

TROPICAL STORM/HURRICANE INFORMATION SHEET

RISKS TO WATER SUPPLY DUE TO STORM

Severe weather, especially if accompanied by flooding, can contaminate the public water supply. Water treatment plants may not be operating or water lines may be contaminated. Individuals cannot assume that the water in the affected area is safe to drink.

Listen for public announcements about the safety of the municipal water supply. Drinking contaminated water may cause illness.

If your well has been flooded, it needs to be disinfected and tested after the storm passes and the floodwaters recede. Questions about testing should be directed to your county or state health department.

WATER FOR DRINKING AND COOKING:

Safe drinking water includes bottled, boiled or treated water. Remember these general rules concerning water for drinking and cooking:

- Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food or make ice.
- If you use bottled water, know where it came from. Otherwise, water should be boiled or disinfected before use. Drink only bottled, boiled or disinfected water until your supply is tested and deemed safe.
- Boiling water kills harmful bacteria and parasites. Bringing water to a rolling boil for 1 minute will kill infectious organisms (germs).
- Water may be disinfected with chlorine by mixing eight drops (1/8 teaspoon; about the size of a dime) of unscented, ordinary household chlorine bleach (4-6 percent active ingredients) per gallon of water. Mix the solution thoroughly, and let stand for about 30 minutes. Use a container that has a cap or cover for disinfecting and storing water to be used for drinking. This will prevent contamination. However, this treatment will not kill parasitic organisms that may have entered a flooded well. Iodine or other disinfection tablets available at sporting goods stores may also be used.

Containers for water should be rinsed with a bleach solution before reusing them (one tablespoon bleach per gallon of water). Use water storage tanks and other types of containers with caution. For example, fire truck storage tanks as well as previously used cans or bottles may be contaminated with microbes or chemicals. Do not rely on untested devices for decontaminating water.

HOW DO I DISINFECT MY WELL?

It is important to disinfect both the well and plumbing with 4-6 percent chlorine, non-scented household bleach to ensure that all infectious agents are killed. If you have water treatment devices, remove all membranes, cartridges and filters and replace them after the chlorination process is completed.

The amount of chlorine and the length of time you allow it to remain in your system are equally important. Common unscented laundry bleach can be used effectively as a chlorine disinfectant. Follow these steps for the recommended usage amount of chlorine bleach:

- If the water is discolored before chlorination, run the water until it is clear for up to 10 minutes.
- Turn off and then drain your hot water heater—chlorine is not effective in water above 105 degrees.
- Remove and replace charcoal filters after the chlorination process is completed.
- To avoid adding contamination to the well during disinfection, first clean the work area around the top of the well. Remove grease and mineral deposits from accessible parts of the well head and flush the outside surfaces with 1/2 cup of laundry bleach in 5 gallons of water.
- Turn off the pump. Remove the cap or the well plug on the rubber seal. There are many types of well caps and plugs. If you have questions, you should contact a licensed well driller. If you have a submersible pump, you may also want to contact a licensed well driller for advice on disinfection procedures.
- Try to coat the sides of the casing as you pour in one gallon of unscented household bleach (4-6%). If you get chlorine on the pump or wiring, flush it thoroughly with fresh water to prevent later corrosion. Your county health department may issue additional guidance for your area.
- Re-cap or plug the well opening and wait 30 minutes.
- Turn on and, if needed, reprime the pump. Open all the faucets on the system one by one. Allow the water to run until there is a noticeable smell of chlorine. You may also want to flush the toilets. If you have outside faucets, you may want to direct the water away from sensitive plants. If you cannot detect a chlorine odor, re-chlorinate the well.
- Turn off all the faucets and allow the chlorine to remain in the system for at least eight hours.
- Backwash water softeners, sand filters and iron removal filters with chlorinated water.

IS IT SAFE NOW?

The only way to verify that the water is safe to drink is to have it tested. Although chlorine bleach is effective against microorganisms, it will not remove chemical contamination that may have gotten into your well. Contact your [county health department](#) for sampling instructions to get your water tested. Photos of this procedure are on the USEPA website at: <http://www.epa.gov/safewater/privatewells/whatdo.html>.

For further information, please contact your local county health department or visit www.doh.state.fl.us or www.FloridaDisaster.org.

