

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STATEMENT OF

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On

“This is NOT a Test: Will the Nation’s Emergency Alert System
Deliver the President’s Message to the Public?”

BEFORE THE
**COMMITTEE ON TRANSPORTATION
AND INFRASTRUCTURE**
**SUBCOMMITTEE ON ECONOMIC DEVELOPMENT,
PUBLIC BUILDINGS, AND EMERGENCY MANAGEMENT**
U.S. HOUSE OF REPRESENTATIVES

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Introduction.

Good afternoon Madam Chairwoman, Ranking Member Diaz-Balart, and Members of the Subcommittee. I am Damon Penn, Assistant Administrator of the Federal Emergency Management Agency's (FEMA) National Continuity Programs (NCP) Directorate. I recently joined National Continuity Programs after retiring from the U.S. Army; however, my first exposure to continuity programs came 15 years ago with the Department of Defense. I also have had years of experience associating with FEMA: in 2004, I served as the Defense Coordinating Officer for Florida, a job in which I was responsible for all Department of Defense assets in support of the state's emergency management efforts. I also served in that same capacity assisting Mississippi's efforts during Hurricane Katrina in 2005.

I want to thank you for the opportunity to appear before you today to discuss the current status of the Integrated Public Alert and Warning System (IPAWS) program. In FEMA's National Continuity Programs Directorate, we serve the Nation's citizens by protecting our constitutional form of government in direct support of Executive Order 13407 and National Security Presidential Directive 51 / Homeland Security Presidential Directive 20 (NSPD-51/HSPD 20). We are intimately involved with all levels of government continuity planning, guidance, and operations support.

IPAWS is the Nation's next generation public alerting system. It is designed to improve public safety through the rapid dissemination of emergency messages to as many people as possible over as many communications devices as possible. IPAWS is building additional redundancy into the Emergency Alert System (EAS) by establishing diverse message dissemination paths such as satellite, digital television, and the Internet. It will provide an interface to provide capability for commercial cellular and paging carriers to conduct mobile alerts. In addition, the program is developing standards that support interoperability with state and local warning systems, such as emergency telephone network dialers, websites, e-mail accounts, and other opt-in technologies.

I. System Overview and Vision

The IPAWS vision is an effective and comprehensive system that enables the proper authorities to alert and warn the American people under all conditions through as many means as possible. Incident response and public alerts begin at the local level. Thus, IPAWS also is developing the protocols to enable existing local and State public alert and warning systems to be interoperable with – and leverage – IPAWS architecture. As an example, assume an industrial accident suddenly occurs in a particular geographic area. A state, local, tribal, or territorial emergency manager can send an alert through their local system or an IPAWS interface to warn the nearby populations of potential danger. IPAWS would then authenticate the user's authority, validate the message format, and route the message to the appropriate National Oceanic and Atmospheric Administration (NOAA) All Hazards National Weather Radio, local broadcast media (television and

radio stations), and cellular providers in the area designated by the emergency manager. Residents in this area would then be warned by any combination of these distribution channels.

In simple terms, IPAWS will accept standards-based alert and warning messages generated by emergency managers using existing state, local, tribal, or territorial systems, or an IPAWS web interface. This standards-based format is known as the “Common Alerting Protocol” (CAP). CAP formatted messages will then be forwarded to the FEMA IPAWS aggregator. The aggregator will disseminate the message through all distribution means the emergency manager is authorized to use. For example, the aggregator will have interfaces to distribute messages to traditional broadcast media via the EAS, to cellular and paging devices via the Cellular Mobile Alert System, to NOAA All Hazards Weather Radio, and national Weather Service networks to Internet services via network interfaces, and to unique state and local systems that are IPAWS CAP compliant (such as Emergency Telephone Networks, siren, and/or signage systems).

IPAWS will:

- Enhance the resiliency of EAS through our Primary Entry Point (PEP) expansion program; (The PEP are the entry points for national presidential EAS alerts that FEMA is responsible for distributing.)

