



## FLOOD EMERGENCY RESPONSE PLAN

### Quick Tips – The Storm is Approaching!

- Notify staff of possible flooding – stay tuned!
  - Is a telephone tree available if building power is lost!
- Inspect doors, windows, roof drains, roof flashing – any quick repairs needed?
- Check emergency supplies – flashlights, cellphones and chargers, tarps, PPE (boots and gloves).
- Remove / relocate flood-borne missiles from the perimeter area – pallets, trash container, furniture, etc.?
- Can temporary barriers be created and installed – sandbags, flood barriers, plywood for windows? Don't overlook roof openings and skylights.
- Do fork-lift trucks need to be relocated (e.g. onto a trailer to take them to higher ground)?
  - Do the chargers need to be protected (e.g. elevated, or raised higher off the ground)?
- Are there opportunities to raise stock higher – to upper tiers of racks, or on stacked pallets on the floor?
- Are “spare parts” (e.g. fuses, motors, filters) available and raised above flood water height?
- Are computers and data back-up medial raised above flood water height?
- Should we halt incoming deliveries until after the storm passes?
- Do we need to move vehicles and outdoor storage trailers to higher ground?
- Check fire detection, fire-suppression and security alarm systems – are these in proper working condition?

### Person in Charge of FERP

Name / Title	Office Phone	Mobile Phone	eMail Address
(Primary Contact)			
(Alternate Contact)			
(Other)			
(Other)			

### FERP Team Members

Name / Title	Office Phone	Mobile Phone	eMail Address
(Property Manager)			
(Building Engineer)			
(Office Manager)			
(Human Resources)			
(Director of Maintenance)			
(Safety Manager)			
(Other)			
(Other)			

### Emergency Contact Information

**FOR EMERGENCIES DIAL 911**

Organization	Contact	Phone	eMail Address
Fire Department			
Police Department			
Gas Company			
Power Company			
Telephone Company			
Buildings Department			
Insurance Agency			
DEP / Water Department			
Other			
Other			

### Introduction

This Flood Emergency Response Plan (FERP) has been established to clearly define actions that should be taken in the event of a pending flood event to our site. The plan is designed to proactively outline actions to be taken to reduce physical loss to buildings, machinery and equipment and stock /supplies at this site in order that we may resume operations as quickly as possible after the flood event is over. This plan is to be updated in February of each year.

*(Note – fill in the {bracketed} information that is appropriate for your site)*

### Description of Operations

{Provide a brief description of your operations. Describe the building, type of construction, number of floors, nature of the occupancy, presence of any below ground floors, existence of safety features such as automatic sprinklers and/or fire alarms, and the like}.

## **Flooding Scenario – Overview of Likely Flood Threats**

{Describe exposure to flood – e.g. flooding from nearby river, storm surge, and the like. If possible, identify your flood zone, as well as finished floor elevation. Try to identify water entry points and where water will most likely enter first.}

## **Monitoring Potential Flood Event**

The {Director of Maintenance/Property Manager} will advise the FERP leader when flood conditions are possible. When potential flooding goes beyond a flood alert stage, the FERP leader will assign personnel the responsibility to visually monitor {the River/Brook elevations - local weather forecasts} each hour and record and report the findings to the FERP leader. The FERP leader will be responsible for implementing various components of the FERP based on {forecasts, river elevations}.

The {Company Name} facility and buildings are susceptible to flooding in the event of {an extended period of rain, storm surge, Nor'easter}. When a flood event becomes a considerable possibility (e.g. a pending significant rainfall), the FERP leader or designate {FERP Alternate} shall initiate the {Company Name} FERP / Disaster Recovery phone tree (see list of FERP Team Members on cover page).

## **Preparation - Before the Storm Season (e.g. Months in Advance)**

- Inspect and repair doors, windows, and other building openings
- Inspect and repair roofs to ensure...
  - drains are clear
  - roof flashing is secure
  - roof-mounted equipment is secure and in good condition
  - there is no loose material or debris
- Check roof mounted skylight to ensure they are in good physical condition.
- Inspect and repair mechanical equipment to ensure it is in good condition...
  - sump pumps, back-flow valves, floor drains, and the like.
- Determine if sand-bags will be needed, and if so, make plans to obtain and store these on site.
- Identify and/or re-confirm the names and contact information of emergency response providers such as...
  - salvage companies,
  - equipment repair vendors,
  - building repair contractors,
  - emergency generator suppliers
- Obtain emergency equipment and supplies, including...
  - lighting (flashlights and batteries)
  - tarps
  - lumber
  - portable generators
  - sandbags
  - two-way radios
  - non-perishable food and water
- Obtain spare parts for equipment that is likely to be damaged
  - (e.g. pumps, motors, fuses, and the like that can't be moved from areas likely to flood).
- Identify any occupants with medical or mobility needs that need to be addressed well in advance in case the building is subject to a loss of electrical power or heat.

