



■ Floods: Drying Out

This publication is intended to give quick, brief answers to the many issues that arise after a flood. You will not find detailed instructions here, but the answers will direct you to short fact sheets and the sections of several booklets that have detailed instructions.

BEFORE ENTERING THE BUILDING, MAKE SURE IT IS STRUCTURALLY SOUND AND SAFE TO ENTER. IF YOU ARE NOT SURE, ASK LOCAL OFFICIALS FOR ADVICE. THIS IS VERY IMPORTANT!

■ Drying Out the House

First: Remove as much water as possible, using pumps, wet-dry vacuums, squeegees, etc. (A basement filled with water should be emptied about one-third per day. Rapid water removal may cause the basement walls to collapse. See more information below.) Mechanically remove as much water as possible; this is easier than drying by evaporation. Remove mud and silt. If flooding involved polluted water (chemicals, sewage, etc.), then additional cleaning and sanitizing will be necessary. Refer to "Types of Flooding" below.

Second: Once all liquid water has been removed, the wet building will need to be dried out, and contents will need to be dried or thrown away. If electricity is available, fans greatly increase the evaporation rate if the air the fan is moving is dry. Fans must be combined with a method of removing moisture from the air, such as some type of dehumidification or ventilation air exchange pulling in warm, dry exterior air and exhausting damp inside air. Electric space heaters can provide heat, but large heaters are required to warm the air enough to efficiently dry. Fuel fired heaters produce large amounts of moisture, so they are of limited value unless the heaters are vented to the outdoors. Burning a gallon of kerosene produces about a gallon of moisture. (Professional equipment includes refrigerant and desiccant dryers.)

Walls that have gotten wet must be completely dried out before they can be rebuilt. Mold will grow in wet walls that are closed up before they dry. Sometimes wet plaster can be recovered if it has not separated from the lath. Usually, wall board or plaster is torn out to the floodline, in increments of two feet (for example, 2 feet, 4 feet or 6 feet), to be replaced by half or whole sheets of drywall. If future flooding is a possibility, consider using paperless ("mold proof") drywall. Wet insulation must be discarded. If moldy, wall cavities need to be cleaned. Walls are then allowed to dry before being closed up. Mold can be a health hazard and must be removed before the house can be lived in. For specific details, see "Creating a

Healthy Home: Field Guide for Clean-up of Flooded Homes," sections 5-7, Enterprise Community Partners and National Center for Healthy Homes.

■ **Flooded Basements**

If the basement is flooded, do not enter unless you know for certain that the electricity is shut off from the outside. If you know, for sure, that electricity is off for the entire neighborhood, you can safely shut off power at the home's main switch.

Flooded basements can be pumped out once outside floodwaters have receded. Local fire departments or emergency agencies often are able to help with pumping out basements.

IMPORTANT! If the earth outside has been saturated, then pumping must be done slowly, as groundwater subsides. Otherwise, extra pressure from the groundwater will cause basement walls to cave in. Refer to "Types of Flooding" below.

■ **Types of Flooding: Know What You're Dealing With.**

There are three types of flood waters:

- Category 1 is clean water posing no threat to human health. This could be from a roof leak (rainwater) or a broken water (supply) pipe.
- Category 2 water contains significant chemical, biological or physical contamination. This water can cause discomfort or sickness in humans. This type of flood water is also called "grey water."
- Category 3 water contains biological agents coming from sewage or other sources that are likely to cause discomfort or illness. All seawater, ground surface water or waters rising from rivers or streams falls into this category. This type of flood water is also called "blackwater." This water will have silt in it and perhaps other foreign matter and is considered very unsanitary.

For both grey water and blackwater, special measures are needed for cleanup and sanitizing. Professionals with specialized training are best equipped to work in areas with such contamination. If you must enter, be sure to wear gloves, boots, goggles, a suitable respirator and protective clothing. This contamination poses significant health threats. Use cleaners to wash all flooded surfaces, then sanitize using a solution of one cup of chlorine bleach to one gallon of water. The surface should stay moist for 10 to 15 minutes for the sanitizing to occur.