



# School Safety Monthly

September 2016

## Who Cares About Fire Drills?



Photos: Rachel Wilson



## Message from the Editor



Welcome to another issue of School Safety Monthly! As we wrap up Preparedness month, take a moment to review your organization. Are you up to date on your drills? Have you reviewed your procedures for gaps? Are staff aware of their roles in a crisis?

This issue not only delves into the topic of preparedness but asks some hard questions about how we allocate our emergency drills.

Autumn is upon us; the days grow shorter and the air becomes cold and crisp. Before we had the luxuries of electric heating, this was the time of year that people finalized their preparation for winter by readying their woodstoves and tidying up their woodpiles.

Once the first snow fell it would be much harder to collect firewood and this activity would be vital for winter survival in some places. And the trees that became this firewood had to be felled months before so that it could be dried in time to be properly split and stacked. Without adequate preparation, the wood might be damp, hard to burn and full of smoke.

This is a lot like emergency preparedness: we must prepare as much as we can for the eventuality of a crisis, because once it begins we cannot stop and go back to finish up the planning process. Winter is no time to find out that you are short of wood or that your supply is no good – and a crisis is no time to realize that you should have had more planning meetings, plan vetting or emergency drills.

As you read this issue, consider your own level of preparedness. Ask yourself the hard questions. Remember that you can succeed, but you must prepare.

*-Rachel Wilson, Editor  
School Safety Monthly*

# Shake Out.

October 20, 2016

# Don't Freak Out.

# Shake Out

[www.ShakeOut.org](http://www.ShakeOut.org)

See Page 6 for more information.



# Who Cares About Fire Drills?

by Chris Dorn &  
Stephen Satterly, Jr.

One common suggestion in recent years is that since no fire deaths have occurred in U.S. schools since 1958, schools should conduct more lockdown drills than fire drills, or stop doing fire drills altogether. It is true that many victims have died in school shootings in the past seventy-five years. It is also true that the number of fire deaths has fallen dramatically over the same time period. We respectfully suggest that the reduction in fire deaths is due at least in part because of all the drills and fire code requirements that are now in place. It is also important to note that fire has repeatedly been utilized as a mass casualty weapon in K12 school attacks, including the most lethal attack on an American K12 school to date (the Our Lady of Angels arson in 1955).

Based on the United States Department of Homeland Security definition of active shooter incidents, more victims were killed in this arson attack than all victims of K12 active shooter incidents in U.S. History. We suggest a balance between the need to be able to rapidly evacuate building occupants and the need to be able to rapidly secure them during other types of weapons assaults.

## Why the focus on fire drills?

When dealing with campus safety it is important to base our actions on real risks. With newscasts full of stories of active shooters, it is easy to forget that historically more people have been killed in fires than in active shooter incidents. In fact, the worst school fire in U.S. history killed 175 people. With these incidents fading into

the past it is easy to forget where we came from in school safety. Here are just a few of the fatal fires that killed massive numbers of teachers and students from 1900 to 1960:

- Collinwood, Ohio, 1908: 173 students and 2 teachers burned to death when they became jammed in a fire exit; the school was described at the time as "a modern building of average school construction . . . hundreds of schools [are] by no means as well constructed or secure against such a loss..."

- Peabody, Massachusetts, 1915: 22 students were killed after a fire in a stairwell cut off their escape route

- Covington, Georgia, 1922: 2 students were killed and 38 badly burned after being trapped on the second floor of a burning school building

- Camden, South Carolina, 1923: 46 students and 31 adults were killed after panic broke out when a lamp fell in a large assembly room.

- Babbs Switch, Oklahoma, 1924: 18 student and 18 adults were killed when they rushed for the only exit during a fire because the windows were covered with wire mesh.

- Cheektowaga, New York, 1954: 15 students were killed in Cleveland Hills Elementary school when a furnace exploded. The school was all wood, and burned quickly.

- Chicago, Illinois, 1958: In the most lethal K12 attack to date in the United States, 93 students and 2 staff members perished, with dozens more horribly wounded, when a student started a fire in the school's boiler room.

