



**U.S. House of Representatives**  
**Committee on Transportation and Infrastructure**

**James L. Oberstar**  
Chairman

Washington, DC 20515

**John L. Mica**  
Ranking Republican Member

David Heymsfeld, Chief of Staff  
Ward W. McCarragher, Chief Counsel

June 3, 2008

James W. Coon II, Republican Chief of Staff

**SUMMARY OF SUBJECT MATTER**

**TO:** Members of the Subcommittee on Economic Development, Public Buildings, and Emergency Management

**FROM:** Committee on Transportation and Infrastructure Oversight and Investigations Staff

**SUBJECT:** Hearing on "Assuring Public Alert Systems Work to Warn American Citizens of Natural and Terrorist Disasters"

**PURPOSE OF THE HEARING**

On Wednesday June 4, 2008, at 10:00 a.m., in room 2167 of the Rayburn House Office Building, the Subcommittee on Economic Development, Public Buildings, and Emergency Management will hold a hearing on the efforts within the Federal Government, in particular the Federal Emergency Management Agency ("FEMA"), to modernize, expand, and integrate existing emergency alert warning systems mainly through the Integrated Public Alert and Warning Systems ("IPAWS"); and on H.R. 6038, the "Integrated Public Alerts and Warning Systems Modernization Act of 2008."

**BACKGROUND**

**Emergency Alert System**

Presently, the United States issues emergency warnings through the Emergency Alert System ("EAS"). EAS is the successor system to the Emergency Broadcast System, and relies primarily on broadcast media and the National Oceanic and Atmospheric Administration's (NOAA) Weather Radio All Hazards Network.<sup>1</sup> NOAA sends alerts through NOAA Weather Radio (NWR), which has been expanded to include warnings for all hazards.

Although the name of the system has changed since its inception, the nation's current system of emergency alerts and warnings was developed in the early 1950s to send public alerts and

---

<sup>1</sup>National Oceanic and Atmospheric Administration's Weather Radio All Hazards Network work in cooperation with FEMA on several aspects of EAS.

emergency messages through broadcast radio and television stations as part of America's response to the threat of nuclear attack. As the system evolved, it was opened to state and local participation.

Responsibility for civil defense measures, including the current operation of EAS at the national level, has rested with the Administrator of FEMA, and its predecessor agencies, since the 1950s.<sup>2</sup> The Federal Communications Commission ("FCC") has been designated by FEMA to manage broadcaster involvement in EAS. The FCC currently provides technical standards and support for EAS, including rules for its operation and enforcement within the broadcasting community. Non-Federal EAS operational plans are generally developed at the state and local level. The FCC requires States that have developed an EAS plan to file the plans with the FCC. Not all States have FCC-compliant EAS plans that have been reviewed by the FCC. FEMA advisors often help to integrate EAS usage into regional or state emergency response plans. The decentralized process of EAS coordination and implementation contributes to uneven planning; for example, procedures for initiating a message and activating EAS differ from state to state.<sup>3</sup>

Currently, broadcast radio and television stations, cable television systems, and satellite operators are required to participate in national-level EAS alerts, yet participation in state and local EAS alerts is voluntary. The FCC requires that broadcast and cable stations install FCC-certified EAS equipment as a condition of licensing. Even though broadcasters, not the state or local authorities, have the final authority whether or not to transmit a non-Federal emergency message, there has been a long history of cooperation.

To date, there has never been a national-level alert. The District of Columbia, Puerto Rico, the U.S. Virgin Islands and 42 of 50 states have activated EAS at a state level. Approximately 90 percent of all messages and 100 percent of all Federal messages disseminated by the EAS are generated by NOAA weather alerts.<sup>4</sup> FEMA directly delivers the national-level alerts to the Primary Entry Point ("PEP") stations. Broadcast of these national-level alerts are relayed by the PEP stations throughout the nation to radio and television stations that rebroadcast the message to other broadcast stations and cable systems until all EAS participants have been alerted.<sup>5</sup> The transferring of alerts from one EAS participant to the next is often referred to as the "daisy chain" distribution. Originally, there were 34 PEP stations nationwide. FEMA has begun to add additional stations and has plans to expand the number of PEP stations to 63, which will enable every state and territory to be covered.

---

<sup>2</sup>P.L. 103-337, National Defense Authorization Act for Fiscal Year 1995, Title XXXIV- Civil defense, Sec. 603 (42 U.S.C. 5196), amending the Federal Civil Defense Act of 1950 (64 Stat 12450). Also, integrated in the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5152 and seq.).

<sup>3</sup>CRS Report for Congress, The Emergency Alert System (EAS) and All-Hazard Warnings, page 2, May 5, 2008, Linda K. Moore.

