



Hurricane Preparedness Checklists

Hurricanes and tropical storms can lead to loss of life and devastation to property. Flash flooding from rainfall, storm surges and high winds are the major hazards that result from tropical cyclones. The consequences of this weather ranges from toppled trees to damage to buildings and equipment to bodily injury and even death of people in the storm's path.

Storm Threat Details

In flat areas, storm surges and extremely high tides may force water many miles inland. Hurricanes can also generate heavy rainfall, causing severe flooding over a wide area in a short period of time. A rare, but sometimes deadly by product of hurricanes, are tornadoes spawned by the larger storms. Though coastal regions are always the most vulnerable to a hurricane's effects, flooding and tornadoes may affect areas well inland.

The National Weather Service rates hurricanes by their intensity, using the Saffir-Simpson Hurricane Wind Scale of one to five. The scale categorizes storms according to their sustained winds, the anticipated storm surge and expected damage. Businesses located within areas of the greatest risk should have a hurricane preparedness plan.

Hurricane season runs from June 1 to November 30 every year, with the peak activity on or about September 10. This checklist will help you to prepare for a hurricane before it happens. Proper planning and procedures will limit a tropical system's effect on your organization, employees and community. Following the strategies below is a good first step towards implementing a hurricane preparedness plan.



PRIOR TO HURRICANE SEASON

Ensure that your office is equipped with items listed on the Hurricane Disaster Supply List.

- In May of each year, contact a landscaper to trim trees back from buildings.
- Ensure that you have updated information on your:
 - » Employee Emergency Contact List
 - » Vendor Resource List
 - » Tenant Emergency Contact List
 - » Emergency Phone List
 - » Emergency Resource List
- Contact with a security company that can be retained to provide 24-hour security immediately after a storm to protect workers and property.
- Each year, prior to May 1, create and send an inventory of all office equipment and property assets, including photos or videos, to the corporate office or property owner.
- Establish a hurricane file in the office that contains:
 - » A Hurricane Watch letter copied on bright-colored paper.
 - » Signs that can be posted at all elevators indicating that they have been taken out of service.
 - » Signs to post on doors and in common areas providing contact names and emergency numbers, stipulating that these numbers should only be used for emergencies.



Hurricane Preparedness Checklists (cont.)

The below checklists will help you prepare for a hurricane's effect on your organization, employees and community by highlighting activities you should undertake before, during and after the event. When the National Oceanic and Atmospheric Administration's (NOAA) National Hurricane Center issues a watch or warning, use the time available to begin taking the following steps.

✓ BEFORE THE STORM

- Stay up-to-date on the storm's progress via radio, TV or NOAA Weather Radio All Hazards receiver.
- Determine a safe evacuation route as well as alternative routes.
- Ensure you have an emergency communication plan in place prior to the storm, evacuation or threat.
- Share post-event communication strategy with employees and applicable third parties.
- Develop plans for post-storm damage assessment activities. Determine who will perform facility, equipment and product assessments. Create plans for how assessment results will be communicated.
- Notify and secure applicable third party post- storm services and supplies.
- Back up all data on servers and personal computers. If the backup site is within the area that may be affected by the storm, take backup tapes with you when you evacuate.
- Monitor local media for evacuation announcements and routes.
- Establish remote access to your company website and establish a team to manage updates to the site during and after the storm.
- Turn off all non-critical devices such as server monitors and workstations and other non-essential electrical equipment.
- Check the integrity of the uninterruptible power supply (UPS). Move the UPS to the highest level possible above the floor.
- Inspect and make emergency repairs to drains, gutters and flashing.
- Secure and protect windows with plywood.
- Relocate any paper files not secured in plastic from lower drawers to a higher level in the event of flooding. Additionally:
 - Back up computers and cover them with plastic bags sealed with tape;
 - Fill the gas tanks of all vehicles and equipment; and
 - Unplug all electrical items and turn off circuit breakers and gas lines.
- Strap or anchor all roof-mounted equipment such as HVAC units and exhaust vents to the roof deck support assembly (e.g., the joists)
- Alert a third party about your company's relocation plans in the event the storm makes your location inaccessible.
- Protect/relocate vital records including your insurance policy.



Hurricane Preparedness Checklists (cont.)

