

## Cleanup Following a Flood

### What are the health hazards after a flood?

Anyone who has been flooded out of their home is anxious to get back to ordinary life as soon as possible. It is important, however, to remember that floodwaters are usually very dirty and items in contact with flood waters should be handled properly. During a flood, water leaves the normal course of streambeds and washes over the countryside. After contact with farmyards, manure piles, refuse heaps, outhouses, overflowing septic systems and other sources of disease, floodwaters become heavily contaminated and can make people sick.

### When is it safe to return home?

You should not live in a flooded home until cleanup is finished and a supply of safe water and proper disposal of human wastes and garbage has been arranged.

If your home is served by a public water supply system, your water supply is probably safe. You will be told if it is not safe. If your water supply comes from your own well, you must assume that the water is contaminated until tests show the water is safe. If the water in the well appears to be clear, it may be used after it has been boiled or disinfected.

### How do I clean my flooded home and outbuildings?

All movable furnishings should be taken outside. All woodwork should be cleaned well with soap and water. Upholstered furniture that has been in contact with water should be left outside to dry completely. Direct sunlight has a strong disinfecting power. Floors and surfaces should be scrubbed and cleaned well as soon as possible after the water has gone down.

After surfaces have been cleaned of mud and silt, they should be washed with a sanitizing solution. The solution can be made by mixing one pound of chlorinated lime to 6 to 10 gallons of water (500 g in 25 to 40 litres). Household laundry bleaches with 5 to 6 per cent sodium hypochlorite may be used as well. Mix one quart of household bleach to 6 to 10 gallons of water (1 litre of household bleach to 25 litres

water). Be sure to wear protective gloves as strong solutions may irritate skin and cause respiratory symptoms. Wear eye protection when mixing chlorinated powdered lime solutions.

All standing water in flooded basements should be disinfected, but remember to wait until the floodwaters have left the surrounding ground. Mix two quarts of household bleach in a pail of water. The mixture should be spread evenly over the basement water and stirred as much as possible. This should be repeated every four to five days for as long as the water remains. In pumping basements, care must be taken not to pump the basements too quickly. Water in the surrounding soil may cause the basement walls to collapse and/or uplifting of basement floors.

Once the water has left the basement, remove all the silt and mud right away. You may need to use a hose, buckets of water, and rough scrubbing. Remove all stored furniture, and other items. Open all the windows to help with drying, and if possible, apply heat using a furnace or stove. All surfaces that have been exposed to flood waters should be disinfected by brushing on a sanitizing solution.

All sheds, garages and other buildings where goods are stored should be cleaned and disinfected. In particular, utensils used to prepare, preserve or store food should be washed well and soaked in a chlorine solution.

### What about outhouses, septic tanks and disposal fields?

High water will flood outhouse pits, which can be dangerous to local water supplies. If the outhouse building remains in place it may be used as soon as the water has left the surface of the ground. But in order to eliminate the risk of contaminating the water table, you should empty the contents of one pound of fresh chloride of lime (or two quarts of six per cent bleach) into the pit every three or four days for as long as water remains in the pit. If the outhouse building has been washed away, a new one should be built as soon as possible.

Open outhouse pits should be covered to prevent accidents.

Flooding can seriously affect your septic system by undermining the soil that supports it. After the floodwaters have receded and you are allowed to return home, consult with your local public health inspector and an authorized person in septic system construction and maintenance for advice on your septic system.

Following the cleanup of buildings, you must remove flood-borne material from yards. All combustible material should be raked up and burned as soon as possible. *Non-combustible refuse* should be collected into heaps for removal by the local garbage pickup. If no local garbage pickup is available, as much as possible of the non-combustible refuse should be collected and taken to a sanitary landfill in your area. Particular effort should be made to remove all filth that might, in warm weather, serve as a breeding place for flies and rodents. If this is not possible, such places should be sprayed with suitable pesticides.

### **What precautions should be taken for food safety after a flood?**

The following precautions should be taken when food has come into contact with floodwaters:

- Food that has come into contact with floodwaters should be destroyed unless it has been packaged in waterproof containers that can be easily cleaned and sanitized.
- It is hard to make food that has been directly exposed to flood waters safe to eat. Washing and sanitizing food cannot be done well enough in most cases. Normal cooking temperatures may not be enough to destroy disease causing bacteria and viruses if the food has been heavily contaminated.
- Never eat or drink uncooked foods exposed to flood waters, including raw foods you have tried to wash and sanitize. Perishable foods such as meat, poultry, eggs and dairy products should always be thrown out.
- Strict sanitary actions must be followed when handling foods that have been exposed to flood waters. Remember to wash your hands often.
- Always wash your hands well before eating if you have been cleaning up after a flood.

### ***If in doubt - Throw it out!***

- Canned goods should be thrown away if the seal is damaged, the can is bloated, or the contents show signs of seepage. Cans in good condition should only be opened after the label has been taken off, and the can has been washed well in warm soapy water, and then put into a sanitizing mixture. A sanitizing mixture can be made by mixing 5 ounces (10 tablespoons) of 5 to 6 per cent household bleach to 1 gallon of water (40 mL of household bleach to 1 litre of water). Remember to clearly mark the contents on the can if it will not be used right away after washing and sanitizing.
- Previously opened bottled food and drink products should be thrown out because it is very hard to clean under the caps. Unopened bottles should be discarded if the contents show signs of seepage.
- All contaminated utensils, dishes and food contact surfaces, such as cutting boards and counter tops should be washed with warm soapy water, and then sanitized.

**For more information about cleanup following a flood, please contact the environmental health officer at your local public health unit.**



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