



*Strategic Plan for the
Integrated Public Alert
and Warning System
(IPAWS) Program*

June 2010



FEMA

IPAWS

Integrated Public Alert and Warning System

www.fema.gov/emergency/ipaws

Message from the Assistant Administrator

June 2010

I am pleased to present this *Strategic Plan for the Integrated Public Alert and Warning System (IPAWS)* Program. This strategy sets the course for this critical program by establishing the program's Vision, Mission, Goals and Objectives. It will be the cornerstone document upon which other programmatic and technical documents will build.

IPAWS is simple in concept yet complex in the required programmatic and technological approaches necessary to establish an integrated and interoperable system to allow our Nation's leaders to alert and warn the American people. This capability must acknowledge the technological communications capabilities of today while establishing the ability to integrate technologies of the future. We will be forward-thinking in our approaches to establish standards and protocols; integrate messaging initiators, aggregators, and distribution networks; foster effective and value-added relationships amongst our public and private sector partners; and deliver critical information to the American people.

The American people are our most trusted stakeholder in this critical program. It is incumbent on us to ensure Americans receive timely information about emergencies that helps increase the likelihood of their survival and minimizes damage. Success in this endeavor depends on trusted relationships between and among government and private sector partners. Together, we will focus the necessary resources, technology, tools, and skill sets required for success.



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Executive Summary

The Integrated Public Alert and Warning System (IPAWS) program will significantly enhance alert and warning information delivery to the American public during times of crisis. Ultimately, the American public will benefit most from the implementation of IPAWS. Through integrated systems, messages will reach those in crisis delivering consistent and timely alert and warning information. IPAWS, established by Executive Order 13407, provides the necessary platforms for advanced warning to the American public of impending natural and man-made disasters.

During an emergency, Federal, 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 a modernization and integration of the nation's alert and warning infrastructure. IPAWS will integrate new and existing public alert and warning systems and technologies in order to provide Federal, State, territorial, tribal, and local alert and warning authorities a broader range of message options and communications pathways, thereby increasing the capacity to save lives and property. IPAWS will facilitate the delivery of alert and warning information 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.

In order to provide this next generation capability, the IPAWS Program Management Office has established and embraces the Vision, Mission, and Goals and Objectives set forth in this strategy.

Vision: Timely alert and warning to American citizens in the preservation of life and property.

Mission: Provide integrated services and capabilities to Federal, State, territorial, tribal, and local authorities that enable them to alert and warn their respective communities via multiple communications methods.

Goals: To attain the Vision and accomplish the Mission, FEMA has established three overarching strategic goals:

Goal 1 – Create and maintain an integrated interoperable environment for alert and warning

Goal 2 – Make Alert and Warning More Effective

Goal 3 – Strengthen the Resilience of IPAWS Infrastructure



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I. Introduction

The Integrated Public Alert and Warning System (IPAWS) program will significantly enhance alert and warning information delivery to the American public during times of crisis. The IPAWS Program Management Office (PMO) is charged with implementing the necessary policies and procedures to execute the Program. Specifically, the PMO will perform the following:

Program Management required to achieve Program objectives successfully;

Technical processes and activities to implement a system that meets technical standards;

Functional processes and activities to implement a system within program goals;

Program operations/administrative support activities for retrieval, distribution, and storage of Program information in a way that improves team members' and stakeholders' understanding of the Program;

Business processes and activities to manage scope, schedule, cost, quality, and performance throughout the Program life cycle; and

System acquisition processes and activities to manage acquisitions in compliance with agency and department rules and regulations.

Authorities

The principle authority for the IPAWS Program is Executive Order (E.O.) 13407, *Public Alert and Warning System*, dated June 26, 2006. Other documents providing guidance for the IPAWS program include:

- Presidential Memorandum, Emergency Alert System Statement of Requirements, September 15, 1995;

- The Federal Response to Hurricane Katrina: Lessons Learned, February 2006;
- The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 611(d) and (e), 42 USC. 5196(d) and (e), November 23, 1988;
- National Response Framework, January 2008;
- National Security Presidential Directive-51(NSPD-51)/Homeland Security Presidential Directive-20 (HSPD-20), *National Continuity Policy*, May 9, 2007; and,
- Homeland Security Presidential Directive 7, Critical Infrastructure Identification, Prioritization, and Protection, December 17, 2003

Key Stakeholders and Partners

The American people are the single most important stakeholders in the Integrated Public Alert and Warning System Program. As with any disaster situation, it is the strength and resilience of the American people that ameliorates the initial devastating impact of a disaster – regardless of its origin. For this reason, it is imperative that all measures be undertaken to ensure an effective, reliable, integrated, flexible, and comprehensive system is implemented to alert and warn the American people in situations of war, terrorist attack, natural disaster, or other hazards to public safety and well-being.

