FirstNet Nationwide Broadband Now a Reality for Emergency Response

*Improved incident information will benefit both responders and citizens*

By Lesia Dickson, Regional Lead; Aislynn Turner, State Plans Coordinator; and Kyle S. Richardson, Senior Public Liaison, First Responder Network Authority (FirstNet)

Lives of citizens and responders depend on first responders’ ability to communicate in disasters and emergencies. That is why FirstNet was created – to develop a wireless, mobile broadband network, modernizing public safety communications to keep first responders connected on a single, nationwide network when it counts the most.

The idea for FirstNet originated with and for the public safety community in light of the findings and recommendations of the 9/11 Commission, which called for interoperable communications for all U.S. first responders. Ever since the 9/11 Commission Report was released, the public safety community has been advocating to Congress for their own dedicated spectrum. In 2012, Congress passed the Middle Class Tax Relief and Job Creation Act, effectively creating FirstNet.

FirstNet will become a platform for emergency response voice and data exchange during incidents and major events. Emergency managers already depend upon voice and data communications to run systems, apps, stream video and more. But the unfortunate reality is that during times of the most critical need for communications, network congestion drastically limits or completely isolates emergency responders from exchanging the data that they need to make better decisions in order to save lives and property. FirstNet will change that.

Revolutionizing Emergency Communications

FirstNet has entered into a 25-year contract with AT&T that will revolutionize emergency communications:

- AT&T will provide priority and preemption services to all primary FirstNet users – including emergency managers and public safety communications units. This means that congestion will no longer take away a responder’s ability to reach resources that they need.
- AT&T will provide this priority and preemption capability on all of their LTE bands; thus, public safety can take advantage of the massive infrastructure already in place from this nationwide carrier network.
- States are currently reviewing individualized plans that FirstNet submitted to each state and U.S. territory containing details about network deployment for that specific state/continued on page 2
FirstNet Nationwide Broadband Network Now a Reality for Emergency Response

continued from page 1

territory. Governors of several states have already “opted-in” to the network, meaning that public safety agencies within those states can begin subscribing to FirstNet service right away. If a governor “opts-out,” they must build a Radio Access Network (RAN) within their state at their own expense that is interoperable with the FirstNet Core. This is so that the FirstNet network remains a single, interoperable network across the entire nation, even within states that choose to build their own RAN.

Interoperability at the Heart of the FirstNet Initiative

In fact, interoperability was at the heart of the FirstNet initiative – even before apps and smartphones were a reality. One of the most exciting aspects of the FirstNet network is the extensive application ecosystem – FirstNet will provide a public safety app store that houses apps from large software companies as well as apps that are written locally and regionally by developers, and in some cases by first responders themselves. These apps will help responders reach information that they need and act upon that information in the field more effectively.

Where will a dedicated, interoperable data network for public safety and emergency response take our industry? The sky is the limit! Apps, video, situational awareness – everything becomes enhanced with more coverage, more reliability, and more speed. Internet of Things (IoT) opens up access to information that can be achieved without a responder risking their safety. Drones in the air and under water will allow for better assessment of structural issues, for example. Sensors will give more accurate flood, weather and wind information to responders in the field. Additionally, nationwide scale will encourage manufacturers to invest in new devices and other technology enhancements. Best of all, these capabilities are becoming a reality more quickly than ever imagined because of FirstNet’s partnership with a world-class provider that is assuring priority on their already extensive network.

The FirstNet network provides a host of other capabilities related to devices, customer care, credentialing, a public safety home page, and more. Now that the FirstNet network is ready to be deployed as the most advanced emergency communications solution, we encourage you to reach out to the public safety leaders and government officials in your community to discuss joining FirstNet. First responders require and deserve this next-generation, mission-critical communications platform to connect to lifesaving resources and information, wherever they are and whenever they need it. ▲

Learn more at www.firstnet.gov, or attend the FirstNet Workshop at the upcoming IAEM 2017 Annual Conference & EMEX in Long Beach, California, on Monday, Nov. 13, 2:00-3:00 p.m.

Broadband service for apps, streaming video, location-based services, IoT sensors and much more will energize the mechanization already occurring in emergency management as well as daily emergency response.
From the IAEM-USA President

Thoughts from an Emergency Manager

By Lanita Lloyd, MS, CEM, IAEM-USA President

Let me begin my comments this month by stating that I normally write about the current status of IAEM-USA or a project that we have taken on. We have suffered several disasters in the United States over the past month, and I chose to use this opportunity to reflect.

Over the past few weeks, I have been working with others in my organization (The Salvation Army) to support hurricane survivors, so there has been minimal down time. I’ve been away so much that my husband, Mickey, even agreed to join me for the 16-hour round-trip drive to coastal Georgia and back home, just so we could take advantage of some time together. Most of my road time is spent taking care of business using a blue tooth, but even so, we both appreciated the company.

Recovery in Georgia

Our final destination was St. Marys, Georgia, which is known as the place where a tourist can grab a ferry to ride over to Cumberland Island — where the wealthy and the well-known frequently visit. Georgians refer to the island as “where the wild horses run free.” St. Marys is located within Camden County, also known for the Kings Bay Submarine Base.

Thanks to Hurricane Irma, several Georgia counties were affected, including Camden County’s residents who lost power and other utilities for more than a week, which resulted in the loss of food by almost all residents. To add to this dilemma, there was raw sewage backup that affected about a third of the county, destroying appliances (dishwashers, washing machines, dryers, refrigerators), beds, clothing, flooring, and more. Just so you are aware, we served thousands of meals during this time (about 60,000 in less than eight days throughout Georgia alone).

A Disaster Recovery Center (DRC) opened the previous week in Camden County, and Charlene Sears, Service Center director, scheduled a couple of hours on a specific day for those who registered at the DRC to pick up food boxes (to help replenish cupboards) and gift cards. The event was well organized and attended — with more than 60 volunteers. Approximately 1,200 food boxes and about 500 gift cards — along with water, ice, baby items, cleaning products, etc. — were given out to those in need. Kingsland First Baptist Church stored the items and was used as the pick-up site. Volunteers from the church and Southern Baptist Convention were in town to provide community assistance, as well as members of the military base and local public safety departments who volunteered their time. It was a huge success!

Another truck full of food boxes is scheduled to be delivered tomorrow, and the Camden County Football Team are volunteering their time to unload the truck when it arrives. What a fantastic example of a community — the “whole community” that is pitching in to help its own.

Heading West to Texas

I needed to visit the coast over the weekend, as I had committed to return to Texas — this time, traveling to Victoria for the coming week. I awoke early the morning of my flight, ready to pack.

News of Las Vegas Shootings

As I reached over to turn off my cell phone alarm, I read the alert regarding the shooting in Las Vegas and quickly turned on the TV. As most of you, I could envision the chaos that those arriving at the scene were dealing with — assessing the situation, minimizing more danger, beginning triage, setting up command, and calling for more assistance. And eventually, they would be activating the emergency operations center, reunifying loved ones, offering other assistance, and investigating the incident.

I closed my eyes to say a prayer for the first responders, for anyone in harm’s way, and for family, friends and workers who were affected — including many IAEM members. Several came to mind immediately. I thought of the emergency management director in Las Vegas, the neighboring City of Henderson’s emergency manager, and a good friend who is a lifetime CEM and the former Clark County emergency management director — all IAEM members and extremely good friends for whom I have the highest respect.

I listened to the news coverage of heroic stories of individuals who pulled up in their personal vehicles to shield others or to transport...
victims to hospitals and those who opened their rooms to injured strangers. The list goes on—the whole community—from the responder to the tourist—was offering assistance.

Recovery Efforts in Puerto Rico

Just the night before, I had been scanning through Facebook, looking at pictures (no, faces of survivors) of the National Disaster Medical System (NDMS) mission at Dobbins Air Reserve Base, where medical patients from the Virgin Islands and Puerto Rico were landing, off boarded, triaged, and then transported by ambulance to Georgia hospitals or other medical care facilities. I recognized pictures of those who I have worked with for years—those from federal and state emergency management, Veterans Affairs, public health, emergency medical services, the military, local medical professionals, and those from other volunteer organizations. I understand the high level of skills and knowledge of these professionals, and I feel a sense of pride that I even know them—this whole community.

I arrive at the airport to meet two Salvation Army volunteers, who are members of our Women’s Auxiliary—ready to leave their nice homes and families to donate time and efforts at Points of Distribution and help at our warehouse. We’re heading to work with our Incident Management Team that arrived in Victoria yesterday. I sit next to another passenger who shares that she has never been to Texas. She is a nurse, and she and her husband are spending their “vacation” (which they are personally funding) in Houston, where they will be sleeping on cots at a local church and volunteering to do “mud outs” of destroyed homes in the surrounding community—they, too, are part of the whole community.

Dedicated and Making a Difference

The United States is suffering from a season of unprecedented wildfires, three hurricanes, and now a shooting in one of our busiest and most visited cities. I just heard about the number of individuals (10,000+) who were deployed. The number continues to rise via the Emergency Management Assistance Compact (EMAC) for these disasters. This does not include many federal, state and local agencies or volunteers who were not activated through EMAC. I also remember the numbers of FEMA staff (10,000) who are currently estimated to be in Puerto Rico. So many have been and continue to work long hours. Emergency managers and others are dedicated and trying to make a difference.

No Words Can Express

There are no words that can express how honored I am to be a part of our work, to work with you and beside you, and to be an emergency manager. We understand the importance of collaboration, partnerships, and relationships. We are so blessed to live and work where our communities and residents desire to help one another and to be a part of our whole community. I look forward to hearing about the experiences of others during the IAEM 2017 Annual Conference in Long Beach, California, as we continue to navigate into the future with the whole community.

IAEM Certification Commission Review Meeting September 2017

The IAEM Certification Commission met Sept. 21-24, 2017, at IAEM Headquarters, for policy discussions and application reviews. The commission reflects the spectrum of EM expertise, including government EM programs (local, state, tribal, federal) and all environments of practice (private sector, military installations, not-for-profit/volunteer-based, campuses and healthcare organizations).
last month we discussed the topic of Exercises and Tests, with a focus on exercise design and development with an emphasis on exercise evaluation. This month our emphasis is on improvement planning and the Improvement Plan.

Exercise Improvement Planning Process

A key concept on why we exercise our plan, policies, procedures, and equipment is to make improvements in how we prepare for, respond to, recover from, and mitigate against all hazards. The means for accomplishing this is through the Improvement Planning Process. FEMA Independent Study Course IS-120b, An Introduction to Exercises, tells us that “the Improvement Planning Process is the means for converting recommendations from the After Action Report (AAR) into measurable steps that, when implemented, lead to improved response capabilities.”

As we learned last month, our exercise evaluations are “based on a comparison of the actual results of the participants’ decisions and actions as compared to the expected outcomes during the exercise. The gaps our evaluation team identifies then form the basis for the Improvement Plan.” FEMA Independent Study courses IS-120b, An Introduction to Exercises, and IS-130a, Exercise Evaluation and Improvement Planning, describe this as the last three steps in the “8-Step Process” we referred to last month:

- **Step 6:** Identify improvement(s) to be implemented;
- **Step 7:** Finalize AAR and Improvement Plan; and
- **Step 8:** Track implementation.

The Improvement Plan

The Improvement Plan (IP) provides “a task list and timeline of corrective actions.” It is a matrix (a rectangular arrangement of elements into rows and columns) containing:

- tasks;
- recommendations;
- improvement actions;
- responsible party/parties; and
- completion date.

The tasks in the matrix come from the Exercise Evaluation Guides. The recommendations and improvement actions are taken from the body of the After Action Report in coordination with the stakeholders. This is a standard project management tool that allows for easy tracking because it contains specific, measurable action items, and it identifies a responsible party for accountability, which helps ensure the recommendation is carried out in a timely manner.

When developing the IP, be sure it “establishes realistic priorities for the use of limited resources,” as no jurisdiction, agency, or organization has unlimited resources. It is also possible that every suggested improvement may not be achievable as conceived. IS-120b says planners should:

- Prioritize (action items) according to benefits rather than costs;
- Use local resources as much as possible;
- Have a solid method for monitoring improvements;
- Regularly review improvement progress; and
- Review potential alternatives if progress is not being made.

During implementation, keep in mind that we may identify additional needs and tasks. We also may identify roadblocks to achieving improvements, which may highlight issues not previously recognized.

The Improvement Plan also needs to include attainable benchmarks allowing us to measure progress towards implementation. IS-130a provides three examples of benchmarks we may use:

- the number of personnel trained in a task;
- the percentage of equipment that is up-to-date; and
- the finalization of an inter-agency agreement within a given amount of time.

Two Cautions

IS-130a provides us with two cautions regarding the Improvement Plan. The first one tells us some “recommendations will lead to clear corrective actions that can be defined at the After Action Conference. Other corrective actions cannot be identified without additional information. For these items, the IP matrix should specify at least the first step in the process.”

The second caution tells us the Improvement Plan needs to be a “Stakeholder-driven Process.” Specifically, IS-130a states, “The IP may be driven by the exercise

continued on page 6
CEM® Corner
continued from page 5

planners, but it will be carried out by the organizations that participated in the exercise. For that reason, participating organizations must fully support the IP, especially its sections on assigning responsibility and establishing timelines for completion.” Without stakeholder participation and agreement, their desire to actually implement the recommended improvements will be greatly diminished as they had no say in their development and assignment.

