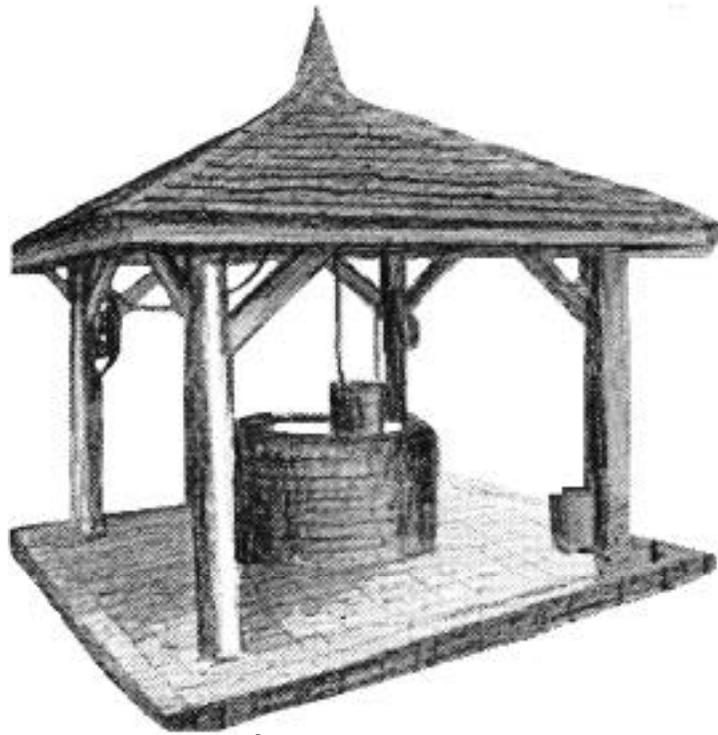


How To Disinfect Your Water Well



**Division of
Community Environmental Protection**

Why the Concern

Ground water is the main source of drinking water for about 44 percent of the total population, or more than 2.1 million people in Alabama. Approximately 800,000 people, or 20 percent of the state population, depend on private water supplies, such as wells, for drinking water.

If you obtain drinking water from your own well, you alone are responsible for assuring that it is safe. For this reason, routine testing is highly recommended. Even if you currently have a safe, pure water supply, regular testing can be valuable because it establishes a record of water quality.

Test your well water

If you suspect that your well may be contaminated, contact your county health department's public health environmentalist for advice. Your public health environmentalist can provide you with information and assistance on securing a water sample kit and instructions on procedures to use in collecting your water sample.

Until you receive a satisfactory test result

Avoid drinking or cooking with water from your well until you receive a satisfactory test result. You can either get water from an approved source, ask your county health department for guidance or use bottled water.

Disinfecting Wells

Use the following general instructions for disinfecting the specific type of well.

To Disinfect Drilled Wells

1. Using Table I, determine the amount of water in the well by multiplying the gallons per foot by the depth of the well in feet. For example, a well with a 6-inch diameter contains 1.5 gallons of water per foot. If the well is 120 feet deep, multiply 1.5 by 120 (1.5 X 120 =180).

2. For each 100 gallons of water in the well, use the amount of chlorine (liquid or granules) indicated at the bottom of Table 1. Mix the total amount of liquid or granules with about 10 gallons of water.
3. Pour the solution into the top of the well before the seal is installed.
4. Connect a hose from a faucet on the discharge side of the pressure tank to the well casing top. Start the pump. Spray the water back into the well and wash the sides of the casing for at least 15 minutes.
5. Open every faucet in the system and let the water run until the smell of chlorine can be detected. Then close all the faucets and seal the top of the well.
6. Let stand for several hours, preferably overnight.
7. After you have let the water stand, operate the pump by turning on all faucets, continuing until all odor of chlorine disappears. Reduce the flow of water from faucets of fixtures that discharge into septic tank systems to a low flow to avoid overloading the disposal system.

