

# EMERGENCY MANAGEMENT

STRATEGY AND LEADERSHIP IN CRITICAL TIMES

JULY/AUGUST 2014

**+ SAFER SCHOOLS:**  
IS ACTIVE SHOOTER  
TRAINING PUTTING  
STUDENTS AT RISK?

**+ NEXT-GEN 911**  
WHAT IMPLEMENTATION  
WILL REALLY MEAN.

HOW THE SMART  
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AGAINST US.  
WHAT TO DO  
ABOUT IT.

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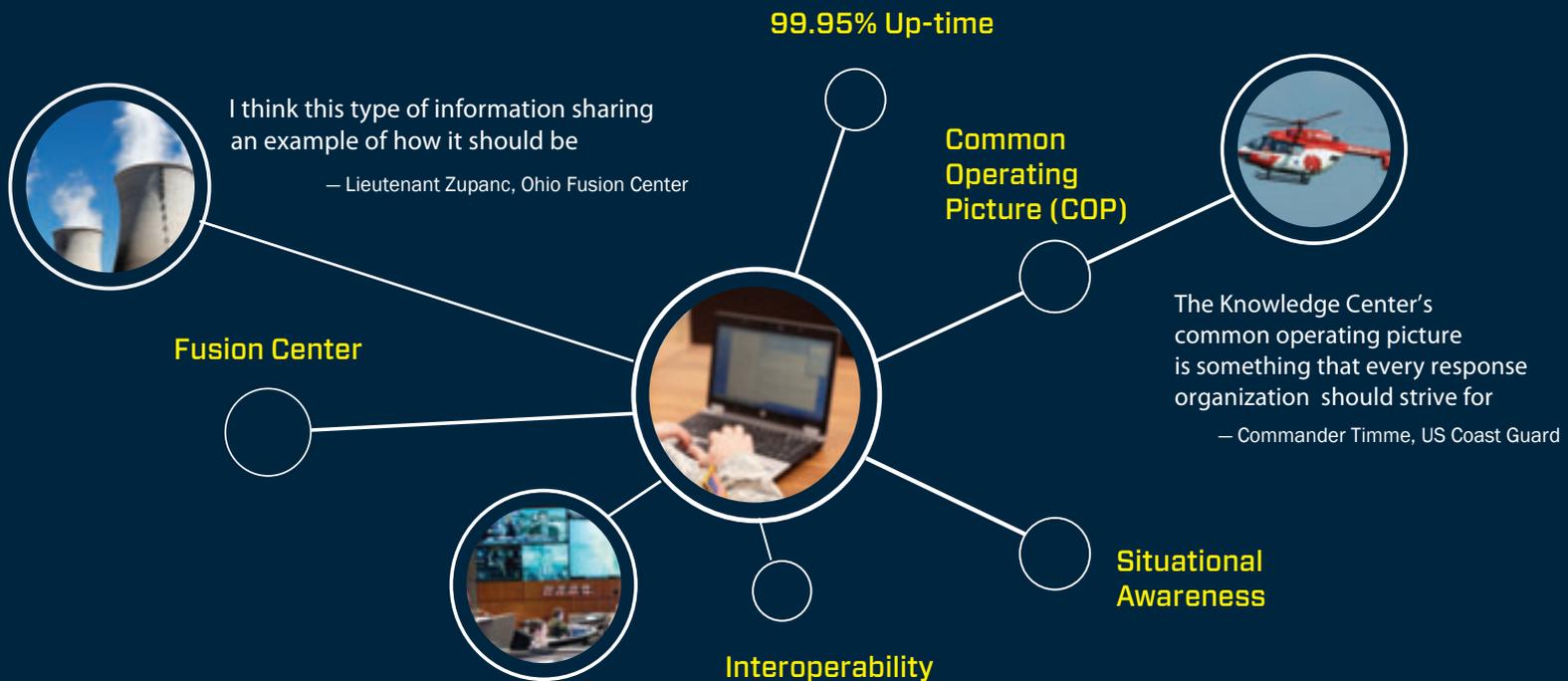


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FLICKR/FRANK KOVALCHEK

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When a consumer assumes he/she is covered with a comprehensive policy supposedly covering all risks and then the company refuses to pay this is when I take issue.

**Pamela Kullo** — in response to *Fixing Flood Insurance* in the May/June issue



**It is good to keep the cost of flood** and all natural disasters as a hot topic of congressional discussion. Flood disasters certainly have a significant cost. Recent changes to the federal disaster assistance program may, as intended, save the federal government money but do nothing to reduce these costs at all levels of government.

Several of the changes will increase the costs borne by the states and local governments. We face a challenge we have all contributed to. The owners of properties in floodplains pay the same taxes as

everyone else. The predominant land use decision-maker is the federal government with 238 years of such decision-making.

The electorate and all levels of government contribute to the cost of disaster response and recovery. Governments induced developments in floodplains and tornado alley among all other places and happily took numerous taxes into their treasury as a result.

My two concerns with the Biggert-Waters legislation are not sharing the risks broadly enough and the non-deductibility of flood insurance premiums for non-business properties. We elect and re-elect Congress. A problem 238 years in the making is not going to be solved by one piece of legislation. I do hope it won't take 238 years to solve.

**Jerry Quinn** — in response to *Fixing Flood Insurance* in the May/June issue

**The best chance to mitigate** climate change is to severely reduce consumption of animal foods. About half of human-induced warming is attributable to animal agriculture. Methane is 24 times more potent than CO2 but takes only seven years to cycle out of the atmosphere. CO2 takes around 100 years to come out. Human pursuit of animal protein is the leading cause of methane release and a primary cause of CO2 concentrating in the atmosphere.

**Jim Corcoran** — in response to *Addressing the Rise* in the May/June issue



**Regardless of what the science** indicates and the effect that urbanization has on water flow, how much is design considered when planning and is an emergency manager even invited to hear the input?

**Jose Rodriguez** — in response to *Translating the Past* in the May/June issue

## Emergency Management Summits

Each summit will address the man-made and natural hazards — fires, floods, earthquakes, terror events — facing the area, as well as best practices in preparing for and mitigating these crises.

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By Jim McKay

# Cops on Campus?

**I**t's hard to wrap your mind around the fact that someone would enter a school building and declare open season on kids. It's even harder to determine a strategy for how to mitigate that. There's a growing catalog of "solutions" to help with the problem.

There are a number of trainings available, including the *Run, Hide, Fight* video and ALICE (Alert, Lockdown, Inform, Counter, Evacuate) training; there's the mental health issue; the gun issue; there are myriad solutions — buzzers, cameras, locks, bulletproof desk tops — and we discuss some of these and their relative merits in *Active Shooter Mirage* in this issue.

It seems school districts are grasping at straws, trying to come up with a fix, including investing millions in some cases on security measures like cameras, which by themselves won't stop a gunman bent on destruction.

Some are using the *Run, Hide, Fight* video because it's endorsed by the U.S. Department of Homeland Security and the Department of Education. That's understandable. Educators aren't experts on public safety issues and although campus shootings are still uncommon events, there's a hysteria surrounding them and no school district wants to be the next Sandy Hook.

While interviewing sources for *Active Shooter Mirage*, the subject of supervision came up repeatedly. Teachers and school administrators have their hands full, I'm sure, but there has to be a way of connecting the dots between a student who is troubled and the student who takes the next step and decides to shoot up his classmates or commit another violent act.

Cost is a real issue in many of these districts, but it seems to me that a school resource officer, one trained in how to handle multiple

situations, perhaps a retired law enforcement officer, would be invaluable on campus.

In a quote that ran in a previous issue of this magazine, Bill Lowe, associate professor of emergency management and terrorism at Jacksonville State University in Alabama, said, "If you can justify having a librarian in the school then how do you not have someone responsible for intruder protection, fire protection — someone trained to deal with emergencies?"

He suggested this person be a multi-dimensional first responder who might work for a school district for nine months and for the local police or sheriff's office the rest of the time. The officer's salary would be shared.

There are many other situations that occur far more frequently on campus than shootings, such as bullying, suicides and other violent incidents that would justify, by themselves, a police presence. This officer or officers wouldn't just be someone with a gun but someone to provide supervision and help connect those dots between the troubled kid and the act of violence. In the worst case, an officer already on the grounds could limit the damage if gunfire should erupt, as was the case in one of the most recent shootings that occurred at Reynolds High School in Troutdale, Ore., on June 10, when two school resource officers responded within a minute and probably saved lives, although one student was killed.

There are no real solutions to the active shooter scenario, but having a police presence on campus, combined with some other prudent measures discussed in *Active Shooter Mirage*, is a no-brainer. 

AN AWARD-WINNING PUBLICATION



QUESTIONS OR COMMENTS?

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## In the News

### **MILD HURRICANE SEASON, BUT SURGE IS STILL POSSIBLE**

Forecasters are calling for a below-average hurricane season. But in a nod to the ever-changing climate, Colorado State University raised its predicted numbers a tick to 10 named storms, with four becoming hurricanes and one of those reaching “major” hurricane status.

Some cite the devastation of Hurricane Sandy’s surge level as evidence that things can change quickly. The surge level on Oct. 29, 2012, topped 13.88 feet, beating the old record of 10.02 set in 1960. Sandy left 117 people dead and caused \$68 billion in damage.

And a number of new reports issued in May, including the third National Climate Assessment from the White House, predict a 1- to 4-foot rise in sea levels over the next century, the result of a melting polar ice cap in Antarctica triggered by global warming. Also, many of those same reports point to more frequent and intense tropical storms.

**McClatchy News Service**

### **Did you know?**

From 1990 to 2008, population density increased by 32 percent in Gulf coastal counties, 17 percent in Atlantic coastal counties, and 16 percent in Hawaii, according to the U.S. Census Bureau in 2010.

- Much of the United States’ densely populated Atlantic and Gulf coastlines lie less than 10 feet above mean sea level.
- More than half of the nation’s economic productivity is located within coastal zones.
- 72 percent of ports, 27 percent of major roads and 9 percent of rail lines within the Gulf Coast region are at or below four feet of elevation.
- A storm surge of 23 feet has the ability to inundate 67 percent of interstates, 57 percent of arterials, almost half of rail miles, 29 airports and virtually all ports in the Gulf Coast area.

**National Hurricane Center**

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## MERS: A Threat to the World

Middle East Respiratory Syndrome (MERS) has been on the U.S. Centers for Disease Control and Prevention's radar since it first appeared in Saudi Arabia in 2012. The World Health Organization called the virus a "threat to the world," because of the unknowns surrounding it, most notably how it spreads. While MERS burst into the spotlight once the two U.S. cases were reported in April in Indiana and Atlanta in May, the CDC has been preparing for the virus's arrival.

"We began working with state health departments and emergency managers to prepare in the summer of 2013, because we were pretty certain MERS would reach the U.S. one day, we just didn't know when," said CDC spokesman Jason McDonald.

Indiana State Health Commissioner William C. VanNess II said the response was a plan that came together. "We were really pleased with the preparation that occurred and how everybody jumped in, did their job, and did it well. A lot of accolades go to the hospital, which was able to identify this fairly early, and to find the employees that had been in contact with the patient."

The state plans to review the sequence of events to see what can be learned from it and where to improve.



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## WHOOPIING COUGH CASES RISE IN CALIFORNIA

Whooping cough is on the rise in California again, with more cases being reported in the first five months of the year than in all of 2013.

The latest figures concern state health department officials who say they expect cases of the persistent and sometimes deadly cough to continue to rise.

The California Department of Public Health said it has received reports of 2,649 cases of pertussis from Jan. 1 to May 27. More than 800 cases were reported in April alone, the highest monthly count since the 2010 epidemic, when a total of 9,159 cases were reported. Officials say the disease peaks every three to five years.

Health officials point to a number of reasons for this: the public not sufficiently seeking out the available immunizations, waning immunity and more aggressive detection as reasons behind the spike in whooping cough cases. Two infants have died so far. Ten infant deaths were reported in 2010.