Largely as a result of these tragic fires, fire science was utilized to dramatically revamp fire codes in American Schools. While fire deaths have been dramatically reduced, thousands of fires still occur in U.S. schools annually, resulting in an average of 85 injuries and \$92m in property damage each year. There have been a shocking number of mass casualty fires in modern times in the U.S. Here are just a few examples of more recent tragedies:

- Beverly Hills Supper Club fire, Kentucky, 1977 - 165 killed and more than 200 injured when exits became blocked with the large flow of people trying to escape through the same door rather than using alternate evacuation routes when the primary exit became blocked.

- Happy Land Night Club fire, New York, City, 1990. 87 victims were killed in an arson fire set by a jealous ex-boyfriend of a club employee.

- The Station Nightclub, Rhode Island, 2003: 100 killed and 230 injured when pyrotechnics started a blaze and the crowd stampeded towards the main exit.

We also feel it is important to note that thus far, at least four attackers have combined the use of fire and firearms in planned attacks at K12 schools. The first such



attack was in Olean, New York in 1974 and the most recent was an attack at Arapahoe High School in Littleton, Colorado in 2013. The attacks at Columbine included fire and explosive devices that malfunctioned. The second deadliest attack in U.S. history, the Bath School Disaster in 1927, was carried out with a combination of firearms, explosives in two locations and a car bomb. The recent series of well-planned and executed terrorist attacks in Europe and in the United States increase the potential for more combination attacks in the future.

Attackers can kill people with smoke in a modern school building with a fire suppression system if they can delay or deny victims a fast evacuation. We have also seen the use of multiple attack methodologies, such as the combined use of fire and firearms in the same attack by terrorists around the world. Barricading concepts could also make it possible for properly prepared attackers to use firearms to trigger a lockdown and barricade of classroom doors to enable them to carry out a deadly attack using chemicals. That is why it is important to have a lockdown protocol that allows for alternative action and quick emergency egress rather than a barricade concept.

### **Safety Codes are Written in Blood**

One of the concepts often taught in OSHA and fire safety courses is that safety codes and regulations are “written in blood”. This is because many of these regulations were put in place after an incident involving serious injury or death.

One of the most frustrating parts of dealing with school safety today is navigating the fine line between emergency egress (i.e. fire codes) and security against violence (i.e. active shooter re-

sponse, as many choose to focus on this area). In most communities, fire and law enforcement personnel are able to convene and determine a suitable solution that both satisfies fire code and security concerns. Other communities have more complex issues that take more time to resolve.

In either case, it is becoming more and more common to hear law enforcement personnel, along with some school staff, proposing a myriad of options: sliding bolt locks on the inside of the door and various emergency barricade devices being used by some schools to secure doors during a lockdown. Despite any supporting data, there are a variety of new training programs that claim to improve safety by teaching students and staff to attack an active shooter. These types of training programs have already caused hundreds of thousands of dollars in training injuries alone. Representatives of insurance companies that we work with have also informed us that of litigation that has been taken against law enforcement trainers who use this approach as well, which we predicted in the past.

### **A Data-driven Approach**

While this brings up more complex questions than we can address in this article, a primary concern is that many of these newer concepts have the potential to violate the fire code and actually result in more injury and death for active shooter situations. A number of exercises, as well as anecdotal evidence from our clients who have used one of these programs, show that these approaches are not always successful. This includes teachers telling us that they or their colleague were “killed” during their latest lockdown drill, putting doubt into that individual’s ability during



that individual’s ability during a real situation. In contrast to many currently popular active shooter approaches, fire service approaches have been proven to prevent injury or loss of life through empirical research. We know of no active shooter training program that has been validated as effective through realistic scenario testing, research, or vetted in a peer-reviewed process.

It is also important to remember that almost every one of the equipment options designed to facilitate a lockdown are really only useful when a door cannot be locked at all. This is a point that is often overlooked in light of misinformation that has been spread about past active shooter events. For example, the Virginia Tech shooting is often used as an example of how 29 individuals in classrooms where a lockdown had been initiated were killed while most of those who barricaded doors survived. This is a dangerously inaccurate depiction, since an external review conducted for the Virginia Tech Police Department verified that the school had no lockdown protocol, no lockdown training for students or staff, no lockdown drills, and no locks



on the doors with which to secure the room itself. No victims were killed in a classroom where a lockdown had been performed at Virginia Tech because the concept was not possible let alone utilized at the time of the attack.

