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2011: YEAR OF THE
BILLION-DOLLAR DISASTER

A CRUMBLING FUTURE?
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EMERGENCY MANAGERS

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FORECAST UNKNOWN

A gap in satellites could leave emergency managers without severe weather information that they’ve come to rely on.

DISASTER PREPAREDNESS

FALLING APART

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Your excellent publication in the most recent edition depicts several disaster settings with obvious electrical power loss to those localities. Question: Why is it that trees are quite commonly allowed to grow too close to electrical power and telecom utility overhead power lines, when these are quite well known to come down in natural disasters?

Such lax governmental policies and practices (e.g., where parks departments and other responsible agencies often fail to keep tree overgrowth under control) actually set the stage for compounded problems in times of such emergencies; government emergency personnel must then respond to and deal with such complications, most frequently under adverse weather conditions. We are reminded of this avoidable problem in every hurricane season, and yet again every winter season!

An enforcement policy of 20- to 30-foot minimum clearance from power and telecom lines and other vulnerable structures (e.g., water supply and other pipelines) would not at all decimate the tree population, but would save millions of dollars in lost property and rebuilding costs to disrupted lives, and perhaps hundreds in human life per year.

It is time for those with the authority in every U.S. jurisdiction to make positive changes to get their fellow responsible agency leaders going toward such a wise preventive policy. This means concerted communication by emergency responder agencies’ leaders — but also follow-up with compliant leaders of other agencies — to the point of action.

Without electricity and telecom, inland or coastal, we are all little more than back in the woods, and (to use the old metaphor) not being able to “see the forest for the trees” — (Prof.) Paul J. Gammarano, M.A., J.D.

In terms of focusing on antiterrorism training/efforts, as members of the law enforcement community, we need to cast a much wider net to catch terrorists from different groups — instead of just on Islamic radicals. In fact, since 1960 there have only been a handful of successful terrorist attacks in the United States that were committed by non-U.S. citizens. Yet in the same time period, there have been several hundred successful terrorist attacks on U.S. soil that were committed by U.S. citizens.

Some of these groups were the Ku Klux Klan, the Black Panthers, Weather Underground Organization, Animal Liberation Front and the Earth Liberation Front. It is important to note that terrorists are just regular criminals — the organizational structure is no different than dealing with street gangs or organized crime. One of the main differences is the fact that a terrorist group usually is trying to push their beliefs or further their cause, instead of gaining additional power — Shaun at www.emergencymgmt.com, in response to the article Training Gone Awry? in the November/December issue
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Lessons From 2011

2011 was a memorable year for those of us in the emergency management field — and for the many Americans impacted by disasters.

Massive blizzards simultaneously blanketed dozens of states across the country. As snow melted, parts of the Midwest and upper Midwest experienced severe flooding. Texas and other states fought dangerous wild fires for months.

Last spring, our nation was devastated by the deadliest outbreak of tornadoes since the 1950s, with multiple instances over just a few weeks. In August, a magnitude 5.8 earthquake struck Virginia and was felt as far as New York City — just one of the 5,017 earthquakes experienced in 2011, according to the U.S. Geological Survey.

And as expected, the 2011 hurricane season didn’t give us a break. We had 19 tropical storms, the third-highest total since records began. Irene became the first hurricane to make landfall since 2008. Days later, Tropical Storm Lee proved that storms don’t have to be hurricane strength to cause significant damage. Then there are the thousands of smaller disasters that communities handled every day, out of the media glare.

So as we reflect on the past year, many wonder, what lessons did we learn?

First, not all disasters come with warnings — and we all need to be ready. Last year, various areas of the U.S. were hit with different types of disasters. Some, like the floods along the Missouri and Mississippi rivers, were well forecast. Others, however, came with little to no warning. And even with some events, such as Hurricane Irene, we may have had advance warning, but there wasn’t great certainty of forecast.

Ultimately we all are vulnerable to these hazards. It’s very difficult to prepare for them at the last minute. If we all take away one lesson from 2011, I hope it’s that we all have a responsibility to be prepared.

Second, we can’t underestimate the importance of the entire team. For a long time, we’ve talked about planning for the needs of the whole community and leveraging the resources of the whole community to meet those needs. We saw it in action repeatedly — in the southeast after the tornadoes, in Joplin, Mo., in May and in Vermont after Irene.

All of these response and recovery efforts engaged the entire team, including federal, state and local officials, the private sector, nonprofits, the faith-based community, volunteer groups and most importantly, the public. And it made a remarkable difference.

Third, 2011 further proved that we must prepare for worst-case scenarios or “maximum of maximums.” Japan’s tragic earthquake, resulting tsunami and power plant meltdown was a big wake-up call for all of us. We need to get serious about planning for incidents that involve significant loss of life, destruction of property and threats to our power grid or other infrastructure.

In many ways, 2011 reinforced what we already know: Disasters can strike anytime, anywhere; it takes the entire team working together to effectively serve communities and survivors; and we must continue to plan for and test ourselves for the maximum of maximums.

As we begin 2012, let’s apply those lessons and do our part to help the team by getting prepared.

QUESTIONS OR COMMENTS?
PLEASE GIVE US YOUR INPUT BY CONTACTING OUR EDITORIAL DEPARTMENT AT EDITORIAL@GOVTECH.COM, OR VISIT OUR WEBSITE AT WWW.EMERGENCYMGMT.COM.

AN AWARD-WINNING PUBLICATION

Maggie Wilner
Dear Public Safety/Trade
2009, 2010 and 2011

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Chechnya-born Harry Burkhart, 24, was arrested and charged with dozens of counts of arson after terrorizing the Los Angeles area by setting more than 50 fires during New Year’s weekend.

Burkhart placed incendiary devices under the engines of cars and caused more than $3 million in damages. According to news reports, Burkhart had “railed against Americans” at a court hearing prior to setting the fires. Authorities said he may have had a history of arson in Germany.
Emergency services agencies are taking a regional approach to public safety in western Pennsylvania. Ten counties plan to use a shared next-generation 911 system by early 2013. Allegheny, Armstrong, Butler, Fayette, Greene, Indiana, Lawrence, Mercer, Somerset and Westmoreland counties will be linked on a network with access to the same 911 technology, giving each county the ability to accept emergency text and video messages.

Frank Matis, director of Butler County Emergency Services, said it isn’t clear yet whether the region would be using the call capacity and newer 911 switches — which route emergency calls to the appropriate operator — owned by Allegheny and Butler counties, or if additional equipment would be bought to serve the group’s needs. But the partnership will have access to the latest technology at a fraction of the cost it would be to purchase individually.

Outreach is much more than just handing out brochures or developing public service announcements — it involves building relationships. Good outreach comes down to two things: networking and being creative. You need to be visible, active in your community and spread the message of personal preparedness. Here are three steps to help raise your visibility:

1. **Be active in your community.**
   If you’re visible in the community and you’re working in the trenches, they are likelier to say yes when you need their help.

2. **Develop relationships with those in the media.**
   Get away from the us-and-them mindset and instead develop relationships with the local media.

3. **Tap into community resources, including service groups, schools and businesses.**

GIS TO GO

Although Google’s Street View picture-snapping cars are out and about in most counties in the U.S., Monroe County, N.Y. has its own GIS technology vehicle.

“As far as I know, there is no other vehicle like this in New York,” said Scott McCarty, GIS operations manager for the Monroe County GIS Services Division.

The county’s GIS division got a mobile vehicle, partly because snow-covered remote marshes and ponds makes it dangerous for law enforcement to follow in pursuit or emergency services to reach those in trouble.

The vehicle is connected via 4G cellular for communications, and delivers GIS data to base stations. With its Global Navigation Satellite System and its own onboard weather station, the vehicle delivers data to nearly every county office, which serves 750,000 residents.
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AT THE SPEED OF IDEAS™
FALLING APART

America’s crumbling infrastructure will challenge emergency managers for decades.

By Adam Stone
Hurricane Irene caused intense flooding on the East Coast in late 2011, damaging homes and threatening critical infrastructure like roads and bridges.
They call it “critical” infrastructure for a reason. Roads and bridges, energy, water, even the food supply: The loss of any one of these can bring a region to its knees.

It’s not just the collapse of a critical resource that can wreak havoc. Rather, it’s the inherent interdependencies within these systems—the potential for a domino effect of failures—coupled with the complex nature of public and private interests inherent in critical infrastructure.

To understand how critical infrastructure drives unique challenges for emergency managers, it helps to start with a real-world example.

On April 9, 2009, vandals in San Jose, Calif., cut through an AT&T fiber-optic cable, disrupting land line and cellphone service to thousands of residential and business customers, but the damage went much further. The Internet went down, 911 calls were stymied and law enforcement telecommunications broke down.

“If the police made a car stop, they couldn’t ask for warrants, they couldn’t run license checks, so it became an officer safety issue,” said Frances Edwards, the former director of telecommunications broke down.

Events like these illustrate why the American Society of Civil Engineers (ASCE) gave America an overall “D” grade for its decaying critical infrastructure.

In September 2010, a 54-year-old gas pipeline exploded in San Bruno, Calif., killing eight people and destroying more than 50 homes.

In one high-profile incident in 2007, a bridge spanning the Mississippi River in Minneapolis collapsed, killing 13 and injuring 144.

In October 2011, a 54-year-old gas pipeline exploded in San Bruno, Calif., killing eight people and destroying more than 50 homes. The situation appears to be a recipe for disaster. The average bridge in the U.S. is 43 years old, and one in four of the nation’s 600,000 bridges is deficient, according to the ASCE. The Wall Street Journal reported that of more than 3,000 oil and gas production platforms operating in the Gulf of Mexico, one-third were built in the 1970s or earlier. It gets worse: A New York Times analysis found that a significant water line bursts roughly every two minutes, or 720 times a day.

Complicating the situation for emergency planners is the fact that every event related to critical infrastructure is unique, leaving planners to face more unknowns than knowns.

Each time an infrastructure element fails, “it causes the emergency managers to reconsider all of their emergency plans,” Edwards said. “You don’t know what you don’t know, so after you have an event like this, it makes you stop and wonder: What else is out there? Now you have all this new information on how systems actually function, so you have to rethink your procedures and retrain your staff to make room for the new reality based on what you did not know before.”

In other words: a moving target.

