



U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

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December 9, 2011

BRIEFING MEMORANDUM

TO: Members of the Subcommittee on Economic Development, Public Buildings, and Emergency Management
FROM: Subcommittee on Economic Development, Public Buildings, and Emergency Management Staff
SUBJECT: Oversight Hearing on “The Effectiveness of Our Nation’s Public Alert System”

PURPOSE

The Subcommittee on Economic Development, Public Buildings and Emergency Management will meet on Tuesday, December 13, 2011, at 9:30 a.m., in 2167 Rayburn House Office Building to receive testimony from the Federal Emergency Management Agency (FEMA), the Federal Communications Commission (FCC), and representatives of the wireless, cable, and broadcasting industries. The purpose of the hearing is to examine the development of FEMA’s Integrated Public Alert and Warning System (IPAWS) and receive testimony regarding the recent test of the nation’s Emergency Alert System (EAS).

BACKGROUND

Legislation

On September 13, 2011, Subcommittee Chairman Denham and Ranking Member Norton introduced H.R. 2904. H.R. 2904, the Integrated Public Alert and Warning System (IPAWS) Modernization Act of 2011, would establish a clear framework and timetables for FEMA’s modernization of its public alerts and warning system. Similar legislation was introduced in the 110th and 111th Congresses. FEMA is responsible for ensuring alerts and messages of the President can be sent to the public pursuant to Section 202 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Development of IPAWS is pursuant to that authority.

Last Congress, the Subcommittee conducted an investigation of the development of IPAWS and the Government Accountability Office (GAO) issued a report¹ that highlighted concerns related to FEMA's development of IPAWS. The Subcommittee's investigation and GAO's report supported the need for legislation to ensure consultation and coordination with key stakeholders, strategic planning, and the timely roll out of the new system.

H.R. 2904 is modeled after the WARN Act. In 2006, Congress enacted the Warning, Alert, and Response Network (WARN) Act. That Act established a similar framework, led by the FCC, to develop a system that would provide for the use of wireless technologies in sending alerts. During the course of the Subcommittee investigation, the framework established by the WARN Act ensured input by the relevant industries maximizing buy-in by the private sector and helping to facilitate decision-making by establishing timetables. H.R. 2904 is intended to apply a similar framework to the development of IPAWS.

Emergency Alert System

Currently, the United States issues emergency warnings through the Emergency Alert System (EAS) – the successor to the Emergency Broadcast System (EBS) -- which relays messages through broadcast and other media. EAS allows the President and authorized officials to transmit emergency messages to the public via television (TV) and radio through a hierarchical distribution system dating back to the 1960s. FEMA is responsible for administering EAS at the national level and distributing Presidential alerts to national primary stations, known as Primary Entry Point (PEP) stations. PEP stations are stations that have been hardened to protect them from disasters, including back up generators and fuel onsite. Broadcasts of the national level alerts are relayed by the PEP stations across the country to radio and TV stations that rebroadcast the message to other stations and cable systems. The retransmission of alerts from one EAS participant to another is commonly referred to as a “daisy chain” distribution system.

Additionally, the National Oceanic and Atmospheric Administration's (NOAA) Weather Radio, All Hazards Network, sends alerts through NOAA Weather Radio (NWR), which has been expanded to include warnings for all hazards.

On November 9, 2011, the first nation-wide test of EAS was conducted. The test only involved the legacy TV and radio system. The test was originally planned to last for three minutes; however, a decision was made to reduce the test time to 30 seconds. FEMA asserts this decision was made due to the limited ability to alert the public that the alert was only a test. The visual message indicated that EAS had been activated; however, the message indicating it was a test was in audio. This raised concerns that many, including the hearing impaired, could mistake the test as an actual emergency. While an official assessment will be not available until after December, as broadcasters have until the end of the year to submit reports, some of the issues reported include 3 of

¹ Emergency Preparedness: Improved Planning and Coordination Necessary for Modernization and Integration of Public Alert and Warning System, GAO-09-834, Sep 9, 2009

the 63 PEP stations failed to rebroadcast the message resulting in some members of the public not receiving a message and reports of poor or no audio or the playing of music in lieu of the message.

Integrated Public Alert and Warning System

On June 26, 2006, former President Bush issued Executive Order 13407, stating the U.S. policy is “to have an effective, reliable, integrated, flexible and comprehensive system to alert and warn the American people.” The former President issued a list of functional requirements for the Secretary of Homeland Security. The requirements were based on recommendations of experts in the field and included:

- evaluating and assessing existing resources at all levels of government;
- adopting common alerting protocols, standards terminology, and other procedures to enable interoperability;
- delivering alerts on criteria such as location and risk;
- accommodating disabilities and language needs;
- supporting necessary communication facilities;
- conducting training, testing, and exercises;
- ensuring public education about emergency warnings;
- coordinating and cooperating with the private sector and government at all levels;
- administering the existing EAS as a component of a broader system; and
- ensuring that the President can alert and warn the American people.

