

EXPLANATION OF WATER ANALYSIS

DESCRIPTION OF TEST: The laboratory has tested the water for the presence or absence of pollutional-type bacteria called “Coliforms.” There is no simple test for the presence of actual disease-producing bacteria.

WHY THE TEST FOR COLIFORMS: Coliform bacteria are normally present in the intestinal tract of humans, animals, and birds. Coliforms are found in large numbers in sewage. They are found in surface water and in topsoil to a depth of several feet depending upon the type of soil or rock. If found in drinking water, they usually indicate that pollution is entering the supply. New or recently repaired wells or water systems have coliform bacteria present until the well pump and piping system have been adequately disinfected.

HOW THEY GET IN: Pollutional bacteria get into a well mostly from the ground’s surface, although in some cases pollution may enter from underground. That is why proper location and construction of the well are important.

HOW SERIOUS IS THIS: If the way is open for surface water, shallow ground water, or sewage to enter the supply, then actual disease-producing bacteria may enter. Intestinal diseases which may be transmitted by contaminated water are diarrhea, dysentery, infectious hepatitis, and typhoid fever. Also, parasitic intestinal worms and amoebic cysts that cause dysentery may be present in contaminated water.

DISINFECTION OF WELLS

1. Check the well seal, and/or vent pipe, to be certain of good, tight construction. Replace any worn or damaged parts. A well must be in good repair to prevent contamination.
2. If your water is cloudy, the well should be pumped until the water is clear utilizing one of two methods:
 - A. If you have public sewer, run each tap until the water is clear and free from turbidity.
 - B. If you have a septic system, connect a garden hose to an outside water faucet and run the water onto the ground away from the septic system until the water is clear and free from turbidity.
3. **Chlorination Procedure**

The amount of chlorine required to disinfect your well is determined primarily by the amount of water in the well. To determine the exact amount of household bleach to use in disinfecting the well, use the following procedure:

 - A. Determine the diameter of the well.
 - B. Determine the depth of water in the well
 - C. To determine the exact amount of bleach to use, utilize the table below.

DEPTH OF WATER IN FEET

	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	
DIAMETER OF WELL IN INCHES	4"	¼	1/3	½	¾	1	1 ¼	1 1/3	1 ½	1 ¾	2
	6"	½	1	1 1/3	1 ¾	2 ¼	2 ¾	3 ¼	3 ½	4	4 ½
	8"	¾	1 ½	2 ½	3 ¼	4	4 ¾	5 ½	6 ½	7 ¼	8
	12"	1 ¾	3 ½	5 ½	7 ¼	9	10 ¾	12 ½	14 ½	16 ¼	18
	24"	7 ½	15	22 ½	30	37 ½	45	52 ¼	60	67 ½	75
	36"	15	30	45	60	75	90	105	120	135	150
	48"	30	60	90	120	150	180	210	240	270	300

Example: An 8" well with 50' of water would take 4 cups of bleach

- D. Mix bleach with ten (10) gallons of water in a large bucket.
- E. Remove well cap and pour the solution directly into the casing, be sure to splash it around so the inside of the well casing is coated with the solution.
- F. Take a hose connected to an outside faucet and rinse the sides of the well casing and leave the hose on the inside of the casing for approximately twenty (20) minutes to mix the chlorine solution with the water in the well.
- G. Turn on each faucet or hydrant in the water system (i.e. bath tub, sink, toilet) one at a time. Let the faucet run until the water has a strong chlorine odor then shut it off and move to the next faucet. Add more chlorine at the well if a chlorine odor cannot be detected.
- H. Let the chlorine stand in the well and water system overnight.
- I. The next morning, the system should be discharged of the chlorinated water in the following manner:
 - 1. If the house is on public sewer system, let all water faucets run until the chlorine odor disappears.
 - 2. If house is on septic system, connect a garden hose to an outside water faucet and run the water onto the ground away from the septic system until the chlorine odor disappears.
- J. A water sample can be taken again once the well has been flushed of all chlorine residual. *If bacteriological contamination is still present, it may be necessary to increase the chlorine concentration.

CHLORINE HAZARDS TO AVOID

Do not drink water with a strong chlorine odor. When working with chlorine, you should always be in an open or well ventilated area. Do not allow strong liquid to remain in contact with the skin or clothing.

Knox County Health Department
 1361 W. Fremont St.
 Galesburg, IL 61401
 309/344-2224