Examination References

As for the previous standards, NFPA 1600 does not describe how to conduct an emergency management exercise or an Improvement Process, so for the exam we need to refer back to various FEMA Independent Study Courses and the HSEEP Manual. Review independent study courses related to exercises, such as IS-120a, An Introduction to Exercises, and IS-130a, Exercise Evaluation and Improvement Planning, for the core questions. USA candidates also should review the Homeland Security Exercise Evaluation Program (HSEEP) documents.

Essay

The application process for both the CEM® and the AEM® does not require the candidate to address Exercises and Tests specifically as one of the required Knowledge, Skills, and Abilities (KSA) components for the emergency management essay. However, it does require discussion of Prevention, Preparedness, Response, Recovery, and Mitigation activities. In addition, candidates may choose Exercises and Tests as a key component of their Problem Statement and write about that (being sure to cover all of the KSAs).

Practice Questions

Here are two core-type questions for our analysis in this article.

1. Which of the following exercise tools (documents) contains measureable steps that, when implemented, lead to improved response capabilities?
   a. Exercise Evaluation Guides.
   c. Improvement Plan.

   This question is asking you to know what information and data the various exercise program documents contain, their purpose, and how the documents are used. While the Exercise Evaluation Guides do contain measureable action items, their achievement is not used for improved response. The Exercise Evaluation Plan is a document that helps exercise evaluators understand their roles and responsibilities. The Improvement Plan by definition does contain measureable steps, that when implemented, lead to improved response capabilities. The Situation Manual is the participant handbook for discussion-based exercises. Therefore, the correct response is c. (See IS 120.b, IS-130a, and the HSEEP Manual.)

   2. Who identifies each area for improvement listed in the Improvement Plan matrix?
   a. Evaluators.
   b. Exercise Participants.
   c. Observers.
   d. Stakeholders.

   This question is asking you to recall who develops the content for the Improvement Plan. Specifically, know who decides which areas for improvement are described therein. Following the exercise, Evaluators and Exercise Planners assist in preparing the draft After Action Report and Improvement Plan matrix, which lists the areas for improvement. Then, during the After Action Conference, exercise participants, officials, and other stakeholders determine the details of the Improvement Plan matrix. Therefore, the correct response is a. See IS 120.b, IS-139a, and the HSEEP Manual.

   When reading the questions and responses, be sure you understand exactly what the question is asking of you and read each response before selecting the correct one. It is too easy to get distracted and select a response that appears to be correct but is not the correct response for the question being asked.

Next CEM® Corner

Next month we continue our discussion on Exercises and Tests,
CEM® Corner
continued from page 6

with a focus on exercise development and an emphasis on how the evaluators determine which areas for improvement get listed in the Improvement Plan. We also will analyze some practice exam questions. As usual, please send any questions you have about the examination or the certification process to me at info@iaem.com, and I will address them in future articles. ▲

IAEM Think Tank: “Machine Intelligence and Artificial Intelligence in Emergency Management”

LIVE from the IAEM Annual Conference!

Tuesday, Nov. 14, 2017, 11:00-a.m.-12:30 p.m. EST

Participate remotely via GoToMeeting

Artificial Intelligence (AI), Machine Learning (ML) and Big Data (BD) are transforming nearly every aspect of society – how we work, how we play, and how we live. Learn how AI, ML and BD are making revolutionary changes in emergency management. Join us live at the IAEM 2017 Annual Conference for our next Think Tank moderated by Rich Serino, or register to participate online. Speakers will include: Ahmad Wani, CEO and co-founder of One Concern; Clive Cook, president of Geocosmo; and Greg Brunelle, director of global engagement in North America and senior emergency management advisor, One Concern. ▲

Access to recordings of IAEM Think Tank events are an IAEM member benefit. Visit the website and click on the links to view the Think Tank recordings.

2017 Think Tank Recordings

- Large Event Crisis Planning – A Private Sector Perspective (July 18)
- Unmanned Aerial Systems (UAS) – the How, the Why, and the Future (Apr. 20)
- FirstNet – What You Need to Know (Jan. 31)

All of our Think Tanks since we started this series in 2015 have been recorded and posted on the website for IAEM members. ▲

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Changes to the CEM® Requirements

Earlier this year, the IAEM USA-Board approved recommendations submitted by the Certification Executive Committee to help streamline the Certification process. Requirement changes affect lifetime applications, references, and professional contributions.

IAEM Headquarters is currently working to get the online certification applications updated to reflect these changes. For those who have already started an application, the system will think you still must meet the old requirements. To avoid having to start a new application, you may wish to edit your current application by indicating in the respective submission fields (if applicable) “not required as of Apr. 18, 2017” and then uploading a separate document indicating the same. This will allow the system to reflect you provided a submission form with documentation under the old requirements.

Details on New Certification Requirements

Below are details related to each of the new certification requirements.

■ Lifetime Certification. Any CEM® familiar with the candidate may nominate a candidate for lifetime certification. Previously, only a Certification Commissioner or IAEM Board member could complete a Lifetime CEM® nomination.

■ References. Require a minimum of one letter of reference (signed and on letterhead from a current supervisor) plus contact information for a total of three references, with the option to upload two additional reference letters if the candidate feels it would be helpful to their review. Previously, all candidates were required to upload three separate letters of reference.

■ Professional Contributions: All submissions must be related to comprehensive emergency management.

♦ (C) Service Role – Serve on a board of directors, a board, a committee, task force or special project for a professional or a jurisdictional organization contributing to or supporting comprehensive emergency management. For example, being on a multi-jurisdictional committee/task force where the individual is asked to serve because of his/her emergency management knowledge is acceptable. Serving on a board of directors or trustees of a volunteer fire department, rescue squad, auxiliary police department, etc. does not necessarily meet the intent of Service Role without substantial documentation. Documentation substantiating the service role(s), such as a letter of appointment, meeting minutes showing the candidate’s attendance and participation, etc., must be provided. The previous requirement that C) Service Role contributions could not be part of a candidate’s regular job duties is no longer enforced.

♦ (D) Leadership Role – any member of an EM-related board qualifies; and

♦ (F) Speaking – removal of the 20-minute requirement. Candidates still must document three separate speaking engagements on the topic of emergency management.

If you have any questions, please contact IAEM Headquarters at CEMInfo@iaem.com.

Important Reminders for IAEM-Oceania

■ The New Zealand certification exam was updated in August 2017. New Zealand candidates preparing to take the AEM®/CEM® Exam should access a copy of the updated AEM®/CEM® Study Guide from the IAEM website to review the revised list of suggested resources.

■ The Australia certification exam is currently being updated. Until further notice, all Australia candidates will take the International exam and therefore should only study references from the “recommended publications” list.

Reminder for Recertification Candidates

As announced previously, new recertification requirements were implemented in January 2015. If recertification candidates started an online recertification application prior to Jan. 5, 2015, please note that the application is tied to the old recertification requirements.

Candidates can confirm they are working on an updated application by logging into the online application portal and checking if there is a recertification year (i.e. 5-year recertification) listed under the recertification application in the first column of their candidate dashboard. If there is no year listed clarifying the recertification period, candidates will need to add and complete a new recertification application to take advantage of the current recertification requirement. Important: Recertification candidates should save any information from the old recertification application and delete the old recertification application prior to beginning the new application. IAEM Staff is happy to assist with any questions.
The IAEM program is packed full of more than 100 dynamic sessions, training courses and events!

Check out the online program to see the complete listing of speakers in the plenary, spotlight and breakout sessions. The online program can be viewed as a schedule by day, by track, interest area or by looking up a speaker.

Arrive Early and Take Part in Many Pre-Conference Offerings

- On Saturday, Nov. 11, IAEM is offering three outstanding tours:
  - Disney Global Studios EOC
  - Disneyland Resort EOC
  - Port of Long Beach
- Training courses will be offered on Friday-Sunday, Nov. 10-12. See the complete schedule online.
- Or you may wish to simply tour the sunny Southern California city of Long Beach and enjoy everything the city has to offer. Check out the website for more things to do in Long Beach!

Networking Opportunities

- Kick off the conference with a bang at the Welcome and Networking Party with spectacular views of Long Beach on Sunday, Nov. 12, 5:30-7:30 p.m. Come early and meet others in our Pre-Welcome Party Meet & Greet.
- Attend one of the many great networking events throughout the week and at our special events.
- Get involved by attending one of IAEM’s many special interest caucus or committee meetings, or meet others in your region at regional meetings.
- Top off the conference with a tribute to the outgoing IAEM-USA president and officers – and celebrate the newly elected officers and the new IAEM Certified Emergency Managers and Associate Emergency Managers – at the President’s Banquet on Wednesday, Nov. 15, 6:00-8:30 p.m.
- Visit the conference website for complete details.

IAEM Members Save Big on EMI and EMAP Training Courses

This year, for the first time, IAEM has significantly reduced member training rates for EMI and EMAP training courses.

Members save up to $513 off of last year’s rates for a three-day training session.

Make the most of your time away from work, and add these courses today by registering online.

Rates are as low as $25 per day for IAEM members attending the conference at the full, basic or student rates or $100 per day for IAEM members not attending the conference or attending at a reduced or complimentary rate. Non-members will pay the IAEM member rate from last year of $196 per day.

Pre/Post-Conference Training Courses Filling Up Fast

There is still time to add training courses to your conference agenda. Hurry before all seats are full in these limited capacity offerings. See a complete listing of training below.

Attendees at these training courses, with the exception of the AEM®/CEM® offerings will receive an attendance certificate, which can be applied towards the IAEM Certification program under the Training section.

Appropriate documentation of course content must be provided within the certification application.

continued on page 10
Training Courses Include:

Friday, Nov. 10, 8:00 a.m.-5:00 p.m.
- L0141: Instructional Presentation and Evaluation Skills* (Day 1 of 3)
- L0202: Debris Management Planning for State, Tribal, and Local Officials* (Day 1 of 3) (newly revised)
- L0362: Train the Trainer for G0364, Multi-Hazard Emergency Planning for Schools* (Day 1 of 3)

Saturday, Nov. 11, 8:00 a.m.-5:00 p.m.
- L0141: Instructional Presentation and Evaluation Skills* (Day 2 of 3)
- L0202: Debris Management Planning for State, Tribal, and Local Officials* (Day 2 of 3) (newly revised)
- L0362: Train the Trainer for G0364, Multi-Hazard Emergency Planning for Schools* (Day 2 of 3)
- (EMAP) Emergency Management Standard Training Course* (Day 1 of 2)
- (EMI) New Public Assistance (PA) Delivery Model for Recipients and Applicants* (Day 1 of 2)
- University and Colleges Emergency Managers Practitioners Symposium* (Day 1 of 2)

Saturday, Nov. 11, 8:30 a.m.-4:00 p.m
- 2017 Healthcare Caucus’ Emergency Managers Symposium* (1 day)

Sunday, Nov. 12, 8:00 a.m.-12:00 p.m.
- V0002: Virtual Table Top Exercise – Winter Storm* (4 hours)

Sunday, Nov. 12, 8:00 a.m.-5:00 p.m.
- L0141: Instructional Presentation and Evaluation Skills* (Day 3 of 3)
- L0202: Debris Management Planning for State, Tribal, and Local Officials* (Day 3 of 3) (newly revised)
- L0362: Train the Trainer for G0364, Multi-Hazard Emergency Planning for Schools* (Day 3 of 3)
- (EMAP) Emergency Management Standard Training Course* (Day 2 of 2)
- (EMI) New Public Assistance (PA) Delivery Model for Recipients and Applicants* (Day 2 of 2)
- University and Colleges Emergency Managers Practitioners Symposium* (Day 2 of 2)
- Naval Post Graduate School (NPS) Center for Homeland Defense and Security (CHDS) (1 day)

Sunday, Nov. 12, 9:00 a.m.-4:30 p.m.
- Nathaniel Forbes’ Persuade! How to Make a Memorable EM Presentation* (1 day)

Sunday, Nov. 12, 1:00-5:00 p.m.
- V0007: Virtual Table Top Exercise-Flood* (4 hours)

Sunday, Nov. 12, 1:30-3:30 p.m.
- Aligning Critical Infrastructure with Your Emergency Management Programs

AEM®/CEM® Certification Offerings

Sunday, Nov. 12, 8:00 a.m.-1:00 p.m.
- Associate Emergency Manager (AEM®)/Certified Emergency Manager (CEM®) Prep Course*

Sunday, Nov. 12, 11:00 a.m.-12:00 p.m.
- AEM®/CEM® Overview

Sunday, Nov. 12, 12:00-2:00 p.m.
- AEM®/CEM® Consultations

Sunday, Nov. 12, 2:00-4:00 p.m.
- AEM®/CEM® Examination*

Post-Conference Training

Thursday, Nov. 16, 2017, 8:00 a.m.-5:00 p.m.
- PER 344: Social Media Tools and Techniques (1 Day)
- AWR 347: Climate Adaptation Planning for Emergency Management (1 Day)

Thursday, Nov. 16, 2017, 8:30 a.m.-2:30 p.m.
- (EMAC) Mission Impossible to Mission Possible: Mission Ready Packages Serve as the Backbone of our Nation’s Emergency Response System During Disasters

continued on page 11
Request for Donations of Items for Silent and Live Auctions to Raise Money for IAEM Scholarships

By Dawn M. Shiley, IAEM Scholarship Program Director

The IAEM Scholarship Commission, friends, and supporters of the IAEM Scholarship Program request your participation in our upcoming auctions to be held in conjunction with the IAEM Annual Conference, Nov. 10-15, 2017. We are requesting donations of goods or services to be offered in our silent or live auctions.

