

## Explanation of Water Test Results

**Coliform Organisms Not Found-** This is good news. As far as levels of harmful bacteria are concerned, your water is safe to drink at the time of sampling.

**Total Coliform Found –** Coliform organisms are present in your water, and it may not be safe to drink.

**E. coli Found-** E. coli is a type of fecal coliform bacteria commonly found in the intestines of animals and humans. E. coli is short for Escherichia coli. The presence of E. coli in water is a strong indication of recent sewage or animal waste contamination. Sewage may contain many types of disease-causing organisms.

***\*Your water well should be disinfected if your water sample results were positive for either E. coli or Total Coliform.\****

## How to Disinfect Your Well and Plumbing System

### ***Locate on your property:***

- The power switch to your well pump.
- The power to your water heater.
- The wellhead. (This is the concrete pad on top of the well. It might be in your pump house or just outside somewhere. It generally has a pipe sticking out that goes to your pressure tank.)
- The faucet nearest to the wellhead (This should be a water tap that you can hook a garden hose to.)
- If your well is pressurized, locate the pressure release valve. (It might look like a faucet.)
- The well access plug (It might look like a large bolt.)

### ***Gather these materials:***

- Disinfectant: liquid chlorine bleach (“bleach” in the rest of these instructions) or solid calcium hypochlorite
- A wrench that fits the well access plug
- A funnel (wide mouthed if you use calcium hypochlorite)
- A garden hose long enough to reach the wellhead from the nearest faucet

<b>Table: How Much Disinfectant to Use If your well is this deep:</b>	<b>Use this much bleach:</b>	<b>Or use this much solid hypochlorite:</b>
<b>Less than 100 feet</b>	1 quart	<b>1/8 cup</b>
<b>100 to 200 feet</b>	2 quarts (1/2 gallon)	<b>1/4 cup</b>
<b>200 to 300 feet</b>	3 quarts	<b>3/8 cup</b>
<b>More than 300 feet</b>	<b>4 quarts (1 gallon) or more</b>	<b>1/2 cup or more</b>

## ***Disinfecting the well***

The time needed for this part of the process depends on whether or not you have a pressurized well. If your well has a screened vent at the wellhead, or if you haven't used an air compressor to maintain water pressure, your well is probably not pressurized.

### **Disinfecting a pressurized well**

This process takes at least 12 hours:

1. Turn off the power to the well pump and air compressor.
2. At the wellhead or pump house, find the pressure-release valve. Before you open it, be sure that you are in the open and breathing fresh air, not the vented air, which may contain hydrogen sulfide, methane, or other gases that sometimes can build up in wells.
3. Open the valve to release all the pressure in the well.
4. Remove the access plug. (You'll need to replace it later.)
5. Put the funnel in the opening where you removed the access plug.
6. Pour in the bleach or calcium hypochlorite. (See the table on page 1 for the right amount to add.)
7. Replace the access plug. Let the well sit for at least 12 hours. During this waiting period:
  - Following the manufacturer's directions, turn off the power to your water heater and drain it.
  - Drain any other water-storage tanks that are connected to your plumbing system.
  - If you can, collect at least some of this water (for example, in 5-gallon buckets) to use whenever anyone needs to flush a toilet during the rest of the disinfection process.
8. When the 12-hour waiting period is over, turn on the power to your well pump and air compressor.

**If you are not comfortable carrying out these steps, you can call a professional water-well driller.**

### **Disinfecting a non-pressurized well**

1. Turn off the power to the pump.
2. Remove the access plug.
3. Put the funnel in the opening where you removed the access plug.
4. Pour in the bleach or calcium hypochlorite. (See the table on page 1 for amounts.)
5. Connect the garden hose to the faucet nearest the wellhead.
6. Turn the power to the pump back on.
7. Turn on the faucet and run water through the funnel into the well for one hour. By circulating the chlorinated well water, you will expose all fittings and equipment in the well to the chlorine solution and improve the germ-killing action.
8. During this hour:
  - Following the manufacturer's directions, turn off the power to your water heater and drain it.
  - Drain any other water-storage tanks that are connected to your plumbing system.
  - If you can, collect at least some of this water (for example, in 5-gallon buckets) to flush toilets during the rest of the disinfection process.
9. After the hour is up, remove the garden hose and funnel and immediately replace the access plug.

## ***Disinfecting your plumbing***

To disinfect the rest of your plumbing system, you will fill the pipes with chlorinated water from the well and let it remain at least overnight—if you can, let it remain for 24 hours. For the best results, follow the steps below:

1. Working away from the well, go to the next closest outside faucet. Turn it on, run the water until you can smell the sharp odor of bleach (chlorine), and then turn it off.
2. Repeat step 1 until you have reached all the outside faucets.
3. Refill the water heater, but don't turn the heat back on yet.

4. Refill any water-storage tanks.
5. Go inside and flush each toilet until the water coming in smells chlorinated.
6. Repeat step 1 on each inside faucet. Be sure to include bathtubs, showers, and other faucets and to do this to the cold- and hot-water faucets.
7. If you have a chilled-water line on your refrigerator, run it until you smell bleach.
8. Now that your plumbing system is full of chlorinated water, let everything stand at least overnight or, if you can, for 24 hours to kill germs in your plumbing. During this time:
  - Don't use this water for drinking, cooking, bathing, washing clothes, or washing dishes.
  - You can use this water for flushing toilets, or you can use water collected from draining your water heater. If the toilet isn't clogged, it will flush if you pour in 2 or 3 gallons of water from a bucket.
  - If you have an icemaker, let it run, but dispose of all the ice it produces.
  - Run your empty dishwasher and clothes washer through a full cycle.

### ***Flushing the system***

After the chlorinated water has been in your plumbing system for 12 to 24 hours, it's time to flush the system. This process will take about the same amount of time it took to fill the system with chlorinated water—about 5 to 10 minutes per faucet, on average:

1. While you are carrying out the rest of these steps, drain your water heater and any other water-storage tanks connected to your plumbing system.
2. Starting with the outside faucet farthest from your well, open the faucet and run it until you no longer smell chlorine and the water is clear of any debris or color.
3. Working your way back toward the well, continue step 2 with each outside faucet. Don't flush any inside faucets until you have finished outside—otherwise, you might flood the septic system.
4. Flush each toilet once.
5. Repeat step 2 with each inside faucet.
6. If you have a chilled-water line, run it until you no longer smell bleach. Dispose of all of this water.
7. Refill the water heater and any other water-storage tanks.
8. Following the manufacturer's directions, turn the power to your water heater back on.
9. Run a rinse cycle on your dishwasher and your washing machine.

### ***More than you can do?***

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If this process for disinfecting a well seems like more than you want to handle, call a plumber or licensed water-treatment specialist to have it done for you. While not that complicated, it's important to have the job done right.

*This information is provided through TCEQ. VCCHD is not held liable for any information provided about how to disinfect water wells. This information is given as a courtesy.*