TABLE 1. BLEACH FOR A DRILLED WELL

Diameter of Well (in inches)	Gallons per foot of water
3	0.37
4	0.65
5	1.0
6	1.5
8	2.6
10	4.1
12	6.0

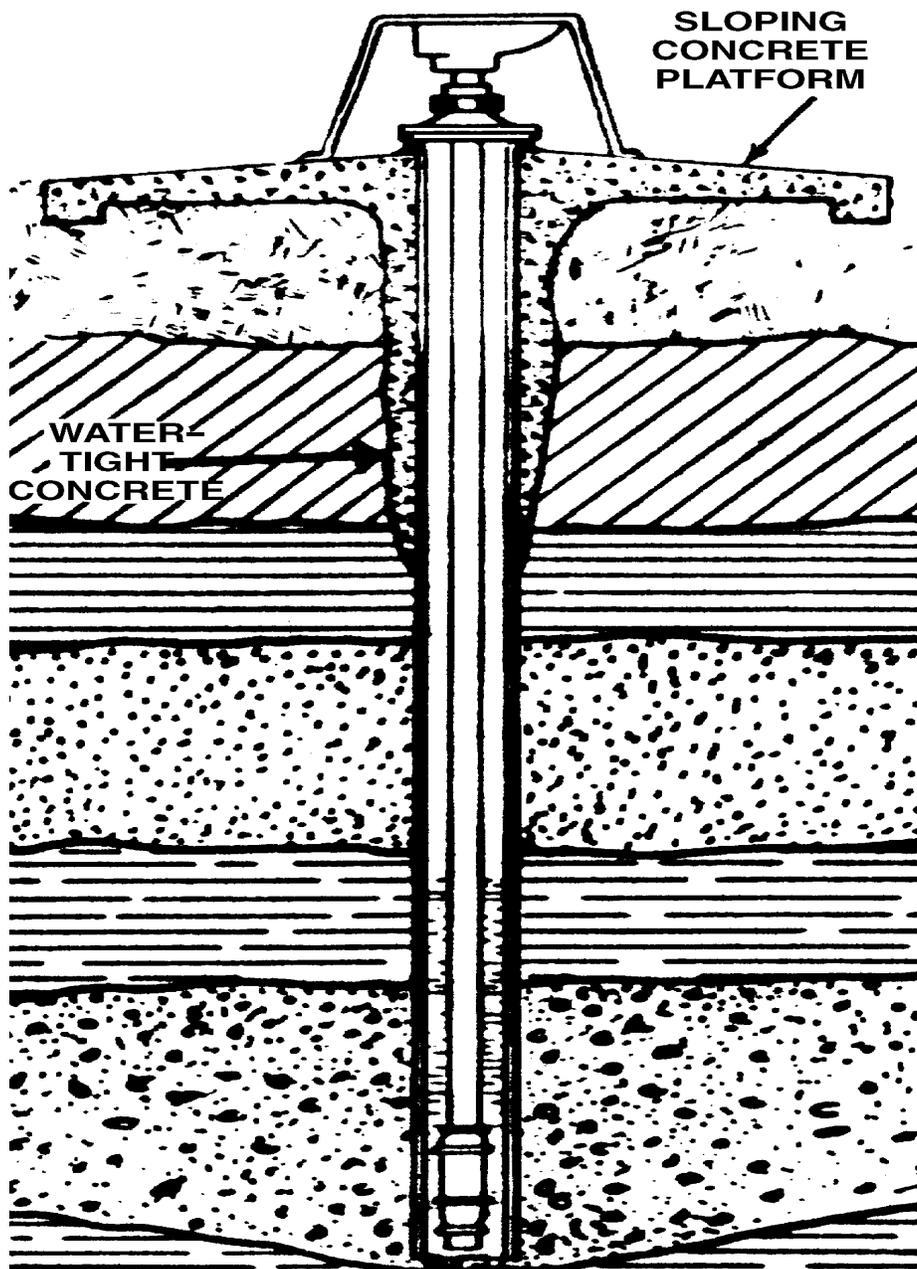
Amount of disinfectant required for each 100 gallons of water:

Laundry bleach (5.25% chlorine)	3 cups(*)
Hypochloride granules (70% chlorine)	2 ounces(**)

(*) 1 cup = 8-ounce measuring cup

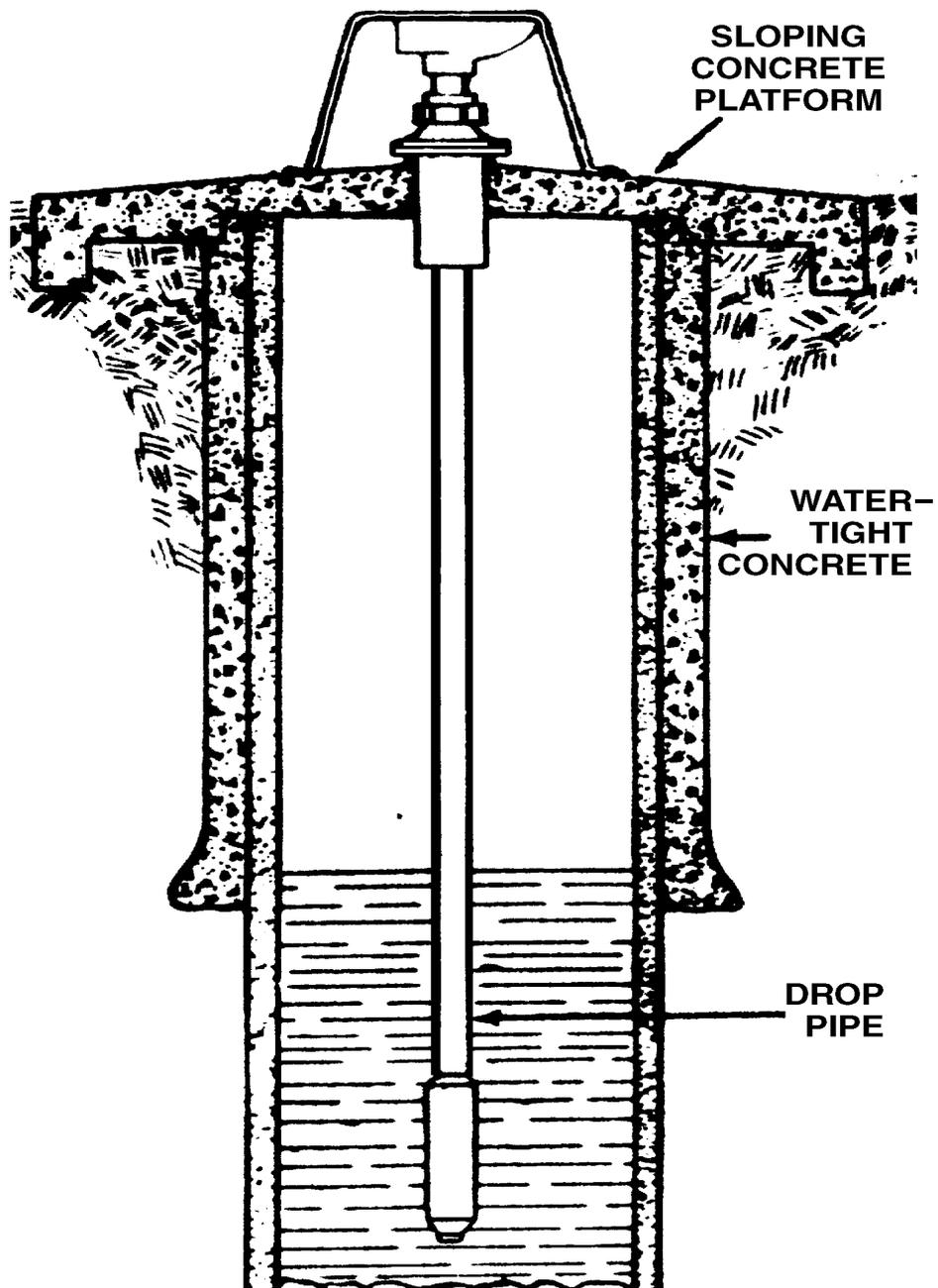
(**) 1 ounce = 2 heaping tablespoons of granules

