DEPARTMENT OF HOMELAND SECURITY

FEDERAL EMERGENCY MANAGEMENT AGENCY

STATEMENT OF

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ON

"Advancing Public Alert and Warning Systems to Build a More Resilient Nation"

BEFORE THE
COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEE ON EMERGENCY COMMUNICATIONS,
PREPAREDNESS AND RESPONSE
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INTRODUCTION

Good morning Mr. Chairman, Ranking Member Dent and Members of the Committee. I am retired Major General Martha Rainville, Assistant Administrator of the Federal Emergency Management Agency's (FEMA) National Continuity Program (NCP) Directorate. Thank you for the opportunity to appear before you today to discuss the progress that FEMA has made over the past two years and to describe what we expect to accomplish in the years ahead. FEMA is the Executive Agent for the national Emergency Alert System (EAS).

It is my privilege to lead the dedicated professionals with whom I work at FEMA. At NCP, our mission is to serve the public by protecting our Nation's constitutional form of government in direct support of National Security Presidential Directive 51/ Homeland Security Presidential Directive 20 (NSPD-51/ HSPD 20) and FEMA's recently released Strategic Plan. FEMA serves as the Nation's center of excellence for government continuity planning, guidance, and operations support, in direct support of FEMA's Strategic Goal #1: Lead an integrated approach that strengthens the Nation's ability to address disasters, emergencies, and terrorist events. FEMA also is responsible for assuring that the President can address the Nation under the most extreme circumstances and is in alignment with FEMA Strategic Goal #3: Provide reliable information at the right time for all users.

Under the leadership of Administrator Paulison, FEMA has weathered difficult times and today is better able to fulfill our mission of reducing the loss of life and of property and to protect the Nation from all hazards, including natural disasters, acts of terrorism, and man-made disasters. The agency has transformed into a "New FEMA," one that leads and supports the Nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

The emergency management landscape today is not what it was in 2001, or even in 2005 and it will not be the same two years from now. Together with our partners, we are helping to shape the future of emergency management. In this uncertain world, one thing is clear: No one person, agency, or group has all the answers. To that end, we are transforming our concept of "emergency management" into a disciplined approach that entails collaboration with stakeholders, thoughtful planning, and decisive execution.

FEMA's direction and authority with regard to alerts and warnings are spelled out in various federal Statutes, regulations and directives including: Section §706 of the Communications Act of 1934, as amended (47 U.S.C. §606); Warning, Alert, and Response Network Act, Title VI of the Security and Accountability for Every Port Act of 2006, Pub. L. No. 109-347, 120 Stat. 1884 (2006); Section 202 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (42 U.S.C. §5132); 47 C.F.R. Part 11; Executive Order 12472, *Assignment of National Security and Emergency Preparedness Telecommunications Functions*, April 3, 1983 (amended by Executive Order 13286 of February 28, 2003; and Executive Order 13407, *Public Alert and Warning System*, June 26, 2006.

Our focus is to raise the level of awareness about continuity planning and increase interagency cooperation in the alert and warning community to create a more resilient government at all levels. We have laid the foundation for becoming an organization that is valued across all jurisdictions as an engaged, agile, responsive, and trusted leader and partner.

Improving the Nation's Alert and Warning Systems

In the alert and warning community, we work closely with our federal partners at the National Oceanic and Atmospheric Administration (NOAA) and the Federal Communications Commission (FCC) to ensure that the federal government speaks with one voice when it comes to upgrading, improving, securing, and regulating the EAS with support from the FCC which is responsible for ensuring that broadcasters comply with applicable federal regulations. In 1994, the EAS replaced the Emergency Broadcast System (EBS) which has been in operation since 1963. Under FCC regulations, broadcast radio and television, cable television stations, direct broadcast satellite services, and satellite radio operators are required to carry national (Presidential) EAS alerts and to support state and local EAS alerts and tests.

