

## State Well Drillers Association Contractors:

### Florida Ground Water Association (FGWA)

David Boozer, Executive Director  
P.O. Box 1519, Winter Haven, FL 33882  
Ph. 863-293-5710 / Fax: 863-293-5154  
Email dboozer1@aol.com

### Georgia Drillers Association (GDA)

Bruce Widener, Executive Director  
P.O. Box 1928, Duluth, GA 30096  
Ph. 678-646-0369 / Fax 678-646-0379  
Email bruce@widener-association.com

### Kentucky Ground Water Association (KGWA)

Holly Lyell, Executive Director  
P.O. Box 991, Mayfield, KY 42066  
Ph. 270-247-6658 / Fax 270-251-3004  
Email kygwa@wk.net

### Maryland/Delaware Water Well Association (MD/DEWWA)

Betty Jane Kelley  
26222 Hobbs Road, Denton, MD 21629  
Ph. 410-479-3078  
Email bettygeo@intercom.net

### North Carolina Ground Water Association (NCGWA)

Elaine Christian, Executive Director  
P.O. Box 41368, Raleigh, NC 27629  
Ph. 919-876-0687 / Fax 919-878-7413  
Email execman@worldnet.att.net

### South Carolina Ground Water Association (SCGWA)

Janet Jordan, CAE, Executive Director  
P.O. Box 2054, Lexington, SC 29071-2054  
Ph. 803-356-6809 / Fax 803-356-6826  
Email association@sc.rr.com

### Tennessee Water Well Association (TNWWA)

Melba Davis, Executive Director  
1436 Glenmar Avenue, Mt. Carmel, TN 37645  
Ph. 423-357-0815 / Fax 423-224-2344  
Email davismelba@hotmail.com

### Virginia Water Well Association (VWWA)

Jane H. Cain, Executive Director  
P.O. Box 1128, New Market, VA 22844  
Ph. 540-740-3329 / Fax 540-740-4556  
Email jcain@well-drillers.com

### West Virginia Water Well Association (WVWWA)

Cindy Smith  
P.O. Box 440, Springfield, WVA 26763  
Ph. 304-822-4786



# A Consumer's Guide to Well Testing and Disinfection

A well is the only water source that gives you, the owner, control over choices about both the quality and quantity of water that your family uses.

A Consumer's Guide to  
Well Testing and Disinfection



A Publication of the  
South Atlantic Well Drillers Association  
(540) 740-3329  
www.SAWD.org



## A Consumer's Guide to Well Testing and Disinfection

The advantage of having a private well is that a properly constructed well is a small, closed system, and problems with water quality or quantity are easily diagnosed and remedied.

A well, like any other household system, needs routine maintenance and regular testing to assure that it is functioning properly and safely.

### When Do I Test My Water?

- When a natural disaster strikes
- When an unusual occurrence disturbs your well or the land around it
- When a well contractor replaces your well pump or makes routine repairs

### What Am I Looking For?

- Bacteria
- Nitrates
- Nitrites
- Insecticides
- Petroleum products

## What are my Options?

### Option 1.

Take test samples yourself. This procedure involves taking the sample to an accredited water analysis lab. You can use a private lab or inquire at the local health department about their testing facilities (See Yellow Pages under Water Analysis/Testing Labs/Environmental Labs). Unfortunately, during emergency situations, you may have a long wait for test results.

### Option 2.

Purchase a home water testing kit. NOTE: Not all test kits give accurate results. Make sure it is laboratory certified and is based on EPA standards. One test kit endorsed by the American Ground Water Trust and the American Quality Institute is sold under the name Pur Test. (For information on Pur Test kits, call 1-800-788-4825.) With home testing, you may get results more quickly.

### Option 3.

Call a local water well contractor to do the sampling and testing for you. Always do this if the well doesn't have a tap, or if you have a 2-inch well with a 1-inch pipe and a jet pump. In both cases the well seal may have to be broken to get a sample. Only a professional driller can replace the well seal properly and preserve the integrity of the well.

### Remember

Whether you use a home test kit or take samples to a water analysis lab, you will get valid results ONLY if you follow sampling and testing instructions precisely.

