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**TESTIMONY BEFORE THE
HOUSE OF REPRESENTATIVES SUBCOMMITTEE ON NATIONAL SECURITY,
EMERGING THREATS, AND INTERNATIONAL RELATIONS
COMMITTEE ON GOVERNMENT REFORM**

**“THE HOMELAND SECURITY ADVISORY SYSTEM: THREAT CODES & PUBLIC
RESPONSES”**

March 16, 2004

Mr. Chairman and Members of the Committee:

My name is Kenneth Allen, and I am executive director of the Partnership for Public Warning (PPW). William Craig Fugate, chairman of the PPW Board of Trustees, regrets that he cannot be here today. However, Mr. Fugate is director of the Florida Division of Emergency Management, and his legislature is currently in session. On behalf of the Partnership, I appreciate this opportunity to appear before the subcommittee to discuss the Homeland Security Advisory System (HSAS).

Timely and effective public warnings can save lives, reduce property losses and speed economic recovery. Public warning empowers citizens by providing them with the information they need during times of emergency to make informed decisions and take protective actions. The objective of a public warning system is to provide people at risk with timely and accurate information regardless of their location, the time of day or night or any special needs.

Four years ago, the President’s National Science and Technology Council issued a report which concluded that many in our society are at risk because we do not have an effective means of warning them about impending emergencies such as natural hazards, chemical spills and other accidents. On September 11, 2001, we learned that we did not have the capability to warn citizens of terrorist attacks. On that terrible day, not a single national warning system was activated.

The Partnership for Public Warning was established in January 2002 by concerned emergency management officials from around the country. Recognizing that public warning is an issue that encompasses all levels of government and relies upon a private

sector infrastructure, PPW was created as a non-profit, public-private partnership. PPW provides a collaborative, consensus-based forum where government and industry are working together to develop the standards, processes, policies and educational materials needed to create an effective alert and warning capability. PPW is the only national organization dedicated to working on public warning issues.

Less than three months after the Partnership for Public Warning was established, the Federal Register of March 18, 2002 included a notice describing the then-proposed Homeland Security Advisory System. In addition to responding to that initial request for comments, the Partnership has continued to monitor and evaluate the HSAS. I am therefore pleased to discuss this important issue with the committee.

On April 25, 2002, the Partnership for Public Warning submitted written comments that discussed the nature of public warnings and identified significant issues that should be considered in the development of any alert or warning system for terrorism.

Believing that this issue deserved more attention than was possible during a 30-day comment period, the Partnership convened a four-day workshop where emergency management and warning experts from government and industry reviewed and discussed the proposed system. Participants included experts from the social sciences, physical sciences, emergency management community, public warning and communications industries and federal law enforcement. The conclusions and recommendations that emerged from this workshop were provided to Governor Tom Ridge, Director of the Office of Homeland Security in a July 5, 2002 letter.

In November 2003, the Partnership solicited public comments on the operation of the Homeland Security Advisory System. These comments were provided to the Department of Homeland Security in a December 30, 2003 letter to Frank Libutti, Undersecretary for Information Analysis and Infrastructure Protection. Copies of all three reports have been provided to this committee and are available on the PPW web site at www.PartnershipforPublicWarning.org. I would like to review our initial recommendations, summarize the most recent public comments, answer the specific questions raised by the committee and provide some thoughts on how to move forward.

The most important point that emerged from the PPW workshop in 2002 was the conclusion that the Homeland Security Advisory System is a “*threat assessment system*” and not a complete warning system. The five colors can tell the public that something may happen, but it does not identify what or where – it does not warn citizens when an attack is imminent. The best description I have heard is that the HSAS is “America’s mood ring.” Based on this conclusion, the experts who participated in the June 2002 workshop made the following recommendations:

1. Develop clear standards for deciding on changes in threat condition and for reviewing suggested changes. Have these standards reviewed by experts in the

Administration and private sector. Publicize the existence of such standards. Build credibility for the process.

