



Protecting Your Business From Flooding

FEDERAL EMERGENCY MANAGEMENT AGENCY

ARE YOU AT RISK?

If you aren't sure whether your business is at risk from flooding, check with your local floodplain manager, building official, city engineer, or planning and zoning administrator. They can tell you whether you are in a flood hazard area, and they can also tell you how to protect your business from flooding.

WHAT YOU CAN DO

Protecting your business from flooding can involve a variety of actions, from inspecting and maintaining your buildings to installing protective devices. Most of these actions, especially those that affect the structure of your buildings or their utility systems, should be carried out by qualified maintenance staff or professional contractors licensed to work in your state, county, or city. One example of flood protection is using flood-resistant construction materials.

BUILD WITH FLOOD-RESISTANT MATERIALS

If your business is in a flood hazard area, you can reduce the damage caused by flood waters and make cleanup easier by using flood-resistant building materials. Building materials are considered flood-resistant if they can withstand direct contact with flood waters for at least 72 hours without being significantly damaged. "Significant damage" means any damage that requires more than low-cost, cosmetic repair (such as painting). As shown in the figure, flood-resistant materials should be used for walls, floors, and other parts of a building that are below the flood level. Both FEMA and the U.S. Army Corps of Engineers have published lists of these materials (see OTHER SOURCES OF INFORMATION on the back of this sheet). Commonly available flood-resistant materials include the following:

Flooring Materials

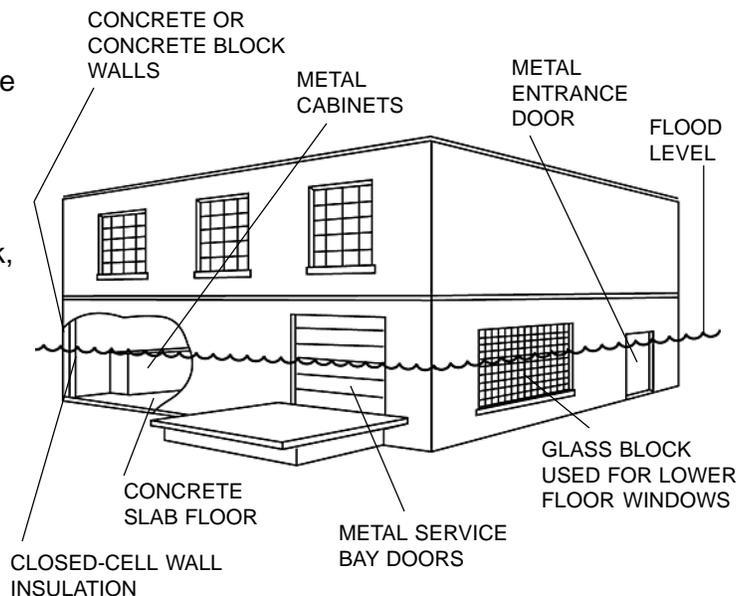
- concrete and concrete tile
- ceramic, clay, terrazzo, vinyl, and rubber tile
- pressure-treated (PT) and naturally decay-resistant lumber

Wall and Ceiling Materials

- brick, concrete, concrete block, glass block, stone, and ceramic and clay tile
- cement board
- polyester epoxy paint
- PT and naturally decay-resistant lumber
- PT and marine-grade plywood
- closed-cell and foam insulation

Other

- metal doors and cabinets



Protecting Your Business From Disasters

Build With Flood-Resistant Materials

TIPS

Keep these points in mind when you build with flood-resistant materials:

- ✓ Remember that as long as your building remains exposed to flooding, it is likely to be damaged, even when you use flood-resistant materials. Some amount of cleanup and cosmetic repair will usually be necessary. Also, although using flood-resistant materials can reduce the amount and severity of water damage, it does not protect your building from other flood hazards, such as the impact of floodborne debris.
- ✓ All hardware used in areas below the flood level should be made of stainless or galvanized steel.
- ✓ Flood insurance will not pay a claim for damaged finishing materials below the Base Flood Elevation (BFE), even if those materials are considered flood-resistant.
- ✓ If your business is in a coastal flood hazard area, installing flood-resistant materials in areas below the BFE may create an obstruction, in violation of National Flood Insurance Program regulations. Check with your local building official or floodplain manager before making any modifications to your buildings.
- ✓ Areas of a building that are below the BFE should be used only for parking, storage, and access.

ESTIMATED COST

The cost of using flood-resistant materials will vary depending on the size of the project you undertake. Your local building official and contractors can give you cost estimates for materials and installation.

OTHER SOURCES OF INFORMATION

Flood-Resistant Materials Requirements for Buildings Located in Special Flood Hazard Areas, FEMA Technical Bulletin 2-93, April 1993

Floodproofing Regulations, EP 1165-2-314, U.S. Army Corps of Engineers, December 15, 1995

Floodproofing Non-Residential Structures, FEMA 213, 1986

To obtain copies of FEMA documents, call FEMA Publications at 1-800-480-2520. Information is also available on the World Wide Web at <http://www.fema.gov>.