

# Flood Environmental Precautions

## Precautions following reports of heavy rains and flooding in Fort Bend County Texas.

### Watch:

- Watch for news media announcements about the safety of public drinking water supplies, Follow "boil water" alerts that may be issued by local water utilities or the Texas Commission on Environmental Quality.
- Persons under boil water alerts and persons with private wells that may have been contaminated by flood water should use only bottled, boiled or treated water until water has been tested and found safe.
- .If you boil water for drinking purposes, allow it to boil for at least one minute. Water also may be disinfected with chlorine or iodine (follow package directions) or with ordinary household bleach -- one- eighth teaspoon (about eight drops) per gallon of water. Sterilize water containers and drinking utensils with a solution of household bleach.

### Food:

- Do not eat food that has been in contact with flood water.
- If electricity has been off, refrigerated food may have spoiled. Discard any food that has been at off temperature of 41 F for more than four (4) hours or if it has an unusual odor or color. Thawed food from freezers may be safe for consumption or refreezing if it is still partially frozen or is "refrigerator cold."
- Babies on formula should be given ready-to-feed formula or powdered formula prepared with bottled drinking water.
- Do not drink water from unknown sources.
- Wash hands with soap and disinfected water before eating or handling food, after clean-up work and after handling flood water-contaminated items.

### Environmental Hazards:

- Snakes and other wildlife may seek shelter in trees, homes and vehicles. Bats are often injured in heavy rains and winds. Do not handle these or any other bats. Seek immediate treatment if bitten or injured by an animal. Beware of displaced pets.
- Return home in daylight for best visibility and to avoid using unsafe power sources. Do not use lanterns or torches until after *the* premises are safe from gas leaks.

### Chemical Hazards

- Use extreme caution when returning to your area after a flood. Be aware of potential chemical hazards you may encounter during flood recovery. Flood waters may have buried or moved hazardous chemical containers of solvents or other industrial chemicals from their normal storage places.
- If any propane tanks (whether 20-lb. tanks from a gas grill or household propane tanks) are discovered, do not attempt to move them yourself. These represent a very real danger of fire or explosion, and if any are found, police or fire departments or your State Fire Marshal's office should be contacted immediately.

- Car batteries, even those in flood water, may still contain an electrical charge and should be removed with extreme caution by using insulated gloves. Avoid coming in contact with any acid that may have spilled from a damaged car battery.
- Standing water after floods is a breeding place for mosquitoes. Drain, all standing water and empty water to outdoor items such as old tires, cans and flower pot bases, Protect yourself with an appropriate insect repellent.
- Let no one re-enter your home while flooded unless the main electrical switch has been turned off.
- Wear shoes in post-flood areas to reduce the chances of punctures or cuts from nails and other sharp contaminated objects.

### **Medical:**

- Persons with puncture wounds or cuts exposed to flood water could be at risk of contracting tetanus and may need to have a tetanus shot to prevent infection.

### **General:**

- Do not allow children to play in or near flood water or storm drains.
- Disinfect all furniture, woodwork and other household surfaces in homes that have flooded.
- Wash hands frequently during cleanup to lessen recontamination of cleaned areas.
- To prevent allergic reactions and other health problems caused by mold, replace porous wallboard (from at least 12 inches above the waterline) that has been flood-damaged.
- Disinfect children's toys with a solution of one cup bleach to five gallons of water.
- To prevent producing toxic fumes, do not mix bleach with products that contain ammonia.
- To prevent carbon monoxide poisoning, do not burn charcoal or use gasoline-powered generators or pumps indoors.
- Try to rest and conserve energy and avoid heat stress. Persons with heart conditions and other illnesses should avoid strenuous exertion.



**HEALTH & HUMAN SERVICES**  
**Environmental Health Department**  
**Fort Bend County, Texas**

281-342-7469 Office

281-342-5572 Fax

## **Water Sample Instructions**

Regardless if a water well is new or existing, water sampling must be done with special consideration to obtain a good water sample and avoid additional contamination. Please read this document completely, as it outlines the correct procedure for taking a water sample.

