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TESTIMONY

Before the House Homeland Security Committee
Subcommittee on Emergency Preparedness, Response, & Communications

Weathering the Storm: A State and Local Perspective on Emergency Management

June 10, 2011

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Introduction

Thank you Chairman Bilirakis, Ranking Member Richardson, and distinguished members of the Subcommittee for the opportunity to testify today on behalf of the National Emergency Management Association (NEMA). Reflection on the events of the past six years, since some of the most significant natural disasters of our time, allows us to learn from the past and properly assess where we currently stand as a nation and a profession. As disasters continue to challenge our nation's emergency managers, we seldom have time to look back and reflect on how far we have come.

Many of the most significant changes in emergency management have been influenced through evolving technology and its impact on our society. In the past six years, we have witnessed better integration of the private sector in emergency management preparedness, response and recovery. Improved technologies and more effective use of social media impacts every aspect of public engagement. Exercise programs and public warning and communications systems continue to evolve to meet ever-changing threats.

Private Sector Integration

Working with the private sector has always been a priority in emergency management, but after Hurricanes Katrina and Rita in 2005, we realized improvements could be made and "cooperation" must become "integration." An example of this integration comes from Louisiana which is bringing the private sector closer to the center of the entire decision-making process.

Through a Cooperative Endeavour Agreement, Louisiana used EMPG funds to begin developing the Louisiana Business Emergency Operations Center (LABEOC). A stand-alone facility, the LABEOC is interconnected with the State EOC in Baton Rouge. It is designed to improve disaster preparedness and response by:

1. Improving communications to and from business and industry before, during, and after a disaster,
2. Utilizing a business model when more efficient and cost effective to respond to resource and other requests; and
3. Leveraging the critical infrastructure representatives in the LABEOC to help bring communities back online while receiving real-time economic impact information important in determining level of state and federal assistance.

The LABEOC also facilitates better communication and coordination with the private sector and the requests and needs of nonprofits through national and state Volunteer Organizations Active in Disasters (VOAD). This model has gained the attention of DHS and neighboring Gulf states, which have expressed interest in establishing Business Emergency Operations Centers within their own states.

Alert and Warning Systems

The public-private relationship is also linking advances in technology with alert and warning systems. One of the basic lessons learned from Katrina was the need to effectively reach out to the broadest audiences possible during a disaster.

The Washington State Emergency Management Division (WEMD) and its technical contractor, Federal Signal Corporation, developed the All-Hazard Alert Broadcasting (AHAB) siren network to provide state

and local officials with the capability to effectively alert the public to any hazardous situation that may arise. While the system is designed to provide timely warning for any hazard, its primary function in the state is to conduct notification to outdoor populations of impending tsunamis. This joint effort between WEMD and Federal Signal represents the power of public-private partnerships to meet the unique needs of public alert and notification requirements for multiple hazards.

To increase the effectiveness and coverage of this key communication network, the AHAB system provides both tone and voice alert capability to state and local emergency management authorities. Social science research indicated citizens often remain unaware of what to do when they hear sirens. To alleviate potential confusion, this system was designed not only to provide an audible alert, but also play pre-scripted digital directions which give at-risk individuals critical and timely information on how to respond appropriately to the emergency. The system produces 360 degree coverage and has a distinct blue strobe light which provides a visual extension of the warning signal for the hearing-impaired and in areas with high ambient noise.

AHAB sirens are capable of being activated from the State EOC Alert and Warning Center via satellite or from the local emergency management agency using Radio Frequency technology and both activation pathways are tested regularly. This siren network now covers the outer coast and Strait of Juan de Fuca shorelines of Washington State and supplements indoor alert and notification provided through the Emergency Alert System (EAS) and National Oceanic and Atmospheric Administration weather radio. The deployment strategy has focused on first installing sirens in population centers and at high-risk or critical facilities. Initial sound studies indicate 96 sirens are necessary for full warning coverage and 50 sirens have been deployed as of May 2011.

Since the creation of this system, AHAB has become the de-facto standard for tsunami alert and notification for outdoor populations. Based on the successful implementation of the AHAB siren network in Washington, similar systems have been installed in Alaska and Puerto Rico. Pierce County, Washington has also deployed AHAB sirens as part of the volcano warning system for Mount Rainier.

