

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STATEMENT OF

Damon Penn

Assistant Administrator, National Continuity Programs

ON

“Communicating With the Public During Emergencies:

An Update on Federal Alert and Warning Efforts”

BEFORE THE
COMMITTEE ON HOMELAND SECURITY
U.S. HOUSE OF REPRESENTATIVES

JULY 8, 2011

Introduction

Good morning Chairman King, Ranking Member Thompson, and Members of the Committee. My name is Damon Penn, Assistant Administrator of the Federal Emergency Management Agency (FEMA) National Continuity Programs (NCP) Directorate. As a US Army Colonel prior to joining FEMA in August 2009, I served as the Director of Operations for the Joint Force Headquarters (JFHQ) at the National Capitol Region of the United States. While leading the JFHQ, I oversaw intelligence, operations, force protection/anti-terrorism, planning, the operations center, training, ceremonies, and security. I have also served as the Defense Coordinating Officer for Florida and was responsible for all Department of Defense assets mobilized to assist Florida and Mississippi's emergency management efforts during Hurricane Katrina. Now as the Assistant Administrator of NCP, I am charged with managing the Federal Executive Branch Lead Agent for continuity of national essential functions and the Integrated Public Alert and Warning System (IPAWS). I want to thank you for the opportunity to appear before you today to discuss our accomplishments, challenges, and vision.

It is my privilege to lead the dedicated professionals with whom I work at FEMA. FEMA serves as the Nation's focal point for government continuity planning, guidance, and operations support, and is also responsible for ensuring the President is able to address the nation under the most extreme circumstances. The technology used to fulfill this central mission has undergone many changes, beginning in 1951, when the Control of Electromagnetic Radiation system, or CONELRAD, was the chief method of federal communication during a disaster. CONELRAD was replaced by the Emergency Broadcast System in 1963, followed by the Emergency Alert System (EAS) in 1994. IPAWS is a modernization and integration of the nation's alert and warning infrastructure.

Under 47 U.S. C. § 606 and regulations implemented by the Federal Communications Commission (FCC) (47 C.F. R. Part 11), *et seq.*), broadcast radio and television stations, cable television stations, direct broadcast satellite services, and satellite radio operators are all required to carry national (Presidential) EAS alerts and support State and local EAS alerts and tests. In support of these requirements, Executive Order 13407 states, "It is the policy of the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and

warn the American people.”¹ FEMA created IPAWS to be a system of systems to: (1) modernize the EAS and expand the Primary Entry Point (PEP) station system; (2) create an Open Platform for Emergency Networks, or IPAWS-OPEN, which can be used at no cost by State, local, territorial, and tribal public safety partners; (3) promote collaboration with industry to leverage existing or develop new standards and to integrate current and future technologies seamlessly into IPAWS; (4) expand traditional alerting and warning communication pathways; and (5) working with the Department of Commerce and the National Oceanic and Atmospheric Administration (NOAA) to deliver alerts through NOAA Weather Radio All-Hazards.

IPAWS’ Significant Progress in the Last Two Years

The IPAWS program has made significant progress over the past two years, and FEMA is on schedule to achieve our IPAWS vision in fiscal year 2012 by having established the following:

1. Interoperable standards and interfaces;
2. Redundancy in the dissemination network;
3. Integrated disparate message distribution paths, meaning that one message can travel many paths to reach the American public; and
4. Direct coverage for 90 percent of U.S. residents by at least one means of communication.

We have cleared several significant hurdles in order to ensure success moving forward, yet challenges remain. By the end of this calendar year, we will roll out the Commercial Mobile Alerting System (CMAS) in New York City and Washington, D.C. in conjunction with the major cellular providers. CMAS will enable wireless carriers to provide customers with geo-targeted, timely and accurate emergency alerts and warnings to their cell phones and other mobile devices. We are also scheduled to conduct the first ever National Test of the Emergency Alert System on November 9, 2011, at 2:00 p.m. EST. In parallel with the technical challenges and accomplishments, the IPAWS Program Management Office (PMO) works closely with industry, State, local, and territorial emergency managers, and our Federal interagency partners at the FCC and NOAA to help further our mission.