- 1. Obtain an approved sterile sampling container and *current* Water Sample Form.** These may be picked up from our office or the City of Houston Water & Dairy Laboratory. Do not use jars or other containers from home or other sources. Use approved water sample containers only.
- 2. Select a cold water faucet or tap nearest the well.** Most wells have a faucet located on the water line exiting the tank. Samples should come directly from the well or the tank. If a water softening or filtration system is connected to the water source, the water sample should be taken from a tap or faucet prior to either of these types of system.
- 3. Remove anything attached to the faucet.** Hoses, aerators, or anything else attached to the sample faucet may cause contamination.
- 4. You want fresh well water in your sample.** Turn on the tap or faucet. Let it run for at least ten minutes so that the well pump is activated and you obtain a fresh supply of water from the well.
- 5. Do not get your hands dirty.** While the water source is running, wash your hands thoroughly with soap and water. Do not handle animals, place anything in your mouth, or do anything that might contaminate your hands and cause the water sample to become inadvertently contaminated.
- 6. Turn off the faucet and sanitize it.** If the faucet is metal, it can be done by heating it with a cigarette lighter or a propane torch. Heat the faucet until it is dry. If the sample is to be taken from a plastic or chrome faucet such as your kitchen sink, do not heat it. Swab inside and around the opening of the faucet with a cotton ball soaked in rubbing alcohol or use a spray bottle containing a water/bleach mixture.
- 7. Collect the sample.** Turn the faucet on to a slow trickle. Carefully open the water bottle making sure not to touch the inside the cap or the bottle threads. Avoid breathing into the bottle. Fill the bottle to the neck and secure the cap. While filling the bottle, do not lose or rinse out the white substance inside the bottle. This is sodium thiosulfate. Its purpose is to neutralize any chlorine in the water sample.

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8. **Protect the sample.** Keep the sample out of direct sunlight and away from heat. Until you are ready to bring the sample in, keep the sample cool, **not** frozen, in a refrigerator or cooler. After you take the sample, you have **twenty-eight (28)** hours to deliver it to the lab.
9. **Fill out a sample form.** Complete the form using **black ink** only. Make sure the information is complete. If you have a **Public Water System**, make sure to include the **ID number** in the space provided on the form. If you have a chlorinated well, make sure to test the chlorine residual and include that information in the space provided on the form. After completion the form, include a check or money order for **\$16.50** payable to the City of Houston. **No cash.** Wrap the form and payment around the bottle and secure it with a rubber band. If you have an account with the Houston Lab, include your account number on the form or the sample may not be processed.
10. **Get the sample to the lab.** As a courtesy, this office will courier water samples submitted on **Wednesdays** between the hours of 8:00am and noon. You should receive the laboratory report within 7-10 days. Should your report not arrive in two weeks, you may contact the laboratory by telephone. The following information will be required to locate the results: (1) the date the sample was brought in (2) the county in which the sample was collected and (3) the return address exactly as the form was completed. Should you need results for a real estate closing, please fill out the form for FAXING RESULTS which can be obtained in our office.
11. **What the laboratory report means.** If coliform organisms are **not found**, the water is bacteriologically safe to drink. If coliform organisms **are found**, the water contains bacteria commonly present in sewage which might include typhoid or other disease producing bacteria. Contaminated water **should not** be used for drinking or washing teeth, wounds, or vegetables which are to be eaten raw. Use bottled water until the water supply is decontaminated. Contaminated water may be boiled for a minimum of 20 minutes or may be treated with 6 to 10 drops of household chlorine bleach per gallon at least 30 minutes before use.
12. **How to treat a contaminated well.** Obtain 1 gallon of chlorine bleach. Dilute it with 5 gallons of water and pour it directly into the well casing. Connect a garden hose to a faucet near the well and let it flow into the well casing until the odor of bleach is detected from the hose. Shut off that faucet and open all other cold water faucets until the bleach odor is detected from each faucet. Then open all hot water faucets to allow the bleach into the cold water line serving the water heater. Let the bleach remain in the well and piping for at least 4 hours, preferably overnight. Then open one exterior faucet and let the water run until the bleach odor is gone. Next flush each cold water faucet similarly. Wait 3 days before taking a new sample to the laboratory. It is not unusual repeat this treatment 3 or 4 times before no contamination is found by laboratory tests. All wells should be tested for contamination at least twice each year.

**Water samples are only tested for the presence of fecal coliform bacteria. If you desire your water tested for other substances, contact the Texas Commission of Environmental Quality at (713) 767-3500 for further information.**

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