

Making Drinking Water Safer from Bacterial Contamination in Emergency and Camping Situations

Monty C. Dozier

Assistant Professor and Extension Water Resources Specialist

Public Water Supplies

Health departments and officials responsible for public water supplies use many safeguards to protect the sanitary quality of your drinking water. However, this protection may break down during emergencies caused by natural disasters, such as floods, hurricanes or tornadoes. Water supplies to your home may be shut off or become dangerous to use. *You must then know what to do to provide a safe and adequate supply of water for your family.*

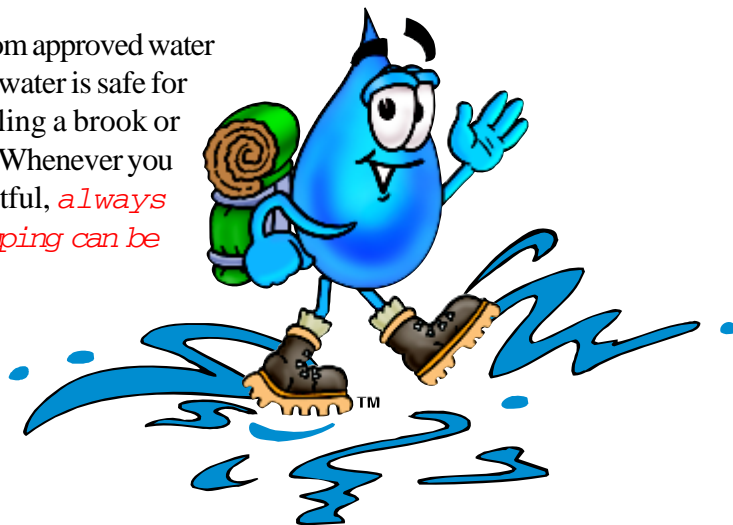
Private Water Supplies



If you have your own water supply, such as a well, cistern, spring or other private source, ask your health department or local county office of Texas Cooperative Extension to inspect it for sanitary quality and to show you how to keep it safe. You should also have your water tested for the presence of disease-causing bacteria such as total or fecal coliforms or *E.coli*. There are many diseases associated with the consumption of water contaminants by these and other bacteria. If properly constructed and maintained, you should have confidence that, under normal conditions your water is safe to drink. However, under emergency or disaster conditions, particularly during floods, these sources may become dangerous to use. Unless you are assured otherwise by test results, *no water should be presumed safe, and all water should be disinfected in such emergencies.*

Travelers, Campers, and Sportsmen

When you are traveling, camping, hunting or fishing and away from approved water supplies, you must take precautions to make sure that available water is safe for consumption. Remember that no matter how clear and sparkling a brook or mountain stream may look, the water is not always safe to drink. Whenever you must use drinking water from a source where its safety is doubtful, *always disinfect it. Supplies to disinfect water while camping can be purchased from camping supply stores.*



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Emergency Sources

If it is necessary to select an emergency water source, remember that underground water, such as that obtained from wells or springs, is less likely to contain contamination harmful to your health than water from surface sources.

However, if underground water is not available, surface water from a creek, river, lake or pond, in that order, should be used if available. Avoid water having a dark color, an odor or containing floating materials since such things may indicate pollution. If possible, surface water should be obtained upstream from an inhabited area and dipped from below the surface. **Remember to disinfect all water when you are unsure of its quality before it is consumed.**



Also remember, if your home supply is interrupted, limited amounts of water may be obtained by draining the hot water tank, melting ice cubes or using water in the toilet tank.

Methods of Disinfection



The following simple procedures, including use of either heat or chemical disinfection and clean containers (to the extent possible), will reduce or eliminate usual harmful bacteria that may be present in water obtained under emergency conditions.

Heat

1. Strain water through a clean cloth, coffee filter, or paper towel into a container to remove any sediment or floating matter.
2. Boil the water vigorously for at least 10 minutes.
3. After it cools, the water is ready to use. To improve the taste, you may add a pinch of salt to each quart of boiled water, or pour the water back and forth from one clean container to another several times.

Chemicals

If boiling water is not possible, strain the water as in listed above and disinfect with any one of several chemicals as follows (choice of chemical is based on availability):

Liquid Chlorine Bleach (from the home laundry or grocery store). Read the label to find percentage of chlorine available and follow this table.



Available Chlorine	Drops to be Added per Quart	
	Clear Water	Cloudy Water
1 percent	10	20
4 to 6 percent*	2	4
7 to 10 percent	1	2

*Common unscented household laundry bleach



1. Mix thoroughly by stirring or shaking water in container.
2. Let stand for 30 minutes, and if a slight chlorine odor is detectable, the water should be free of bacteria.
3. If a slight chlorine odor is not detectable in the water, repeat the dosage and let stand for an additional 15 minutes before serving.

Tincture of Iodine (from medicine chest or first aid kit)

Available Iodine	Drops to be Added per Quart	
	Clear Water	Cloudy Water
2 percent	5	10



Let stand for 30 minutes, after which time, water should be safe to use.

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