¹ Executive Order 13407, Section 1

The IPAWS PMO continues to: (1) train the alerting community, including public safety officials, industry partners, and the American public; (2) implement and expand new communications paths; (3) provide – at no cost to State, local, territorial, and tribal public safety officials – the capability to use IPAWS-OPEN to send alerts and warnings through multiple communication pathways to individuals within their jurisdictions; and (4) ensure an environment suitable for innovation of new alerting capabilities.

The IPAWS Vision:

We remain steadfastly committed to our vision for IPAWS as a timely and accurate alert and warning to the American people in the preservation of life and property. In the coming months IPAWS will create an integrated capability accessible to all levels of public safety officials, allowing State, territorial, tribal and local officials to issue public alerts and warnings for all hazards. Next, IPAWS will expand beyond radio and television, alerting over multiple communications channels while maintaining the EAS as an all-hazards alerting component. Finally, IPAWS will retain a capability to foster growth and development of future alerting capabilities through the adoption and promotion of common technical standards and protocols.

Innovative and Adaptable Technologies

IPAWS has moved from a requirements-based, single technology network approach to an applications-based, open standards platform approach. This ensures that IPAWS is accessible to a broad range of information processing technologies, networks and equipment so that existing private sector alerting and communication systems can easily integrate with IPAWS-OPEN. While even basic phones with texting capability can receive an alert from IPAWS-OPEN, the open standards platform will also allow for future technologies to integrate with IPAWS.

IPAWS-OPEN supports an environment which leverages the industry-adopted Common Alerting Protocol (CAP) Emergency Data Exchange Language standard to improve interoperability across a wide variety of technologies and other solutions. As a result, there are 46 private sector vendors and 12 public sector organizations currently developing and testing products to leverage the IPAWS-OPEN application capabilities. The National Public Radio (NPR) also uses CAP messages from IPAWS to deliver alerts to people with visual or hearing impairments by

providing alerts directly to prototype devices that activate a bed shaker, display an audio alert in text, or output the text to a Braille printer.

IPAWS' OPEN provides our industry partners with flexibility in the development of new types of technologies and fosters greater competition and innovation in the development of public alert and warning tools.

IPAWS' Milestones

IPAWS has achieved notable accomplishments since the beginning of FY 2010, including adopting CAP, expanding the PEP station system, conducting two successful live code EAS tests in Alaska, developing the Commercial Mobile Alert System (CMAS) in partnership with the Department of Homeland Security's Science and Technology Directorate (S&T), and supporting individuals with access and functional needs. These accomplishments are a result of the consistent vision of IPAWS, support from authorizing authorities such as this committee, and the strong relationships IPAWS PMO has established with our public and private partners.

Common Alerting Protocol

FEMA IPAWS officially adopted the CAP Standard on September 30, 2010, after it was developed by a partnership between S&T and the Organization for the Advancement of Structured Information Standards, an international standards body. Similarly, FEMA IPAWS adopted the CAP to EAS Implementation Guide in May 2010 after it was developed by the EAS to CAP Industry Group. The FCC regulates CAP compliance actions by EAS participants (such as radio, cable, and television providers, etc.). FEMA contracted with Eastern Kentucky University to test vendor products for CAP compliance. Vendors' test results are posted on the FEMA Responder Knowledge Base website.² The FEMA Responder Knowledge Base benefits State, local, territorial, and tribal public safety officials, as well as EAS participants, because it confirms whether equipment they are considering purchasing will work with the modernized EAS.

² The FEMA Responder Knowledge base website at <https://www.rkb.us/> provides emergency responders, purchasers and planners with a trusted, integrated, online source of information on products, standards, certifications, grants, and other equipment-related information.