<sup>4</sup>FEMA Briefing by Lance Carver, Director Integrated Public Alert and Warning System Program Management Office, "Integrated Public Alert and Warning System Overview", April 18, 2008.

<sup>5</sup>Originally, there were 34 PEP stations across the country. FEMA reports that in order to provide more coverage they plan to increase the number to 63.

On June 26, 2006, President Bush issued Executive Order 13407, stating that the U.S. policy is “to have an effective, reliable, integrated, flexible and comprehensive system to alert and warn the American people...” The President issued a list of functional requirements for the system, including:

- 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 private sector and government at all levels;
- administering the existing Emergency Alert System as a component of a broader system; and
- ensuring that the President can alert and warn the American people.<sup>6</sup>

### **FEMA: The Integrated Public Alert and Warning System (“IPAWS”)**

Currently, there are several Federal initiatives to improve, expand, and integrate these existing warning systems. The Integrated Public Alert and Warnings System (“IPAWS”), which is a public-private partnership in which FEMA has a leadership role, is the primary initiative regarding testing and developing state-of-the-art technology to transmit alerts and warnings.

In response to Executive Order 13407, FEMA created the IPAWS Program which is administered by the IPAWS Program Management Office to oversee the evolution of the public alert and warning system.

According to FEMA, IPAWS aims to be the nation's next generation public communications and warning capability. FEMA is working with public and private sectors to integrate warning systems to allow the President and authorized officials to effectively address and warn the public and state and local emergency operations centers via phone, cell phone, pagers, computers, and other personal communications devices.

The current emergency alert system is based on generally outdated technology that relied on radio and TV to transmit audio-only alerts. Today, the public uses many different technologies to receive information and is 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 and in American Sign Language and Braille. IPAWS seeks to expand the traditional alert and warning system to include more modern technologies 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 by the public through digital technologies that can reach various communications devices, such as mobile phones, land lines,

---

<sup>6</sup>Executive Order 13407, “Public Alerts and Warning System”, signed by President George W. Bush, June 26, 2006.

paggers, fax machines, personal digital assistants, desktop computers, and digital highway signs. IPAWS is currently running pilot programs in various locations and the aim is to eventually make the programs nationwide.

Presently, FEMA and other Federal agencies are working with tribal governments, state and local emergency managers and broadcasters to test elements of the IPAWS program. The goal is to expand these 14 pilot programs that are being conducted in various locations across the country to nationwide application once testing is complete. According to FEMA, the pilot programs include:

- **Geo-targeted Alerting System (“GTAS”):** The GTAS pilot is a joint FEMA and NOAA public alert and warning project. GTAS is testing new technologies to give emergency managers the ability to predict hazard zones in near-real-time, to collaborate on which areas to alert and what the message should be, and then to deliver these alerts and warnings to residents in a specific geographic area based on risks and recommended protective measures.
- **Web Alert Relay Network (“WARN”):** The WARN pilot project provides emergency operations staffs with web-based collaboration tools and alerts and warnings capabilities. In addition, the WARN pilot is working to develop a two-way messaging framework based on international standards that supports emergency messages generated and sent out by authorized emergency officials at the Federal, state, region, county, parish or tribal level. The WARN pilot also provides opt-in capabilities for the public in pilot locations to receive alert and warning messages on their computers, cell phones, paggers, and other devices.
- **Digital Emergency Alert System (“DEAS”):** DEAS is a program designed to upgrade the existing EAS with digital technologies and international warning standards, such as the Common Alerting Protocol (“CAP”). Upgrades associated with the DEAS program include the provisioning of all public television stations across the country to enable them to disseminate DEAS messages through their digital broadcasts. Additionally, there are on-going DEAS state and territory pilots whereby an Emergency Operations Center can originate alerts and warnings using CAP and then disseminate them using the public television station digital broadcasts.
- **Emergency Telephone Notification (“ETN”):** ETN allows emergency managers to log in and provide warning messages. ETN also provides automated calling of all residents in a selected geographic area. (This is formerly known as reverse 911.)
- **Enhanced ETN:** This pilot provides additional servers to ETN to minimize the chance of outage and adds capability for translation from English to multiple languages.
- **Deaf and Hard of Hearing Notification System (“DHNS”):** DHNS provides emergency information to the hearing impaired community and uses American Sign Language videos to inform those with hearing disabilities. DHNS sends the information over the Internet and via other communication devices.<sup>8</sup>

---

<sup>8</sup>Program summarized from the FEMA website, IPAWS Program.

