



XL Insurance

Hurricane season

Hurricane preparedness guide for construction projects







Hurricanes are among the most destructive of all natural catastrophes and can cause billions of dollars in damages. But weather forecasting systems and technology often provide enough lead-time to minimize damages when a storm strikes — if you plan ahead.

By preparing before hurricane season, builders and contractors can be ready to take action when a storm is coming.

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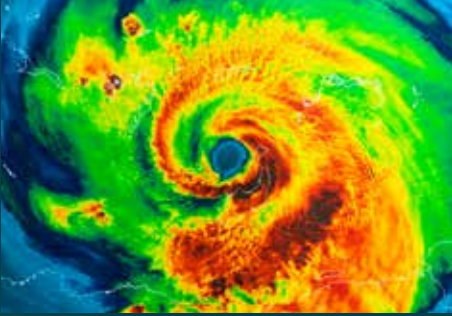
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About hurricane season



U.S. hurricane season

June 1 – November 30

Frequency

According to the National Weather Service, six hurricanes form in the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico during an average hurricane season. Over a typical two-year period, the U.S. coastline is struck by three hurricanes; one is usually classified as major (Category 3 or higher) with winds of 111 mph or greater.

Researchers note that storm seasons may become more severe in the future. Rising sea levels are contributing to more flooding, and the National Oceanic and Atmospheric Administration predicts that severe flooding may worsen.

The 2020 hurricane season is expected to have above-average activity. Experts say there is a 95% chance that at least one hurricane will make landfall in the U.S. this year.

Regions affected

Hurricanes can make landfall in any of the Gulf Coast states (Texas, Louisiana, Georgia, Alabama, and Florida), as well as in any state along the East Coast — from Florida to Maine. Florida is by far the most hurricane-prone, followed by Texas, Louisiana, and North Carolina.



Potential losses

Damages from hurricanes are largely caused by water and wind. Hurricanes can bring tornadoes, high winds, and flooding from storm surge and/or heavy rainfall. Hurricane Harvey in 2017 was one of the costliest hurricanes on record, mostly due to damages from storm surge and heavy rains.

Construction sites are particularly vulnerable during hurricanes. Materials and debris can become projectiles in high winds, water can flood unfinished structures, and equipment can be lost or damaged. In addition to water and wind, fire losses are also possible, as well as damage from theft or vandalism after the storm is over.

Pre-season planning

The more your team can prepare before hurricane season, the better it will be able to respond if your site is in the path of an approaching hurricane. Here's a look at what you can do ahead of time.

Assemble your hurricane response team

- Who will oversee advance preparation?
- Who will monitor weather reports and storm updates?
- What sources and/or applications will be used to monitor the weather?
- Who will lead communications efforts in the event of a storm?
- Who has the authority to make decisions regarding preparing and shutting down the site?
- Who will lead post-storm recovery efforts?

Review project schedule for hurricane season

Evaluate the timeline of construction activities taking place during the upcoming hurricane season. This can help you understand potential exposures and plan precautionary measures on a month-by-month basis.

- Structural frame and roof: Which parts of the building will be open and exposed to high winds, storm surge, and heavy rain during each month of hurricane season?
- Inventory all equipment and materials on site. How will unused materials be protected? What large equipment will be on site and which equipment requires protection?
- If there are open excavations on the site, review drainage provisions and water removal systems. Ensure that pumps are serviced and have reliable power supplies. Verify that discharge hoses and/or pipes are secured in place and cleared of debris.
- If gas/diesel powered pumps are employed, make sure adequate fuel is stored and properly secured on site.
- If electric pumps are in use, secure power cords. Consider whether backup power should be provided.

Develop timeline plans

When a hurricane is brewing, you can begin taking precautionary measures in an organized way. Because storms often change course, you want to take appropriate actions at the right time.

- Develop your timeline plans ahead of time using the guidance in the next section (for these phases: tropical storm, 72-48 hours before landfall, 48-36 hours – hurricane watch, and 24 hours – hurricane warning).
- Always keep in mind that hurricanes rated Category 3 and higher are major storms with the potential for significant loss of life and property damage.



Assemble protection materials

- Inventory all materials available for protection efforts. (See accompanying materials checklist for guidance.)
- Are all necessary materials for protecting the site available, accessible, and in good condition? Replace as necessary.
- Check emergency power generator systems and be sure flashlights and other materials are working and have new batteries.

Create communications plan

- Verify that you have correct contact information for all team members and updated emergency contact information.
- Create a plan to communicate when storm preparations should begin.
- Develop a notification system for alerting employees when the job site is closed and they should stay home.

Prepare your people

- Review your hurricane plans (including pre-season plans and close-range timeline plans) with all team members, contractors, and other stakeholders.
- Make sure your people know how communications will function in the event of a storm. How will they find out if they should report to work?
- If they are part of the final storm-prep team, do they know where they can shelter nearby if they cannot make it home?

Develop post-storm plans before the storm arrives

- Establish pre-storm contractual relationships with service and recovery contractors
- Designate who will return to the site after the storm has passed and how they will know it's safe to return.
- Determine who will lead efforts to survey the damage and begin clean-up activities
- Develop procedures to follow in the event of exposed electrical wires, hazardous material leaks, or structural damage.

Timeline plans

Tropical storm phase

For the duration of hurricane season, the person in charge of monitoring weather should be checking frequently on the progress of any tropical storms identified by the National Weather Service.

