

# Protect Your Employees and Business from Flood Damage

Allianz Risk Consulting



## Introduction

Floods are treacherous and a leading cause of business interruption. Whether or not your business is in a designated flood zone, flooding can still occur on your property. Rivers, lakes, creeks and levees can overflow onto streets, and potentially into buildings and outdoor storage areas.

How you protect your organization and employees from a flood may be critical to the success of your business and the health and welfare of your employees. It's never too early to prepare.

As a business owner, there are several steps you can take to help reduce damage from flood hazards. Primarily, it's important to establish a strategic emergency plan to quickly respond to a flooding event and a flood recovery plan that details the necessary steps to take after a flood. Allianz Global Corporate & Specialty risk consultants have compiled the following information to help you prepare.

## Flood Causes

Whether it's from melting snow, hurricanes or thunder storms, water can cause severe damage to your property and business operations. Careful attention should be given to loss mitigation before, during and after major weather events and flooding.

The most common causes of flooding include:

- Heavy rains – Intense rainfalls can cause rivers to overflow into surrounding flood plains and surface water to flow into other areas
- Hurricanes – Hurricanes are often accompanied by heavy rains and therefore cause significant riverine flooding in inland areas
- Ice Jams – In colder climates, flooding can be caused by the obstruction of a river or stream by ice
- Sheet Flows – This flood type generally occurs where mountains intersect. Water from rain or melting snow flows down the slope in wide paths or sheets

- Seiche – A seiche is an oscillation of water from a lake or bay caused by seismic disturbances, wind wave, or unusual abrupt changes in atmospheric pressures that abnormally raise the water level, causing rivers to overflow their banks
- Storm Surge – Low pressure associated with a hurricane causes the ocean water surface beneath the hurricane's eye to be lifted
- Tsunamis – Large ocean waves caused by undersea earthquakes of magnitudes greater than 6.5 on the Richter scale. Tsunami waves can reach heights of 30 to 50 feet and approach the coast at 500 mph

## Planning Ahead

To help mitigate loss from such flooding events, create and document formal emergency and recovery plans.

The following actions are considered critical:

- In the event of heavy rainfall or imminent flooding, monitor the weather report and stream/river water levels
- Focus the plan on specific equipment or facility areas that are vital to production or business
- If possible prior to actual flooding, de-energize or relocate important equipment to a different facility or to a higher floor
- Relocate stock and equipment off the floor or to a higher floor
- Consider permanently mounting electric motors and control panels above the floor
- Record contact information for vendors and contractors who can provide needed supplies or services
- Make sandbags available so they can be placed at entry points to prevent water entry
- Equip entries with floodgates or doors
- Maintain a diesel pump on site for water extraction
- Educate employees on emergency evacuation (include procedures and assignments for personnel)
- Establish procedures for accounting for personnel, customers and visitors
- Test your emergency plan periodically and make appropriate adjustments

Develop a detailed list indicating the order in which processes are to be shut down and the facility secured. Determine the length of time needed to accomplish

these tasks in advance so that appropriate actions can be initiated at the proper time. Planning is also necessary to provide alternate feeds or non-electric drives for vital equipment so that electricity can be shut down before hazardous conditions occur.

Give one person authority to act as the main coordinator throughout the emergency. This person should monitor the flood advisories issued by the National Weather Service and decide if the conditions warrant a shutdown. Implement precautions and appropriate actions as soon as a flood warning has been announced.

The following information can be used in creating your flood recovery plan:

- Pre-Flood Checklist
- After-Flood Checklist
- Flood Preparedness Resources

## Pre-Flood Checklist

- Assemble supplies and equipment at a secure central location. Suggested items include:
  - Portable pumps and hoses
  - Emergency lighting
  - Lumber and nails
  - Sandbags
  - Mops and squeegees
  - Tarps
  - Tools
  - Shovels
  - Axes
- Ensure that the premises has supplies, such as:
  - Nonperishable food
  - First aid equipment
  - Lighting
  - Two-way radios
  - Stored drinking water
- Shut down processes safely and drain open tanks of flammable or combustible liquids
- Have enough personnel to move vehicles to a safe area
- Brace unsupported structural members at construction sites
- Anchor yard items that can be moved by flood waters, such as trailers, propane tanks or lumber. Move stored materials inside if practical. Barricade critical outdoor equipment with sandbags to provide protection against floating debris