Modernizing and integrating the public alert and warning system is an extremely large and complicated task. The different and often separate roles and responsibilities that the Federal Government, State and local governments, and other non-governmental and private sector stakeholders play in disseminating alerts has often led to problems with coordination, and uneven effectiveness of EAS utilization from state to state.<sup>9</sup> It is evident that during the early implementation of IPAWS, FEMA envisioned developing an integrated public alert and warning system that would provide effective warnings at all times, in all places, under all conditions and over all broadcast media devices available to the public. FEMA implemented pilot projects to test the digital capabilities of public radio and television, provide more geographically targeted alerting capabilities, just to name a few, and to upgrade and expand the relay distribution system.

Now that many of the pilot programs are concluding, some stakeholders worry that FEMA may not have a clear plan and several challenges remain. According to information provided to Committee staff, FEMA is realigning some of the IPAWS program. Many stakeholders want to see a clear end-state articulated, including how IPAWS is intended to function, a plan with intermediate goals, and a timeline that will show how FEMA intends to reach the end-state. Without a clearly articulated plan and timeline, States and localities may forge ahead and purchase upgraded EAS systems on their own that may not be compatible with other systems and equipment in other parts of the country, making it more difficult to implement a nationwide integrated system. In fact, New York already operates a satellite- and radio-based network, and Washington, California, and some other States have moved ahead in a similar direction. Although there has been progress in modernizing and integrating the EAS system, some critical challenges remain including reaching agreement on standard technology for disseminating alerts, gaining collaboration among EAS stakeholders to ensure all elements of the system can work together, and providing adequate training for EAS participants.<sup>10</sup>

In March 2007, the Government Accountability Office (“GAO”) initiated a study of the functioning of EAS from the perspective of emergency preparedness in government operations. GAO made several recommendations to FEMA and the FCC for additional planning and greater involvement with stakeholders. GAO found that there were problems regarding the dependability and effectiveness in the relay system that had not been identified, in part because there is no requirement for a system test at a national level and that many EAS participants lacked the proper training and technical skills to issue effective EAS alerts. Additionally, the report identified problems such as gaps in disaster planning and insufficient redundancy to ensure uninterrupted broadcasting nationwide. The study did note that FEMA, in coordination with the FCC, continues to work on implementing the executive order regarding improvements to the system. In response, FEMA agreed with the intent of GAO’s recommendations. However, more than one year since GAO’s recommendations, several of the concerns raised by GAO still have not been fully resolved.

### **FCC: Commercial Mobile Alert System (CMAS)**

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” (“SAFE Port

---

<sup>9</sup>CRS Report for Congress, The Emergency Alert System (EAS) and All-Hazard Warnings, page 1, May 5, 2008, Linda K. Moore.

<sup>10</sup>Emergency Preparedness: Current Emergency Alert Systems Has Limitations, and Development of New Integrated System Will Be Challenging, March 30, 2007, GAO-07-411, Mark Goldstein.

Act”) required the FCC to establish a Commercial Mobile Service Alert Advisory Committee (“CMSAAC”). Committee members included state, local and tribal governments, members of the private sector, and representatives of people with disabilities. CMSAAC was charged with providing the FCC with recommendations on technical requirements, standards, regulation and other matters needed to support the transmittal of emergency alerts by commercial mobile service providers to their subscribers on a voluntary basis.<sup>11</sup>

In April 2008, the FCC adopted most of the recommendations made by the CMSAAC, including recommendations for wireless carriers to transmit certain types of alerts including presidential, imminent threat, and AMBER alerts as well as emergency alerts originated by state, local and other non-Federal entities. The FCC also adopted the recommendations that the coverage is to be nationwide and that Federal agency manage the alerts by acting as an aggregator in accepting, verifying, and routing messages.<sup>12</sup> Stakeholders seemed pleased with the collaborative process between government and the private sector that is necessary to the implementation of the public alert and warning system.

The final determination on a choice of a federal aggregator was deferred because FEMA raised concerns that the agency may not have authority to manage alerts as an aggregator. FEMA asked in a letter to the FCC not identify a federal aggregator until all legal issues have been resolved.<sup>14</sup> FEMA has expansive legislative authority over public alerts and warnings, as set forth in Sections 202 (*Disaster Warnings*) and 611(d) (*Communications and Warnings*) of the Robert T. Stafford Disaster and Emergency Assistance Act. These sections provide broad authority for FEMA to issue warnings to state and local officials and to provide technical assistance to these entities for effective warnings; to utilize or make available to federal, State and local agencies the emergency communications system or any other Federal communications system to provide warnings to governmental authorities and civilians endangered by disasters; and to enter into agreement with commercial communications providers for use of facilities for providing warnings to governmental or civilians endangered by disasters. In addition, the Administrator of FEMA may make appropriate provisions for necessary emergency preparedness communication and for dissemination of warnings to the civilian population of a hazard. Committee staff believes this provides FEMA with very broad authorities to do what it takes in the best interest of the public to disseminate alerts and warnings, including serving as a federal aggregator.

