**Frequently Asked Questions About Groundwater Rule Advisories**

## We’ve never had a drinking water advisory before. Why are we having one now?

Your water system uses groundwater [wells, aquifer]. Groundwater has different standards than water from other sources like rivers or streams. Your water system now has to comply with new requirements, known as the Environmental Protection Agency (EPA) Groundwater Rule.

## What’s different about the Groundwater Rule?

We used to think that groundwater was protected from fecal contamination. New information shows

that groundwater can have fecal contamination and people could get sick. This is why EPA developed the Groundwater Rule.

## What indicator organisms does a groundwater system test for?

Groundwater systems test for one of three indicator organisms -- *E. coli*, enterococci, or coliphages -- to monitor water quality. If the water system has a positive test for any one of these three organisms, it can mean recent contamination with human feces.

Water systems test for indicator organisms to check for possible contamination. There are many different possible pathogens. It is not possible to test for every pathogen in every water sample, so they test for indicators instead.

## What are “indicator” organisms?

Indicator organisms come from the same sources as organisms that might make you sick. Indicator organisms are easier to identify, are present in larger numbers, and respond to water treatment in the same way as harmful bacteria and many other biological pathogens. A biological pathogen is any organism, such as a bacteria, virus, protozoa, or parasite that causes disease. Biological pathogens are commonly called “germs.”

## What does a positive test result for an indicator organism mean?

A positive test for an indicator means possible water contamination and a risk of waterborne disease. A positive test in groundwater for *E. coli*, enterococci, or coliphages means you and your water system need to take action.

## Will indicator organisms make me sick?

Coliphages do not infect humans or cause illness. Some enterococci can cause disease in humans. Most coliform bacteria are a normal part of the environment and do not cause disease. However, some rare types of *E. coli,* such as O157:H7, can cause serious illness. Although most *E. coli* O157:H7 outbreaks are from eating raw or undercooked food, cases from contaminated drinking water can occur, but are rare.

## What are coliphages?

A virus that infects bacteria is called a phage. Phages infect specific species of bacteria. Coliphages infect coliform bacteria. Coliphages do not infect humans or cause illness. A positive test for coliphages indicates the water may be contaminated with feces or *E. coli.*

Frequently Asked Questions About Groundwater Rule Advisories, cont’d

## What are coliforms?

Coliforms are a group of bacteria found in plant material, water, and soil. Coliforms are also present in the digestive tracts and feces of humans and animals. Most of the time, these bacteria are not harmful.

Total coliforms is another term for the full group of coliforms. They are indicators of possible water contamination. Fecal coliforms is one type of coliform bacteria found mainly in animal digestive tracts and feces. Fecal coliform tests are a more specific indicator of water contamination. *E. coli* is a species of fecal coliform bacteria. *E. coli* almost always comes from animal feces and is considered the best indicator of fecal water contamination. If *E. coli* is present, harmful bacteria or other pathogens may also be present.

## What is *E. coli*?

*E. coli (Escherichia coli)* is a species of fecal coliform bacteria. *E. coli* almost always comes from animal feces. *E. coli* is considered the best indicator of fecal water contamination. If *E. coli* is present, harmful bacteria or other pathogens may also be present. Not all *E. coli* make people sick. Some rare types of *E. coli*, such as O157:H7, can cause serious illness.

## What are Enterococci?

Enterococci are a type of bacteria mainly found in the gut and feces of animals. They are used as an indicator organism for groundwater because they closely link water quality with contamination by human feces. Some enterococci can cause disease in humans. Enterococci are not coliform bacteria.

## For more information see or contact:

* [**Personal Preparation and Storage of Safe Water**](http://www.cdc.gov/healthywater/emergency/safe_water/personal.html): CDC provides guidance on the amount of water needed for good health, as well as how to prepare and store safe water before and during an emergency.
* [**Hygiene and Handwashing**](http://www.cdc.gov/healthywater/emergency/hygiene/index.html): CDC provides guidance on alternative hygienic practices when water is not available or is contaminated.
* [**A Guide to Water Filters**](http://www.cdc.gov/parasites/crypto/gen_info/filters.html): CDC maintains a guide for filters that remove *Cryptosporidium* or *Giardia*.
* EPA Safe Drinking Water Hotline: 1-800-426-4791
* [**Consumer Information**](http://water.epa.gov/drink/info/index.cfm): EPA provides information and guidance about drinking water quality, emergencies, contaminants, public health issues, and treatment and storage.
* Water system: [name, title, phone, e-mail, website]
* State or local public health department: [name, title, phone, e-mail, website]
* Primacy Agency: [name, title, phone, e-mail, website]