- 2. Base the threat-level scale on the probability/imminence of a terrorist attack. Do not include potential gravity or risk. If the risk is not high, express this information separately.**
- 3. Develop ways to be more specific about what is likely to happen, where, when, over what time period and how likely it is. Be clear about the risks and the actions required to reduce the risks. People are unlikely to take actions that expend their limited resources without credible, specific information.**
- 4. Consider changing the name of HSAS to accurately describe it as a threat assessment system and indicate that the advisory (warning) system is being developed.**
- 5. Recognize that effective warning is an ongoing evolutionary process that involves consistent use of terminology, thoughtful planning, training, and meaningful public education. The need for an ongoing long-term commitment and continual reevaluation and quality improvement is shown clearly by decades of experience in developing warning systems to prevent/reduce a variety of natural and social problems.**
- 6. Move towards development of a national, all-hazards warning system. Americans must respond to more natural hazards and accidents each year than to acts of terrorism. Unifying the terminology and approach will provide better response to warnings about terrorism.**
- 7. Use the power of existing emergency response plans, practices and procedures to engage State and local governments in the development and use of the HSAS. Emergency response to disasters (including warnings) usually starts at the local “incident” level. The state’s role is to supply resource requests from local government. The federal role is to back up state response.**
- 8. Recognize that actions taken outside the federal government will be based in part on actions taken by the federal government, because the federal government is the primary source of information on terrorism.**

The above recommendations were based on many years of social research and the experience of emergency management experts and authorities. We believe that these recommendations remain valid today.

It has now been almost two years since the Homeland Security Advisory System was put into place. It is an appropriate time to evaluate the effectiveness of that system.

We note that Secretary Ridge and other senior DHS officials have acknowledged that the HSAS needs to be refined. We also note that several Congressional committees have expressed similar concerns. As part of the FY 2004 budget process, the House and Senate Appropriations Committees have directed DHS to provide a report on how to improve the system.

The Partnership for Public Warning felt that it would be useful to ask local and state governments – and the public – for their comments on the HSAS. Towards that end, PPW initiated a request for public comments last November. The comments we received including the following points:

- The current system is too vague. It does not provide sufficient information to enable the public to understand the nature of the threat. Emergency managers and the public are unclear as to what protective actions should be taken.**
- The HSAS is inconsistent with existing alert and warning scales such as the current FBI 4-tiered Threat Level System, the DOD THREATCON and the numerous threat scales used by other federal agencies. This multiplicity of different scales can create confusion in the minds of the public.**
- The HSAS would be more effective if it used standard terminology and message formats – similar to those being developed for other warning systems.**
- When there is a change in the threat level, state and local officials should be notified before the public. A standard, minimum time should be established between the notification to the proper authorities and notification to the public.**
- One color does not fit all. Advisories should be tailored to specific geographic regions, industry sectors and other potential targets. Models or templates should be developed to guide this tailoring process.**
- The HSAS is merely a threat advisory system; in its current incarnation it cannot be used to warn the public of an imminent terrorist attack. A terrorist warning system should be developed and it should be linked to existing alert and warning dissemination systems such as the Emergency Alert System and NOAA Weather Radio.**
- The federal government should develop a terrorist alert and warning system that is not dependent solely upon the news media for dissemination of information to the public. Such a system should employ a multitude of distribution channels and technologies.**

The commentors who responded to the PPW request also provided a number of specific recommendations for improving the Homeland Security Advisory System. These recommendations ranged from getting rid of the system to reducing the number of colors and eliminating the colors in favor of a threat scale consistent with other existing systems.

Before I provide our suggestions as to how we can move forward, I would like to address the specific questions raised by the committee.

What process is used to determine the Homeland Security Advisory System threat level?

The Partnership for Public Warning is not in a position to answer this question, as we are not involved in the process for determining the threat level.

However, as we have noted in our previous comments on the HSAS, public credibility will be significantly enhanced if there is a well described and understood process for changing the threat level and releasing information. The research into public warnings has demonstrated that one of the most important factors in an effective public warning is the credibility of the warning source. When people understand, believe and trust the source of a warning, they are more likely to take the appropriate protective actions.

Clearly, much of the information used to assess the threat level is classified and cannot be released to the public. However, there is no need to do so if there is a clear and codified process for assessing threats and making decisions about the correct threat level. At a minimum, this codified process would include the process by which data is evaluated, the criteria to be used for increasing or decreasing the threat level, the organizations and people involved in the decision making process and the methods and protocols for disseminating information.

