

PRE-FLOOD PLANNING

- Nearby flood sources, such as rivers, creeks, streams, drainage ditches, canals, lakes, oceans, elevated reservoirs or dams, ground water, etc.
- Flood maps indicating your site is in a flood plain.
- Historical flood events.
- Areas where water runoff can accumulate.
- Basement areas with important equipment, utilities, stock, or records.
- Sewer or drain lines where water can backup into buildings.
- Access roads for the property susceptible to flooding that could create ingress/egress problems.

PRE-FLOOD CHECKLIST

- Review buildings for potential openings where flood water may enter and seal openings as necessary.
- Inspect all existing flood prevention systems if provided, such as dikes, walls, flood barriers, etc., and make repairs as necessary.
- Install back-flow prevention devices in sewer and drain lines to prevent floodwater from backing up into buildings.
- Be prepared to place sandbags at vulnerable building openings and around critical outdoor equipment.
- Relocate important equipment, stock, and records to higher elevations not subject to flooding. For equipment and stock that cannot be relocated, be prepared to cover with plastic tarps or store on pallets.
- Develop a comprehensive, written flood emergency plan to mitigate the exposures. The plan should include: Assigning emergency organization roles and responsibilities; providing training at least annually; assembling emergency supplies and equipment in an elevated location not susceptible to flood waters, such as sandbags, pumps, plastic tarps, mops, squeegees, emergency lighting, fuel for equipment, etc.

- Planning for salvage and recovery, including maintaining a list of key vendors, contractors, and salvage services.
- A business continuity plan for restoring operations after the event. The plan should be reviewed at least annually and updated as needed.
- Participate in a flood warning system if available. If a flood warning system is not available, designate a person to maintain Secure all outdoor items that cannot be relocated, such as tanks, trailers, equipment, etc. In case of a flood event, fill empty tanks with water or product to prevent them from floating away.
- Install grates, trash racks, curbs, etc. to protect inlets to all drains and storm water drainage systems against blockage from debris.
- Inspect the following areas to ensure they are free from debris that could cause water to backup: Floor and yard drains; culverts, tunnels, and bridges along rivers, streams, creeks, etc.; provide emergency power for storm water systems that are dependent on electrically driven pumps; locate emergency power supplies at an elevation above the expected flood level.
- Inspect and test all basement sump pumps to verify they are fully operational.
- Backup important computer data and relocate to a location not subject to flooding.
- Isolate, neutralize, or remove from the site any chemicals that can react violently with each other.
- Determine if access roads to the facility are likely to flood and if there are alternate routes.
- If flooding is imminent, safely shut down operations: Shut off processes and equipment following established procedures; shut off all flammable and combustible liquid and gas lines at their source to prevent discharge from broken piping; shut off the building's electrical power. Note: Power to electric motor-driven fire pumps should remain in service.
- Enforce "No Smoking" and "No Cutting or Welding" rules. Protect or shut off other possible flame sources.

DURING A FLOOD

- Emergency response team personnel should remain at the facility if safe to do so and be prepared to respond.

- Continue to monitor the media for information on potential flood damage, access to property, utility outage, etc. Update management and maintenance accordingly.
- Monitor flooding in all buildings.

AFTER A FLOOD

- Secure the site to prevent unauthorized entry.
- Organize and prepare emergency crews for salvage and cleaning operations.
- If safe to do so, conduct an immediate damage assessment, paying particular attention to the following: Undermining or structural damage to the building, such as foundations; fire protection equipment, maintaining as much fire protection in service as possible by isolating damaged sections, then making repairs and restoring systems back to service as soon as possible; notify ARC if any system will be impaired for more than 10 continuous hours.
- Utilities, including electricity, gas, water, compressed air, HVAC, steam, etc. (isolate as necessary).
- Production & process equipment.
- Areas subject to flooding, including basements.
- Notify utility companies of any outages or damage.
- Call in key personnel and notify contractors to begin major repairs. Make sure facility safety procedures are fully implemented before work commences. This includes controlling ignition sources such as smoking and hot work. Follow all hot work permit procedures.
- Initiate salvage operations to perform the following: Relocate flood damaged stock and equipment to dry areas; clean and dry equipment, placing priority on critical high-valued equipment; inspect and repair electrical systems and equipment before re-energizing; clear any debris from floor and yard drains, drain pipes, catch basins, etc.; remove water and dehumidify damp areas; monitor air humidity levels over an extended period of time in areas with highly sensitive equipment.sensitive equipment.