The situation is further compounded by the privatization of roughly 85 percent of the nation’s most critical infrastructure systems. That infrastructure may encompass varied forms. According to the U.S. DHS, critical infrastructure includes not just the obvious—roads, bridges, power grids, nuclear facilities and dams—but also agriculture, health care, manufacturing and other categories.

In contemplating this extremely wide range of possible sources of calamity, emergency managers must work through a deliberate dance with private owners of infrastructure. In this dance, every simple definition can be confusing.

If a substantial power outage is cause for emergency action, “how do the local government and the utility agree on the definition of ‘substantial’? How many customers are out? What will the utility be reporting to emergency management, and what will be the emergency manager’s expectation of that?” said Charlie Fisher, vice president of crisis management consulting firm Witt Associates.

Chain of command likewise may not translate easily between public and private players. As the two work to craft an emergency plan, who will the private sector send to the table? “Is this someone who has knowledge and authority, or just a messenger?” Fisher said. “If you are sitting with the police chief and the fire chief, you want a very senior person from the utility there as well.”

In fairness, some say the burden of planning should fall on the public managers.
Severe flooding from storms in 2009 damaged and cracked a highway in Washington state.

Aging roads and bridges take a toll

ONE IN FOUR BRIDGES in the United States is either structurally deficient or functionally obsolete, according to the American Society of Civil Engineers (ASCE). In its report card, the ASCE gave roads a "D minus." The report said that poor roads result directly in the deaths of 14,000 Americans yearly. Hundreds of thousands of commuters drive on unsafe bridges every day. In 2007, the I-35W Mississippi River Bridge collapsed in Minnesota, killing 13 and injuring 145.

A lot of the nation’s bridges are 35 or more years old. Many were built in the 1950s and ’60s and are coming of age. Most bridges are designed to last about 50 years. Many are becoming dangerous, and the prospect of more bridge failures is real, even likely.

“I hope not, but I’m concerned,” said William Ibbs, civil and environmental engineering professor at the University of California, Berkeley. “We’re not spending as much to maintain this system, and there are more systems in place, more government buildings, more schools, more bridges than ever. So resources aren’t keeping up with the needs, and the needs are expanding. It’s very likely you’re going to see more problems in the future, regrettably.”

“I think we’re going to see more knee-jerk-type responses to problems,” Ibbs said. “Whenever there is a catastrophe, like the Minneapolis bridge, there’s a sudden emphasis on the infrastructure, but after about two months the interest dies down and people go on to something else. What you see is a very short-term reactive response to infrastructure needs rather than a long-term commitment to proactively maintaining the infrastructure.”

— JIM MCKAY, EDITOR
Falling Apart

not because it’s their designated role but because any failure in the infrastructure system will likely come from the public side. While there may be infrastructure weaknesses all around, the private sector has a financial interest in ensuring its critical components are sound. At the same time, the public sector is notoriously underfunded and behind on its upgrades in many jurisdictions. This combination weights the scale toward a crisis coming from the public side, said Annie Searle, principal of risk assessment consultancy Annie Searle & Associates.

“The pieces on the private-sector side are in really good shape—they’ve maintained them,” Searle said. “We’re worried about the public infrastructure where the dollars may not have gone into either maintenance or improvement of the infrastructure.”

Still, it’s not an easy equation. With so many vital systems in private hands, the two sides must cooperate. This means overcoming jurisdictional vagaries, said Wendy Freitag, external affairs manager of the Washington State Military Department’s Emergency Management Division.

“They control access to it, and the government draws a line and respects that ownership,” Freitag said. “This has practical implications. Take the scenario in which hurricane debris lands on private property. Government responders won’t move on that. Now suppose that private property is a reservoir whose compromise might contaminate the water system. Jurisdictional concerns may keep responders arms length.”

And then there’s the money. As Freitag noted, the Stafford Act would prevent public servants from claiming federal reimbursement should they go for a cleanup on private property. In laying plans for such an event, emergency managers must think carefully about financial ramifications.

Overall, cooperation is the key to success in dealing with public-private tensions. Freitag said. The best thing emergency planners can do is to look to the private sector as customers. Develop a sound relationship by listening to what your customers need. “Typically their priority is in having access. They want to get in, repair and restore what needs to be restored. You have to listen to that. You have to care about what they need.”

Joint training helps establish rapport. In Washington, all state certification and training classes are open to the private sector. Beyond this, communication is the final pillar. Freitag’s office uses proprietary software Public Information Emergency Response (PIER), which allows outreach to more than 400 private- and public-sector members. “The key to maintaining a private-public partnership is having some sort of a two-way communication tool,” she said.

Responding to a critical infrastructure disaster is not just a two-way street—public to private. It’s an every-way street. It’s in the nature of critical systems to be enmeshed and intertwined with a whole host of other systems and processes. A burst dam causes a flood, which takes down power, which kills the phones. Meanwhile roads wash away. The ripple effect can be staggering to emergency responders.

The Idaho Bureau of Homeland Security is ever mindful of this fact. Ever since a cataclysmic dam failure in 1976, the state has held a heightened sense of watchfulness concerning its 632 dams. Dams are owned either by private entities, the Corps of Engineers or the Bureau of Reclamation. The owners have the primary responsibility for drawing up response plans, while the Bureau of Homeland Security follows up with training and exercises, explained bureau spokesman Robert Feeley. By their nature, those plans are far reaching.

“There are cascading effects to any event, and that is one of the challenges of emergency management, to identify all those effects,” Feeley said. Planning begins with geography, the mapping of an inundation area likely to be hit by a dam breach. This in turn gives rise to an analysis of the power grid in each affected area. The flood maps also determine jurisdiction. Imperiled roads, for instance, are handed off to the county sheriff’s office. Evacuation plans meanwhile fall into the hands of first responder communities.

Often an emergency manager’s knowledge of interdependencies will be critical to the organization of an emergency response. Fisher described a scenario in which a hurricane took out communications to the local electric company. Both pieces needed to be brought back on line, but only one thing mattered: restoring power and communications to the Electric Operating Center. Without that first step having been built into the emer...
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Water Vulnerability

IN MARCH 2010, heavy rains overwhelmed Washington, D.C.’s water system, causing raw sewage to flow into the Potomac and Anacostia rivers, according to a New York Times article.

In Washington D.C., a pipe breaks every day on average, contributing to the 7 billion gallons of water lost per day nationally because of leaky pipes, according to a report by the American Society of Civil Engineers.

Aging sewer systems spill more than a trillion gallons of untreated sewage every year in the country, and the decaying systems are vulnerable to natural disasters or even a terrorist attack. The drinking water and wastewater sector is vulnerable to various attacks, including contamination with deadly agents, and physical and cyberattacks, according to the Council on Foreign Relations. Denial of water service could cripple services, such as firefighting, health care, energy, transportation, and food and agriculture.

Much of this infrastructure is decades old, and there are hundreds of thousands of ruptures each year that damage water supplies. Some jurisdictions are raising water rates to pay for the decrepit infrastructure, but it will take decades to replace everything.

A 2009 Environmental Protection Agency study concluded that it would take $335 billion to maintain the nation’s top water systems in coming decades and that in New York, for example, $36 billion is needed in just the next 20 years to maintain municipal wastewater systems.

— JIM MCKAY, EDITOR

The Minneapolis bridge collapse is a stark reminder that the nation’s bridge infrastructure is vulnerable. One in four bridges is structurally deficient, according to the American Society of Civil Engineers.

gency plan, no other element of response could have been carried out effectively.

The San Jose blackout described above — the result of vandalism — serves as a stark reminder that the failure of critical infrastructure need not necessarily be caused by acts of nature, or even by slapdash maintenance and restoration.

Critical infrastructure is thought by many to be a natural target of terrorists seeking to inflict harm or cause panic among a broad population. In fact, any of the 18 sectors designated as “critical” by the DHS could be vulnerable to a terrorist attack.

For public safety planners, the emergency services sector will seem especially notable. An attack can render first responders unable to meet other concurrent challenges. For example, jurisdictions with nuclear reactors, chemical plants and dams could well be subject to coordinated attacks that first render their emergency responders unavailable, prior to a larger-scale attack.

Density also can factor into the terror equation. The U.S. Army Training and Doctrine Command offers a range of statistics showing how a heavy concentration of resources can render a sector vulnerable. Nearly a third of U.S. hog inventories are in Iowa. Some 25 percent of all pharmaceuticals are manufactured in Puerto Rico. More than half of the banking sector is focused on lower Manhattan. The densities make for appealing targets.

For emergency planners, crafting a response around sectors with a high terrorism risk can be especially challenging, because of the confidential nature of many of these facilities. Take, for instance, the Idaho National Laboratory, a nuclear research institution. Although representatives of the lab have a seat at the table in the state’s EOC, they don’t always offer full transparency. This still is a facility that trades in highly secret information.

It’s a tricky balance, crafting a plan without seeing the full picture. “There are things we are going to know about and things we are not going to know about,” Feeley said. His office’s response is to do the best it can within the constraints. “Working from the generalities, we can develop action plans for what could happen, without having to know exactly what they are doing in this facility.”

Gives the inherent limitation, the best solution has been to keep doors open. Feeley’s office reaches out to the nuclear side and administrators typically reciprocate. Representatives from the lab recently presented Feeley’s office with a briefing on lab activities.

“We appreciated that. It gave us a very good picture of what is going on there.”

The Minneapolis bridge collapse is a stark reminder that the nation’s bridge infrastructure is vulnerable. One in four bridges is structurally deficient, according to the American Society of Civil Engineers.
Key Tool for Public Safety
Fast, tough, cost-effective laptops are a must.
As in all government today, public safety agencies must find innovative ways to provide services despite shrinking budgets and reduced workforces. Information technology is a powerful aid in the quest to do more with less. Finding the right technology at the right price is crucial — especially in public safety, where there is no room for error.

Laptops in police cars, for example, are a critical tool for public safety. "They're communication engines for officers," said Jason Mooneyham, executive director of U.S. Public Sector Sales for Lenovo. "Officers have a radio, and they typically have a phone, but they need that computer to access a lot of information. It's a key tool in the effectiveness of the officer."

The importance of a quality laptop that performs well cannot be overstated. In public safety — where lives can be lost and every second counts — personnel need to be certain their computers are fast, powerful and durable.

"Performance is key," Mooneyham said. "Officers need to access information quickly, so having a machine with the latest and greatest types of performance is important. And that means hardware that enhances the current software you're using in public safety."