Executive Order 13407 directed the Department of Homeland Security (DHS) to meet this challenge “to ensure an orderly and effective transition” from current capabilities to the system described in the executive order and to report on the implementation of the system within 90 days after the Order, and on at least a yearly basis thereafter. FEMA’s IPAWS program was initiated in 2004, and has become the programmatic mechanism to carry out this Executive Order. IPAWS is defined by FEMA as a “system of systems,” which is intended to eventually integrate existing and new alert systems including EAS. Therefore, EAS is expected to be superseded as the nation’s primary alert function by IPAWS. EAS will act as one of IPAWS’ component parts and one of the primary mechanisms to disseminate alerts.

IPAWS aims to be the nation's next generation public communications and warning capability. As previously mentioned, the current EAS is based on generally outdated technology that mostly relies on radio and TV to transmit audio-only alerts.

Today, the public uses many different technologies to receive information and is increasingly less reliant on TV and radio.

The aim of IPAWS is to improve public safety through the rapid dissemination of emergency messages to as many people as possible over as many communications devices as possible, including in multiple languages, in American Sign Language, and in Braille. To do this, IPAWS seeks to expand the traditional alert and warning system to include more modern technologies such as digital technology and, at the same time, upgrade the alert and warning infrastructure so that no matter what the crisis is, there would be near instantaneous transmission and receipt of alerts to the public. The alerts would be transmitted through digital technologies that can reach various communications devices, such as mobile phones, land lines, pagers, fax machines, personal digital assistants, desktop, computers, and digital road signs.

Under IPAWS, an alert is initiated either by the President or by a designated State official. The designated State official sends a message to FEMA, which is designated as the “aggregator” for the messages. FEMA then authenticates the message and the sender and ensures that the message complies with what is known as the Common Alerting Protocol (CAP). The message is then transmitted to the PEP stations via phone lines and satellites and the PEP stations in turn rebroadcast. The Common Alerting Protocol is a standard adopted by the international standards-making body, the Organization for the Advancement of Structured Information Systems (OASIS). CAP ensures messages meet the proper technical standards to be transmitted. FEMA officially adopted CAP in September, 2010.

Last Congress, the Subcommittee held a hearing in September 2009 which highlighted the potential of digital technology to transmit information to the public through many methods of communication. Such technology can be used to send video, for example, that could facilitate visual information understandable to people with limited English proficiency. The technology could also be used to trigger lights or other devices to facilitate alerts for people with disabilities.

As highlighted, the IPAWS legislation introduced by Chairman Denham and Ranking Member Norton mirrors the framework established in the WARN Act for the wireless industry. The Warning, Alert and Response Network Act (WARN Act), as signed into law as Title VI of P.L. 109-347, the Security and Accountability for Every Port Act of 2006 (The SAFE Port Act), required the establishment of a Commercial Mobile Service Alert Advisory Committee (CMSAAC) by the FCC. Committee members included State, local and tribal governments, members of the private sector, and representatives of people with disabilities. The Committee was charged with providing the FCC with recommendations on technical requirements, standards, regulations, and other matters needed to support the transmittal of emergency alerts by commercial mobile service providers to their subscribers on a voluntary basis.

In April 2008, the FCC adopted most of the recommendations made by the CMSAAC, including those for wireless carriers to transmit certain types of alerts, specifically Presidential, imminent threat, AMBER alerts and emergency alerts originated by State, local and other non-Federal entities and the coverage is to be nationwide with a

Federal agency managing the alerts by acting as an aggregator in accepting, verifying and routing messages. Since the recommendations were issued, FEMA has agreed to serve as the Federal aggregator.

While the wireless industry was not included in the recent EAS test, since passage of the WARN Act, the FCC has led the development of a wireless system to carry a public alert or warning called the Commercial Mobile Telephone Alerts (CMAS). CMAS would require participating carriers to transmit three types of messages: presidential alerts, Amber alerts, and Imminent Danger Alerts (e.g. tornados). As has occurred in past disasters, typically the wireless networks have been overloaded with people attempting to make phone calls or send text messages. The WARN Act process has led to the formulation of a system in which wireless carriers would send a broadcast cellular message which means that rather than, for example, thousands of text messages going through the system, the broadcast message acts as if it is one message, thus minimizing the potential an alert would clog the system. In addition, the broadcast method allows for geo-targeting – sending the alert only to those cellphone owners within the area broadcasting the alert.

While participation in CMAS is not required by law, currently a significant number of carriers have agreed to participate, covering 96% of the wireless customer base. The four largest carriers involved include Verizon, AT&T, Sprint, and T-Mobile. More are expected as the system is rolled out with the first roll out expected in New York by the end of the year. While the four largest carriers are prepared or nearly prepared to roll out the system nationwide, FEMA must still finalize the technical connections and certify and train the designated States officials assigned to originate messages.

WITNESSES

Mr. Damon Penn
Assistant Administrator
National Continuity Programs Directorate Federal Emergency Management Agency

Mr. James Arden Barnett, Jr.
Rear Admiral (Ret.)
Chief, Public Safety and Homeland Security Bureau Federal Communications
Commission

Ms. Suzanne D. Goucher
President & CEO
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Mr. Chris Guttman-McCabe
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Dr. William Check
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