



Southwest District Health

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Disinfecting Domestic Wells

Bacterial contamination of drinking water is very common. Studies show that more than 40 percent of private water supplies are contaminated with coliform bacteria, which can cause gastrointestinal illness.

If a routine bacteriological sample submitted to a certified lab comes back positive for coliform/fecal coliform bacteria, and the well owner wishes to treat the water supply with a disinfectant, the following steps and precautions must be taken.

First, gather basic safety equipment and supplies (i.e. rubber gloves, funnels, safety glasses, plastic face shield, buckets, tools). Step number 5 recommends pouring five gallons of clean fresh water down the well after the disinfectant is placed into the well. This will wash off items that may have come into contact with the disinfectant. The bucket that is used should be washed and free of debris. Also, have a bucket of water free of disinfectant nearby in case someone gets doused with chlorine. The fresh water will help wash the chlorine off. Fill all buckets with water prior to turning off the power to the well.

1. Flush the distribution lines to clear contaminants especially if the dwelling has been vacant for any extended period of time. This can be done by turning all faucets on for three to five minutes, then turning the faucets off.
2. Shut off power to the well.
3. Remove sanitary seal/water tight cap from the top of the well casing.
4. The following table may be useful as a guide to determine the amount of disinfectant to use in treating your well. **Note: The table below refers to standard bleach; floral or other scented bleaches should not be used.**

Chlorine Bleach Dosage Table for Well Disinfection	
Well Depth	Amount of Bleach
Less than 100 ft.	1 quart
100 to 200 ft.	½ gallon
200 to 300 ft.	3 quarts
300 ft. and greater	1 gallon or more

Reference: Texas Natural Resource Conservation Commission, Private Well Disinfection & Water Sampling; GI (revised 6/01).

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5. Apply the disinfectant into the well. After the disinfectant is placed into the well, pour five gallons of clean fresh water into the well, giving attention to washing off all electrical wires that may have come into contact with the disinfectant.
6. Restore power to the well.
7. Open one cold water faucet and let the water run until the odor of disinfectant is detected, then turn faucet off. Continue this process until all other indoor and outdoor faucets have been filled with treated water from the well. Flush showers, baths, and washing machines using both hot and cold running water. Finally, flush toilets until disinfecting smell is noticed in the tank.
8. Allow treated water to stand in pipes overnight.
9. **Open only outdoor taps that do not drain to septic tank** and allow the treated water to flush through the system until no disinfecting odor is detected. It may take between 8-24 hours of continuous flushing due to varying well casing diameters and well depths, to fully purge the well of disinfectant. After the disinfectant has been flushed from the well through outdoor faucets, next flush indoor fixtures, showers, baths, and washing machines. Flushing inside fixtures will take less time because you are merely flushing the lines and not the well.
10. All disinfectants must be completely flushed from the water supply before a re-sample can be obtained. For mortgage survey's, SWDH will test your water supply for disinfectants prior to sampling. If disinfectants are found, SWDH cannot take the sample. A \$40.00 re-inspection fee will be assessed for the sample to be taken after the water supply has been completely flushed.

SWDH cannot provide further instruction or recommend any products over what has been provided within these guidelines. SWDH strongly encourages the applicant hire a professional or corporation that specializes in disinfecting wells due to the potential health and safety hazards associated with the process. The Idaho Department of Water Resources (IDWR) may also be able to provide useful information.

- All chemicals (usually chlorine) must be a registered disinfectant. Registered disinfectants will/must have the EPA registration number on them and a label directory on the container to be in compliance with EPA regulations. SWDH cannot instruct/direct the purchaser on what concentration to use. The purchaser must follow the label directions on the container.
- **SWDH highly recommends that extreme caution be used by clients wishing to use chemicals to disinfect a well. Chemicals can be corrosive and toxic to humans, pets, and equipment. It is up to the applicator to ensure that the appropriate steps are taken to guarantee safety for everyone that may come into contact with the treated water supply.**