

## Well Disinfection Procedures for Public Water Systems

### Summary:

If a well is found to contain coliform bacteria, it may be possible to eliminate the contamination by disinfecting the well. The goal is to disinfect the well so that coliform bacteria are eliminated. The well disinfection should be in accordance with the American Water Works Association C654-13. If the well is improperly constructed or located, contamination may not be eliminated or may be eliminated temporarily. In that case, you may need either a new well or an approved disinfection system. Please contact this office to discuss the problem creating the need to disinfect the well.

1. Pump the well to waste for at least 30 minutes. With pump not operating, pour the correct amount of liquid sodium hypochlorite into the well casing. The sodium hypochlorite you use must be ANSI/NSF (American National Standard Institute (ANSI) or National Sanitation Foundation (NSF). Standard 60 certified for potable drinking water. Most wells have a cap or plug that may be removed to pour the liquid into the casing. To achieve 50 mg/L of chlorine solution, here are the recommended chlorine amounts:

Well casing diameter	Amount of 12.5% avail hypochlorite solution needed (per 100 feet of well depth)
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4 inches	half cup (or 4 fluid oz.)
6 inches	one cup (or 8 fluid oz.)
8 inches	1 ¾ cups (or 14 fluid oz.)
12 inches	2 pints (4 cups or quarter gallon)

Note: These quantities are for 100 feet of well depth. Adjust the quantities to fit the depth of your well. This is for liquid hypochlorite with 12.5% available chlorine.

2. Do not operate the pump for 30 minutes after adding the hypochlorite and ensure the hypochlorite solution reaches all parts inside of the well. Then surge the well either by turning the pump on and off several times or by connecting a hose to the nearest hose bib and circulating the water into the well casing opening for several minutes.
3. Allow this water to sit undisturbed in the well and distribution system for 24 hours if possible; or at least 12 hours. This water should not be used for drinking or bathing.
4. After the sitting period, open all taps (starting with the tap closest to the pump) and allow water to run to waste until no chlorine residual is measured.

5. After the chlorinated water is completely flushed from the well and distribution system, and no chlorine residual is detected for 5 to 15 minutes (depending on water availability), two bacteriological samples must be collected and analyzed by a certified laboratory. If coliform bacteria are absent, the disinfection has probably been successful. A follow-up sample should be collected from the well after one week. Another follow-up sample should be collected after one month to verify that the water remains free of contamination. If any sample shows presence of coliform bacteria, disinfect the well again by following steps 1 through 4, conduct bacteriological testing by following step 5, and contact this office.

**Note:** Please note that any discharges into a storm drain or other conveyances that drain to surface waters must be in compliance with Clean Water Act section 402 – National Pollutant Discharge Elimination System.