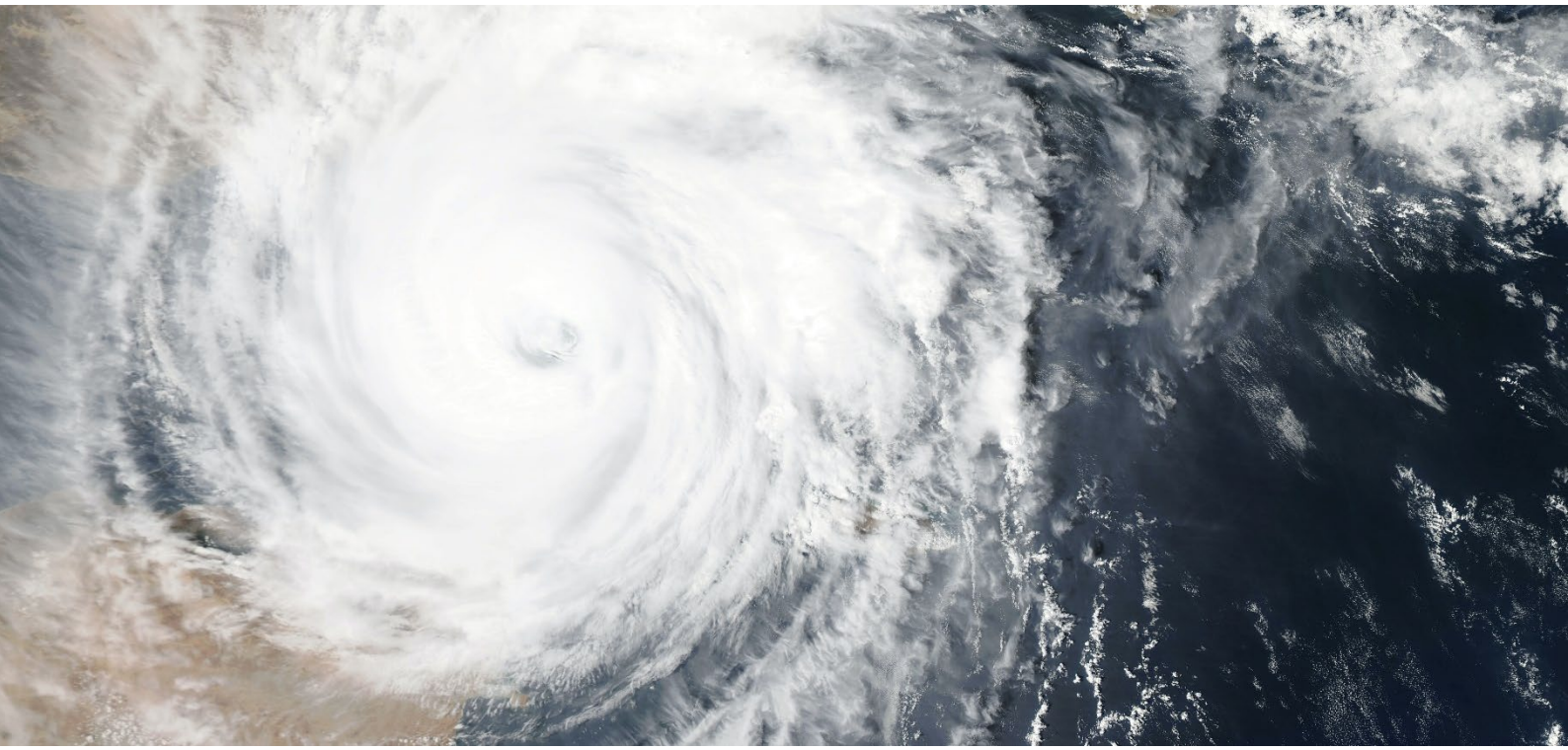

Catastrophic weather events lead to unanticipated delays, costs in construction

Events of extreme, catastrophic weather have increased across the world over the past decade, with far-reaching economic effects on construction projects that last long after skies brighten.

According to the National Oceanic and Atmospheric Administration (NOAA), weather disasters have more than doubled since 1980. In the U.S. in 2022 alone, NOAA reported a total of 18 weather-related disasters, each of which exceeded $1 billion in losses.[1] The events included 11 severe storms throughout the central U.S., 3 cyclones in the Southeast, a severe winter storm in the Northeast, flooding in Kentucky and Missouri, a wildfire in the West, and hurricanes along the Southeastern coast. In the four decades since 1980, severe weather events occurred an average of 7.9 times per year. In the last five years, however, severe weather events have increased to an average of 17.8 per year, with losses totaling $595.5 billion.[2]

“In recent years, the United States has experienced, on average, more than one disaster that has caused over a billion dollars in damages each month,” the White House announced in a statement last fall.

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[1] https://www.ncei.noaa.gov/access/billions/
[2] https://www.ncei.noaa.gov/access/billions/

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"To put this in perspective, until this past decade, the country rarely experienced a year with more than a handful of billion-dollar weather and climate disasters."[3]

While catastrophic weather events have caused widespread damage, injuries, deaths and crippling socioeconomic hardships, they also affect today's construction projects in surprising—and often overlooked—ways. Contractors often must quickly demobilize before a storm or other weather event hits their jobsites. They also must just as quickly assess and mitigate any damage to in-progress structures or any loss of materials and equipment in the wake of the storm. In addition, they must be prepared to re-mobilize—often rebuilding what was damaged—as soon as safely permitted to do so.

