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"First Responders Frontiers: Enabling First Responders Today and Tomorrow"
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GCN, Jan 9, 2009

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Cyclone Prompts Reform

Tropical Cyclone Larry hit Australia on March 20, 2006, causing widespread damage to buildings and industry. A major community information and education campaign was developed to address shortcomings in preparedness and response identified during Cyclone Larry.

Liaison Officers a Major Asset

Florida’s emergency preparedness liaison officers are a boon to the state and federal coordinating officers, and more directly, to the defense coordinating officer supporting the unified command in the Florida State Emergency Operations Center during a disaster event.

In the Field

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My education clearly sets me apart.

Specialized courses in emergency management and public law have helped me understand the complexities in Homeland Security/FEMA plans. As a result, my company more efficiently responds to those affected by devastation. The disaster management program certainly adds to my credibility.

Wayne Odachowski
Principal, Infinity Restoration
Student, Emergency and Disaster Management

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The new year is always a time of reflection and also of looking ahead. In taking a moment to think back on the growth of our publication, I am moved to thank many people who encouraged us to begin this endeavor and those who have contributed to our success. Though there are too many to mention here, I’d like to pay special tribute to a few and then introduce you to some people who will carry us forward with you into the future.

Among those who laid the foundation for *Emergency Management*, we owe a special debt to Leon Frazier, who at the time was head of Public Sector for Nextel. He educated us on the problems of all-hazards emergency management and convinced us that there was a need for a publication to bring together all the stakeholders across federal, state and local government and private-sector partners, as well as volunteer organizations. His vision gave us our unique mission, and his support made the launch of *Emergency Management* magazine possible.

We received more insights and encouragement from contributing writers, such as Russell Decker, Bob Jaffin, William Eggers and Eric Holdeman, who brought on-the-ground experience to our pages. Their perspectives gave real depth to our editorial coverage.

We developed many of our story ideas from participants in our editorial roundtables in Miami-Dade, Fla., and Los Angeles. Experts like Doug Bass, Bob Palestrant, Frank Reddish, Jim Featherstone, Tony Cardenas, Randi Levin and Thera Bradshaw shared valuable insights. These roundtables allowed us to bring together diverse regional stakeholders to discuss initiatives and issues that affect all of us. We look forward to holding many more editorial roundtables and we hope we will get to meet many more of you at these nationwide events in 2009.

We will move from a quarterly publication to a bimonthly publication, expand our audience and bring you a greatly enhanced Web site with more content and new ways for you to connect with your peers. We will reach out to many of you through surveys to understand the issues that most concern you and will ask some of you to contribute articles to share with your peers in our magazine and on our Web site.

To make all this possible, we are adding some key players to our team. Marty Pastula joins us as vice president of *Emergency Management* and Homeland Security. He will have the primary responsibility for developing our relationships with government and industry stakeholders and guiding our expansion efforts. Scott Fackert, the publisher of *Emergency Management*, will have the task of managing the talented team of editors, writers, designers, and sales and marketing professionals who produce the magazine.

We’ve come a long way in a short time, and we look forward to meeting and working with more of you. Our goal is to give honor to your service, tell your stories and share your ideas and insights. Thank you all for giving us this opportunity.
A fire drill is not a metaphor here. It’s a molten mess of brick, steel and flames with your name on it. In these extreme conditions, there’s no time for miscommunication.

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In the Field

Elevated houses in Port Bolivar and San Leon, Texas, survived Hurricane Ike’s 20-foot storm surge with minimal damage. Houses that were not elevated suffered far more damage and many were annihilated.

To read more turn to page 36.
California’s most populous American Indian tribe and one of its poorest and most rural — the Yurok Tribe — has used its area’s natural disasters as cause to educate its people, develop an emergency plan and forge coordination with local governments.

In the face of a 2005 Christmastime flood, the tribe — untouched by the wealth and political power that marks many of the state’s Native American tribes that have gaming operations — went to work with local governments and helped create a mutual aid partnership template that was distributed to tribes throughout California. The template pushes to strengthen tribal-local government relationships — a dynamic that has been fraught by the complexity of tribal sovereignty and the absence of state regulatory guidance.

“The Yurok Tribe has made huge strides in expanding capabilities in responding to natural hazards,” said Mark Ghilarducci, vice president and director of the Western States Regional Office of James Lee Witt Associates, an emergency management consulting firm.

Rising Waters
When the winter flood wreaked havoc on the Yurok reservation, drinking water was cut off, mudslides isolated people and high water levels damaged fish-monitoring equipment.

“We were caught off guard,” said Labecca Nessier, the tribe’s emergency services coordinator.

The tribe’s land is tucked into California’s isolated northwest corner, in old growth redwoods. The 58,000-acre reservation follows the Klamath River from the Pacific Ocean for 45 miles, and spans a mile wide on each side. The tribe’s population is concentrated in the upriver community of Weitchpec and at the river’s mouth in Klamath, Calif., Nessier said.

About 2,000 of the 5,000 Yuroks live on the reservation, and many don’t have telephone service or electricity. Highway 169, a two-lane road that services the reservation from the south, dead ends inside the reservation. “So it’s quite a challenge to provide emergency notifications … It’s basically door to door during a flood event,” Nessier said.

The Klamath is California’s second largest river, after the Sacramento River, and its swelling waters have shaped the Yurok Tribe in many ways. Two major floods ravaged the lower Klamath in 1955 and 1964. The middle Klamath flooded after rainstorms drenched Northern California in 1996 and 1997.

At the time of the 2005-2006 flood, the tribe didn’t have an organized emergency response and also faced other challenges. The already-isolated area was further cut off when debris blocked roadways, choking communication and stopping resource allocation.

The flood hit the reservation the week before Christmas — when people tend to be gone on vacation, said Peggy O’Neil, the tribe’s planning director. And the interim tribal police chief had been on the job only a week or two.

Out of the Wilderness

California’s Yurok Tribe seeks collaborative emergency response after a flood.

Jessica Hughes

PHOTO BY DEEMS BURTON
PHOTO COURTESY OF THE PHOEBE A. HEARST MUSEUM OF ANTHROPOLOGY AND THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
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Operation Coordination

Because there were no existing agreements, the tribe faced problems getting resources and recognition from local authorities, Ghilarducci said. For the most part, tribes aren’t included in the mainstream emergency management structure, he said. O’Neil said it was difficult knowing who to ask and how to ask for help. "The surrounding counties looked to the Yuroks' incident commander and incident command structure — there were neither."

"The Yurok Tribe is a fairly new government, and at the time we did not realize the need to prepare ourselves," Nessier said. "The lack of coordination and communication during that event woke us to the need to coordinate with the local governments." O’Neil said she now recognizes the significance of defining roles during a disaster and knowing the tribe’s strengths and weaknesses. "We are capable when it comes to knowing our communities, but limited in manpower and resources," she said.

In the years since the flood, the tribe has made a concerted effort to coordinate, train and exercise with all levels of government, Nessier said. The tribe created an emergency operations plan and trained more than 70 percent of its work force in the National Incident Management System. And the tribe now has shelters with generators and people designated to lead various aspects of disaster response and recovery.

The reservation traverses two counties: Del Norte and Humboldt. The counties, or operational areas, have separate policies, personnel and incident command structures, which makes it difficult for the tribe to establish connections. Tribal representatives began attending county emergency services meetings — an indication to the counties that the tribe was willing to do its part, Ghilarducci said.

Following the flood, the tribe created the emergency services coordinator position and appointed Nessier, a newly trained Community Emergency Response Team member, to the post. Because of her efforts, the tribe received a CaliforniaVolunteers grant in June 2007 and hired James Lee Witt Associates to improve the tribe’s coordination with the two operational areas. A tabletop exercise was conducted in December 2007 that included the Yurok Tribe plus four other tribes, the two counties, Red Cross, the California Department of Forestry and Fire Protection, the Governor’s office of Emergency Services and Homeland Security and several other agencies.

"As an unattached third party, we were able to stimulate discussion, ask the hard questions and get them to support each other," Ghilarducci said. James Lee Witt Associates brought the tribe and counties together to voice their needs and decide how to meet them. The openness also resulted in better coordination between the counties, he said.

In some ways, Ghilarducci said, tribal governments have the best of both worlds. In times of distress, they can ask for federal assistance — from FEMA or the Bureau of Indian Affairs — or lobby local governments for help. They also retain national sovereignty. Yet the external support that tribes receive from cities and counties can depend on the tribe’s resources — leaving many poor tribes unable to forge mutual aid agreements with neighbors.

"Tribes that don’t have that gaming capability are still at the mercy of grants and the federal government to be able to provide some assistance," he said. This presents a roadblock for a standardized, statewide approach, which Ghilarducci said is needed.

As it stands, the state’s emergency management framework — the Standardized Emergency Management System — lacks provisions for tribal governments.

"There are a lot of gaps in how tribal nations fit into the system," Nessier said. "There needs to be a Cabinet-level liaison at both the federal and state levels to work with tribes to resolve varied issues." Ghilarducci agrees that leadership is necessary. He said the Governor’s Office of Homeland Security has continued to work on the issue with the state’s tribes.

In 2008, there was some discussion at the state Capitol about amending the California Emergency Services Act, but budget considerations stalled progress, Ghilarducci said. Changing the act would let tribal governments participate in the mutual aid system.

Learning Curve

But much can be done while tribes and governments wait on lawmakers. Most important is to establish dialog and clarify expectations, Ghilarducci said. Given strong opinions on terminology and entrenched ideas of how tribes and local governments should operate, that’s not the easiest task.

"It was a learning curve for all of us to figure out how the Yurok tribal government and local governments were supposed to work together," Nessier said. "Not all counties know how to work with tribes and not all tribes know how to work with counties, and I think it needs to be brought forward a little more."

