

# Preparing Schools for Natural Disasters

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In May of 2013, a half-mile wide tornado roared through the Plaza Towers Elementary School in Moore, Okla. Its 200-mph winds tore the school and the surrounding community to shreds.

Like fires and some other kinds of natural disasters, tornados come out of nowhere threatening and often taking lives. Brutal winds ranging from 40 mph to over 300 mph will not only kill people, they will destroy property. Raging winds can pick up cars, as well as people, and toss them around like a child's toys.

Hurricanes wreak havoc on lives and properties, too, but weather forecasters can see hurricanes coming and predict their paths with reasonable accuracy, allowing people at least a couple days to prepare.

In fact, it is a good idea for K-12 schools to be prepared well ahead of any kind of disaster. Then when something happens, administrators and students can take cover immediately in a shelter strong enough to protect lives for days. Preparing for natural disasters involves identifying risks and finding ways to remove their sting. Preparations also include readying shelters, warning everyone with alarms and communications, setting up a system that will enable a school to get back to teaching as quickly as possible.

## Identify Risks

"Look at your region of the country and identify the kinds of disasters that you might face," says Michael Dorn, executive director of the Juliette, Ga.-based Safe Havens International, the world's largest school safety center. "The two biggest risks are earthquakes and tornados. Don't ignore events because they are infrequent. For instance, earthquakes are not common on the east coast, but they have occurred there and they will again.

"Vet your list of risks with local or state emergency management authorities. It is their job to know the risks. We emphasize continual collaboration with emergency management people — they will recommend components for your emergency plan as well as drills appropriate to the region."

## Ready Shelters

Take some time to make sure the shelters chosen will provide adequate protection. *Some schools have been getting it wrong.*

"The way many schools have drilled to prepare for tornados is wrong," says Paul Timm, vice president of RETA Security, a division of Fairfax, Va.-based Facility Engineering Associates. "They prepare by sending students into the school's hallways because the walls there are reinforced.

"This was proven wrong in the Joplin, Mo., storm. In that storm, when the exterior doors gave way, the hallways became wind tunnels and debris was blown into the corridors from outside. Fortunately, that storm hit over the weekend, and there was no one in the building. Had there been students and teachers sheltering in the hallways, they would have been mutilated."

Where can people shelter safely? Move into the interior rooms, rooms with no windows — in a school, interior rooms typically include restrooms and locker rooms. Timm also notes that K-12 schools are required to post evacuation maps that teachers and students can refer to in the event of fire. "Our company also recommends that these maps address severe weather by designating shelter areas," he says.

## Preparations Common to All Kinds of Natural Disasters

Students, teachers and people from the local community may use schools as shelter for different kinds of disasters: hurricanes, floods, wildfires and so on. With that in mind, Timm suggests keeping emergency supplies on hand in schools. “We recommend Classroom Emergency Backpacks,” he says. “These backpacks have supplies of food — specifically hypo-allergenic energy bars — and water. They also have wind-up flashlights which don’t need batteries, thin, folded Mylar blankets, glow sticks, and first aid kits with emergency medical supplies.

In addition to emergency supplies, it is important to drill for natural disasters. While that may sound like too much trouble, experts point out that K-12 schools have been drilling for fire emergencies for decades now. And when there is a fire, students as well as teachers have proven adept at getting out of the school to safety.

Drills are important,” says Timm. “In our state, Illinois, all public and private K-12 schools are required to have one severe weather emergency drill every year — in addition to fire evacuation drills, lockdown drills and other drills that might be recommended.”

“Invite police and fire department personnel to your drills. They can advise you about procedures and, equally important, get to know your facility, which will enable them to work more efficiently in an emergency.”

Not all states mandate drills, but Timm believes drilling is key to surviving a disaster relatively unscathed.

Timm also helps schools organize emergency table-top exercises for various scenarios such as severe weather. Table-top drills bring school emergency managers, administrators, police and firefighters together to discuss what they would do to manage various emergency scenarios. Another way table-top drills help is that everyone at the table sees what each of the others is going — so participants get more than just their own angles.

One more option that some districts have adopted is a short video, about two minutes in length, that explains what to do during an evacuation. Such videos are particularly useful when regular drills are impractical.

“You might also consider participating in the Great American Shakeout,” says Dorn. “This annual event teaches people to protect themselves during an earthquake. It has a standardized national curriculum. Some of what you will learn will also help to manage any liability that may arise.”

Timm advises reviewing emergency plans periodically. “You really should review your emergency plan a couple times a year, but at minimum once per year,” he says. “If you let it go past 12 months, you no longer have a living document. Many components will still be practical, but schools change and evolve over time and the plan needs to take those changes into account.”

## Raising an Emergency Alarm

Fires and sudden severe storms require quick action by everyone. School officials must notify students and teachers and spur an immediate reaction.

“Everything today is mass notification,” says Timm. “That means I need several communication vehicles. A midwestern town, for instance, may have a tornado siren, while buildings may notify occupants through their public-address systems.

Some schools are installing emergency message boards. Information about a threat can be programmed to scroll across these boards. If conditions are right to produce a tornado, for instance, the boards on campus might say: Tornado watch. Please move to a safe area.

“These messages must get through to everyone,” Timm says. “So you should use as many ways to communicate as you have. Other communication methods in use today include texting and emailing to cell phones, tablets and computers.

## Maintaining Continuity

Getting through a natural disaster with as few injuries and as little property damage as possible is one part of emergency management. Once the emergency ends, a school must get back to teaching students. Dorn calls this the Continuity of Operations Plan (COOP).

“Say an earthquake causes extensive damage to a school,” Dorn explains. “The emergency plan helps to keep people alive. Next comes COOP. Suppose inspections show that part of a building — or an entire building — is out of commission. A detailed COOP plan will address a variety of physical and IT scenarios and problems with solutions designed to return buildings to service as quickly as possible.

*Preparing for natural disasters ranks as a vitally important task for school administrators and staff. It requires taking stock of risks facing a school in the event of a flood, earthquake, fire or any other natural disaster that might befall a school.*

The preparatory thinking and work is often assigned to the security director and his or her staff. Experts recommend that the security director lead the effort by eliciting broad participation from the administration, faculty, student body and parents. In the end, disaster preparations shared across the community will prove to be highly effective when the time comes to make use of them.

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## Evacuating People with Disabilities

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When students, faculty and administrators evacuate a school, just about everyone stands up and walks in orderly lines out of the school, just as they did during regular drills.

*Then again, not everyone can stand up and walk out. What about people with disabilities? People in wheelchairs or on crutches can’t simply walk out, and safety professionals ask that elevators not be used in an emergency. People with disabilities need special help.*

“Lift and carry can be dangerous,” says Jeff Wolvovsky of EVAC+CHAIR North America LLC in Lake Success, N.Y.

EVAC+CHAIR manufactures special chairs that can be used to evacuate the disabled. “On the bottom of our chair, there are reinforced rotating belts,” Wolvovsky says. “When a person sits in the chair, the belts rotate and glide down the stairs. Friction controls the speed of descent. The heavier the person the more the chair brakes. Ninety percent of the passenger’s weight is held by the stairway. Using our chair, a 100-pound person can take a 250-pound person down the stairs.”

We hope you find this information useful in developing, implementing and updating your plan for natural disaster preparation.