FEMA is partnering with recognized government and industry leaders and technical experts to ensure the IPAWS program incorporates the latest technology and is practical for prospective users, including local

broadcasters, emergency responders and the general public. FEMA's government partners include:

Federal Communications Commission (FCC)

The FCC, in conjunction with the Federal Emergency Management Agency (FEMA) and the National Oceanic and Atmospheric Administration's National Weather Service (NWS), implements the Emergency Alert System (EAS) at the federal level. The FCC's role includes prescribing rules that establish technical standards for the EAS, procedures for EAS participants to follow in the event the EAS is activated, and EAS testing protocols. Additionally, the FCC ensures that the EAS state and local plans developed by industry conform to FCC EAS rules and regulations.

Department of Homeland Security Science and Technology (S&T) Directorate

DHS S&T coordinates and collaborates with the IPAWS Program Management Office (PMO) to develop alert and warning standards, certify alert and warning products, evaluate available products and market trends, and develop critical technologies.

Department of Commerce National Oceanic and Atmospheric Administration's National Weather Service

NOAA Weather Radio All Hazards (NWR) uses the same digital protocols as EAS, and is the primary means for NWS to activate EAS. NWR also broadcasts non-weather emergency messages (NWEMs) such as Evacuation Warnings and AMBER alerts over NWR. These NWEMs originate with local, state, or Federal emergency management agencies and are broadcast over NWR at their request, through existing Memorandums of Understanding or state or local EAS plans.

White House Military Office, White House Communications Agency

The White House Military Office (WHMO) oversees policy related to WHMO functions and

Department of Defense assets and ensures that White House requirements are met with the highest standards of quality. The White House Communications Agency provides information services to the President, Vice President, National Security Council, United States Secret Service and others as directed by the White House Military Office, ensuring the ability to communicate anywhere, anytime, by any means to anyone in the world.

Department of Homeland Security, Sector Specific Agency for the Communications and Emergency Services national sectors.

Homeland Security Presidential Directive 7 and the National Infrastructure Protection Plan (NIPP) designate federal organizations to serve as Sector Specific Agencies (SSA) for each of the 18 national level critical infrastructure and key resource sectors. DHS is designated as the SSA for both the Communications and Emergency Services sectors. The SSAs are responsible for implementing the NIPP sector partnership model and risk management framework; develop protective programs, resiliency strategies; and provide sector-level Critical Infrastructure/Key Resource (CIKR) protection guidance. Physical infrastructure associated with the Integrated Public Alert and Warning System falls under the purview of both the Communications and Emergency Services sectors.

Department of Justice, Office of Justice Programs

The AMBER Alert System began in 1996 when Dallas-Fort Worth broadcasters teamed with local police to develop an early warning system to help find abducted children. AMBER stands for America's Missing: Broadcast Emergency Response. The Assistant Attorney General for the Office of Justice Programs, U.S. Department of Justice, is the National AMBER Alert Coordinator. The National Coordinator facilitates the development of the AMBER network, supports the development of state AMBER plans and efforts, helps eliminate geographic gaps in AMBER networks, provides regional AMBER network coordination and

provides guidance on criteria for issuing an AMBER Alert.

National Governors Association (NGA)

Founded in 1908, the National Governors Association is the collective voice of the nation's governors and one of Washington, D.C.'s most respected public policy organizations. Its members are the governors of the 50 states, three territories and two commonwealths.

National Academy of Public Administration (NAPA)

Established in 1967 and chartered by Congress, the National Academy of Public Administration is a non-profit, independent coalition of top public management and organizational leaders who tackle the nation's most critical and complex challenges.

The International City/County Management Association (ICMA)

The International City/County Management Association (ICMA) is the professional and educational organization for chief appointed managers, administrators, and assistants in cities, towns, counties, and regional entities throughout the world.

The National League of Cities (NLC)

The National League of Cities is the oldest and largest national organization representing municipal governments throughout the United States. Its mission is to strengthen and promote cities as centers of opportunity, leadership, and governance.

National Conference of State Legislatures (NCSL)

The National Conference of State Legislatures is a bipartisan organization that serves the legislators and staffs of the nation's 50 states, its commonwealths and territories.

The Council of State Governments (CSG)

The Council of State Governments was founded during the Great Depression and for more than 75 years, CSG has worked hard to provide state leaders with what they need to succeed in difficult times. The members of CSG include every elected and appointed state and territorial official in the United States.