But as a result of the coordination, the tribes and counties are developing memorandums of understanding that let the counties better respond on tribal land, Nessier said.

The increased coordination, along with a focus on emergency management, gives the tribe a fighting chance against the next flood. Not only that, the tribe now has the means to battle forest fires and face a tsunami. Soon the tribe will receive a National Oceanic and Atmospheric Administration grant for a remotely activated solar-powered sirens system — a useful tool since many Yuroks are unreachable by phone, TV and radio.

"The Yurok Tribe and James Lee Witt Associates are collaborating again through a Department of Homeland Security (DHS) grant. It’s the first time the DHS has offered funding directly to tribes," Ghilarducci said. "This will give us a second bite at the apple," he said.
Cute and Cuddly
THE CENTER FOR DOMESTIC PREPAREDNESS (CDP), located in Anniston, Ala., strives to be the training facility of choice for America's emergency response providers. One of the center's innovative training approaches is using stuffed animals during triage training. Students prioritize the needs of the sick and wounded following a mock explosion, but what they find may be a furry experience.

At the mock explosion site, students find more than 75 stuffed animal "victims" tagged with ages and symptoms and must quickly decide which "victims" are viable.

The CDP training staff has been using this triage technique for the past 10 years and found it provides an effective representation of a mass casualty incident. Instructors have also observed that the stuffed animals touch the students' sensitive side. The students have 30 seconds per "victim" and must triage as many as possible using the START (simple triage and rapid treatment) method.

CDP training opportunities include 38 courses that offer a limited number of direct-assistance MAAP funding grants to PSAPs looking to complete wireless 911 readiness and deployment. The amounts available to qualifying PSAPs are between $20,000 and $25,000. Call 888/272-6911 for more information.

Direct Assistance Grants Available for PSAPs
THE ASSOCIATION OF PUBLIC-SAFETY COMMUNICATIONS OFFICIALS INTERNATIONAL announced two initiatives: the Member Assistance Advisory Program (MAAP) Wireless Facilitator Program and direct assistance MAAP funding grants. The grants will assist public safety answering points (PSAPs) that have not yet deployed Wireless Phase II, the capability to geographically locate a 911 caller who's calling from a mobile device from the cellular network or GPS. The MAAP Wireless Facilitator Program builds on the existing MAAP program by providing wireless deployment facilitators trained on Project LOCATE — Locate Our Citizens At Times of Emergencies.

The facilitators will assist with the development of PSAP-specific readiness assessment and deployment planning, and clarification of PSAP needs and challenges when deploying Wireless Phase II. The facilitators will help PSAPs identify peer resources in mapping, readiness assessment, customer premises equipment evaluation, service negotiations and public-education initiatives.

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Emergency Management

Mobile Traffic Service

LAST SEPTEMBER, GALVESTON, TEXAS, and much of the Gulf Coast looked down the barrel of approaching Hurricane Ike — with frightening memories of Hurricane Katrina’s devastation — and fled to their cars to evacuate before disaster struck. Many evacuees were able to find the safest and quickest path to higher land courtesy of their cell phones. The 3rd Dimension Mobileyes service for mobile devices was launched in December 2007 to serve the region’s more than 2 million daily commuters. Users can view traffic cameras on their mobile devices before leaving their home, office or school in order to plan the quickest and safest route.

The service was especially helpful during Ike. “Through a partnership with Houston TranStar, 39 Traffic Jam Cell Cams track about 600 cameras along highways around Houston, allowing the public to see snapshots of traffic on their highways of choice,” said Dinah Massie, public information officer of Houston TranStar. “In the week Ike hit the southeast Texas region, the public accessed about 60,000 camera views for some 20,000 Houston-area users.”

Donated Devices Aid Communication

GRADY COUNTY, OKLA., POLICE and fire departments now have interoperable communication capabilities thanks to a donation of 10 radio units by BAE Systems, according to a company press release. The $65,000 donation included training on how to use the units.

“My main goal is to have adequate communications between emergency first responders at the incident scene. Lack of adequate communications is a nationwide problem,” said Robert Doke, the state fire marshal. “Grady County first responders will now be able to communicate with each other during any fire, car accident or large-scale disaster, expediting response times and eliminating any communication gaps.”

PHOTOS COURTESY OF JOCELYN AUGUSTINO/FE MA

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PHOTOS COURTESY OF JOCELYN AUGUSTINO/FE MA
What's the difference between a resilient community, and as you call, it a "brittle" one? The efforts at creating resilience that I find most interesting are ones that put a lot into being prophylactic. You need to think in advance of the foreseeable hazards you're likely to face and plot what the consequences would be. If those consequences are unacceptable, what do you invest in right now to mitigate those likely outcomes so that you'll bend not break?

The second piece is a kind of resourcefulness, which we have to build in upfront relationships — across the public, private and nongovernmental sectors — where we figure out our roles in managing incidents and can quickly alert each other when things are unfolding so we're ready to go.

What are the consequences for the brittle community and the rewards for a resilient one? The consequences are well documented like 30 percent of small businesses tend to go into Chapter 11 [bankruptcy] if they're in an area of a major natural disaster. That number's driven primarily by time. If recovery takes too long, they just don't have the cash or the ability to raise credit to get them back up and running.

Resilient communities bend but don't break, relatively speaking. The image is shingles missing from roofs versus houses blown away. Obviously recovery cost is much lower and recovery speed is much quicker.

Is the U.S. moving ahead sufficiently toward an all-hazards approach? My hope is that with the incoming president, we'll have the opportunity to do that. His very tenor has been less about responding to counterterrorism, as if that were exclusively the threat, and more about facing a number of hazards and the message of shared responsibility.

One area they're looking at is economic stimulus in investing in the elements of resilience, which includes having functioning public health departments, emergency management departments and local police.

What do you see happening with FEMA? The lesson of 9/11 and Katrina is there's a greater expectation, and I'd argue a need, for the federal government to play a larger incident management role, which has historically been the case. We know there are disasters that are likely to be confronted, and based on the limited capacity of many states and the expectations of the public — the president isn't going to be in the fly-by's or drive-by's — but [should have] a more focused support role in incident management.
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The Geospatial Information & Technology Association (GITA) has created this unique forum to address the application of mapping technologies such as GIS, GPS, and remote sensing to emergency and disaster response. In response to a perceived need, GITA held the first ever Geospatial Dimensions of Emergency Response Symposium in Seattle, Washington in March 2008. The response was overwhelmingly positive, and, in 2009, the symposium will once again bring together the worlds of emergency response and planning and geospatial technology April 19-22 in Tampa, Florida.

Register and view the program now at gita.org/ers.
California braces for fires, landslides, chemical spills and deaths that follow a massive quake.

At 10 a.m. on Nov. 13, 2008, Southern California experienced a “shaking” unlike anything felt in the region in more than 100 years. A magnitude 7.8 earthquake dubbed The Big One hit the southern San Andreas Fault near the Salton Sea and impacted Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura counties.

The quake and its aftershocks produced between 10,000 and 100,000 landslides. Fires erupted across the region. Five high-rise buildings in Los Angeles collapsed. Roads, railroads and utilities that cross the fault were ruptured. The worst damage was in the Riverside and San Bernardino areas, where the shaking was the strongest and longest. Emergency responders had to cope with chemical spills and potential dam ruptures. Overall, the region suffered 2,000 deaths and more than $200 billion in losses.
Thankfully it was a drill — but one that fore-shadowed the chaos that would ensue after a three-minute quake that some seismologists predict is coming.

How ready are the public, first responders and emergency management officials for such a scenario? That’s one of the questions regional officials hoped to answer during the November 2008 drill.

Based on this scenario, the Golden Guardian emergency response exercise and the Great Southern California ShakeOut, a drill for the public, were designed to test Californians’ ability to respond and recover during a catastrophic earthquake.

The first thing emergency management officials should realize about a quake of that magnitude is that initially they’ll be overwhelmed, said Dennis Mileti, a member of the California Seismic Safety Commission. “This quake will be unlike any drastic emergency anyone has experienced or can remember,” said Mileti, a professor emeritus in sociology at the University of Colorado and an expert on the societal aspects of hazards and disasters. “It is a class apart. That has ramifications for public information, sheltering, food and water, fire suppression — everything flows from that.”

Mileti is quick to point out that because it’s so well practiced, California’s emergency response community is among the best in the country. When overwhelmed in a normal emergency response, such as during huge fires, unaffected neighboring communities help in mutual aid pacts. However, in this quake scenario, that won’t happen right away, he said. For instance, in Riverside and San Bernardino counties, there won’t be any way for other responders to get there. “Riverside County will be ripped in half,” he said. The I-10 freeway sits on top of the fault in many places, and it will be torn in two. Airports won’t be functioning, and emergency response teams in towns and villages, such as Rancho Mirage, where Mileti lives, will be on their own. “That doesn’t mean they won’t work tremendously hard,” he said, “but the demand will be way beyond their capacity.”

“This means everyday citizens will play an important role. "The real first responders are victims," he said. Studies of large earthquakes have found that 95 percent of people rescued were saved by other victims, not by search-and-rescue teams or firefighters.

Emergency responders will get some things up and running in about a week, but until then, the citizenry is on its own for basics like food and water.

Creating the Scenario

The ShakeOut Scenario was the first public product of the U.S. Geological Survey (USGS) Multi-Hazards Demonstration Project. It brought together 300 seismologists, engineers, social scientists and computer experts from around the world to make projections to help Southern California improve its resiliency to natural disasters through improved planning, mitigation and response.

Why did they pick the southern part of the San Andreas? That section of the fault has had a quake on average every 150 years, yet hasn’t moved for 300 years. “Many seismologists think it is 10 months pregnant,” said USGS Project Manager Dale Alan Cox.

