

Disinfecting a Well

Any test which is marked unsatisfactory or unsuitable indicates an immediate need to evaluate and/or disinfect your water system.

Evaluation of the Water System

Prior to disinfection, the system should be evaluated to identify and correct possible sources of contamination. Please Note: Disinfecting the water system without first removing the source of contamination provides only temporary health protection. The following list identifies some of the major health related factors to examine:

- A sanitary seal that prevents surface water, insects, and rodents from entering the well
- A ground surface graded or ditched so surface water drains away from the well or spring
- Well casing surrounded by a concrete slab that extends at least 6 inches above the ground
- Well or spring located at least 100 feet (for well) or 200 feet (for spring) from septic systems, barn yards, or other sources of contamination
- Inverted, screened air vents on the well
- No cross connection of the drinking water system with a non-potable system such as irrigation water or a sprinkler system.

Disinfecting Your Well

You can disinfect your well with household chlorine bleach such as Clorox, Purex or a generic brand. The chlorine in the bleach kills bacteria. Note that it may require chlorinating your well more than once to return a satisfactory test. This is generally an overnight process so you will need to plan ahead when you decide to chlorinate.

If you have a storage tank you will need to disinfect it too. See the procedures for disinfecting a storage tank. If it has been determined that the water source (well) is not contaminated, you need only disinfect the storage tank and not the well.

1. You will need to calculate the volume of water in your well. You must know the total depth of the well and the depth to the static water level (water level when the pump is off). Subtract the static water depth from the total depth to get the depth of water in the well. Use the following table to calculate the volume of water in the well. (Note: most well casings are 6" diameter)

Table 1: Calculating Well Volume

Diameter of well (in inches)	Gallons per foot
4	0.65
6	1.5
8	2.6

Depth of water in the well in feet x Gallons per foot = Gallons of water in the well

Example: Well depth 124 feet. Static level 60 feet. 6" casing is 1.5 gallons per foot.
 $(124-60) \times 1.5 = 64 \text{ ft of water} \times 1.5 \text{ gallons/ft} = 96 \text{ gallons of water in the well.}$

*If you do not know the depth of the well, assume 50-100 gallons

2. Calculate the amount of bleach needed to chlorinate the well.

Table 2: Amount of Chlorine bleach needed for disinfection

Gallons of water in well	5.25% chlorine bleach	8.25% chlorine bleach
50	1-1/2 cups	1/2 cup
100	3 cups	1 cup
150	4-1/2 cups	1-1/2 cups
200	6 cups	2 cups

3. Mix the required amount of bleach with 5 to 10 gallons of water.

4. Remove the access nut on the well casing top. Using a funnel, pour the chlorine solution into the well.

5. Connect a hose to a faucet near the well and run water down into the well. This will mix the chlorine with the well water and draw the chlorine to the bottom of the well. When you start to smell chlorine in the water coming out of the hose, use the hose to rinse the upper part of the casing.

6. Open every faucet on the system until you can smell chlorine coming from the tap. (It may be necessary to add more chlorine.) Recap/seal the well.

7. Let the water stand in the system for at least 4 hours, preferably overnight.

8. Open taps to remove chlorine from the system.

IMPORTANT: Regulate the flow of water from fixtures that discharge into a septic system to avoid overloading the system, or catch the water in a basin or bucket and discard outdoors. Do not pour into any water body, wetland or drainage ditch; chlorinated water may kill lawn or plants.

9. After 5 days of normal use of the system, re-test for coliform bacteria.

Professional Help

You may prefer to have a well or water supply professional chlorinate your system. Look in the yellow pages under water purification, water treatment, well drilling, etc.

Temporary Measures

While waiting for chlorination to be completed, water used for drinking and cooking should be from a known safe supply. You can perform emergency disinfection by boiling the water for 1 minutes, or put 4-10 drops of bleach into 1 gallon of clear water. Stir and let stand 30 minutes. At that time the water should have a slight chlorine taste, if not, add more bleach. You can also use bottled water purchased from a store, or a known safe water supply.