Enhancing Technology

Technological advancements in the past six years go far beyond traditional alert and warning systems. Virginia Department of Emergency Management (VDEM) maintains a system marking true innovation through the Virginia Interoperability Picture for Emergency Response, or VIPER.

This tool not only allows the Virginia Emergency Operations Center staff the ability to visually assess statewide emergency management operations in real time but also automatically offers users instant access to essential local information through traditional Geographic Information Systems layers.

VIPER can work in various emergency scenarios. If a locality experiences a rapidly escalating traffic incident, VIPER will provide information about nearby hospitals; in the case of a hazardous materials spill, VIPER will offer data about area schools; during a flood, VIPER will alert users to low-lying areas which could be affected. VIPER monitors environmental sensors and gathers data from VDEM's crisis management system as well as external systems, such as Computer Aided Dispatch, the National Weather Service and the Integrated Flood Observation and Warning System. VIPER then performs an analysis of all available information and alerts VDEM to potential impacts on critical infrastructure.

VIPER stands as an example of how each of the states can be utilized as unique and distinct test beds of innovation. This has already occurred for VIPER, as several state agencies across the country have begun to incorporate elements of the tool into their operations, including the Florida Division of Emergency

Management, Mississippi Fusion Center, North Carolina State Police, the South Carolina Emergency Management Division, Texas Border Control, and local government agencies in Beverly Hills, California; Clarke County, Nevada; and Virginia Beach, Virginia. VIPER also helped DHS, FEMA, the U.S. Secret Service, and VDEM monitor the 56th Presidential Inauguration, and Tampa officials used VIPER to monitor Super Bowl XLIII.

VIPER has received numerous honors, including those from the Council of State Governments and the Ash Center for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government which acknowledges creative government initiatives around the country.

#smem

No discussion regarding technology and public outreach in the past six years is complete without acknowledging the vast impacts of social media. While many of the innovations in emergency management stemmed from lessons learned during the response and recovery from Hurricane Katrina, one of the most influential changes evolved naturally and has recently proven to be a critical resource for emergency responders and others in a disaster situation. The onset of the social media wave in our personal lives occurred rapidly. It is often hard to remember that in 2005 Facebook and YouTube could only measure their existence in months while Twitter would not be created until a year after Katrina altered the Gulf Coast forever.

The use of social media in disasters seems like a natural progression. The public uses new media platforms to document their daily activities and express opinions about current events. Smartphones have put the power of social media in to the pockets of citizens we serve, allowing them to be a partner in the disaster preparedness, response, and recovery process. On twitter, hashtags are often used to coordinate discussion. These hashtags help people communicate and discuss issues of importance. Social media in emergency management (or "smem") has become a hashtag utilized by people around the world to engage emergency management stakeholders from various disciplines and has proven to be a vital forum for discussion of the evolution of this emerging technology.

Within the emergency management and homeland security community, the introduction of social media has been met with varied opinions. Skepticism and doubt were natural reactions for some, while many worked from the outset to integrate this new technology into their existing structures. Incredibly, nearly every State Emergency Management agency has a presence on Twitter and half also have a presence on Facebook. FEMA has a number of accounts on Twitter, Facebook, and YouTube; and has encouraged partnerships between FEMA and the states. During the Tennessee floods of 2010, FEMA partnered with the Tennessee Emergency Management Agency to encourage information and picture sharing of the response and recovery. Many challenges exist in adoption, but FEMA has encouraged state and local officials to address challenges or barriers in their own agencies prior to a disaster so social media use is not a burden, but rather another tool in a comprehensive toolbox.

FEMA leadership has been challenging the emergency management community to innovate faster than the speed of government. Instead of trying to make systems fit the traditional emergency management structure, and make the public fit how we communicate now, we must meet the needs for accurate information following a disaster by figuring out how best to engage the public. We continue to experiment with new platforms and technologies and as state emergency managers we work with our own staffs to bring these efforts down to a community level.