One goal of the demonstrations project is to help emergency management officials prepare to respond.

“We asked emergency management officials what tools they need,” Cox said. “They asked us what it would mean to have an earthquake of this magnitude, because all they have to go on is earthquakes of the past, such as the Northridge earthquake of 1994, which was much smaller. It lasted only 18 seconds. This quake is projected to last three minutes.”

For emergency managers and fire department officials, the Golden Guardian exercise were putting the drill into muscle memory and uncovering unknown vulnerabilities, Cox said. The first question they must address is how to reach people needing assistance, because traffic won’t be moving and many bridges will be unusable.

“We are dealing with a large population that is transportation challenged,” said Henry Renteria, director of the California Governor’s Office of Emergency Services (OES). “It’s too dependent on autos, with not enough public transit. So part of the scenario is how to move supplies and emergency personnel if the freeways are impassable [and] how to get first responders in and out. This will give us a scenario to test other systems for doing that, moving people by waterways and by helicopter if airport runways are damaged”

Fire Worries

The secondary hazard that immediately concerns emergency managers is fire. Extrapolating from previous earthquakes, experts predict that 1,600 fires would start, of which 1,200 would be too large to be controlled by one fire engine company. It’s estimated that 133,000 homes would be lost.

“In areas of dense wood-frame construction, those fires, if not controlled, will grow quickly to involve tens or hundreds of city blocks,” the scenario predicts.

For the Los Angeles area, in particular, there’ll be so many fires that there’ll be no way to put them out before they merge into a major conflagration.

According to Mileti, the scenario projects that almost every water pipe in the Los Angeles area will break. “The damage is going to be so extensive that the water companies are going to determine that it’s cheaper and easier to replace the entire system rather than fix it,” he said. “It will be six months before you will be able to turn the tap back on.”

“Fire chiefs tell us that water is to firemen what bullets are to police,” Cox said. “Well, with so many pipes breaking during the quake, there isn’t going to be water to fight the fires.”

Renteria, who worked in emergency management in Oakland during the magnitude 7.1 Loma Prieta earthquake in 1989, noted that in the 1906 San Francisco earthquake, it was fire — and the lack of water to fight it — that destroyed much of the city. That’s why San Francisco is the only U.S. city with an underground cistern system to store water, he said.
Renteria said fire departments are adding tools to get water to where it’s needed, including above-ground hydrant systems on tracks that can pump water out of a lake, river or even the ocean.

“What keeps me awake at night is the weather after a quake,” Renteria said. “If it comes in September or October, the time of strong Santa Ana winds, that would be the worst-case scenario.”

Mileti said the ShakeOut Scenario poses difficult questions about fire response. “How do you manage in a situation like that? There may not be an answer,” he said.

In San Bernardino

In the ShakeOut Scenario, San Bernardino County would see some of the worst damage from the quakes and secondary hazards. The lifelines that cross Cajon Pass on the way to Las Vegas would be completely severed, disrupting telecommunications, electrical transmission lines, water pipelines, and rail and truck routes for major Southern California ports. The scenario includes a 50-car train derailment, and area hospitals would only be at 25 percent functionality.

Denise Benson, director of the San Bernardino County Office of Emergency Services, has been working on the Golden Guardian exercise for 14 months. The scenario it depicts is devastating, she said.

“We know this is going to be a major catastrophe with massive debris and hundreds of fires,” she said. “In the first two to three days, it will be catastrophic and hard to get resources to people who need them. We work to remind citizens that they will have to prepare themselves to be self-sufficient, and the first 24 hours is the worst, before our employees can get the EOC [emergency operations center] established and get things better organized.”

Proactive Efforts

Renteria said the OES is being proactive by enlisting the community to help in case of a large quake. “We are working on developing relationships with private-sector companies and nonprofit agencies that have the availability to respond,” he said. For instance, the OES is in discussions with retail stores and suppliers that have fleets of equipment about incorporating them into emergency management response.

“They are part of our team instead of part of the problem,” he said.

Improved communications is also a key benefit of the Golden Guardian exercise. The regional event lets responders practice cooperation across jurisdictions and include hospitals and schools in their efforts.

One goal of the Golden Guardian is to determine where outside help would most likely come from, Benson said. “We know it will come from the National Guard, and parts of the state not as significantly impacted. For instance, in San Diego County, there is not as much disruption from this scenario. ” She also noted that in the scenario, San Bernardino’s airports receive little damage, so some supplies, such as drinking water, may be flown in.

Golden Guardian planning meetings revolve around multiple objectives, including: communications, restoration of lifelines, emergency operations center setup, mass care and shelter, and economic and community recovery. Each objective has a working group that brings in people from the community to work together on solutions. For instance, the lifelines group has representatives from Verizon, the California Department of Transportation, the California Highway Patrol and the water companies.

“These groups are great because they help us realize what needs to be done, so we can start developing protocols we need to have,” Benson said. “Nothing compares to the value of having these networks established or enhanced.”

Mileti is convinced California’s emergency response community will discover gaps in coverage by participating in these drills. They can then tell their bosses and politicians where they need extra resources, but he admits it’s a difficult sell.

“In the wake of the 100-year anniversary of the 1906 quake, we commissioned a timeline of all the major laws and ordinances having to do with seismic safety,” he recalled. “There were more than 200 of them, and 99 percent of them followed within three months of an earthquake.

“The time that politicians respond to a need for change and fund it is after major events, not before,” Mileti noted. “In this country, we manage needs after the horse is already out of the barn.” Politicians may only respond to events the public has just experienced, he said.

“but the professional emergency management community is going to push and nudge and coax them to do more.”

Drop, Cover and Hold On

On Nov. 13, 2008, in conjunction with the Golden Guardian exercise, Southern California held the largest public earthquake drill ever conducted in the United States. People in businesses, schools and offices practiced the “drop, cover and hold on” protocol.

The drill’s sponsors sought to raise regional awareness. More than 4 million people registered to participate, said Mark Benthien, director of communications, education and outreach for the Southern California Earthquake Center at the University of Southern California.

“This is about changing the culture of preparedness,” Benthien said. “People hear the buzz about it and work on preparedness and practice it.”

Using the ShakeOut Scenario, agencies are making the public aware of the potential for fire and that tap water may be unavailable for several months. “We are saying store more water — one gallon per person per day for at least three days, and ideally for no longer than two months,” Benthien said. People also should make sure they have a fire extinguisher at home.

Dennis Mileti, a member of the California Seismic Safety Commission who has spent years studying the societal aspects of hazards and disasters, said such a high-profile event will help a little, but only if it’s tied to a long-term advertising campaign. “It’s just like selling Coca Cola,” he noted. “To make a difference, the advertising has to be ongoing and unrelenting.”

Emergency Management 23
Pledging to the Greater Good
Berkeley, Calif., is at the forefront of trying to mitigate earthquake damage rather than just responding passively to what’s perceived by many as inevitable.

In addition to retrofitting fire stations, historic buildings and landmarks to meet earthquake safety standards, and offering tax breaks to homeowners who do the same, Berkeley has teamed up with its well known university, the University of California, Berkeley (Cal), to train students in disaster response and equip them with the supplies that are necessary to help.

“If you look at the greater good — especially if you live in a community that is subject to fires, earthquakes, tornadoes, hurricanes, tsunamis — you have to have a plan in advance,” said Gil Dong, deputy fire chief of the Berkeley Fire Department. Hurricane Katrina was instructive, he said, because it showed that if people don’t take the time to prepare, a lot of them will be left waiting, which could lead to more injuries and deaths.

The No. 1 benefit of the student responder program is that more people will be there to help when an earthquake occurs.

“For some people who don’t know how to take care of themselves in disaster situations, there will be people who know what to do,” said Bradley Kerr, a junior at Cal who is majoring in environmental science and is the Interfraternity Council (IFC) vice president of risk management. “For the majority of the populace that doesn’t take the time and wouldn’t even consider that an earthquake might happen until it actually is happening, there’s already something in place to help protect them and keep them safe.”
Students, Supplies and Training

Berkeley's preparation now includes Cal students who live in fraternities, sororities and co-ops. They are being equipped with emergency training and supplies.

"They're already organized, they already have a leadership structure — how about we give them the incentives to work together as clusters and offer them the equipment?" Dong said. "They live about 50 feet from the top of a fault line, which scientists have predicted will produce a major earthquake in the San Francisco Bay Area. It happens every 140 years, and it's been 140 years since Hayward Fault ruptured."

More than 2,000 students at Cal receive basic supplies, like a generator, goggles, fire extinguisher, portable lights and two-way radios. A total of six equipment caches were obtained through an $18,000 grant that Dong applied for and received. The students also receive training in at least some of the following courses: basic preparedness, fire suppression, light search and rescue — are good life skills that a lot of people are interested in learning. They just didn't have an outlet through which they could help, they didn't know how to help," he said. "So we're saying, 'Look, in case something goes wrong, here's how you can help; here's how you can make things better.' We're giving them a lot of power to take control of things. They're very responsive."

"The courses are taught through the Berkeley Fire Department," said Jennifer Heller, communications coordinator of the Berkeley Student Cooperative. "Students take the courses for their own edification, and for the greater good of their fellow co-opers," she said. They don't earn credits toward a college degree, but that could be offered someday, Dong said.

Ten percent of each house's members must take additional training classes before a student group receives its supplies, Dong said. If there are 50 people living in a fraternity, sorority or co-op house, then at least five of those residents must take at least one of the seven classes offered.

One person doesn't take all courses, Heller said. "By having different students take different courses, we are forming teams of co-ops that are trained in various areas to support their fellow members during an emergency," she said. "Our goal is that every co-op has a trained team of co-operators in case of emergency to provide any necessary support."