— McClatchy News



## LOS ANGELES FEELING MORE RUMBLING

The Los Angeles area is feeling more earthquakes this year. After a relatively quiet period of seismic activity in the area, the last five months have been marked by five earthquakes larger than 4.0. That hasn't occurred since 1994, the year of the destruc-

tive Northridge earthquake that produced 53 such temblors.

Earthquake experts said 2014 is clearly a year of increased seismic activity, but they said it's hard to know whether the recent string of quakes suggests that a larger one is on the way.

Quakes in the magnitude 4 range are large enough to be felt over wide areas but generally too small to cause much damage. The largest so far this year was a magnitude 5.1 in La Habra, which caused several million dollars in damage. — McClatchy News

## MOST DEVASTATING HURRICANES IN THE U.S.

### 1 / 1900 GALVESTON, TEXAS, HURRICANE:

Roughly 8,000 people were killed by this Category 4 hurricane, though some estimates put the death toll as high as 12,000. According to the National Oceanic and Atmospheric Administration, the south, east and west sides of the city were destroyed as far as five blocks inland by a storm surge of up to 15 feet high. An estimated 3,500 homes and buildings were destroyed.

### 2 / 1928 SOUTHEAST FLORIDA/LAKE OKEECHOBEE HURRICANE:

Roughly 2,500 people were killed, but it's possible this number is as high as 3,000. The majority of the deaths were from drowning after a storm surge caused Lake Okeechobee to overflow and put the surrounding area under 10 to 15 feet of water.

### 3 / 2005 HURRICANE KATRINA:

A total of 1,200 direct deaths. Even though Katrina had weakened to a Category 3 before landfall along the northern Gulf Coast, its large size and previous extreme intensity sent a huge storm surge into the Mississippi, southeast Louisiana and Alabama coasts. — WEATHER.COM



# GETTING AHEAD WITH GRANTS

The federal government alone offers billions of dollars each year in IT grants that are often targeted to local governments.

*But how can public safety and emergency management agencies take advantage of these grants to fund technology initiatives?*

To answer this question, *Government Technology*, in partnership with CDW•G, created a comprehensive, interactive grants guide and held a complementary webinar. Download both for:

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How the smart energy grid can easily be turned



# SECURING THE

against us by bad actors and what to do about it.



By Adam Stone

# THE GRID

## Sci-fi movies have warned us again and again: Sooner or later, our technology will destroy us.

The moment will come when machines become so smart, they will become a force for destruction rather than the engine of our general betterment.

Will it be the smart energy grid that pushes us over the line? There is growing concern that the automated, intelligent interplay between elements of the power grid could produce new and deeply hazardous vulnerabilities.

Consider first the upside. Smart grid technology enables two-way communication between disparate elements of the power generation, transmission and distribution chain. Constant feedback allows the system to detect and respond to local changes. As a result, lost power can be restored more quickly; systems can respond to peak demands; renewable sources can be integrated into conventional systems more easily.

“The downside is that with this higher degree of coordination comes a higher degree of vulnerability. If bad actors understand the new control paradigm, they can herd the grid to certain places, they can trick the grid operators or the automated equipment to respond in certain ways,” said Battelle Memorial Institute Research Leader Jason Black.

Within the complexity of the smart grid structure, these threats can take any number of forms.

Vulnerability begins at a mundane level, with the plain old physical attack, explosive or otherwise, targeted at the computing centers that run the smart grid. While power plants may have some level of physical security, data centers often do not have such protections. “Some of these major control centers are located in standard office buildings. They are not even located behind concrete barriers,” said Thomas Popik, chairman of the nonprofit Foundation for Resilient Societies, which conducts research into the U.S. power grid.

In addition to physical threats, more complicated attacks also are possible — attacks that seem to mirror Hollywood scenarios. Specifically, computer-based control systems also may be vulnerable to electromagnetic attack, the kind of mass shock wave that disrupts digital transmissions, as depicted in the movie *Ocean’s Eleven*. In that case, con artists use such a pulse to take a city’s grid offline for a few crucial moments.

“The same thing can happen to any vulnerable electronic component of the smart grid,” Popik said. Nor would the attackers be particularly noticeable. Such a disruptive device could easily fit into a standard van.

It’s a solvable problem, but the solutions have to be implemented early. One solution is a Faraday cage, an enclosure of conductive material that shields equipment from the pulse. You can cage individual pieces of equipment or enclose a whole room. Defense against electromagnetic attack also can be built into new energy facilities, adding 5 percent to the overall cost. Those who add such defenses as a retrofit typically find the costs to be about four times more.

The most widely recognized vulnerability in the smart grid lies in the software itself, the programming that directs the actions of the system. “We’ve tested around 30 different products from over 20 different vendors since April 2013 and we found 85 percent of those have low-hanging vulnerabilities,” said Adam Crain, a partner at Automatak. In examining energy industry software, Crain’s team has found a range of issues that may lead to possible exploitation.

While standards for security may be adequate, implementation is far less certain. Even with the security standards in hand, “now the coders have to take this complex standard — it’s 1,000 pages long — and translate it into software, and that is no easy task,” Crain said. While that software is then tested for functionality, it is seldom tested for security. Bad actors can slip in through security gaps and spread mass damage relatively easily.

“One of the things we found was that the master stations, the control centers, were vulnerable,” Crain said. All it takes is one unsecured power pole to get to the control center: Because everything is interconnected, even a small gap opens the door back to the master control system, giving a bad actor access to literally the entire system.

Where are the weak links? Virtually everywhere. Power poles, capacitors, voltage regulators, power quality meters, smart readers in people’s homes, electrical vehicle charging stations. Name it. Anything that isn’t locked down is a potential source for exploitation, an open window into the beating heart of the network.



A smarter energy grid allows for the systems to become more efficient. Unfortunately, it opens the door for bad actors to more easily launch an attack.

All these cyberthreats are in a sense built into the very nature of the smart grid. “There is a huge culture gap, especially in the electrical power space,” Crain said. “The grid was designed for physical reliability, resistance to storms. It was not designed for resistance to cyberattacks. When you mention this issue to people in the field, the best they can say is that, ‘This is why we have redundancy.’ But redundancy doesn’t help you if that redundant asset has the same software and the same vulnerability.”

Now let’s start to think about the impact of all of this on the emergency management community. There’s the obvious threat of mass blackouts, and we’ll come to that. But consider first the “smartness” of the smart grid and all that it implies for people on the front lines of emergency response.

The smart grid depends on the intelligence of the devices to which it is connected. Diverse elements within the power chain must have some degree of awareness, as it were, if they are to communicate effectively up and down the line. This native hardware intelligence poses real risk as the power system becomes increasingly smart. The more intelligent the devices, the more widespread the risk.

At the Northern California Regional Intelligence Center, Cyber Intelligence Analyst Donovan Miguel McKendrick points to the innocuous-seeming Philips Hue light bulb. The bulb’s color can be adjusted to meet a range of settings, a nice feature for changing the mood in your living room. As the manufacturer

“There’s no awareness about how serious it is. People hear about Anonymous, they hear about these malicious threats. But every time it comes out in the media, they say it is the end of the world. Then when the world doesn’t end, people just tend to write it off.”

describes it, users can “[e]xperiment with shades of white, from invigorating blue to soothing yellow. Or play with all the colors in the hue spectrum. ... Relive your favorite memories. Even improve your mood.”

Hue is controlled by a smartphone app. Plug it into the smart grid, however, and it becomes theoretically possible to control the light from outside the app via software hack. Then the system’s own intelligence becomes a point of entry for destructive players. “Now suppose that light bulb is installed in an emergency room and someone shuts it off during a procedure,” McKendrick said. “That’s a worst-case scenario.”

Knowing that such things could happen, one moves quickly to considering the possibility that they will.

“The main concern is that somebody is going to get into the system with the motivation and the skill set to do serious damage and to cause loss of life,” McKendrick said. He points to the example of Dark-Seoul, a hacking organization credited with successful cyberattacks on South Korea’s banks, television broadcasters, financial companies and government websites.

“That is exactly the concern,” McKendrick said. “That somebody could use a piece of malware like that and target critical infrastructure in America. With the smart grid, it would not be very difficult.”

The same techniques could of course be used to turn off all the lights. As emergency managers begin to contemplate these unpleasant scenarios, it seems reasonable to ask just how big a threat we’re talking about. While the smart grid is by no means ubiquitous, it is rapidly gaining a place among the most prominent energy management models.

More than 26 percent of public utilities and 28 percent of investor-owned utilities (IOUs) are in the early planning stages of developing a smart grid, according

to the latest *Strategic Directions in the U.S. Electric Industry* report from engineering and consulting firm Black & Veatch.

More than 36 percent of public utilities and 23 percent of IOUs are actively deploying physical infrastructure updates, while about 13 percent of public and 17 percent of IOUs are deploying IT infrastructure. Clearly there’s momentum here.

Let’s back up and consider the big picture. The problems are apparent: buggy software, physical vulnerability, the inherent interconnectedness of intelligent devices. Yet the technology exists to remediate the worst of these. So what’s the problem?

As is so often the case, one of the main problems is the human element.

While the expertise exists to address the technological challenges of the smart grid, it does not always exist in the right places, said Adam Cahn, CEO of Clear Creek Networks, a company that builds computer networks for utilities.

“The problem is that the power engineers who are responsible for the management of the physical electric grid are not experts in the data networks that support the grid. They lack the skills to properly configure network devices,” he said. Data network professionals on the other hand may have a solid grasp on the technology, but may not understand the subtleties of power generation.

For emergency management, there are other aspects of the human element that may be more directly controlled.

When it comes to the prevention of crises, emergency managers often assume the role of educator, whether it comes in the form of a smoke alarm campaign or hurricane response instructions. In the case of the smart grid,

that same up-front effort could help prevent disaster or at least speed remediation.

“The holes are generally in the human component. Humans are the weakest link every time,” McKendrick said. “So a large part of the job is not just responding to the cyberthreat but also educating the humans.”

Emergency managers likely will face significant hurdles in trying to get their voices heard. “There’s no awareness about how serious it is,” McKendrick said. “People hear about Anonymous, they hear about these malicious threats. But every time it comes out in the media, they say it is the end of the world. Then when the world doesn’t end, people just tend to write it off. Then you have the majority of the populace that just ignores it altogether. ‘My job isn’t in IT, so what do I care?’”

To help raise awareness, emergency managers should build alliances well in advance of a crisis, Black said. It’s important to forge ties with local utilities, to understand the vulnerabilities, to share response plans. If first responders know in advance that a certain school is going to become an ad hoc shelter, it makes sense to tell the utilities that, so that the school can become a priority for the return of power.

While emergency managers might not be able to control malicious actions on the grid, they can play an active role in shaping the policies that are meant to safeguard the system, Popik said. In particular, he recommends leaders join the North American Electric Reliability Corp., which sets policy for the energy industry.

