

Pre-Planning for a Flood

Flood headlines occur all too often. Flooding is one of the most common and widespread types of natural disaster. It can occur at any time of the year in any part of the country. Flooding is most likely to occur during snow thaw, spring rains, thunderstorms and tropical cyclones. Floods can happen in a matter of minutes or can build up over a period of time.

Most people assume that because they are not located in a floodplain, they should not be concerned by the potential of flooding. While flooding often occurs in floodplains near rivers, streams, lakes or ponds, it can just as easily occur in other areas.

Understanding that flooding can occur at any of your facilities at any given time is the first crucial step in preparing your agency for a potential flood. Once you realize that there is a potential risk for just about any building, you can begin taking steps to minimize the damage caused by floodwaters.

Learn about the flood risk for all of your facilities.

You can learn about flood risk by contacting any one of the following agencies:

- ▶ Your local Red Cross Chapter
- ▶ Emergency Management Office
- ▶ Local National Weather Service office
- ▶ Your local planning and zoning department.

These resources often have information about the risk for your area and your elevation above flood stage. They may even be able to provide you with projected flood information that can help determine how much water is likely to affect your facility.



Hurricane Rita in the Gulf of Mexico
(Image courtesy of NOAA.gov)

Flood Planning

June 2001

Tropical Storm Allison dumps 36 inches of rain in some areas. Damages to Houston alone are estimated to be \$1 billion.

May 2002

After three days of severe flooding in West Virginia, Kentucky and Virginia, some 2,300 homes are damaged.

July 2004

More than a foot of rain falls across parts of the Northeast, causing record flooding. Five dams burst, homes are flooded and several rivers reach flood stage in New Jersey, Pennsylvania, Delaware and Maryland.

January 2005

Severe weather, including heavy rains and snowfalls continue to cause flooding and mudslides throughout California.

August/September 2005

Hurricanes Katrina and Rita, ranking among the top 5 most powerful storms of all time, strike the Gulf Coastline.

For additional information on recovering from a flood, contact:

American Red Cross, www.redcross.org, Federal Emergency Management Office, www.fema.gov, National Weather Service, www.nws.noaa.gov, U.S. Geological Survey, www.usgs.gov, Local Planning and Zoning Department

Once you understand the risks you face, you can determine what changes are necessary.

By implementing changes, you can minimize and quite possibly prevent damage to your utilities and the building itself. While flooding may still happen, clean-up and recovery time could be significantly reduced, helping you get back to providing valuable services to your clients as quickly as possible.

Some changes to consider to protect your utilities from damage:

- ▶ Ensure that the following items are elevated to a minimum of 12 inches above the projected flood elevation for that facility:
 - Electrical systems- panel board (electric fuses or circuit breakers), electric service lines (at the point where they enter the facility), outlets, switches, light sockets, baseboard heaters and wiring.
 - Furnace and water heater - these can be placed on masonry or protected by a flood wall. Some furnaces that operate horizontally can be suspended from ceiling joists (if the joists are strong enough to support the unit), or downdraft furnaces can be installed in the attic.
 - Appliances - washers and dryers can be placed on masonry or protected by a floodwall.
- ▶ Receptacles in areas that could get wet should be connected to a ground fault circuit interrupter (GFCI) to avoid the risk of shock or electrocution.
- ▶ Fuel Tanks - anchor them securely and place vents and fill line openings above projected flood levels. *Check with your propane company about securing propane tanks.*
- ▶ Install a floating floor drain plug at the drain location. The plug will rise up and close the drain should water start to back up in the pipe.
- ▶ Install an interior or exterior backflow valve on your sewer system, but be sure to check with your building department for permit requirements.
- ▶ Seal walls in basements with water proofing compounds to avoid seepage through cracks.
- ▶ Install a sump pump, water alarms, flood shields or doors.

Additional flood proofing options:

- Build drainage systems or levees around the property
- Seal openings such as low windows
- Construct floodwalls around basement doors and window wells
- Elevate buildings above projected flood levels

Be sure that any work done conforms to state and local building codes and is completed by a licensed electrician or other qualified professional.

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