The class a student takes may be based on his or her major. For instance, an engineering student may be most interested in the "light search and rescue" class because it teaches how to use mechanical advantage, like taking plywood boards or long beams to help lift coffee tables or bookcases off someone, or how to brace up a building that's partially collapsed. "We take a premed student and say, 'You're perfect for disaster first aid.'" Dong said, "Because they're interested in treating people anyway. These are some of the selling points we offer to the students and how we recruit those who have to take it."

Kerr said the most important course he took was light search and rescue because after an earthquake, many people don't take a building's structural integrity into consideration. Even if a building appears to be intact, it could be a hazard because of unseen damage in the foundation and frame.

"You have to look around to determine whether it actually is safe, and while you may want to rush in and get someone out from the pile of rubble, you really have to make sure you take your own safety into consideration," Kerr said. "In the light search and rescue training, you definitely learn that 'slow is proper' — you have to do things in a timely manner, but you want to make sure you're doing them safely and appropriately. It really teaches you proper techniques."

Beginnings

The $18,000 grant that Dong secured in March 2007, allowed the local Office of Emergency Services (OES), which is housed within the Berkeley Fire Department, to fund six equipment caches in the student housing areas.

Several groups collaborated as the idea took shape, including: the Center for Student Leadership, which oversees all the fraternities, sororities and multicultural student organizations; the Berkeley Student Cooperative, members from city departments, like the city manager's office, the Berkeley Fire Department, the OES, City Councilman Gordon Wozniak's office; the American Red Cross, Berkeley Campus Chapter; the JFC, and the Panhel Chapter.

They held monthly meetings to forge how they would implement the grant, Dong said. First they toured the student housing areas and identified key sites.

Stakeholders pushed back initially because of concerns about liability and responsibility, Dong said. Some of them asked if the proposed program would require that the student responders care for the whole neighborhood.

Everyone thinks the fire department will be there in four and a half minutes, but if we have a large-scale earthquake with multiple fires, with gas leaks, and we have an old infrastructure that needs to be retrofitted, Berkeley Fire Department resources will be nil until we get mutual aid." — GI Dong, deputy fire chief, Berkeley Fire Department
“So we created a level of understanding for all participants to sign and pledge their participation,” Dong said, “and we changed the IFC and Panhellenic social codes that govern them on how they’re supposed to act — what things they’re supposed to participate in to be organized student groups affiliated with [Cal].”

One IFC and Panhellenic social code that changed is that every individual must take a basic preparedness course. How the students take this course is up to them. They can take a traditional 35- to 45-minute course taught by the Berkeley Fire Department or do it remotely via a podcast. The podcast is available through the Berkeley chapter of the American Red Cross, with whom the Berkeley Fire Department joined forces because the two had common goals.

The Red Cross wanted to train 1 million people in the Bay Area this year, Dong said. “And we said, ‘We can be part of this process, so whoever we train, we’ll give you their names.’”

Students can download the 20-minute podcast and take the test online. After taking the test, that information is submitted to the Red Cross, Dong said. Though the traditional course lets students ask questions directly, the podcast is an option to get students who are already doing homework and extracurricular functions involved.

The Collaborative Advantage

“You have to have a collaborative approach whenever you do something new or mandate something of somebody,” Dong said.

Kerr also made note of the effective collaboration. “One of the coolest parts about this disaster-preparedness program is the cooperation that happened between the fire department, the university and the Cal fraternities and sororities,” he said. “I just think it’s one of the prime examples of greater involvement in the outside community for the fraternities and sororities in a very positive, beneficial, synergistic way.”

It’s important to recognize that the collaborative approach begins with the individual. Being prepared, Dong said, starts with the “me,” and each individual in the community who prepared alleviates responders’ burden.

“If you’re not prepared and you get injured, then you as an individual are going to need help from someone else, and we don’t have the resources to do that,” he said. “Everyone thinks the fire department will be there in four and a half minutes, but if we have a large-scale earthquake with multiple fires, with gas leaks, and we have an old infrastructure that needs to be retrofitted, Berkeley Fire Department resources will be nil until we get mutual aid.”

“Students take the courses for their own edification, and for the greater good of their fellow co-ops.”

— Jennifer Heller, communications coordinator, Berkeley Students Cooperative

And that’s only if the roads are accessible, Dong said, noting that in the Bay Area, some surface streets and freeways could be blocked during an earthquake.

“If one takes care of himself or herself, that’s one person we don’t have to provide rescue, food, water or shelter for,” he said. “And if we get one person to educate their community block, then the community block or neighborhood organization takes care of themselves.”

This is the idea in training and equipping student organizations.

“Can you imagine if you gave me the Cal football team to rescue people with their size, their stamina? Because then I can take 10 firefighters and create 10 groups, and divide up the soccer, football, volleyball players or whoever, into 10 larger response groups,” Dong said. “It only takes one firefighter to direct a group of people. They expand our first responder resources within our community. If I can get that entire student population prepared, they become the best volunteers for me.”

Cal Berkeley students being taught how to perform chest compressions. As a part of the process, students must interlock their fingers and push 1 ½ to 2 inches into a victim’s chest while pumping 30 times.

— Unknown photographer
Tad Agoglia aids first responders and expects nothing in return.

When Tad Agoglia, president of the First Response Team of America, walks into your emergency operations center and offers immediate, free disaster response assistance — complete with his own equipment and team — you may ask yourself, "Am I dreaming?"

No, you are not. And no, you are not on Candid Camera.

Agoglia and his team go to disaster scenes to remove the obstacles that prevent local first responders from helping their community.

"We watch weather patterns, we watch radars and we decide when a storm is severe enough that we should respond," Agoglia said. "And when we respond, we always work and serve for free under the local emergency and government officials."

Finding the Need

In 2005, Agoglia created Disaster Recovery Solutions to clean up debris from man-made and natural disasters. Within three weeks to two months following a disaster, the for-profit company receives contracts to aid in long-term recovery.

BY ELAINE RUNDLE
Ted Agoglia uses specialized equipment to clean up cities and towns immediately after a disaster.

For Heroes
After responding to hurricanes for a couple of years, Agoglia said he started wondering what kind of response follows directly after the storm. "I used to look at the news, and I would see a report of a big tornado that wipes a whole city out," he said. "I would look at them and say to myself, 'I wonder what those people are going through; that massive storm must have completely covered those roads with debris, houses and trees.' I started out by saying, 'I wonder if I should just maybe go there for free and clear the roads for these communities, just so that ambulances, fire trucks and state troopers could get through.'"

That's exactly what he did in May 2007, when Greensburg, Kan., was hit by an F5 tornado. Agoglia headed there with a crane and some other equipment and removed debris from the roads to open them up for first responders. The experience reinforced his belief that debris removal was needed immediately after a disaster.

But he saw a need for much more. "In the response phase — responding to a disaster just after it happens — I saw food and water coming in, but I didn't see any heavy, specialized equipment," Agoglia said. "And in fact, on top of that, I didn't see any specialized equipment for dealing with storms coming in, which is what I have."

The income generated from Disaster Recovery Solutions provides the funding for the First Response Team. In May 2008, Agoglia submitted the paperwork to make the team a nonprofit organization. As of October 2008, he said the nonprofit had only generated $22,000 in donations, which covers about 10 days of operating costs.

"In the response phase — responding to a disaster just after it happens — I saw food and water coming in, but I didn't see any heavy, specialized equipment."

— Tad Agoglia, president, First Response Team of America

That's not the only equipment the First Response Team brings. A hovercraft works as the rescue boat. "In the middle of America, if a city's underwater, No. 1, there's no boat ramp," Agoglia said. "So I needed a boat that could go over sand, asphalt and gravel. I needed a boat that wasn't going to get destroyed, that could keep on going after it hit the roof of a house, a street sign sticking out of the water or a car underwater because we're dealing with trying to save people's lives."

The fleet also includes a large generator and a commercial water pump that can remove water from low-lying areas or a basement. Satellite phones and laptops enable communication, which Agoglia lends to local emergency and government officials. Specialized camera and audio equipment can snake through a collapsed building when looking for bodies under rubble.

"It has cameras that work at night [and] can sense body heat, so if someone is unconscious and under rubble, we can sense their body heat and see if someone's there," he said. "It's so
The Team Evolves —
But Not Alone

What was a disaster-care coordinator
to do after a tornado hit a small, Missouri
city and left a nursing home without
electricity? After making many phone
calls and contacting several people, Greg
Gaines, Missouri Region B disaster care
coordinator of the Regional Homeland
Security Oversight Committee, came up
with the phone number for Tad Agoglia
of the First Response Team.

"He kind of came to the rescue with a
giant generator to run this building. The
power came on a couple of days later, so
I didn't need it for that long," Gaines said.
"But I saw him as a valuable resource once
I started talking to him and figured out
exactly what they do."

Gaines followed up with Agoglia and
his crew in Springfield, Mo., where he
became familiar with the team’s goal and
equipment. "My mission was to get
his foot in the door and get him and his
people trained, so he could talk the same
language as the emergency managers and
other first responders, and he has done
just that," Gaines said. "People take him
seriously now, as they should. What he
does is a valuable service to the point
that it can even save lives."

Gaines has also taken on the role of
advising Agoglia if the team runs into
problems. If they encounter a roadblock
— like being unable to enter a city that
has just been hit by disaster — Agoglia
calls Gaines for advice on the best way
to handle the situation.

He’s also gotten the First Response
Team involved in taking classes about the
National Incident Management System and
the Incident Command System. Gaines
described the classes get the team speaking
the same language as emergency management
officers and help them become a cohesive
part of the response effort.