“They need to become involved in the political process and demand the regulation, security and reliability of the electric grid,” he said. ⊕

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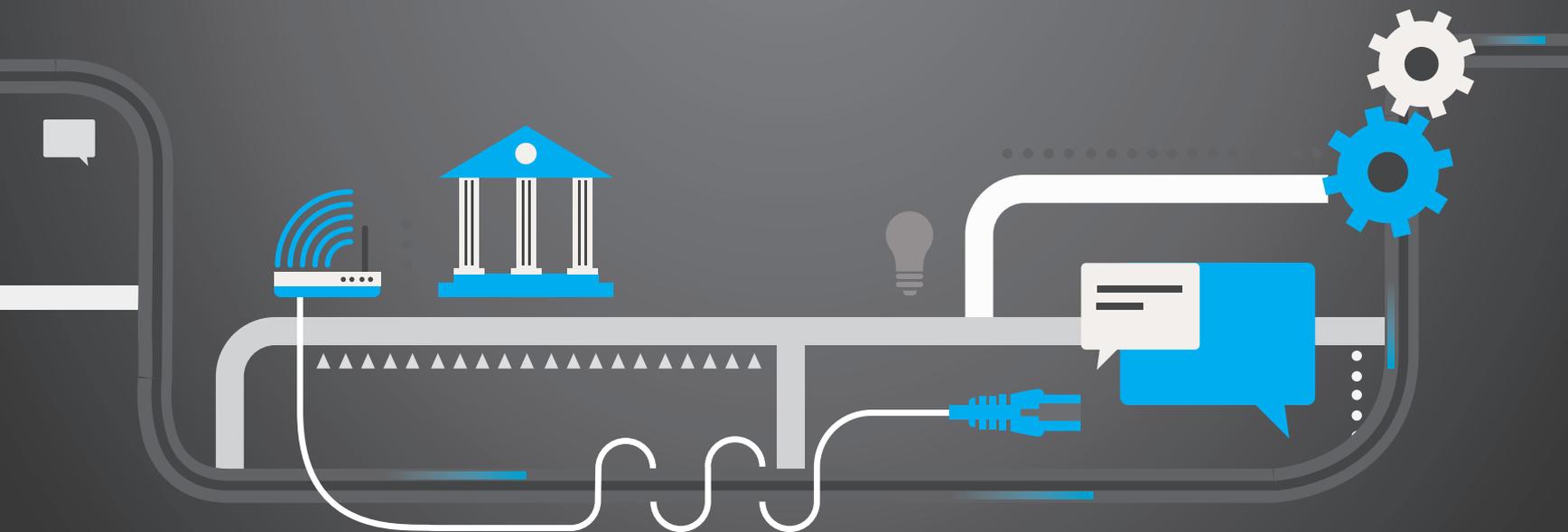
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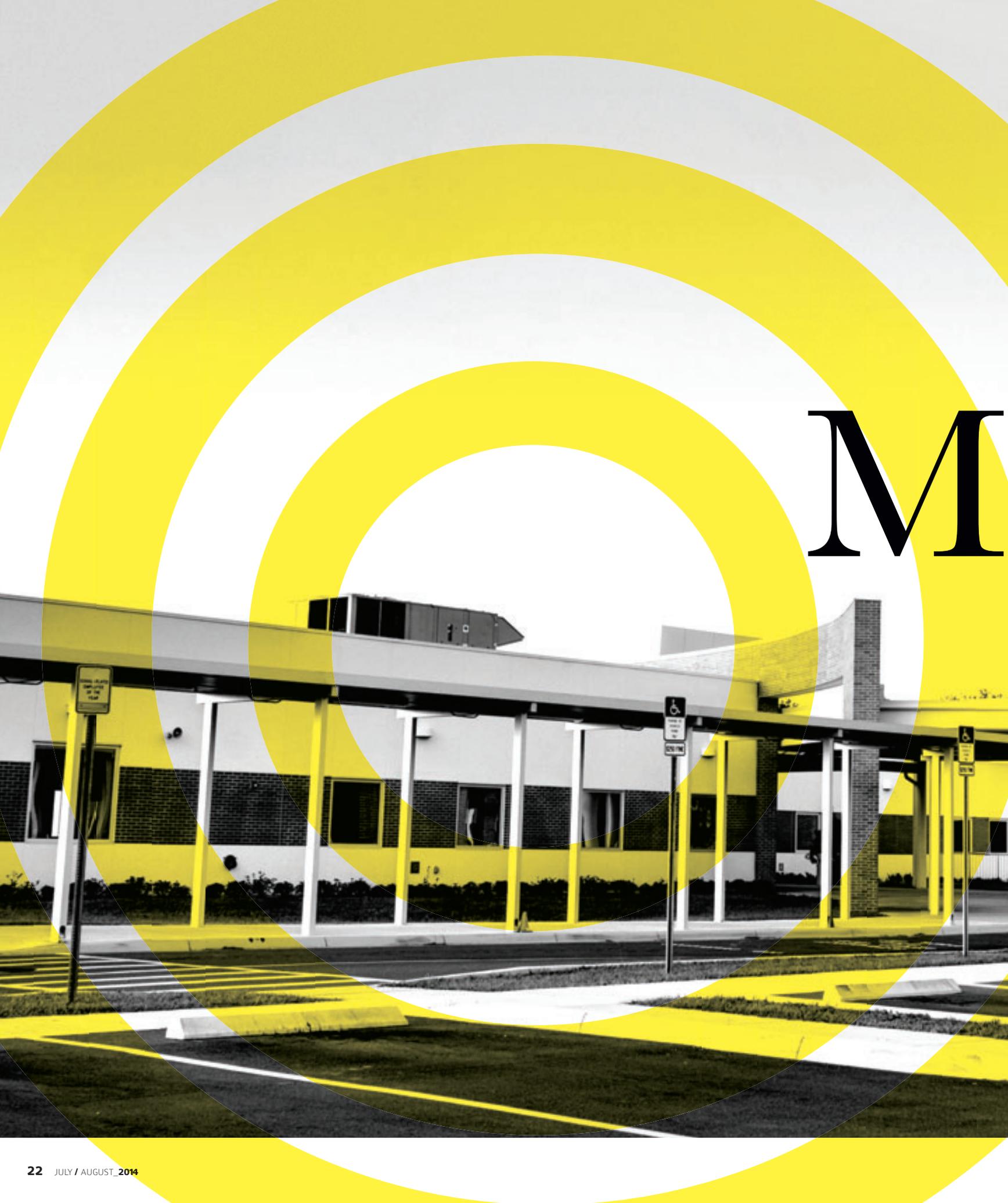
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# ACTIVE SHOOTER TRAGEDY

ARE SCHOOLS NEGLECTING ASPECTS OF SAFETY BY FOCUSING TOO MUCH ON THE ACTIVE SHOOTER SCENARIO?



BY JIM MCKAY

School shootings have captured the attention of the American public and certainly school administrators, who feel compelled to do something to prevent or mitigate the effects of a similar incident taking place on their grounds.

Solutions — in the form of cameras, metal detectors, buzzers, bulletproof white boards and the like — are coming out of the woodwork and are being foisted upon administrators. There is a lot of training available too, such as the *Run, Hide, Fight* video that demonstrates what to do in the event of an active shooter, including taking down an armed gunman.

But there are problems with these approaches and educators are missing key elements of managing these scenarios by relying on some of the technology fixes and the active shooter training, some experts say.

The *Run, Hide, Fight* training is an alternative to waiting for law enforcement to arrive, which is ineffective since most violent acts are usually over in minutes, before law enforcement arrives. The objective of the training videos is to condition students and administrators, anyone faced with the potentially deadly situation of an active shooter, to recognize the best avenues for avoiding bloodshed.

Running is the first option. If you can get away from danger, do it, the video teaches. If not, find a place to hide quietly. And last, if in close quarters with a gunman, with no place to hide and no avenue for escape, become offensive by throwing objects at him to distract him or even resort to physical combat.

Proponents, and there are many school campuses taking part in such training, say this is better than becoming a sitting duck.

But there are those who say the training is flawed, asks too much of school administrators and students, and misses key components like threat assessments, all-hazards training and collaboration.

#### ARE SCHOOLS LESS SAFE?

“We’re very concerned that a lot of schools are less safe today than they were before Sandy Hook,” said Michael Dorn, a former

Dorn’s organization conducts assessments for schools to see how prepared or unprepared they are, putting them in a scenario and observing the reaction. Often the reaction is counter to what is safe and effective, and oftentimes those who’ve watched the *Run, Hide, Fight* video perform worse than those with no training at all.

“The video is very frightening to educators,” Dorn said. “They freak out and do the

There have been real shooting scenarios where citizens unsuccessfully tried to stop a gunman and Dorn acknowledged that it has gone both ways, where citizens were successful. For instance at Thurston High School in Oregon, students disarmed a gunman after he opened fire. But, as in the case of a Wisconsin high school principal, people have been killed by becoming aggressive with an individual brandishing

## “THE SCHOOL TEACHER WHO MAY QUALIFY AT THE PISTOL RANGE ONCE A YEAR IS NOT GOING TO HIT THE TARGET IN A HIGH-STRESS SITUATION LIKE AN ACTIVE SHOOTER.”

law enforcement officer and now executive director of Safe Havens International, a nonprofit campus safety organization.

One of the reasons, Dorn said, is the heavy emphasis on the active shooter scenario, which ignores other threats, and that some of the training is not evidence-based and not proven to work, such as the *Run, Hide, Fight* video, created by the city of Houston with U.S. Department of Homeland Security funds.

That thinking is in line with that of Curt Lavarello, executive director of the School Safety Advocacy Council, as well. He knows of no instances where a classroom has been trained to disarm a gunman and has actually done so successfully. He was speaking of the “fight” component of some of the trainings being offered to school districts, which instruct teachers and even elementary school students how to disarm a gunman.

Asking teachers or students to have the wherewithal to attack an armed gunman and hold him down “gets way, way off base,” Lavarello said. “We’re doing something that is not only inherently dangerous but it’s untested.”

Dorn likened the “Fight” part of the video to close quarters combat taught in the military. “When you’re training people to disarm somebody, it’s the highest level of close quarters combat. It’s harder to teach that than to teach them to shoot somebody or stab them with a bayonet.” And yet it’s being done with a 10-minute video or two-hour class, he said.

most bizarre things. We ask them why they did what they did and they say, ‘I saw the video and that’s what the video told me to do.’”

One elderly man got so panicked during a drill that he jumped through a plate-glass window. And that’s just one case. Dorn said one state has had nearly a quarter of a million dollars in emergency medical bills in the last 18 months just from training. In addition, he said about one-fourth of all participants in the assessment drills will attack the gunman, whether the gunman is suicidal, down the hall, waving the gun or not.

a gun. At the assessments, people are going out of their way to attack the gunman.

As for having guns for protection in the classroom, Lavarello said it’s asking for trouble. For one thing, police arriving on a scene would have the daunting task of identifying a “good shooter” versus a “bad shooter.” He said that from his 25 years as a law enforcement officer (18 in schools) he understands that in a high-stress situation like an active shooter scenario, even a trained shooter will hit the target about 30 percent of the time.

“The school teacher who may qualify at the pistol range once a year is not going to hit the target in a high-stress situation like an active shooter,” Lavarello said. “And in a school, the backdrop of missing rounds is other kids.”

Physical security, in the form of police officers or security officers has increased since Sandy Hook, and that’s a good thing and advocated by most security professionals. These can be multi-hazard professionals, trained in all-hazards response and, perhaps, shared with the local law enforcement office.

#### OTHER VIOLENT ACTS

In *Run, Hide, Fight*, students and teachers are taught to run if it’s safe and hide if it’s not, but they don’t remember that part correctly or misidentify the situation in simulation. Assessments reveal that when given scenarios where there is someone with a gun walking 75 yards away, they do unthinkable things like leaving second-graders exposed.



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There are more common types of violence on campus that are being overshadowed by the active shooter hype, such as suicides and other incidents: “The guy who pulls out a buck knife on a teacher or the guy who’s emotionally unstable and comes in and starts beating up the secretary with the wooden nameplate on her desk,” Dorn said. He cited a study that listed 63 homicides in the last 15 years with twice as many suicides. Kids are shooting themselves in front of classes or in the principal’s office, and those instances are twice as common in terms of the number of deaths and five times as common as shootings.

Proponents of the fight and countermeasures say those are meant to be last resorts; when everything else is off the table and the subjects are in close quarters with a gunman. And it’s an alternative to the “lockdown” procedure, which produces easy targets.

But teaching students to hide under a desk or lie down on the floor is counterproductive when it comes to survival, they say, and recent shootings such as Sandy Hook prove

that. At Sandy Hook 39 rounds were fired into a room of about 17 square feet where kids were hunkered down. “That was somebody’s strategy,” said Lt. Joe Hendry with the Kent State University Police Department. “That’s not a great idea for this circumstance.”