What are the specific means of communication used to disseminate threat level information to federal agencies, state and local authorities, private industry and the public?

It is our understanding that there are a number of specific channels for disseminating threat information to government agencies and key industry sectors. Our primary interest is in how threat information is disseminated to the public.

Currently, changes in the threat level and information regarding specific threats are disseminated to the public via press release. Although the media does an excellent job of distributing the information, not everyone is listening to the radio or television. While as many as 22% of the population may be listening to the radio at any given time of the day, fewer than 1% are listening in the middle of the night. The average television set is in use only 31% of the day, and most of us turn the television off when we go to sleep.

Relying upon the media may not be a problem if the purpose of the HSAS is solely to advise the public that something may happen at some indeterminate point in the future.

Most people will eventually read a newspaper or listen to the radio or television. Sooner or later almost everyone will hear the news.

However, if there is the danger of an imminent attack, and there is a need to warn the public immediately, the HSAS will not be effective. This is especially true if the threat emerges in the middle of the night – when few people are listening to the radio or television.

As we have previously suggested, there needs to be a public warning component developed to complement the threat advisory system. Moreover, the warning system should be linked to existing dissemination systems such as the Emergency Alert System and NOAA Weather Radio. In the longer term, there is a need to develop a comprehensive and integrated national public warning capability that uses multiple technologies --- computers, telephones, cell phones, PDAs, etc. – to deliver warnings to the public.

What types of information are passed to federal agencies, state and local governments, private industry and the public?

PPW does not know what information is passed to federal agencies, state and local governments and private industry. We are aware of the information that is shared with the public.

To date, whenever the threat level has been raised, the public has been provided with very general information that there may be some type of threat to the United States. In most instances, there has been little specific information as to the exact nature of the threat or where it is most probable. The public has also been provided with only general suggestions about what to do. These suggestions range from being more vigilant to putting together a home survival kit. We believe that more specific information needs to be provided. Moreover, as a result of the research that has been done, we know what makes an effective warning.

The first objective of a warning is to get people’s attention – to get them to realize that something is happening (or about to happen) that is important enough to be worthy of some of their time and thought. This is easiest when there is a clear, perceivable threat such as an approaching tornado or hurricane. When the threat is less perceptible, such as a toxic cloud or a potential terrorist attack, sufficient information must be provided just to get people’s attention. Once you have their attention, they will seek information in order to decide whether the event will affect them and what, if any, action to take. If official information is not available, they will get it from less authoritative sources, or discount the threat, reasoning that if the threat were really serious, the government would provide additional information. The public wants specific information and details upon which to base decisions. The more detail that is provided, the greater the chance that the public will pay attention and consider options. It is important to remember that a warning is intruding into people’s lives, seizing their attention, and urging them to modify deeply embedded behaviors.

Intermediaries and the general public will be seeking as much information about an event as possible. While not every piece of information will be equally relevant to every person, among the information that should be considered as part of any public warning is the following:

Hazard information

- Type of hazard
- When
- Where
- Intensity
- Duration
- Source that identified the hazard

Vulnerability

- Demographic characteristics (static and dynamic)
- Population density
- Population profile
- Access to escape routes
- Environmental characteristics
- Infrastructure

Risk

- Probability
- Projected numbers of individuals affected
- Types of impacts

Possible actions

- Ways to reduce impact
- Protective actions
- Recovery actions

Additional Information

- How to obtain

As noted above, not every member of the public will need all of the above information. Provided below is an example of the type of information that might be sought by a homeowner threatened by an approaching hurricane.

Hurricane Warning Information for Households

Threat Information

Type of event	Hurricane
Types of threat	Storm surge, wind, inland flooding, tornadoes
Target location	What are the threats at their location?
Impact area	Where else are there threats? Should they change locations? Width of threatened coastline

	Inland extent of surge, wind, and flooding
Magnitude (Intensity)	What is the impact to them? Saffir-Simpson scale Depth of surge/flooding and wind speed at critical locations
Time of onset	Estimated arrival time of tropical storm winds and surge
Duration	How long tropical storm winds and surge will last?
Probability	Expected landfall location and radius of hurricane winds, storm category, arrival time, duration
How vulnerability varies by structure and location	For single family structures, multi-family structures, mobile homes

Recommended Actions

Protection for persons	Evacuation Sheltering in-place
Protection for property	Strengthen building envelope (install shutters) Secure contents (bookcases, refrigerators) Turn off utilities (gas, electric power, water)
Further information	Contact point for further information (EAS station, NOAA Weather Radio) Contact point for assistance in protective response Environmental cues Social sources/conditions

Clearly, the warning process for a hurricane, or any other hazard, requires communicating a great deal of information quickly and concisely. This is best achieved when the population has been given previous training and education.

