

Temporary Disinfection of Private Water Wells

Disinfection of your water system is recommended whenever coliform testing indicates contamination, when starting up a seasonal water supply, or whenever there is a potential for pathogens to enter your water system (after new equipment is installed, flooding around your well, etc.). This is commonly referred to as a “shock treatment.”

Before proceeding with the disinfection, ensure that your well is properly protected and correct any deficiencies found. Your well casing should extend at least 18 inches above the ground, be structurally sound and fitted with a screened well cap to prevent entry by insects and other animals. If you have a buried well casing, you will need to locate and uncover it. Welding an extension to any buried well casings is recommended. This will better protect your well from intrusion of surface water and will make future maintenance easier. The area around your well should be graded using impervious clay soil or bentonite so any surface water flows away. Ponding of surface water or void spaces along your casing are possible sources of contamination.



Note: This procedure will temporarily disinfect your water system. It does not guarantee that your water will be safe to drink afterwards. If your water supply is not properly protected, it may become re-contaminated after the chlorine is flushed out. Follow-up sampling is necessary to determine if the treatment was effective.

INSTRUCTIONS:

- 1) THIS PROCESS WILL FLUSH OUT LARGE AMOUNTS OF RUST AND SEDIMENT THAT COULD DAMAGE YOUR APPLIANCES AND WATER TREATMENT EQUIPMENT. Disconnect any appliances that are hooked up to your plumbing (dishwashers, washing machines, ice makers, etc.). Bypass any water treatment equipment you have installed and follow your treatment manufacturer’s disinfection instructions. Remove any sediment or carbon filters you have installed from their housings. They will be ruined if left in during the disinfection. Be sure to have extra water set aside in jugs or buckets for drinking, washing and flushing your toilet. Your water may not be suitable for use once you begin.
- 2) Mix approximately one part unscented household bleach with four parts water in a bucket to dilute it. For most water systems, one gallon of bleach will be adequate. If you have a deep well (greater than 100 feet) or you have high levels of iron or sulfur in your water, additional bleach may be necessary.
- 3) Remove the well cap and pour this mixture down your well casing.

For driven-point wells, you will need to pour the bleach solution directly down the well pipe. If you do not have a “T” with a removable plug installed at the top of the well pipe, you may need to disconnect your jet pump to get access. Re-prime your jet pump and skip to step six.

- 4) Attach a garden hose to a nearby spigot and run water directly down your well casing. This will cycle the chlorine through your water system and ensure good mixing. If you do not have an outdoor spigot, you may be able to connect your hose to your washing machine hook-up.
- 5) Once you can smell chlorine coming from the hose (could take up to an hour for some wells), use the hose to rinse the inside of the well casing down thoroughly for several minutes and turn it off.
- 6) Turn on each tap in your distribution system one by one and run it until you can smell chlorine. It is important to run the hot and cold water separately in each fixture since there are two different sets of plumbing. (You will smell chlorine quickly from the cold water but the hot water may take some time if you have a hot water tank.) Once you are certain that you have distributed chlorine through the entire system, turn off all of your taps and stop using the water.
- 7) Let the chlorine sit for 12 to 24 hours to ensure a good disinfection. **DO NOT USE ANY WATER DURING THIS PROCESS.** The amount of chlorine present is not safe to use and may damage clothes or bleach hair.
- 8) After the time has elapsed, begin flushing out the chlorine. **DO NOT FLUSH THE CHLORINE INTO YOUR SEPTIC SYSTEM.** Using your garden hose again, run water outdoors in a safe location off your lawn. The amount of chlorine present may harm your grass or other nearby plants. Let the water run for no more than an hour at a time with a few hours in between flushes so that you do not stir up sediment in the bottom of your well. Be especially careful when flushing if you have a driven-point well or if your well has a history of running dry.

YOUR WATER WILL BE FULL OF RUST AND SEDIMENT WHEN YOU BEGIN FLUSHING. The strong chlorine solution will scour rust and other mineral buildups loose from the inside of your well casing and pipes. This should clear up after the first few flushes.

- 9) Once the chlorine smell from the garden hose is gone, you can begin flushing the rest of the chlorine from your distribution system. If you have a hot water tank, attach your hose to the blow-off valve at the bottom and flush this outdoors first. This will minimize the amount of chlorine going to your septic system. Your water is safe to use when you cannot smell any more chlorine coming out (although there will still likely be a small amount for the next few days).
- 10) Follow-up testing is necessary to determine if the disinfection was effective. Contact your health department office for a coliform test once you are certain all of the chlorine is gone. Chlorine test strips for pools and aquariums are cheap and easily available in most department stores.

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Many people will need to perform this disinfection more than once before getting satisfactory results. Depending on the source of contamination, temporary disinfection may never be 100 % effective and a permanent disinfection system may be needed.

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