



FLOOD CLEANUP HEALTH TIP SHEET **DOUGLAS COUNTY HEALTH DEPARTMENT**

Food & Drink Section: (402) 444-7480
Sanitation Control: (402) 444-7481
Sanitary Engineering: (402) 444-7485

In order to provide one convenient source of emergency health information for those who must return to, live in and salvage flood-stricken homes, the Douglas County Health Department has summarized and recommends the following Flood Cleanup Health Tips:

WELL WATER

If you suspect your well water may have been compromised by the flood, please use bottled water until the well can be tested by a professional.

STAGNANT WATER

Stagnant water is to be avoided in all instances as it can be a source for numerous diseases and infections. It also needs to be removed when possible as it will provide a breeding ground for mosquitoes and the diseases they carry.

SEPTIC SYSTEMS

Returning a septic system to service after a flood can be somewhat involved, but here are some basic steps to follow.

- Do not pump your tank until surface and ground water recede to normal levels.
- Do not pump unanchored tanks until the drain field is saturated. The tanks could float out of the ground or collapse.
- Have septic systems inspected by a certified professional and serviced if not functioning properly.
- Use as little water as possible while the system is restoring itself. Little things like taking laundry to a laundromat will help.
- Do not dump flood waters that entered the house into plumbing that will go into the septic treatment system.
- Do not drive over the system or set building materials over the system during clean-up or restoration activities. It is good to fence off the system to prevent those problems.
- If the septic system will not accept wastewater after the floodwater has receded and the soil has dried, the drain field or soil may be plugged and a certified professional should be called.
- Flood waters can partially or completely wash away components of septic systems. This is another situation in which you should call a certified professional.
- If you observe surface discharge after the lateral area has dried, it is a sign of a failed septic system and a certified professional should be called to help.

SALVAGING DAMAGED FOODS

To prevent food-borne illness, diarrheal diseases and dysentery, the following items should be destroyed if they have been exposed to flood waters: Fresh meats and poultry; prepared and processed foods; home-canned foods; medicines and cosmetics; and packages that are not hermetically sealed (airtight), including flour, packaged frozen foods and other commodities in bags.

Throw out foods needing refrigeration if the refrigerator has been out for more than four (4) hours. Don't refreeze frozen foods which have thawed. Throw them out if they have been thawed more than four (4) hours. Call the Health Department if there is any question.

Since seepage can carry harmful bacteria into all but airtight containers, the contents of crown-capped bottles and screw-top glass containers (including canned food in glass jars) should be destroyed. Sealed metal cans that are punctured or leaking are unsafe. If airtight cans are in good condition, they can be salvaged. However, they must be carefully cleaned and disinfected before using the contents. Follow this procedure:

- (1) Remove labels. Keep the same kinds of foods together, or mark them in a way that will enable you to identify them after disinfection. Colored crayons or adhesive tape may be used.
- (2) Wash cans in warm water containing soap or detergent.
- (3) Soak the cans for at least fifteen (15) minutes in a disinfecting chlorine solution made by mixing four (4) tablespoons of liquid chlorine bleach with two (2) gallons of water. Rinse in clean, cool water that has been boiled for at least five (5) minutes.

INSECT AND RODENT CONTROL

To guard against a possible influx of rats, flies and mosquitoes in flood-damaged areas, the following precautions should be taken:

- (1) Clean up all debris and refuse as soon as possible.
- (2) Properly store all usable food.
- (3) Place garbage and all spoiled food in secure, fly-tight and rat-tight containers while waiting for collection.
- (4) Suspend garbage containers from a tree or post if rats are seen in the area.
- (5) Make necessary repairs in all window and door screening.
- (6) Dump any containers holding water and eliminate any standing pools of water around the home.

CLEANING CLOTHING AND BEDDING

Since disease-producing bacteria often carried by floodwaters can remain alive in and on fabrics for long periods, care in laundering clothing and bedding is essential.

First, brush off all dirt and, if mud-stained, rinse in cool water until as much mud as possible is removed. Then wash as usual, using enough detergent to keep soil from redepositing on fabrics.

The use of a disinfectant in the rinse water is especially recommended to destroy bacteria. Two types of disinfectants are effective, such as Lysol and Clorox (liquid chlorine bleach).

Mattresses soaked with floodwater should be discarded; reconditioning is too difficult to be done at home.

ENTERING DAMAGED BUILDINGS

If there are any doubts about the safety of a building which has been flooded, do not enter it. Seek professional advice first.

When you do enter a damaged building, check it for buckled walls, loose bricks, cracks, or any shifting of the foundation.

Do not pump flooded basements out too quickly, because the water-saturated ground around the basement could push the walls in.

Follow the instructions of your utility company concerning the restoration of gas or electrical services.

PERSONAL HYGIENE

Several simple rules of personal cleanliness should be followed:

- (1) Wash hands with soap and water after using the toilet or participating in flood clean-up and handling food.
- (2) Use boiled or disinfected water for brushing teeth.