The National Association of Counties (NACo)

The National Association of Counties (NACo) is the only national organization that represents county governments in the United States. Founded in 1935, NACo provides essential services to the nation's 3,068 counties.

National Emergency Managers Association (NEMA)

The National Emergency Managers Association (NEMA) is the professional association of and for emergency management directors from all 50 states, eight territories and the District of Columbia.

NEMA provides national leadership and expertise in comprehensive emergency management; serves as a vital emergency management information and assistance resource; and advances continuous improvement in emergency management through strategic partnerships, innovative programs and collaborative policy positions.

The primary purpose of NEMA is to be *the* source of information, support and expertise for emergency management professionals at all levels of government who prepare for, mitigate, respond to, recover from and provide products and services for all emergencies, disasters and threats to the nation's security.

International Association of Emergency Managers

The International Association of Emergency Managers (IAEM) is a non-profit educational organization dedicated to promoting the goals of saving lives and protecting property during

emergencies and disasters. The IAEM vision is to be recognized as a premier international organization of emergency management professionals. The mission of IAEM is to serve its members by providing information, networking and professional opportunities, and to advance the emergency management profession.

National Congress of American Indians

The National Congress of American Indians (NCAI) was founded in 1944. Since its founding, the NCAI has been working to inform the public and Congress on the governmental rights of American Indians and Alaska Natives. NCAI has grown to include member tribes from throughout the United States. Now serving as the major national tribal government organization, NCAI is positioned to monitor federal policy and coordinated efforts to inform federal decisions that affect tribal government interests.

State, Local, Tribal, and Territorial Government Coordinating Council (SLTTGCC)

The SLTTGCC serves as a forum to ensure that State, local, and tribal homeland security partners are fully integrated as active participants in national CIKR protection efforts, and to provide an organizational structure to coordinate across jurisdictions on State and local government-level CIKR protection guidance, strategies, and programs.

E.O. 13407 requires IPAWS to, “include in the public alert and warning system the capability to alert and warn all Americans, including those with disabilities and those without an understanding of the English language.” To accomplish this, the IPAWS PMO will engage with certain special needs organizations.

National Council on Disability (NCD)

The NCD is an independent federal agency, composed of 15 members appointed by the

President, by and with the consent of the U.S. Senate to promote policies, programs, practices, and procedures that guarantee equal opportunity for all individuals with disabilities, and that empower individuals with disabilities to achieve economic self-sufficiency, independent living, and inclusion and integration into all aspects of society.

National Federation of the Blind

With more than 50,000 members, the National Federation of the Blind is the largest and most influential membership organization of blind people in the United States. The NFB improves the lives of blind people through advocacy, education, research, technology, and programs encouraging independence and self-confidence. It is the leading force in the blindness field today and the voice of the nations blind. The NFB has affiliates in all fifty states plus Washington D.C. and Puerto Rico, and over seven hundred local chapters.

National Association of the Deaf

The National Association of the Deaf (NAD) is the nation's premier civil rights organization for deaf and hard of hearing individuals in the United States. The advocacy scope of the NAD is broad, covering a lifetime and impacting future generations in the areas of early intervention, education, employment, health care, technology, telecommunications, youth leadership, and more – improving the lives of millions of deaf and hard of hearing Americans. The NAD also carries out its federal advocacy work through coalition efforts with specialized national deaf and hard of hearing organizations, as well as coalitions representing national cross-disability organizations.

Additionally, close and continuous collaboration with our private sector partners is essential and the IPAWS PMO will maintain lines of communication and exploit communication venues to ensure collaboration takes place. There are a number of key private organizations contributing to the IPAWS program, including:

- National Association of Broadcasters (NAB);
- The Primary Entry Point Administrative Council (PEPAC);
- National Emergency Number Association (NENA);
- Alliance for Telecommunications Industry Solutions (ATIS);
- Telecommunications Industry Association (TIA);
- Organization for the Advancement of Structured Information Standards (OASIS);
- Society of Broadcast Engineers (SBE);
- Association of Public Television Stations and the Public Broadcasting Service (PBS); and
- Cellular Telecommunications and Internet Association (CTIA).

Value Proposition

The Integrated Public Alert and Warning System (IPAWS), established by Executive Order 13407, provides the necessary capabilities for alerting and warning the American public before, during, and after natural and man-made disasters. An effective public-private partnership is necessary to ensure IPAWS is interoperable with current and future technologies. Implementation efforts are most efficient and effective when there is the full participation of government and industry partners. The success of the IPAWS partnership depends on articulating the benefits to government and private sector partners.

Ultimately, the American public will benefit most from the implementation of IPAWS. Through an integrated set of capabilities, messages will reach those in crisis in order to deliver consistent and timely alert and warning information.