We cannot always accurately predict the next disaster. But we can plan for it, and we can alert the American people – we can tell them to seek shelter before a tornado hits, we can tell them to evacuate before the rivers swell up leaving behind a trail of devastation. The Integrated Public Alert and Warning System is the Nation's next generation alert system. IPAWS is a system of systems through which FEMA is upgrading the existing EAS, creating a redundant path through Digital EAS, and supporting the distribution of alert and warning messages to residential telephones, to websites, to pagers, to e-mail accounts, and to cell phones. We cannot do everything at once so later this year we are rolling out the first increment to support digital alerts. Later on, we will roll out additional increments to support risk-based alerts, non-English language alerts and alerts for special needs communities. Throughout the increments FEMA will improve the resilience and the security of IPAWS.

We collaborate extensively with our nonprofit partners, particularly the Primary Entry Point Advisory Committee (PEPAC), the Association of Public Television Stations (APTS), and the Public Broadcasting System (PBS). Our partnership with PEPAC and its member Primary Entry Point (PEP) stations provides the foundation for FEMA's ability to send a Presidential alert to the public and provides the existing system over which most state, local, tribal, and territorial alerts are sent today. FEMA's partnership with APTS and PBS brings the PBS satellite network into IPAWS through Digital EAS. This initiative provides a redundant and resilient path over which to distribute national, state, local, tribal, and territorial alerts. It is only through our public-private partnerships that we are able to sustain, upgrade, add, and maintain the PEP stations and integrate the PBS satellite network into the IPAWS.

We recognize that there is no single solution set that will meet everyone's alert and warning requirements and that is why FEMA and our partners are looking for the most appropriate interoperable solutions for IPAWS. At the same time, we are aware of the concerns of our state partners who have invested in their own alert and warning systems. With that in mind, IPAWS is intended to be fully interoperable with those systems by establishing common protocols for alerts and warnings. It is only through a coordinated federal response to Executive Order 13407 that we can remain focused on the primary reason for establishing IPAWS — to provide life saving information to the American people during an emergency.

Since FEMA established the IPAWS program management office, Congress has provided us with an appropriation of $25 million for Fiscal Year (FY) 2008. We are focusing our fiscal resources on upgrades to the EAS through improvements to and the expansion of the PEP stations; developing plume modeling that support geo-targeted messages; using satellite networks as a redundant path for alerts (Digital EAS); deploying a mobile EAS asset (IPAWS truck); creating standards and protocols, and engineering support.

President Bush in June 2006 issued Executive Order 13407, "Public Alert and Warning System," which established the national policy for alerts and warnings and directed a series of actions meant to improve and modernize the ability of government at all levels to communicate rapidly with the American people. The EAS currently allows the President to transmit an alert to the American people within 10 minutes through the Primary Entry Point (PEP) stations, which then travels from station to station in order to send the message over all broadcast radio and television stations, cable television stations, and satellite radio stations. While a President has never activated the national EAS, carrying a Presidential message is mandatory and takes priority over any other EAS message. To ensure that the infrastructure remains viable for a national message, FEMA tests the connections to the PEP stations on a weekly basis. If a Presidential message is ever sent, FEMA would authenticate the sender and the message.

The EAS also provides a means for NOAA, state, local, tribal, and territorial government officials to send warnings about local emergencies such as AMBER alerts, hazardous material incidents, and weather warnings. These warnings are the most common emergency messages. State, local, tribal, and territorial government officials determine the content of their alerts. The operating procedures that govern the transmission of a state, local, tribal and territorial alert are developed by the government officials and the local broadcast radio and television stations. State, local, tribal, and territorial officials include in their state plans measures to validate their users and procedures to proscribe the frequency of alerts. The procedures then become part of the state EAS plans which are filed at the FCC. There is no federal or other entity that reviews, validates, or authenticates a state, local, tribal, or territorial alerts sent over the EAS. FEMA does not receive data from NOAA, state, local, tribal, or territorial officials about their use of the EAS or the content of their alert messages.

