



Global Risk Services

Preparing for Hurricane Season: Lessons Learned from Recent Disasters

It's that time of year again, when early autumnal blessings are offset by the stark memories of hurricanes past—particularly the harsh lessons of Hurricanes Harvey, Irma and Maria in 2017.

The three storms rank among the five worst hurricanes in history, in terms of economic damage and insured losses. The fact they occurred within weeks of each other has given rise to the concept of a “new normal” in natural disasters—hurricanes of greater intensity, longer duration and higher rainfall volume.

The impact of this new normal was evident in the case of Hurricane Harvey, a Category 4 storm that produced an unprecedented volume of rainfall, estimated at [nearly 60 inches or 9 trillion gallons of water](#).ⁱ Flooding in the greater Houston area exceeded all other known U.S. flooding events, resulting in the destruction or damage of nearly [200,000 homes and business structures were damaged or destroyed](#).ⁱⁱ

Surprisingly, [90 percent of the storm's insured losses derived from inland flooding](#) and not wind.ⁱⁱⁱ Conversely, fierce wind was the factor in the massive property damage caused by Hurricanes Irma and Maria, both Category 5 storms. [Irma's 185-mph winds](#)^{iv} lasted for a period of [37 hours](#), the longest duration in recorded history.^v [Maria's 175-mph winds](#) devastated Puerto Rico, which was unprepared for a hurricane of such magnitude.^{vi} The storm killed nearly 3,000 people, ranking as the second deadliest in U.S. history.^{vii}

For midsize and smaller businesses in hurricane-prone regions, now is the time to prepare for the storms' inevitable impact, with particular attention given to the lessons learned from the recent disasters. Failure to do so is foolhardy: According to the Federal Emergency Management Agency (FEMA), [40 to 60 percent of small companies](#) in the aftermath of a hurricane never reopen their doors for business.^{viii}

“Hurricanes cause more than commercial property damage for small companies—roads, bridges, utilities and suppliers shut down and customers evacuate the area, interrupting the normal flow of business,” said John Oliver, who leads QBE's [Risk Solutions Center](#), which is focused on helping business owners better understand their risks to reduce the potential for loss.

Planning is Everything

While large enterprises have more capital resources to survive a natural disaster, a business disruption of a few weeks can doom a small company. Consequently, it is vital then that such businesses bear in mind the four following steps:

- Understand the changing nature of hurricane damage and business disruption risks.
- Prepare for their potential impact.
- Develop disaster preparedness and business continuity plans to mitigate the outcomes.
- Retain a property insurance policy that absorbs potential property damage and business interruption losses.

In putting together a disaster preparedness plan, companies must appreciate that the greatest threat to life and property from a hurricane along coastlines is storm surge and extensive flooding. In fact, inland flooding caused by heavy rainfall accounts for more than half of all hurricane-related deaths annually, according to FEMA. The other major exposure is wind intensity, which can destroy or damage buildings through sheer force or windborne debris.

“The first thing to consider in hurricane preparedness is whether or not the facility is constructed to withstand the intensity of today’s storms,” said Bob Tull, Senior Property Consultant in QBE North America’s Loss Control Services Department. “Building and construction codes have changed considerably in the aftermath of Hurricane Andrew in 1992. Many pre-1992 buildings actually may not be up to today’s more stringent codes.”

Tull, who has assisted many large Fortune 1000 companies in developing and implementing their disaster risk management programs, advises small businesses to hire a structural engineer to inspect the building and determine if it is up to code. If this is not the case, they should consider fortifying existing pre-1992 structures to current codes or relocating to another facility.

In addition to evaluating the integrity of buildings to withstand damage, companies also should assess the presence of exterior and interior elements that may pose a threat to people and property, such as trees, fencing, canopies, flagpoles, furniture, and filing cabinets. Such objects can become veritable projectiles, Tull said.

“FEMA advises companies to secure external elements like flagpoles and signs to withstand wind pressures, or to reengineer them in such a way that they can be quickly and easily removed and stored prior to an event,” he added. “Landscaping also can be redesigned to include trees and shrubs that are hurricane resilient.”