CDWG agrees. "From the standpoint of the processor, memory and operating system, you have to be sure the machine can handle the load that will be put on it," said Houston Thomas, public safety solution architect with CDWG. "It's a lot more than the average office worker has on their computer. Police officers may have an in-car camera system showing video on the screen; they may have an automatic vehicle location platform; they have a computer-aided dispatch application — and dispatch information flows more over the computing environment now than over the radio."

Laptops are also needed for conducting background checks, running license plate information against databases, issuing electronic citations, sending in reports, printing, and much more. Having access to all pertinent data increases officers' productivity, and improves the safety of both the officers and the public.

On the Road

Public safety agencies need laptops that are designed and engineered for life on the road. These computers must be able to handle motion, vibration and an overall environment that's more demanding than office environments. Longevity is critical, as laptops sometimes need to be in service for more than five years. And officers need machines that boot up quickly and are always operating at peak performance. CDWG, Lenovo and Intel recognize the need, and are working together to bring high-quality laptops to public safety agencies at affordable prices. Lenovo laptops with 2nd Generation Intel Core processor technology are tough and fast — and they cost about a third of what some competitors' machines cost. Intel, CDWG and Lenovo understand what public safety agencies need, both today and in the future.

"When you look at today's police forces, they're running a lot of simultaneous applications, and a lot of those applications are critical," said CDWG's Thomas. "You need to be optimized for the future, as well as for today, because you really don't know what new applications will be coming down the road."

The expertise offered by the three companies can be a big help to public safety agencies seeking to do more with less. Now more than ever, it helps to have private-sector partners like these — to navigate the IT landscape and to help public safety agencies succeed in their very important missions.
CASE STUDY

**Being There**

Cost-effective, durable laptops help Sheriff’s Office detectives solve cases faster.

Will County, Ill., is one of the nation’s fastest growing counties. Based in Joliet — about 45 minutes outside of Chicago — the county has nearly 700,000 residents after a 35 percent increase in population over the last 10 years. Several factors have led to the growth, including the city’s thriving economy, proximity to Chicago and a family-friendly suburban environment.

Rapid growth always provides special challenges for public safety agencies, which are already facing budget issues and the constant need to provide services in the most cost-efficient manner. The Will County Sheriff’s Office is responding to these challenges by leveraging technology for greater efficiency.

For its Investigations division, the Sheriff’s Office recently purchased 19 Lenovo laptops with 2nd Generation Intel Core processor technology, provided by CDW-G. Josh Fazio, a detective in the High Tech Crimes unit at the Sheriff’s Office, said there were three key reasons the detectives chose Lenovo: “durability, the number of features that come standard with the laptop and cost.”

The division’s 19 detectives tried demo laptops from five different companies for four months, and unanimously chose Lenovo. The price was right, and the Sheriff’s Office needed a machine on which it could depend. “We need to be able to turn it on, and have it work,” said Fazio. “We never have a problem with these. We never had to have IT work on them. They just always work. These are tough and reliable, and that’s what we need.”

Durability is a key factor, because detectives take the laptops into all kinds of environments and weather conditions. The detectives also like the fingerprint recognition for security, the Gobi modems that enable them to easily connect to cellular networks, and ergonomic factors — including the full-size keyboard.

**Doubling Productivity**

The Investigations division has seen a rapid increase in productivity since it began using the laptops. Detectives in Will County can find and share information from the field in a way they never could before.

“Detectives are getting real-time information, right there and then on their laptops,” said Fazio. “Now, instead of waiting until they come back to the office, they’re writing their reports right there in the field. It’s making the detectives twice as productive.”

For example, detectives were working a homicide case and had the name of a suspect. But no one in the Sheriff’s Office was familiar with the name, and databases weren’t showing any matches. By running the name through a gang database while out in the field, detectives instantly saw that the suspect had several aliases. They were able to track him down in 20 minutes, whereas it could have taken days without the mobility enabled by the laptops.
The county’s land area is so expansive that detectives can be nearly two hours away from the office while working a case. Thus getting information back and forth between the office and the field was difficult before the purchase of the laptops. Now, detectives can stay connected to databases and other information no matter where they are. “Now, detectives have real-time data, and can keep running with these cases without even stopping,” Fazio said.

“Now, detectives have real-time data, and can keep running with these cases without even stopping.”

— Josh Fazio, detective, Sheriff’s Office, Will County, Ill.

**Better Information Sharing**

Detectives also use the webcams on the laptop to take photos, which they can send to others via email from the field. The photos have proven to be big time-savers, since a picture can convey details more quickly and clearly than a phone conversation.

And since detectives can take and share their own photos of a crime scene, they no longer have to wait until the crime scene investigators take their photos, go back to the office, download their photos, and then distribute them.

Detectives also use the webcams for videoconferencing. This allows them to participate in meetings no matter where they are located. “It’s like they really can be in two places at once,” said Fazio.

The new laptops have greatly increased detectives’ ability to share information with one another. “It’s bridging the gap for us, as far as being able to discuss the cases,” said Fazio. “One guy may be working on something, and another guy may be working on the same thing, and we’d never know it before. Now that we’re all connected on these laptops, we know what everyone is doing.”

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The machines have worked so well that the Sheriff’s Office is planning to expand its use of laptops. “We’d like to get the whole department in this mobile laptop world, so we can bridge the gaps between the Patrol division and the Investigations division and the Traffic unit and everything,” Fazio said. “We want to connect everyone with this type of equipment.” That includes making administrative and support staff more mobile as well.

The Sheriff’s Office has worked with CDWG before, and Fazio said the company was a big help when the detectives needed laptops. “We have a really good relationship with CDWG,” said Fazio. “They come out here, they see what we’re doing, and they really know what our needs are. They’re a huge help.”

Fazio thinks this kind of approach can work for other agencies too. “I think more departments should think outside the box, and work with their account reps,” he said. “When the reps see what you’re actually doing, that’s a lot better than you telling them over the phone. They can then present you with options that you never would have thought of.”

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The threat of terror sometimes leaves emergency managers struggling to balance the need for security against their duty to craft plans that address public safety most efficiently. They may need to risk some exposure to a terror event in the name of meaningful emergency response. That's a fine line to walk. Given the interdependencies and the possible ripple effect of a breach, planning for an infrastructure event demands a rigorous and well thought-out process.

One such process comes from King County, Wash., where emergency planners have broken down their approach to infrastructure into a virtual road map of response. The plan identifies, up front, the role owners and operators play in critical infrastructure protection decision-making. Owners must help with the assessment of vulnerabilities, assess their own dependencies on other infrastructure sectors and identify ways in which government agencies can help protect their critical infrastructures.

The plan then lays out detailed risk-management processes, assigns specific roles and responsibilities, describes the procedure for sharing information and establishes a protocol for making decisions. Planners then designate a hierarchy of concern: from energy, IT and telecom to government facilities and banking institutions, to icons, monuments and commercial facilities.

To make it possible to draw up an effective plan, the county drills down into the details of just what constitutes risk. How vulnerable is the infrastructure? What are the likely threats and their consequences? How likely is a breach? The county plan lays out precise definitions for assessing each area. The county designates lead players, including the Regional Homeland Security Council, Critical Infrastructure Protection Work Group, local, federal and state governments, and others.

Taken together, the county's definitions, procedures and protocols help to generate emergency plans that respond with considerable precision to the varied threats faced by critical infrastructure.

The great distinction in an infrastructure disaster always comes down to the question of interdependency, the cascade effect in which one system failure causes similar crashes down the line. It's a consideration that emergency planners must always keep foremost and yet there's no simple formula to help them make those complex calculations.

"What we need now is a super-simple, easy model to use where we can map these interdependencies and see them very visually," Freitag said.

Such a model would need to have a high degree of sophistication and would draw from multiple public and private sources. Given the complexities of the task, she said, "I think government is going to have to be the one to develop that. It's something everybody needs."

Adam Stone is a contributing writer based in Annapolis, Md. adam.stone@newsroom42.com
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Year of the Billion-Dollar Disaster

With more than 90 federally declared disasters, 2011 may have been a

By Claire B. Rubin and Jessica Hubbard / Contributing Writers
or those in emergency management, the last calendar year was an unusually busy and costly one. Of the more than 90 federally declared disasters in 2011, at least 12 generated costs of $1 billion or more.

Although most didn’t dominate the national news for very long (the exceptions perhaps being the tornadoes in Pascagoula, Ala., and Joplin, Mo.), the cumulative effect of these events was substantial. One outcome was the greatly increased workload for public-sector emergency management personnel, the insurance industry and other segments of society. A second outcome was the cost, which was especially noticeable in a year filled with congressional arguments over the national debt ceiling and the source of supplemental funding for disaster relief.

The year was unusual both in terms of frequency of disasters and each event’s high cost. In recent years, typically one or two large to catastrophic events have dominated the news – like 9/11, Hurricane Katrina in 2005 and the Gulf of Mexico oil spill in 2010. Whether 2011 with its multiple billion-dollar disasters is a trend is hard to tell, but professional emergency planners and managers should be prepared for that possibility.
The National Climatic Data Center at the National Oceanographic and Atmospheric Administration compiled data, including total loss data, on the 12 billion-dollar disasters of 2011. The following information illustrates the historic nature of those disasters:

✓ The Groundhog Day blizzard of Jan. 29 to Feb. 3 dumped one to two feet of snow across the Northeastern, mid-Atlantic, eastern and central states, resulting in 36 deaths. Total losses were more than $1.8 billion.

✓ During the Midwestern/Southeastern tornadoes of April 4-5, 46 tornadoes affecting 10 states caused nine deaths, more than $2 billion in insured losses and exceeded $2.8 billion in total losses.

✓ The Southeastern/Midwestern tornadoes of April 8-11 included an estimated 59 tornadoes across nine states that were responsible for numerous injuries but no deaths, and more than $2.2 billion in total losses.

✓ On April 14-16, about 177 tornadoes across 10 states in the Midwest/Southwest resulted in 38 deaths. While few of those tornadoes were considered intense, they caused total losses greater than $2 billion.

