

PRIVATE WELL TESTING AND SHOCK CHLORINATION

LABORATORY ANALYSIS

It is recommended that private wells be sampled regularly for contamination by bacteria (coliform) and prior to shock chlorination. Water bottles can be picked up and dropped off at Boulder County Public Health Lab Services, 5605 N. 63rd Street, Boulder, CO, phone (303) 413-7426.

UNSAFE WATER REPORT

If any coliform bacteria are found in the water supply, the word *PRESENT* will be reflected in the RESULTS section of the lab slip, next to *TOTAL COLIFORM*. **Any** total coliform detected means the water was determined to be unsafe. These bacteria indicate that some part of the water system is subject to contamination, and the contaminants may be bacteria that could cause illness. This problem may be temporary or it may be permanent.

E. coli is a subset of Total Coliform and its presence indicates recent fecal contamination. The water should be boiled for 20 minutes or an alternate water source should be used for drinking, food preparation, and dishwashing until the water problem has been solved. Caution should also be taken not to swallow any untreated water during teeth brushing or bathing.

CHLORINATION PROCESS TO SHOCK DISINFECT A WATER SYSTEM

1. Determine the total water holding capacity of the system. Add the well capacity, cistern capacity, and pressure tank capacity together. The system installer may be able to help you obtain this information. Use the calculation below to determine the amount of bleach to use in order to disinfect the system.

$$\frac{\text{total capacity in gallons} \times 16}{1,000} = \# \text{ Cups of household laundry bleach}$$

(This results in a concentration of approximately 50 parts per million chlorine.)

2. Mix the laundry bleach in five gallons of water.
3. Remove any debris on or near the well lid. Remove the lid.
4. Add the mixture to the well, replace the lid, and allow the well to stand undisturbed for four to six hours.
5. Beginning with the tap farthest from the well, open each tap, showerhead, and other source of water until a chlorine odor is detected. (This should take about ten to fifteen minutes.) At this point, shut off all taps.
6. Let the entire system stand undisturbed for twelve hours. Do not drink or run any water

during this time.

7. At this time, you must slowly flush out the system. This can be accomplished easily by opening all outside taps. Leave the taps on until the water no longer has a strong chlorine odor. This may take three to four hours. **DO NOT** drain the water into an onsite wastewater system absorption area, as the chlorine and excessive water could cause severe damage to the absorption area. **DO NOT** allow the water to reach any surface water (lakes, ponds or streams, or storm drains), or to run off of your property. ***Do not run the well dry.***

COLLECTION OF A SECOND WATER SAMPLE

After completing the above procedure, a time span of three to four days ***MUST*** elapse before a second water test can be taken. If any chlorine is still present when the second sample is taken, the results would not be valid, and the sample will be discarded.

RESULT INTERPRETATION OF SECOND WATER SAMPLE

If the second sample passes this test, it is assumed that the water problem has been solved. This does not mean it will not become unsafe again; it simply means that on the day of the second test, the water was safe for consumption.

If the water sample is again unsafe, contact the Boulder County Public Health Water Quality Program at (303) 441-1190, to discuss what additional steps can be taken.

For information on additional water testing, contact CSU Cooperative Extension at 970-491-5061 or visit their web site at <http://www.ext.colostate.edu/pubs/natres/06703.pdf>

SAFE WATER LABORATORY RESULTS

If the water sample passed, it means the water was bacteriologically safe at the time of collection. The quality of this water, as indicated, does not necessarily certify a fully approved supply. It is recommended that you regularly have your water analyzed.