Same thing at Virginia Tech and the movie theater in Colorado, where a number of people were shot lying on the ground. “Those are not survival tactics,” Hendry said. He’s a proponent of the counter aspect and teaches students to become harder targets, to distract the shooter with noise and movement.

Janice Evans, chief policy officer and director of communications for Houston Mayor Annise Parker’s office, where the *Run, Hide, Fight* video was produced, stated that the “fight” portion of the video is not transferable to a school situation. “However, the ‘run’ and ‘hide’ segments can be applied to schools.” She said the video has been viewed by nearly 3 million people on YouTube and her office continues to get requests for it from corporations and public agencies around the country.

Brad Spicer, CEO of SafePlans, agrees that passive targets are easy victims. “It’s not that we think that young kids can pick up a book and take out a bad guy. We’re saying don’t just tell kids to hide under a table and hope the bad guy doesn’t come in,” he said. He said bullets aren’t magic and don’t automatically find their targets, so being active, making the shooter make decisions and presenting him with challenges can save lives.

Marianne Derbyshire Alvarez is the vice president at the ALICE Training Institute. ALICE — Alert, Lockdown, Inform, Counter, Evacuate — is a training strategy for schools, including K-12 schools, businesses and hospitals to improve the odds of survival among students and employees during a “violent intruder event.”

Alvarez called ALICE a toolbox that provides options other than the traditional actions of lockdown and wait. ALICE is based on the principle that every circumstance is different and there is no one-size-fits-all method for survival, she said. And the



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order of response is based on the situation, meaning whether it's Lockdown, Evacuate or Counter (distract the shooter) the best choice depends on the circumstance.

But can children or even adult employees stay calm and focus on the right solution when shots are being fired? "That's where training comes in," Alvarez said. "Just like police are trained over and over, we actually visualize what we may go through so that if we are faced with it, then we just do it."

ALICE emphasizes that "Counter" is a last resort to be used only when all other options are no longer viable. And unlike the *Run, Hide, Fight* video, where fighting is an option, the countermeasure in ALICE is a diversion aimed at distracting the shooter and allowing time for individuals to escape. "Say you're the shooter and you're approaching some people and they all start throwing books at you or a cup of coffee," Alvarez said. "Isn't it going to be more difficult for you to hit that target with things flying at your face?"

ALICE Training is a method of mitigating the circumstance of an active

'What do I need? Do I need cameras? Metal detectors? Retina scanning?'" Lavarello said. "We tell them to take a step back and truly look at what the needs are."

The way to do that is through an assessment, which can be done by a professional or even a principal from another school. But oftentimes the most important security measure lacking on campus is supervision.

Lavarello said he recently did an assessment for a school district in a city that was ready to shell out nearly \$5 million on walkthrough metal detectors. He was on several of the district's campuses for hours at a time before anyone approached him to ask who he was and what he was doing there. At one point there were nearly 40 buses unloading children, he said, and not one administrator or adult was around other than the bus drivers to inquire as to who he was.

"Here the district was ready to make this huge purchase and yet they weren't even doing the simple things."

Dorn agreed, saying supervision is almost always implicated when a student is killed on or near campus. More emphasis on student

and that should be trained, alert personnel.

Like Dorn and Lavarello, Klinger does intruder assessments and finds the same things: Nobody engages the visitor. "That's a huge vulnerability for schools," she said. "Maybe they're there to steal iPhones or snatch a kid or shoot up a school — you don't know."

Dorn said de-escalation training is a no-brainer because it works. Evidenced-based anti-bullying programs work as does training on pattern matching recognition — learning how to spot a desperate individual can help administrators become more able to detect danger and act accordingly to de-escalate it.

Assessment training should not just be about who the next shooter might be but who has the potential to be violent to one's self or to others in any way. It could be merely a student who appears to be engaging in risk-taking behavior all the way up to a person who projects the ability to be violent.

Klinger said that in more than 75 percent of school shootings, three or more adults were concerned about the individual prior to the shooting, and threat assessments and

**“I WAS ON SEVERAL SCHOOL CAMPUSES FOR TWO OR THREE HOURS IN SOME CASES BEFORE I WAS EVEN ASKED WHY I WAS THERE.”**

shooter incident once that happens. It's not meant to replace assessments of facilities and the mental health of students and employees. Alvarez said she's a "big believer" in threat assessment teams for schools or any agency and having different groups meet once a month to discuss individuals who might need to be watched or investigated.

#### ALL-HAZARDS APPROACH

The emphasis on an active shooter scenario detracts from other important trainings like tornado drills, CPR and shelter in place, Dorn and Lavarello said. And school districts, deluged with quick fixes from vendors, are investing in things they don't necessarily need.

"We do a lot of school safety assessments and I get the million-dollar question:

supervision will reduce the number of deaths from tornado, school traffic fatalities, suicide, and reduce bullying, child abduction and sexual molestation, he said. "And it's cheaper than teaching people how to pack a gun."

Part of that is just being available, greeting students as they arrive at school, communicating with them and developing a rapport. Cameras are great but they are mostly used as evidence and schools usually don't review video at the end of the day.

Amy Klinger, director of programs at the Educator's School Safety Network, acknowledged that it's fine to purchase buzzers, locks, cameras, metal detectors, etc., but it's also important to realize that they are but a first line of defense and that there must be a second line. She said if someone wants to get onto school grounds, they will, so there'd better be a second line of defense,

appropriate training are ways to connect the dots. "But it also is predicting kids at risk for suicide, self-mutilation, substance abuse or running away. So it's exactly what we need to be doing because it's an all-hazards approach to preventing these events."

Schools, businesses and the public have — for the most part — waited for law enforcement to arrive on the scene during situations like an active shooter. But prior collaboration with law enforcement, and fire and EMS is an important part of mitigating events.

"School districts and colleges should reach out to local first responders and develop a relationship and an understanding of how things work in each realm," Lavarello said. They should go hand in hand to make kids learn to their maximum capacity." ➤

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# NEXT- GEN 911

FROM A TO Z

THERE ARE CHALLENGES TO IMPLEMENTING NEXT-GENERATION 911 AND ONE IS A LACK OF KNOWLEDGE OF HOW IT WORKS.

**ON MAY 1, 2010**, a terrorist attack in New York City's Times Square was thwarted when street vendors noticed smoke coming from a car in which a homemade bomb had failed to explode. Imagine if those street vendors could have used their cellphones to send pictures or video of the vehicle and license plate to a 911 center. What if the 911 center could then push that data to first responders and police to get the location from GIS and buildings visual in the photos?

"They could really capture the dynamics of the event," said Brian Fontes, CEO of the National Emergency Number Association (NENA). "That is what I call an information-rich 911 call, which will be supported in a next-generation 911 (NG911) system."

Fifty-eight percent of Americans own smartphones and people now routinely send text, photos and videos from their mobile devices. And although 75 percent of all calls to 911 are wireless, most 911 centers today are still tethered to the voice-centered world of communications of the last century and can't receive text or photos.

The existing 911 system faces difficulties in supporting text or multimedia messaging, according to NENA, and it lacks the capability to interconnect with other systems and databases such as building plans and electronic medical records.

The very structure of the current 911 system is rapidly going out of date. "It is analog network-based," said Roger Hixson, technical issues director for NENA. "You can't find people in the phone companies knowledgeable about the old technology anymore. We have to evolve to survive."

There is a movement under way to move to a next-generation system (NG911) based on modern Internet protocol-based networks that take advantage of capabilities such as text and video messaging. And NENA has done years of work on developing the i3 architecture standard that vendors will follow.

"The intention is to have interconnected networks," Hixson said. "That type of interoperability requires standards. People in public safety also indicated that they wanted more flexible systems, not just in terms of multimedia versus voice, but also in terms of their ability to pick different vendors and have them operate together, so they weren't locked in with just one vendor."

The deaf and hard-of-hearing will especially benefit from an upgrade, because it will be easier for them to reach 911 with their phones, without requiring additional devices. Looking not too far into the future, it could also harness the technology of biomedical devices, such as a defibrillator that could automatically call 911 in a real medical emergency. Increasingly popular automatic collision notification systems like OnStar could be routed to 911 and change the way a dispatcher responds to a serious accident.

Beyond receiving and sending multimedia, there are other benefits to the new types of networks. Public safety answering points (PSAPs) will be able to transfer calls and activate alternative routing to share the burden during an emergency or when PSAPs are closed by disaster. For instance, during Hurricane Katrina, 38 call centers were disabled, and people in those areas couldn't reach 911. In contrast, Vermont has imple-

mented a modern IP-based network linking its eight PSAPs. When Hurricane Irene took one of them offline in 2011, the other seven were able to answer calls for that area. It promises to allow smooth information sharing between 911 centers, first responders, trauma centers and other emergency response entities.

Linked PSAPs will also be able to share resources such as GIS databases rather than each having to purchase its own individually.

"From my perspective, it will allow our 911 centers to function in the 21st-century world of telecommunications," Fontes said. "It will allow for information — voice plus video and data — to move seamlessly from consumer to the 911 center and then ultimately to first responders participating in FirstNet, the wireless public safety broadband network."

If NG911's benefits seem obvious, the transition itself is by no means easy. States and regions must work through many issues relating to technology standards, the process of transition, governance and funding. Creating regional or state networks of previously autonomous 911 authorities raises many issues. Complicating matters is that each jurisdiction has its own way of handling 911.

Progress is uneven across the country. Some regions, like King County, Wash., have been working on upgrading to NG911 technology for almost a decade. Yet in many rural parts of the country, very little has been done.

There are more than 6,000 PSAPs in the U.S. and they all do things slightly differently, said John Chiaramonte, senior program manager with the consulting firm Mission Critical Partners. "Whether these

changes happen at a city, county, regional or state level depends on factors having to do with size, history and culture.” For instance, Vermont has made progress on NG911 because it has only eight PSAPs statewide. Rhode Island has just one PSAP for the whole state. It is much easier to control funding and governance in those situations compared to someplace like Texas, which has hundreds of PSAPs.

“Technology is not really the big issue,” Chiaramonte said. “It is more the funding, policies and governance that must be worked through. The 911 authorities also have to figure out how they will maintain their legacy systems while working on new ones. “There is not going to be a flash cut-over,” he said. “For a while there is going to have to be a hybrid approach.”

Regions around the country are developing Emergency Services IP networks (ESInets), which are the foundation on which 911 will be built. They are designed to expand mutual aid and allow for the sharing of applications and systems. For instance, they could provide inter-network access to databases such as HAZMAT information.

In one example, 17 emergency telephone system boards in southern Illinois have crafted inter-governmental agreements to create a secure public safety broadband network. They will share voice and data associated with a next-generation-capable 911 system. Instead of purchasing 17 separate sets of NG911 equipment that would each serve a limited geographic area, they are purchasing two redundant systems and connecting them through a secure IP network.

Some states, such as Ohio, are planning a common statewide network structure for core functions. “That highlights an incredibly important point,” said Fontes. “Everyone wants to know what the cost is going to be, and that is a valid question to ask. But there are cost savings associated with the investment. In Washington, where they have deployed the telecom infrastructure for NG911, they have a 48 percent savings in telecommunications costs.”

Colorado is a case study of the promise and challenge of NG911. Daryl Branson, executive director of the nonprofit Colorado 911 Resource Center, explained that 911 is very much a locally controlled service in his

state. Many states have some level of coordination, such as a state 911 office or board. But in Colorado, the only oversight of 911 service at the state level is the Public Utilities Commission. And the PUC is tasked only with overseeing the quality of service provided by the carriers, Branson said. “That presents some challenges for local-control states,” he added, “when they want to try to transition to a type of network that is regional or statewide in nature, which is what NG911 would be.”