Some believe that FEMA’s reluctance and delay in accepting responsibility as the federal aggregator is an example of FEMA’s lack of a clear plan, timeline, and end-state for the modernization and integration of the nation’s EAS system.

However, on May 30, 2008, FEMA announced that it will assume the federal aggregator role for the nationwide Commercial Mobile Alert System. Once the system is in place, FEMA will verify the Federal, state, and local emergency alerts that are sent by “authorized senders” and will transmit alerts to commercial mobile service providers, who will, in turn, transmit them to their cellular subscribers. In addition, FEMA announced that it is working with the Department of Homeland Security’s (DHS) Directorate for Science and Technology and NOAA to adopt CAP as set forth in

---

<sup>11</sup>P.L. 109-347, Sections 603 (a-c) and 602 (a-c)

<sup>12</sup>FCC, First Report and Order, April 9, 2008, PS Docket No. 07-287 (FCC 08-99)

<sup>14</sup>Letter to the FCC, February 19, 2008, from General Martha T. Rainville, Assistant Administrator, Office of National Continuity Programs, FEMA, Docket No. 07-287.

the FCC's July 12, 2007 Second Report and Order, Review of the Emergency Alert System. FEMA plans to adopt CAP within the next 30 to 60 days.<sup>15</sup>

However, there remains the issue of a lack of clear leadership and accountability on a comprehensive plan that would tie all of the elements of an integrated public alert and warning system together. GAO recommended in its 2007 report that FEMA establish forums for the diverse stakeholders involved with emergency communication to discuss emerging issues related to the implementation of an integrated EAS system. These forums should include relevant Federal agencies, state and local governments, private industry and the affected consumer community.

### **The Integrated Public Alert and Warning System Modernization Act of 2008**

On May 13, 2008, Subcommittee Ranking Member Sam Graves introduced H.R. 6038, the "Integrated Public Alerts and Warning Systems Modernization Act of 2008". The bill amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act to direct the President to modernize the integrated public alerts and warning system. The bill authorizes FEMA to do much of what it was already doing administratively through the current authorities in the Stafford Act, as directed by Executive Order 13407, and as authorized through the Post-Katrina Emergency Reform Act. The bill also specifically gives the Administrator of FEMA responsibility for the alerts and warning system and proscribes the Secretary of Homeland Security from transferring that responsibility outside of FEMA without an Act of Congress. The bill requires FEMA to:

- lead the modernization of the EAS system;
- have certain capabilities and meet certain requirements to modernize the system including in summary; establishing or adopting common alert warning protocols, standards and operating procedures; providing the capability to distribute alerts on the basis of geographic locations and risks; providing alerts for individuals with disabilities and limited English proficiency and ensuring that there is training, testing and exercises for the public alerts and warning systems;
- implement pilot programs to demonstrate feasibility;
- develop a system that incorporates multiple communication technologies;
- improve coverage to remote areas;
- promote local and regional and private partnerships;
- provide redundant alert mechanisms; and
- submit a detailed implementation plan that includes a timeline, a spending plan, and recommendations for any additional authority that may be necessary.

The bill also authorizes \$37 million for 2009 and such sums as may be necessary for subsequent years.

### **PRIOR LEGISLATIVE AND OVERSIGHT ACTIVITY**

The Subcommittee has not previously held a hearing specifically on the Emergency Alert System or the Integrated Public Alerts and Warning System.

---

<sup>15</sup>Press Release, FEMA Announces That It Will Assume Aggregator/Gateway Role For Nationwide Cell Phone Alert System, May 30, 2008.

**WITNESSES**

(Listed in Alphabetical Order)

**Mr. Larry Gispert**

President, International Association of Emergency Managers; and  
Director, Department of Emergency Management, Hillsborough County

**Mr. Christopher Guttman-McCabe**

Vice President, Regulatory Affairs  
CTIA – The Wireless Association®

**Mr. James T. Judkins, Jr.**

Suffolk, Virginia Citizen; and  
Emergency Management Coordinator, Suffolk Department of Fire and Rescue,  
Division of Emergency Management

**Chief Derek K. Poarch**

Chief  
Public Safety & Homeland Security Bureau  
Federal Communications Commission

**Major General Martha T. Rainville**

Assistant Administrator  
National Continuity Program Directorate  
Federal Emergency Management Agency

**Mr. Michael Womack**

Director, Mississippi State Emergency Management Agency  
National Emergency Managers Association