Diameters of drilled wells vary from 3 inches to 12 inches.



DRILLED WELL

Dug or bored wells vary in diameter from 3 feet to 10 feet.



BORED OR DUG WELL

TABLE 2. BLEACH FOR A BORED OR DUG WELL

Diameter of well (in feet) Amount of 5.25% laundry bleach per foot of water Amount of 70% chlorine granules per foot of water

3	1.5 cups	1 ounce
4	3 cups	2 ounces
5	4.5 cups	3 ounces
6	6 cups	4 ounces
7	9 cups	6 ounces
8	12 cups	8 ounces
10	18 cups	12 ounces

Laundry bleach (5.25% chlorine) 3 cups(*)
Hypochloride granules (70% chlorine) 2 ounces(**)

(*) 1 cup = 8-ounce measuring cup

(**) 1 ounce = 2 heaping tablespoons of granules

TO DISINFECT BORED OR DUG WELLS

1. Use Table 2 to calculate how much bleach (liquid or granules) to use.
2. To determine the exact amount to use, multiply the amount of disinfectant needed (according to the diameter of the well) by the depth of the well. For example, a well 5 feet in diameter requires 4.5 cups of bleach per foot of water. If the well is 30 feet deep, multiply 4.5 by 30 to determine the total cups of bleach required ($4.5 \times 30 = 135$ cups). There are sixteen cups in each gallon of liquid bleach.
3. Mix this total amount of disinfectant with about 10 gallons of water. Splash the mixture around the wall or lining of the well. Be certain the disinfectant solution contacts all parts of the well.
4. Seal the well top.
5. Open all faucets, and pump water until a strong odor of chlorine is noticeable at each faucet. Then turn off all faucets, stop the pump, and allow the solution to remain in the well and lines overnight.
6. The next day, operate the pump, turn on all faucets, continuing until the chlorine odor disappears. Reduce the flow of water faucets or fixtures that discharge to septic systems to a low flow to avoid overloading the disposal system.

TO DISINFECT YOUR WELL WHEN THE TYPE AND DEPTH IS UNKNOWN

A common disinfection practice that has been used successfully is the following:

1. Add a gallon of chlorine solution (such as Clorox) to the well and wait for the solution to saturate the entire column of water (about 1 hour).
2. Draw water out of every faucet served by the well, including outside faucets, until you can smell the chlorine. Starting with the tap closest to the well, and working to the taps farthest away from it, turn on each tap one at a time until you can smell the chlorine, and then turn off the tap.
3. When all taps have been done, the entire system will contain chlorinated water. All taps should be shut off. Let the water sit in the pipes overnight, or about 12 hours.
4. After this time, run water through all the faucets again until you cannot smell the chlorine.

This process should be repeated, possibly with increased amounts of chlorine and time, and the water should be sampled until you receive a satisfactory test result. If you have trouble reading the test results, call your county public health department environmentalist.

Remember: You should continue to test your well water on a regular basis, or if you think it might be contaminated. You should disinfect your well water after any unsatisfactory test, or after any repair work or priming.

If you have any questions, call your county public health department environmentalist.

Acknowledgements:

1. Illinois Department of Public Health
2. CDC, BACKGROUNDER: Hurricane, A Prevention Guide to Promote Your Personal Health and Safety, CDC Press Office, August 3, 1995

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