During the recent storms in Alabama and Missouri, as well as the flooding in Louisiana, the evolution of a social media workforce has continued. FEMA has come to rely on online databases to track the status of missing people, and it now uses digital mapping to allow search-and-rescue teams to deliver resources

to areas of highest need. The agency has started to see the emergence of a new group of volunteers from around the world who are able to apply technology in real-time situations to "crowd source," a method of using large numbers of people to work on common problems and share information and solutions. These volunteers cull the internet for open source information and put this into databases or on maps to provide first responders and local officials with a clear picture of an incident without impeding the immediate response work being done on the ground.

Technology continues to evolve and while current social media platforms may seem like they are going to be around forever, we must constantly remain aware of how our citizens communicate. Limited resources on the state and local level make leveraging existing models and platforms key factors in success before, during, and after a disaster. Social media is constantly changing and harnessing the power of this revolution can help the emergency management community be more effective in serving our citizens in their time of need.

Mutual Aid

Mutual aid, specifically through the Emergency Management Assistance Compact (EMAC), has evolved into one of the best supporting mechanisms for state emergency managers to obtain assistance throughout the country. This assistance occurs rapidly with arrangements pre-determined for reimbursement and deployment.

When states and the U.S. Territories joined together and Congress ratified EMAC (Public Law PL-104-321) in 1996, the legal and procedural mechanism was created whereby emergency response resources such as Urban Search and Rescue Teams can quickly move throughout the country to meet disaster needs. All 50 states, the District of Columbia, and three territories are members of EMAC and have committed their emergency resources in helping neighboring states and territories.

EMAC has grown significantly in size, volume, and the type of resources provided over the years. Since 2004, the volume and types of resources requested under EMAC has grown considerably. For example, 26 emergency management personnel responded to the September 11, 2001, terrorist attacks. Conversely, over 66,000 personnel from a variety of disciplines deployed to the Gulf Coast in response to Hurricanes Katrina and Rita and 12,279 personnel to Texas and Louisiana during Hurricanes Gustav and Ike. The response lasted 63 continuous days with a total of 265 completed missions. The 2009 Spring Flooding in North Dakota and Minnesota resulted in states deploying equipment, sandbags, and 1,029 personnel to North Dakota. In all, 727 National Guard personnel and 302 civilians were sent to assist via the compact.

Exercise Programs

While we must always be ready to harness innovations in emergency management and the society in which we work to protect, strides must be taken to ensure our agencies remain robust from within as well. Such improvements are often ensured through the use of effective exercise and training doctrines which have realized vast improvements in the past decade. More recently, these exercise programs work to involve the public more and become rolling assessments of where we stand operationally.

California's annual Statewide Golden Guardian Exercise Series was first implemented in 2004 and is managed by the California Emergency Management Agency (CalEMA). The purpose of Golden Guardian is to enhance the all-hazards emergency management readiness of regional and state responders, including private sector and volunteer organizations. The goal is to build upon the lessons learned to improve California's ability to prevent, protect, respond, and recover from catastrophic natural and manmade disasters. Golden Guardian is currently the largest statewide exercise program of its kind in the country.

But California does not stop with Golden Guardian in assessing the state's level of readiness. The third Thursday of each October, millions of Californians practice how to protect themselves during an earthquake. The Great California ShakeOut begins with the "Drop Cover and Hold On" drill, however, the campaign reaches beyond to inspire Californians to become more earthquake-resilient at work, school, home, and in their communities. ShakeOut began as a southern California regional event in 2008, providing a public participation element to California's Golden Guardian annual exercise. It was the largest earthquake drill in U.S. history at the time with a total of 5.4 million participants. The success of the exercise led to a statewide event in 2009, with more than 6.9 million participants, and is now annual California event that included nearly 8 million drill participants in 2010.

Conclusion

As you can see, the emergency management profession has changed dramatically since 2005 and will continue to do so as the relationships between homeland security and emergency management, public and private sector representatives, and government officials with the public evolve. By engaging diverse stakeholder groups, the emergency management community will benefit from enhancements and overhauls while leveraging the innovative nature of professionals and community members. Some changes in the community have been reactions to specific disasters, while others developed organically; answering questions many of us never thought to ask. The best way to continue this pattern of innovation is to be confident in past accomplishments and open to future changes that will make the profession more effective, efficient, and ultimately, more meaningful for the citizens that we serve.