Disinfection of Individual Water Systems

The disinfection of your water system will be necessary after accessing your well, distribution system or storage tank for repair or replacement. Disinfection is also required when a water sample shows the presence of total coliforms. Before any disinfection is attempted, you need to seriously look at your water system and ask yourself if the water is protected. If the answer is no, do the necessary work to protect it before disinfection. Proper disinfection will destroy the bacteria in the system at the time of disinfection, but will not protect the water or clean the well. If you have a question, ask your local Environmental Health Inspector for assistance.

1. Take all necessary steps to properly protect the water source and or storage tank from any further contamination.

2. Notify everyone that could use the system of the time and date the system is going to be disinfected. Caution them that they should not use the water while there is a chlorine odor except to flush the toilet. Other arrangements for water usage for a 24 hour period should be made.

3. Pump water from the well to waste until it looks relatively clean and stop the pump.

4. Add ordinary household bleach (5.25 % chlorine concentration) to the well in the suggested quantities from table I. To assure chlorine reaches the water in the well casing, add the chlorine into the casing with a gallon of clean water. If you have a storage tank you will need to add chlorine to it as suggested in Table II.

   Where small individual wells to be treated are of unknown depth or volume add one gallon of standard household bleach.

5. Allow water to stand 15 minutes so the chlorine can settle, then start and stop the pump repeatedly to mix the water and chlorine.

6. Let stand for 30 minutes and repeat pumping as in (5).

7. Open every tap (indoors and outdoors) one at a time until there is a strong chlorine odor, then close. Also run the shower(s) and flush the toilet(s). Let stand for 12 - 24 hours.

8. After 12 - 24 hours open all taps, start the pump and pump water until all the chlorine odor is gone. Stop the pump and close all taps. The water in your system should now be safe for use and consumption. Heavily chlorinated water should not be wasted into septic tanks because it can adversely impact the system. The water may be wasted to land, but avoid discharging into drainage ways that may enter surface waters.

9. Wait a minimum 48 hours to ensure no chlorine residual in the water and resample. You can check for chlorine with chlorine test strips or DPD test tablets.

TABLE I

Disinfection of Wells 100 Feet Deep or Less Using Household Bleach (5.25% chlorine)

Diameter of Well Casing	Amount of Bleach Needed
4 to 6 inches	1/4 gallon (32 oz)
8 to 12 inches	½ gallon
16 inches	1 gallon

For wells 100 to 200 feet deep double the amount of bleach listed.

TABLE II

Storage Tank Disinfection Using Household Bleach (5.25% chlorine)

Gallons of Water	Amount of Bleach Needed
50,000	50 gallons
25,000	25 gallons
10,000	10 gallons
5,000	5 gallons
2,000	2 gallons
1,000	1 gallon
500	½ gallon
200	26 ounces
100	13 ounces
50	6 ounces

The above listed concentrations will provide an approximate chlorine residual of 50 parts per million or more. Water with this level of chlorine residual is not safe to drink. Please refer to step 2 and step 8 on the first page.