Stakeholders in Colorado are trying to define a new path because there is no desire to give up local control or create a new regulatory or oversight body at the state level, Branson said. There have been investments in preparation for NG911 in many parts of the state.

“In the Front Range corridor from Fort Collins to Colorado Springs, there’s an understanding that this is the direction we have to go, and a lot of authorities have put in structures already to get themselves ready for an IP-based future,” Branson said. “But in rural areas of the state, in some cases they see the potential, but in other cases it seems very far away and I don’t think it is very high on their list of priorities.”

## CARRIERS ADOPT TEXT-TO-911 AS JURISDICTIONS LAG

On May 15, the four major cell providers began supporting text-to-911. Subscribers of AT&T, Sprint, T-Mobile and Verizon can now send text messages to 911, which will be routed to their local police dispatchers — if the feature is supported by their county.

While all carriers now support text-to-911 functionality, most counties haven’t yet adopted the technology. Residents of all counties in Vermont, Iowa and Maine can use the service, as can a handful of other counties across the nation. Some states, however, have not yet adopted the technology at all, like California. As counties consider the costs and other repercussions of implementing text-to-911 capabilities, it will likely be some time before all 6,000 dispatch centers nationwide adopt the technology. This is something the FCC is urging.

The adoption of text-to-911 by the major wireless carriers reflects

a growing trend in communications as people opt to text and email more and talk less. More than 6 billion text messages are sent every day, according to a 2013 report by Kleiner Perkins Caufield and Byers. Text-to-911 represents a growing demand by consumers, particularly younger generations, but the technology has its foibles, as illustrated by one CNET editorial.

Texting 911 could take longer than calling, the article states. And users of text-to-911 will be automatically sending the dispatch center their location data, but dispatchers require additional information, like the cross street, details about people involved in the incident in question, or any other dangers that officers should be aware of. Texting all of that information will probably take much longer than if the user was talking.

This dynamic means call centers may need to hire more operators. The

National Emergency Number Association (NENA) recommended that call center operators accept no more than three conversations at a time. If text-to-911 becomes popular, it could become a burden for dispatch centers.

The medium of texting is limited in other ways as well. Voice calls can give operators a lot of additional information that the caller doesn’t need to explicitly impart, such as their emotional state, which can be heard in the tone of their voice, or the condition of the scene, which can sometimes be better understood when the operator hears sounds like shouting or gunfire. Texting relays none of that information unless the user makes it a point to type it all out, which can also take longer.

Text-to-911, in this early stage, also faces technical limitations. NENA warned call centers of the possibility of texts being routed to the wrong call

center when the texter’s location is near the border of two jurisdictions. Text-to-911 also doesn’t work while the user’s phone is roaming.

The most obvious beneficiaries of text-to-911 are the speech and hearing impaired, who will now have direct access to emergency services. People in dangerous situations who need to call for help but need to remain quiet to stay safe will also benefit. NENA CEO Brian Fontes told CNET that getting local governments to adopt text-to-911 will be among the most difficult upcoming challenges they face.

“There’s a need for leadership — both on the local and state levels — to make sure that texting will be made available,” Fontes told CNET. “It would be nice if [each] state rolled out a game plan, if you will, to say, ‘OK, we are committed to rolling out text-to-911.’”

Speaking at a Feb. 25, 2014, PUC workshop, Matt Goetsch, 911 coordinator for the Montrose County 911 Authority, expressed concerns about going to the added expense for features that a smaller authority and PSAP may not need for some time.

Joseph Benkert, counsel for the Boulder Regional Emergency Telephone Service Authority, which has four PSAPs, said Boulder uses an IP telephone system provided by Intrado. “We could implement NG911 pretty easily at any time.” But he said there are several unanswered questions, such as when does it make fiscal sense to do so? When are the features and services going to be available?

“Our concern is somewhat with the expense of those services and features that may only benefit a small number of people,” Benkert said. “And where would we take money from to pay for those services or features?” he asked, “Because it is a zero-sum game among the public safety agencies.”

System upgrades funded and coordinated by the Larimer Emergency Telephone Authority (LETA) have connected the five PSAPs in Larimer County with a next-generation-ready network. LETA plans to begin offering text-to-911 services in June 2014, working with all four main mobile carriers in Colorado, said Kimberly Culp, the organization’s executive director. The five PSAPs can now communicate instantly online and reroute 911 calls to other communications centers during heavy call loads.

Culp agreed that funding can be a challenge, but she said that LETA had been planning for the changes for years, including setting aside funds for the upgrade. “You have to do it in steps,” she said. “You can’t do it all in one year. The biggest challenge for Colorado is how do we do it together?” Culp said. “Here in Larimer County, we are good to go.” The big question, she said, is how to connect to adjacent counties or to help them upgrade. “We don’t need state oversight. We just need to go ahead and do it on the local level.”

**F**ontes and Hixson both estimate that NG911 should be fairly ubiquitous in the U.S. within five years, although there will be outliers that take longer. So what is the main roadblock?

In some states, 911 is woefully underfunded, and the 911 community has expressed concern that the federal government hasn’t

made enough grant funding available for the transition. The feds have spent just \$43 million on grants going back to 2008 for NG911 projects and so far has designated just \$115 million (in the Middle Class Tax Relief and Job Creation Act) for it in the future.

“If we really are going to ensure that our nation has a NG911 system, we have to make sure we are on par with other public safety services, and that we have a sufficient amount of money to enable this to occur,” Fontes said. “There are 250 million 911 calls made each year, and that is the first link to public safety. And to have that first link so critical to the whole chain of events underfunded is very unfortunate.”

No one at the local level wants to see the federal government do anything that looks like it’s taking over local provision of 911 service, Branson said, but he noted that the federal government is spending up to \$8 billion on the FirstNet network to connect first-responder agencies with wireless broadband.

“Clearly, their priority is on FirstNet and not on NG911, but the way I look at it, those are really two sides of the same service. Getting information from the public to the PSAP is the NG911 part,” Branson explained. “And they are spending money on the back end, which is getting information from the PSAP to the first responders. But if you can’t get that information from the public to the PSAP first, you’re missing half the equation.”

There are great opportunities for collaboration between NG911 and FirstNet, Chiaramonte said. FirstNet is being designed as a wireless broadband network to connect all first responders. NG911 is a new network to connect all 911 systems. “These are parallel activities, and there needs to be more coordination and bridging between these two efforts,” he said. “There are finite resources, and not enough funding for either so far, so it is imperative that the efforts be coordinated.”

Aside from funding, another hurdle is that enabling legislative changes are needed in most states because the rules governing 911 haven’t been rewritten in 40 years, Chiaramonte said. “They often specifically reference legacy technology, and might not be open to interpretation with newer technology.”

When asked what other roadblocks remain, Fontes stressed leadership. “There seems to be an understanding that 911 is important, but no one does the deep dive into how 911 really works.”

## MODIFICATIONS REQUIRED FOR NG911

A 2011 report by the California Technology Agency noted that several state laws and regulations governing the type of devices and “calls” allowed to access the NG911 network might require modifications, including:

- ✓ Review laws and regulations concerning the eligible use of NG911 funds;
- ✓ Ensure that laws or regulations do not require specific technology components for 911 service delivery that are incompatible with NG911 service;
- ✓ Eliminate laws and regulations that inhibit efficient sharing of NG911 data, but retain appropriate safeguards for privacy protection;
- ✓ Craft uniform requirements for all NG911 service providers that meet accepted industry standards;
- ✓ Ensure that laws and regulations are functional, standards-based and performance-based, without reference to any specific proprietary technology, manufacturer or service provider; and
- ✓ Ensure that state and local governments are prohibited from reallocating funds intended for existing 911 and new NG911 services to other purposes.

**G**overnment leaders need to treat 911 on par with police, fire and EMS as a critical public safety service. Increasingly, he said, consolidated emergency communications centers are operating independently and are no longer tethered to police, fire or EMS. But policymakers have to understand their importance. “Of course, we would always like money,” Fontes said. “But more importantly, we would like equal treatment for grants and funding that already exists for public safety.” +

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# The Recovery Mission

**Thomas Richardson** is a battalion chief for the Seattle Fire Department, and Washington Task Force 1 Urban Search and Rescue Task Force leader. He was recently deployed to the site of the massive mudslide near Oso, Wash., on a recovery mission where at least 42 people were killed. He has previously been deployed to missions during Hurricane Katrina, 9/11 and the Oklahoma City bombings. He took time to discuss lessons learned from the mudslide.

By **Jim McKay** | Editor



⊕ **What did you see when you got to the scene?**

Eight hundred acres of landslide. The mountain had come down and had taken out a good chunk of [State Route] 530 and with the flooding had spread out more than a couple of miles because it had blocked the river and backed things up — a little bit of housing debris on the outskirts of it but really just a mountain, dirt, water and broken trees was what was visible.

⊕ **Did anything surprise you about what you saw?**

Honestly there were no surprises. We knew we were on a recovery mission. We were not deployed until Monday night and Tuesday morning [the mudslide occurred Saturday, March 22] and given the conditions — freezing rain and pretty bad conditions — we expected we were just going to be there for a recovery. I've been deployed to Oklahoma City, the World Trade Center and Hurricane Katrina, so it's not a big surprise.

⊕ **What were the difficulties in this effort compared to others?**

The main challenge was the scale of the site. Think about 9/11: That was around 16 acres and it took them more than six months to get to native soil, down to the foundation of the World Trade Center. They were dealing with a couple of 110-by-110-[story, 10 million]-square-foot buildings; we were dealing with 800 acres. A vastly larger scale with a small number of people we were looking for.

It turned out that we were able to recover a little more than 95 percent of the remains — not too bad considering the problem.

**What do you take away from this effort?**

If you're ever going to search a landslide or an avalanche, search the leading edge. People were not found where they live. They were found half a mile-plus away from where their houses used to be. Apparently landslides tend to push people toward the leading edge.

The second thing would be to do really good documentations of your finds because you can put together a picture; once you've found enough, you can start creating trajectories. We ended up creating trajectories based on where people used to be and where

they were found. That allowed us to focus our efforts on our search so that we weren't having to search the entire site and were being successful within a couple of weeks, where my original projection was, "We're going to be here for months to years if you really want us to dig out all the bodies, and it's going to cost a billion dollars." It didn't cost quite that much and didn't take that much time.

GPS is critical. Using devices where you can connect data points and put that together with bodies so that you have an understanding of where you're looking, where you need to look and you can plan your future searches. We incorporated volunteers as a base instruction from the local incident management team. That was, in part, because they couldn't keep them away, but in the end it was a really good thing. The volunteers were critical in the success of the mission.

There were hundreds of volunteers out there and many of them worked for CERTs [Community Emergency Response Teams]. They found and helped recover a significant number of the remains, and it was volunteers who brought in dump trucks and heavy equipment. Usually our task forces come in with relatively small hand tools to do a rescue of a structural collapse. We're not really set up to do a large 800-acre site search. We really needed the heavy equipment and that was provided by volunteers.

Really a success story of this evolution was that we not only incorporated the civilians into our response but of the hundreds of civilians there was just one problem with one person who was posting stuff online and that was quickly resolved.

There are independent activities going on where firefighters prepare for disasters and civilians prepare for disasters, but rarely do we actually tie the civilians in with the training of the firefighters. We have CERTs in Seattle and around the state, but very frequently you'll find that firefighters are not expecting them to be a participant. Even in my department there's no master plan in our policy and operating guideline on how we're going to use CERTs. We need a better incorporation of them, officially, into our plans and so that we can, among other things, take the civilians and trust them not only with doing the work but with the intelligence.



As an urban search and rescue task force leader on many previous recovery missions, Thomas Richardson knew what to expect when he arrived at the site of a horrific mudslide in March.