- If a storm looks like it has potential to develop and strike in your area, review hurricane plans and materials to be sure your team is ready to take action.
- Verify that your protection materials are available and accessible.
- Keep in mind that hurricane conditions can change dramatically in just 24 hours and that estimates can be wrong. Hurricanes can be unpredictable and arrive early.



72-48 hours before landfall

At this point, it is hard to tell if the hurricane will affect your site location. However, you can begin to take precautions that are not overly disruptive in case the hurricane changes course.

- Alert all personnel about the storm and that you are currently taking precautions. Remind team members of hurricane communication and action plans and what they can expect if the watch is upgraded to a warning.
- Instruct crew leaders to finish jobs in progress and hold off on starting new jobs. Pause installation of materials prone to water damage (e.g., drywall, electrical, and insulation).
- If feasible, put deliveries to the job site on hold until after the storm passes.
- Remove and store or secure any tools or equipment not currently in use.
- Tie down materials not currently in use with sandbags, anchors, and rope. Cover with tarps or plastic sheeting.
- If cranes are being used, assess current risks and make plans to prepare them for a storm event. Booms can be laid down or the load line hooked to the structure at a low point.
Note: Boom lift, hoist, and other lifting equipment operators should stop operations when sustained wind speeds reach 30 mph; crane operators should not attempt picks if wind gusts exceed 20 mph.
- Assess roof, structural frame, and walls. Remove all loose items from roof and other exposed areas. Make sure roof drains are clear of obstructions and are protected from clogging with strainers or wire mesh. Add additional anchors and bracing where appropriate to stabilize and reinforce partially completed building elements.
- Remove any loose debris and trash from the site so debris can't become projectiles in high winds. Cover dumpsters and remove or tie down portable bathrooms.
- Check retention basins and water collection systems and make sure they are prepared for heavy rainfall. Verify that storm drains are clear.

When a hurricane is brewing, you can begin taking precautionary measures in an organized way.

HURRICANE WATCH

48-36 hours before landfall

The National Hurricane Center (NHC) issues a hurricane watch when hurricane conditions (sustained winds of 74 mph and higher) are possible for a specific area. Preparing a site for a hurricane can become difficult in windy conditions, so monitor weather reports and prepare your site accordingly.

- Alert staff about hurricane watch. Make assignments for site preparation and remind people about communication plans in place. Place personnel on standby if the hurricane is forecasted to arrive on a weekend day.
- Move and secure any remaining equipment from areas that could become flooded.
- Remove or brace temporary construction (scaffolds and forms). Reinforce and brace partially completed structural elements (masonry, precast, and CIP walls) for high winds.
- Tie down and secure any remaining materials with sandbags, anchors, and rope. Cover with tarps or plastic sheeting.
- Store, remove, or secure any hazardous materials.
- Continually track storm progress. Escalate precautionary measures as necessary. Remember that hurricanes reaching Category 3 and higher are considered major storms with the potential for significant loss of life and property damage.
- Based on weather reports, begin boarding up exposed areas and placing sandbags to protect the structure from water.
- Update the project schedule to reflect the current progress of activities.

HURRICANE WARNING

24 hours before landfall

The issuance of a hurricane warning by the NHC indicates that hurricane force winds (sustained winds of 74 mph or higher) are expected in an area within 24 hours. At this point, the storm is likely to affect your site.

- Alert your staff to final storm preparation plans. Suspend all work and focus efforts on final site preparations. Communicate to non-critical personnel to return or remain at home.
- Identify any remaining items that may need to be moved, tied down, weighed down, or banded together. Cover materials with plastic sheeting and tarps.
- Board up exposed doors and window openings. Place sandbags around the structure as appropriate.
- If feasible, disconnect power and remove temporary connections susceptible to damage.
- If the site has open excavations, ensure that pumps are fueled up and serviced to maintain operation through the storm. Check discharge hoses/pipes to ensure water is discharged away from the excavation.

After the storm

When it's safe to return to the site after the storm is over, begin assessing damage and start clean-up.

- Use caution in assessing the structure in case the storm has impaired its structural integrity. Be aware of any downed powerlines that may be active or wet electrical panels. Be careful walking in any standing water.
- Document damages using photos or videos.
- Alert appropriate personnel about when they can return to the work site.
- Contact any outside service providers that are needed (e.g., tanker truck that can remove excess water).
- Pump out water as quickly as possible. Begin using fans and dehumidifiers to dry out the building.
- Begin tearing out and disposing materials that were damaged.
- Assess construction damage and its impact on project costs and schedule.
- If the project appears to have sustained damage or delays from the storm, notify your broker and AXA XL Claims.



Because storms often change course, you want to take appropriate actions at the right time.

Materials and equipment

Use this materials checklist to make sure you have the necessary materials/equipment for hurricane season and that the items are in good condition.

The 2020 hurricane season is expected to have above-average activity. Experts say there is a 95% chance that at least one hurricane will make landfall in the U.S. this year.

Item	Inspected	Storage location
Anchors		
Batteries and chargers		
Buckets		
Dehumidifiers		
Electrical tape		
Extension cords		
Fall protection systems		
Fans		
Fire extinguishers		
Flashlights		
Flood lights		
Generators		
Generator fuel		
Gloves		
Hard hats		
Heaters		
Heating fuel		
Ladders		
Mops		
Plastic bags		
Plastic sheeting		
Plywood		
Pumps (trash pumps and sump pumps with discharge hoses)		
Ropes		
Sandbags		
Tape		
Tarps		
Tie down kits		
Utility knives		



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