Each year, weather delays 45% of construction projects worldwide, costing billions of dollars in additional expense and lost revenue, research shows.

On large and mega projects, demobilization and securing of structures, materials and equipment that can't be moved isn't an easy or quickly accomplished task and can take several days. Getting on-site to investigate the extent of damage also can take time. Remobilizing and ramping up to achieve pre-storm productivity levels can take days or weeks, depending on the level of damage and other ancillary factors.

"Extreme weather impacts every aspect of our lives," reports Forbes Technology Council. "And the construction industry is no exception. In fact, it is one of the most vulnerable to adverse weather because of the frequency of outdoor work and the industry's heavy reliance on labor. Each year, weather delays 45% of construction projects worldwide, costing billions of dollars in additional expense and lost revenue, research shows."[4]

Determining who is responsible for those delays and, specifically, who pays for them can be problematic, leading to contentious disputes, claims and litigation that further delay projects and drive already increasing costs up even further.

For construction contractors and owners, those delays can be as catastrophic as the weather events themselves. However, there are steps that can help firms prepare for severe weather—even well before it is predicted.

Have a Plan

Even companies that have never experienced severe weather events or other catastrophes on their construction projects should fully plan for such eventualities. Companies that already have disaster plans in place should review and update them regularly, ensuring that they reflect rapidly changing

[3] https://www.whitehouse.gov/cea/written-materials/2022/09/01/the-rising-costs-of-extreme-weather-events/
[4] https://www.forbes.com/sites/forbestechcouncil/2022/03/17/new-tech-helps-construction-battle-extreme-weather-and-labor-disruptions/?sh=38fa79a91624

weather patterns, emergency preparedness regulations, construction and supply-chain trends, and emerging risks.

Know Your Risks and Responsibilities
It's vital to know, even before bids are submitted, what the contract allows and what insurance covers—and what they do not. Contracts do not always address all of the specific risks and responsibilities associated with severe weather, especially if the project is located in an area that has not experienced such events in the past. Review your contracts carefully and ask for additional information if you need it.

Also, while some insurance policies may offer reimbursement for physical damage, other costs—such as those resulting from delays and often-unforeseen "soft" costs for such things as materials storage, debris removal, extra security for weather-breached jobsites, legal and administrative fees, reinspection and permitting fees, and costs associated with demobilization and remobilization—may not be covered. Conduct a thorough review of your policy to determine the breadth and limits of coverage, covered losses, methods for recovery, documentation needed, and protocols for the process.

Consider Impacts Beyond the Physical
Time spent demobilizing at a construction site, idled workers and equipment, stockpiled and safely stored materials, increased security needs, and accelerated schedules to account for time lost all carry cost implications for both contractors and owners. It's important to consider, well before a weather event, how these time and cost issues will be handled, and who pays for what. In addition, consider well in advance the impact of weather events on a project's overall schedule and profitability, communicate concerns, and adjust estimates and budgets accordingly.

Allow for Other Delay-Related Costs
Any stoppage in construction costs money, and projects that are shut down for considerable amounts of time carry myriad costs beyond those associated with the delay. Material and equipment costs, for example, can quickly escalate during prolonged shutdowns. Costs also can spike when numerous construction sites are affected within a specific geographic area, creating a surge in demand—and corresponding supply-chain issues—for such staples as lumber, steel and concrete. Labor shortages also can follow long shutdowns, leaving contractors scrambling to fill positions when remobilizing. In addition, costs to store materials purchased before or during the shutdown need to be factored, as do costs to maintain security on jobsites even during shuttering.

Improve Documentation and Accounting Systems
Ensuring that you have sound, time-tested document and cost management and reporting protocols and systems in place can be crucial when disaster strikes. Costs related to severe weather or other catastrophes must be accurately captured and segregated before a construction or insurance claim is initiated. Documentation also is key if a dispute arises. Backing up all electronic data normally stored on a jobsite computer to a home office or other remote location is also key to recovery.

Establish a Dedicated Team
Consider setting up a team of professionals at the start of a project to manage the challenges and complexities of weather events or other emergencies. This team should include upper management and top decision-makers, corporate counsel, financial officers, engineers and architects, and key representatives from the jobsite. The team also should include outside advisors who are experienced in preparing insurance claims, as well as consultants experienced in analyzing delay-related construction disputes and claims.

Experts predict that catastrophes related to severe weather will continue.

"We see already that extremes are bringing about catastrophe," said Claudia Tebaldi, an earth scientist at the Pacific Northwest National Laboratory in Richland, Wash. "The question is: How are we going to possibly adapt and lower the risk by turning the dial of what we can control?"[5]

Having a well-crafted disaster plan, assessing contractual responsibilities and insurance protections, and identifying a team of experts to address extreme weather and other catastrophic events can help both contractors and owners manage a potentially stormy future.

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[5] https://www.washingtonpost.com/climate-environment/2023/01/06/climate-change-scenarios-extremes/