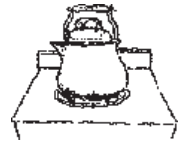




Boil Water Notices: Questions and Answers



Some types of bacteria (small living organisms) are a threat to drinking water quality and are responsible for most waterborne illnesses. Coliform bacteria are a group of bacteria that are generally harmless; however, their presence in drinking water indicates the possibility that the other types of bacteria or viruses that are harmful to humans may also be present in the water. Because of this possibility, any water sample that tests positive for total coliform bacteria is tested further to determine if fecal coliform and/or *E. coli* bacteria are also present.

Total coliform bacteria are very common in the environment; they are found in soil, for example. If only total coliform bacteria are detected, fecal contamination is not probable, and the source is more likely to be from contamination from the environment during construction or while repair to a water main was underway. Although the health risks are minimal when only total coliform bacteria are detected in drinking water, the Minnesota Department of Health takes precautionary measures and instructs the water supplier to disinfect its system and inform its customers through a Public Notification process.

Fecal coliform and *E. coli* bacteria are found in the intestines of animals and appear in greater quantities than total coliform bacteria in animal fecal matter. The presence of fecal coliform and/or *E. coli* bacteria in a water sample may indicate contamination from a sewer, septic system, feedlot, or animal yard. If fecal coliform or *E. coli* bacteria are detected, the water supplier will issue a "Boil Order" notice, immediately begin disinfecting the water distribution system, and, through the Public Notification process, inform their customers of what precautions they must take.

What is the water supplier doing to remedy the problem?

The water supplier is currently feeding chlorine into the system to eliminate the unwanted bacteria. However, this process will take several days to complete and will include retesting of the water to assure its safety.

What happens if this water is consumed without it being boiled, and what are the symptoms of any illness that may result from bacteriological contamination?

If present, disease-causing bacteria or viruses can cause gastrointestinal illnesses such as diarrhea and vomiting. Not all people will be affected to the same degree. Young people and the elderly are usually more susceptible to illnesses from microbial contamination.

How long should water be boiled when a boil order is in effect?

Bringing the water to a rolling boil and then letting it boil for one minute is sufficient to eliminate harmful bacteria.

Is there a need to boil water when chlorine is in the system?

Yes. Even though the chlorine is in the water to kill the bacteria, the water should be boiled until tests prove that all the bacteria have been killed.

Can the water be treated by using iodine tablets instead of boiling?

This is technically possible; however, we recommend boiling instead because it is more foolproof.

Is it advisable to purchase bottled water during this period?

Bottled water is an acceptable alternative to boiling the contaminated water. Bottled water is routinely tested and can be considered safe.

Can ice be made with this water?

No. Ice should not be made with this water. In addition, ice that has already been made or ice produced by an ice maker should be discarded.

Can the water be used to make coffee? For cooking? For washing dishes?

No, not unless it has first been boiled. However, commercial dishwashers using hot water or chemical sanitizing may be used, providing the operating temperature and sanitizer concentration meet manufacturer's specifications.

Is it safe to brush teeth with this water?

No. The possibility exists that the disease-causing bacteria could be introduced into a person's digestive systems.

Is it safe to bathe or shower with this water? How about washing clothes?

The water is safe for any of these activities; however, infants and young children should not bathe using contaminated water since they may swallow some of it. The only concerns with the water have to do with consuming it.

Can this water be used on plants?

Yes. The disease-causing bacteria that may be present in the water do not present a threat to plants.

Is it safe for pets or livestock to drink this water?

No. The water is just as unsafe for animals as it is for humans. It should be boiled first before being given to pets or livestock.

Will the chlorine in the water harm house fish?

Yes. Chlorine will kill many small fish found in aquariums and minnows at bait shops. City officials should contact all bait shops immediately to alert them that chlorine will be added to the water system.

If a home has any type of water treatment or conditioning unit, including a water softener, should anything be done with the unit before it is used again?

Some units will require disinfecting. Homeowners should check with the unit's manufacturer regarding how to accomplish this.

Will the rust that the chlorine stirs up and the high chlorine levels hurt a water softener?

No. The chlorine should not damage a water softener, and most water softeners can handle some amounts of iron. The normal regeneration of a water softener should get rid of the iron that has been trapped by the softener.

Will chlorine cause the skin to break out?

No. Most people will not have a reaction to the amount of chlorine that has been added to the water; however, a few individuals are extremely sensitive to chlorine and should avoid contact with the chlorinated water.

What should be done with water that's been collecting in a cistern?

It should be considered contaminated and boiled before any consumptive use.

What is the proper way to disinfect the well and the system?

Chlorine is placed in the well and fed into the water distribution system. The fire hydrants are then flushed to move the chlorine to all parts of the water system as quickly as possible. The chlorine must stay in the water system for at least two days to ensure maximum kill of the bacteria. The chlorine addition is then stopped and the fire hydrants flushed to remove all of the chlorinated water. Once the chlorinated water has been removed, the water is retested to determine if the bacteria are gone and if the water is safe. If tests show the water to be safe, the water system may notify its customers that the water no longer needs to be boiled.

Why is the water a reddish brown color?

The chlorine added to the water to kill the bacteria may also react with the iron that has deposited in the water mains, breaking it loose from the pipes and causing some temporary discoloration of the water. The iron in the water causes a distinctive reddish brown color but does not present a health threat. Flushing fire hydrants and inside taps will help eliminate the iron residue and associated color problems.



Minnesota Department of Health *Division of Environmental Health*
625 North Robert Street Box 64975 St. Paul, Minnesota 55164-0975
<http://www.health.state.mn.us/divs/eh/water>