One essential characteristic of an effective public warning system is the use of uniform terminology for all hazards and consistent messages. Disasters have many similarities, regardless of whether the cause is a natural hazard, accident or act of terrorism. This is true because the mechanisms that harm people and property, such as fire, building collapse, toxic chemical release, or floods, are the same regardless of how these mechanisms are triggered. Alerting people at risk to an impending disaster, or notifying them about an ongoing disaster, involves the same kinds of activities no matter what the cause of the disaster. The goal in each case is to get people's attention, to provide information about what is happening, and to get them to take appropriate action. Effective

warnings must be communicated clearly and succinctly. Unfortunately, there is frequently little similarity in the warning terminology used by different government organizations.

Even at the community level, it is not uncommon to find that each type of emergency event employs different terms and warning scales. As a result, people at risk may not recognize or understand a warning when it is heard. It is far more effective to use consistent terminology and warning scales. People at risk would understand warnings much better if the terminology were standard for all types of hazards.

In developing standard terminology it is important to use:

- Easily understandable “trigger words”
- Words that are simple and memorable to the great majority of people
- Words that are transferable across different hazards
- Words that translate into other languages with similar meanings
- Words that can be used in many different media such as a 10-character mobile pager, a 12-character cell phone, a 60-character short messaging appliance, a newspaper article, a half-hour television documentary.

By using standard words, training and education are facilitated. This would alleviate the problems associated with having multiple threat scales, or scales that people rarely hear about. For example, on September 10, 2002, National Public Radio interviewed tourists at the Washington Monument about that day’s increase in the Homeland Security Advisory Scale to level “Orange.” Few of them knew that the level had changed, and none could identify what it meant. One man stated, “No, I’m not [aware of the HSAS change or level]. I mean, I barely get the pollution and the heat colors. Last week the kids were talking about purple. Like, I’ve never heard of purple.” Another commented, “I’d rather see it high, low, medium, you know? It’d be easier to understand.” The use of different terminologies for each warning system makes it difficult for the individual citizen to remember how each system uses the terms and hinders our ability to move easily from one system to another.

What actions should federal agencies, state and local governments, private industry and the general public take once a threat level has increased from yellow (elevated) to orange (high)?

The warning process consists of those with information communicating with individuals at risk and others, such as emergency responders, in advance of or during a hazardous event, with the intent that those at risk will take appropriate action to reduce casualties and losses. The goal of a warning is to prevent hazards from becoming disasters. The success of a warning is measured by what actions people take.

A warning prompts people to take immediate actions that save lives, reduce injuries and protect property. Terrorist attacks and other hazards, both natural and man-made, create disasters when they kill and injure people, destroy and damage property, and cause further economic and emotional problems by instilling a sense of unease and uncertainty into society. Such losses can and have been reduced when people receive an alert of what is likely to happen soon, or notification of what is happening and advice about what to do in response to the hazard. With such knowledge, those at risk can take appropriate action to get out of harm's way, to reduce losses, to reduce uncertainty and to speed recovery. Thus, a warning must provide the information and motivation for people to take informed action.

As we have already noted, the Homeland Security Advisory System is not a warning system – it is merely a threat advisory system. Moreover, the public has been provided with minimal guidance as to what specific actions to take and, in some instances, conflicting guidance. When the threat level was raised over the most recent holiday season, the public was advised to conduct business as usual and continue to make their holiday visits and trips. Such a message creates conflict in the minds of the public between the credibility of the threat and the need to take protective actions – if the threat is credible and serious, why are no changes in behavior warranted?