We are hoping to acquire items of value and/or interest to bring visibility to our donors. Additionally, we seek items that will entice our attendees to eagerly engage in the bidding process. All proceeds are used to provide scholarships to students who will lead emergency management programs in the communities they serve.

Donations Are Tax Deductible

The IAEM Scholarship Program is a 501(c) (3) public charity, and your donation is tax deductible as a charitable contribution to the extent permitted by law. In addition to donations to the auction, IAEM welcomes cash donations to the fund.

Since 2002, the IAEM Scholarship Program has provided $99,000 in scholarships through a competitive process to 56 deserving full-time and part-time students working toward degrees in emergency management, disaster management or a closely related program of study.

Participate in our Auctions Even if You Are Not at the Conference

The IAEM Live Auction will take place on Tuesday, Nov. 14, beginning at 6:30 p.m. You must be present to participate.

This year, the IAEM Silent Auction will be conducted online via BiddingForGood. All members of IAEM and registered participants on the BiddingForGood portal will be able to bid on items in this year’s silent auction. IAEM members are encouraged to visit biddingforgood.com now and set up their account. We will be posting a preview of the auction in October and starting the silent auction in early November before the conference begins. Items will be added as received during the conference, so don’t forget to visit the auction frequently once the conference begins. Also, please tell your friends about IAEM and encourage them to participate in the auction. The more participation we have, the more funds we will have for scholarships for emergency management students. Please help us spread the word.

To donate items for the auction, contact IAEM Scholarship Program Director Dawn M. Shiley at Shiley@iaem.com for logistics.

Conference News

Bring your Spouse/Friend with You to the IAEM Annual Conference

IAEM has a program tailored for spouses or friends of attendees to occupy their time and meet new friends while you are attending training at the IAEM Annual Conference. During all the breakouts, your spouse or friend can meet others and join in fun activities and socialization, plus plan the day’s activities to explore the wonderful sites of the Long Beach area with others.

Special discount rates apply for spouses or friends traveling with conference attendees and who are not involved in emergency management. They will be able to join you during the receptions and events with this special rate. For complete details, visit our website.
IAEM in Action

IAEM-Japan

Representatives of IAEM met with the Governor of Tokyo, Japan, on Sept. 19, 2017. Left to right are: Clay Tyeryar, IAEM international outreach; Maki Fukami, president, IAEM-Japan; Yuiko Koike, governor of Tokyo; Ellis Stanley, IAEM-Global chair; Craig Fugate, past FEMA administrator; and Jan Bernini, IAEM PDTC instructor.

IAEM-Asia

IAEM-Asia Risk & Resilience Conference Singapore, Aug. 22-24, 2017

IAEM International Outreach Liaison Clay Tyeryar and IAEM-Asia President Victor Bai, CEM, at the AARC Conference in Singapore.

IAEM-Global Chair Ellis Stanley spoke at the Asia Risk & Resilience Conference, held on Aug. 24-24, 2017, at Sands Expo & Convention Centre, Singapore. IAEM was a sponsor of ARRC 2017. Prior to the conference, IAEM offered its Professional Development Training Course (PDTC), which drew a good turnout. Photos of the PDTC instructors and class appeared in the August Bulletin.

Participants at the Asia Risk & Resilience Conference, held on Aug. 24-25, 2017, at Sands Expo & Convention Centre, Singapore. IAEM was a sponsor of ARRC 2017.
IAEM-International

5th Annual National Security Middle East Conference, Abu Dhabi, United Arab Emirates

IAEM International Council President H.E. Khaled Al Mansoori delivered a keynote speech on Sept. 11 at the Fifth Annual National Security Middle East Conference, taking place Sept. 11-13, 2017, in Abu Dhabi, United Arab Emirates. The event focused on strategic surveillance to enhance intelligence operations in homeland security and counter-terrorism.

C4ISR Summit Middle East, Kuwait City, Kuwait

IAEM International Council President H.E. Khaled Al Mansoori represented IAEM at the C4ISR Summit Middle East, Kuwait City, Kuwait, Sept. 19, 2017. Left to right are: COL Takaaki Arima, Kuwait Defense Attaché; Captain Massimiliano Nannini, Combined Joint Operations from the Sea Centre of Excellence, Norfolk, VA; President Mansoori; and LT GEN (Ret.) Giorgio Battisti, NATO Defense College Foundation.

IAEM-Canada

IAEM-Canada Professional Development Committee Director Michelle Sullivan (far left), participated in a panel presentation on Business & Economic Disaster Recovery at the Economic Developers Association of Canada (EDAC) Conference, Sept. 10, 2017, in Niagara Falls, Ontario, Canada.

The New Certification Commissioner Training Orientation took place on Sept. 20, 2017, at IAEM Headquarters, Falls Church, Virginia, USA. L-R: Bill Halstead, CEM, Shannan Saunders, CEM, IAEM-Canada representative, IAEM Program Managers Kate McClimans, and Patricia McIntosh, CEM. See more Certification Commission photos on page 4 and on page 15 (bottom left).
IAEM-Oceania

A New EOC for Canterbury –
Six years in the Making

On Sept. 12, 2017, the Christchurch Justice & Emergency Services Precinct opened in Christchurch, New Zealand. This is the first major public building to be built by the government in Christchurch since the 2010 and 2011 earthquakes devastated much of the city. Approximately 2,000 people will work in or use the precinct daily. It co-locates the Ministry of Justice, NZ Police, Department of Corrections, Fire and Emergency New Zealand, St. John New Zealand (ambulance), Ministry of Civil Defence and Emergency Management, Canterbury Civil Defence and Emergency Management, and Christchurch City Council Civil Defence and Emergency Management.

At the precinct open day, approximately 14,000 people visited for more than five hours, with a range of displays and guides available to help educate the public on different aspects of staying safe and what the various agencies do. – Kristin Hoskin, CEM, IAEM-Oceania Vice President

L-R: Civil Defence and Emergency Management staff (Canterbury CDEM Group Controller Neville Reilly, MCDEM Emergency Management Advisor John Lovell, Canterbury CDEM Community Resilience Coordinator Jessica Petersen, and Christchurch City CDEM Planning Coordinator Anita Walker were available to answer any questions the public had about the EOC during the opening day of the Christchurch Justice & Emergency Services Precinct, Sept. 12, 2017.

Photos © 2017: Kristin Hoskin
See full-sized photos at www.iaem.com/Oceania-News
Doug Bryson, CEM, chair, IAEM-USA Government Affairs Committee, had a very productive meeting with John Kelly Long, regional director for Senator Tim Scott, on Sept. 20, 2017, in Columbia, South Carolina. Left to right are: Sam Hodge, Georgetown Co. EM Director; Kim Stenson, director, South Carolina EM Division; Long, and Bryson.

IAEM-USA Region 3 President John Conklin, CEM, visited IAEM HQ on Sept. 20, 2017, to coordinate several upcoming appearances in Region 3. He is shown with IAEM Outreach Coordinator Kyler Bartee (left).

IAEM-USA Director of Government Affairs Thad Huguley, with Dr. Daniel Kaniewski, FEMA Deputy Administrator for Preparedness (left), on Sept. 12, 2017, after he took the oath of office before the Senate Homeland Security and Governmental Affairs Committee.

Dr. Daniel Kaniewski (right), President Trump’s nominee to be FEMA’s Deputy Administrator for Preparedness, taking the oath at his nomination hearing before the Senate Homeland Security and Governmental Affairs Committee.

Certification Commission

Certification Commission Chair Keith Dowler acknowledges retiring commissioners at the Sept. 21-23 review meeting in Falls Church, Virginia. Pictured left to right are: Heather Kostecki, CEM; Keith Dowler, CEM; Ty Davisson, CEM; and Peter Hirai, CEM. More Certification Commission photos are shared on page 4 and on page 13 (bottom right).
Members of Congress returned to Washington, D.C., in September facing a long list of must-pass legislation, including Fiscal Year (FY) 2018 appropriations, the federal debt ceiling, a National Flood Insurance Program reauthorization, and disaster aid. Many expected a grueling month, with proposals and counter-proposals being offered and significant negotiations needed. However, in a surprise development during the very first week back in session, a deal was struck to address appropriations, the debt ceiling, disaster aid, and flood insurance on a temporary basis.

This short-term budget deal, which President Trump negotiated with Congressional Democrats and the Republican Congressional Leadership, provides for extending current federal appropriations, the debt ceiling, and federal flood insurance until Dec. 8, 2017. The package also provided $15.25 billion in disaster relief as a down payment in dealing with the costs of Hurricanes Harvey and Irma.

This short-term package is a classic case of kicking the can down the road. Now, instead of facing a Sept. 30 deadline on these issues, the President and Congress have bought themselves additional time to make a longer-term budget and appropriations deal with the new Dec. 8 deadline.

The short-term budget deal means that once FY 2017 ends on Sept. 30, 2017, federal agencies will be able to continue to operate until Dec. 8 under the Continuing Resolution (or CR) that was part of the deal. The CR continues federal funding at the FY 2017 appropriated levels, but requires agencies to use the minimum amount of funding needed to sustain programs and operations and prohibits agencies from starting new projects, programs or activities that were not funded by FY 2017 appropriations.

Possibility of Sequestration

Over the next several months, the House and Senate Appropriations Committees will be hard at work trying to wrap up FY 2018 appropriations before the Dec. 8 deadline. An additional wrinkle in this process is that, without a change in current budget law, both defense and non-defense spending will need to be cut by a total of $5 billion below FY 2017 levels – or mandatory spending cuts, also known as sequestration, will be implemented. Neither side wants sequestration, but until a FY 2018 budget deal is reached, it remains a possibility.

Federal Public Debt Ceiling

The federal public debt ceiling is another issue that has several possible outcomes. While the short-term budget deal suspended the debt ceiling until Dec. 8, this does not mean the ceiling will actually be reached on that date. It depends on the amount of federal receipts and outlays over the next several months, as well as any extraordinary measures the U.S. Treasury is allowed under current law to undertake to avoid reaching the debt limit. As a result, it could be several months after the Dec. 8 date before the debt limit is actually reached.

In the absence of the short-term budget deal, the National Flood Insurance Program (NFIP) was set to expire Sept. 30. That date is now Dec. 8. However, while the expiration date was changed, the $30.425 billion cap on borrowing authority the NFIP could utilize was not changed. The program has about $5 billion in borrowing authority remaining to pay claims, but with the recent hurricanes, that limit is expected to be reached soon. This means that further action on the NFIP will be needed before Dec. 8.

What Congress will do about the borrowing authority or other changes to the NFIP is anyone’s guess. There is no consensus in either the House or Senate on what to do with the program.

Finally, it also should be noted that the short-term budget deal additionally covered an expected shortfall in wildland fire funding that was set to occur because of the major fires in the western United States. As with the other parts of the package, this was also a temporary fix.

Introduction

While federal funds for emergency management and disaster relief programs will likely continue uninterrupted over the next several months, there is still a lot of work for the Trump Administration and Congress to do this fall to see that these important needs are addressed on more than a temporary basis.
Index to special focus issue feature articles: “Navigating a Journey with the Whole Community, Part 1”

Articles from Speakers at the Upcoming IAEM 2017 Annual Conference

FirstNet Nationwide Broadband Network Now a Reality for Emergency Response: Improved Incident Information Will Benefit both Responders and Citizens, by Lesia Dickson, Regional Lead; Aislynn Turner, State Plans Coordinator; and Kyle S. Richardson, Senior Public Safety Liaison, First Responder Network (FirstNet) ........ 1

Design an Insightful Cyber Attack Exercise, by Regina Phelps, CEM, President, EMS Solutions Inc., San Francisco, California ................................................. 18

In Natural Disasters, States Lend Each Other a Hand: Nationwide Mutual Assistance Compact Promises Aid from Neighbors, by Anne Stauffer, Director, Fiscal Federalism, and Colin Foard, Senior Associate, Fiscal Federalism, Pew Charitable Trusts, Washington, D.C... 20

Learning from Disasters: Four Case Studies of Major Disasters in Taiwan, by Dr. Ray H. Chang, AEM, Assistant Professor, Department of Political Science, Fire and Emergency Management Administration Program, Oklahoma State University ........................................... 22


Civil Unrest and Employees: When Community Concerns Become Workplace Challenges (Planning Ahead to Keep External Events from Affecting Internal Culture), by Terri Howard, Senior Director, FEI Behavioral Health ................................................................. 25


Greensburg, Kansas a Decade Later: A New Chapter Begins Without Green Economist Development, by David E. Leiva, Economic Development and Site Selection Consultant, Webster Global Site Selections, and Adjunct Professor of Economics, University of Maryland-University College ........................................... 30

Articles from Additional Authors on the Special Focus Issue Topic

Business Collaboration: A Whole Community Approach, by Mark S. Warnick, Ph.D., Tennessee Technical University Adjunct Faculty ................................................. 32

Red Cross Launches National Readiness Initiative, by Charley English, National Emergency Management Liaison, Disaster Cycle Services, American Red Cross National Headquarters, Fairfax, Virginia ......................... 35

All Hands on Deck: Charting a Clearer Course for Emergency Preparedness, by Dr. Christopher Hennen, Emergency Manager, United States Military Academy, West Point ......................................................... 37

Watch for more articles in the November 2017 IAEM Bulletin, based on our conference theme: “Navigating a Journey with the Whole Community, Part 2”

The IAEM Bulletin is a benefit of membership in IAEM, in its 34th year of providing news and resources for IAEM members. The Bulletin Archives are available online for members only at www.iaem.com/Bulletin.
Design an Insightful Cyber Attack Exercise

By Regina Phelps, CEM, President, EMS Solutions Inc., San Francisco, California

It seems like every day we hear about another cyber attack or breach, a “breach a day.” Confidential information exposure is worrisome, but these events are expensive on many levels: problem detection, data recovery, information loss, and disruption to the organization, among other things. This doesn’t even take into account the damage to reputation and loss of current and future business.