The EAS has served us well, but the reality is that it is based on technology that is 15 years old. Through IPAWS, FEMA and our partners are transforming the alert system

from an audio only signal sent on radios and televisions to one that can support audio, video, text, and data messages sent to residential telephones, to websites, to pagers, to e-mail accounts, and to cell phones. The mission of the IPAWS program management office is: "Send one message over more channels to more people at all times and places."

We started by re-engaging the federal alert and warning partnership between FEMA, the FCC, NOAA, and DHS' Science and Technology Directorate. Successful execution of Executive Order 13407 requires a coordinated federal response as no single entity has the authorities, statutes, or appropriations to accomplish IPAWS alone. By more closely working with NOAA, FEMA is developing an integrated national architecture that will provide a redundant and resilient path for alerts sent by the President, federal, state, local, tribal, and territorial officials.

FEMA is working with the FCC to conduct assessments of the PEP stations, and with the NOAA to assess their state and local architecture. It will take us approximately one year to complete. This collaborative and coordinated approach will allow us to verify the dependability and effectiveness of the cascading relay system. This interoperability among federal alert and warning systems and the states will expand the message delivery capabilities for the President, federal, state, local, tribal, and territorial officials.

We recognize the importance of establishing a forum for the diverse alert and warning stakeholder groups. FEMA is working with DHS to identify the appropriate departmental advisory committee that we should use to establish a stakeholder subcommittee and comply with the Federal Advisory Committee Act. Until that process is complete, we are connecting with our stakeholders through national forums such as the International Association of Chiefs of Police Conference, the International Association of Emergency Managers Conference, the National Hurricane Conference, the Big City Emergency Managers' Learning and Exchange Forum, and the National Association of Broadcasters Show. We are also looking forward to participating in the upcoming FCC Emergency Alert Summit later this month.

Once we finish our coordination for the first IPAWS increment (Digital EAS), we plan to conduct town hall meetings this summer in FEMA Regions IV and VI and with Regional representatives and state emergency management personnel from the selected states.

Lessons Learned from the Pilot Projects

Since 2005, FEMA has deployed several pilot alert and warning technologies to 14 coastal states. The proof of concept pilot projects allowed FEMA and the participating states to explore the viability of new alert capabilities including the ability to send targeted alerts within a specific jurisdiction; the use of digital technology to send alerts over public television stations; and the ability to send alerts as text messages to cell phones, e-mail accounts, and pagers.

Congress allocated funds in the FY 2005 Supplemental Appropriations in Response to Hurricane Katrina. FEMA used $2.5 million of the supplemental appropriations to

provide for the first time a suite of alert and warning capabilities to Alabama, Louisiana, and Mississippi. I am pleased to report that the pilot projects successfully demonstrated the integration of new technologies into state emergency operations centers. With the pilots, Alabama, Louisiana and Mississippi emergency managers had the ability to send alerts over the Internet as American Sign Language (ASL) video to residents who were deaf or hard of hearing and to send pre-recorded messages in Spanish for residents who did not speak English. These successful pilots ended in December 2007. In fiscal years 2006 and 2008, 27 states, including Alabama and Mississippi, applied for and received Homeland Security Grant Program funds to improve their alert capabilities.

The pilots also served as a proof of concept and demonstrated that state and local emergency management personnel could successfully integrate modern technologies into their operations centers. The pilots also took a large step toward addressing the GAO concern that the EAS must adequately support residents who are not literate in English or who are deaf or hard of hearing.