- Create an alert and warning message interoperability framework by establishing or adopting standards, such as CAP, that allow a single warning message to be seamlessly transmitted over different systems;
- Improve federal, state, local, tribal, and territorial alert and warning message access to multiple broadcast and other communications pathways by enabling alert and warning messages to reach the public through as many means as possible;
- Partner with NOAA to enable seamless integration of message transmission through the National Weather Service networks;
- Enable alert and warning to those with disabilities and those without proficiency in the English language; and
- Allow the President of the United States to speak to the American people under emergency circumstances.

II. The Current Schedule for 2012

FEMA is on schedule to achieve our IPAWS vision in fiscal year 2012. To us, meeting that schedule means four things:

1. We will have interoperable standards and interfaces in place;
2. We will have redundancy built into the dissemination network;
3. We will have integrated disparate message distribution paths, meaning that one message can travel many paths to reach the American public;

4. We will increase the number of PEP stations to provide additional direct coverage of EAS.

Standards are needed so that federal, state, local, tribal, and territorial entities can share the same common message and interface formats. Inside the IPAWS environment, an aggregator contains a suite of standards and services for message dissemination across multiple systems and platforms. If everyone uses the same standards, validated emergency managers will be able to send their messages over any combination of partner dissemination paths that use those standards. We expect that interfaces to many of these dissemination paths will be established in the next two years.

We are also strengthening national broadcast stations to withstand the most severe threats. FEMA has coordinated with the Primary Entry Point Administrative Committee (PEPAC), which represents participating radio stations in the EAS program, and the U.S. Army Corps of Engineers (USACE) to expand our PEP station coverage. USACE, in coordination with PEPAC, is working with FEMA to assess the necessary number of PEP stations to maximize the reach of the EAS daisy chain. As of today, USACE has completed the composite shelter and power system design work and performed site surveys at 15 locations. They are on target to complete the shelters over the next 18 months.

III. IPAWS Component Status

Common Alerting Protocol (CAP). NCP is very proud of the innovative approach we have taken to building standards and protocols into the overall IPAWS architecture. CAP is an open standard that will benefit emergency managers at all levels by allowing a single warning message to be disseminated simultaneously over many different systems. To increase interoperability in the national warning system, FEMA is working with S&T to modify the requirements for an alert profile of the EAS-CAP Industry Group, an industry coalition of emergency alert equipment manufacturers. In December 2008, we submitted these requirements to the Organization for the Advancement of Structured Information Standards (OASIS), an international standards organization, to develop a product in consultation with its members that reflected public comment. We believe OASIS's open process for development, public vetting, and ultimately advancing an open standard is the best way to ensure a state of the art product.

After meeting with the broadcast industry and receiving their feedback, FEMA pledged to complete four milestones before adopting the CAP IPAWS profile:

1. Establish a testing program and publish lists of tested, CAP-compliant products broadcasters can purchase;
2. Oversee development of an Implementation Guide for CAP to EAS Translation;
3. Demonstrate delivering a Federal message in the CAP IPAWS Profile format to a National Primary Entry Point Station; and
4. Begin the OASIS process on IPAWS CAP Security Requirements.

Establish a testing program and publish lists of tested, CAP-compliant products

broadcasters can purchase. To initiate the conformity program, FEMA awarded Eastern Kentucky University a contract to test emergency alert equipment for conformity with the Common Alerting Protocol (CAP) IPAWS v.1.2 Profile in August of this year. As testing progresses, FEMA will publish a list of vendors whose products have passed testing and thereby conform to the profile. Broadcast purchasers may then be assured their equipment purchases will comply with FCC and FEMA requirements. The kick off meeting with Eastern Kentucky University is scheduled for October 2009. The choice of a lab to perform conformity assessment testing keeps FEMA IPAWS on track with this commitment.

Oversee development of an Implementation Guide for CAP to EAS Translation.