With regard to interior elements, Tull recommends that doors and windows be retrofitted to be impact-resistant. An example is a loading dock door that provides ingress for a hurricane.

Even if the building or its environs endure little damage from intense winds, companies must contend with the increased risk of flooding, particularly if the building is located in a floodplain. Depending on capital resources, the structure can be elevated. If this is not

economically feasible, an alternative is to build floodwalls, levees and dikes to repel or redirect floodwaters.

Forward Momentum

The breadth of these preparations depends on the type of business. Oliver and Tull advise all small companies to develop a risk assessment plan. **The process does not have to be overwhelming; it can initiate with a simple list of questions followed by thoughtful answers.** Questions might include: What might happen if we couldn't sustain our capability to provide goods and services to customers or our supply chain? If building environs were flooded, what might be the damage? Could our windows, doors and other forms of ingress/egress withstand intense wind? And so on.

To address the risk of significant interruptions in operations and revenue, similar advice prevails—ask questions of what can go wrong and how the organization can mitigate this possibility. For example, if certain shipments were to be delayed for one day, three days or a week, what might the impact be in each scenario? Are there alternative ways of delivering and/or receiving these goods? If this answer is no, would it make sense to store more of these items in inventory? How would we maintain cash flow in the event our revenue is severely crimped? How would we preserve our reputation and competitive advantage?

Similarly, if electricity were shut off for a period of time, what would the impact be on business operations and what can be done to mitigate these outcomes? Would it make sense to have a backup power system or portable power generators on hand? If water systems are not available, should water be stored in a tank for interim use?

People are Paramount

Certainly, the primary concern of all businesses is the safety of employees who may be on the premises during a hurricane. For small businesses that continue to operate during a hurricane or after its immediate aftermath—such as a supplier to a utility or an oil and gas distributor—they may want to consider the value of storing food, water, flashlights, sleeping cots, bedding, and first aid kits for employees who stay the duration.

Lastly, companies must ensure they have adequate insurance covering the breadth of property damage and destruction caused by a hurricane and other forms of business disruption. On behalf of clients, QBE North America takes the risk of hurricanes very seriously, carefully studying the impact of rising storm severity on our clients and small businesses broadly.

Obviously, the one thing that a small business cannot do is nothing. Such complacency will backfire. According to FEMA, without a disaster preparedness and response plan in place, three-quarters of businesses will fail within three years after a major hurricane. Your company should not be among them.

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ⁱ Washington Post. August 27, 2017.

https://www.washingtonpost.com/news/capital-weather-gang/wp/2017/08/27/texas-flood-disaster-harvey-has-unloaded-9-trillion-tons-of-water/?utm_term=.abdc5dc868f6

ⁱⁱ Scientific American. June 7, 2018.

<https://www.scientificamerican.com/article/fema-approves-buyout-funds-for-houston-homes-flooded-by-harvey/>

ⁱⁱⁱ RMS. Press release. September 9, 2017. <https://www.rms.com/newsroom/press-releases/press-detail/2017-09-09/rms-estimates-hurricane-harvey-insured-losses-from-wind-storm-surge-and-inland-flood-damage-will-be-between-usd-25-and-35-billion>

^{iv} National Public Radio. September 12, 2017.

<https://www.npr.org/sections/thetwo-way/2017/09/12/550188154/hurricane-irma-blasts-into-the-record-books-with-lasting-intensity>

^v NBS News. September 7, 2017. <https://www.cbsnews.com/news/hurricane-irma-sets-record-for-37-hours-of-super-strength/>

^{vi} National Weather Service. September 20, 2017

<https://www.weather.gov/sju/maria2017>

^{vii} CNN. August 29, 2018. <https://www.cnn.com/2018/08/29/us/puerto-rico-deaths-new-york-9-11-trnd/index.html>

^{viii} Federal Emergency Management Agency. Business Infographic.

<https://www.fema.gov/media-library/assets/documents/108451>