RISK SOLUTION SERVICES

Hurricane preparedness for property

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Overview

The Atlantic hurricane season runs from **June 1st to November 30th**. Hurricanes are considered one of the most destructive natural catastrophes, resulting in injuries, deaths, and billions of dollars in damages each year. Continuous advancements in forecasting and weather technology oftentimes provide enough warning for companies to minimize damage once the storm hits. If you operate in or near hurricane prone regions, an effective plan is critical to limiting damage to your facility and reducing business interruptions. The following information and checklists* are intended to assist with preparing your facility in mitigating damages before, during, and after a hurricane event.

Introduction | Hurricane categories (Saffir-Simpson Scale)

Category	Winds	Effects	Details
1	74-95 mph	**Very dangerous winds will produce some damage.**	Roof coverings could be partially removed due to winds; failures to overhead doors and unprotected windows will be common. Flying debris can cause damage to high-rise windows. Power outages could last a few days.
2	96-110 mph	**Extremely dangerous winds will cause extensive damage.**	A substantial percentage of roof and siding damage may occur; unreinforced masonry walls are susceptible to collapse. Flying debris can cause damage to high-rise windows. Power outages could last several days to weeks.
3	111-129 mph	**Devastating damage will occur.**	A high percentage of roof and siding damage will occur. Isolated damage to wood or steel framing can occur; complete failure of older metal buildings and unreinforced masonry is possible. Numerous windows will be blown out of high-rise buildings. Electricity will be unavailable for several days to a few weeks.
4	131-156 mph	**Catastrophic damage will occur.**	Steel frames in older buildings can collapse. There will be a high percentage of collapse to older unreinforced masonry buildings. Most windows will be blown out of high-rise buildings. Power outages may last several weeks to possibly months.
5	157+ mph	**Catastrophic damage will occur.**	Significant damage to wood roof commercial buildings; complete loss of older metal buildings can occur. A high percentage of industrial buildings and low-rise apartments will be destroyed. Power outages will last for weeks, possibly months.

*Category 3 and higher are considered major hurricanes.

Loss data

The US has been impacted by landfalling Category 4 or 5 hurricanes in five of the last seven years (2017-2023), including Hurricanes Harvey, Irma, Maria, Michael, Laura, Idalia, and Ian. Fortunately, a major hurricane did not impact a large metropolitan area in 2023. Losses attributed to hurricanes between 2017-2023 have totalled more than $500 billion[3]. Notable significant hurricanes that struck the U.S. recently are listed below:

Hurricane	**Hurricane Michael**	**Hurricane Ian**	**Hurricane Idalia**
Date	October 2018	September 2022	August 2023
Damage	$25 billion in losses and 16 deaths[4]	$112.9 billion in losses and 152 deaths[5]	Estimated $3-9 billion in losses and 5 deaths[6]
Details	Michael hit Florida's gulf coast as a Category 5 storm, producing devastating winds, storm surge, and rainfall. The storm continued to track into southern Georgia, before entering the Carolinas, and eventually into Virginia as a downgraded storm. The Florida Panhandle experienced storm surge estimated at 9-14 feet above ground level (AGL). Rainfall amounts throughout the storm's path were 3-11 inches. A total of 16 tornadoes were produced in Florida, Georgia, South Carolina, and Virginia.	Ian struck Florida as a Category 4 hurricane with sustained winds of 150 mph. The high winds and rainfall resulted in deadly storm surge and damages throughout a large portion of the central and eastern portions of the state. Additional damages were sustained in the Carolinas after the Hurricane re-emerged over the Atlantic as a tropic storm and re-intensified as a Category 1 hurricane. Hurricane Ian is the first to exceed $100 billion in insured and uninsured damages within the state of Florida.	Idalia made landfall in Florida's "Big Bend" region as a Category 4 hurricane with sustained winds of 130 mph. Fortunately, the hurricane missed major metropolitan areas resulting in fewer injuries, deaths, and likely the cause for less loss claims. This was the most powerful hurricane to hit the region since 1950. Wind, flooding, and storm surge resulted in majority of the loss claims. Additionally, up to 12 tornadoes were reported throughout Florida, Georgia, and the Carolinas as a result of the hurricane. winter weather will assist with limiting losses and reducing business interruptions.

RISK SOLUTION SERVICES

Hurricane preparedness for property checklist

Location:

Name:

Title:

Date:

The below checklist is specifically designed to assist property owners, managers, and facility personnel in minimizing the risk of loss during a hurricane event. Although nothing can stop Mother Nature from wreaking havoc through hurricanes, adequate planning and preparedness may assist in reducing the overall loss.

BEFORE THE EVENT			
Management program considerations	**Yes**	**No**	**N/A**
Establish a formal Hurricane Emergency Response Plan that can include the following: – Up-to-date emergency contact list. – Monitor local and state forecasts and communications. – Identify alternative means of transportation and alternative routes for critical personnel, services, suppliers, and contractors. – Ensure necessary amounts of fuel are on-site and/or that contracts are in place with 3rd party suppliers for backup power supply. – If leasing space in a building – coordination with the building owner and adjacent tenants should occur for Hurricane preparedness.			
Review the company business continuity plan to ensure all business operational strategies are up to date in the event of significant downtime.			
Review and train on Hurricane procedures with employees. – Have plan in place for maintaining emergency access routes to and from building. – Identify responsible person(s) for critical tasks.			
Property considerations	**Yes**	**No**	**N/A**
Inspect roof coverings, perimeter flashings, gutters, drains, ventilation units, and other roof-mounted equipment. Correct any deficiencies found (securement, fasteners, etc.)			
Inspect and maintain the building envelope (facade, doors, windows, louvers, wall penetrations, etc.).			