"A lot of times, people who do what Tad
does — emergency managers and people
in that position — might be a little gun-shy
because after disasters, people show up
wanting to help and they all want something
out of it," Gaines said. "Tad literally does it for
free and doesn’t want anything."

Sensitive that it can actually hear a baby
breathing. And that same equipment can
perform search and rescue underwater.

Dirt bikes equipped with satellite phones
and GPS allow rescuers to search farmlands
for people who need medical attention. The
dirt bikes can also use GPS coordinates to monitor
levees, so at the first sign of a levee breach, a city
can be evacuated.

"Helping Heroes be Heroes."

"The reality is, because we’re not a govern-
ment-funded entity, we don’t have many
bureaucratic restraints," Agoglia said. "But we
are very careful to work under the supervi-
sion and direction of the local government and
emergency officials."

As of October 2008, Agoglia said the team
had responded to 20 disasters within the last 17
months. The team is there to not only provide
physical assistance with its equipment, but also
to share its knowledge of disasters. Agoglia
helps officials determine what the priorities are
and how to best respond to the challenges. In
one instance, it was most important to citizens
that they bury their dead, so the team helped dig
graves before opening up the main highway.

The team travels to cities where the need is
greatest. Whether it’s a large or small city, the
decision is usually based on where the most
deaths and structural damage occurred.

Agoglia said he wants to add a fire truck to
his convoy in 2009, but the only thing stopping
him is the money. "I want to provide the heroes
with the resources they need," he said. "And for
me, if [firefighters] don’t have the tools they
need, they’re not going to be able to serve their
community, and their community needs them."

Many people wonder why Agoglia spends
all of his time responding to disasters. They ask
him: What’s in it for you? "I get a sense of fulfill-
ment in this life to know that I lived for things
that matter and also to make a difference in
people’s lives and in America," he said.

Agoglia doesn’t make a salary, he doesn’t have
a home and he’s not independently wealthy. He
spends his time and money trying to improve
disaster response.

Agoglia was named one of CNN’s Top 10
Heroes of 2008, though he didn’t win the
$10,000 first-place prize, which he said he
would’ve spent on new equipment. As he
continues his nomadic life, Agoglia is just happy
to help and wishes to someday have more teams
dispersed across the country — with the capa-
bility to reach any location within hours after a
disaster. •
AGENCY STILL MIRED IN TOP-DOWN, ‘WE-KNOW-IT-ALL’ MENTALITY.
Presidential transitions provide opportunities for changing how government and agencies function. A change in overall philosophy of governance by a new administration can lead to very dramatic, even radical changes in agency priorities, programs and grants.

There could be new directions ahead for the Federal Emergency Management Agency (FEMA) under Barack Obama’s administration. As federal agencies go, FEMA is a relatively young agency that has already seen significant changes in its 30-year history. I won’t tackle here the issue of FEMA remaining part of the Department of Homeland Security (DHS) or reverting to an independent agency, perhaps even a Cabinet-level one. What’s discussed below can happen no matter where FEMA resides on the organizational chart, as long as the right leadership is in place.

Is FEMA a response, recovery, preparedness or mitigation agency? The answer is yes to all. The Bush administration’s mistake of trying to segment FEMA into one or two categories of emergency management was an error that has been corrected. If there’s to be a good interface between federal, state and local organizations with the emergency management function, then all phases of emergency management must remain in FEMA and have emphasis.
Much lip service has been paid to the notion that “all disasters are local,” yet FEMA remains mired in a top-down, “headquarters-knows-all” mentality. If the goal is to build a disaster-resilient nation, then it must be done at the state and local levels — only then can broad guidance be turned into local and regional solutions.

There’s potential that it can happen in an Obama administration given his campaign’s penchant for the use of 21st-century communications tools.

The FEMA regions that are geographically dispersed must be empowered to work with their states and local jurisdictions. They can be the cornerstones for restoring trust between emergency managers at all government levels and in the private sector. FEMA regions can also be key to unlocking the power of collaboration between government levels. FEMA shouldn’t dictate solutions, but work with those agencies and the private sector that want to be part of building regional coalitions. Building meaningful relationships will be an important contribution to bringing parties to the table and discovering new ways to build regional partnerships.

Chance for a Do-Over

Anyone who works in emergency management knows that strong interpersonal relationships are the most important aspect of what we do. The relationships between FEMA and state and local jurisdictions and agencies are fractured and broken. Trust in FEMA and the DHS is at an all-time low. This is because “listening” to state and local concerns and incorporating what’s heard hasn’t been valued by many federal agency leaders. The change in the Oval Office presents a unique opportunity for a do-over in order to begin anew at building relationships, then trust between people and organizations, and finally trust between government levels. It won’t happen overnight, but the effort must begin immediately after Inauguration Day.

Media — in all its forms — must be embraced by FEMA’s leadership. Rather than treating newsgatherers as the enemy, respectful partnering opportunities should be sought. The sad story of the “Fake News Conference” — FEMA staffers misleadingly asked questions in lieu of reporters at a “news briefing” during the 2007 California wildfires — is one example of how you’re setting yourself up for failure when you don’t train with entities that will be part of a disaster response. I don’t believe that FEMA deliberately faked a news conference. The public affairs staff only did what they normally do during disaster exercises. They started asking questions like the media because no media were present. They were in this habit because the media are never invited to “play” in the exercises. FEMA holds. Media must be invited to participate in disaster exercises. How else will they learn to cover sensitive issues like a pandemic flu outbreak or a weapons of mass destruction attack if they haven’t practiced and understand the issues?

New media, like Web 2.0 solutions, must be employed, and the knowledge and influence of FEMA employees should be unleashed. FEMA should be acknowledged for having established a blog and a Twitter site. However, these are relatively sterile in their execution. FEMA employees should be encouraged to post information and engage one another and their state and local peers in a vigorous dialogue. Can it be messy? Of course it can. But to make this happen, a significant change will need to be made. The lawyers will have to stop running FEMA. Lawyers are not innovators, nor are they communicators; their role is to ensure that what’s said or done is legal. Only strong, senior, politically appointed leadership with thick skin and transparent and confident leadership skills will make this happen. There’s potential that it can happen in an Obama administration, given his campaign’s penchant for the use of 21st-century communications tools.

Emphasize Mitigation

Perhaps my most controversial recommendation is this: Establish emergency management and homeland security block grants. This would combine the “alphabet soup” of existing legacy grant programs that sprung up following 9/11, and the establishment of the DHS. Once a grant program is established, each discipline looks at its funding stream as “its rice bowl” that’s not to be messed with. This has led to a lack of coordination between state and local agencies and jurisdictions. Each organization fights to maintain its funding and has its national association and lobbying in Washington, D.C., fighting to maintain or increase its funds. Instead of promoting coordination between agencies and disciplines, this funding process wastes dollars and time, duplicates effort and further fractures preparedness at the local and regional level.

Providing block grants to state and local jurisdictions would force the players to the table to sort out their regional priorities. Send the funds through the states and let them administer the block grants by region, not by jurisdiction. This proposal would shake up the field, and in the end it would promote the relationships, needed coordination and perhaps even collaboration between partners who would have to learn how to play together before there’s a disaster.

Last, there needs to be a return to an emphasis on mitigation and a new emphasis on climate adaptation. Emergency management must enhance mitigation-planning efforts to include preparation for more frequent droughts, insect infestations, forest fires, rising sea levels, more frequent and longer rainfalls and floods and events that are already being predicted and possibly experienced. There’s a close alliance between climate adaptation and mitigation. To avoid disaster damages and start protecting our communities from disasters’ impacts, we must integrate climate-adaptation strategies into our mitigation plans. FEMA is the agency that can help guide and direct our national efforts in this area.

This is not an exhaustive list of needed actions, but these can make an enduring change on how our nation plans for the future. It’s a future that is bright, but also challenging as we face the potential wrathful acts of man and nature. While we hope for the best, we collectively must become prepared for the worst.
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Aug. 19, 2008, a wave left the coast of Sudan headed east. By the time it swirled up the Gulf of Mexico three weeks later, it had built up hurricane force winds 240 miles wide. That mass plowed into Texas on Sept. 12 carrying destructive and deadly power.

The day before, the National Weather Service warned residents along the Galveston Bay shoreline that they faced “certain death” if they didn’t evacuate as ordered. Hurricane Ike was blamed for at least 164 deaths, including 82 in the United States. As the tempest blew, more than 182,000 Texans headed for temporary shelter. The Red Cross established some 280 facilities to keep them safe and dry.

Top brass flew in to survey the catastrophe. Former presidents Bill Clinton and George H. W. Bush toured the area and visited an ad hoc Federal Emergency Management Agency (FEMA) headquarters.

Weeks after the hurricane, The Associated Press reported a grim spectacle. The storm’s 13-foot surge had pushed up approximately 200 coffins from their graves. Volunteers and state prisoners searched hundreds of miles of marshland in hope of returning at least some of the dislocated remains to their proper places.

There were close calls. On Sept. 11, the cargo ship MV Antalina left Port Arthur, Texas, to avoid the storm, but the ship’s engine failed the next day. Unable to fix the engine, the crew asked the U.S. Coast Guard to evacuate them, but the Guard determined it would’ve been unsafe to try. The 22-person crew rode out the storm and returned home uninjured.

Nature’s helpless creatures were also impacted as the storm wiped out nesting areas for rare Kemp’s Ridley turtles, washing away dunes and beaches on Bolivar Peninsula and Galveston Island.

Rents felt the brunt of the storm as much as anyone. The Houston Chronicle estimated that more than half of the city’s 2,000 apartment buildings got hit hard, with damaged roofs and toppled walls. The damage was so extensive that the Chronicle gave a bold headline to the resumption of curbside recycling — a big step forward — more than five weeks after the storm.