Organizations are spending millions of dollars to prevent these attacks, which is wise and prudent. However, it’s rare to hear talk about how to deal with the impact of such a breach. Among our clients, professional colleagues, and other consulting firms, we found that few are planning for the impact.

We have done many cyber-attack impact exercises and have found them to be the most effective and rich exercise narratives we have used in more than 30 years of practice. If you want to get your management ready for such an attack, then you need to do a cyber exercise.

What Makes It So Different?

I often hear continuity professionals say they “plan for the worst-case scenario.” Whenever I hear that, I immediately stop them. It is simply not true. Planners don’t plan for the worst-case scenario. They plan for what they think will happen, a “routine” emergency. What they plan for may be a really bad situation, but there is not enough time, money, or risk appetite to truly plan for the worst-case.

“Routine” Emergency

To be clear, routine emergency does not mean “easy.” A routine emergency still can be difficult and challenging. In this context, “routine” refers to the relative predictability of the situation permitting advanced preparation. This risk is in the organization’s risk profile, and they likely have been able to take advantage of lessons learned from prior experiences. All manner of crisis management plans are filled with strategies to manage routine emergencies, and there are processes, training, and exercises to address these risks.

“Crisis” Emergency

A crisis emergency is a much different animal. These events are distinguished by significant elements of novelty. This novelty makes it more difficult to diagnose and deal with the problem. This type of emergency can have the following characteristics:

■ The threats have never been encountered before; there are no plans to manage it.
■ It may be a familiar event occurring at unprecedented speed, so developing an appropriate response is severely challenging.
■ There may be a confluence of forces which, while not new individually, in combination pose unique challenges to the response.

The plans, processes, training, and exercises that may work in a routine emergency are frequently grossly inadequate in a crisis emergency, and may even be counterproductive. It’s time to start from scratch.

A crisis emergency also requires different capabilities. In other words, your plans won’t work. You first must identify the elements of the novelty, determine what makes this situation so different from others. In a cyber attack or breach, this novelty can be surprising. You might begin the process thinking it is one thing, and over time see that it turned out to be something quite different. For example, you may think you are dealing with a routine IT problem or outage and later learn that it is something more significant and sinister.

Once you have identified the real problem and understand that those routine plans won’t work, you have to improvise response measures suitable to cope with the unanticipated aspects of the incident. These responses may be quite different than anything you have ever done before. Handling a crisis emergency may feel like building an airplane while flying it at the same time. It’s not pretty, but it may be necessary.

Lastly, in a crisis emergency, you must respond in creative ways and, at the same time, be extremely adaptable executing these new and improvised solutions. You must be on “full alert” at all times, since you don’t know how the situation will change and you must be prepared to shift at a moment’s notice.

Six Design Aspects You Must Consider in this Exercise

To manage this very different type of exercise, you need to have six things in place to make it work:

1. Management Support. Senior management needs to understand that this exercise is likely to produce

continued on page 19

1 Managing Crisis: Responses to Large-Scale Emergencies, Arnold Howitt and Herman Leonard, CQ Press, page 5.
Design an Insightful Cyber Attack Exercise
continued from page 18

many learnings and issues that will need to be resolved. It will present topics that they have never thought about or completely understood. This easily could make people feel uncomfortable with many unanswered questions at the end of the experience. As you explore the topic, you probably will need to provide some cover to IT (Information Security) so that it doesn’t become a blame game or a “witch hunt.”

2. A Willing IT Department. IT/InfoSec needs to be an active planner in the exercise. You need several excellent IT staff members (who won’t be on the response team in the exercise) to be part of the design process. You need them to help you determine the cause of the attack. When you first begin, this will undoubtedly make them uncomfortable, because in the back of their mind, they are going to be fearful of being blamed. You need to reassure them that isn’t the goal of the exercise.

The first question you should ask IT/InfoSec is, “Could we be hacked?” The answer will inevitably be “yes.” The next question: “How could that happen?” The list is long, but might include such things as phishing, watering holes, ransomware, or infected flash drives. You just need to find a likely means, not a deep exploration of the intrusion. You need the IT team as your ally, and you may need to provide them some cover.

3. Two Design Teams. You need two design teams: An IT/InfoSec Design Team, and a standard Design Team. The IT/Info Sec team needs to do a deep dive on the narrative and develop the timeline of issues that happened before the exercise’s scenario date, and then provide a very detailed timeline of what happens during the exercise. Once they have developed the breach timeline, the other Design Team can begin to develop their injects.

The standard Design Team should include key lines of business, Human Resources, Communications, Facilities, Security, and any other key departments. Those team members should take the IT narrative and timeline, and develop their injects. Those injects will tell the story of the IT problems from their perspective. Remember: In an exercise, if you don’t tell the players what’s happening, they don’t know what’s going on and will invent things. The injects are the way to tell the story.

4. The Right Exercise Type. There are three styles of exercises that can be used with a cyber narrative: Advanced Tabletop, Functional, or Full Scale. What they have in common is a Simulation Team. This exercise requires a Simulation Team to make it work. The response team participating in the exercise needs to have someone to speak to as they work through the problems. If you don’t have a Simulation Team, you will not be able to work through the issues enough to deepen knowledge and awareness.

5. Interwoven Narrative and Injects. The story progresses through the injects, and the injects must “dance” with the IT narrative. The exercise players have to tease the information apart, work with the Simulators to figure out what’s going on, and then improvise a plan. When they develop that plan, the Simulators will have to adapt to the new plan and, in some cases, create injects “on the fly” to make it all work. The narrative and the injects constantly ebb and flow together to tell the entire story.

6. Make it Public. A key aspect of this narrative is the potential damage to the reputation of the company. To damage that reputation, we “out” the narrative. We usually do this early on in the exercise by having our “perpetrator” post the story on a social media platform. (NOTE: Of course, we don’t put a real post on social media; this is done via “exercise magic.”) We often have our AV team produce videos in a similar style as a hacker video, a la Anonymous.

To make it even more interesting, we then create a second video by one of the “local news stations,” saying they are sending reporters to the company under siege seeking official comments and interviews with executives. Mission accomplished, you are outed! The players must deal with the fallout.

Going Forward

The risk of experiencing a data breach is higher than ever, with many companies suffering at least one security incident in the last 12 months. Management can no longer ignore the drastic impact a data breach has on an organization’s reputation.

If the future is anything like the past, cyber incidents are not going away anytime soon. Life will continue to be complicated. Plan your next exercise to be a cyber exercise. Focus it on the impact of a breach and how your organization will deal with it. And based on the probability of a cyber event, you had better get going! ▲

3 Emergency Management Exercises, Regina Phelps, Chandi Media.
4 Anonymous YouTube channel.
5 Data Breach and Industry Forecast 2015, Experian.
In Natural Disasters, States Lend Each Other a Hand

Nationwide Mutual Assistance Compact Promises Aid from Neighbors

By Anne Stauffer, Director, Fiscal Federalism, and Colin Foard, Senior Associate, Fiscal Federalism, Pew Charitable Trusts, Washington, D.C.

A week after Hurricane Harvey made landfall in southeastern Texas, at least 21 states had sent emergency response teams and equipment to help. Such interstate aid is coordinated through the Emergency Management Assistance Compact (EMAC), a mutual aid agreement among states. These cooperative commitments represent another aspect of the “all hands on deck” approach that the federal government and states take to disaster preparation and response.

The compact began as a regional effort among southeastern states and was formalized in federal law in 1996. It now includes all 50 states, the District of Columbia, and the territories of Puerto Rico, the U.S. Virgin Islands, and Guam. In the 21 years since EMAC’s founding, states have helped each other 221 times under the agreement’s provisions, which include sending supplies, vehicles, and other equipment as well as disaster response and recovery experts.

Help Provided after Katrina, Rita, and Wilma

For example, when hurricanes Katrina, Rita, and Wilma dealt a historic blow to the Gulf region in 2005, 49 states, the District, Puerto Rico, and the U.S. Virgin Islands provided at least $800 million in personnel and equipment to help Alabama, Florida, Louisiana, Mississippi, and Texas recover from the widespread damage.

Help Provided after Hurricane Matthew

After Hurricane Matthew last fall, 20 states furnished a wide range of resources to help the affected areas. North and South Carolina provided assistance to each other as they dealt with the impacts of the storm. Florida received equipment and about 120 people from 10 states, at a net cost of almost $1.7 million, according to the National Emergency Management Association (NEMA), which administers the compact. South Carolina was particularly hard hit by devastating floods, and 135 specialists traveled from as far away as Washington and Alaska, at a cost of $3.4 million. (See Figure 1 at left.)

The personnel deployed between states during and after Matthew possessed a broad range of expertise, reflecting the array of assistance states need after a major disaster.

The table shows the states that provided assistance, the cost of assistance, and the number of out-of-state personnel.

<table>
<thead>
<tr>
<th>State</th>
<th>States providing assistance</th>
<th>Cost of assistance</th>
<th>Number of out-of-state personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>AL, CA, CO, IN, KY, LA, MS, NY, PA, TX</td>
<td>$17 million</td>
<td>120</td>
</tr>
<tr>
<td>Georgia</td>
<td>AL, MA, MD, TN, VA, VT</td>
<td>$56,000</td>
<td>8</td>
</tr>
<tr>
<td>North Carolina*</td>
<td>MS, SC, TN, VA</td>
<td>$400,000</td>
<td>37</td>
</tr>
<tr>
<td>South Carolina*</td>
<td>AK, AL, KY, LA, MD, NC, OH, PA, TN, WA</td>
<td>$3.4 million</td>
<td>135</td>
</tr>
</tbody>
</table>

*In addition to receiving assistance, North Carolina and South Carolina provided assistance to one another.

Note: “Cost of assistance” represents an estimate of the equipment, such as vehicles and medical shelters, as well as the personnel provided by states under the Emergency Management Assistance Compact. Although Virginia received a federal major disaster declaration, it did not receive EMAC assistance.

Source: National Emergency Management Association (NEMA)
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disaster. Some filled near-term roles, conducting search and rescue, incident management, and debris removal. Others were specialists in administering federal disaster aid, such as the Federal Emergency Management Agency’s (FEMA) Public Assistance and Individual Assistance programs. Still others, including registered nurses, medical shelter teams, and public health experts, provided immediate and longer-term medical care for residents and first responders.

**States Lend Each Other a Hand**

continued from page 20

Responsibility for Reimbursement to State Providing Aid

States that receive aid are responsible for reimbursing their neighbors that help. If a federal disaster is declared, the U.S. government covers some of the costs – generally 75%. Providing states must document expenses for the mission, and receiving states are responsible for paying their helping states back – regardless of whether a federal disaster has been declared, said Angela Copple, program director of EMAC. Although reimbursement may be as fast as a few weeks, it also can take months, because complex documentation is required of both payer and payee states.

**NEMA’s Role in Administering the Compact**

FEMA provides $2 million annually to NEMA to administer the compact, which includes supporting the coordination and training that states require to help their neighbors in need, as well as managing the online system that makes the compact’s interstate work possible. Additionally, after each incident, NEMA brings the participants together to discuss lessons learned and identify best practices, as part of an ongoing improvement process.

**EMAC: Just One Example of the Need for Coordinated Response by All Levels of Government**

The state-to-state assistance provided under EMAC is just one example of how responding to natural disasters requires an immediate and coordinated response by all levels of government. Other mutual aid agreements exist within regions, including some between U.S. states and bordering Canadian provinces, and among counties to ensure that communities receive the help they need, especially when the magnitude of the damage exceeds the affected jurisdiction’s capacity to deliver needed services to its citizens.

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Four disasters struck Taiwan in the past three years. Lessons were learned from all of these incidents.

- In one, propylene pipelines beneath the downtown area of Kaohsiung City broke around midnight on July 31, 2014, eventually killing 32 people and injuring more than 300.
- In a second one, an airplane crashed in a river outside of the downtown area in Taipei City in February 2015, causing 43 casualties.
- In a third one in the summer of 2015, a powdery substance at an outdoor party that had attracted thousands of teenagers ignited, burning more than 500 participants and overwhelming the capacity of local emergency response.
- An earthquake that occurred at the beginning of 2016 in the fourth one killed more than 100 people when a high-rise building collapsed, creating a nightmare for those who were awakened in the early morning.

Common Problems with Response System Revealed

Although these disasters are different in type and scale, the response of the Taiwanese government to these disasters reveals common problems with its response system. The over-emphasis on fire departments, for instance, generates a “firefighter-oriented” emergency management approach, and thus the disaster response system heavily relies on a hierarchical, command-and-control system to manage all personnel at the scene of the disaster. A command-and-control system lacks the flexibility to deal with unexpected problems, while it also puts unrealistic pressures and expectations on fire officers serving as Incident Commanders on the site. One fire officer who had been placed in charge of overseeing all response activities during the 2016 earthquake, for example, collapsed as a result of mental and physical exhaustion due to lack of adequate rest.