Property considerations (continued)	**Yes**	**No**	**N/A**
Check and seal any other possible water entry points.			
Remove lightweight material from the exterior (furniture, trashcans, etc.).			
Service any emergency power systems and ensure fuel is at the full level.			
Clean out all drains, catch basins, and drainage ditches. Ensure all sump pumps are operational and connected to power.			
Move important equipment, machinery, and stock to another site outside of the impending path of the storm. If it cannot be relocated, consider different means of protection (stack off floor to protect from flood, tarp, etc.)			
Shut down operations and processes in a safe manner and in accordance with manufacturer recommendations.			
Back-up important computer data.			
Shut off flammable and/or combustible liquid piping and gas lines at the source to avoid leaks, ruptures, etc.			
Board up windows and doors; operate shutters; tie down equipment as needed.			
Fire protection considerations	**Yes**	**No**	**N/A**
Obtain a drawing/construction plan of the fire protection system and the various components. Keep in a safe, dry space.			
Ensure all fire protection equipment is serviced and operational.			
Inspect any fixed water storage tanks for structural integrity and ensure they’re full.			
Ensure any outdoor, exposed fire protection piping is protected.			
Ensure diesel fire pump fuel is at the full level.			

DURING THE EVENT			
Management program considerations	**Yes**	**No**	**N/A**
Monitor storm forecasts and understand potential impacts to your facility.			
Monitor the affected property for structural damage, fire, leaks, flooding, security, etc. as safe to do so.			
Monitor news agencies and directions from local officials.			
Monitor impacts to water, power, sewer, internet, gas, and travel.			
Communicate operational status updates to employees.			
Prepare to manage employees and operational impacts via the business continuity plan.			
AFTER THE EVENT			
Management program considerations	**Yes**	**No**	**N/A**
Secure and assess the property for damages or concerns.			
Call designated key personnel and contractors to coordinate repairs and salvage.			
Notify the insurance claims department of any damage immediately.			
Communicate with employees.			
Implement business continuity plan to restore operations.			

Property considerations	Yes	No	N/A
Clean roof drains, storm drains, etc. as it's safe to do so			
Maintain any emergency power systems until power is restored.			
Separate damaged stock from undamaged stock.			
Remove standing water throughout the building and site.			
Fire protection considerations	**Yes**	**No**	**N/A**
Repair all fire protection and return to service as soon as possible.			
Ensure company policy programs such as hot work and smoking, are properly enforced and supervised during repair operations.			
If fire protection is impaired, provide arrangements for fire watch. Ensure the local fire department and insurance provider is notified.			

Summary

Advancements in forecasting almost always provide enough notification and lead time for a hurricane event. While the location of landfall is never exact, those in and around the potential impacted area can plan and prepare for the worst. Even if the "eye" of the storm will not hit your building, indirect impacts such as high winds, extensive rains, storm surge, and more, can lead to significant losses and business interruptions.

Ensure your facility has taken the proper steps to identify exposures and has implemented the appropriate controls as it could be the difference maker in restoring operations quickly or suffering a debilitating loss. The above checklists were created to assist with preparing and supporting your business before, during, and after a hurricane event.

Markel Risk Solution Services (RSS) support

Markel RSS can aid our insureds in evaluating their hurricane preparedness procedures and provide recommendations on how to improve in an effort to reduce losses. Contact your agent, broker, or RSS representative for more information.

References

[1] Saffir-Simpson Hurricane Wind Scale. (n.d.). https://www.nhc.noaa.gov/aboutsshws.php

[2] National Oceanic and Atmospheric Administration. (n.d.). Hurricane Categories Table. NHC-NOAA. Retrieved March 6, 2024, from https://www.nhc.noaa.gov/pdf/sshws_table.pdf

[3] 2023: A historic year of U.S. billion-dollar weather and climate disasters. (2024, January 8). NOAA Climate.gov. https://www.climate.gov/news-features/blogs/beyond-data/2023-historic-year-us-billion-dollar-weather-and-climate-disasters

[4] National Oceanic and Atmospheric Administration. (2019, May 17). NATIONAL HURRICANE CENTER TROPICAL CYCLONE REPORT: HURRICANE MICHAEL. NHC-NOAA. Retrieved March 6, 2024, from https://www.nhc.noaa.gov/data/tcr/AL142018_Michael.pdf

[5] 2022 U.S. billion-dollar weather and climate disasters in historical context. (2023, January 10). NOAA Climate.gov. https://www.climate.gov/news-features/blogs/beyond-data/2022-us-billion-dollar-weather-and-climate-disasters-historical

[6] Admin. (2023, September 1). Early Estimates Put Idalia's Insured Losses at $3-9 Billion for Florida. Insurance Journal. https://www.insurancejournal.com/news/southeast/2023/08/31/738582.htm

? For questions, please contact Eric Engelhardt: eric.engelhardt@markel.com

*The checklist is not intended to be a comprehensive list of all items to consider.

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