

Chlorine Well Shock Protocol

This procedure is used to disinfect the upper portion of a well casing, well pump, drop pipe, water service line, pressure tank and the home distribution system. If simple chlorination is unsuccessful at disinfecting the well, the bulk displacement method of well chlorination should be used. Disinfection of flowing wells, wells with deep well jet pumps, wells with drawdown seals, or wells in pits should not be attempted by well owners. A registered well drilling contractor should treat these wells.

Chlorination Procedure

1. **Remove Turbidity:** If the well water is not clear, pump it to waste until it clears.
2. **Bypass Cartridge Filters:** Place valve in the “bypass” position and remove cartridge. Discard old cartridge. Rinse housing with a solution of 1 oz of bleach in one cup of water. Drain the housing and insert a new filter cartridge. Reinstall the cartridge filter, but remain in the bypass position until chlorine has been completely flushed from the water supply after treatment.
3. **Bypass Water Treatment Units:** Bypass water softeners, reverse osmosis (RO) systems, and iron removal systems. Leave in bypass position until chlorine has been flushed. Chlorine can damage softener resins and RO membranes.
4. **Check Well Record:** Check the well record to see if there are drawdown seals that will prevent chlorine from reaching the water. If there are, contact a drilling contractor.
5. **Turn Off Power** to the Well Pump. Remove well cap.
6. **Prepare a Chlorine Solution:** Use unscented liquid household bleach that contains 5% to 6% available sodium hypochlorite.

Recommended Chlorine Solution

Well Diameter	Chlorine per 25 feet of well depth
4 inch	1 cup
5 inch	1½ cups
6 inch	2 cups

7. **Mix Solution:** Mix the bleach with 5 gallons of clean water in a clean plastic bucket. Now add an additional 2 cups of bleach for disinfection of the pressure tank, water heater, and plumbing.
Example: From the chart above, a 4-inch diameter well 200 feet deep would need 8 cups of bleach to treat the well, plus an additional 2 cups for a total of 10 cups or 2.5 quarts.
8. **Introduce the Chlorine Solution to the Well.**
9. **Circulate Solution.** Start pump to circulate chlorinated water throughout the house. Use an outside hose bib and run the water to waste until chlorine odor is detected. Do not discharge the water into a sewage or septic system; avoid contact with plants, animals and insects.
10. **Recirculate Solution.** Use outside hose to recirculate chlorinated water back into the well (45 minutes.)
11. **Recap the Well.**
12. **Open All Points of Use:** Open all taps until chlorine odor is present. Start dish washer, clothes washer.
13. **Contact Time:** Twelve hours of contact time as required. Minimize water usage during contact period. The longer the contact time, the greater the disinfection.
14. **Flush to Waste:** Use the outside hose to flush the water distribution system of chlorine solution. With a fully open tap, flush solution into a ditch or waste area. This protects your septic system.
15. **Flush All Points of Use:** Open all taps and points of use within the house for 1 hour.
16. **Return All Bypassed Systems to Service:** When chlorine odor is gone, place water treatment units back on line.