The firefighter-based system also leads to chaos during disaster response. The airplane crash in Taipei City, for example, had two Incident Command Posts (ICPs) on-site. Since the airplane had crashed at the border of two cities, fire departments from both cities had established their ICPs without coordination, thereby creating confusion for all responders on site. The chaos during disaster response also aggrivated the difficulties of working with people from a non-traditional disaster response community. Volunteers and firefighters in Taiwan earthquake response, for example, disagreed on the priorities of disaster response.

One insisted on saving those people who could be seen immediately, while another group insisted that every organization has to follow the overall objectives and plan of disaster response. Without establishing perimeters and trusts, fire fighters and volunteers could not work collectively on the ground.

More examples and difficulties of responding to these disasters will be discussed during my presentation at the IAEM 2017 Annual Conference.

Lessons Learned

Lessons learned from these disasters included:

- A firefighter-oriented response system would hamper and delay the response activities.
- Building up consensus and trust is important to successfully respond to disasters.
- It is imperative to realize and prepare for the high levels of uncertainty involved with disaster response.

Recommendations to Reshape Disaster Management

Based on the above lessons, these two recommendations have been made to reshape the Taiwanese disaster management system:

- Establish a Cabinet-level disaster management organization, and
- Build relationships and trusts between all response-relevant organizations, adding the concept of resilience into the response system.

IAEM Certification Links

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Making Small Businesses More Resilient: How to Easily Develop Emergency Preparedness and Disaster Plans

By Gail Moraton, CBCP, Business Resiliency Manager, Insurance Institute for Business & Home Safety, DisasterSafety.org

Disasters of any type can be costly for businesses and even result in permanent closure. Fortunately, small businesses can easily plan for potential disasters—both natural and man-made—which will help them avoid disruption and recover more quickly and easily. The Insurance Institute for Business & Home Safety (IBHS) has created two disaster planning programs specifically to help businesses accomplish this goal.

- **OFB-EZ®** is a business continuity toolkit for small- and medium-sized businesses. The goal is to help business owners and managers put together an effective plan that will allow them to continue operating even if their usual facility is damaged or inaccessible after a storm or other disruption.

- **EZ-PREP®** is a severe weather emergency preparedness and response planning toolkit which includes tasks that can be done in the off-season, when severe weather is first forecast, or immediately before, during, and after a storm.

**Who Should Use OFB-EZ?**

One in four businesses forced to close because of a disaster never reopens. Small businesses are particularly at risk because they may have all their operations concentrated in one location that could be damaged or destroyed. Although every business needs to prepare for potential disasters, OFB-EZ is designed so that those without professional risk managers or business continuity planners can easily understand what they need to do, and how to do it.

**Why Use OFB-EZ?**

The OFB-EZ tool helps small businesses take the steps they need to keep functioning in the event of a major disaster or a smaller disruption. The goal is to continue to perform their most critical operations, which will help reduce short- and long-term losses to their bottom line. Additionally, business owners will contribute to their community’s resilience by keeping their employees on the job and their goods and services available to customers.

**How to Use OFB-EZ**

OFB-EZ is organized into easy-to-follow sections to guide business owners through the planning process.

- **Know Your Risks.** OFB-EZ starts by helping businesses identify their most likely disruptions and their potential impact, and then focuses on planning for those threats with the highest risk.

- **Know Your Operations.** To focus on what matters most to their bottom line, small business owners also need to identify their key business functions and processes, and decide how long they can go without being able to perform each of them. OFB-EZ provides a tool to document critical details for each business function, such as how quickly it needs to be restored, which people perform the function, and who receives the output. They will also be asked to identify any information technology resources needed to perform the function and any manual workarounds.

- **Know Your Employees.** Almost every small business relies on its employees to succeed, making it critical to know how to locate employees after a disaster, make sure they are safe, and let them know the status of business operations and how they can get back to work. This can only happen if business owners have obtained and maintained current contact information for all employees. OFB-EZ provides a convenient place to record basic employee contact information, as well as options for communicating with employees if phone and power lines are down.

- **Know Your Key Customers, Contacts, Suppliers and Vendors.** A business’s key customers will want to know if the business is operating, or how soon it will be back in business, as well as how a disruption might affect them. Having up-to-date contact information for key customers, contacts, suppliers and vendors is just as important as knowing how to reach employees. OFB-EZ allows business owners to create and maintain contact lists and keep them where they are easily accessible.

- **Know Your Information Technology.** Information and information technology are the lifeblood of almost every business. They also are extremely vulnerable to many disruption scenarios, ranging from a localized power outage to a major natural catastrophe. OFB-EZ helps small businesses

continued on page 24
Making Small Businesses More Resilient

continued from page 23

inventory and document their information technology, including hardware, software, digital data and connectivity. It also reminds users of the importance of frequent backups, off-site storage, and restoration options.

- **Know Your Finances.** The time to prepare a business’s finances for a potential disruption is before a disaster occurs. To help business owners do this, OFB-EZ provides a checklist to assist in creating a post-disaster financial strategy, along with an inventory of key financial contacts. Although OFB-EZ is not an insurance program, it provides guidance on how to review insurance coverage regarding what is covered, what is not covered, and other available types of coverage.

- **Know When to Update and Test Your Plan.** Once a plan is documented and distributed, and employees are trained how to use it, business owners may think they are finished. However, organizations are constantly changing, and so are the environments around them. That’s why it’s important to update and test the plan regularly, using suggestions provided by OFB-EZ. It also is vital to recognize that disaster planning is not only a paper exercise; it needs to actively involve the people they will rely on in a real event. The “power outage” tabletop exercise in OFB-EZ is an effective way to test an organization’s disaster readiness and learn where they need to improve.

- **Know Where to Go for Help.** OFB-EZ is a compact disaster planning tool, but there are many additional resources available that provide further disaster safety recommendations and aid in recovery after an event. The online toolkit provides contact information for helpful organizations. It’s also a good idea to maintain a communications channel with community leaders; public safety organizations such as the police, fire and emergency medical services; local government agencies; utility companies; and others that may help with disaster planning or recovery.

**OFB-EZ Mobile App**

In addition to fillable forms (PDF and Word), OFB-EZ is also available as a free mobile app. IBHS member company EMC Insurance Companies partnered with IBHS to develop the app, OFB-EZ Mobile, which guides users through an easy process to create a recovery plan.

The OFB-EZ Mobile app is available free on Google Play, the App Store, and the Chrome Web store. The app allows businesses to complete and store their plan on smartphones, tablets and PCs; the entered plan information is only stored on the user’s device unless they decide to share it with others. And when they do share it, the data may be encrypted and locked with a password the user creates during the sharing process. Users who prefer a full keyboard can download the Chrome app to create their plan on a laptop or desktop computer.

**EZ-PREP**

EZ-PREP is a severe weather emergency preparedness and response planning toolkit that allows small businesses to plan ahead so they are prepared for a variety of operational disruptions. While the highest priority is always employee safety, it also is important to reduce property damage and economic loss, which using this guide will facilitate.

Unfortunately, many businesses are not prepared to respond to disasters. Small businesses can be particularly vulnerable during any kind of disaster, but especially during severe weather events because they often have all their operations concentrated in one location.

One of the most useful features of EZ-PREP is that actions are organized chronologically. If there is advance warning of an extreme weather event such as a hurricane or a severe storm, this tool walks users through the actions and tasks that should be performed five days before, 72 hours before, 24–48 hours before, during and immediately after the event, and during the recovery process.

**Developing Best Practices**

EZ-PREP is customizable, including the capability of adding action items or tasks specific to one’s business. In addition, the EZ-PREP planning guide instructs businesses to:

- **Consider non-weather-related threats and risks in addition to severe weather plans, including those that stem from the nature of the business.**

- **Inspect the vulnerable areas of their physical property, including building envelope.**

- **Identify and implement the steps needed to protect people and property.**

IBHS urges small businesses to implement both an OFB-EZ plan and EZ-PREP plan as having both an emergency preparedness and response plan as well as a business continuity plan in place saves time and permits them to focus their energy during emergency situations. In addition, by taking these actions, business owners will help make their communities more resilient, while also protecting their employees and their business’s bottom line.
Civil Unrest and Employees: When Community Concerns Become Workplace Challenges

Planning Ahead to Keep External Events from Affecting Internal Culture

By Terri Howard, Senior Director, FEI Behavioral Health

The global workforce today is more diverse and blended than ever before. Baby Boomers, Generation X, Generation Y, and now iGen all work and live together, and it’s an incredible challenge for managers to balance the various personalities, morals, and beliefs evenly and fairly.

With so many diverse viewpoints within each generation, not to mention between generations themselves, conversations in the workplace can sometimes become argumentative. We’ve all been advised to tread lightly when discussing politics and religion in public, but recently other issues have become sources of workplace disagreements.

In recent years, we have seen the rise of discussions on racial and gender inequality, income inequality, gender discrimination, opiate abuse, health care, and more. In particular, the internet has become a tool for both public discourse and mobilization. More than ever before, people across the world are able to voice their opinions on social issues, disagree or find common ground, and even organize for protests or large gatherings in response to the issues facing our modern world.

Emergency and human resources managers need to understand, then, that their employees don’t exist in a bubble. Internet-driven interconnectivity means that employees are not only aware of the issues in their community, but also the issues in the world at large. Managers must know how to handle crises in the workplace, yes, but sometimes crises outside the workplace can have equally dramatic effects on employees, and can be much harder to control.

At FEI, we’ve received an increasing number of calls at our employee assistance program (EAP) service center about problems in the workplace thanks to civil unrest and polarized public opinion, and we’ve developed strategies to help emergency managers handle the intrusion of outside events into the workplace.

Civil Unrest

In seeking to minimize its effects on employees, it’s important to first know what civil unrest is. Also known as civil disorder, civil unrest is a broad term used to describe unrest caused by a group of people. Within this description, though, it can take many forms.

Some civil unrest is concentrated in localized areas or neighborhoods and affects the residents of these specific communities, usually sparked by some major event in the community. This was seen in the Rodney King riots of the 1960s and more recently during the rioting in Ferguson, Missouri, and Milwaukee, Wisconsin.

Civil unrest also can occur when groups of people deliberately target a business district, a facility, a transportation system, or an organization to impose maximum disruption. This is the kind of civil disorder that occurred during the World Trade Organization and Occupy Wall Street protests, and can directly affect business in the targeted areas.

Civil unrest can even grow to regional or state levels, affecting large numbers of people no matter the original cause. Unrest on this scale was seen in the days following the 2016 election, as both protests and riots broke out across the United States. Additionally, this level of unrest was seen in reaction to the 2016 shooting of Philando Castile. Individuals located states away from Castile’s Minnesota town were affected by the nationwide civil unrest that resulted.

Conflict in the Workplace

Racial injustice, partisan politics and other hot-button issues can bring civil unrest into your workplace, and employees aren’t going to leave their thoughts and emotions at the door. The best workplaces are those that have a diversity of thoughts and ideas, but this same diversity can lead to heads butting in times of high stress or conflict.

Conflict can negatively affect workplace culture and turn an external crisis into an internal crisis, but emergency managers have to be careful of ineffective zero-tolerance policies that squash discussion altogether. The most effective offensive against civil unrest’s impact in the workplace is planning. Emergency managers should avoid falling into the trap of thinking “It won’t happen here.” Civil unrest is not a common crisis, but one for which managers and employers always need to be prepared. We recommend several key steps to

continued on page 26
Civil Unrest and Employees: When Community Concerns Become Workplace Challenges
continued from page 25
help your organization plan for any civil crisis.

Adhere to OSHA
Under the Occupational Health and Safety Act (OSHA), it’s the duty of employers to provide a safe and healthful workplace for their employees. Employers can do this by setting and enforcing standards, and by providing training, outreach, education and assistance before a crisis occurs.

Disruptive and assaultive individuals can cause disturbances that open employers to OSHA lawsuits. Emergency managers should make sure to preempt such events with planning that keeps their workplace within OSHA standards.

Set the Tone for Appropriate Behavior
Don’t assume your employees are equipped with perfect workplace etiquette. People are hired to fit the needs of the company, but this does not always mean they’re hired for their workplace behavior. In addition, what may work in one workplace could be completely inappropriate for another.

Simply stating that combative or inappropriate behavior is not tolerated is rarely enough. Actively setting the tone and educating employees on acceptable workplace behaviors is critical, and will ideally be accomplished before a civil crisis breaks out so you’re not dealing with an out-of-control workplace situation.

Create a Culture of Diversity and Inclusion
Often, managers see a call to foster diversity and think of racial, gender or sexual orientation requirements in hiring practices. What we encourage, however, is inclusion of diverse thoughts and opinions.

When making plans in the workplace, whether about handling a civil crisis or planning for the future, make sure to include employees at all levels of responsibility. Managers should avoid an “idea vacuum” where their ideas alone matter.

Create a workplace where differences of opinion can be discussed in a respectful way, and the effects of a controversial or tense external situation will be minimized internally.

Establish a Process for Conflict Resolution
Even the most ideologically diverse workplace will experience disagreements, and those disagreements can disrupt workflow. Establishing a conflict resolution plan or policy means emergency managers can prevent disagreements from escalating into conflicts that become detrimental to workplace culture and productivity.