SAFETY PRECAUTIONS

During the urgency of clean-up time, people are often inclined to overlook proper safety measures. Below are a few reminders:

- (1) Wear protective clothing covering limbs, feet and hands while cleaning up debris and rubber gloves while scrubbing flood-damaged interiors and furniture.
- (2) Set priorities; accomplish the vital tasks first and avoid physical overexertion.
- (3) Regardless of the crisis, be sure children are safe and being cared for at all times. Never leave them alone or allow them to play in flood-damaged buildings or areas that might be unsafe.
- (4) Give special attention to cleaning children's toys, cribs, playpens and play equipment. Items a baby or toddler may put in his/her mouth should be boiled. Discard all stuffed toys and those that are water logged or not easily cleanable.
- (5) Keep chemicals used for disinfection and poisons for insect and rodent control out of the reach of children.
- (6) Be sure electrical appliances are dry and in good condition before using.

MEDICINES

Discard all medicines exposed to flood waters and have all needed prescriptions refilled as soon as possible.

CLEANING OF COOKING AND EATING UTENSILS

Dishes, pots and pans that have been covered by flood waters should be carefully washed and disinfected before use. Wash everything in hot, soapy water using a brush, if necessary, to remove dirt. Rinse everything thoroughly in safe water, then disinfect by immersing for fifteen (15) minutes in a chlorine solution made up of two (2) Tablespoons of liquid household bleach in one (1) gallon of water.

Pots and pans can be sterilized by boiling for at least ten (10) minutes. Dishes with cracks should be thrown away.

FOOD PREPARATION

Here are a few hints to ensure safe and easier meals:

- (1) Boil all water used in food preparation vigorously for one (1) minute.
- (2) Wash hands and cooking utensils in a disinfecting solution made by mixing two (2) teaspoons of liquid commercial laundry bleach with each one (1) gallon of clean water, or two (2) Tablespoons of liquid commercial laundry bleach in three (3) gallons of clean water.
- (3) Conserve fuel, water and energy, as well as the number of cooking and serving utensils, by preparing casseroles and one-dish meals, such as stews, pot roast and thick, nourishing soups.
- (4) Save the liquids of canned vegetables. Substitute them for water in recipes for soups, stews and other cooked dishes.
- (5) Drain and save juices from canned fruits. They may be mixed and combined with other canned fruit juices and used as beverages and in making gelatin salads or desserts, instead of scarce water.
- (6) If your oven is in working condition, use it to cook stews, vegetables and other foods. Oven cooking will require less attention and free you to do other tasks while the meal cooks.
- (7) If you lack refrigeration, cook only as much as can be eaten at one meal. If you have refrigeration, save time by preparing food for several meals in advance.
- (8) When purchasing formula ingredients, evaporated or dry skim milk for infants, be sure the containers are sealed. After opening in the home, be sure they are tightly covered to prevent contamination. In the absence of refrigeration, make up only enough formula for immediate use.
- (9) Avoid foods that are subject to quick spoilage and bacterial contamination, such as creamed foods, hash, custards and pies, salads and sandwiches mixed with mayonnaise or other perishables, unless refrigeration is available.
- (10) Hash, croquettes, meat pies and ground meats are easily spoiled and contaminated. If used, they should be served promptly.
- (11) Avoid keeping prepared or cooked food at room temperature. Keep hot foods hot and cold foods cold.

In general, commercially canned and packaged foods are recommended:

- Canned dried milk
- Canned meats, fish, poultry
- Canned or packaged staples
- Canned fruits or vegetables
- Canned juices
- Packaged, dried or dehydrated foods
- Canned or packaged biscuits, breads, crackers, cookies

OTHER CONSIDERATIONS

The Primary causes of flooding severe enough to inundate a home are bad enough: violent weather such as hurricanes, overflowing rivers, dam ruptures, etc. However, a second effect presents a double whammy of danger: standing water inside a house after flooding is hazardous in a number of ways.

The temptation to take control of the situation ASAO by entering a home that's still flooded is understandable. Because the risks are formidable, however, it's usually a job that should be left to a qualified professional. Here are some of the dangers that lurk beneath the surface of standing floor water in a house:

- Sharp objects underwater such as shards of broken glass common in the wake of a severe storm pose a hidden hazard to persons wading about in a flooded interior. Submerged splintered wood also can cause cuts, as well as nails exposed by infrastructure damage.
- Electrocutation is a major threat. Standing water may be electrically charged if the power is still on inside the house or even from a nearby downed power line. The only way to ensure that a flooded house is safe is to have an electrician removed the meter, disconnecting all power to the home. Never attempt to access the main electrical panel if it is located in a flooded or wet part of the house.
- Chemicals and other toxins picked up as a flood moves across the landscape are included in the indoor floodwater. After one recent hurricane, the analysis detected high levels of lead, arsenic and solvents – all of which are carcinogenic – in measurable concentrations, as well as assorted pesticides.
- Since floods typically flush out municipal sewage systems, E. coli bacteria, staphylococcus and even flesh-eating bacteria may also be present in the house. The Health Department recommends that persons coming into contact with the flood water consider getting tetanus booster shots.
- Various displaced insects, animals and snakes may take refuge inside a flooded home. Mosquitoes also utilize stagnant water inside a house to lay eggs. Statistics after a recent hurricane showed an increase in mosquito-borne illnesses.

*For additional information, please contact the Health Department at (402) 444-7825.