There was a lot of bad news, to be sure. But it might have been worse, were it not for the timely use of communication technologies and the intervention of at least one government agency.

NOAA: Information Central

Tim Osborn vividly recalled the days and hours preceding Hurricane Ike’s arrival in the Gulf of Mexico. “Even before Ike became a tropical depression, we had identified the potential for this to start creating an actual storm system — to start rotating,” said Osborn, the regional manager of NOAA’s Office of Coast Survey.

In the coming days NOAA played a critical role in managing the response to Ike. When the storm ended, the federal agency had its hands full finding and repairing navigational aids to help get maritime commerce afloat.
From the very start, NOAA's work focused on communication — keeping emergency services up-to-date on changing conditions as the storm approached. At 10 a.m. each day, regional NOAA offices and weather service officials gathered on the phone with the NOAA Hurricane Center in Miami. Together they reviewed likely five-day scenarios, while NOAA aircraft skinned the storm to conduct weather sampling.

These conference calls, along with Web-based presentations, helped NOAA forge a consistent message that could be communicated to the entire navigation and port community. These conduits likewise helped the Coast Guard organize and coordinate the restrictions and eventual closings of waterways.

Such closings require delicate synchronizations. With 15,000 ship movements in and out of the Mississippi River each year — which is one waterway among many — authorities must work in close cooperation when a major event strikes, Osborn said.

"One of the biggest issues in shutting down navigation is whether you can get pilots out to the ships to bring them in, and what the threshold is when it becomes too dangerous to have that tug traffic still going out there," Osborn said.

Bridges and locks can't be shut down willy-nilly: things must happen in a specific order. In providing timely weather information, NOAA helped determine that order. "We helped provide a single, very focused, very local, very expert authoritative voice of information that everyone could hear at the same moment, on the same phone call," Osborn said.

Those daily calls helped shape emergency response within changing circumstances. "You can't expect to shut things down and have people safely leave the coast in a time frame of 24 hours," he said. "Ships go out so fast; barges and tugs go out so quickly. It requires several days of advance operations to make that happen."

NOAA put its newest technology to use in the shadow of Ike. "This storm season was the first operational year when we used full computer-based Web briefings to outside entities, and they were tremendously well-received," Osborn said. Not only could Web graphics convey information, they also made it possible to convey data accurately to others in the chain. "Now the information from those briefings could be e-mailed so that those participants could then share that throughout their own organizations," he said. "It made the community incredibly effective."

If Osborn can vividly recall the storm's beginning, he's perhaps even more alert to the end, the moment when NOAA's work was effectively finished. "About eight hours before Hurricane Ike made landfall, we had just finished the last conference call for the night," Osborn said. "As we hung up the phone, we realized right at that moment that literally everybody had shut down. There was no port from Mobile, Ala., all the way to Corpus Christi, Texas, that was open. Every tug, every barge, every deep-draft ship had come to a stop. It was amazing to me. The information and the updates we had given to all these people had essentially led to the complete stop of everything within the Gulf of Mexico."

"There's no doubt this saved billions of dollars and an untold number of lives along the way."

**Putting Patients in Beds**

Hurricane Ike forced the evacuation of nearly 8,000 people in Houston alone. Among them came an inevitable population of the old and ailing, many of whom needed hospital beds. Some hospitals had space, while others did not. The last thing anybody wanted was ambulances wandering the roads, trying to match patients with beds.

"It's really about balancing the supply versus the demand and trying to match the two in the most efficient way possible," said Andy Nunemaker, CEO of EMSystems.

The company's patient-tracking systems operate in major cities nationwide. Its flagship product is EMTTrack, a Web-enabled, browser-based system that tracks patient movements, reports transport activities and allows cross-jurisdictional management, among other functions.

In the case of Ike, the system was used in conjunction with EMResource — a common operating picture as described by the National Incident Management System — that delivered a comprehensive and flexible exchange of information between emergency medical service providers, hospitals, health-care entities, 911 dispatch centers and emergency operations centers.

The systems typically are purchased not by individual organizations, but by regions; in this case by entities such as the Texas State Department of Family and Protective Services and the Louisiana Hospital Association. These groups put the system into play in hospitals, dialysis centers, emergency medical services agencies and providers within a five-state area.

As Ike neared, land users began gearing up the EMSystems products to issue evacuation-procedure reminders and disseminate their evacuation status. "So ambulances would know where they could take patients and where they could not," Nunemaker explained.

As time went on, those outgoing communications gave way to incoming queries. "A hospital would poll all the other hospitals in the receiving area to see who could take whom, and then would use the system to preassign people to rooms before they showed up," he said. "The last thing a hospital wants is patients coming in the door that they cannot accept."

The system shared data among a breadth of institutions, including areas outside the potential hurricane zone that were queried about their readiness. Within the potential areas of Ike's landfall, hospitals and also specialty facilities — psychiatric, rehab and dialysis — weighed in with their needs and availabilities.
The tracking of specialty facilities came as a direct result of a previous catastrophe — Hurricane Katrina. Since dialysis facilities are usually privately managed, it proved difficult to track availability, and capacity was easily overwhelmed.

When Ike struck, they were tracking every dialysis center in Texas, Nunemaker said. “There will come a day when we are tracking all the people in nursing homes and other types of facilities who have special needs, and not just hospitals,” he said. “That is just the natural evolution.”

In real terms, the ability to track people and inventory had a transformative effect on those displaced by Hurricane Ike. Nunemaker recalled the case of a woman separated from her oxygen tank. Through the patient-tracking system — which also follows personal belongings — emergency personnel found the tank within minutes and got it to her within hours. “When you are efficiently tracking and scanning and using technology, you are able to find these things in real time,” he said.

Keeping People Connected

Jeff Braun knew the communication system was working when the news reporters started calling.

As emergency management coordinator of Fort Bend County, Texas, Braun found himself trying to deliver timely, storm-related information in the midst of Ike to the county’s half a million residents. To make it happen, he turned to the Public Information and Emergency Response (PIER) System, a Web-based virtual communications center meant to foster emergency communications regardless of circumstance. The Coast Guard and the Los Angeles and Houston port authorities use the system.

PIER allows communications personnel to work through a common Web site to collaborate, update messages and upload photos and videos. “There were a couple reporters who didn’t have power. They didn’t know where to go for information, and they had really tight deadlines,” Braun said. “When the power came back on, the first thing they did was to call us. We were sending out information at a level they had not seen before, in a way that was genuinely helpful to them.”

Braun’s success came within a larger regional effort to make use of PIER. A few local users included:
• University of Houston;
• Dent County, Mo.;
• Port of Houston;
• Marathon Oil Corp.; and
• Metropolitan Transit Authority of Harris County, Texas.

The Coast Guard also numbers itself among the dozen local PIER users, with a steady flow of information appearing on its Web site, www.uscgstormwatch.com.

Uses of PIER varied considerably. At the University of Houston, for instance, it was all about reaching out to students, said Marc Mullen, senior vice president of PIER Systems. As the storm rolled in, campus security used PIER to communicate news of building closures and when it was safe to return.

PIER allowed a multimedia approach to communications. “When they would post a message to the Web site, they could simulta-
neously push it out to students’ cell phones,” Mullen said.

The PIER site also helped communicators track and respond to concerns among students and parents. “They sent out the notice about campus reopenings, and they immediately started getting questions from students: ‘How can you expect me to be on campus when I can’t get gas for my car?’ At the same time, they were getting questions from parents asking, ‘Is it safe for my son or daughter to return to campus?’” he said.

Hundreds of queries passed through the site, where a small team of administrators handled them. With approximately 26,000 employees, Marathon Oil used its employee Web site — Marathoncares.com — as the channel for its PIER communication. In addition to releasing current information, the system allowed workers to update their contact information in real time, in case they became displaced by the storm. By Sept. 15, the site received about 370,000 hits, Mullen said.

For the Eighth Coast Guard District, timely updates were at a premium. Public affairs officials relied heavily on PIER’s template structure. Rather than create news pages from scratch, users typically posted news of waterway closures and other critical information into preformatted spaces, Mullen said.

If automated tools, like PIER, can make communications more efficient and coordinated in times of crises, there are not only practical benefits but also intangible advances for the emergency response community regarding long-term public support. “A good response poorly communicated is not seen as a good response,” Mullen said. Better communications mean greater understanding of the role of emergency services and the value they provide.
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Imagine working in an environment where more than 50 languages are spoken. How would first responders communicate with the victims during an emergency?

In February 2004, this was an issue for more than 2,000 employees at the John Morrell pork processing plant in Sioux Falls, S.D., when ammonia diffused throughout the facility, causing a mass evacuation during frigid winter temperatures. More than 100 people were injured. Erroneous calls and a major language barrier hindered the Sioux Falls Fire Rescue’s initial stages of response.

“Initially the call was [that] someone was injured in a piece of machinery, and it was later changed to a minor fire,” said Jim Sideras, the fire department’s division chief. “When crews got there, it was just one fire truck and then they realized that it was a significant event. The first call always seems to be wrong.”

Ammonia — a colorless, pungent gas — is commonly used as a refrigerant and for food preservation at meatpacking facilities. Exposure to the gas usually causes irritation to the respiratory system, eyes and skin. Though the gas is mostly harmless in small doses, inhalation in high concentrations can cause lung damage and even death.

Because ammonia is considered a toxic chemical, the U.S. Occupational Safety and Health Administration requires that it be handled as a hazardous waste, which meant response needed to be swift, organized and well executed, despite all the obstacles.
Obstacles Aplenty

With so many variables involved — lack of equipment, communication barriers and weather — emergency responders faced many hurdles to gain control of the situation.