Understand Community Dynamics
Organizations must be careful of denying civil unrest or its likelihood. As much as it seems that “it could never happen here,” being unprepared due to skepticism will give your company a negative public image and hinder it from effectively dealing with any crisis that does arise.

Having your finger on the community pulse won’t just make you a more open, receptive company. It also will prepare you for how civil unrest may develop.

Strategize Communication Efforts
Always know in advance how your organization will communicate in the face of unrest. Do you need to know about curfews or street closings? Respond to external requests for information? Talk to your employees?

Knowing how you’ll communicate with the media and on social media is all a part of preparing for a crisis, and should not be overlooked. In an increasingly diverse, vocal and interconnected world, being prepared for the effects of external crises on internal culture will help your organization remain resilient and effectively manage otherwise damaging situations.

Did you miss any of the IAEM Certification Series Webinars?
Access the webinar recordings online.
There is no doubt that people in communities impacted by natural disasters or technological accidents will, by default, be the first responders to that event. They will be the first people with the opportunity to protect lives and minimize harm. In the developing world, the critical need is to organize and prepare these community members in the context of national and regional plans if they exist. In the developed world, the critical need is to instill a sense of responsibility and encourage participation in local and regional preparedness plans.

Of course, we all understand the truth of these statements. Many of us have instituted efforts to address these needs. We all suffer from the difficulties of systematizing these efforts and demonstrating the sort of success that is necessary to justify our programs.

The UN Environmental Program (UNEP) has developed, in cooperation with many stakeholders, a Handbook on “Awareness and Preparedness for Emergencies at Local Level” (APELL). The 2nd Edition of the Handbook, issued at the end of 2015, is a presentation topic at the IAEM 2017 Annual Conference & EMEX. In the broadest view, the Handbook is designed to assist decision-makers and technical personnel in improving community awareness and in preparing community-based preparedness plans.

The Handbook is not intended to replace or interfere with preparedness planning consistent with national governmental or international standards, but rather to complement these standards and programs through improved awareness and coordination in the face of risks.

In the United States, the APELL Process is designed to be complementary to the Emergency Planning and Community Right-to-Know programs, FEMA Guidance such as Community Preparedness Guide 101, and consensus standards such as NFPA 1600. The APELL Process is a tool that can assist in achieving the goals of all these programs.

Significant Benefits of the APELL Process

The most significant benefits of the APELL Process are improved accident prevention and reduced vulnerability to accidents that might occur. The APELL Process aims to produce these benefits through improved community emergency preparedness. It relies on the sharing of information among the members of the community about the hazards in their neighborhoods, the risks those hazards present, and the actions community members should be prepared to execute. Using the APELL Process, all members of the community have a shared responsibility for accident prevention and preparedness.

One aspect that distinguishes APELL from other preparedness initiatives is the local focus. The process is intended to be owned, implemented and maintained by individual communities. The Handbook is a generic document intended as an aid to leaders within communities that wish to improve their level of preparedness. It is complementary to provisions of national law or international programs that already may be in place.

Guidance and Reference to Help Communities Assess Risks

The APELL Handbook provides guidance and references that will help a community assess the hazards and risks in their community and the existing capabilities to address those hazards and risks. The APELL Process can be initiated by any individual or organization within the community. While outside experts can be useful for some purposes, most of the methodology can be implemented with minimal outside assistance.

Specific guidance materials for the APELL Process have been prepared for the chemical, mining, tourism and transport sectors, along with port areas and storage facilities. By focused training programs targeted to these sectors and the general APELL Process, UNEP has made significant efforts to raise worldwide awareness of the effectiveness of the APELL Process for improving local awareness and preparedness for technological accidents and natural disasters.

APPELL has been introduced in more than 30 countries and in more than 80 communities. This has resulted in long-lasting, local-level partnerships based on multi-stakeholder emergency preparedness efforts. Examples of the application of the APELL Process continued on page 28
APELL as a Technique for Community Planning and Systematic Evaluation

exists in communities worldwide.

The 2nd edition of the APELL Handbook has been issued. The guidance it contains is based on experience that has been gathered in the past decades. The new edition of the Handbook recognizes that in most communities there is no difference between the people and organizations that engage in preparedness planning for technological versus natural disasters. As a result, the Handbook emphasizes that preparedness is a locally led process that must be flexible and adapt to local conditions considering all hazards.

Five Phases of Activity

The APELL Handbook provides the basic concepts for initiating and managing the APELL Process. These are organized into 10 conceptual elements within five phases of activity.

■ The first phase provides advice on involving the right participants and organizations.

■ The second phase is focused on understanding and improving awareness of the risks in the community.

■ The third phase examines plans and capabilities, and establishes a vision of success for the community’s efforts to improve preparedness.

■ The fourth phase involves education, training and other efforts to implement emergency plans.

■ The fifth phase discusses the cycle of continuous improvement.

The concepts and tools suggested are flexible, and the mechanics of their operation are intended to be adapted to specific local conditions and requirements.

The handbook is available for download at http://apell.eecentre.org

Because APELL is a local process, identifying and measuring successes must also be tied to the local context and must be measured locally. To create a successful evaluation process, the new APELL Handbook adopts concepts from work done by the UN Organization for Economic Cooperation and Development on Safety Performance Indicators for chemical manufacturing operations in the developing world. The key concept is establishing a “Vision of Success.”

Measuring Progress at the Community Level

The “Vision of Success” is an aspirational goal with progress measured against a strategic plan designed to fill gaps between current capabilities and desired capabilities. The APELL Process leads communities through the steps that establish the “Vision of Success” and the creation of the strategic plan. Measurement and demonstration of progress towards the “Vision of Success” is through stepwise completion of the elements of the strategic plan.

Progress on the strategic plan involves establishing indicators for each of the steps in the plan. As the strategic plan flows from the community’s situation and its “Vision of Success,” each indicator also must flow in the same way. For example, the number of people trained is less important than whether the training they received was targeted at a capabilities gap and whether the success of the training is verified through testing or exercises.

Setting goals and measuring progress allows communities to take a step-by-step approach to reducing the likelihood of accidents and improving preparedness and response capabilities. Depending upon local risks, capacities and conditions, there are several possible goals and metrics that can be applied to the activities of communities when following the APELL Process. One size does not fit all. The advantage of the APELL Process for communities is the ability to set goals and measure progress in a way that is specifically relevant to the community.

The Concept of a “Vision of Success”

Many expect a checklist of what they should be doing to improve preparedness to be provided to them by higher authority. However, it is better for APELL Process communities to have their own “Vision of Success” based upon the risks, capacities and conditions in the community they serve. The “Vision of Success” must be written clearly and come from a group discussion of the concerns and motivations that caused the participants of the communities to join.

It may be that none of the community’s members believe the vision is obtainable given current resources. That does not matter if the community members understand their mission is to make progress. The “Vision of Success” must be written clearly and come from a group discussion of the concerns and motivations that caused the participants of the communities to join.

Obviously, a “Vision of Success” cannot be achieved in one or two steps. It is, instead, achieved through a progression of activities designed to achieve milestones.
along the path to success. To define these steps, communities following the APELL Process establish both long-term and short-term goals that they believe will lead to achieving the “Vision of Success.”

These goals should be a product of clear discussion and agreement among the community’s members with community stakeholder participation.

**Conclusion**

Experience shows that people concerned with the hazards and risks they and their families face can be motivated to work towards improvements in community preparedness. This motivation rapidly fades if these people do feel that progress is being made on topics of concerns. Besides focusing the work of community members on preparedness, the APELL Process will help this people to feel satisfied with the work and that their efforts have led to better protection of the community from technological risks and natural hazard events.

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Every day at noon, 1:00 p.m., and 6:00 p.m., a loud siren blasts through Greensburg, a small southwestern Kansas town about 100 miles west of Wichita.

“It’s a tradition that’s been going on for so long, few can remember when it didn’t,” says Kyler Ludwig, 27, the city administrator who has been on the job for two years.

The siren is also the massive warning of pending tornadoes in the area, something that this town’s residents and business owners know too well. On May 4, 2007, an EF-5 tornado lasted 65 minutes, had a width of 1.7 miles, reached winds of 205 miles per hour, and traveled nearly 29 miles to annihilate 95% of Greensburg. Eleven people were killed.

Months later, Greensburg civic, business and elected leaders – with a host of generous external expertise and funding – unveiled a recovery plan that was expected to usher in a new era of prosperity with green economic development. Greensburg became the first model green city in the United States.

Media captured the daily struggles of Greensburg for years. Tourists, academicians, elected officials, and sustainability activists have come from all over the world to witness how this small town has used renewable practices. Today, the city boasts the most environmentally-friendly and architecturally-rich buildings per capita in America.

However, beneath the coating of eco-friendly public buildings and energy-efficient homes propped up by unprecedented financial, technical and federal support, has stirred a quiet brewing storm of smaller tax rolls, higher taxes, an underused and expensive-to-maintain business incubator, empty business park, and decreasing revenue streams. The population has not returned to pre-storm levels as predicted by the same group of leaders. The media no longer visits.

A Cautionary Tale

Instead, a decade later, America’s role model for the green technology movement looks more like a cautionary tale of outsider influence, misunderstood economic development principles, and a hint of buyers’ remorse.

“We have infrastructure built for 1,500 people, but our current population is around 900,” explains Ludwig, one of only three full-time employees at City Hall. Elected officials work part time.

Of note, urban planning experts say recovery after a cataclysmic event takes five years, while emergency management authorities say that it may take up to 20 years to regain the lost population.

From all indications, everything would have been fine had the population returned, because all the estimates of prosperity were based on that. But it didn’t. Sales taxes dropped, while property values increased beyond the reach of some former residents. Businesses didn’t swarm to this town located on U.S Route 54, a busy corridor that runs from Illinois to Texas. The era of anticipated prosperity, that included the marriage of sustainability and economic utopia, left Greensburg at the altar.

“Sustain What We Have”

After a tough 10 years, though, this two-square-mile town is beginning to see light as a decade of perpetual economic tornadoes begins to slowly dissipate. When the experts came from all over the United States in 2007, including members of the federal government, Mayor Bob Dixson remembers urban planners, architects, engineers, sustainability advocates and emergency managers present. He doesn’t recall there being economic development professionals at the table.

“Economic development was never in place before the tornado,” continued on page 31
Greensburg, Kansas
a Decade Later
continued from page 30

says Dixson, a tall, soft-spoken retired postmaster who was elected after the storm.

As the city’s chief cheerleader, he has crisscrossed the globe looking for companies who wanted to capitalize on the “green” in Greensburg, chasing everything from biotechnology to renewable energy companies to high-tech firms. But the vacant 60-acre business park remains a visible notice of the failure to land.

“Nothing has materialized,” he says.

The part-time mayor is no longer pitching green economic development, instead preferring to focus on preservation. “We have to sustain what we have,” Dixon said.

Signs of Hope

If there is a silver lining, it’s the mending of new leadership, fiscal restraints, and a new strategy. Dixson and Ludwig recognize that the elaborate plans of a decade ago are insufficient. Now is the time for action.

For his part, Ludwig has managed to stop the bleeding, and getting a handle on city finances was his priority. The city experienced a loss of about $150,000 a year for the past eight years. Since 2015, when Ludwig took over, finances have stabilized and normalcy is returning.

“Sometimes when you try to do two things at once, you become a futon. You’re not a couch, and you’re not a bed,” says Ludwig, a Utah native who earned a master’s in public policy from University of Kansas and had municipal experience in other Kansas cities. “There are some costs we don’t have to participate in.”

The incubator, which received a $450,000 grant from movie star and environmentalist Leonardo DiCaprio, lost an average of about $23,000 a year over the past six years prior to Ludwig’s tenure. Last year, that loss was $3,000. When repairs are needed for this LEED building, the city has to hire professionals from Wichita, an expensive proposition.

For several years, Greensburg was among the top cities in Kansas with seriously delinquent mortgages past due by 90 days, according to figures from the Federal Reserve Bank of Kansas City. But, the threat of defaulted mortgages in Kansas has dropped so dramatically that the Feds discontinued a quarterly report and says only 2.5 percent of the state’s residents have mortgages in severe arrears. That’s good news for Greensburg, and while Census figures show an official count of 771 residents, Ludwig says the unofficial number is around 900.

Still, without an economic developer on the small staff, the city has had to retool and rethink its economic development strategy. The vast strategic recovery plan created by others only devoted about 12 pages to economic development, and none of those ideas panned out.

Dixson and Ludwig are now thinking of altering the next chapter of Greensburg’s story, and that means looking at other areas, such as call centers, the rural technology experience, federal procurement, transportation and distribution centers, and finding a sweet spot in agriculture.

This is about the time that Dixson says he wishes the experts would return to help finish the job or to gauge the merits of green economic development in a small rural town. Dixson and Ludwig both agree that if the city could return to those first few months after the storm, Greensburg still made the right decision. Dixson says it was difficult to reimagine changing the course of the city founded in 1886 as a stage line, among the many small towns that sprung up in the plains, but that’s what happened.

A question, though, still lingers as the city’s leaders consider the horizon.

“We have to ask, where do we go from here?” Dixson says.

Editor’s Note: David Leiva is an economic development and site selection consultant, adjunct professor of economics, and member of the IEDC Higher Education Advisory Committee. He visited Greensburg in 2013 as part of his graduate school thesis and returned in July 2017 to update his research. He can be reached at davideleiva1@gmail.com.
**Business Collaboration: A Whole Community Approach**

By Mark S. Warnick, Ph.D., Tennessee Technical University Adjunct Faculty

A whole community approach is a relatively new concept in emergency management. This concept, if approached properly, can empower a local community to build substantially greater resilience. While teaching community preparedness and gathering input about community needs is important, it is also equally important to identify and secure Memorandums of Understanding (MOUs) with various parts of the community, especially the private sector.