Primary Entry Point

The PEP system is a nationwide network of broadcast stations and other entities that is used to distribute a message from the President or designated national authorities in the event of a national emergency. The IPAWS Program Management Office continues to expand the number of PEP Stations across the U.S. In August 2009, the system originally had 36 PEP stations providing direct coverage to 67% of the American people. Currently, there are 49 operational PEP Stations and five PEP Stations under construction, resulting in direct coverage of 75% of the American people. By the end of 2012, the number of PEP Stations will increase to 77 and will directly cover over 90% of the American people.

New PEP Stations use a standard configuration, saving maintenance costs and ensuring an ease of movement between stations. The stations have double-walled fuel containers with spill containment and a modern fuel management system and Electromagnetic Pulse-protected backup power and transmitters. Legacy stations are being retrofitted to meet current PEP Station resiliency standards.

While EAS is currently being used in Puerto Rico, FEMA is working with the Puerto Rican government so they can locally generate island-wide alerts. In the U.S. Virgin Islands (USVI), FEMA has already begun the process of helping the USVI government locally generate territory-wide alerts, as well as assisting them with EAS testing. The IPAWS PMO is installing PEP Stations in other territories, including American Samoa, in FY11 while Guam and Saipan are still in the planning phases.

Live-Code EAS Tests in Alaska

The IPAWS Program Management Office worked closely with the Alaska Association of Broadcasters, the State of Alaska, the FCC, and other key public and private sector partners to conduct two successful live-code tests in Alaska in January 2010 and January 2011. The purpose of these tests was to establish an EAS capabilities baseline and set the stage for the first ever National Test of the EAS. The live-code tests in Alaska helped FEMA and EAS participating stations refine equipment installation/maintenance and standard operating procedures, and clarify certain alerting procedures.

Commercial Mobile Alert System

Using IPAWS-OPEN, CMAS sends non-subscription based 90-character text messages directly from wireless towers and targets phones in the geo-targeted area. State, local, territorial, and tribal public safety officials can, at no cost, alert or warn individuals affected by an imminent threat or Presidential Message. CMAS mitigates wireless call congestion and individuals can receive the alert even if wireless towers in their location can no longer support subscriber-to-subscriber messaging.

The IPAWS PMO works closely with S&T, commercial mobile service providers, and the FCC to realize our mutual goal of expanding the number of communication pathways for alerts and warnings. For example, the commercial mobile industry is developing cellular broadcasting technology to support nationwide alert delivery. As authorized by the Warning, Alert and Response Network Act, S&T is providing the research, development, testing, and evaluation support necessary to fully implement CMAS.

The IPAWS PMO adopted industry-developed CMAS interface specifications in December 2009, and made the IPAWS CMAS Gateway available to carriers for testing in February 2011. Since May 2011, most major carriers have or are in the process of completing development and testing on the IPAWS CMAS Gateway. The IPAWS Program Management Office began C-Interface testing with tier 1 carriers in March 2011, over a year ahead of schedule. Since then, Sprint has completed testing, and US Cellular, AT&T, T-Mobile, and Verizon Wireless are currently undergoing testing, with other providers planning to test in the near future.

CMAS alerts will be transmitted to cell phones within the area of a disaster and are by design sent only to phones within the affected area. FEMA IPAWS is working with NOAA to develop software for State, local, tribal, and territorial emergency managers that will allow alerts and warnings to be geo-targeted. The Geo-Targeted Alert System software models the forward progress of a chemical cloud or toxic spill, for example, so emergency managers can specifically warn those in its anticipated path.

Our industry partners have reported that some mobile user devices currently on the market are already CMAS capable, with all other commercially available devices capable by 2014.

Support for people with access and functional needs

The IPAWS Program Management Office has remained engaged with agencies, organizations, conferences, and private industry to promote IPAWS capabilities and opportunities for the integration of alert and warning technologies for people with access and functional needs. We have partnered with private organizations such as Signtel, Deaf-Link, Alertus, NPR, Readspeaker, Roam Secure, VPN Voice Corp, and public organizations such as NOAA, to demonstrate products that incorporate CAP-enabled technologies for alerting persons with access and functional needs. These technologies and products are routinely incorporated into IPAWS demonstrations and have been displayed at such events as the International Association of Emergency Managers (IAEM) Annual Conference, National Association of Broadcasters Show, National Council on Independent Living Annual Conference, the IPAWS Congressional Demonstration, and the National Disabilities Rights Network Annual Conference. The IPAWS PMO has also participated in such events as the Interagency Disability Educational Awareness Showcase, FEMA Getting Real Conference, and IAEM's Special Needs Committee meeting.