The CAP Profile Implementation Guide defines how CAP will work within EAS. FEMA CAP to EAS translation specifications were in the original profile submitted to OASIS in December 2008. While going through the OASIS process, the OASIS standards body determined that specific implementation guidance does not belong in a standards document and recommended development of an implementation guide. We are working with DHS' Science & Technology Directorate to take the specification and develop a CAP to EAS translation guide.

Demonstrate delivering a federal message in the CAP IPAWS Profile format to a

National Primary Entry Point Station. IPAWS is currently testing the means to deliver

Federal messages in a CAP IPAWS profile format and expects to be operational by spring 2010.

Begin the OASIS process on IPAWS CAP Security Requirements. FEMA has begun working on security requirements with DHS' Science and Technology Directorate (S&T) as part of the IPAWS standards work. We are currently developing the requirements that will enable us to define timelines on when to initiate the OASIS process.

Once these four milestones have been reached, FEMA will formally adopt the CAP profile. By federal regulation, broadcasters then have 180 days to make whatever internal changes they deem necessary to be able to receive an IPAWS CAP message.

CMAS. The Commercial Mobile Alert System (CMAS) is a component of IPAWS systems that will provide the capability to reach cellular phone subscribers with public alert and warning messages. FEMA will be the alert aggregator, receiving messages from authorized users and passing alert messages to the cellular phone industry. Adding mobile alerts to our range of distribution channels will cover 270 million subscribers, or 87 percent of the population. CMAS will facilitate the dissemination of three types of alerts through cell phones: Presidential Alerts; Imminent Threat Alerts; and America's Missing: Broadcast Emergency Response (AMBER) Alerts.

FEMA through S&T, is working with two industry organizations, the Alliance for Telecommunications Industry Solutions and the Telecommunications Industry

Association, to finalize interface specifications between the FEMA CMAS gateway and commercial mobile service provider gateways. This interface is needed to allow federal systems carrying an alert to seamlessly hand off that alert to the private sector commercial mobile carriers for further distribution. This month, IPAWS and S&T staff participated at an industry meeting in California that furthered work on the interface specifications for that hand off.

We expect final balloting by industry association members on the interface specifications to be complete by the end of the calendar year. FEMA will then formally adopt the resulting CMAS interface specification. By federal regulation, cellular service providers then have 28 months to make whatever internal changes are necessary to receive an alert and transmit it to their customer base. During the first year of this 28-month period, FEMA and S&T also plan to establish the infrastructure that will allow us to send messages to the commercial mobile service providers.

Geo-Targeted Alert System (GTAS). CMAS alerts will be broadcast to cell phones within the area of a disaster and are by design sent only to phones within the area of the emergency. FEMA IPAWS is working with the NOAA to develop software for state, local, tribal, and territorial emergency managers that will allow alerts and warnings to be geo-targeted. Called the Geo-Targeted Alert Systems (GTAS), this software models the forward progress of, for example, a chemical cloud or toxic spill, so emergency managers can warn only those people in the anticipated path of the plume.

In August 2009, FEMA successfully piloted this software at the City of Dallas Emergency Operations Center, and the NOAA Weather Forecast Office in Ft. Worth, Texas. NOAA and FEMA will also be conducting live training at the State of Washington EOC and the City of Seattle EOC this week.

Training. NCP is creating an online training program for emergency managers who have never before been exposed to IPAWS. NCP is working with FEMA's Emergency Management Institute to develop a web-based independent study course that will be available on FEMA's Emergency Management Institute's eLearning system and/or the FEMA Employee Knowledge Center. The course goals are to help state, local, tribal, and territorial emergency managers draft better alerts and warning messages; to improve skills in using emergency alerting equipment; and to increase the effectiveness and participation of emergency managers using the EAS.

IV. Challenges

While we are making great strides in achieving our vision, our progress is not without challenges.