FLIC667/THE NATIONAL GUARD/PHOTO BY SFC. MATTHEW SUSSEL, 1220 PADC

We ultimately got trajectory maps, but people were really possessive of those maps and concerned that if they got released to the public what would be the political ramifications of a map showing body parts. We need to let go of that and recognize that there's a grim reality to a disaster and either people are going to face those realities and be a part of the recovery or we're going to exclude them. But I don't think it's appropriate to exclude them and therefore we need to incorporate them in our intelligence.

**⊕ Did it slow the response down to try to coordinate all the volunteers?**

Not at all. Mostly we ended up the recipient of volunteers and were told to use them, but they didn't really report to us. We need to do a better job of putting them officially in our briefings and including them in our overall plans so they understand.

As it was, I had to go tell people out in the field what they could have gotten in a briefing. You get a lot more buy-in if somebody understands: "We're finding all the bodies here. I know that Steelhead Drive used to be over there, but that's not where

the people are and here's why we believe we're searching in the right place."

We were actually not supposed to release that information, but in the end you're either a responder or you're not, so we treated all responders the same. Just because you're a civilian doesn't mean you don't have the capability of dealing with exposure to traumatic events. Responders are just people who happen to have a job, and yes, we have some training but we're really not any more equipped to deal with that stuff than Joe Civilian. We've dealt with it before, but we need to realize that if people are stepping up to the plate and they understand the difficulties of the mission, we have to just trust that they can be a part of it.

We also need to do a better job of incorporating modern technology into our responses. Specifically we need to start to see official applications coming out where a person can report needs and impacts of the disasters so it can be tabulated automatically whether the person is in need of power, food or water, or their house is destroyed. We can help people report that stuff, and with an app we could incorporate volunteers more efficiently by allowing

people to volunteer their resources by saying, "I have an excavator or a shovel and a strong back or a house where I can provide shelter."

Then as emergency managers we can connect the dots between the needs and the capabilities. But right now we kind of exclude them and frequently, not in this case, but the government response is promising to take care of everything without the capabilities.

There were also many things that needed to be addressed by the incident management team. There was a road that needed to be addressed; upstream flooding; hazardous materials; debris and personal belongings; people were displaced. There were many things that needed to be addressed other than the missing victims, but they were never incorporated in the incident action plan. We need to do a better job of looking at the big picture and beyond just the first few victims. We relied on the volunteers. If we had waited on the incident command system to supply us all the resources, we would have been waiting a much longer time. ⊕

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Alaska's food needs can only be met in a limited number of ways.

FELIC/FRANK KOVALCHUK

still need all the basics — food, water, energy, medicine, shelter — but our need for them can only be met in a limited number of ways.” Most towns in the United States have several roads leading in and out of them and can be reached easily by helicopter if necessary.

“The supply lines to Alaska do not work that way,” Madden said. Ninety percent of the goods in the state come in through one port in Anchorage. One incident “could have a very profound cascading effect on those supply lines.”

The structure of Alaska's government is unusual, as well. In Alaska as in other states, the responsibility for emergency preparedness starts with the individual, then goes to the community level, then to the state and finally to the federal government. But more than one-third of Alaska — a lightly populated area about as large as Texas — is not organized into any form of local government, making the state primarily responsible for emergency services. In those areas, the state has primary responsibility for several things that in many other states would be handled first by counties.

Additional complicating factors include the fact that the federal government actually owns about two-thirds of the land in Alaska, though emergency preparedness is the responsibility of the state even for that federal land.

The state's geography adds to the challenge. The whole state is far away from the sources of most of the goods it imports, and within Alaska, many people live in remote areas.

“Help is a long distance away,” Madden said.

Transportation of goods is also difficult. “There are so many villages and small communities that are off the road system,” Consenstein said. Even around Anchorage, some suburbs depend on bridges to connect them to the city, a vulnerability when it comes to getting food after a disaster.

In addition, the extreme cold weather, with temperatures reaching more than 50 degrees below zero, can present winter hazards.

Alaska does have some advantages when it comes to emergency food, what Consenstein calls “a culture of wild food.” Alaskans have traditionally hunted and fished, catching salmon, moose and caribou. They have frozen salmon, meat and berries for winter use. Especially in the remote villages, Alaska residents may be likelier than residents of

# The Food Challenge

Alaska, with its unique setting, works to secure its food supply.

By Margaret Steen | Contributing Writer

**L**ike every other state, Alaska has to be prepared for disasters, both natural and man-made. But as it works to make sure its residents would have enough food in a disaster, the state also has to deal with some unique challenges.

“We've got volcanoes, earthquakes, cold weather — a lot of potential for emergencies up here,” said Danny Consenstein, state executive director for the U.S. Department of Agriculture Farm Service Agency in Alaska. “Do we have a food system that is resilient and strong, that could help us in case of emergencies?”

Work on that food system is happening on several fronts: The state is establishing an emergency food supply as part of a larger emergency management effort. Local communities are also looking at both short- and long-term ways to ensure a stable supply of food.

All of this work happens against the backdrop of a huge geographic challenge:

“We have many things in common with the rest of the country, but we also have some things that are uncommon,” said John Madden, director of the Alaska Division of Homeland Security and Emergency Management. “We

most states to have a freezer stocked with an ample supply of food after a disaster.

However, that culture has been changing, Consenstein said. In some of those remote communities, “they rely more on food from stores, and if the planes don’t get into those villages, the store shelves are empty.”

### Proper Food Supply

Alaska has taken a number of steps toward establishing an emergency food supply, as part of a program initiated by the governor to increase preparedness and resilience in four areas: power, water, communications and food, Madden said.

“On those first three, we have completed almost everything we need,” Madden said. The state has generators in a range of sizes that can be moved to where they are needed. It has water purification systems. And it has mobile communications systems that range in size from those that are pulled by a truck to those that fit in a backpack.

Food, the fourth component of the plan, was more difficult, Madden said. The state wanted to purchase and store food for 40,000 people for seven days, and wanted to be sure it could get to where it was needed. “There are very few places in the nation that have done a supply of food to the measure that we are.”

The emergency planners also took into account the state’s entire population. For example, the MRE, or Meal, Ready-to-Eat, used by the military is designed for healthy men and women in their 20s and 30s. They may not be appropriate for infants, the elderly or those with dietary restrictions. The state wanted to be sure the food supply would serve everyone.

When the state first asked for bids on this project in 2012, it was seeking one vendor that could supply the food and then store and manage the emergency supply. “We did not get any qualified bidders,” Madden said.

More recently, the state tried again, with a different approach that divided up the bidding process. First, it asked for bids just for providing the food. Once the state has all the information it needs from the vendor it chooses — information like the volume, the shelf life and the storage requirements for the food — it will enter the second phase where it selects a vendor to provide storage and management.

The state is in the process of awarding the first contract and will then proceed to the next step. “I anticipate that there will be more than enough bidders with various types of solutions for the storage,” Madden said. The entire process could be complete by the end of summer.

The state wants some of the food stored in or near Anchorage and some in Fairbanks, Madden said. “There’s no natural hazard that can affect both places simultaneously.”

### Long-Term Solutions

In addition to the state’s efforts to quickly procure an emergency food supply, Alaskans are working in several different ways to improve the state’s long-term preparedness.

“If the question is, how can we make Alaska more prepared, particularly around food for emergencies, my answer would be, we have to build a stronger, more resilient local food system,” said Consenstein.

In 1955, the state produced more than half of its own food, but according to Consenstein, that number today is about 5 percent. “As transportation has gotten better and cheaper, it has become harder for local economies to compete,” he said. “It’s more of a global marketplace, even for perishable food.”

Getting people to buy more locally produced food would have advantages ranging from emergency preparedness to health and economic benefits, Consenstein said. In addition, he said that Alaskans connect with this sense of self-reliance.

There are challenges, such as the fact that food can’t be grown year-round in most of the state. But good storage options would allow some food to be processed or frozen and kept for later use. In addition, new technology could allow some food to be grown indoors.

One group, the Alaska Food Policy Council, includes representatives from state and federal agencies, business owners, farmers, fishermen, anti-hunger groups and emergency managers — “anybody who has some connection to food in Alaska,” said Consenstein, who helped form the group several years ago. The group is working to study and improve all aspects of Alaska’s food system, from supporting food-related industries to making food supplies sustainable and secure.



Residents of Alaska have historically been more likely than people in other states to have a supply of frozen food on hand, but their reliance on food from stores has grown in recent years, leaving them vulnerable in an emergency.

There are also efforts to help individual communities become more self-reliant. Whereas the state is trying to prepare for a disruption to the supply line that connects Alaska to the rest of the country, communities are looking at ways to ensure their own food supplies in case of local disasters.

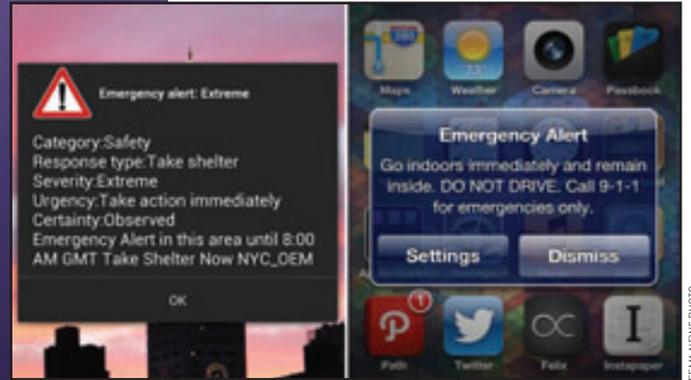
Darren Snyder, a cooperative extension agent with the University of Alaska Fairbanks and a member of the governing board of the Alaska Food Policy Council, has worked on a tool to help communities ensure they have an emergency food supply: the Alaskan Community Emergency Food Cache System. The idea is to build on the ways food is already being distributed and have local vendors keep extra food supplies, which they would rotate as part of their regular stock management. “It’s intentionally augmenting whatever food is going to the community anyway,” Snyder said.

“Food security has risen as a public interest topic,” Snyder said. The interest goes beyond concern about day-to-day hunger to include emergency planning. “How prepared are we?” 📌

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Some states have opted for a statewide emergency alert system. In other states, localities are taking the lead.



FEMA NEWS PHOTO

# Alert Systems: Lead or Tag Along?

Opinions vary on whether states or localities should take the lead in implementing emergency alert systems.

By **Justine Brown** | Contributing Writer

As technology becomes cheaper, more sophisticated and easier to use, states have more options available to improve their public warning capabilities and integration with FEMA's Integrated Public Alert and Warning System (IPAWS). Some states are choosing to implement statewide systems while others are giving localities the lead and providing statewide oversight and support.

Iowa is one state that is pushing for a statewide alert system. The state previously left the deployment of alert systems to each county. But based on the results of a survey it conducted — which found

that just 53 of the state's 99 counties had a public alert system and that those counties were spending about \$600,000 a year on those systems — the state decided to investigate other approaches. In January 2013, the Iowa Homeland Security and Emergency Management Department (HSEMD) issued an RFI to investigate the feasibility of developing a statewide alert system.

"We asked vendors what a statewide alert system might look like and cost," said John Benson, spokesperson for the Iowa HSEMD. "Based on the responses, we recognized that if we did it right, we'd be able to provide statewide coverage for less than what

those 53 counties were paying." He said it would be a cost savings for those who were already paying and provide a new tool to the 46 counties that didn't have a system.

Soon after, legislation was introduced supporting the implementation of a statewide system and requesting funds to support it. The request for funding was secured through the General Assembly this year. The Iowa HSEMD then issued an RFP, which was under review at press time. Once a vendor is selected, plans were to begin implementation July 1.

Benson said Iowa's new alert system likely won't be used on a statewide level, but decisions to alert residents would be made by local law enforcement and emergency management agencies.

"It's basically a statewide system that retains its local control. It will be a statewide system, but the state will probably be the most limited user of it," Benson said. "Our goal is to give local folks a tool to use and they would determine how and when to use it to send an alert for whatever emergency situations they have."