✓ The Southeast/Ohio Valley/Midwest tornadoes of April 25-30 were responsible for more loss of life than any of the preceding tornadoes of 2011. An estimated 343 tornadoes across 13 states caused 321 deaths. Several major metropolitan areas, including Chattanooga, Tenn., and Tuscaloosa, Birmingham and Huntsville, Ala., were directly affected by several strong tornadoes, which were responsible for $7.3 billion in insured losses and more than $10 billion in total losses.

✓ The Midwest/Southeastern tornadoes of May 22-27 resulted in total losses greater than $9.1 billion, more than $6.5 billion of which were in insured losses. More than 180 tornadoes caused at least 177 deaths. 360 of those deaths were in Joplin, Mo., in what was the single deadliest tornado to strike in the U.S. since modern tornado record keeping began in 1950.

✓ An estimated 81 tornadoes and severe weather struck the Midwest and Southeast on June 18-22; losses exceeded $1.3 billion.

✓ Spring through fall, drought, heat wave conditions and wildfires in the Southern Plains and Southwest affected Texas, New Mexico, Oklahoma, Arizona, southern Kansas, and western Louisiana and Arkansas. Direct losses to agriculture, cattle and structures totaled more than $9 billion.

✓ Mississippi River flooding during the spring and summer resulted from persistent rainfall (nearly 300 percent of normal precipitation) combined with melting snowpack. Economic losses were estimated at $3 billion to $4 billion.

✓ Upper Midwest flooding in the summer resulted in five deaths and estimated losses in excess of $2 billion. These floods were caused by the melting of an above-average snowpack across the northern Rocky Mountains combined with above-average precipitation.

✓ Hurricane Irene made landfall on Aug. 20 as a Category 1 hurricane over North Carolina. Over the next nine days, it moved north along the coast, bringing torrential rainfall and strong winds while causing flooding across the Northeast. Losses were more than $7 billion; at least 45 deaths resulted from the storm.

✓ Wildfires impacted Texas, New Mexico and Arizona during spring through fall, losses from which exceeded $1 billion.
The estimated economic damages from these events exceed $45 billion as of press time, making it likely that 2011 will be the costliest year for insured losses since records have been kept. Given that 2011 was the first year of the 21st century's second decade, it's clear that those responsible for emergency management and disaster planning must anticipate the future in a bolder, more proactive way than they have in the past. The historic events of last year demonstrated some unusually destructive characteristics, attracted significant media attention, and laid bare numerous deficiencies in the plans, systems and processes used in all phases of emergency management.

We now have some perspective on disaster trends in the United States for the first decade of the 21st century. During this period, the nation experienced three major to catastrophic disasters, providing milestone events for each of the three categories usually used to characterize U.S. disasters:

- On Sept. 11, 2001, four terrorist attacks constituted the greatest man-made, intentional disaster that has ever occurred on the U.S. mainland.
- In September 2005, two natural disasters, hurricanes Katrina and Rita, caused the greatest damage seen in the United States to date in terms of area affected and impacts on people and property.
- In April 2010, the Gulf of Mexico oil spill resulted in the largest man-made, unintentional event ever to occur in the United States, with most of the damage affecting the Gulf Coast region.

The trend line for numbers of declared disasters has gone up steadily since 1988 (when presidents were given more authority in making declarations). This increase could be due to several factors — most notably, weather patterns and the political climate. Additionally in recent decades, more people have been moving to high-risk areas — areas that have historically been prone to natural disasters, such as coastal environments.

Another contributing factor could be the disaster declaration funding formula. When the president makes a disaster declaration, FEMA becomes responsible for at least 75 percent of the recovery costs. It's possible that state and local responders are more aware of this today than they were in the past and are better at negotiating the process to receive federal funds to assist in recovery. Additionally it could be noted that both Congress and the president are likely to try to avoid the mistakes made during the Hurricane Katrina response, and a disaster declaration is a key indicator that the federal government is aware of the magnitude and scope of the event and is willing to help.

In April 2010, the Gulf of Mexico oil spill resulted in the largest man-made, unintentional event ever to occur in the United States, with most of the damage affecting the Gulf Coast region.
When talking about disasters, 2011 has been a significant year on its own—and the events of the year appear to be keeping with the noticeable upswing in the number of declared disasters in recent decades. Although it is too early to establish a firm trend line or pattern, as a nation we need to consider the following:

✓ Are large-scale disasters and catastrophes, events whose costs are measured in the billions of dollars, the new normal in the foreseeable future?
✓ If so, how should the emergency management community plan and prepare for such mega-disasters?
✓ Do we need to make changes, major or minor, to our policies, programs and response/recovery systems?
✓ Should the threshold for a presidential disaster declaration be changed?

(A staffer from the U.S. DHS Office of Inspector General recently noted that the formula hasn’t changed since 1999.)
✓ Should the preparation of a national risk assessment be given a higher priority?

✓ Should the DHS’ education and training programs give more attention to risk management for catastrophic natural disaster events?
✓ Will the Whole Community concept being promoted by the current administration at FEMA be essential? Is it adequate as now articulated?

The emergency management community seems to be entering new territory with respect to the scale, number, frequency and cost of disasters in the United States. It is essential that we’re prepared for the worst as we head into a new year.

Claire B. Rubin is president of Claire B. Rubin & Associates, a small firm based in Arlington, Va., that specializes in research and consulting in the fields of emergency management and homeland security. She is the author of several disaster timeline charts and the editor of a new history book, Emergency Management: The American Experience, 1900-2010.

Jessica Hubbard is a research associate at Claire B. Rubin & Associates.
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Bryan Koon was named director of the Florida Division of Emergency Management in 2010. He joined the division after years as the senior operations manager in Wal-Mart’s Emergency Management Department.

At Wal-Mart, he managed events that affected the 2.2 million associates at the company’s facilities and nearly 100,000 vendors and suppliers throughout the world. Koon was a surface warfare officer in the Navy and worked at the White House Military Office for seven years.

Emergency Management magazine caught up with Koon at a recent conference to discuss his experience and the transition from the private sector to the public sector.

By Jim McKay | Editor
What’s it like following in the footsteps of FEMA Administrator and former Director of Florida’s Division of Emergency Management Craig Fugate? It’s daunting but frankly it’s a tremendous opportunity and that was one of the primary reasons I took the job in Florida. It was an opportunity to go to a state that already had a fantastic reputation. It’s daunting to follow Craig. He has reached the place where he’s known by one name like Bono or Prince — it’s just “Craig.” But far surpassing that, is the ability to learn from the organization and to take what has been a great success so far and make it even better.

Are there things you’d like to do differently than Fugate? We still have lots to improve upon, so we are working on numerous things. One is taking the effectiveness that was achieved and continuing on with [it], but improving the efficiency of it. Recognizing that the financial climate we’ll be dealing with in the next 10 years is going to be tough.

How do emergency management organizations or a state achieve the same results or better with less money and more streamlined efforts? Continuing to engage the “whole community,” to use FEMA’s language, in emergency management and recognizing that in those large-scale situations, it is not government-centric and it should not be a government-centric focus. Everybody in the community should be engaged in that process.

We’re taking a much more proactive effort to engage the academic community, which is a vastly underutilized resource in Florida. We have great colleges and universities that have lots of emergency management and homeland security programs, and many bright, young students that want to be engaged. There are lots of internship and research opportunities. Colleges have physical infrastructure that could be of use to us. They have some of the best communication systems as far as alerting notification. Engaging the academic community more fully is something we are working on.

The challenge in Florida is that we can’t be all Facebook all the time because fully is something we are working on. Engaging the academic community more and continuing on with [it] but improving the efficiency of it. Recognizing that the financial climate we’ll be dealing with in the next 10 years is going to be tough.

What do you bring from the private sector to government that was missing? There are a number of things. One of them is because I came from outside of government, it has allowed me to ask the dumb questions that I would perhaps be afraid to ask otherwise. I can ask people to explain how we got where we are today and why. It seems so convoluted. Explain to me how it is not convoluted, or in fact if it is convoluted, why we got there.

I can ask how we got to the point where this county is doing this and the county next door is doing something completely different. In some cases, I have gotten good answers, and in some cases I have gotten, “because that is the way that it always has been done.” It has allowed me to truly engage people and allow them the opportunity to explain how things work and either defend it or clearly illustrate that it’s something we can approve upon.

I am a public communicator and the public-facing part of the organization. I’m the negotiator; I’m a manager; I’m a leader; a counselor; an adviser; a sounding board; I am a collaborator; the guy who nags somebody on behalf of the organization. I’m the one who moves issues up and down. Those are skills that you can acquire outside of government. In fact, you can probably get better at doing those kinds of things in the private sector. Those are the skill sets I brought to the job that I would not necessarily have honed as well had I been in government the entire time.

I’m truly glad I did Wal-Mart first because they are very focused on a brand, an image and reputation, so I did a lot of media relations-type classes where you spent days going through mock interviews and going over the message to make sure you were reflecting credit upon the company. I haven’t seen that kind of training occur within the state so I would have been ill-prepared had I come up through the ranks.

Having come from the private sector, is one of your goals to facilitate better communication between the private and public sector? Yes, it should be irrespective of individual. Relationships are very important in this business, but it has to go deeper than that. One of the first things that I did was hire a dedicated full-time private-sector coordinator for the agency. I have one person solely focused on understanding the needs of the private sector and ensuring that we as an agency are moving forward in the direction to incorporate those needs into what we’re doing.

It has to be fully integrated in everything we do so that we know where all the resources are before a situation. All I want to do as a governmental emergency management agency is fill in the gaps. I don’t want to overlap with something else because no matter how efficient we become as an organization, we will always be more expensive than the alternative. We [also] have to understand big-picture implications. You may implement a curfew in a town, and say something happens after that 6 p.m. curfew — and that is understandable from a security perspective — but we have to understand big-picture-wise how
that will impact us because now you can’t get trucks in there to stock store shelves. So the next morning when it is light, there’s nothing on the shelves for people to go and buy. Now you as a government agency have to provide food and water for those people, so adding a little bit of extra security in that 12 hours has now cost you $250,000 in food and water for that one additional day.

One lesson that came out of Irene: They were using helicopters to get water to folks after bridges went out. Do you have any idea how expensive that water becomes if you’re using an $8,000-an-hour Black Hawk to bring a pallet of water to somebody? That is now a $40 gallon of water that you provided to that person.

We treat preparedness-money and recovery money separately sometimes, but we really have to start tying that stuff together.

- You’re sitting in the nation’s hurricane capital. What are your biggest challenges in preparing folks to deal with hurricanes?