Some emergency managers overlook fully incorporating the private sector into their Emergency Operations Plans (Mangeri, 2016). While nonprofits are often included, other key elements in a whole community are often overlooked.

**Businesses Are Stakeholders That Can Be Vital in Response and Recovery**

Businesses are stakeholders that can become a vital part of response in the initial stages of a disaster and in short- and long-term recovery. In small-scale disasters, the services that these stakeholders could provide may not be needed. In a catastrophic disaster (or in the event of a nationwide disaster), initial resources may be limited, thereby making these local businesses central to achieving the emergency manager’s mission. By utilizing businesses, the local emergency manager empowers members of the community to be part of the solution rather than being only spectators (FEMA, 2011).

There is no doubt that many businesses can offer a wide array of resources (Harris, n.d.). During a large-scale disaster, resources that might be provided from outside of the affected area might take days or even weeks to arrive. This situation holds true in large scale or catastrophic disasters, such as Hurricane Irma, Hurricane Harvey, Superstorm Sandy, large earthquakes, and similar disasters. The use of local businesses as a resource might be even more significant in rural and suburban communities. By engaging local stakeholders during the planning stage, local businesses can become a dynamic part of planning, mitigation, response and recovery, thereby creating a more cohesive and resilient community.

**Viability of Businesses as Response Partners**

Hurricane Harvey revealed the viability of businesses being used as response partners, and the media identified this repeatedly. Gallery Furniture opened two 100,000 square foot furniture stores as temporary shelters. Volunteers poured in from around the region to assist in cooking meals and tending to the needs of the evacuees that were being sheltered. Gallery Furniture also actively dispatched their delivery trucks to assist in transporting people from staging areas and flooded zones (Shapiro, 2017).

Many watched as the media presented stories of dump trucks, school buses, and business owners (who owned boats) being instrumental in saving lives during this monumental disaster (Hennessy-Fiske, 2017). While it is not known if the dump trucks and school buses were owned by a local government agency or a private sector business, they were a resource (nonetheless) that an emergency manager may be able to utilize from the private sector during a catastrophic disaster.

Major manufacturers teamed up with local businesses to assist in the rescue. Bass Pro Shops, based in Missouri, donated 80 boats and $40,000 of supplies, such as protein rich foods, to local affiliates in Texas so they could be distributed to local government agencies (Rocco, 2017). KL Outdoors, based in Michigan, who also manufacture boats and kayaks, provided 50 Jon Boats which were distributed by Academy Sports at no charge (McGuire, 2017). Farmers and ranchers were seen helping other ranchers and farmers save livestock (Richards, 2017; Malewitz, 2017). Clearly, local businesses and their owners can be an important part of managing disasters.

Local businesses that already supply much of the needs for their community during non-emergent times, could help to supply the communities’ needs during emergency situations by providing supplies and services that have not been damaged. Emergency managers can consider the goods and services that keep their population operating and quickly identify which resources and goods might be advantageous during a disaster.

**Learning the Concept of Using Local Resources**

Tennessee Technical University offers a Master’s of Professional Studies in Public Safety, and the concept of using local resources is taught to those in the program. As an assignment, students must identify how local businesses might continue on page 33
be utilized in a disaster. The students identify how these businesses might be useful and create a contact list that identifies what additional resources and services the business could offer. Often this assignment turns into an investigation game, where students look for the most obscure businesses and how they might be creatively involved.

Some student responses have included utilizing the local boat repair shop for flooding incidents and recruiting local excavating and heavy equipment companies for severe storms, flood, wildfires, hurricane, and earthquake clean-up. Other ideas included utilizing snow removal companies that can assist with winter storms also being used for moving light debris and mud after a severe weather event. Tree trimming companies were identified for removing trees from the roadways and removing dangerous elevated obstacles.

Some students suggested that local farmers and ranchers can be asked to clear debris, move animals, and assist with the maintenance and repair of equipment used during a response and recovery. Local repair shops, tire shops, and parts stores can be utilized to maintain equipment. Local towing companies can be involved with assisting response vehicles, moving large debris, and moving abandoned or disabled vehicles to the median during evacuations. Local cab companies, school bus companies, public transportation, and non-emergency medical transport companies could be used for evacuations, including evacuating those with disabilities.

Students pointed out that animal clinics, animal shelters, and boarding facilities could assist with caring for pets. Owners of large acreages could become important for relocating livestock. Pet stores, veterinary offices, farm stores, and animal shelters could be used for caring and feeding of animals and livestock. Wilderness outfitters and hunting stores could provide flashlights, tents, clothing, survival food, and more. Grocery stores, big box stores (e.g. Walmart, Target), large home improvement stores (e.g. Lowes, Menards, Home Depot), hardware stores, and similar businesses might be able to provide food, water, tools, building/boarding up supplies, and numerous other items. Bakeries, restaurants, food banks, and wedding supply rental companies may be able to provide food, utensils, drink dispensers, tables, chairs, tents and other related items. Homeless shelters, churches, meals on wheels, and local charities might be able to provide cooking facilities, temporary shelters, and feeding facilities. Portable toilet companies can provide restroom facilities, and local second-hand stores might be able to provide clothing, blankets, and other basic necessities during the initial stages of an event. Ministerial alliances and nonprofits might be useful in handing out supplies, arranging clothing, managing volunteers, and in counseling.

Students identified local psychologists, psychiatrists, behavioral health centers, ministers, and funeral homes that may be useful in counselling. Local doctors, nurses, nursing assistants and pharmacists can provide immediate health care, tetanus shots, emergency medicines, and more. Local advocacy groups and the online community could be used to get information to their constituents and in liaising between government and their constituents. Local trucking companies might be able to provide mobile morgue services by providing refrigerated trailers, storing supplies, or in the transportation of supplies. Local mini-storage facilities and warehouses could provide storage areas, staging areas, or warehousing of equipment and supplies. Local rental truck companies might be utilized to transport equipment and supplies locally and in distributing supplies from tractor trailers to Points of Distribution (POD). Companies with large parking lots also might be utilized to set up a POD that hands out food, water and other necessities, and the local media can be incorporated to direct victims to these supplies.

Banks, fast food restaurants, and other drive through businesses could be utilized to hand out prophylactic medicines. Local businesses with call centers could be used to blast out messages or to provide daily welfare checks on those with medical or access and functional needs. These are only a few ways that students identified how businesses and organizations might be incorporated into disaster response and relief.

The Value of Building Strategic Partnerships

As emergency managers, we need to make strategic partnerships. It is important that we quit playing a game of checkers by looking only one or two moves ahead. Instead, emergency managers should become chess players, looking at all strategies available on the board. Emergency managers should have a chess board mentality, thinking through a worst-case scenario while using all of the chess pieces (the whole community). The best chess players in the world begin to think about the moves they can make before the

continued on page 34
game starts, not after they are already knee deep in it. We can learn a lot from these chess players.

For more information on a whole community approach, FEMA provides guidance in *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*. It can be found [online](http://example.com).

**References**

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- Malewitz, J. (2017, August 30). *Harvey’s winds and rain disrupt Texas agriculture*. Texas Tribune, Austin, TX.
- Shapiro, A. [Host](2017, August 28). *The people Of Texas are resilient: Houston furniture store owner opens doors to residents* [Radio program]. Washington, DC. All Things Considered.

**About the IAEM Bulletin**

The *IAEM Bulletin*, the official newsletter of the International Association of Emergency Managers, is published monthly by IAEM to keep members abreast of association news, government actions affecting emergency management, and research and information sources.

The publication also is intended to serve as a way for emergency management colleagues to exchange information on programs and ideas. Issues from 1999 through the present are available in the members-only IAEM Bulletin Archives.

The *Bulletin* is distributed electronically via the members-only archives to emergency management officials each month, representing all levels of government, industrial, commercial, educational, military, private, nonprofit and volunteer organizations.

Publishing an article in the *IAEM Bulletin* may help you to meet IAEM’s certification requirements. If you haven’t written an article lately, or at all, for the *IAEM Bulletin*, check out the [author’s guidelines](http://example.com).

The members of the IAEM Editorial Work Group know that every one of us has a story to tell. [Learn more](http://example.com).

**Watch for more articles in the November 2017 IAEM Bulletin, based on our conference theme:**

“Navigating a Journey with the Whole Community, Part 2”

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Questions? Email [CEMinfo@iaem.com](mailto:CEMinfo@iaem.com)
The American Red Cross is undertaking a major, nationwide service delivery readiness strategy aptly named the National Readiness Initiative (NRI). The organization is making significant investments in local, state and national preparedness programs to ensure that it has the capacity and capability to reliably accomplish its mission, which is to “prevent and alleviate human suffering in the face of emergencies.” The Red Cross relies on the cooperation of government and non-governmental partners to accomplish this essential humanitarian responsibility.

**Getting Ready, Being Ready, and Staying Ready to Serve**

The slogan of the NRI is “getting ready, being ready and staying ready to reliably serve clients and communities.” At the highest level, the NRI can be described as the Red Cross’ organizational emphasis on increasing sheltering capabilities and capacity and ensuring planning assumptions are aligned with government partners. Even though this concise description sounds simple, executing the strategy is no small or simple task.

To accomplish this nationwide readiness initiative, the effort is divided into four major dimensions and will take nearly three years to fully complete all activities. However, immediate readiness results are expected as various tasks are already underway around the country. The Red Cross has named the four dimensions (or lanes) of the NRI: Supportive Community; Trained People; Accessible Infrastructure and Necessary Supplies.

**Supportive Community**

Externally, almost all of the interaction with the NRI will be in the “lane” entitled Supportive Community. The objective of this lane is to align sheltering and feeding capacity and capability expectations with local and state government in realistic planning discussions that include engaging community-based service-delivery partners. To support the development of planning assumptions, locally based Red Cross representatives will work with their local emergency managers to identify a high consequence, high probability event that is likely to impact that jurisdiction. This process will define a set of planning assumptions that will determine sheltering and feeding requirements and will quantify the resources needed to meet that community’s sheltering needs.

The Red Cross then will transparently inform the EMA of its capability in providing shelter services for the event discussed and jointly with the EMA seek to find solutions for meeting any gaps that remain. Following these structured planning and resource assessment conversations, local Red Cross offices will provide a written sheltering and feeding Statement of Intentions to emergency management.

The objective of this approach is to increase internal and external confidence in the Red Cross’ capability to provide sheltering services to each community across the nation. The expected outcome of the Supportive Community lane will be strengthened operational readiness through a process that aligns feeding and sheltering expectations and commitments with emergency management.

**Trained People**

It is important to know that the other three lanes of the NRI are in

continued on page 36
Red Cross Launches National Readiness Initiative

continued from page 35

direct support of sheltering capacity and accomplishing the mission of the Red Cross. These ongoing support projects will, in most instances, be invisible to those outside of the Red Cross. For example, in the Trained People lane, there are efforts to enhance the recruitment and training of volunteers to be ready to serve in times of disaster as well as provide steady state leadership training and development.

Accessible Infrastructure

The dimension of Accessible Infrastructure not only includes ensuring that Red Cross services are available to all, but also includes the provision and updates to tools and systems necessary for Red Cross workers to efficiently do their work. One exciting new development is the creation of “RC View,” a data visualization and information sharing platform that will be utilized to manage and track resources and to provide a common operating picture for disaster responders.

Necessary Supplies

Finally, the Necessary Supplies lane is undertaking critical projects regarding inventory management and vehicle standardization to make certain requisite supplies, equipment and resources are readily available to disaster workers when responding to a local community.

Conclusion

The Red Cross is indeed taking on a tremendous readiness commitment with the launch of the NRI. There is no doubt that the four dimensions (Supportive Community, Trained People, Accessible Infrastructure, and Necessary Supplies) will better prepare the organization to accomplish its mission. Just as importantly, however, is the insistence by Red Cross leadership for local disaster representatives to have candid, honest and transparent conversations with partners about sheltering capabilities in every community. Indeed with the commencement of the NRI the Red Cross is “getting ready, being ready and staying ready to reliably serve clients and communities.”

Photo: American Red Cross, 2017.
It is indisputable that present-day emergency preparedness public service information campaigns are not working. The great hope of the campaigns has been in their ability to disseminate attention-getting, value-added, behaviorally persuasive messages to large, diverse audiences at an affordable cost, with the goal of promoting preparedness through involvement.

That has not happened, at least to the extent envisioned by its architects. While awareness and preparedness are stipulated as decisive elements of community readiness and resilience, FEMA’s National Preparedness Report, the Citizen Corps National Preparedness Survey, and Columbia University’s National Center for Disaster Preparedness (NCDP) all acknowledge a disturbing and consistently declining pattern of risk awareness and preparedness engagement among Americans.

No Strong Correlation Between Awareness Literacy and Preparedness Activity

Furthermore, research has not demonstrated a strong correlation between awareness literacy and preparedness activity. The root cause of this may be that a growing number of Americans expect the government to solve their problems. It is becoming an article of faith that if calamity strikes, “someone” will deliver them from the consequences—a foolish, perhaps disastrous, position to take.