If you are uncertain about taking a sample or need professional help, call a local well contractor. (Contact your State Well Drillers Association located in this brochure.)

## Understanding Test Results

### Heavy Rain?

Heavy rain and flooding increase the possibility of contamination. Always test for the presence of coliform bacteria. Under flood conditions it is also important to test for other contaminants such as nitrites, insecticides and petroleum products.

### A Presence of Bacteria?

The presence of coliform bacteria (water tests "positive") is an indicator of the overall health of your well. The presence of coliform bacteria is a warning signal.

### Test Results?

If well tests show the presence of bacteria which belong to the "total coliform group," you may or may not have an immediate health hazard. However, this finding shows a need for further testing.

If additional tests show fecal coliform is present (waters tests "positive"), you have a serious health hazard present. In either case, STOP consuming the water immediately.

Do not use the water until the source of contamination is found. Then disinfect the well and retest the water.

If the well tests free of bacteria but your inside faucet tests positive for bacteria, then the problem is in the plumbing, water treatment system or water tank, not the well.

In most cases, however, bacteria in your whole well system can be eliminated by proper disinfection.



# Disinfecting Your Well

## Chlorination Steps

### Step 1.

Prepare a chlorine solution by either mixing the required amount of calcium hypochlorite, 70%, or household bleach, 5.25%, with 5 to 10 gallons of water. Check the chart to determine the specific amount for your well.

### Step 2.

Pour the 10-gallon solution down the well casing.

### Step 3.

Call a local water well contractor to do the sampling and testing for you. Always do this if the well does not have a tap or one needs to be installed. Only a professional driller can preserve the integrity of the well and ensure the well is properly sealed.

### Step 4.

Open all faucets and taps in the house until a chlorine odor is noticed. The hot water tank should be flushed along with all the toilets so the chlorinated water will be in contact with all the distribution plumbing.

### Step 5.

Replace the sanitary seal and cover on the well.

### Step 6.

Allow chlorinated water to remain in well and house piping for a minimum of 8 hours; overnight is preferable.

## Step 7.

Flush the well until the chlorine odor is absent then flush all hot water storage tanks, water pressure tanks, and faucets (as well as toilets), to remove the chlorinated water. A water sample should not be taken until the chlorine is absent.

## Step 8.

When the chlorine odor is completely gone, have the water sampled and retested by a state-certified laboratory. The water should not be used for drinking purposes until a successful re-test has been completed.

## Quantities.

Quantities<sup>1</sup> of Liquid Chlorine Bleach (5.25% chlorine) Required for Water Well Disinfection.

## Dosage Chart

DEPTH OF WATER IN WELL (ft.)	WELL DIAMETER (in.)															
	2"	3"	4"	5"	6"	8"	10"	12"	16"	20"	24"	28"	32"	36"	42"	48"
5'	1c	1c	1c	1c	1c	1c	1c	1c	2c	4c	1q	2q	3q	3q	4q	5q
10'	1c	1c	1c	1c	1c	1c	2c	2c	1q	2q	3q	4q	4q	6q	8q	2.5g
15'	1c	1c	1c	1c	1c	2c	3c	4c	2q	2.5q	4q	5q	6q	2G	3G	4G
20'	1c	1c	1c	1c	1c	2c	4c	1q	2.5q	3.5q						
30'	1c	1c	1c	1c	2c	4c	1.5q	2q	4q	5q						
40'	1c	1c	1c	2c	2c	1q	2q	2.5q	4.5q	7q						
60'	1c	1c	2c	3c	4c	2q	3q	4q								
80'	1c	1c	2c	4c	1q	2q	3.5q	5q								
100'	1c	2c	3c	1q	1.5q	2.5q	4q	6q								
150'	2c	2c	4c	2q	2.5q	4q	6q	2.5g								

**Quantities:** Quantities are indicated as **c** = cups; **q** = quarts; **g** = gallons.

**Source:** Manual of Individual and Non-public Water Supply Systems published by the U.S. EPA Office of Groundwater and Drinking Water, EPA-570/9-91-004, Washington, DC, May 1991.