Value will also accrue to the government at all levels through:

- The integration of dissemination paths to allow alert originators to reach as many end devices as possible with a message;
- Facilitated interoperability with common standards so that the national message can propagate through state, territorial, tribal, and local systems; and
- Added resilience at the national level through diverse delivery infrastructure and at the state level through their leveraging of federal infrastructure to increase the reach of their message.

It is clearly in the national interest to ensure private sector participation in the integration of alert and warning systems and the application of new interoperable technologies. The value proposition for our private sector partners includes:

- A more robust network to disseminate alert and warning;
- Participation in a policy development and management framework that helps focus both public and private planning and resource investment;
- Greater information sharing; and
- Participation in national-level training and exercise programs.

Vision, Mission, and Goals

During an emergency, Federal, 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 a modernization and integration of the nation's alert and warning infrastructure. IPAWS will integrate new and existing public alert and warning systems and technologies in order to provide Federal, State, territorial, tribal, and local alert and warning authorities a broader

range of message options and communications pathways, thereby increasing the capacity to save lives and property. IPAWS will provide 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 as well as the capability to generate alerts and warnings of their own. 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.

In order to provide this next generation capability, the IPAWS PMO has established and embraces the Vision, Mission, and Goals and Objectives set forth in this strategy.

Vision: Timely alert and warning to American citizens in the preservation of life and property.

Mission: Provide integrated services and capabilities to Federal, State, territorial, tribal, and local authorities that enable them to alert and warn their respective communities via multiple communications methods.

Goals: To attain the Vision and accomplish the Mission, FEMA has established three overarching strategic goals:

Goal 1 – Create and maintain an integrated interoperable environment for alert and warning.

Goal 2 – Make Alert and Warning More Effective.

Goal 3 – Strengthen the Resilience of IPAWS Infrastructure.



II. Program Goals and Objectives

The IPAWS Program will provide the capability for timely alert and warning to American citizens in the preservation of life and property. An effective and integrated public alert and warning system program is enabled by the following three goals and their respective objectives.

GOAL 1: Create and maintain an integrated interoperable environment for alert and warning

Technology will play a leading role in the implementation of IPAWS. To create a viable system, IPAWS will establish an environment that enables the integration of today's relevant technologies with the technologies of the future to produce a robust and interoperable system of systems.

Objective 1: Attain technical and operational interoperability by establishing or adopting common alerting and warning protocols, standards, terminology, and operating procedures.

Common standards and common protocols are absolutely essential to the success of IPAWS. The IPAWS end state will include a recognized national alert and warning message standard and seamless interconnection of existing and new public alert and warning systems that ultimately can be used save American lives and property.

Objective 2: Ensure the integrity of messages and deliver them through as many communications pathways as practicable.

To reach the American public given today's communications capabilities means more than simply enhancing the current configuration and coverage of the EAS. Typical Americans today know of and/or have access to a multitude of communications means. IPAWS will be capable of reaching out through those capabilities (e.g.,

the Internet, cellular devices, satellite, etc.) to provide alert and warning messages to the broadest segment of the American public as possible. In addition, alert and warning messages will be capable of reaching those Americans with disabilities as well as those for whom English is not their primary language.

GOAL 2: Make Alert and Warning More Effective

The effectiveness of the program will be realized through a comprehensive education and outreach program coupled with integrated training and exercises for emergency managers at all levels. The IPAWS PMO will reach out to the American people as well to ensure they understand IPAWS capabilities. A holistic education and outreach program must be developed and executed to ensure everyone understands IPAWS – how it functions, what it is for, and what it provides. Training provides emergency management officials with the knowledge, skills, and abilities needed to perform key tasks required by specific capabilities. Exercises assess and validate the speed, effectiveness and efficiency of capabilities, and test the adequacy of policies, plans, procedures, and protocols in a risk-free environment. Aside from actual events, they provide the best means of evaluating capabilities.

Objective 3: Train emergency alert originators to craft effective alert messages and use the system in a timely manner.

Effective and institutionalized training is vital to the successful execution of IPAWS. It is recognized that the complexity of the training will vary dependent upon the audience. Therefore, training modules will be tailored to the appropriate level at which it is given and will be based on tasks, conditions, and standards developed to ensure preparedness managers

know the standards and protocols for preparing alert and warning messages and how to use the technology available to send alert and warning messages.

Objective 4: Implement a national test and exercise program that verifies IPAWS is available when needed and operable as required.