Emergency preparedness officials—this author among them—have expressed frustration over their public’s poor emergency preparedness knowledge, attitudes, and behaviors in the face of ever-present dangers. We must rethink how we promote and measure emergency preparedness. Moreover, we need more reliable information on what works and what doesn’t as a foundation for advancing the public good while increasing the value of public expenditures.

As with the other facets of emergency management (EM), emergency preparedness is a multifunctional, capacity-building process, optimally achieved when the whole community—policy makers, planners, practitioners, and publics—is engaged. In the aftermath of 9/11, risk awareness and preparedness attained a high level of significance in the national consciousness.

Positive Response When Calamity Is Imminent

We see this attentiveness repeated across the country when calamity is about to strike. This more positive and social response to crisis, and the preparedness behaviors it often arouses, is a cooperative act, borne out of a sense of individual and collective vulnerability that often breeds a sense of duty, solidarity, and even ingenuity.

Yet with the passage of time, memories fade, motivation to act declines, and the challenges as well as the frustrations of inspiring community effort resume. Some observers, aware of the difficulties in achieving whole community preparedness, have concluded that the problem of understanding and responding to these challenges is insurmountable. However, abandoning the effort is not a solution.

EM Has No Natural Constituency Until a Crisis Occurs

Part of the problem is that—except for those with EM responsibilities, which are modest in number and influence—EM has no natural constituency until a crisis occurs. People worry most about risks that seem to directly threaten their immediate well-being. Their tolerance for risk and, thus their motivation to prepare, appear related to their perception of benefit. All other things being equal, the more imminent the perceived risk, the greater the motivation to do something about it.

Home Depot is never busier than just before a major storm, and flu vaccine demand overwhelms public health officials only after a pandemic has been declared. Americans are optimists and procrastinators, and this confidence can make them and their communities vulnerable.

According to NCDP Director Irwin Redlener, the nation remains considerably unprepared, and conditions have not improved proportionally with national investments in this enterprise. In “A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action” (December 2011), FEMA concedes that “truly enhancing our nation’s resilience to all threats and hazards will require the emergency management community to transform the...
way the emergency management team thinks about, plans for, and responds to incidents in such a way as to support community resilience. We may find reversing the existing indifference toward preparedness and dependence upon the government unachievable until we conceive of a new approach that makes the current approach unappealing and unsustainable.

Electronic Media Revolution

Until now, emergency preparedness public service expenditures have been largely centered on information dissemination, but simply making advice available through a largely one-size-fits-all approach is insufficient for today’s information savvy public. While print media still plays a role for populations with limited online access, poor literacy skills, or disabilities that impair access to alternate media platforms, the electronic media revolution has renewed discussion over print media’s relevance.

Consumers are abandoning traditional public service information methods for faster, more interactive means. Social media platforms allow public service officials to leverage existing social networks, spreading their messages to a wider, presumably more receptive audience.

While creative costs to develop emergency preparedness tools and information for social media are similar to traditional media, the costs of amplifying transmission or modifying a program in response to audience reception are less formidable. The only barrier to responding to changing conditions in real time lies in the limits of organizational capacity and ingenuity.

Any appeal that feels impersonal and doesn’t offer perceived or actual value is likely to be disregarded by consumers. Community preparedness success lies, in part, in understanding consumer information preferences and then using that understanding to offer them an exchange they will value. The greater the gap between the bother (i.e., to consider the appeal) and the benefit (i.e., what’s in it for me?), the less potential that the call to action will be persuasive. Tangible benefits (i.e., free stuff) can create more attention and genuine, longer-lasting appeal.

Providing Incentives

Providing incentives is one method for eliciting desirable, self-driven behavioral change. The premise is that the motivating power of financial rewards for engaging in emergency preparedness (e.g., free or deeply discounted products and a sales tax break as part of preparedness campaigns; technology innovation contests) or mitigation measures (e.g., reduced insurance premiums or tax relief) can translate into better prepared individuals and communities. Unlike vaguely worded official preparedness proclamations or the super-abundance of print media products, these kinds of enticements send a message that government is serious about the importance of emergency preparedness, and there is clear value in taking action to be prepared.

However, sustaining desirable behaviors is not achieved solely through incentives. The effects of incentives depend on how they are designed, the form in which they are given, and what happens after they are discontinued. No matter how much government seeks to persuade or entice the public, it is bound to have difficulty affecting risk behaviors on appeals or incentives alone. Yet, when government fails in its duty to protect the safety and well-being of its citizens, society suffers. Consequently, more decisive measures are needed.

Mandates to Promote Readiness

There are a variety of possible policy levers that could be applied—at least in principle—to complement persuasive approaches to promote health and safety through population-wide action. Since most people are unimpressed by “soft” approaches to emergency preparedness, regulatory interventions (e.g., fines, taxes, regulations) represent critically important components of bureaucratic strategies.

Fire drills, fire and flood insurance, and enforcement of building codes are examples of mandates to promote readiness. Other measures—“Go Kits” as a condition for vehicle inspection; state-directed preparedness curriculum and first aid/CPR training for students; community response and continuity plans as a condition for state/federal grant funding; and emergency preparedness apps—are examples that hold potential for improving community preparedness.

Objections to such methods usually focus on their costs, effectiveness, or impact on one’s freedom of choice. For example, today’s public support for the compulsory wearing of seatbelts is far removed from initial public resistance to its imposition. It was once unthinkable to ban smoking from public places, while now it is almost unthinkable to allow it. Building consensus and compliance in the context of emergency preparedness, albeit

continued on page 39
with some initial resistance, is not only possible but also practical and principled. The best antidote to lack of support for government regulation is to show that it works, at a reasonable cost and with acceptable impositions on liberty and property.

**New Approaches Are Needed**

New approaches that resonate throughout the whole community are needed to heighten awareness and translate knowledge into purposeful and sustained activity. The ideal is to reach a point where there will be little need for public expenditure on emergency preparedness – either through persuasion or coercion – because people will prepare naturally. This may require considerable behavioral change, but the eventual aim is to reawaken a habit of personal responsibility and a self-reliant social norm. In practical and economic terms, finding and pursuing solutions to this problem are likely less costly than response and recovery.

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**The Time for Change Is Now**

Our future is anything but hopeless, and we are not helpless. There is no silver bullet, but it is clear that those responsible for information campaigns cannot rely on simply increasing the frequency or abundance of information to affect lasting behavioral changes. We have a vast reservoir of talented people who share a common desire to examine communities’ emergency preparedness risks and potential strengths.

Lest we continue to invest in what has not worked, the time for change is now. Emergency preparedness education must be a part – versus the entirety – of the solution. By operationalizing the right mix of persuasive and coercive approaches, FEMA’s whole community preparedness goal of “a more effective path to building societal security and resilience ... (in order) to achieve better outcomes in times of crisis” can be realized. ▲
**EM Calendar**

Visit [www.iaem.com/calendar](http://www.iaem.com/calendar) for details on these and other events.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 18-19</td>
<td>Mid-Atlantic Center for Emergency Management: Maturing Public-Private Partnerships Workshop, Lawrenceville, GA.</td>
</tr>
<tr>
<td>Oct. 21</td>
<td><strong>AEM®/CEM® Exam, Saint Leo University, Saint Leo, FL.</strong></td>
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<tr>
<td>Oct. 23-26</td>
<td>Saskatchewan Emergency Planners Association Conference, Saskatoon, SK, Canada.</td>
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<tr>
<td>Oct. 25-27</td>
<td>14th Annual Canadian Risks and Hazards Network Symposium, Halifax, NS, Canada.</td>
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<tr>
<td>Nov. 2</td>
<td>Mid-Atlantic Center for Emergency Management: Maturing Public-Private Partnerships Workshop, St. Paul, MN.</td>
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<td>Nov. 2</td>
<td><strong>AEM®/CEM® Prep Course &amp; Exam, Texas Division of Emergency Management – Preparedness Section, Austin, TX.</strong></td>
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<tr>
<td>Nov. 3</td>
<td><strong>AEM®/CEM® Exam, Millersville University, Millersville, PA.</strong></td>
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<tr>
<td>Nov. 6-8</td>
<td>7th Algeria Fire, Safety and Security Expo, Algiers, Algeria.</td>
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<tr>
<td>Nov. 10-15</td>
<td><strong>IAEM 65th Annual Conference &amp; EMEX Expo, “Navigating a Journey with the Whole Community, Long Beach, CA.</strong></td>
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<tr>
<td>Nov. 12</td>
<td><strong>AEM®/CEM® Prep Course &amp; Exam, IAEM 2017 Annual Conference &amp; EMEX, Long Beach, CA.</strong></td>
</tr>
<tr>
<td>Nov. 14</td>
<td>11:00 a.m.-12:30 p.m. LIVE at the IAEM Annual Conference! IAEM Think Tank: “Machine Intelligence and Artificial Intelligence in Emergency Management. See details on page 7.**</td>
</tr>
<tr>
<td>Nov. 13-17</td>
<td>Heritage Emergency &amp; Response Training, Washington, D.C.</td>
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<td>Nov. 14-17</td>
<td>Toronto Emergency Management Symposium, Toronto, ON, Canada.</td>
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<tr>
<td>Nov. 15-16</td>
<td>Mid-Atlantic Center for Emergency Management: Maturing Public-Private Partnerships Workshop, Honolulu, HI.</td>
</tr>
<tr>
<td>Nov. 28-29</td>
<td>Mid-Atlantic Center for Emergency Management: Maturing Public-Private Partnerships Workshop, U.S. Department of Agriculture, Kansas City, MO.</td>
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<tr>
<td>Dec. 7-8</td>
<td>Maximizing Organizational Resilience: COOP for Public Entities, Baltimore, MD.</td>
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<tr>
<td>Dec. 9</td>
<td>IAFC Regional Rail Response Training, Beecher, IL.</td>
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<td>Dec. 11</td>
<td>IAFC Regional Rail Response Training, Pittsburgh, PA.</td>
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</table>

**2018**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Jan. 10</td>
<td><strong>AEM®/CEM® Exam, Utah Emergency Management Association 2018 Conference, West Jordon, UT.</strong></td>
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<tr>
<td>Jan. 11</td>
<td>IAFC Regional Rail Response Training, Ellabell, GA.</td>
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<tr>
<td>Feb. 21-22</td>
<td>4th Annual Emergency Management Theory and Research Conference (open-access virtual platform).</td>
</tr>
<tr>
<td>June 4-7</td>
<td>20th Annual Emergency Management Higher Education Symposium, FEMA’s Emergency Management Institute, National Emergency Training Center, Emmitsburg, MD.</td>
</tr>
</tbody>
</table>

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New IAEM Members: Aug. 16-Sept. 15, 2017

<table>
<thead>
<tr>
<th>IAEM-Aasia Council</th>
<th>IAEM Latin America &amp; Caribbean Council</th>
<th>IAEM-USA Region 3</th>
<th>IAEM-USA Region 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henry Ee</td>
<td>February J. Seok</td>
<td>Ligia De Menezes</td>
<td>Saint Cloud, FL</td>
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<td>Singapore</td>
<td>Elmhurst, NY</td>
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<th>IAEM-Canada Council</th>
<th>IAEM-USA Council</th>
<th>IAEM-USA Region 1</th>
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<tr>
<td>Kristin N. Bruce</td>
<td>Jeremy Bernfeld</td>
<td>Jason M. Dotson</td>
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<tr>
<td>Saskatoon, SK</td>
<td>Washington, DC</td>
<td>Columbia, KY</td>
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<th>IAEM-Europa Council</th>
<th>IAEM-USA Region 2</th>
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<tr>
<td>Gal Horowitz</td>
<td>Angel L. Gillette, CEM</td>
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<td>Tel Aviv, Israel</td>
<td>Harrisburg, PA</td>
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<tr>
<td>Gudrun Lisbet Nielsen</td>
<td>Hallie Nix</td>
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<td>Reykjavik, Iceland</td>
<td>Washington, DC</td>
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<tr>
<th>IAEM International Council</th>
<th>IAEM-USA Region 5</th>
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<tr>
<td>Badis Bououn</td>
<td>Ronald J. Smith</td>
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<tr>
<td>Riyadh, Saudi Arabia</td>
<td>Millbrook, AL</td>
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<tr>
<td>Eng. Ayman M. Naguib</td>
<td>Monica Strzalkowski</td>
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<tr>
<td>Khalafalla</td>
<td>Frankfort, KY</td>
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<td>Muscat, Oman</td>
<td>Jaiseson Weber</td>
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<td>Olisa Ogwuadi, CPP</td>
<td>Fort Lauderdale, FL</td>
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<td>Lagos, Nigeria</td>
<td>Jonathan A. Wey</td>
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<td>Tampa, FL</td>
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<td>Jonathan S. Yavneh</td>
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<td>Plantation, FL</td>
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</tbody>
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Please welcome these new IAEM members!

continued on page 42
Please welcome these new IAEM members!
New IAEM Members

continued from page 42

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Anaheim, CA

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Harbor City, CA

Valerie L. Meyers
Phoenix, AZ

Griselda I. Moya-Flores
Tucson, AZ

Cappy D. Myers
Morgan Hill, CA

Andrea Prosser
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Mark G. Spoolstra
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IAEM-USA Region 10

Kathryn L.C. Baker
Bellingham, WA

Matthew J. Magorrian
Seattle, WA

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REGISTER TODAY!

Nov. 10-15, 2017

IAEM 65th Annual Conference & EMEX
“Navigating a Journey with the Whole Community”

Long Beach, California

www.iaemconference.info