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FREQUENTLY ASKED QUESTIONS: BOIL WATER ADVISORIES

1. What is the proper way to disinfect my water so that it is safe to drink?

- The preferred method of treatment is boiling. Boiling water kills harmful bacteria and parasites (freezing will not disinfect water). Bring water to a full rolling boil for at least 1 minute to kill most infectious organisms (germs). Let the water cool before use.
- For areas without power, disinfect the tap water by adding 8 drops, about 1/8 teaspoon, of plain unscented household bleach (4 to 6%) per gallon of water and allow the water to stand for 30 minutes. If the water is cloudy, repeat the procedure. Use a container that has a cap or cover for disinfecting and storing water to be used for drinking. This will prevent contamination. If your well was flooded, boiling the water is the safest action, since disinfection does not kill certain parasites.

2. How should I wash my hands during a boil water advisory?

Based on the current conditions of the affected public water supplies, vigorous hand washing with soap and your tap water is safe for basic personal hygiene. If you are washing your hands to prepare food, if at all possible, you should use boiled (then cooled) water, disinfected or bottled water with hand soap.

3. Is potentially contaminated water (where *Cryptosporidium* is not the significant contaminant) safe for washing dishes or clothes?

- Yes, if you rinse hand-washed dishes for a minute in a bleach solution (1 tablespoon bleach per gallon of water). Allow dishes to completely air dry. Most household dishwashers do not reach the proper temperature to sanitize dishes.
- It is safe to wash clothes in tap water.

4. Is potentially contaminated water safe for bathing and shaving?

The water may be used for showering, baths, shaving and washing, so long as care is taken not to swallow or allow water in eyes or nose or mouth. Children and disabled individuals should have their bath supervised to ensure water is not ingested. The time spent bathing should be minimized. Though the risk of illness is minimal, individuals who have recent surgical wounds, are immuno-suppressed, or have a chronic illness may want to consider using bottled or boiled water for cleansing until the advisory is lifted.

5. How should I wash fruit and vegetables and make ice?

Fruits and vegetables should be washed with boiled (then cooled) water or bottled water or water disinfected with 8 drops (about 1/8 teaspoon) of unscented household bleach per gallon of water. Ice should be made with boiled water, bottled water or disinfected water.

6. What if I have already consumed potentially contaminated water?

Even if someone has consumed potentially contaminated water from either a public water system or a private well before they were aware of the boil water advisory, the likelihood of becoming ill is low. Anyone experiencing symptoms such as diarrhea, nausea, vomiting, abdominal cramps, with or without fever, should seek medical attention.

7. What infectious organisms might be present in contaminated water?

Disease transmission from contaminated water occurs principally by drinking water. The major organisms of concern are protozoa such as Giardia and Cryptosporidium, and bacteria, such as Shigella, E. coli and viruses. These organisms primarily affect the gastrointestinal system, causing diarrhea, abdominal cramps, nausea, and vomiting with or without fever. Most of these illnesses are not usually serious or life threatening except in the elderly, the very young or those who are immuno-compromised.

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**TROPICAL STORM/HURRICANE INFORMATION SHEET
STOCK BOIL WATER MESSAGE**

Due to flooding and damage caused by the storm, the Florida Department of Health (DOH) is advising individuals under a boil water notice to take precautions against contaminated water. If your well has been covered with flood water, your water may contain disease-causing organisms and may not be safe to drink.

DOH recommends one of the following for private well owners:

- Use bottled water, especially for mixing baby formula; or
- If power is available, boil water before use, holding it at rolling boil for at least one minute before using it for drinking, washing, cooking, etc.; or
- If power is not available, disinfect water by adding 8 drops (about 1/8 tsp – this would form a puddle about the size of a dime) of plain unscented household bleach (4 to 6%) per gallon of water, and then let it stand for 30 minutes. If the water is cloudy after 30 minutes, repeat the procedure. Use a container that has a cap or cover for disinfecting and storing water to be used for drinking. This will prevent contamination.

After the flooding subsides:

- Disinfect your well using the procedures available from your local health department or provided on the Department of Health website at:
<http://www.doh.state.fl.us/environment/water/manual/floodinf.htm>;
- Have your water tested by your local health department or by a laboratory certified by the State to perform a drinking water analysis for coliform bacteria.
- Continue to use bottled/boiled/disinfected water until lab tests confirm the water is safe to drink.

For further information, please contact your local county health department or visit:
www.doh.state.fl.us or www.FloridaDisaster.org.

The Florida Emergency Information Line: 1-800-342-3557

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