There are several. Every day since the last hurricane is that much further removed from people’s minds from how bad a hurricane can be. It reinforces the fallacy that some may have in parts of the state that some kind of protective geographic feature where they live prevents them from being impacted by a hurricane. The fact is that anywhere in the state can be impacted by a hurricane, but the longer you go without having one, the more people forget about it, so overcoming that complacency in a continually growing state [is a challenge]. We have new citizens who have moved in since the last hurricane, and they have no understanding of it and how they work.

There also is turnover in emergency management personnel, so the further you are removed from the last hurricane, the further you are from an experienced emergency manager who has dealt with those issues before. The same things with politicians, business owners and such. You risk repeating the mistakes of the past.

- You mentioned the elderly population. Is it difficult to reach sometimes?

I wouldn’t characterize them as that. I mentioned the elderly population but thought about it more in terms of people over the age of 55. We have new citizens who have moved in since the last hurricane.

MARK COOPER AND WAL-MART HELP FOSTER RESILIENT COMMUNITIES

Some said it was ironic that Bryan Koon left Wal-Mart to direct the Florida Division of Emergency Management. But for reasons outlined above, it was a good fit. As equally fitting is Mark Cooper taking over Koon’s position at Wal-Mart after heading emergency management for Louisiana.

Both bring a lot to the table from their experiences and both seek to increase public-private relationships. It’s a need that’s taken hold over the last several years, especially after Hurricane Katrina when the private sector came to the rescue.

Wal-Mart was one of the private entities lauded after Hurricane Katrina for its ability to provide supplies, like water, to communities in need and also for its knowledge of supply chains and infrastructure.

“The private-sector support during Katrina and FEMA was important,” Cooper said. “With Fugate coming in and putting an increased emphasis on that part with his whole community concept, the private sector is going to play more of a role.”

When Cooper joined Wal-Mart last year, he brought his extensive experience in the public sector, including acting as Louisiana emergency management director during hurricanes Gustav and Ike, and the BP oil spill. He also spent years in Los Angeles County during wildfires, the Northridge earthquake and Los Angeles riots.

“It’s benefitted me knowing the needs at the state and local levels,” he said. “When I accepted the job with Gov. [Bobby] Jindal in Louisiana, one thing we discussed was the role of the private sector and how they helped during Katrina.”

Cooper and Jindal responded to Hurricane Gustav by creating a Business Emergency Operations Center (BEOC), giving the private sector an easier way to help during the crisis.

“We had people dedicated to major private-sector organizations like Wal-Mart and others to provide assistance during Gustav,” he said. “That evolved into what Louisiana has today, the BEOC, a stand-alone, integrated program that supports the state during disasters.”

The BEOC allows more than 30 private-sector representatives to collaborate with one another and on
Do I go through TV ads or an electronic billboard? Do I talk to a civic organization or through the bridge club? Do I go to the churches or do a Facebook or Twitter page? Do I do direct mail or lots of press releases? The answer is yes, I do all of that.

The other thing is recognizing that government doesn’t know how best to reach all of those individuals. The media does, other groups in the state do, so we provide that standard official message and then engage those partners to help reach all of those people. It’s not my job to try to reach 19 million Floridians. I need to hit those sources that can help me hit 19 million Floridians.

I don’t think that anyone is stubborn or difficult to reach. I think that we recognize that everybody does it differently. If you read the report from the National Weather Service on the Joplin [Mo.] tornadoes and you read anything out of the Natural Hazards Center in Boulder, Colo., you find that people like to have multiple sources of information before they act. They want to go to their trusted sources to validate their information. Again, we have to recognize that and know that no single thing is going to get the response we desire. We have to tie it into all of those different ways to reach the people who need to be reached.

Do I say every group, every person in Florida has a different way in which they receive information, and none of that is either good or bad — it is simply something that we need to understand as emergency managers. We have to utilize the proper channel to reach that person. There are very few people in Florida who have no means of external communication whatsoever.

Keeping its stores running is not only crucial for business, it also provides the community with valuable resources. “We’re the largest retailer in the world and those associates live in the communities that are impacted by the disasters, so we have an interest in bringing their lives back online during a disaster. When we’re trying to bring those stores back online and working with federal, state and local officials in identifying issues, we’re making those communities more resilient.”

Cooper said Wal-Mart has a vested interest in being able to respond quickly and efficiently during a disaster, and that positively impacts communities.
Redefining Volunteerism
Making every disaster local with technology, social media and volunteer communities.

By Valerie Lucas-McEwen | Contributing Writer

Many emergency managers today struggle with the challenge of incorporating social media into what they do both during an event and on a daily basis. Social media is unpredictable, and the information spread through these platforms is erratic, hard to control and difficult to verify.

Another challenge for emergency managers will be merging convergent volunteers, social networking and emerging technology. It generates something Art Botterell, a disaster management consultant at Carnegie Mellon University’s Silicon Valley campus, calls “open source disaster management,” which could be an effective tool because of its potential, but is frustrating for emergency managers because it is unconventional.

“It will be like open source [free] software,” Botterell said. “It’s a process that nobody owns, with nobody in charge, and nobody has a clue how to make a business out of it — yet it keeps happening anyway.”

That's why CrisisCommons was developed — it converges international resources during a disaster.

CrisisCommons is an international community of volunteers encompassing crisis response organizations, technology organizations, government agencies and citizens working together to use technology to help respond to disasters and improve preparedness.

Traditional volunteers are mobilized to perform a specific range of actions: manage logistics, provide medical care or establish shelters. This new form of volunteer, according to a World Bank report published in March 2011, is the humanitarian technologist. “These experts — who are most often technical professionals with deep expertise in geographic information systems, database management, social media and/or online campaigns — applied their skills to some of the hardest elements of the disaster risk management process,” the report stated.

Instead of working in a hierarchy, volunteer technical communities (VTC) use a decentralized “commons” structure that’s adapted from online communities like Wikipedia. They work in loose groups; they gather in a global, virtual community. Emergency managers will have to understand who they are, what they do and how to use them.

Volunteer Technical Communities

The VTCs use the word “community” very deliberately. They create an online community
of people who share common characteristics and interests. Where the worldwide adoption of Internet technology over the past 15 years has dissolved many real-world community bonds, virtual communities like Facebook, Foursquare, LinkedIn, VKontakte (Russia), and Mixi (Japan) have replaced them.

One of the most striking examples of how the strength and growth of online communities has affected emergency management is the difference in response to earthquakes.

During the Great Hanshin (or Kobe) earthquake that struck Japan in 1995, cellphones were uncommon and the use of Internet communications was new. The few people with Internet access were overwhelmed by those desperate to get information.

During the 2011 Tōhoku (or Great East Japan) earthquake and tsunami, social media allowed citizens to create their own knowledge base, in real time, and share it globally. Or consider the difference between the 1999 Kocaeli and the recent (2011) Van earthquakes in Turkey. Pelin Turgut, Time’s Turkey correspondent, recalled lugging around a satellite phone in 1999 to dictate stories because there was no other communication. After the latest earthquake, she wrote, “Technologies whirred into motion that would have been unimaginable back then.” Those included Google’s Person Finder, crisis mapping using geocoded tweets from the public, one-click text message donation services and Facebook aid requests.

CrisisCommons

The missing piece of the puzzle was a community that could support and coordinate the VTCs and provide a link between them and the emergency response and relief agencies that they wanted to help. CrisisCommons was proposed as the nexus for three groups: crisis response organizations, other VTCs and private-sector companies willing to donate resources.

CrisisCommons’ founders — Heather Blanchard, a specialist in policy development in crisis communication and management; Noel Dickover, a consultant in human performance technologies; and Andrew Turner, a neogeographer helping build a geospatial web — were working through the details that would define CrisisCommons when the Haiti earthquake happened in January 2010.

CrisisCommons organized a CrisisCamp in Washington, D.C., a few days after the earthquake during which IT professionals, software developers and computer programers came together to develop projects that would assist disaster relief. Eventually there were CrisisCamps in several cities across the United States.

Available Tools

CrisisCamps and other volunteer technical communities have designed several projects to help emergency managers better operate before an event. The Situational Awareness and Rapid Assessment Application, developed by Pascal Schuback, program coordinator for the King County, Wash., Office of Emergency Management, is a situational reporting app for crowd-sourcing information about emerging emergency situations.

The Mobile Assessment of Damage for the Public app streamlines reporting and assessing the amount of damage during a disaster. It helps develop the preliminary damage assessment estimates that help determine disaster declarations.

The Collaborative Risk Assessment Tool — an online app to collaboratively do a risk analysis — was proposed as a way to support hazard identification and scoring.

Social Media for the Emergency Manager (SMEM) was established to help bridge the social media gaps in emergency management practice. The strategy is to have monthly open conference calls and ad hoc workgroups called BarCamps. The first SMEM gathering was at the National Emergency Managers Association mid-year conference in March 2011, a report about which highlighted the gap between how these new technologies could be used and how they’re currently being used, with a heavy emphasis on training, education and buy-in at senior leadership levels.

CrisisCommons’ current focus is encouraging technical volunteers to get involved with their local agencies and vice versa. To that end, the CrisisCamper Tour 2011 made 22 stops in 16 cities, engaging local technical communities and emergency managers to help create those relationships. The CrisisCamper Tour 2012 is being planned for the East Coast.
Technology and Trends

CrisisCamps bring together technical volunteers to create and advance technology tools that aid disaster response.

United States and Canada, and the model spread to Argentina, Chile and New Zealand. Many of CrisisCommons’ active volunteers joined right after the Haiti earthquake. David Black, the emergency manager at the University of Toronto, found out about CrisisCommons from a tweet asking for help to host a CrisisCamp to help Haiti in the Toronto area. “All they needed was space and Wi-Fi,” he said. “I’m at a university, and I have lots of that. They brought everything else they needed.”

Black helped recruit students with both technical and nontechnical skills from the University of Toronto for what was called CrisisCamp Haiti. He watched computer students working with technology professionals to build a language translator for clinics. Haitian students who couldn’t go home helped develop the language syntax.

Black is still very involved with CrisisCommons as an active member of its Governance Committee, along with Pascal Schuback, a program coordinator for the King County, Wash., Office of Emergency Management.