The new system, which will be a Web-based SaaS application, will provide users a single Web page on which they can quickly compose a message and determine how they would like it delivered (text, email, voice mail, etc.). The system will also integrate with IPAWS and will include a special-needs advisory so someone with a mobility impairment can easily alert first responders of the need for assistance.

## Local Control

Minnesota is taking a slightly different approach to its emergency alert system plans. Rather than implement a statewide system, the Minnesota Homeland Security and Emergency Management (HSEM) agency has asked counties to implement their own

# Q&A:

## Practicing and Preparing Before Disaster Strikes

Sprint's Emergency Response Team (ERT) often finds itself in the midst of hurricanes, tornadoes, floods and other disasters, providing connectivity, equipment and expertise to first responders. But in between these extreme events, the team hones its skills by participating in nationwide emergency preparedness exercises, demonstrating how Sprint connectivity during catastrophes can help save lives and hasten recovery. Ryan McGill, business development manager for Sprint ERT, tells *Emergency Management* how one of the smartest things jurisdictions can do is form relationships with private sector emergency telecom providers well before storm clouds form.



**Ryan McGill**  
BUSINESS DEVELOPMENT MANAGER,  
SPRINT EMERGENCY RESPONSE TEAM

**Q: Sprint ERT participates in public sector emergency drills and exercises. Describe Sprint's role in these.**

**RYAN MCGILL:** Sprint ERT believes that teaming up with our nation's first responders on exercises is a crucial facet of emergency preparedness and incident management. Building relationships before an incident is a huge advantage when the real thing happens. ERT has participated in hundreds of exercises over the past 13 years, including TOPOFF, DOD DICE, Golden Guardian and Urban Shield, to name a few. In June 2014, ERT participated in the National Level Exercise (NLE) CAPSTONE CUSEC in the central U.S., specifically in Illinois and Missouri.

Sprint ERT manages, maintains and deploys all satellite-backhauled mobile assets for the company, utilizing a fleet of custom-designed vehicles that use satellite backhaul and on-board generators to mitigate the need for terrestrial connectivity and power.

In March 2014, Sprint's ERT deployed to Anchorage, Alaska, to support the NLE Alaska Shield 2014. We worked with the Washington National Guard, which transported ERT's infrastructure and personnel by a military air transport jet C-17. We supported the Washington National Guard by providing an IP solution, cellular coverage and a cache of handsets for use during the exercise. This solution was a solid example of Sprint's capability to augment the National Guard and local governments' communication systems during a catastrophic disaster.

**Q: Aside from providing data connectivity for responders when terrestrial lines are down, what else can ERT offer during emergencies?**

**RYAN MCGILL:** Sprint's ERT offers a full suite of communication capabilities, including a fleet of SatCOLTS to provide cellular voice, Sprint Direct Connect push-to-talk service, 4G LTE and high-speed IP connectivity. The Sprint ERT SatCOLT

can provide IP over satellite at speeds up to 20 Mbps. ERT also has an inventory of Fly-Away-Kits or VSAT (very small aperture terminals) to provide IP connectivity in various formats and configurations, as well as fixed-dish install for brick-and-mortar locations, which are both customer and ERT deployable. Sprint's ERT can provide interoperable communications and link public safety LMR systems with commercial push-to-talk to extend geographical coverage, or assist with operability for mutual aid agreements and the linking of disparate systems. ERT has a stock of over 10,000 ready-to-deploy handsets, data cards and other communications equipment, including video teleconferencing. We offer a complete turn-key package to our clients so they can focus on their mission and not worry about connectivity.

**Q: What do you consider the most important element of Sprint's public-private relationships during disasters?**

**RYAN MCGILL:** The most important aspect of any continuity plan is the people. It is the employees within your organization, as well as your public sector client and, ultimately, the community. We see the importance of these exercises — establishing relationships before an incident occurs is invaluable.

Approximately 80 percent of all critical infrastructure in the U.S. is owned and operated by the private sector, so public and private collaborations are becoming increasingly important. I'm proud to be a part of Sprint ERT because of the people with whom I am able to collaborate. Providing a critical service to responders during an incident is very rewarding. We often take connectivity for granted, but when phones and email don't work during disasters, logistics and operations in emergency response can be gravely impacted. Communications can speed recovery at all levels and help minimize downtime and losses.

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IPAWS compatible systems and is providing oversight and guidance from a statewide level.

"In 2010 we looked at doing a statewide system — what it would cost, what each county would gain from it, and where the funding would come from," said John Dooley, communications and warning officer of Minnesota HSEM. "Third-party software just wasn't sophisticated or available enough yet for us to pursue a statewide system."

Minnesota HSEM then conducted a survey of public safety answering points (PSAPs) and decided to leave it up to the counties to determine and implement alert systems that would integrate with IPAWS (access to IPAWS is free; however, to send a message using IPAWS, an organization must procure its own software that's compatible with the system).

"We thought, because pretty much all disasters are local, we wanted to keep the concept of operation local as well," Dooley said.

At the same time, Minnesota HSEM formed a statewide IPAWS committee.

The committee provides the counties with guidance, best practices, and education on IPAWS and how to use it.

"From our surveys, we found the PSAPs really wanted their alert systems to be simple, because when they get a call in and they are dealing with a disaster where they have to alert the public, there is already a flurry of things going on," said Dooley. "They wanted to be able to choose a system they were comfortable with, and we felt allowing them to make that decision and providing oversight and support from a statewide level would put us miles ahead."

Seven out of Minnesota's 87 counties are active on IPAWS, and several others are in the process of securing software and working with FEMA to complete a memorandum of agreement.

#### Mix and Match in Ohio

In Ohio, local governments have the option of using parts of the statewide system to address their alerting needs. Michael

Swaney, communications infrastructure specialist for the Ohio Department of Public Safety, said Amber Alert origination capability and the availability of equipment gave the Ohio State Emergency Communication Committee a means to specify how to do a system at the county level with state government oversight. Swaney said most of Ohio's equipment was replaced in 2003 when the Emergency Alert System (EAS) replaced the previous Emergency Broadcast System. Today, local governments can use parts of the statewide system as they see fit.

In Texas, the Department of Public Safety (DPS) deployed a major upgrade to the Texas Emergency Alert System statewide this May. The new system will serve as the core of the state's public alert and warning system, simultaneously activating the state EAS relay to radio, TV and cable systems across the state. The new system will be the state's primary interface with the IPAWS network, giving the department synchronized access to EAS



Photo courtesy of Wake Med Health and Hospitals

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and enabling IPAWS to generate wireless emergency alerts to the cellphone systems.

In Texas, the size and geographic diversity of the state pose numerous hurdles to conventional EAS capabilities. The upgraded system addresses these challenges by allowing Department of Public Safety officials to create and issue alerts to both the existing EAS system and the IPAWS system. The system will allow Texas DPS to send statewide alerts or target the messages to any number of the state's 254 counties.

"By replacing its older equipment ... Texas now has a more robust, efficient and reliable way to spread lifesaving warnings to its citizens about emergencies via all modes of digital technology," said Edward Czarnecki, senior director of strategic development and global government affairs for Monroe Electronics, which provided the system.

Czarnecki added that because Texas DPS chose a standards-based approach, the system also sets the foundation for interoperability with future systems the department may consider.

### Technology Tools

Benson said the technology has advanced by leaps in recent months, increasing its viability as a lifesaver.

"When you look back over the last 18 months, you can see a huge evolution in technology in terms of how it can be employed for mass notification and emergency alerts," Benson said. "With that has come recognition that this is something as emergency managers we really need to be leveraging."

Benson added that the system Iowa plans to deploy can also be used to more effectively manage and alert first responders. It can generate lists and first responders can designate which number should be called to summon them immediately in an emergency.

"You can set up a call list for a specific group of first responders so you can reach out and touch them all very quickly instead of doing the old call tree method," explained Benson. "It's another way to marshal your response force more effectively because it doesn't require human intervention."

Overall, Benson believes more states will choose to deploy statewide alert systems in the future.

"We are starting to see a lot of states lean this direction," he said. "With a statewide system, you have unified technology being utilized across the state, and that's always good in terms of being able to back people up. But there is also the cost that goes along with that, because generally the more you buy, the cheaper it gets. So when you talk about covering an entire state, a lot of times the cost savings really get your attention."

Several states are pressing forward with other types of early warning systems as well. For example, California is working on a statewide earthquake early warning system, though there is debate about how the system should operate and whether it will be strictly free or whether a more advanced, paid system will be incorporated. +

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# #Morechatter

Emergency managers stress the need for social media volunteers.

By **Eliot Kleinberg** | McClatchy News

**E**mergency managers are recruiting an army of volunteers who, in a disaster, will ride herd on the tremendous power of social media to inform us — and misinform us.

“Rumors start quickly after a disaster. Social media has just made that easier,” Florida State University’s David Merrick told a workshop recently at the Florida Governor’s Hurricane Conference in Orlando.

“Facebook and Twitter allows that to happen nearly instantaneously across the entire country. You really have to have an idea on that so you can see what the public is saying that might be wrong,” said Merrick, deputy director of Florida State University’s (FSU) Center for Disaster Risk Policy.

And, he said, “We’re all aware that, in an absence of information, people just make it up.”

Palm Beach County Emergency Management began training for its own such setup this past summer.

In a crisis, as many as a dozen county employees whose jobs aren’t disaster-related will staff the county’s Digital Information Support Center, based at the Emergency Operations Center.

They will pass what they find to public information managers, who will determine how to respond — either with a news release or at a news conference, or with an update for people staffing phone banks or a posting to the county’s own Twitter and Facebook accounts.

The county also has a Web page — the Individual Damage Reporting Tool — that residents can use to report damage after a storm from their computers or smartphones. Information will drop into a giant map at the operation center’s “war room.” Emergency workers then can look at the entire county’s conditions and send help quickly to the neighborhoods that need it most.

FSU’s Merrick said that, ironically, while the volunteer system deals with 21st-century technology, it’s very labor-intensive. There’s no automated process for monitoring all that chatter.

“We’ve still not been able to take the human out of the loop when it comes to analyzing this information,” he said.



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## **INVITED SPEAKERS:**

Deputy Mayor Jerry Snead,  
Homeland Security , New Orleans, LA

Denise O'Donnell, Director,  
Bureau of Justice Assistance, DOJ

Kshemendra Paul, PM-ISE,  
Office of the Director of National  
Intelligence

Melanie Talia, CEO,  
New Orleans Police & Justice Foundation

Chief Ronal Serpas,  
New Orleans Police Department

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**MEDIA PARTNER**



## HOW TWITTER WILL CHANGE THE NEXT HURRICANE

**IN THE EIGHT YEARS** since the last hurricane struck Florida, communications professor Robert Chandler says, fewer and fewer people are turning to their newspaper, radio or television.

Many of them don't use those media at all. Instead, Chandler told the recent general session of the National Hurricane Conference, meeting in Orlando, the primary source of information often is a tweet.

That's a challenge to emergency managers, said Chandler, who teaches at the nearby University of Central Florida. Not only are people not getting correct information from the proper authorities, what they are getting could well be wrong — and fatally so.

"That's the problem," he said later. "The fact is, people will respond to a note from their brother-in-law saying, 'We have to evacuate. Let's go.'"

That person might also evacuate to the wrong place. Or, conversely, heed a relative's tweet to stay when he or she should leave. In Superstorm Sandy in the northeastern United States, Chandler said,

147 people drowned, many in areas that had been warned by emergency managers of a flooding threat.

"The audiences have changed," he said. "You've got to have recorded messages mapped out, using multiple strategies, and targeted at specific demographics."

People in the middle of crises "are talking and listening and want to learn information," he told the conference. "It is a foreshadow of what our next hurricane is going to be. I'm suggesting it will be unlike a hurricane of seven years ago. We have undergone a sea change. If social media's not part of what you're doing, my recommendation is to make it part of it."

