



Testing and Disinfecting a Well - Operation and Maintenance

Proper operation and maintenance of a well helps ensure the availability of safe drinking, bathing, and wash water. Regular testing of water wells for coliform bacteria helps keep our water supply safe and is vital to the operation and maintenance of a water system. If water tests show “unsatisfactory” results, shock chlorination may be used to remove any existing bacterial contamination from the system.

Disinfecting using shock chlorination

A strong chlorine solution is added to a water source and plumbing system for 12 to 24 hours to disinfect the system. You can use regular household bleach that contains 5.25 percent sodium hypochlorite, which kills bacteria and certain viruses.

Shock chlorination is recommended for all bacterial contamination, after a new well is constructed and installed, when a well is opened for repairs, or if floodwater has entered a well. Be sure to store enough fresh water to last 12 to 24 hours while the well and water system are being disinfected.

Flushing after treatment is required to reduce the chlorine concentration. Be sure to flush until the chlorine odor is gone. Also, use an in-line cartridge water filter to remove iron or sulfur bacteria that may dislodge from plumbing lines during chlorination. Be sure to change the filter regularly to keep it from becoming clogged. Refer to the PDF [How to use shock chlorination](#) (disinfection with unscented household bleach) for more specifics.

- Estimate the number of gallons in the well (a 6-inch diameter well casing has 1.5 gallons per foot of water), and use one half-cup bleach for every 30 gallons of water. *Example: If you have a well with a 6-inch casing that is 150 feet deep, with a water static level of 90 feet (water level is 90 feet below the surface) you will have 60 feet of water. 60 (feet of water) X 1.5 (gallons per foot of casing) = 90 gallons. Pour 1 ½ cups of liquid household bleach (5.25% chlorine) into the well. This will produce 50 ppm of chlorine to treat your well. **Do not over-chlorinate.***
- The mixed chlorine solution must be poured directly into the well. The best way to add chlorine to a drilled well is to fill a tank or other container that holds more water than is stored within the well casing. Mix the chlorine solution with the water in the tank. Then, using a funnel, let the tank contents flow into the well through the access port.
- Do not use the well for at least 2 to 3 hours.
- Open every faucet in the system and let the water run until the smell of chlorine can be detected. Then close all faucets and let stand overnight.
- Flush the water system to remove the bleach by turning on all outside faucets until the odor of chlorine is gone.
- Follow-up treatment
- After you have thoroughly pumped the well to remove the chlorine, use the water for a week and then have another water sample tested. Two, or even three, consecutive tests give you more confidence the problem has been corrected. No bacteria test is perfect and the results of only one test can be misleading. If tests continue to show bacteria, you may need to retreat and retest your water. You also may need to have your well site evaluated to help determine the source of the disease-causing bacteria or iron and sulfur bacteria problems.