

Integrated Public Alert and Warning System

What Is IPAWS?

During an emergency, the President, state, territorial, tribal and local officials and emergency managers need to provide the public with life-saving information quickly. The Integrated Public Alert and Warning System (IPAWS) is the nation's next-generation infrastructure of alert and warning networks that will expand upon the traditional audio-only radio and television Emergency Alert System (EAS) by providing one message over more media to more people before, during, and after a disaster. In the event of a national emergency, the President will be able to use IPAWS to send a message to the public quickly, easily, and simultaneously through multiple communications paths in order to reduce loss of life and property damage. In addition, IPAWS will provide state, territorial, tribal, and local governments with the capability to integrate their alert and warning systems with the national alert and warning infrastructure. In this way, IPAWS will increase resilience to local systems and provide additional means by which life-saving information can be distributed to residents during a crisis.

What Will It Do?

IPAWS will provide flexibility for the President to send emergency alerts in various forms, including text, pre-recorded or live audio/visual (for example, American Sign Language or Teletype) alerts. People will be able to receive alerts via their landline phones, specified websites, personal digital assistants, e-mail accounts, or cell phones.

Which Alert Systems Will Make Up IPAWS?

IPAWS will employ several alert systems to convey emergency information to the public. These systems include:

Digital Emergency Alert System (DEAS)

The Digital Emergency Alert System (DEAS) will improve the accessibility, security, and reliability of emergency alerts and notifications both nationally and for the states. In its end-state, DEAS will improve upon the analog voice-only Emergency Alert System (EAS) by transmitting voice, video, and data messages in a digital format over emergency alternative paths and IP-based networks. Future capabilities specifically provide for the President to address the American people in times of crisis over multiple media—radio, cable TV, pager, cell phone, Internet—and as many other outlets as practicable. IPAWS conducted a nine state pilot of DEAS from 2006-2008. The pilots were conducted in two phases: a local pilot in the National Capital Region and a state pilot that included eight states and one territory. These included Alabama, Alaska, Florida, Louisiana, Mississippi, New Jersey, South Carolina, Texas, and Puerto Rico. During the pilots, IPAWS installed DEAS equipment at over 169 participating PBS member stations.



Geo-Targeted Alerting System (GTAS)

The Geo-Targeted Alerting System (GTAS) Plume Modeling project will develop an application that can be deployed to Emergency Manager desktop systems. It will meet FEMA's requirements to provide air dispersion and toxic plume information along with National Oceanic and Atmospheric Administration (NOAA) meteorological and environmental data to state, territorial, tribal, and local emergency management agencies. This effort will enable the National Weather Service to predict the dispersion of a wide variety of airborne substances including chemical particulates, biological particulates, gases, and radioactive particles based on the characteristics of the substance, the current weather conditions, and known or estimated details of the release. Using established relationships between local National Weather Service Weather Forecast Offices (WFOs) and local emergency operation centers (EOC), GTAS will disseminate vital data to emergency managers in a quick, detailed and user-friendly way to assist their mitigation and response plans.

Primary Entry Point (PEP) Expansion Project

A Primary Entry Point (PEP) Station is a radio broadcast station that provides public information prior to, during, and after a national or local emergency. They are equipped with an emergency power supply in order to keep broadcasting warning and safety information to the public. IPAWS is expanding the number of PEP stations across the nation from the current number of 36 to 68. FEMA, through cooperation with station owners and operators of communication facilities, will maintain, and if necessary, restore facilities and capabilities necessary for the public alert and warning system. The PEP Expansion Project and support from FEMA to the broadcasters will help ensure that under all conditions the President of the United States can alert and warn the public.

Standards Project

The over-arching goal for the Standards Project is develop and publish the standards and protocols necessary to establish the interoperable federal infrastructure framework to meet the mission objectives of the IPAWS Program. The alert and warning standards and protocols are essential to defining the architectural interfaces among IPAWS stakeholders to achieve mission-critical functional and operational capabilities. In its end state, the standards and protocols from the standards project will allow non-proprietary, vendor-neutral industry products to interoperate and compete to achieve an effective national interoperable and distributed alert and warning system-of-systems. The standards project accomplishes this vision by establishing a community engagement process for sustained practitioner and industry technical involvement, development and publication of standards and protocols for new and emerging technologies to deliver critical information to the public, a conformity assessment program to validate and verify vendor compliance to the published standards and protocols, a vendor liaison process for review of promising technical concepts, a technology development process for maturation of promising technical concepts, and feedback to regulatory, policy, and legislative bodies.



What Is FEMA's Role?

FEMA acts as the overall administrator of IPAWS. As the Administrator, FEMA shall:

- establish or adopt common alerting and warning protocols, standards, terminology, and operating procedures for the public alert and warning system to enable interoperability and the secure delivery of coordinated messages to the public through as many communications pathways as practicable;
- include in the public alert and warning system the capability to alert and warn all residents, including those with disabilities and those without an understanding of the English language;
- administer the Emergency Alert system (EAS) as a critical component of the public alert and warning system; and
- ensure that under all conditions, the President of the United States can alert and warn the public.

Who are FEMA's Federal IPAWS Partners?

- Federal Communications Commission (FCC) <http://www.fcc.gov> ;
- Joint Interoperability Test Command (JITC) <http://jitc.fhu.disa.mil/washops/jtcb/fema.html>
- National Oceanic and Atmospheric Administration, www.noaa.gov/wx.html.
- National Weather Service (NWS), <http://www.nws.noaa.gov/>
- DHS Science and Technology (S&T) Directorate, http://www.dhs.gov/xabout/structure/editorial_0530.shtm

Others

Several public and private organizations are contributing to the IPAWS program, including the [Society of Broadcast Engineers](#), [National Association of Broadcasters](#), [Association of Public Television Stations](#), International Association of Emergency Managers, National Emergency Management Association, and [The Weather Channel](#).