Thanks in large part to the participation of state and local emergency managers, we learned that augmenting the reach of the EAS with alerts sent to residential telephones, cell phones, e-mail accounts, and other devices was popular with both officials and residents. Over a four-month pilot project period, 8,000 people across three states signed up to receive alerts to their cell phones, pagers, and e-mail accounts while another 600 signed up to receive ASL video translations of alerts. Officials in the three states chose to send audio alerts to residential phones totaling approximately 200,000 calls. The 2007 pilot projects demonstrated the state, local, tribal, and territorial emergency operations centers could successfully integrate new alert and warning capabilities into their operations. Now emergency managers and state, local, tribal, and territorial officials can identify and prioritize the capabilities that are best suited to protect their residents and apply for funds through the Homeland Security Grant Program to help offset the costs.

One lesson reaffirmed through these various pilot projects is that the alert and warning tools preferred by one state may not be as useful for another state. State local, tribal, and territorial officials are well-suited to determine which alert and warning technologies will provide the appropriate protection for their residents. This complements FEMA's role to ensure that IPAWS provides an interoperable platform to accommodate the options that state officials can choose based on likely disasters in their regions and the needs of their population. FEMA is partnering with the DHS Science and Technology Directorate to establish alert and warning standards and protocols to support the ability of state, local, tribal, and territorial emergency managers to send alerts to their residents during emergencies. The standards and protocols will allow for states to select the capabilities that they need without any major reinvestments if they need to change their capabilities in the future.

We also learned that not every technology works for every scenario. While sending alerts to cell phones may be an ideal solution for a city or county, a localized or regional alert would need to be geo-targeted and sent only to a disaster-affected area to avoid overwhelming the telecommunications infrastructure. FEMA supports the guidelines and

recommendations of the FCC to create a framework for delivering emergency messages through a nationwide mobile phone alert system. We are working with FCC to define the aggregator role and how FEMA can best support the recommendations in the FCC's First Report and Order, PS Docket No. 07-287.

We also successfully demonstrated the delivery of alerts to residents with special needs and learned that there are many different solutions for providing information to people who are deaf or hard of hearing. There are state, local, tribal, and territorial officials who prefer to use ASL translations of alerts while others like Dane County, Wisconsin are sending alerts to a Telecommunications Device for the Deaf (TTY) to reach their residents during an emergency. The special-needs NOAA Weather Radio is widely available (there are various options ranging in price from $60 to $150 that can alert residents who are deaf and hard of hearing about hazardous conditions). The radios use visual and vibrating alarms to signify that an alert is coming and transmit warnings to a liquid crystal display readout screen.

We find more and more states are using innovative approaches to alerts by adapting existing technologies to provide their residents with life-saving information. One example is Oklahoma's Weather Alert Remote Notification program which sends alerts to residents who are deaf and hard of hearing over their pagers and other wireless devices. The program, started as a pilot in 2001 and funded in part by a FEMA grant, was fully implemented in 2003. Through the Homeland Security Grant Program programs, FEMA continues to support states that request assistance for alert and warning improvements. In fiscal years 2006 and 2007, FEMA approved $13 million in Homeland Security Grant Program funds for alert and warning initiatives to nearly half of the states.

We at FEMA know that improving the national infrastructure is critical and we must ensure that the alert and warning system will serve this and future generations. FEMA is setting the framework for federal, state, local, tribal and territorial officials to get critical and life-saving information to residents. To ensure the viability and survivability of the national backbone, we are devoting resources to improving the PEP stations and, through Digital EAS, to creating redundant pathways for emergency messages. In conjunction with our partners at DHS S&T, we are developing standards and protocols that will better inform state, local, tribal and territorial emergency managers as they make choices about their alert and warning solutions. In this way, FEMA is ensuring that there is a redundant and resilient capability for a national message.

Next steps for IPAWS

Over the next few years, FEMA is taking a number of steps to improve the alert and warning infrastructure and increase the dependability of the national system.