Having said that, the Partnership for Public Warning is not in a position to list those actions the public should take when the threat level is raised to orange (high). We believe the specific actions to be taken should be a function of the nature of the threat, its probability, risk and location. This requires greater specificity in the threat advisory system and the information that is disseminated to the public.

Our nation is at risk from terrorist attacks. We need an effective alert and warning system to communicate with the public and provide them the information they need to protect their lives and property. Creating such a system is not an easy task. The Homeland Security Advisory System has been a good first step towards a terrorist threat system and we commend the Department of Homeland Security for its efforts.

After almost two years of operational experience with the HSAS, it is clear that changes are needed. A more useful and effective system can be developed. The Partnership for Public Warning has the following recommendations for creating a more effective system.

Moving Towards an Effective Public Warning System

The Partnership for Public Warning supports the development of a truly effective system for warning the public about terrorist threats and attacks. A first step is understanding that developing an effective public warning system is a complex process that requires the integration and management of many different elements. Selecting a technology to disseminate warnings is often the easiest issue to address, as there are many

excellent technologies and systems available. Moreover, a comprehensive public warning system will employ not just one, but a multitude of technologies.

The key elements of the public warning process include:

1. **Data collection and analysis**

Development or collection of data regarding a potential hazard and the analysis of that data by experts as to the potential risk associated with the hazard.

2. **Deciding to issue a warning**

Review of the data and the expert analysis by the appropriate authorities and the reaching of a decision to issue a warning to the public.

3. **Framing the warning**

Creating a warning message for the public that includes pertinent information such as the nature of the hazard, the risk, the affected area and the protective actions that are recommended.

4. **Disseminating the warning**

Distribution of the warning through all appropriate and available channels. This could include sirens, the Emergency Alert System, the media and specialized warning services such as telephone dial-out. The warning is also disseminated to those with special needs (e.g. blind, deaf, non-English speaking).

5. **Public Reception**

Members of the public at risk hear the alert and understand the warning.

6. **Validation**

Before taking action, most members of the public will seek to validate the warning by going to alternate information sources to see if the same message is being sent.

7. **Take Action**

Members of the public take appropriate protective action to protect themselves, their families and their property.

The above is a simplified overview of the warning process. Developing a successful warning strategy requires three things:

- **Planning**

Long before an emergency occurs, the appropriate officials should develop plans for when and how to issue public warnings. Key elements in any plan include the criteria for issuing a warning, the officials with the authority to issue a warning, standard terminology and the methods of distribution.

- **Public Education**

Just as important as the plan is the education of the public. Information needs to be provided to the public that explains how they will be warned, what the warnings mean (e.g. if a siren goes off is it calling the volunteer firemen to the station or signaling that citizens should stay in their houses?) and where to get additional information, especially if the power is off.

- **Testing and Evaluation**

An effective warning system will be tested on a regular basis, both to make sure the system works and that individuals targeted for the warning understand the purpose and the message. Evaluation of the system by emergency managers, government officials, the media, private sector and the public can be invaluable in identifying ways to improve the communication of warning messages.

With regard to the Homeland Security Advisory System, we have the following recommendations.

1. The threat advisory scale should be made more consistent with other existing threat scales.
2. The system should be refined to provide information on a local, regional and industry-specific sector basis (better targeting).
3. More detail should be provided regarding the protective actions that citizens should take at each threat level.
4. A public *warning* system for terrorist threats needs to be developed to complement the threat advisory scale.
5. The HSAS should be integrated with existing public alert and warning systems, and a national, all-hazard public warning capability should be developed.

- 6. The Department of Homeland Security should collaborate with local and state governments, the private sector, the non-profit community and the public to refine and operate the Homeland Security Advisory System.**

The last two recommendations are the most important.

Americans do not expect their government to preserve and protect them from all these risks. However, because of government's duty to promote the public welfare, and its unmatched ability to gather, analyze, and disseminate risk information, Americans do expect government to give them significant warning so they can act to limit damage to themselves, their property and their communities. Indeed, event post-mortems more often focus on the adequacy of warning than on the prudence of the public's response. For government, there is no escape from public judgment on its performance in warning those who subsequently become victims.

