

When Disaster Strikes: How School Facilities Can Cope with the Unthinkable

By Ray Dufresne

More than three years after Hurricane Katrina ripped through the Gulf Coast, Louisiana and the surrounding areas are still coping with its powerful aftermath.

The storm is estimated to have caused more than \$81 billion in damage, making it the costliest natural disaster in U.S. history. The state's schools were among the buildings and infrastructure severely affected by the storm. A 2006 survey confirmed that Hurricane Katrina damaged all 124 of New Orleans's public school buildings. New Orleans Public Schools officials estimate that it will take three to five years and approximately \$800 million to repair that damage.

Because of their urgent nature, the costs of emergency or unplanned repairs to educational facilities—whether caused by hurricanes, floods, earthquakes, fires, or other events—are typically higher than planned maintenance or capital renewal projects. In addition, when classrooms become unusable, districts must quickly determine what other space can most readily and effectively be repurposed and how long that interim space will be needed during repair work.

These unplanned costs can also affect the district's ability to fund planned initiatives. Most school districts do not have a holistic picture of their facility portfolio, making it difficult to project the effect of this type of emergency spending on future capital plans.



Building on a Foundation of Knowledge

In the wake of a major disaster, damage assessment can be particularly challenging for organizations with dozens or even hundreds of affected properties. Those with well-documented information about predisaster facility conditions can more readily pinpoint those facilities that are at the greatest risk of damage and to determine how to prioritize the assessment process.

Because postdisaster assessments need to be performed quickly, the availability of trained assessment professionals can be limited. In many cases, organizations can deploy field personnel already familiar with specific facilities to conduct a quick triage to determine the systems or structures that require immediate attention and to begin to estimate the costs associated with repair. Armed with a plan for data collection, even employees less versed in building engineering or maintenance can gather basic information.

In the wake of a major disaster, damage assessment can be particularly challenging for organizations with dozens or even hundreds of affected properties.

Although using less skilled assessors can improve the response time, they may decrease the accuracy and completeness of the assessment data. In some cases, damage to structural integrity or specific building systems may not be obvious. Following up on the initial triage with professional assessments of specific facilities or systems can enable organizations to respond quickly and cost-effectively to initial assessment needs, while developing accurate estimates of repair costs.

An organization's preexisting assessment data can make initial triage assessments much more efficient. For example, previously collected data about resistance can be used as a metric to assess the location of areas of greater damage and target those locations for triage assessment before anyone returns to a facility. These data may also point out locations where preexisting conditions suggest that the facilities should not be repaired even if damaged, thus giving them lower priority with regard to initial assessments.

Whether hurricane or flood damage makes a school facility uninhabitable for a prolonged period, or a significant equipment failure or unexpected power outage strikes for a relatively brief time, complete and current

information on facility assets and systems is the foundation for making optimal decisions about redeploying resources most effectively.

Of course, information on facility conditions and systems is only valuable if the data can be accessed. In the past, a comprehensive and well-organized plan room was considered a best-in-class approach to supporting the operations team in its disaster response. However, if such a plan room is damaged in the disaster, the organization's ability to respond effectively can be significantly impaired and the loss of data can be crippling.

Today, best practices dictate that critical information be stored electronically in multiple locations to minimize the effect of a single event. An organization's ability to develop a timely recovery plan, with associated costs, is significantly enhanced when this information is contained in a centralized system.

The Importance of Quick Response

Quick remediation decisions can help districts stay ahead of the rush for building materials and labor resources, which can become scarce and expensive after a disaster.

For example, in the aftermath of the Hurricane Rita, the supply of fuel gas and raw materials, and transportation logistics around the Gulf of Mexico—already significantly affected by Hurricane Katrina—were expected to present a continuing challenge to industry throughout the region. The longer an organization takes to determine the scope of necessary projects and to schedule them, the more likely they will face higher costs for labor and materials, as well as a longer time line for project completion.

In addition, organizations with detailed facility data can more readily make the case for their repair estimates and negotiate to maximize the values estimated for each item. Effectively managing this process will help the organization minimize the effect of emergency or unplanned repairs on its ability to fund other planned initiatives.

Even the best planning measures may not prevent damage to facilities. However, up-to-date facility information and effective systems can minimize the effect on the organization's operations.

For school systems, having accurate information along with an established centralized system can increase response time and truly affect the days, weeks, and even months following a disaster. From minimizing the interruption of classroom time to construction dollars saved, having a handle on the asset portfolio is the first major step in being prepared to respond.

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