Changing vision and strategy. We acknowledge previous personnel shifts altered the perceived strategy and direction of IPAWS. I have accepted my predecessor's vision, and I plan on maintaining it until the project is complete. We recently selected Mr. Antwane Johnson, a Level III certified Program Manager with over 20 years of program manager experience to be the new IPAWS Division Director. He has the knowledge and

systems management experience skills to effectively and efficiently manage this program. Four additional project management positions requiring similar levels of experience will be selected in the month of October, bringing the program to full staffing. In addition, NCP is developing an IPAWS Strategic Plan. It will codify the strategic focus of the program and reinforce the program's alignment with Executive Order 13407 and the needs of state, local, tribal, and territorial officials. In addition, NCP has modified the IPAWS Mission Needs Statement and Operational Requirements documents to strengthen the IPAWS vision in accordance with requirements established in Executive Order 13407. We will develop more detailed planning information in accordance with this Committee's wishes.

Testing. We acknowledge the federal government has never conducted an end-to-end test of the Emergency Alert System. A working group consisting of FEMA, FCC, the White House Military Office (WHMO), and NOAA is in the planning stages of conducting the first ever national exercise of the Presidential-level Emergency Action Notification (EAN) and associated messages and codes within the EAS. This exercise will assess the readiness and effectiveness of the EAS from origination by the President to reception by the public. FEMA also conducted a closed-circuit test on September 23rd, which tested message transmission from the White House to FEMA to PEP stations. This was an important step in assessing the front-end reliability of the system.

In further preparation for a national exercise, the working group is planning to conduct a test at the state level and selected Alaska as a possible location. FEMA has initiated

conversations with the State of Alaska and worked with FCC on outreach to the Alaska broadcast community. Discussions have been promising; the State of Alaska and broadcasters have been engaged in assisting us to establish timelines and tasks, and ensure the necessary outreach to and education of the citizens of Alaska. Coordination and planning are still in early stages, but the hope is to conduct the Alaska exercise in January 2010.

Improved coordination with stakeholders. We have redoubled our outreach efforts and plans to engage stakeholders at all levels. For example, we have:

- Spoken at 14 national conferences since April 2007, including the National Association of Broadcasters in April 2009;
- Re-launched the IPAWS Web page (<http://www.fema.gov/emergency/ipaws>), which has received over 10,000 hits since the relaunch in March 2009;
- Conducted quarterly conference calls giving update presentations to each FEMA region and many of their states. For example, IPAWS delivered 22 regional and state briefings between July 2008 and September 2009;
- Stepped up our outreach to tribal nations by working with the FEMA regions to distribute informational materials, participate in teleconferences, and send presentations to tribal emergency management conferences;
- Organized three working groups within stakeholder communities to advise us on IPAWS development and implementation, a Federal Working Group, an industry working group, and a Practitioner Working Group (that is split into an emergency manager subgroup and a broadcaster subgroup);

- Each working group has a charter, bi-monthly meetings, and regular membership;
- The industry working group is to receive industry input, provide status updates, and receive stakeholder feedback. This helps guide program development and has already shaped the IPAWS program. For example, our decision on when to officially adopt the CAP profile was made based on broadcaster feedback and with their constraints in mind; and
- Coordinate regularly with our federal partners and meet frequently at a working level with DHS' Science & Technology Directorate, NOAA, and the FCC to coordinate areas of common interest.

We recognize IPAWS needs the expertise and input of our stakeholders to become an effective system that meets the needs of multiple communities. We are committed to moving forward with our partners, in all levels of government and in the private sector.

V. Conclusion

The FEMA Mission Statement is “to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.” IPAWS is making great progress in support of this vision, and we are pleased to do our part to support its mission. FEMA is fully committed to IPAWS and recognizes its importance

to citizens of the United States. I lead a group of highly dedicated professionals, all of whom share my commitment to the IPAWS vision.

I thank the Subcommittee for the opportunity to testify and I am pleased to take any questions.