Schuback was involved with CrisisCamp Haiti in Seattle, working with the London CrisisCamps. “The London team was taking on projects in the morning and we would take over in the afternoon,” he said. “We would just rotate through the technology with the capability of continuing their projects.”

The most significant collaboration from CrisisCamp Haiti was the OpenStreetMap for Haiti. CrisisCamps used satellite imagery from the United Nations to create a highly detailed map in 48 hours. Non-programmers traced roads, and Haitians living outside Haiti identified streets and other landmarks. The map was widely used by governments, rescue teams and nongovernmental organizations.

Ethan Zuckerman, a researcher at the Berkman Center for Internet and Society at Harvard University, provided this example in one of his blogs: “As the map improved in quality, the volunteers were eventually able to offer routing information for relief trucks based on road damage that was visible on the satellite imagery. A convoy would request a route for a 4-ton water truck, and volunteers would use the birds-eye view of the situation — from half a continent away — to suggest the safest route. Ultimately the government of Haiti requested access to the information, and CrisisCamps provided not only the data, but training in using it.”

Since Haiti, CrisisCommons has been monitoring worldwide crises and supporting CrisisCamps when they are established, as they were for the earthquakes in Chile, New Zealand, China and Japan; the Gulf of Mexico oil spill; the floods in Pakistan and others. CrisisCamps and coordination with other VTCs have become routine.

In December 2010, CrisisCommons was awarded a $1.2 million grant from the Alfred P. Sloan Foundation in collaboration with the Woodrow Wilson International Center for Scholars. The grant will support CrisisCommons as a full-time project for two years, to further the development of the “commons-based” approach to crisis management and global development. In addition to developing community and technical liaison support, the grant is to help CrisisCommons establish trust and formalize relationships between crisis response organizations and VTCs.

Facing the Future

The future of emergency managers will certainly incorporate emerging technology — and the volunteers who practice it — into planning. “What we need to do is change our mentality of what volunteers can do,” said King County’s Schuback. “How can we use this [new technology] in emergency management?”

The obvious answer is to embrace the local technical community early. One of the foundations of emergency management is developing relationships before an event and not during the response. But it’s important to recognize that those relationships are going to look different and who you might be working with probably won’t be in the same room or even the same country.

“I have worked with people from Nairobi, Japan, New Zealand, Poland, Canada — all over the place,” Schuback said. “Every disaster is local in our global environment.”

Valerie Lucus-McEwen is a certified emergency manager and certified business continuity professional. She also writes the Disaster Academia blog for Emergency Management at www.emergencymanagement.com/academia.valuc@aol.com
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NAME: Buddy


NOSE: Trained to ignore all scents but that of a live human being.

PAWS: Tough, but still get sore sometimes. Can climb ladders and virtually walk tightropes.

EYES: Very expressive. Can look very sad, or very happy. Trained to interpret non-verbal directions.

EARS: Listens to every word you say. Understands and obeys dozens of verbal commands. Wishes he could understand everything.

BARK: Expressive. Urgent. And the most beautiful sound in the world if you’re caught beneath the rubble.

BACK: Unbreakable.

TAIL: Wags incessantly, particularly when searching for survivors.

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Forecast Unknown

A gap in satellites could leave emergency managers without severe weather information that they've come to rely on.

By Elaine Pittman | Associate Editor

2016 is looming as the year during which a gap in weather satellites could leave the nation without some of the severe storm data that's vital to early warnings. After 2013's record-breaking severe weather -- with 12 disasters that cost more than $1 billion -- it seems counterintuitive that budget reductions may create a period of 12 to 18 months during which severe warnings days in advance of a storm likely won't be available, according to National Oceanic and Atmospheric Administration (NOAA) predictions.

Vital to weather forecasting, two polar-orbiting satellites collect data above the Earth's poles 14 times per day and feed data into a computer model. According to NOAA, the satellites' orbits “provide two complete views of weather around the world,” which allow meteorologists to “develop models to predict the weather out to five to 10 days.” In addition, polar-orbiting weather satellites provide about 90 percent of the data used in National Weather Service forecast models.

The two satellites provide continuity of information, with one providing data during the mid-morning orbit and the other in the early afternoon. The first is run by the European Organisation for the Exploitation of Meteorological Satellites, which partners with NOAA and benefits from the information collected in the afternoon orbit. The second satellite is owned by the United States -- and is where the information gap issue lies.

Because of a funding reduction, Ajay Mehta, deputy director for NOAA's Joint Polar Satellite System (JPSS), said that the launch of the new satellite, called JPSS-1, was delayed. JPSS-1 will replace a NASA satellite that was launched on Oct. 28, 2011. NASA's satellite -- called the National Polar-Orbiting Environmental Satellite System Preparatory Project, or NPP for short -- will provide operational data for four or five years.

That is an important thing for our continuity because [it's] the last of the old generation of satellites we had launched in 2009,” Mehta said. “That one is only going to last for another couple of years.”

While NASA's satellite is providing continuity of information, its life cycle is expected to end in 2016, and Mehta estimated that JPSS-1 won't be fully operational until 2017. The time between NPP and JPSS-1 is when the information gap is expected.

“For the polar orbit, we have had operational satellites since 1978, so this mission is critical to provide continuity of NOAA operational data sets,” said Mitch Goldberg, JPSS program scientist. “NOAA has products and services, such as weather forecasting, and they depend on this constant flow of data from satellites going to weather prediction models.”

Funding Issues Abound

Last year was rife with concerns over how much funding NOAA's satellite program would receive and what that would mean for the future of severe weather forecasting in the United States. NOAA Administrator Jane Lubchenco had many poignant sound bites in 2011, including that budget cuts to the satellite would be a “disaster in the making,” that in a few years, the agency may not be able to do the severe storm warnings that people have come to expect, and that it could cost three to five times more to rebuild the project than to keep funds flowing toward it.

President Barack Obama requested a little more than $1 billion for 2011 and beyond for the polar-orbiting satellite program. On Nov. 18, 2011, legislation was enacted that gave JPSS $924 million for 2012. “While we’re happy with the level of funding in this fiscal environment, it was still almost $150 [million] less than the president’s request — therefore it will not eliminate the possibility of a gap,” Mehta said via email.

Accuracy Is Key

When thinking about impacts that the information gap could have on emergency management, a question arises: What would be different?

To help assess how beneficial the information from polar-orbiting satellites is to weather forecasting, the National Weather Service ran forecasts for Snowmageddon, the blizzard that hit the East Coast in February 2010, without the satellites’ data.

“When they took the data out, they ended
up mis-forecasting it by almost 50 percent,” Mehta said. With the polar-orbiting data, a 20-inch snowfall was predicted, and without it the forecast was 10 inches of snow. In reality during the week of storms, 28.6 inches of snow fell in Washington, D.C. — the most since 1922, according to NOAA. “You can imagine the difference for decision-makers,” said Goldberg. “If someone tells you there is going to be a seven-inch snowstorm or two-foot snowstorm, you’re going to make different decisions based on those two scenarios.”

The last year also has seen an increase in severe weather. From the tornadoes in Alabama and Missouri to Hurricane Irene impacting the East Coast, tremendous amounts of devastation have occurred across the U.S., the forecasts for which have been “very good,” Goldberg said. Without data from the polar-orbiting satellites, however, he said there would be a major degradation of weather forecast performance.

Another issue is this information can’t be obtained from other sources. Although the United States partners with Europe’s satellite program, data from both orbits is needed, said Mehta. He added that NOAA is exploring all options and has looked into privately owned satellites — but that would not help prevent the predicted information gap.

“Our estimates show that for somebody to build a new instrument and launch it, it’s going to take much longer,” he said, “because we’ve already started building the instruments and spacecraft for JPSS-1.”

And the lack of additional information sources also applies to state and local emergency management agencies. Larry Gispert, past president of the International Association of Emergency Managers and former emergency management director of Hillsborough County, Fla., said everyone — the private and public sectors — relies on NOAA and the National Weather Service for severe weather information. He said some companies will process that data and put their own spin on it — “but they all get that data from the federal government.”

**Impacts on Emergency Management**

What it comes down to is that emergency managers need severe weather data — and it must be as accurate as possible and provide enough time for preparing and evacuating if needed. The island of Key West, Fla., is the year-round home to 1 million visitors annually. Craig Marston, Key West’s division chief of emergency management and training, said evacuation procedures begin 96 to 72 hours before a storm is predicted to make landfall and having good, up-to-date information is key. “We’re pretty far out there, so what really concerns us is that NOAA is able to maintain its air flights,” he said.

Marston works closely with the National Hurricane Center and the local Weather Forecast Office to know what the weather is doing and what to expect. In the event that severe weather data isn’t available for more than three days in advance, Key West’s ability to evacuate health-care patients and other populations could be jeopardized. “72 hours is the minimum amount of time needed to fly patients from the area. ‘We rely heavily on the Weather Service for its information,’” Marston said. Hillsborough County’s Gispert said the large numbers of people who live in coastal areas make storm information necessary to help with evacuations. “Emergency management people have a tough enough job without getting inaccurate data and some kind of advanced warning of potential threats,” he said.

Like most issues, it all comes down to money, and Gispert said public safety is one of government’s ultimate responsibilities. “If my congressman would ask me, and I often tell them, if it was a choice between funding one more bomb to Afghanistan or putting up a weather satellite, guess which one I am going to vote for.”

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with the first national test of the Emergency Alert System (EAS) declared a success, federal officials and EAS participants are hoping that local emergency managers and public safety officials will become more engaged in the EAS and other alerting initiatives. One State Emergency Communications Committee chair said there are emergency managers in her state who don’t even know about the EAS.

For the first time since the capability was established in the 1950s, TV sets and radios around the country simultaneously aired a message in November 2011 that was transmitted from the White House through a relay system to the American public.

The system did not work flawlessly. In some cases, the test ran too short. In others, it ran too long. In some cases, it was too loud. In other cases, it was not loud enough. In some instances, programming was interrupted but not by the EAS test. (Lady Gaga was heard on some satellite channels.) The alert tones were heard at the same time as the message in some places, and there were other cases in which the test wasn’t heard at all.

Despite the issues, the FCC said the “vast majority” of stations and cable outlets received and relayed the test. The FCC’s Public Safety and Homeland Security Bureau placed the number at “about 80 percent” and called the test “incredibly successful.” The bureau’s Greg Cooke was speaking to webinar participants three weeks after the national test. During the webinar, 20 speakers representing various interests, acknowledged glitches but glowed in their evaluation of the test.

