

# Instructions for Well Disinfection



***Please read carefully before disinfecting!***

## Necessary Items:

- One cup of granular chlorine or 1 gallon of regular unscented liquid bleach
- Clean hose(s) to extend from the home to the well
- Wrenches to remove the well cap
- 5-gallon bucket
- Small cup
- Water sample bottle(s)
- Location of ON/OFF switch for the well pump
- Eye and skin protection



## Procedure:

- 1) Draw off about 4 gallons of water into a 5-gallon bucket. Mix one (1) gallon of regular unscented liquid bleach with the 4 gallons of water. **Note: Liquid bleach should not be used with a steel well casing; it can break loose accumulated corrosion and cause pump failure. Instead, use granular chlorine in a steel well casing.**
- 2) Turn off the power to your well pump. Remove the well cap. Be careful if set screws or bolts on your well cap are rusty. **Note:** If the well cap has one large bolt in the center of the cap, you should not attempt to remove it. Have a licensed well contractor disinfect your well. In addition, if your well head or top is buried, or if you have a shallow well installation, your well does not meet current well construction code requirements. Chlorinating these wells is difficult and in many cases impossible. If you have an unsafe water sample and you have a well that fits this description, contact a Washtenaw County Sanitarian at (734) 222-3800.
- 3) Pour the chlorine/bleach mixture into the well between the casing and the cross bar or "T" bar. **DO NOT** pour the mixture into the 1" center hole. (Newer wells will often have markings or a statement next to the correct hole, indicating where to pour the chlorinating solution.) Avoid contact of the solution with the wire connections inside the well, as they could corrode.
- 4) Connect a clean hose to an outside spigot and extend it into the well approximately 4 feet.
- 5) Turn the power supply back on to the well pump. Turn on the outside spigot that is connected to the hose in the well. Allow the hose to run in the well for approximately 20 minutes. This distributes the disinfectant throughout the well system. Turn the spigot off when done.
- 6) Turn off the power supply to the well pump. Once the power is off, remove the hose from the well, and put the well cap back onto the well using the existing nuts and bolts.
- 7) Turn on the power to the well pump. All work is now completed on the wellhead.
- 8) Now it's time to distribute the chlorine/bleach to the pipes. Turn on each indoor and outdoor water faucet, and allow cold water to run until a chlorine/bleach odor is detected. Don't forget to run the shower, clothes washer, dishwasher, and any outside hydrants or plumbing fixtures in other buildings. Also, flush each toilet a couple of times. Once you detect a bleach odor, turn off all faucets. **Note:** Some water softening units should not be chlorinated. Contact your water softening company prior to disinfection to determine if you should bypass the softening system.

# Instructions for Well Disinfection

## Page 2

- 9) Allow the solution to remain in the system for a minimum of eight hours, or overnight. **During this time you should not drink, bathe, wash clothes, or cook with the water, but you can use it for toilet flushing.**
- 10) After the solution has remained in the system for a minimum of eight hours, connect a hose to an outside spigot and allow water to run onto the ground for 20-30 minutes to remove the chlorine solution from the water system. Try to keep the water away from your drainfield and any plants or trees if possible. After 20-30 minutes, turn off the spigot and then run each indoor and outdoor water faucet for 2-3 minutes to remove the solution that was in the pipes.
- 11) It is now time to collect the water sample. Remove the screen or aerator from the faucet tip. Submerge the tip of the faucet into a small container of bleach for 30 seconds. Allow the bleach to remain on the faucet tip for 5 minutes. (This reduces the possibility of a false-positive sample reading, as the faucet tip is a potential area of bacterial growth.) Once the faucet tip has been disinfected, turn on the cold water and allow it to run for 5 minutes. While the water is still running, remove the lid from the sample bottle. **DO NOT** touch the interior of the lid or sample bottle, and remember that the pill or powder substance in the bottle must remain inside the bottle. Fill the bottle to approximately ½ inch from the top and replace the lid. Place the screen/aerator back on the faucet.
- 12) **Samples that are going to be analyzed by our laboratory must be delivered to our office by 3:00 p.m. Monday through Friday. It is best to collect the sample just before delivery to our office!** We recommend that samples be refrigerated or chilled while stored or transported. On dates prior to holidays, no samples will be accepted.
- 13) If well disinfection and resampling was required as part of a Time of Sale inspection, the follow-up sample (after disinfection) must be obtained by either a registered well driller or a Washtenaw County Certified Time of Sale Inspector.
- 14) If you receive a notice that your sample is positive for coliform bacteria, or if you have any questions regarding the well disinfection procedure, please contact a Washtenaw County Sanitarian at **(734) 222-3800**.

### For More Information:



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Environmental Health Division**

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**Disclaimer:** This procedure is intended to be used for chlorinating 5" PVC wells with submersible well pumps. If your well is equipped with a jet pump (either shallow or deep), or if your casing is 4" steel or smaller, we advise that you consult with a licensed well driller prior to chlorination. These instructions are provided as public information based on conditions found in Washtenaw County. There is no implied guarantee and the procedure may have to be repeated. Washtenaw County accepts no responsibility for the outcome, or for any damage incurred.