



■ **Cleaning and Repairing Flooded Basements**

Before you enter a flooded basement, take time to:

- Turn off the electricity, preferably at the meter.
- Check outside cellar walls for possible cave-ins, evidence of structural damage or other hazards.
- Turn off gas or fuel service valves.
- Open doors and windows or use blowers to force fresh air into the basement.

■ **Pumping**

For safety reasons, do not use an electric pump powered by your own electrical system. Instead, use a gas-powered pump or one connected to an outside line. Fire departments in some communities may help with pumping services.

- More damage may be done by pumping flooded basements too soon or too quickly. Water in the basement helps brace the walls against the extra pressure of water-logged soil outside. If water is pumped out too soon, walls may be pushed in or floors pushed up. To help prevent this kind of structural damage:
- Remove about a third of the water each day. Watch for signs of structural failing.
- If the outside water level rises again after the day's pumping, start at the new water line.
- Don't rush the pumping; the soil may be very slow to drain. Whatever is submerged in the basement will not be damaged further by delaying the pumping.

■ **Cleaning**

After water has been pumped from the basement, shovel out the mud and debris while it is still moist. Hose down walls to remove as much silt as possible before it dries. Floors and walls may need sanitizing, particularly if sewage has entered the basement. Scrub walls and floors with a disinfecting solution of 1 cup chlorine bleach per gallon of water.

Oil stains caused by overturned or damaged oil tanks also may be a problem following basement flooding. Commercial products, available from fuel-oil

suppliers, will help neutralize fuel oil. The products come in powder form or an aerosol spray for hard-to-reach places. To remove oil stains and destroy odor: wipe up excess oil, shake or spray product on the spot according to manufacturer's directions, let it set, then sweep it up.

■ Inspection and repair

Before beginning repairs, make a thorough inspection of supporting columns, beams, walls and floors. Unless you have structural expertise, hire a contractor to make a professional survey. (Consider joining with neighbors for a group-rate inspection.) Repairs may extend to the following:

- ***Buckled walls:*** Signs of buckling include horizontal cracking and areas that have moved out of vertical alignment. When this condition is minor, you need not repair the wall immediately. However, any noticeably buckled wall will eventually collapse from normal ground pressures and seasonal temperature changes. When buckling has seriously weakened the wall, the damaged parts should be rebuilt immediately. Pilasters (vertical reinforcements) may need to be constructed into walls over 15 feet long.
- ***Settled walls and footings:*** indicated by vertical cracks either in small areas or throughout the structure. Repairs are difficult without special equipment. Contact a reliable contractor for this work.
- ***Heaved floors:*** those that have not returned to their original level or have cracked badly. The floor may have to be removed and a new floor constructed. If a floor is badly cracked, but has returned to its original level, a new floor may be placed over the old one. A vapor barrier should be added between the two floors. The new floor should be at least 2 inches thick.

In houses without basements, the area below the floor may be completely filled with mud. Shovel out the mud as soon as possible to avoid rotting joists or foundation wood.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/cleaningandrepairingfloodedbasements.html>