The IPAWS Program Management Office also partnered with FEMA's Office of Disability Integration and Coordination and initiated a semiannual outreach roundtable for Federal partners and industry experts on disability-related issues. The roundtable includes representatives from over a dozen leading organizations representing Americans with access and functional needs; it is intended to provide periodic updates to our industry Federal partners, as well as elicit information on emerging technologies and systems that can integrate CAP.

The Future of IPAWS

Two major milestones remaining for this calendar year include the: (1) CMAS roll-out in New York City and (2) the first ever National EAS Test. The IPAWS Program Management Office is actively implementing strategic technical and outreach plans to communicate with and engage stakeholders and partners to ensure successful implementation and testing of both CMAS and the EAS.

We have already had exceptional cooperation from the wireless industry in adapting CMAS. While participation by commercial mobile carriers is voluntary, 142 mobile service providers have already filed their intent to participate, with the major wireless carriers providing CMAS capability four months ahead of schedule.

In addition to the strong working relationship between the wireless community and the IPAWS Program Management Office, there has been great cooperation from S&T, the New York City Mayor, city leadership, and NYC Office of Emergency Management in advance of the first large-scale integration test of CMAS between local authorities and IPAWS. We plan to make CMAS available in New York City and Washington, D.C. by the end of this calendar year, with the expectation that CMAS will be operational throughout the U.S. in April 2012.

The National EAS Test is scheduled to take place on Wednesday, November 9, 2011, at 2 p.m. EST. The date and time for the test was coordinated with the cooperation of numerous public and private partners – most notably the broadcast industry and the FCC – to take place after peak hurricane season and outside of rush hour on both coasts.

The National EAS Test will help determine where adjustments need to be made. We anticipate the test will help us establish an effective baseline for future tests, devise mitigation strategies for common issues, and assess and adjust training and standard operating procedures.

The 2011 National EAS Test will not incorporate IPAWS system technologies. It is an end-to-end test of our nation's alerting capability to demonstrate the readiness and effectiveness of the national EAS. The National EAS Test on November 9th will use the legacy EAS infrastructure to deliver television and radio alerts across the nation.

Conclusion

The IPAWS vision of providing timely alert and warning information to the American people in the preservation of life and property remains clear and consistent. FEMA is fully committed to IPAWS and recognizes its importance to the American public.

Between now and the end of calendar year 2012, the IPAWS PMO will continue to work with state and local alerting authorities to help them leverage the IPAWS system and capabilities, including providing the certification tools State, local, territorial, and tribal public safety officials will need to have authenticated for access to IPAWS-OPEN. The IPAWS PMO will also continue to conduct extensive outreach and training to State, local, territorial, and tribal public safety officials.

We will continue to work with industry and academia for the development of capabilities to alert people with access and functional needs and those whose primary language is not English. We will also continue our work with the FCC to evolve alert and warning regulations to encompass whole of community alerting capabilities, and will work with NOAA to fully integrate their alert and warning systems with IPAWS.

The IPAWS PMO will complete the EAS Modernization and PEP Expansion program through 77 PEP stations directly covering 90% of the American people, retrofitting legacy PEP stations to current specifications for all-hazards, resilient capability and modern environmental protection configuration. IPAWS will also incorporate back-up EAS through satellite messaging capability within the PEP system.

We will continue to increase the IPAWS-OPEN Alert Aggregator's resilience through greater accessibility, reliability, and redundancy. We will continue to work with S&T, industry, and other partners to explore means of providing alerts through internet services and "new media" in a secure and integrated fashion. We will continue to promote IPAWS standards and CAP, and will encourage the developers of future technologies to provide IPAWS capable alerting tools to America's public safety officials.

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