VERMONT
DEPARTMENT OF HEALTH

How to Disinfect Your Drilled or Dug Well

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Follow these steps to disinfect your well if bacteria were detected in your water, your well was repaired (including replacing the pump), you installed a new well, or there is a hydrogen sulfide (rotten egg) smell in your water system.

Before You Disinfect Your Well

Visually inspect your well and water system and make any repairs.

- Look for and fix any sources of bacterial contamination around your well, such as leaks, un-mortared joints, loose caps, or ripped vent screens.

Consider testing for nitrate and chloride to help determine the source.

- A septic system or nearby farm could be the source of contamination.

Find out the depth and dimensions of your well.

Draw enough water to last for 3 to 5 days.

- Boil for one minute any water used for drinking, cooking, washing food, brushing teeth, or making ice or baby formula. You can also get or buy water from another safe source. **Note: boiling water may concentrate other contaminants, like nitrate, in your well.** Only boil your water if you know there are no other contaminants in your water.

Flush your system if the water appears cloudy or full of sediment.

- Turn on an outside spigot and flush approximately one volume of the well. Be careful not to pump the well dry, which could damage it and cause your water to become contaminated.

Step-by-Step Guide to Disinfecting Your Well

You will be adding chlorine bleach directly to your well. Chlorinated water will then travel throughout the plumbing and faucets in your home.

1. Disconnect or bypass any water treatment devices, like water softeners or reverse osmosis units, since bleach can damage them. You will need to disinfect these devices separately according to manufacturer's instructions.
2. Gather materials needed: rubber gloves, eye protection, household chlorine bleach that contains no scents or additives, 5-gallon bucket, small brush, garden hose, and a measuring cup. **Wear rubber gloves and eye protection whenever you are working with bleach.**
3. Keep children and pets away from the area, especially from bleach and chlorinated water. Turn off power to the pump.

4. Remove the well cap. Inspect and fix any exposed wires. You can turn the power to the pump back on, but do not get the wires wet.
5. Mix 1 cup of bleach with a half-gallon of water in the bucket. Use this water to clean the well cap and sides of a dug well using the scrub brush. Discard the water away from your septic system and any streams.
6. Calculate the amount of bleach needed by using the chlorine calculator at HealthVermont.gov/water/disinfection or **use about ½ cup of bleach for every 10 feet of depth for a standard 6-inch diameter drilled well** or **use 1 cup of bleach per 25 gallons of water storage for dug wells.** The goal is for the water to reach a chlorine concentration of 100 to 200 parts per million (ppm). The way you estimate the volume of water in your well or which method you use may result in slightly different concentrations, between 100 to 200 ppm.
7. Carefully pour the bleach into the well.
8. Use the garden hose to run water into the well to mix and circulate the bleach. Run the water along the well casing or sides of the dug well. Do this for at least 15 minutes and up to 1 hour.
9. Reseal the well and (if applicable) install a new gasket if it is brittle or missing.
10. Go to the faucet inside your home that is farthest from the well and run the cold water until you smell bleach. Turn the tap off, then do the same with the hot water. Repeat this step for all faucets, shower and baths, toilets, and outside spigots. **Remove any screens on your faucets as they can become clogged by debris dislodged during the disinfection process.**
11. Check the manufacturer's instructions before running the chlorinated water into your clothes washer, dishwasher or refrigerator water filtration system.
12. **Leave the chlorinated water in the plumbing for at least 8 hours, but no more than 12 hours,** to give the chlorine time to disinfect your system.
13. After at least 8 hours, flush the system until you no longer smell bleach. Start with an **outside** spigot. Connect a garden hose so it drains onto a gravel driveway or brushy area. Flushing large volumes of chlorinated water into your septic system may damage it. You may want to run the water at less than full flow or turn the tap off periodically to allow the well to recharge so it does not run dry.
14. Flush the taps inside your home by running both the hot and cold faucets until you no longer smell bleach.
15. Remove, clean, then replace any screens on your faucets as they can become clogged by debris dislodged during the disinfection process.
16. Retest your water 2 to 3 days after the chlorine smell is gone. Order the bacteria test (Kit A) from the Health Department Lab. Sanitize the faucet with rubbing alcohol and a cotton swab before collecting the sample.
17. Continue to either boil your water or get water from a safe source until no bacteria are detected.

More Information

- Visit HealthVermont.gov/water/coliform-bacteria
- **Questions?** Call the Drinking Water Program at 802-489-7339