The response was divided into three operations: a rescue operation to evacuate people who were in the plant; a hazardous materials operation to handle the leak; and an emergency medical services (EMS) branch to provide medical treatment.

EMS used START triage — simple triage and rapid transport/treatment — for casualty care. START triage classifies the severity of casualties by the colors red, yellow, green or black using an RPM (respiratory, perfusion and mental status) system.

“We didn’t have a consistent triage tag for our system. It sounds like a minor thing, but it really wasn’t.”

— Jim Sideras, division chief, Sioux Falls Fire Rescue

“When you think about RPMs, you think about cars and what a red line is. When the respiration rates are more than 30 [per minute] they’re going to be classified as red. If they have a capillary refill, which means you push down on your thumbnail and it’s longer than two seconds [for color to return], that is going to be a red,” Sideras said. “That means they are not perfusing very well and might have internal bleeding or hemorrhaging. So that’s what ‘P’ is: perfusion. The M is mental status. If they can’t answer simple questions and squeeze my fingers, they could have a head injury. So those would be classified as red.”

START is a simple method, but triage tags are a necessity that was lacking during the pork plant response. “We didn’t have a consistent triage tag for our system. It sounds like a minor thing, but it really wasn’t,” Sideras said. “Having a consistent triage tag ensures that every responder is going off the same triage tags.”

Emergency responders worked around this obstacle by using ribbons, but South Dakota has since implemented statewide triage tags, which means care is consistent and responders are on the same page.

The wintry weather and communication hurdles to gain control of the situation.

Emergency responders worked around this obstacle by using ribbons, but South Dakota has since implemented statewide triage tags, which means care is consistent and responders are on the same page.

The priorities for managing every incident are:

1. Life safety.
2. Incident stabilization.
3. Property conservation.
4. Environmental protection.

Once the incident’s necessary priorities are determined, the IC can establish strategies to meet the priorities for managing the incident. Strategies are the big picture of what the command wants to achieve to meet the identified priorities.

The next step is to establish tactical objectives. This is where the IC begins to determine what actually needs to be done to meet the specific strategy. Once this process begins, each level of the organization can understand the IC’s priorities and strategies. This allows for a clear direction and expectation.

Finally, tasks are where resource allocation begins and when groups and divisions are formed. At this point, the focus is on those common skills where crews begin their job.

Often, an IC can intuitively move through this process quickly. The more experience an IC has with similar incidents, the better their sense of establishing the priorities will be. However, one common mistake is when the IC starts at the tasks level before developing their jobs.

Here’s an example of decision-making for a mass casualty incident:

Priority
- Ensure life safety.

Strategy
- Provide medical care and treatment for injured victims.

Tactical Objectives
- Establish a communications network with hospitals.
- Establish and support the required divisions and groups, such as a triage group and treatment division.

Tasks
- Start the triage and treatment of patients.
- Establish a transportation division.
- Establish an incident management plan.
- Establish a medical communications coordinator and develop communications to the hospitals.
consistent radio reception — were other obstacles for first responders. “One of the difficulties was that the incident happened in February, and in South Dakota it’s about 10 degrees out,” Sideras said, adding that responders weren’t prepared to handle a mass casualty event indoors. “We also had difficulty with communication, because where we set up the treatment areas indoors, for some reason we could not get the radios or cell phones to work very well, so sometimes we actually had to go outside to use the radios.”

Although the firefighters couldn’t do much to solve the patchy radio and cell phone reception, they overcame on-site communication barriers using interpreters to ascertain information from casualties to help with triaging. “The plant has interpreters. They are identified by a certain color of hardhat. We did have some people who were actually interpreters, and we also had some people who were bilingual and could help,” Sideras said.

As for radio communication, the department’s crew had to trek inside and out to correspond with each other and the hospital. Even though communication was hampered, having direct contact with the hospital’s emergency department helped immensely. “It worked out,” Sideras said, “but if we didn’t have cell numbers for the direct lines into the hospital ER, it would have been much more difficult because we would have been trying to get through switchboards.”

Problems Dissipated

Emergency crews controlled the incident by improvising on scene and using their resources — fire department tags and translators — wisely. The hazardous materials team stemmed the ammonia leak by allowing it to dissipate in the air. With the situation under control, both teams rest assured that business could resume normally. Sideras said he’s confident that if the incident were to happen again, the response would go much more smoothly with all of their lessons learned.

“Break everything down into three to five things, work on them and figure out how to meet those things to reach your strategic objective,” he said. “We teach our incident commanders, we critically review every incident we go on … every major incident. The first question is, ‘What were your strategic goals?’ A lot of people are doing the task before they know what the strategy is for the incident.”

Lessons Learned

- **Having consistent triage tags:** Using the same triage tags is invaluable to any emergency response operation. South Dakota has now implemented statewide triage tags.
- **Have frequent, large-scale drills and tabletop exercises that take various weather situations into account.**
- **Using the START triage method is helpful when controlling a mass casualty event.**
- **Use resources wisely.** Instead of putting patients who have minor injuries on an ambulance, get a city bus to transport them to hospitals.
Orange County, Calif., might be the paradigm of success for local governments resisting interoperable communications systems.
The assertion that all responders from cities within one county should share an interoperable communications system really isn’t debatable in the United States. The delays caused by a lack of interoperable communications between fire and police at the World Trade Center on 9/11 are common knowledge. But many counties still struggle to persuade first responder agencies in cities to agree on uniform system specs.

Their concerns are serious. In 2003, the National Task Force on Interoperability outlined five obstacles to achieving county interoperability. The task force blamed:

- aging and incompatible equipment;
- fragmented budget cycles;
- limited and fragmented planning and coordination;
- limited and fragmented spectrum; and
- agency resistance to uniform equipment standards.

However, four years before that report, Orange County, Calif., managed to connect all of its responders in 31 cities on the same 800 MHz trunk radio system. The system supports more than 17,000 radios and averages about 55,000 transmissions daily. The trunk system uses 81 channels and has nearly 400 talkgroups. Local governments that still struggle to achieve similar levels of interoperability can look to Orange County for insight on how to make it happen.

Resisting the Standard

Motivating agencies that control their own budget to agree on unified standards can seem out of reach. It’s a paramount obstacle to interoperability in most counties, according to Harlin McEwen, chairman of the Communications and Technology Committee of the International Association of Chiefs of Police. First responders continue to fear that losing control over the system will keep them from ensuring that it meets their needs. Also, if the system doesn’t perform to their liking, what recourse do they have?

But that wasn’t a problem in Orange County, said Scott Maddy, communications specialist for the Anaheim Police Department (APD), which shares the Orange County system. Maddy, who joined the APD in 1972, oversaw the agency’s migration in 1999 to the new system.

One key to this end was a technical-liaison committee that met monthly for six years to assure that the technical and operational issues were resolved. The committee included sworn and nonsworn personnel, technical and nontechnical personnel, field and dispatch, and all disciplines — including fire, police and public works.

In addition, Orange County’s communications staff branched off into several radio shops, each specializing in a particular aspect of responder communications. One shop focuses on dispatch needs, another on mobile radios, and so forth.

“Say a packet (multichannel radio) no longer functions. I drop it off with the county communications staff, and I usually have it back within a couple of days,” Maddy said. “They are very attentive to anything that law, fire or public works need. I don’t think it could get any better.”

For technical communications in which a firefighter is inside a building, usually these kinds of [VoIP] things are not reliable — cases in which they’re trapped in a building, and the chief says, ‘You’ve got to get out of there, quickly.’ Sometimes they don’t work.”

— Harlin McEwen, chairman, Communications and Technology Committee, International Association of Chiefs of Police

Even if centralized communications teams understand how to address multiagency concerns enlisting those agencies into a centralized system would sometimes be difficult because the agencies are focused on their own budget agendas. However, Orange County didn’t have that problem, either. Since the 1930s, Orange County has had a communications department, in one agency or another, orchestrating communications for the entire county. That led to a cultural embrace of countywide communications strategies, said Robert Stoffel, division director of the Orange County Sheriff’s Department.

“We kind of looked out for all of the cities, and everything we did, we did in concert with them,” Stoffel said.

As for the fragmented budget problem, Orange County also had a solution for that. Each responder agency is usually on a different budget cycle, so it’s difficult to combine
funding to purchase a system for all agencies at once. Orange County planned for its interoperable system roughly five years in advance to overcome that challenge. Each city’s responder agencies began putting money aside in an escrow account. The county approved the contract in 1995 and deployed it between 1999 and 2001. Each city raised 100 percent of its share of the funding by the time the system was operational, Stoffel said. The contract cost $82.7 million.

Before and After
Most local governments endorse interoperable communications in principle. However, insight from an Orange County responder about how life was before and after interoperability could deepen the perspective of cities elsewhere that are still in the discussion stage. Interoperability accelerated response actions involving both police and fire, said Gary Dominguez, division chief of the Fullerton (Calif.) Fire Department. He recalled the delays involving police and fire before the current system. If the police wanted to communicate with fire, they sent a message through the police dispatcher, who then called the fire dispatcher, who in turn relayed the message to firefighters.

Dominguez recounted a typical exchange with police during these situations: “We’d get in there, and the cops would say, ‘What took you so long? We told you to come in 20 minutes ago!’ Well, you didn’t tell us — you told the dispatcher who had to tell another dispatcher, and one of those dispatchers got busy with something else.”

Just before switching to the interoperable system, Dominguez experienced a close call that could’ve seriously injured a police officer. At an incident involving chemically hazardous materials, he noticed a cop standing in a gutter filled with toxic substances.

“I could see the cop standing in the material, but I couldn’t communicate to him that the material was going to eat through his shoes,” Dominguez said. Identifying those types of materials was not part of Orange County police training. Thankfully an impromptu message saved the cop’s feet.