### The potential for a “Kill in Place” attack

In a modern building with adequate door locks, a safer solution to the lockdown dilemma can be to simply have staff members keep their doors locked throughout the day, including instructional periods.

While we agree that many schools could and should dramatically improve their ability to implement a lockdown, the deadly history of school fires in America demonstrate the need to remain vigilant in the area of fire protection. As fire has been repeatedly used as a weapon in K12 schools, the potential for future arson attacks is a very real and well-documented concern. This is of even greater concern given the potential for a combination attack designed to “kill in place” victims who have denied themselves the ability to rapidly evacuate during a lockdown.

### “How Many Drills Should We Be Doing?”

The number of drills you perform should be determined based on your needs. Here are a few questions that can be used in making this decision:

- What are your state or local requirements for emergency drills?
- What are your local risks?
- What is your organization’s level of preparedness?

Here are some typical drill requirements that we see around the United States:

Type of Drill	Frequency
Fire drill	Most states require these on a monthly or quarterly basis, and sometimes stipulate that one or more is held in the first week of school.
Lockdown	Twice or more per year, with more (or less) as needed.
Severe Weather (Tornado or High Wind)	Twice annually or more frequently in tornado-prone areas
Earthquake	Once or twice annually, with more frequency for areas with increased risk
Reverse Evacuation	Periodically in combination with other types of drills
Shelter-in-Place/HazMat	Once or twice annually

Remember, even if your organization is well prepared, periodic drills can help keep staff prepared, reduce staff anxiety and make it more likely that new staff and mid-year hires are familiar with the plan as well.

*Chris Dorn (Senior Analyst, SHI) and Stephen Satterly, Jr. (Adjunct Analyst, SHI) are regular contributors to School Safety Monthly and are part of the team that co-authored “Staying Alive: How to Act Fast and Survive Deadly Encounters”. Dorn and Satterly have performed school safety assessments for hundreds of schools and their expertise is regularly requested by local, state and federal agencies involved in safe schools planning.*

#### Sources & More info:

Quarterly of the National Fire Protection Association, October 1939, Volume 33 Number 2, Boston, Massachusetts.

National Fire Protection Association: School Fires with 10 or more deaths  
<http://www.nfpa.org/research/reports-and-statistics/fires-by-property-type/educational/school-fires-with-10-or-more-deaths>

Structure Fires in Educational Properties fact sheet:  
<http://reliablefire.com/wp-content/uploads/2013/10/EducationalFactSheet.pdf>

Relative Risks of Death in U.S. K-12 Schools: Active Shooter Incidents Info graphic:  
[http://safehavensinternational.org/wp-content/uploads/2014/08/Safe\\_Havens\\_Infographic-Active\\_Shooter\\_Incidents.pdf](http://safehavensinternational.org/wp-content/uploads/2014/08/Safe_Havens_Infographic-Active_Shooter_Incidents.pdf)

The Bath School Disaster: <http://bathschooldisaster.info/>

Our Lady of Angels fire: <http://www.olafire.com/FireSummary.asp>

# SHAKE IT OUT!

**Save the Date: The Great Shakeout!**  
**10:20AM on 10/20/2016**

Participate in the world's largest earthquake drill! On October 20th, 2016, schools all over the United States – and around the world – will be practicing a coordinated earthquake drill to enhance preparedness and awareness. While you may choose to do your drill at a different time, this is a great reminder! Most schools don't perform this type of drill, which can be critical because of the severe yet infrequent nature of earthquakes.

Visit the Shakeout website to register and download handouts, posters, and even audio recordings that you can use to facilitate your school's earthquake drills:

<http://www.shakeout.org/resources/>



<b>K-12 Schools and Districts</b>	<b>Register today at <a href="http://ShakeOut.org">ShakeOut.org</a></b>
<p><b>At 10:20 a.m. on October 20, 2016</b>, millions of people will "Drop, Cover, and Hold On" in The Great ShakeOut, the world's largest earthquake drill ever! All K-12 schools and districts are encouraged to participate in the drill (or plan a more extensive exercise).</p> <p>Major earthquakes may happen anywhere you live, work, or travel. The ShakeOut is our chance to practice how to protect ourselves, and for everyone to become prepared. The goal is to prevent a major earthquake from becoming a catastrophe for you, your organization, and your community.</p> <p>Why is a "Drop, Cover, and Hold On" drill important? To respond quickly you must practice often. You may only have seconds to protect yourself in an earthquake before strong shaking knocks you down, or something falls on you.</p>  <p>Millions of people worldwide have participated in Great ShakeOut Earthquake Drills since 2008. The Great ShakeOut is held on the third Thursday of October each year.</p> <p><b>Everyone can participate!</b> Individuals, families, businesses, schools, colleges, government agencies and organizations are all invited to register.</p>	<p style="text-align: center;"><b>HOW TO PARTICIPATE</b></p> <p>Here are a few suggestions for what K-12 schools and districts can do to participate in the ShakeOut. Learn more at <a href="http://ShakeOut.org/howtoparticipate">ShakeOut.org/howtoparticipate</a>.</p> <p><b>Plan Your Drill:</b></p> <ul style="list-style-type: none"> <li>• Register at <a href="http://ShakeOut.org/register">ShakeOut.org/register</a> to be counted as participating, get email updates, and more.</li> <li>• Download a Drill Broadcast recording from <a href="http://ShakeOut.org/drill/broadcast">ShakeOut.org/drill/broadcast</a>.</li> <li>• Have a "Drop, Cover, and Hold On" drill at 10:20 a.m. on October 20 (or any day or time that fits your schedule).</li> <li>• You can also practice other aspects of your emergency plan, such as inviting parents or guardians to participate in an exercise of your reunification procedures.</li> <li>• Discuss what you learned and make improvements.</li> </ul> <p><b>Get Prepared for Earthquakes:</b></p> <ul style="list-style-type: none"> <li>• Check your emergency supplies and equipment; make sure they are accessible and functional.</li> <li>• Download and review school preparedness materials from <a href="http://ShakeOut.org/howtoparticipate">ShakeOut.org/howtoparticipate</a>.</li> <li>• Encourage staff and students to prepare at home.</li> <li>• Distribute ShakeOut take-home materials.</li> </ul> <p><b>Share the ShakeOut:</b></p> <ul style="list-style-type: none"> <li>• Encourage students and staff to ask their friends, families and neighbors to register.</li> <li>• Ask colleagues at other schools to participate.</li> <li>• Find posters, flyers, and other materials for promoting the ShakeOut at <a href="http://ShakeOut.org/resources">ShakeOut.org/resources</a>.</li> <li>• Share photos and stories of your drill at <a href="http://Shakeout.org/share">Shakeout.org/share</a>.</li> </ul>
	

**As a registered ShakeOut Participant you will:**

- Learn what you can do to get prepared
- Be counted in the largest earthquake drill ever!
- Receive ShakeOut news and other earthquake information
- Set an example that motivates others to participate





## Photo of the Month

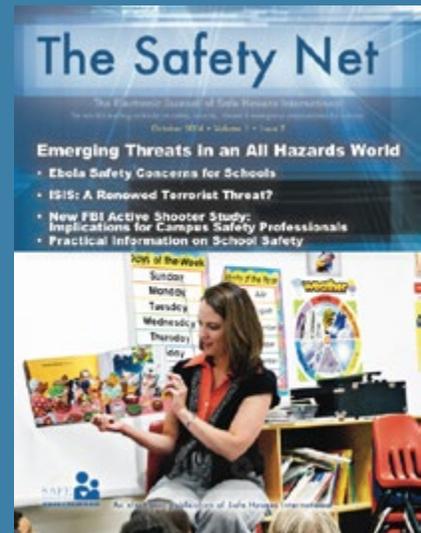


Is this a familiar sight in your school? To get more to the point, how well secured are the dangerous items in your school that are needed for day-to-day operations? What steps are taken to prevent students or visitors from accessing these items?

Tina Brookes/Safe Havens International

## Subscribe to *School Safety Monthly* and *The Safety Net*

In addition to School Safety Monthly, Safe Havens International also publishes an annual electronic journal titled The Safety Net. This is a more in-depth publication that allows for a longer format of articles and a detailed look at topics related to school safety, school security, emergency preparedness for schools, safe school design, building climate, safe school culture and school law enforcement concepts. If you are on the mailing list for School Safety Monthly you will also receive new issues of The Safety Net. If you are not already a subscriber, click here to sign up: <http://www.safehavensinternational.org/newsletter>



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