

No Matter The Project Location, A Robust Safety, Storm And Disaster Readiness Plan Is A Must

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WHOEVER SAID THAT LIFE, DEATH AND TAXES ARE THE THREE THINGS IN LIFE THAT ARE CERTAIN FORGOT TO INCLUDE WEATHER AS THE FOURTH.

Just ask anyone in the construction industry, and they'll tell you that Mother Nature has her own ideas. This is why disaster preparedness is more vital than ever especially if you live and work in an area prone to hurricanes, floods and flash floods.

Extreme Weather

Christopher Diaz is vice president of environmental, health, and safety for Balfour Beatty's Buildings operations in Florida.

He says general contractors need to understand that storm preparedness planning should begin before putting the first shovel in the ground because severe weather – such as hurricanes – is often unpredictable.

“Storms have the potential to intensify and rapidly change paths, so it's vital for project teams to be well-versed in proactive storm procedures. It's essential that these plans are communicated and executed in the preplanning phase so project teams can quickly and safely react when unexpected weather approaches.”

Diaz adds that it is equally essential that contractors structure the delivery of projects based on the weather they may have to withstand during and after construction.



“In areas of Florida, we center our buildings operations around wind cycles and hurricane systems, blue sky lightning, heavy rain, and flooding to mitigate risk. In this instance, a plan that accounts for securing equipment that the wind can move, such as tower cranes, loose materials, electronics, and scaffolding helps protect the project and surrounding infrastructure, and those who come in contact with our work.”

For heavy rain and flooding, Diaz says that sandbags are placed around the perimeter of their project sites to divert turbid, muddy floodwater, and to prevent pollution in local waterway systems.

“Projects located in coastal planes also experience low and high tide sea levels that can rapidly cause flooding. Non-stop de-watering controls may also be necessary to ensure

infrastructure is safely out of the ground and protected against corroded building foundations.”

Michael Teng is assistant vice president of regional product, pricing, and underwriting for Sentry Insurance in Stevens Point, Wisconsin. He says when a disaster occurs, the most important thing is getting workers into a safe zone quickly.

For example, if a flood is expected around a team’s project, the safe zone should be in a secure, higher elevation area. Conversely, if a tornado is forecasted, the safe zone should include the lowest area in a secure building.

“If you have more time to prepare for a forecasted disaster, it may allow your business to activate its full business continuity plan like getting critical materials and equipment off the project site, while also designating a temporary work location.”

Creating A Safety Plan

When it comes to instituting a safety plan, the critical areas of disaster preparedness include planning, training, and execution. If one of these is missing, it could be extremely costly to a construction business.

“Your geographic region can also influence your preparation and planning,” explains Teng. “If you’re a contractor in the Great Plains, your tornado risk is higher, while a contractor in the southeastern region is more prone to hurricanes. Your plan should reflect the likelihood of disaster types based on your geographic region, but it shouldn’t exclude less common scenarios.”

Eric Yates is the southeast region, environmental, health, and safety manager for Balfour Beatty’s U.S. Civils operations. He says ensuring the team is safe is the most critical aspect of disaster preparedness and post-disaster recovery.

“Getting teammates’ emergency response numbers and emergency shelter locations in their areas is one of the first items on our disaster preparedness checklist. In the case of heavy rain, flooding, and rising seawater issues, stormwater controls are necessary to consider in a storm preparedness plan to keep projects sustainable and safe from erosion and pollution. Flooding and erosion can devastate jobsites and

require extensive and well-executed quality control measures to keep projects safe from damages.”

Yates says researching historical data for flooding in the project area gives a good idea of what can be expected.

“For example, when experiencing heavy rain and flooding on our highway and bridge-span projects, we take additional measures to avoid silt entering waterways or large bodies of water. For a hurricane, wind, and rain events, supporting rebar columns are also a part of the preparation for our operations and require additional monitoring when a storm moves closer to a jobsite, or if a storm changes its path.”

Protecting Assets: Prioritization Is Key

When asked what the best way is for business owners to protect their employees, building, equipment, and inventory as part of their disaster preparedness efforts, Randy Dombrowski, safety services manager for Sentry Insurance, says prioritization is key.

“Your formal safety plans will contain a lot of information. You need to skinny your plan down into an immediate response plan that’s usable for workers. They need to be able to access it on their phone or in the jobsite trailer, and it needs to be easily executed. Your workers, vendors, and equipment all face heightened risk during a disaster. You need people in assigned roles who can activate the goals and steps your business established beforehand to mitigate that risk.”

Diaz agrees and says that prioritizing the safety of team members, partners, and the public always remains constant through Balfour Beatty’s operations.


“To effectively communicate storm forecasting, project status, safety protocols, and the status of project operations, Balfour Beatty uses text alert systems to rapidly broadcast updates to our teams and partners located in areas of potential impact. In the instance of intense lightning, these communication tools aid in informing team members and partners of lightning stand-downs and when to seek shelter prior to a storm approaching.”

Yates adds that improved forecasting and real-time monitoring systems have significantly enhanced storm preparedness.

“These innovative tools can alert our workforce nearly 10 days prior to severe weather, giving teams ample time to execute storm preparedness procedures. With the help of forecasting technology, we can accurately pinpoint a storm’s location 24/7. This is even more helpful if storm trajectories change so we can be agile in safely adjusting our storm preparedness operations accordingly.”

The Balfour Beatty project teams also leverage drone technology for aerial monitoring and inspections as storms unfold. Before initial impact, teams capture 360-degree videos and images of entire project sites and use this footage as a baseline to assess jobsites post-storm. Once storms have passed, drones are flown over jobsites to accurately pinpoint and document damage such as erosion, flooding, and loose materials. The drone footage also provides key intelligence regarding when it is safe to allow its workforce to return to the jobsite.

There is also the issue of having insurance that will protect your business if a disaster strikes. Even when the team is prepared and acts fast, weather emergencies can still cause damage to equipment and inventory.

“It’s important to include insurance in your risk management plans to protect against the inevitability of severe weather,” adds Dombrowski. “Owners should review their insurance policy with their advisor on a regular basis to make sure their business has adequate coverage. You will have more peace of mind that your workers and business are protected.” 



About the Author

Lisa Kopochiniski is a writer, editor, project manager, and content marketer with many years of experience in both the U.S. and Canada. Lisa has written articles on a wide variety of topics and industries such as construction, travel, corrections industry, education, human resources, and more, as well as edited many publications for companies, organizations, and associations.

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