



Cleanup in the Aftermath of Flooding

By the Water Quality & Health Council

With record flooding in areas of Texas and the 2016 hurricane season just beginning, we think a word to the wise on cleanup in the aftermath of flooding is in order. First, assume that all flood waters are contaminated and that exposure to these waters may raise the risk of diarrhea, dysentery, and even hepatitis, skin and eye infections and respiratory disorders.



The first step in the cleanup operation is to remove flood water and sewage and dry the affected area. Powerful fans and enhanced ventilation are helpful for drying damp structural surfaces. Meanwhile, it is important to evaluate items contacted by flood waters, deciding what to discard and what to keep. Whenever possible, a disinfecting solution of water and chlorine bleach should be applied to affected surfaces of saved items.

To help prevent disease transmission associated with flood cleanup, the Water Quality and Health Council offers the following tips:

- When using a disinfecting solution to clean up after a flood, remember to:
 - Wear gloves and protective clothing. Do not touch your face or eyes.
 - Change the disinfecting solution often and whenever it is cloudy.
 - Be thorough. Wash and dry everything well.
 - When finished, wash your hands thoroughly with soap and water for at least 20 seconds, even if you have worn gloves.
- If an item got wet, assume it is contaminated.
- Disinfecting works best when all loose dirt and debris are removed first. That's why the [Centers for Disease Control and Prevention recommends](#) first washing surfaces with soap and warm, clean water. Next, use a household bleach solution to disinfect.

- Prepare a bleach solution (3/4 cup regular strength chlorine bleach or 1/2 cup concentrated bleach to one gallon of water) to disinfect walls, floors and other surfaces touched by floodwaters. Keep the area wet for at least two minutes.
- When addressing exterior surfaces, such as outdoor furniture, patios, decks and play equipment, keep surfaces wet with disinfecting solution for 10 minutes after removing loose dirt and debris with soap and warm, clear water. This may mean wetting the surface with disinfecting solution more than once.
- Carpets and rugs that have been soaked for more than 24 hours should be discarded. If carpets and rugs were soaked for less than 24 hours, evaluate as follows: Carpets that contacted sewage-contaminated floodwater should be discarded. Carpets contacted only clean basement seepage or lawn runoff into a sub-basement, for example, may be dried and cleaned. Washable throw rugs usually can be cleaned adequately in a washing machine. For more information on cleaning flood-damaged carpets and rugs, see this [North Dakota State University website](#).
- Chlorine bleach solutions degrade quickly- be sure to make a fresh solution daily as needed. Unused solution may be discharged into toilet or sink.
- Contaminated clothing should be washed in the hottest possible water with detergent and chlorine bleach if fabric instructions permit.

Disinfecting Private Wells

If the wellhead has been submerged by floodwaters, the well has most likely been contaminated.

If microbial contamination is suspected (if well was flooded or if water is unusually cloudy, odorous or tastes different), immediate disinfection is recommended. If contamination is discovered through water sampling, disinfection is required. Private well water consumers may choose to have their water sampled again immediately after disinfecting to be certain water is safe to drink. Thereafter, periodic sampling can help provide assurance of good drinking water quality.

Consumers of private well water may contact the local health department for advice on well disinfection. This task can be carried out either by ground water professionals or by the homeowner using an array of information resources available from state and local health departments and government agencies. See, for example, the US Environmental Protection Agency's website, "What to Do With Your Private Well After the Flood" at: <https://www.epa.gov/privatewells/what-do-your-private-well-after-flood>

Note: Depending on the local geology, it is possible for an aquifer (underground water-bearing formation) to become contaminated by floodwater. In such cases, disinfecting the well may not ensure safe water. Aquifer contamination by floodwaters usually clears up after a period of time, but until water sampling confirms good water quality, the household served by a private well should disinfect all water used for drinking and food preparation.