Floods: Water Quality

Listen for public announcements on the safety of the municipal water supply. Flooded, private water wells will need to be tested and disinfected after flood waters recede. Questions about testing should be directed to your local or state health departments.

Water for Drinking, Cooking, and Personal Hygiene

Safe water for drinking, cooking, and personal hygiene includes bottled, boiled, or treated water. Your state or local health department can make specific recommendations for boiling or treating water in your area. Here are some general rules concerning water for drinking, cooking, and personal hygiene. Remember:

- Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food, wash your hands, make ice, or make baby formula. If possible, use baby formula that does not need to have water added. You can use an alcohol-based hand sanitizer to wash your hands.
- If you use bottled water, be sure it came from a safe source. If you do not know that the water came from a safe source, you should boil or treat it before you use it. Use only bottled, boiled, or treated water until your supply is tested and found safe.
- Boiling water, when practical, is the preferred way to kill harmful bacteria and parasites. Bringing water to a rolling boil for 1 minute will kill most organisms.
- When boiling water is not practical, you can treat water with chlorine tablets, iodine tablets, or unscented household chlorine bleach (5.25% sodium hypochlorite):

  - If you use chlorine tablets or iodine tablets, follow the directions that come with the tablets.
  - If you use household chlorine bleach, add 1/8 teaspoon (~0.75 mL) of bleach per gallon of water if the water is clear. For cloudy water, add 1/4 teaspoon (~1.50 mL) of bleach per gallon. Mix the solution thoroughly and let it stand for about 30 minutes before using it.

  Note: Treating water with chlorine tablets, iodine tablets, or liquid bleach will not kill parasitic organisms.

Use a bleach solution to rinse water containers before reusing them. Use water storage tanks and other types of containers with caution. For example, fire truck storage tanks and previously used cans or bottles may be contaminated with microbes or chemicals. Do not rely on untested devices for decontaminating water.

Disinfecting Wells

If you suspect that your well may be contaminated, contact your local or state health department or agriculture extension agent for specific advice. Here are some general instructions for disinfecting wells.

To Disinfect Bored or Dug Wells

1. Use Table 1 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

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4½ cups of bleach per foot of water. If the well is 30 feet deep multiply 4½ by 30 to determine the total cups of bleach required (4½ X 30 = 135 cups). There are sixteen cups in each gallon of liquid bleach.

3. Add this total amount of disinfectant to 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 bleach is noticeable at each faucet. Then stop the pump and allow the solution to remain in the well overnight.
6. The next day, operate the pump by turning on all faucets, continuing until the chlorine odor disappears. Adjust the flow of water faucets or fixtures that discharge to septic systems to a low flow to avoid overloading the disposal system.

Table 1. Bleach for a Bored or Dug Well

Diameter of well (in feet)	Amount of 5.25% laundry breach chlorine per foot of water	Amount of 70% chlorine granules per foot of water
3	1½ cups	1 ounce
4	3 cups	2 ounces
5	4½ cups	3 ounces
6	6 cups	4 ounces
7	9 cups	6 ounces
8	12 cups	8 ounces
10	18 cups	12 ounces
Source: Illinois Department of Public Health. Recommendations may vary from state to state.		

To Disinfect Drilled Wells

1. 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 in Table 2. 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. Adjust the flow of water from faucets or fixtures that discharge into septic tank systems to a low flow to avoid overloading the disposal system.

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Table 2. 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

Table 3. 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

Source: Illinois Department of Public Health.
Recommendations may vary from state to state.