Conducting a national test of the EAS as well as incorporating IPAWS into future exercises will ensure two things. First, it will inculcate the proper understanding and use of the system and institutionalize IPAWS throughout the emergency preparedness operating environment. Second, by using feedback mechanisms built into exercise processes, required policy, procedural and/or technological changes identified during the course of an exercise will be captured by and incorporated into further enhancements to IPAWS.

Objective 5: Conduct outreach and education to the American people.

It is incumbent upon the IPAWS program staff to reach out to the American people to ensure all segments of the American population know and understand IPAWS – how it works and how they can use the system during times of crisis. The IPAWS PMO, in partnership with private sector stakeholders, will use every opportunity and every venue available to provide educational and actionable information to the American public.

GOAL 3: Strengthen the Resilience of IPAWS Infrastructure

The infrastructure and assets necessary to execute the IPAWS program’s mission must be recognized as critical infrastructure in the context of Homeland Security Presidential Directive (HSPD) – 7 and the National Infrastructure Protection Plan (NIPP). Establishing such recognition will strengthen the ability of the IPAWS Program Management Office to institute procedures, in collaboration with both the public and private sectors, to enhance the resiliency of IPAWS infrastructure using the programs and tools developed as an integral part of the NIPP.

Objective 6: Manage risk to IPAWS infrastructure in accordance with the National Infrastructure Protection Plan (NIPP).

IPAWS infrastructure is critical to national security. As such, the IPAWS PMO will establish active coordination channels with the national-level Communications and Emergency Services sectors. Such coordination will be crucial to ensuring IPAWS infrastructure is incorporated into risk assessment and risk management processes and procedures already put in place by the Department of Homeland Security through the NIPP framework.

Objective 7: Establish forums and processes for establishing successful public-private partnerships and attaining public and private sector input.

The IPAWS program will use the partnership model established in the NIPP as the primary organizational vehicle for collaborating with and seeking input from the private sector. The IPAWS Program Management Office, working in full collaboration with the Sector-Specific Agency for the Emergency Services Sector, will coordinate the establishment of a Federal Public Alert and Warning Working Group as a coordination forum through which the details of the program’s resiliency, standards, protocols and technology requirements can be vetted effectively. The IPAWS Program Management Office will also work with industry leaders to bring about the establishment of a private sector counterpart to the Federal Public Alert and Warning Working Group.



III. Summary

The Vision, Mission, Goals and Objectives set forth in this Strategic Plan will ensure FEMA and the IPAWS PMO meet the requirements for the Integrated Public Alert and Warning System

established by Executive Order 13407. Table 1, below, demonstrates the correlation of E.O. requirements to the IPAWS Goals and Objectives.

		Goal 1 Objective 1	Goal 1 Objective 2	Goal 2 Objective 3	Goal 2 Objective 4	Goal 2 Objective 5	Goal 3 Objective 6	Goal 3 Objective 7
EO 13407 Requirements	Inventory, Evaluate and Assess						X	
	Common Alert Protocols	X						
	Target Geographic Locations		X					
	Disabilities and Non-English Speaking		X					
	Maintain, Protect and Restore						X	
	Training, Tests and Exercises			X	X			
	Public Education					X		X
	Coordinate with Private Sector							X
	Administer the EAS		X				X	
	Alert and Warn Under All Conditions		X				X	

Table 1
Correlation of E.O. Functions to Goals and Objectives

IPAWS will ensure that the President of the United States can alert and warn the American people under all conditions. IPAWS will provide Federal, State, territorial, tribal, and local alert and warning authorities integrated services and capabilities enabling them to alert and warn their respective communities, via multiple communications pathways for all hazards impacting public safety and well-being. IPAWS will:

- Diversify and modernize the EAS;
- Create an interoperability framework by establishing or adopting standards such as the Common Alerting Protocol (CAP);
- Enable alert and warning to those with disabilities and to those without an understanding of the English language;
- Provide the President, Federal, State, territorial, tribal, and local emergency managers access to more communication pathways to ensure alerts and warnings reach the maximum number of Americans over as many pathways as possible;
- Partner with NOAA to enable seamless integration of message transmission through national networks; and
- Allow the President of the United States to speak to the American people under all emergency circumstances

IPAWS is simple in concept yet complex and serves as a critical component of our Nation's capability to alert and warn the American people of impending dangers. The American people are our greatest and most trusted stakeholder, making it is imperative that alert and warning capabilities be as robust, comprehensive and resilient as feasibly possible. The resilience of the American people during times of crisis has been demonstrated time and time again. Therefore, it is incumbent on all of us to ensure they have timely information to increase the likelihood of their survival and minimize damage during times of emergency. Success in this endeavor depends on trusted relationships between and among government and private sector partners. Together, we will focus the necessary resources, technology, tools, and skill sets required for success.



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