Public and private cooperation was clear through extensive publicity about the test. Before the test, some officials were concerned that the public would over-react to hearing the test from the White House on virtually all radio and TV sets simultaneously. To mitigate concern, the test was shortened to 30 seconds from the original plan of three-and-a-half minutes. Pretest outreach efforts were aggressive. Many broadcasters ran public service announcements prior to the test. Plans for the test were covered locally and nationally by the news media. Most state emergency management agencies used their channels to make local public safety officials aware of the test so they could be prepared and alert the local public.

Adrienne Abbott, chair of the Nevada State Emergency Communications Committee (SECC), told the webinar participants that she knew of no public calls of concern about the test to 911 centers in Nevada. Suzanne Goucher, from Maine’s SECC, said she heard reports of more calls to public safety officials regarding the test prior to it being conducted than when it actually occurred. A FEMA official close to the test said he heard more complaints from the public about not hearing the test than from those concerned about it. He said FEMA also received calls from the public expressing appreciation for the test.

As officials and participants declared the first national EAS test a success, they began working on technical glitches. One of the most significant culprits was discovered to be audio looping caused by a conference bridge used to deliver and monitor the test. An incorrect time stamp on the origination equipment also caused problems. Fixes are being applied to both issues. What’s been called “extensive analysis” is being conducted of the post-test reports that EAS participants were required to submit. Officials hope the analysis will identify issues that weren’t immediately obvious.

Attention now turns to the future and other aspects of the nation’s efforts to upgrade alert and warning capability. For example, should there be more national EAS tests and when? Participants in the FEMA webinar were bullish about more tests, even though in many cases it’s their programming that’s being interrupted. Several webinar speakers pointed out that additional tests will be necessary once EAS participants upgrade their equipment to support use of the Common Alerting Protocol. Upgrades are mandatory for EAS participants by June 30.

Other discussion involves engaging more emergency managers and public safety officials in EAS discussions and other efforts to enhance the nation’s alerting system. Ann Arnold of the Texas Association of Broadcasters told Emergency Management magazine that broadcasters “have spent millions to establish, test and operate EAS.” She said that although the EAS doesn’t help broadcasters pay bills, EAS “is in our DNA. We take it very seriously.” Yet, Arnold said some public safety officials in Texas aren’t aware of the EAS.

Goucher said some local emergency managers are “afraid of EAS — afraid they’ll get the message wrong, afraid someone will criticize them” for their use of the alert
system. She said the EAS is a “marvelous tool” and emergency managers must overcome their fear of it.

Whit Adamson, president of the Tennessee Association of Broadcasters, said public safety cooperation with the EAS is improving in his state, but “we need to get more civil authorities involved, particularly since state EAS plans need to be rewritten.”

Goucher said EAS training for local officials is needed. FEMA is developing a training program for local authorities who will use the system being developed under its national alerting initiative, the Integrated Public Alert and Warning System (IPAWS), which includes the EAS. Goucher said the training program will help, but she’d like to see such training part of law. Legislation has been introduced in the U.S. House and is expected to be part of a bill introduced by Sen. Susan Collins of Maine, the senior Republican on the Committee on Homeland Security and Governmental Affairs.

In addition to mandating the training program, both the Collins bill in the Senate and the House bill (H.R. 2904) would give IPAWS the force of law rather than only executive order. The IPAWS program was created in 2006 by executive order of President George W. Bush.

Many of the initiatives in the House and Senate bills are already in some stage of development, authorized at the FEMA program level rather than by law. The most fundamental element requires establishment of a system that incorporates multiple technologies for alerts and warnings, including those applicable to people with disabilities.

Other provisions of the bills would:

• establish an IPAWS Advisory Committee of federal, state and local representatives as well as private industry (both bills);
• require periodic national tests of IPAWS (Senate bill);
• include IPAWS in the DHS’ National Exercise Program, including the annual National Level Exercises (Senate bill);
• establish protocols, standards, terminology and procedures (both bills); and
• ensure coordination with the DHS’ new National Terrorism Advisory System (Senate bill).

The draft of the Senate bill would also restrict presidential use of the system to just those things that relate to a natural disaster, terrorist act, other man-made disaster or other hazard to public safety. It would also let the public opt out of IPAWS alerts other than those issued by the president.

Both bills are expected to have bipartisan support. Similar legislation was introduced in 2007 and 2009 but died.

IPAWS officials hope that increased visibility of the program’s initiatives will help encourage local officials to become more engaged. Although the November EAS test focused on the ability of the president to send an alert to the nation, new capabilities are being developed for local officials:

• Local activation for the EAS can become easier once the system’s relay equipment is upgraded, which should be completed by mid-2012.
• The first local trials of the Commercial Mobile Alert System (CMAS) (also known as PLAN: Personal Localized Alerting Network) occurred in New York City in December. More trials are planned for 2012. CMAS will give local authorities the ability to send messages to mobile devices in targeted areas without requiring the public to sign up to receive the alerts.
• IPAWS training for local officials was launched in December through FEMA’s Emergency Management Institute. Training will be a first step for local officials to be given authority to activate alerts through IPAWS.
• More than 50 companies and organizations are part of an IPAWS program that allows them to adapt their technology to send alerts through IPAWS.

Whit Adamson, president of the Tennessee Association of Broadcasters, said the initial national EAS test was deemed a success, there is obviously more work to be done. This includes addressing technical issues, increasing awareness and engagement of emergency managers and pushing legislation to ensure that national efforts in public alerting remain at the forefront. Continued progress will not only ensure that the president can communicate with the American people in a crisis, but will also provide a solid foundation for more effective local alerting and warning.

Rick Wimberly is president of the consultancy Galain Solutions Inc. rick.wimberly@galainsolutions.com
Hidden Invaders
How fighting terrorism has indirectly affected the food supply.

By Hilton Collins | Staff Writer

After 9/11, the federal government waged war on terrorism, but that fight, according to some experts, has come at a cost to the nation’s food supply.

Citing a 2006 U.S. Government Accountability Office (GAO) report, the Associated Press reported that in 2003, the federal government reassigned more than 1,800 agricultural specialists to the U.S. Department of Homeland Security (DHS), leaving the borders unprotected against invasive plants, produce and insects that threaten the food supply. Scientists say the move has cost billions of dollars in crop damage and eradication efforts.

The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) workers were reassigned and became employees of the DHS’ Customs and Border Protection (CBP). They were accustomed to dealing with pests and plants, not terrorists and weapons.

Even though the CBP had been tasked with fighting both terrorist and agricultural invasions — and had the personnel to do both — the office devoted the bulk of these resources to the terrorism portion.

The result was that bugs in crates and fruits in passengers’ bags — ones that can wreak havoc — were introduced into the country.

Mark Hoddle, an entomologist at the University of California, Riverside, travels abroad studying invasive species, often on behalf of California government. “Everybody pays a price,” he said. “When we have an agricultural pest that comes in and establishes, it means growers have to apply more pesticides to control that pest. That increases environmental contamination; that means your food prices increase. If you want to buy oranges or apples, you end up paying a little bit more because management costs have increased.”

Troubling Invaders

More than 50,000 non-native plant and insect species have emerged in the United States, according to Oregon Public Broadcasting. Most have been harmless or beneficial, but some have been catastrophic, like these invaders:

- The mildly toxic yellow star thistle from Eurasia has crowded out millions of acres of grass that cows graze on in the Western United States, crippling ranchers.
- Quagga mussels from the Ukraine cover entire American landscapes with their shells, causing billions of dollars in damage to boats, docks and other property while clogging pipes and impeding flowing water inside.
- Spartina grass is indigenous to multiple foreign countries, but in the American west, birds have trouble finding their food — insects and crustaceans — that becomes hidden in spartina that shouldn’t be there.

“Our crops and forests are always at risk when we’re dealing with new pests that might come in,” said Jeff Grode, assistant director for emergency and domestic programs at APHIS. His office focuses on how to handle invasive species that slip through the cracks. “Pests that are new to an environment can do damage because there aren’t natural enemies for many of them here.”

According to the GAO, in a typical inspection, travelers are questioned about their origins and destinations, and inspectors review their written declarations and screen luggage with dogs. If the inspectors still have doubts, they question a passenger more fully and examine luggage by hand search or X-ray.

But the organization also found fault with the agricultural inspection methods...

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themselves and communication between inspection personnel. According to the report, the CBP didn’t adopt appropriate methods to gauge how well the agricultural quarantine inspection program performed, and not all inspectors received notifications about inspection alerts and policy changes.

Problems in the Fight

According to the GAO report, APHIS transferred 1,871 agricultural specialist positions, including 317 vacancies, and distributed them across 20 CBP field offices in 2003. The CBP created the “One Face at the Border” initiative that unified customs, integration and agricultural inspection duties under the same office. APHIS retained the responsibility to set the inspection policy that the CBP specialists must adhere to in the field. CBP officers and agricultural specialists were cross-trained to handle all tasks. Agricultural specialists were suddenly required to work with gun-toting CBP agents, and the culture shock was intense. “Anytime you have a change like that, there’s some disruption,” Grode said, though he didn’t reference specific problems or incidents in detail.

Senior officials involved with the transfer told the GAO that the reassignments were done hastily with guesswork. Soon after the transfer of duties, APHIS created a staffing model to recommend how many agricultural specialists should go where. But the CBP didn’t follow it when assigning the more than 600 agricultural specialists who were hired during the transfer. Consequently the CBP couldn’t tell if the country’s most vulnerable areas had the appropriate level of staffing.

Perfecting Strategy

Hoddle has joined a project to assess just how pervasive the invasive species problem has been in California. The members include researchers from academia and the California Department of Food and Agriculture.

“We have a team that’s looking exactly at this issue to see what the invasion rates of exotic organisms into California have been over the last 22 years,” he said. “This will include data before and after 9/11. We should be able to run statistical tests to determine whether the invasion rates into California are significantly different before and after that time.”

They want to come up with hard numbers to quantify the invasive species issue, and Hoddle said they expect to complete their work by spring 2012. In a testimony before the Senate Committee on Homeland Security and Governmental Affairs in October 2011, Bruce Murley, CBP’s director of the port of Honolulu, spoke of changes to the CBP’s inspection methods, suggesting that the research carries weight for years after it was completed.