“I wound up being able to tell a fire unit that came around the corner, ‘Hey, get that cop out and into a safe zone and identify hot zones for him,’ ” Dominguez said.

He also related an example of quicker action enabled by interoperable communications. Firefighters received a call from police, requesting fire to provide “medical
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When Spectrum Is Limited

Building an interoperable radio system involves pooling all channels available to the county, divulging those channels among the responder agencies, and establishing extra channels for responders from all disciplines to access simultaneously for communicating at once. All of the different channels are called talkgroups.

What should a county do if it doesn’t have enough spectrum to establish the additional talkgroups? One option is connecting responders using different systems and frequencies through the Internet, via a voice over Internet protocol (VoIP) gateway. This allows cities to choose their own systems without worrying if they’re compatible with neighboring cities. It’s also cheaper than buying a new countywide radio system. However, Harlin McEwen, chairman of the Communications and Technology Committee of the International Association of Chiefs of Police, urges counties to avoid VoIP gateways whenever possible.

“If you have a modern trunk digital radio, it will pop up and tell you what unit is calling you, and when you reply, they’ll know who’s talking to them,” McEwen said. “There are other kinds of features as well. Most [VoIP] gateways don’t transmit those features.”

Robert Stoffel, division director of the Orange County Sheriff’s Department, pointed out another difference between the communications systems. “[Digital radios] have panic buttons so you can push that emergency button if you’re in distress and can’t really say anything,” he said. “The radios can be programmed so that if you just want to send a message that you’re in some kind of peril, you don’t even have to say it — you can push a button on the radio. Many of these systems that are built by Motorola, Harris/COM and Johnson, which are proprietary in a lot of ways, don’t allow those features to be transferred over to another manufacturer’s equipment.”

Also, when responders using a gateway move out of the gateway’s boundary, the gateway stops working. “If you’re working on the edge of the county boundary, and you go over to the next county on a chase or other business, you’re out of range, and you can’t talk anymore,” McEwen said.

Multitalkgroup talkgroups with their own spectrum channels on a unified system, by contrast, operate beyond county boundaries. That’s because unified interoperable radio systems force counties to negotiate for neighboring counties to stay off the frequencies used within the county that’s operating the interoperable system. The frequencies stay open and available whenever the interoperable responders cross county boundaries.

McEwen added that VoIP isn’t always reliable. “For technical communications in which a firefighter is inside a building, usually these kinds of [VoIP] things are not reliable — cases in which they’re trapped in a building, and the chief says, ‘You’ve got to get out of there, quickly.’ Sometimes they don’t work,” he said.

Others in local government see VoIP gateways as shortsighted. They argue that since virtually all counties understand they need interoperable equipment, they should determine how to buy it from the start instead of purchasing extra technology. Still, if a county can’t get all of its responders to agree on uniform system specs, VoIP is an option.

“If you don’t have the money to replace a whole system, then [a VoIP gateway] is a cheaper solution, but it’s not the best solution,” McEwen said.

aid” to a multifamily dispute. The firefighters responded with their standard level of urgency until another police officer got on the interoperable radio to inform them that three children had been stabbed.

“That geared us up right away, and we had additional resources coming. The interoperability eliminated the time lag, it just puts us all on the same page,” Dominguez said.

In Orange County, there’s also a dispatch-to-dispatch talkgroup that lets dispatch centers share information with one another. For example, if a local public safety answering point lost its 911 trunks or if an agency needed a language translator, it would use this talkgroup rather than the phone.

The unified system also empowers dispatchers to more quickly find the best-suited responders for incidents with its “red-hot” receiver. Every city sheriff’s patrol unit and every dispatch center monitors a talkgroup known as Red. Law enforcement uses the Red talkgroup to disseminate countywide broadcasts such as Amber Alerts and crimes in progress. All units in the county can track the progress of each incident through the Red talkgroup.

“What really strikes me is that somebody will come to work in our county and they say, ‘Wow, I can’t believe this radio system. Where I came from, we had nothing like this.’”

— Robert Stoffel, division director, Orange County Sheriff’s Department

Without the red-hot receiver, dispatchers would be calling other dispatchers on the telephone to pass the word to their responders, which delayed the alert.

“What really strikes me is that somebody will come to work in our county and they say, ‘Wow, I can’t believe this radio system. Where I came from, we had nothing like this.’ Or we hear from somebody who left Orange County and went somewhere else and they say, ‘Man, things are so messed up here. I can’t believe they have no somebody who left Orange County and went somewhere else and they say, ‘Man, things are so messed up here. I can’t believe they have no

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The SA-441M MagForce Mechanical siren was judged one of the top new products at the EMS Expo in Las Vegas in October 2008. For more information, visit www.carsonsirens.com.

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Regional Action Requires Coalition Warfare Approach

Developing a functioning emergency management program isn’t easy. There’s always more work to do than staff and other resources to do it. The turnover in personnel causes a never-ending requirement to build relationships and engage those people in planning, training and exercising.

But it’s not enough to have a functioning program based on an individual organization. Building a disaster-resilient community requires teamwork with regional partners.

We all favor unilateral action. We’re by nature selfish people who want to have our way. Somewhere in our development cycle, we learn to share toys and to play nice with others. Then we grow up, become emergency responders and emergency managers, and forget everything we learned in kindergarten.

Regional action can’t be forced. When it’s time to form a regional emergency management partnership for common action — be it planning, training or exercising — it’s involuntary by nature.

For others to join you in regional action, the other parties will have to see a benefit for them and their organization.

To have regional efforts, you’ll need to build regional relationships. No one is going to partner with someone they don’t trust.

Some agencies and jurisdictions will immediately join your regional partnership, and others will hang back with a wait-and-see attitude before they join.

Just as in coalition warfare, you start by working with those nations/organizations that you know best, the ones you’ve established relationships with. They may not immediately leap at the chance to partner with you on a regional activity. They have their own goals and objectives to meet. Regional activities are on top of their normal workload, so it is not an easy sell.

“Shuttle diplomacy” will be needed to get the coalition put together in the first place and continue throughout. There’s little that’s static about our emergency management world. It will require you to communicate in person and in writing with all your partners as you seek to build the coalition. Getting out of your office and sitting in theirs is a great way to show your interest in joint action. Understanding their fears, concerns and needs is critical to putting together a lasting partnership.

You will have to give up unilateral control to achieve joint action. The larger the organization is, the harder this will be to accomplish. When you are “bigger,” you’re used to having it your way. Compromising doesn’t come naturally to larger organizations. If you’re the larger organization looking to work regionally with your partners, they’ll be apprehensive. You’ll have to conquer their fears and build trust through personal relationships.

More than 12 years ago, King and Pierce counties collectively took action to do regional mitigation projects as part of Project Impact. It started with both counties agreeing to combine separate grants they had received and managing the funds together. King County (my organization) — being twice the size of Pierce was the feared entity.

To achieve a regional coalition, I compromised and gave our $300,000 in funds to Pierce County to be administered by their staff. We hired one coordinator who we shared, but he worked in the Pierce County office.

The partnership between King and Pierce counties grew over the years with other joint agreements and coordinated actions. It began as a neighborly relationship and grew into a strong bond that withstood some challenging moments. That’s what coalition warfare and regional action is supposed to do.
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The summer 2007 issue of Emergency Management magazine outlined the importance of education programs for emergency managers in Jessica Jones’ and Jim McKay’s article, Cracking the Books. Although colleges and universities now offer degree programs in emergency management, many of our emergency managers — fire, police and emergency medical service chiefs — have risen from the “front lines.” These leaders come to us with tremendous tactical experience in public safety, working under the guidelines of the Incident Command System and National Incident Management System.

But they have varied educational backgrounds, from those who achieved advanced degrees to those who completed only a few college-level courses. Developing executive-education programs for our emergency management leadership is a critical step forward in taking the in-the-field experience and expertise and utilizing it to develop operating procedures, policies and strategies that will ultimately make our emergency management plans stronger and organizations more resilient.

Executive-education programs can be developed by taking advantage of existing courses available at internationally known universities, such as Harvard University’s John F. Kennedy School of Government, or by partnering with local colleges, universities and state agencies to develop a training program that best meets specific needs and budgetary constraints. Local colleges and universities are often willing to provide seats in courses for state and local emergency managers as a show of good will; it’s also a service they can provide local government in lieu of taxes.

These institutions are offering distance-learning courses in leadership and emergency management via a Web-based format that provides the same basic concepts more accessibly and less expensively. And state agencies often provide training at no cost on an as-needed basis, for topics such as grant writing guidance, ethics, legal requirements and human resources.

When developing executive-education programs, I believe you need to match your organization’s mission areas with courses that complement those missions, and not try to develop a one-size-fits-all program. Additionally the program must balance one-time-only courses with courses that must be refreshed periodically.

Over the past year, we’ve been developing an executive-education program for the Boston Fire Department that seeks to take advantage of the items listed above. The program’s aim is to give the department’s leadership the educational opportunities that will allow them to develop professionally and personally. The city’s law department facilitated education on legal responsibilities, and the state ethics commission provided ethics training for senior managers. Working with the John F. Kennedy School of Government, we identified many courses that would best suit our specific needs and then created a program that covers numerous topics — from leadership and strategic management to negotiating collective bargaining agreements, as well as innovative leadership through IT use.

After each course, we get feedback from our students to see if the course met our goals and if it provided training and education that benefits our mission. Over time, we’ll add and remove courses to refine our program and provide the best mix of leadership and management training available within our budgetary constraints.

We all recognize that learning is something that doesn’t end, and we must ensure that we provide our leaders with the knowledge they need to prosper. An effective executive-education program tailored to your organization’s needs will accomplish that goal.
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