✓ BEFORE THE STORM

Take the following steps to ensure items outdoors will not blow away or cause damage:

- Remove all loose debris and anchor items that will remain outdoors;
- Relocate all nonessential equipment to a safe indoor location;
- Secure storage of flammable liquid drums, or move them to a sheltered area (but never into the main facility areas);
- Anchor all portable buildings (e.g., trailers) to the ground;
- Secure large cranes and other heavy equipment;
- Make sure outdoor signs are properly braced.
- Ensure all roof and parking lot drains are clear of debris.
- Have cash on hand for post-storm needs, such as buying food and supplies or paying employees and contractors.
- Ensure you know which employees are certified in first aid procedures such as CPR, EMT, etc.
- Be sure that above-ground tanks are in good condition and filled with fresh water.
- Fill fuel tanks of generators, fire pumps and all company-owned vehicles.
- Remove as many goods as possible from the floor or ship them out of the facility.
- Turn-off natural gas supply to minimize the chance of fire loss.
- Disconnect the main electrical feeds to the facility, if possible, to prevent a potential fire caused by short-circuiting of damaged equipment.

✓ DURING THE STORM

- Constantly monitor any equipment that must remain online.
- Remotely monitor storm activity and building systems.
- During power failure, turn off electrical switches to prevent reactivation before necessary checks are completed.



✓ AFTER THE STORM

- Keep listening to radio, TV or NOAA Weather Radio All Hazards to make sure the storm has passed.
- Wait until an area is declared safe before entering to secure the site and survey damage.
- Have assigned teams perform damage assessment of facilities, equipment and product. Assessments should be performed in teams only. No individual should be permitted to enter the facilities alone.
- Secure 24-hour security if needed.
- Watch for closed roads. If you come upon a barricade or a flooded road, turn around, don't drive through flooded or closed roads.
- Survey the area for safety hazards such as live wires, leaking gas or flammable liquids, poisonous gases and damage to foundations or underground piping.
- Continue to communicate with all key audiences until the crisis has passed. Consistency is important, especially with members of the media.
- Call in key personnel and notify contractors to start repairs. Make sure safety systems are fully implemented before work is allowed to begin. This means controlling smoking and other open flame sources. Require contractors to share responsibility for establishing fire-safe conditions before and during the job.
- Begin salvage as soon as possible to prevent further damage:
 - Cover broken windows and torn roof coverings immediately
 - Separate damaged goods, but beware of accumulating too much combustible debris inside a building
- Clean roof drains and remove debris from roof to prevent drainage problems.

✓ YOUR PEOPLE

- Have all employees, vendors and client contact information on hand.
- Use the Alert Notification System to keep all parties posted on status updates and next steps.
- During evacuation, have a pre-arranged central point of contact for all employees and ensure you know where your people are located.
- During evacuation consider redirecting your phones lines. Forwarding to cell phones, answering service or Google Voice could be critical to continuing operations.
- Following the storm, notify all critical people of next steps, based on damage.



Know the Terms

Tropical Depression: An organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 MPH (33 knots) or less. Sustained winds are defined as one-minute average wind measured at about 33 feet (10 meters) above the surface.

Tropical Storm: An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39–73 MPH (34–63 knots).

Hurricane: An intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 MPH (64 knots) or higher.

Storm Surge: A dome of water pushed onshore by hurricane and tropical storm winds. Storm surges can reach 25 feet high and be 50–1000 miles wide. A storm surge is by far the greatest threat to life and property along the immediate coast.

Storm Tide: A combination of a storm surge and the normal tide (i.e., a 15-foot storm surge combined with a 2-foot normal high tide over the mean sea level would create a 17-foot storm tide).

Hurricane/Tropical Storm Watch: Hurricane/tropical storm conditions are possible in the specified area of the watch, usually within 48 hours. Tune in to NOAA Weather Radio, commercial radio or television for information.

Hurricane/Tropical Storm Warning: Hurricane/tropical storm conditions are expected in the specified area of the warning, usually within 36 hours of the onset of tropical storm force winds. Complete storm preparations and immediately leave the threatened area if directed to do so by local officials.

Extreme Wind Warning: Extreme sustained winds of a major hurricane (115 mph or greater), usually associated with the eye wall, are expected to begin within an hour. Take immediate shelter in the interior portion of a well-built structure.

Short Term Watches and Warnings: These warnings provide detailed information about specific hurricane threats, such as flash floods and tornadoes.

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	Very dangerous winds will produce some damage: Well-constructed frame homes could experience damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last several days.
2	96-110 mph 83-95 kt 154-177 km/h	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes may sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	111-129 mph 96-112 kt 178-208 km/h	Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4 (major)	130-156 mph 113-136 kt 209-251 km/h	Catastrophic damage will occur: Well-built framed homes may sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 kt or higher 252 km/h or higher	Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.