“I will outline CBP’s advancements over the past eight years, and the challenges we face every day,” he said. These ‘corrective measures,’ as Murley phrased them, included:

• ensuring that urgent alerts are more effectively shared between the CBP and states;
• giving agricultural specialists access to the CBP’s automated targeting system to identify high-risk shipments before they enter the country;
• working with APHIS to create a quality assurance program that ensures ports carry out inspections within APHIS policies; and
• creating the Joint Task Force in 2007, which is overseen by the Agriculture Quarantine Inspection Partnership Council, to evaluate agriculture programs’ effectiveness and recommend improvements.

Murley said the CBP will ensure that the “introduction of plant pests and foreign animal diseases is treated with the same rigor as all other mission areas.”

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Everett Pierce, Director of Emergency Management, has 45 years of experience at the forefront of the Fire Service and Emergency Management fields. Of those years as a call firefighter and 5 years as a Fire Chief and Emergency Management Director for a Massachusetts island community, Chief Pierce also holds a CFO (Chief Fire Officer) designation held by fewer than 700 fire professionals worldwide. Chief Pierce, an Obituaries of these programs, what part do you see education playing in creating leaders for our nation’s defense at home and abroad? Emergency Management is a dynamic, expand-

David Glazebrook, Adjunct Professor at AMC, is the Emergency Manager for the Area of Operations for the Portsmouth Naval Shipyard in Kittery Maine and is currently responsible for four Level 1 Homeland Security installations, Emergency Planning, and All Hazards Response. Mr. Glazebrook served 13 years active duty U.S. Army including a combat tour in Iraq. He also holds certifications in Anti-Terrorism, Homeland Security, emergency management, and a variety awards for performance and bravery.

Peter Cusolito, Adjunct Professor for AMC, served 26 years active military duty including service as Operations Officer and Chief Instructor for special operations. Educated leaders make informed decisions. The Anna Maria curriculum is ideal for providing students with the depth of knowledge to facilitate academic and professional growth. The tactical and practical aspects can come only from faculty personally experienced in real world scenarios. Obviously, from Director Pierce on we have that at AMC. While you often teach online because of the flexibility and convenience it offers working students, how do you personally relate with each person in one of your online classes? AMC online classes are small and set up to be extremely interactive between the students themselves and with me, or whoever the instructor may be. By actively engaging in class activities and discussions, we try to get to know each student as well online as we would on campus. Networking is going to be a critical factor in their careers advance. We want our students to know they can count on their faculty beyond their degree program.

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ing area that changes daily. We are faced with new technologies that pose hazards and unusual weather conditions that we’ve never experienced. Now and different ways of dealing with disasters are evolv- ing constantly. Having professors that are working in the industry in responsible posi-

tions enables us to be nimble and adjust our program to meet current needs. I’d like to introduce you to two of them now.

**LESSONS FROM THE ACTION**

**INSIGHTS FOR THE FUTURE**

**Q:** For a professor. Has this changed your professional perspective in your field? A: The Army taught me the importance of being prepared, understanding your environment and how to handle a crisis. The combat tour in Iraq was particularly instructive. All of those lessons brought me to Emergency Management. After the Army, it was a natural fit and allows me to continue to serve in a manner that protects people, families and our society. Protecting and leading have always been my passion. I guess now you can add teaching and mentoring our next generation of leaders to that list. You named the soldiers you served with and their families when we asked for a list of your heroes. You told us the growing fields of emergency management and homeland security as providing excellent opportunities for our returning service men and women. I think pursuing further education and degrees would be an excellent strategy for our returning heroes and that careers in these particular fields would help them capitalize on their service back-
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**Q:** How do you believe the new Master of Science degree in Emergency Management and new MPA Homeland Security concentration and certificate will prepare the best possible leaders should a disaster strike? A: The ability to process critical thought and develop rational courses of action will facilitate a more coordinat-
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**Product Spotlight**

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**TRAINING EDUCATORS**

Produced in collaboration with the Alliance of School Cooperative Insurance Programs and the California Community Colleges Chancellor’s Office, Global Community College Inc. released two DVD sets that provide preparedness information for educational facilities. The multimedia kit for colleges and universities includes a video DVD that contains four modules that cover emergency management best practices, plan development, compliance guidelines for emergency response, plus exercise design and drills. A resource DVD contains case studies and valuable documentation that can be reproduced and used to support campus preparedness. The kit for K-12 schools also contains four video modules plus a companion resource DVD and is designed to help districts and schools develop emergency operations plans and train personnel to a level of compliance with the Standardized Emergency Management System and National Incident Management System. [www.gccc.us](http://www.gccc.us)
This text has been thoroughly revised to include new and altered security and safety practices that have resulted from real and thwarted terrorist attacks on American soil or to American interests. It also includes updated budgetary information on both homeland security programs, and on the homeland security grants that have supported safety and security actions at the state and local levels, as well as in the private sector. Lastly, it also explores changes in the way the public perceives and receives information about security risk, including the elimination of the Homeland Security Advisory System.

- New chapter that focuses specifically on the border and transportation security missions
- An increased focus on cyber security and infrastructure security, both of which are rapidly growing in importance in the homeland security field among officials at all levels
- A companion website that includes a full online Instructor's Guide and PowerPoint Lecture Slides.

Bullock, Haddow and Coppola have set the standard for homeland security textbooks, and they follow up their #1-selling third edition with this substantially improved version. Professional practitioners value the decades of experience that the authors bring to their analysis, and the new edition offers still more research-based data to balance the field-tested practical information included in each chapter. What's more, links to the most current online government information help to keep the text up-to-date in this rapidly developing field. As with its predecessors, the book clearly delineates the bedrock principles of preparing for, mitigating, managing, and recovering from emergencies and disasters. However, this new edition emphasizes their value with improved clarity and focus.

Introduction to Homeland Security, 4th Principles of All-Hazards Risk Management
by Jane Bullock, George Haddow and Damon P. Coppola
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Introduction to Emergency Management, 4th
By George Haddow, Jane Bullock and Damon P. Coppola
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Introduction to International Disaster Management, 2nd
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A Complicated Profession

About 25 years ago, emergency management was a simple profession. The doctrine was steadily being developed. It had been this way since 1984, the year I became exposed to the profession and participated in the development of the Federal Response Plan from a military perspective. Perhaps this steady development can be attributed to the pace of communications. Back then it was phone calls and written mail being sent between organizations and levels of government.

In 1991, when I began my civilian career in emergency management, it was possible for one person to be very knowledgeable about all aspects of the job. That's no longer true for many reasons. First, I'd say the advent of communications allows for the sharing of information and a technological revolution in the way that people communicate and organizations interact. The levels of government and society have come much closer together. Today, via the Internet, the world is literally at your fingertips. And so is the research that's been done on emergency management and its allied partners.

The second contributing factor to our emergency management lives becoming complicated was the establishment of the U.S. DHS. It not only made life complicated, it also made it confusing—and the confusion still exists today. With the creation of the DHS, FEMA was assimilated into its amalgamation of departments. The 9/11 attacks caused a wholesale shift to a terrorism-focused approach to disasters. This wasn’t corrected until the Hurricane Katrina debacle after which the pendulum swung back to an all-hazards approach.

In the meantime, we wandered through the homeland security wilderness. The establishment of homeland security grants caused the entire profession to chase grant dollars and detracted from our overall disaster preparedness mission. However, I can’t say that it’s been all bad. The grant funding required multidiscipline approaches and eventually the DHS realized that regional coalitions were a good thing to promote. The list of our partners with whom to coordinate grew exponentially. There are now closer ties to law enforcement, public health and tribal nations. Although this is better, it’s more complicated.

We have state and local agencies with names that reflect emergency management, homeland security or legacy civil defense monikers. This confusion in the profession extends to higher education and the plethora of degrees that you can obtain today. If you get a degree in homeland security, does that mean you’re a fully qualified emergency manager by training? In reality, a mishmash of degree programs mix and match emergency management and homeland security. I suppose in this era of not having a fully developed doctrine for emergency management and its relationship to homeland security, it’s OK to have a mixture of programs and approaches to educating our future workforce.

It’s no longer possible for one person to have all the knowledge and information available on the topics of emergency management and homeland security. The pace of change and new doctrine is amazing. Sometimes I wonder if we’re just reinventing the wheel with new acronyms and programs. It’s certainly been a full employment era for consultants back in Washington, D.C.

The saving grace is that now all the information we need is readily available and the only limiting factor is the number of hours in the day in which to work and productively apply the information.
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Opportunity Knocking

Prior to the American Red Cross/U.S. Geological Survey trip in July 2010, an earlier opportunity arose to travel to Chile as a representative of the American Red Cross with a different multidisciplinary team, which was created through the Los Angeles Operational Area’s Critical Incident Planning and Training Alliance. The purpose of this trip was to gather and analyze information on the planning, response and recovery efforts in place before and after the Feb. 27, 2010, earthquake.

One of the unique elements of the response to this earthquake was the ushering in of a new government as the country’s presidency was transitioning. The federal government was in a significant transition and as a result, the Chilean Red Cross officials found themselves educating a new government on their role and responsibility at a national and local level at the absolute worst time.

There has been significant progress over the last few decades with the creation of Voluntary Organizations Active in Disaster and the integration of national nongovernment organizations in state and national response planning. These efforts, identification of additional resources (both human and physical) added to the disaster planning landscape and ensured greater coordination during response.

Despite this progress, a large opportunity remains in the coordination of nontraditional disaster response organizations. These are the organizations whose mission statements don’t reference planning and response to disasters, but do include providing service to a particular constituent. If your community was one of those affected by the numerous disasters that struck across the United States last spring, you may have seen these organizations provide incredible services. Regardless of how robust the efforts may be in your local community, there’s significant room for improvement nationwide.

In Los Angeles, there is continual preparation for a catastrophic earthquake. The immediate response to such a scenario will overwhelm all traditional response organizations and, history tells us, there is a high probability that the nontraditional disaster response organizations will begin to provide services outside of their day-to-day mission.

The opportunity to convene has never been greater. The responsibility lies within each of our organizations to understand our roles and responsibilities, and to invest the resources to reach and help nontraditional disaster response organizations to understand the roles and responsibilities available to them. Planning and collaboration in this manner will serve as the framework for connecting with all of the entities that will need to be engaged to support FEMA’s Whole Community strategy.
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