Chandler called communication "a powerful, complex essential component to any sort of disaster emergency management. You have to understand that it is not just in a box. Just because your radios are working, and telephones still work, you may not be communicating."

Chandler said Sandy "was the first 'social media' disaster. Sandy had some wonderful

positives, and significant shortcomings. It revealed some weaknesses."

In Sandy, he said emergency dispatchers were receiving 300 inbound telephone calls and 100 inbound tweets every minute.

"Tweets became cries for help from people in trouble," he said. "People sent them Twitter messages [saying] 'Help! I'm trapped. Come rescue. Help! My house is on fire.' It's a whole new world."

In a crisis, Chandler said, reading skills drop as much as four grade levels. With the average person reading at a sixth-grade level, "I cannot hire a Ph.D. from NOAA [National Oceanic and Atmospheric Administration] to write [advisories] for me. I need someone that can write at the sixth-grade reading level," he said. "It has to be incredibly simple."

More and more, Chandler said, even emailing people might not work; people are so deluged with emails they often delete several at a time without opening them.



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“We’ve still not been able to take the human out of the loop when it comes to analyzing this information.”

And with everyone dealing with tightening budgets, agencies must rely more and more on volunteers.

The good part is that they can operate anywhere they have a desktop or laptop computer and an Internet connection, plus social media accounts.

FSU has recruited about 30 students, Merrick said.

Several were busy during recent flooding in Florida’s Panhandle.

“The trick there is trying to identify what is good and bad,” Merrick said. “We are looking for reports of people that were trapped, of which there were several. They weren’t ‘trapped.’ They just couldn’t get out onto the road.”

Often, the problem isn’t too little on the twitter-sphere, but rather too much “noise.”

Tweets use “hashtags” — placing the “#” symbol, followed by an acronym or short word at the end of their tweet — to let people access all tweets related to a specific topic.

In the Panhandle flooding, people were just making up hashtags as they went, and there were several, which served to defeat the purpose.

On top of that, hashtags aren’t exclusive.

All week, the hurricane conference ran a social media exercise called “Duckville Duckhunt,” in which a hurricane struck the imaginary town and conference participants are asked to send imaginary situation reports. Its hashtag: “#quackattack.”

At the same time, across the continent, the Anaheim Ducks and neighbor Los Angeles Kings were locked Thursday in Game Six of their National Hockey League

playoff. As Anaheim fans watched the team play, and eventually lose, they flooded the Twitter world with the same hashtag: “#quackattack.”

That meant anyone searching “#quackattack,” looking for the conference exercise, would be reading a lot about hockey.

That, Merrick said, is an example of how, in a real crisis, the combination of bad information, information with the wrong identifiers, and information posted in the wrong places, can hinder more than help.

“A lot of bad information gets out there,” Merrick said.

And, he said, “most of it gets retransmitted and retweeted, not out of malice, but because people don’t pay attention.”

He said he solves that by just ignoring retweets. But, he said, “(if) 10 people all have said there is flooding, and if I put them in a map and they’re all in the same area, that’s good enough for me.” +

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## WE WERE THERE

*Chocowinity, North Carolina – April 25, 2014*

This picture was taken by a grateful recovery volunteer to document the name of the supplier who helped them out immediately after a tornado tore through the community. We clearly see the Fastenal truck, but the real story is how quickly Fastenal General Manager Kimmy Makepeace drove it from her nearby store to deliver water and work gloves to the recovery crew. It’s another great example of how our local presence is more than just convenient — when disaster strikes, it’s mission-critical.

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By Eric Holdeman

# How to be a Liaison

**W**e talk about it, write about it, have it on our EOC organization charts, but what does it really mean to be a liaison? What are the best ways to use these people and positions?

My first military assignment was as an infantry officer serving in a combat engineer battalion. As such I supported a mechanized infantry battalion when they were on field maneuvers at Fort Hood, Texas. In that era we spent half of our time in the field so I got lots of experience in being a liaison in another

organization's command post. Yes, the principles are all the same.

The primary goal is to have eyes and ears on what is going on. Disasters are fluid, and discerning the situation and its ramifications is not easy. By having

a person in another organization's EOC or other facility physically, you have the ability to measure what is happening and the pace of the activity. And you have to discern if you will be providing resources or receiving them.

Before there is an actual request for resources that needs to be coordinated, the position of liaison is primarily one of listening, watching, and monitoring the status boards in an EOC.

The other side of the coin is having liaisons from other organizations present in your facility. It can only help, especially when those liaisons are from another high-level organization that might be called on to support emergency and disaster response operations. In quick-moving disaster situations, the flow of information can be fast and furious with plenty of opportunities for items of information to get twisted around. Having someone to talk with face-to-face can

be invaluable in eliminating misunderstandings and resolving conflicting information.

But people who are not confident in their response capabilities might not want other people in the room "looking over their shoulder." The exchange of liaisons all boils down to obtaining a level of trust between people over time.

One excuse I've heard repeatedly from people for not placing liaisons in other organization's EOCs is that they don't have the staff to do it. They are thinking too small. Typically I'll agree that you will not be able to place an emergency management staffer of your own in another organization's EOC. But you can find other staff who don't have a disaster function, such as inter-governmental staff, who are good with people and attuned to politically sensitive situations. There are other associated staff — risk managers, for instance, — who might be of assistance.

Being a liaison requires being active, but not intrusive, in another organization's operations. Besides finding out situational information and relaying it back to the people who sent you, you are looking for opportunities where your parent organization might have staff, equipment or other resources that can help the organization you are co-located with. It is critical that the agency dispatching the liaison understands what authority it has to offer assistance. In cases like these, it is always better to under-promise and over-deliver so that you don't set up false expectations for those who are looking for assistance.

You have probably noted that being a liaison is a bit of a dance that needs to be learned. Practicing being a liaison during exercises with people who don't have an emergency management background, when everything is not on the line, is a good way to get them experience and for them to hone their skills. I assure you that the investment in sending and receiving liaisons will pay off when disasters do strike. 

YOU HAVE PROBABLY NOTED THAT BEING A LIAISON IS A BIT OF A DANCE THAT NEEDS TO BE LEARNED.

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ERIC HOLDEMAN IS THE FORMER DIRECTOR OF THE KING COUNTY, WASH., OFFICE OF EMERGENCY MANAGEMENT. HIS BLOG IS LOCATED AT WWW.DISASTER-ZONE.COM.

# EMERGENCY MANAGEMENT SUMMITS

## FALL EVENTS

September 24      **Boston**

October 2      **Los Angeles**

October 29      **Denver**

November 13      **Minneapolis**

December 9      **Miami**

December 11      **Houston**



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## GUN BUSTER FOR LAW ENFORCEMENT

Gunbusters recently introduced its patent-pending firearms pulverizer system for law enforcement. The system was developed for agencies to destroy confiscated and surrendered firearms and other items of evidence like computer hard drives. The system consists of three parts: the pulverizer, dual cameras and a computer program that creates a permanent record of the destruction of each item. The database is searchable by serial or agency evidence number. [www.gunbustersusa.com](http://www.gunbustersusa.com)



## DURABLE MOBILE COMPUTING

During natural catastrophes real-time communication is the most critical need, yet many ground responders have to rely on consumer-grade cellphones and obsolete walkie-talkies. The first in a series of hard-shell mobile devices designed for emergency responders dealing with harsh weather, extreme environments and other grueling conditions that make normal cellphones impractical has been developed by Two Technologies. The N4, an Android device housed in a rugged polycarbonate shell, is waterproof and heat-resistant. N4 incorporates the Samsung Galaxy Note series of smartphones, is rugged to MIL-STD 810 G and operating temperatures of MIL-STD 810F. With a hot swappable battery, operators don't have to exit an application, reboot and then re-enter the app to change the battery. It can also be submerged up to 1 meter while remaining in an application. [www.2t.com/n4](http://www.2t.com/n4)

## New WebEOC Core

Intermedix announced its new WebEOC Core, the newest addition to the WebEOC platform, which is used for emergency management and daily operations by hundreds of agencies in the United States and around the world. Featuring pre-configured board sets, WebEOC Core provides the essential capabilities of WebEOC in a hosted solution. WebEOC Core is entering the market with two different board sets. The Emergency

Management Module focuses on incident command tools to build a common operating picture. The Municipal Management Module supports special events management, fire and building inspections, and other local government responsibilities that are often managed through fragmented, paper-based processes. This hosted solution enables a municipality to manage critical services simply and cost-effectively. [www.intermedix.com](http://www.intermedix.com)

## FIRE ALARM SURGE PROTECTION

Silent Knight, by Honeywell, released the SK-F485C wire-to-fiber converter designed to allow new and existing Silent Knight systems to increase wire runs between fire alarm control panels and

power supplies, while providing a boost in surge protection. Being the first wire-to-fiber converter to be UL listed for a non-proprietary line of fire alarm systems and sold over-the-counter

at security equipment wholesalers nationwide, allows Silent Knight to offer the ideal solution to large facilities and multi-building campuses seeking non-proprietary fire alarm systems.

Covering longer distances over fiber lets Silent Knight systems offer more economical and reliable fire protection to larger facilities, such as warehouses and factories, as well as

multi-building projects, including K-12 schools, universities, corporate campuses and more. [www.honeywellprocess.com](http://www.honeywellprocess.com)

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By Jim Mullen

# Public-Private Action on Resilience — Now

**T**he statement that investments in resilience pay huge dividends when disaster strikes rings true, but the conversation can't end there.

As a longtime local and state emergency management director, one of my final challenges remains unmet: the ability to gather the combined resources of a community to consider the challenges of restoration prior to a disaster.

## WHY NOT EXERCISE PLANS WITH RECOVERY OR RESTORATION IN MIND?

Here's why: Knowledge of risks is often known, but that information is diffused among a number of agencies. Those who know the most about risk rarely have an opportunity or a forum, outside of their own professional discipline, to educate or share their knowledge with others. We need discussions outside of our respective disciplines because no one group or profession possesses either all of the answers or a clear understanding of all of the negative impacts that could arise from a disaster.

In my final years in Washington state as director of emergency management, we determined that for the state and its communities to recover from a catastrophic, or just a really bad earthquake, we needed a public-private discussion of the risks (to public safety, commerce and "social equilibrium") that our coastline and communities throughout the state would face from the Big One. That proposal is still under review by Gov. Jay Inslee and the Washington Military Department Emergency Management Division.

It's a good start at planning for resilience. If/when it finally surfaces among other state agencies, local governments, the private sector and (I hope) the general public, there is a chance we can move from theory to concerted action to plan for recovery. Where to rebuild, where to reoccupy and where not to are just some of the considerations I have been speaking about for the past couple of years and in the months since my retirement.

After a major event, the priority inevitably becomes getting people back home, rebuilding and healing. No one really wants to have an in-depth discussion about the feasibility of reoccupying or rebuilding. People want to go home again if they can, as quickly as possible, and resume life as they once knew it. Environmental concerns often pale in the face of a need for communities to rebuild and reconstitute themselves. In New Jersey and Louisiana, and almost any other place where risks have caught up with development decisions, recovery planning began too late, after the event has done its worst.

We know that government leaders, after the first few days or weeks, will appoint someone to lead a redevelopment/recovery task force, particularly if criticism about the pace of the recovery grows.

Why not do it now?

Why not exercise plans with recovery or restoration in mind? Why not identify challenges, such as a lack of legislative or administrative authority to carry out recovery requirements and establish that authority? Why not enlist leaders in the private sector to provide their perspective. And let's not forget to take the general public along for the ride. They are way ahead of us on such subjects, we might as well trust them in advance with the challenges we may all face. +



**JIM MULLEN** IS THE FORMER WASHINGTON STATE EMERGENCY MANAGEMENT DIVISION DIRECTOR AND FORMER NATIONAL EMERGENCY MANAGEMENT ASSOCIATION PRESIDENT.

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