- Identify critical replacement parts (based on experience from previous storms, possibly including electrical transformers, air-compressors, motors (e.g. fire-pump), fork-lift chargers).
- Identify possible salvage equipment and suppliers, possibly including restoration companies, suppliers of refrigerated trailers, back-up generators, etc.
- Identify how and where to shut off utility systems if necessary (e.g. main gas and water supply valves, main electrical service switches).

### Preparation – Before a Storm Event (e.g. Days in Advance)

- Monitor conditions – National Weather Service: <http://water.weather.gov/ahps2/>
- Inspect the building envelope...
  - ensure doors, windows and roofs are in good physical condition
- Check emergency supplies – flashlights, cellphones and chargers, first aid supplies, tarps, PPE (boots and gloves), food and water
- Erect temporary physical flood barriers to protect the building – to protect selected doors and building openings.
  - Protect windows as appropriate with suitable shutters
- Provide sand-bags or other types of water resistant barriers around **roof openings** (e.g. elevator motor rooms) to minimize the amount of water that can enter through these openings
- Identify outside storage and portable equipment that must be relocated from flood exposed areas before flood waters inundate the site.
- Identify parking lots and garages exposed to flood water inundation.
  - Be prepared to relocate vehicles and trailers to higher ground before flood waters inundate the site.
- Inspect perimeter areas around the building for water-borne “flood missiles”.
  - These are items that can float and act as a missile striking your building, such as
    - Pallets, lumber, furniture, trash containers, etc.
- Inspect fire-protection and detection systems to ensure they are in “normal” working condition.
- Check condition / operation of sump pump(s) to ensure they are in “normal” working condition.
- Protect building contents and utilities:
  - Move stock as high as possible within the building or off-site
  - Isolate any low-level electrical equipment – protect with sand-bags if possible
  - Elevate critical machinery or computer equipment as much as possible – don’t forget fork-lift chargers.
    - Consider relocating to a higher floor until it’s safe to put it back.
- Close any manual sewer backflow prevention valves.

- Consider relocating valuable tools, records, computer data and the like to an elevated trailer, or to a vehicle that can be driven to higher ground.
- Stop incoming deliveries until after the storm passes.
- Takes reasonable steps to raise stock, records, furnishings, and supplies so they are at least 2 feet above expected maximum flood levels.
  - Can the most valuable / expensive stock be placed on the second tier of shelves, or perhaps on several pallets?
- Relocate spare mechanical equipment (e.g. fuses, motors, filters, etc.) to a safe location (e.g. upper shelves or second floor)
  
- Are there below grade or underground fuel storage tanks?
  - Can these be emptied of the contents to minimize possible contamination?
- Are electrical transformers found in locations expected to be flooded?
  - Will these need to be turned off if flooding is imminent. If so, are procedures in place to do this?
  - Are procedures in place to communicate to building occupants that electrical power will be turned off?
- Verify that all flood-exposed unmovable outside structures are anchored to secure foundations
  - fuel storage tanks
  - pad mounted electrical transformers
  - emergency generators
  - cooling towers
  
- Build Sandbag Dikes the Right Way!

### **After the Storm Event**

- Initiate clean-up operations when safe to do so –
  - remove standing floodwater, mud and debris – make sure PPE is used!
  - use brooms, squeegees, mops, sump pumps and cleanup supplies
  - assess condition of trash compactor – call for repairs if necessary
  - evaluate the need to obtain the services of a trash dumpster company
- Have all utilities checked by a competent person before use.
- Clean/dry equipment as may be required.
- Document the flood event...
  - Report on detailed floor water levels with location and time indicated (written description, photographs, etc.). This will help for future planning.
- Analyze salvageable materials and equipment – discard/remove all non-salvageable items.
- Remove sandbags, window boarding and other items used to protect the building exterior.
- Conduct safety walkthrough by building management along with other necessary building/utilities officials.

- Verify that fire suppression, fire detection, and security alarm systems are in “normal” operating condition.
- Notify corporate office of status of the building and operations
- Initiate telephone tree to communicate status of operations to employees

### Supplies and Resources

Supply	Source	Contact Name & Phone	Location Address
Salvage and Recovery			
Building Materials			
Generators			
Clean-up supplies			
Other			
Other			
Other			

### Contractors and Vendors

Company Name	Contact Person	Phone Number
Electrical Contractor		
Plumbing Contractor		
Sprinkler Contractor		
Mechanical Contractor		
HVAC Contractor		
Roofing Contractor		
Waste Management Contractor		
Fuel Oil Supplier		
Fire Alarm Company		
Security Alarm Company		
Compressor Contractor		
Other		
Other		
Other		
Other		