First, we are strengthening the federal government's ability to send emergency warnings directly to the American people by increasing PEP stations from 36 to 63. This will enable these warnings to be delivered to 85 percent of the American people, up from 70 percent. We began the installation of 3 new PEP stations in FY 2007 and they were

completed and operational in FY 2008. Our immediate steps this year are to award contracts to build an additional 24 PEP stations that will provide up to 60 days of fuel and supplies, and provide an all hazards shelter. These improvements will expand the number of locations of entry point receiver stations and will ensure their ability to support alerts for sustained periods without resupply. This is a lesson learned from Hurricane Katrina and the outstanding performance of WWL AM Radio Station 870, the PEP station in New Orleans.

Second, we are increasing the survivability and resiliency of the national alert and warning system by utilizing the satellite technologies of the Public Broadcast System infrastructure. By integrating the PBS satellite network into IPAWS through the Digital EAS project, FEMA is improving the survivability of the alert and warning infrastructure. Digital EAS will eventually provide video, voice, and text messaging capabilities for a Presidential alert, and will allow the President, for the first time, the ability to distribute a message in multiple languages.

This year we will roll out the first increment of IPAWS – Digital EAS – to the eight states and one territory that previously participated in the Digital EAS pilot project: Alabama, Alaska, Florida, Louisiana, Mississippi, New Jersey, Texas, South Carolina, and Puerto Rico. We also will expand Digital EAS beyond the original nine locations to five more states – those under consideration are Arkansas, Georgia, Kentucky, North Carolina, New Mexico, Oklahoma, and Tennessee. We are currently in the discussion stages with the FEMA Regions and state emergency management personnel to finalize our plans. Depending on the results of the 2008 installations, we plan in 2009 to roll out Digital EAS to 16 additional states that are prone to weather hazards such as hurricanes, tsunamis, and earthquakes. The state Digital EAS will give state, local, tribal, and territorial emergency managers the same functionality as a Presidential message including the redundant path of the PBS satellite network for message distribution. FEMA will continue to roll out Digital EAS until there is coverage in all states and territories.

Third, we are increasing the capacity of the national alert system by incorporating NOAA's infrastructure – which is currently in use by many of the state and local emergency operations centers – into the IPAWS architecture. This year FEMA will provide NOAA with a mobile platform (IPAWS truck) that NOAA can use to temporarily re-establish alert and warning capabilities within an area affected by a disaster and to provide redundancy between the Weather Forecast Office and its transmitters if necessary.

We are also working with NOAA and the National Weather Service (NWS) to develop secure interfaces to deliver a Presidential alert to the public over the NWS infrastructure. By partnering with NOAA and making our systems interoperable, we will build a solid framework for state and local officials to use and ensure that the national EAS is reliable, redundant, and secure.

Fourth, FEMA is coordinating and collaborating with the FCC to extend the reach of the public alert system through new technology supported by new regulations and rule making. FEMA is committed to supporting and to building on the FCC's report and order to include cell telephone in the distribution of emergency information. The framework the FCC established is a critical step in executing Executive Order 13407 to develop a system that will allow federal, state, local, tribal, and territorial officials to communicate with the American people under all conditions. FEMA is working with the FCC and NOAA to determine the best and most effective federal solution to monitor and manage the integration of cell phones into the IPAWS.

Our goal is to ensure that the President will be able to send an alert to the public during an all-hazards event, and to support alert and warning capabilities chosen by state and local emergency managers to send alerts to their residents. Through the pilot project phase and now as we prepare to deploy the first permanent increments of IPAWS, FEMA is demonstrating how seriously we have taken our responsibility to deliver life-saving information to the public.

Summary

In summary, FEMA remains committed to providing the infrastructure, the guidance, and the support to ensure that the national alert system is more robust, more resilient, and more reliable so that when the next catastrophic disaster strikes, the President and emergency managers at all levels can provide quick and accurate information to all Americans.

Mr. Chairman, Ranking Member Dent and Members of the Committee, thank you again for the opportunity to speak, for your support of FEMA, and your interest in IPAWS. I appreciate the opportunity to appear before you today. Thank you.