The public, reasonably, has a right to expect that government, if it cannot protect them, will at least effectively communicate to them critical advice and information on imminent risks. Many, if not most, Americans believe that an effective national public warning capability exists. It does not. While current warning systems are saving lives, they are not as effective as they can or should be.

Existing national alert and warning systems are fragmented and uncoordinated. With few exceptions, existing systems are unable to target only those people at risk, provide inconsistent messages, lack coordination, and are often not interoperable. Each program has its own scale for measuring risk and its own method for reaching those at risk. Existing systems also fail to reach many people at risk while warning and alarming many who are not at risk. As a result, individuals at risk fail to get timely information, fail to understand or act on the information and often do not know where to go for additional information. Those not at risk who receive warnings of little relevance may come to view the system with skepticism, if not distrust.

The Homeland Security Advisory System is an example of this fragmentation. Instead of building upon existing alert and warning capabilities, we have created another system with its own threat scale and distribution channels.

The Partnership for Public Warning believes that the answer is a national, integrated public warning capability that can be used to alert the public in all types of emergencies, from terrorism to natural disasters and accidents. The Homeland Security Advisory System should be part of a national all-hazard public warning capability that will provide citizens at risk during times of emergency with timely and useful information to enable them to take appropriate actions to save lives and property. Such a capability will:

- **Support multiple warning sources (President, federal officials, state officials, local officials and authorized private officials (e.g. nuclear plant));**
- **Take advantage of existing national assets such as Weather Radio and the Emergency Alert System;**
- **Enable local emergency managers to provide more effective public warnings;**
- **Ensure that only authorized officials may enter alerts and warnings;**
- **Be secure, redundant and available 24/7;**
- **Be based on an open, non-proprietary architecture;**
- **Employ uniform alert and warning terminology that is clearly understood by recipients regardless of geographic location;**
- **Support multiple languages and users with physical disabilities;**
- **Employ multiple distribution channels employing multiple technologies (e.g. telephones, cell phones, PDA's, personal computers, TV's, radios and other consumer electronics);**
- **Involve all public and private stakeholders in its development and operation.**

Creating this national capability is not a technology problem. We already have the technologies necessary to warn people in any location, at any time of day or night or in any language. The need is for standards, policies, procedures, and public education. An effective national public alert and warning capability can be developed relatively quickly for only a few million dollars. The Partnership for Public Warning has already begun work towards this capability. In addition to a recent assessment of the Emergency Alert System, PPW has promoted the development of the first-ever standard message format for warning – the Common Alerting Protocol. This protocol is about to be issued as a standard and is already in use in a number of jurisdictions.

For further information on what it will take to create a national alert and warning capability, I draw your attention to PPW's "*National Strategy for Integrated Public Warning Policy and Capability*." This document sets forth a vision and a road map for creating an effective national, all-hazard alert and warning capability. We have also released a plan that identifies the specific actions needed to implement the strategy. Terrorism alerts should be an integral part of this national capability.

Perhaps the single most important recommendation is the need for cooperation and partnerships.

Protecting our nation's security must be a collaborative effort in which government, industry and the public work together. This is especially true if we are to develop an effective Homeland Security Advisory System. Despite its best efforts, the government cannot protect us from all threats, and no citizen would expect otherwise. It is therefore essential that there be an effective system for the government to communicate with us about the nature of the threats, the risks and what we can do to protect our families and ourselves.

The Federal government cannot develop an effective system on its own. Neither it – nor any other organization or individual – has all the answers. Moreover, local and state governments, private industry and the public must understand and implement a terrorism warning system. To do so effectively, these stakeholders should be part of the process to design that system. We urge the Department of Homeland Security to participate in a collaborative forum with local and state governments, the private sector and the public to create a system that is understood and supported by all sectors of our society. The Partnership for Public Warning has offered to assist the Department of Homeland Security in this endeavor, and we reiterate that offer today. Let us work together to develop a truly effective national alert and warning system.

September 11th taught us that the unthinkable can happen. Future tragedies – whether natural or man-made – are not a matter of if, but when. Lives can be saved and losses reduced through effective public warning. Americans expect their government to protect them and believe an effective warning capability exists. Although such a capability does not exist today, it can be put in place quickly if we work together. There is no excuse for further delay.

Public warning is an important issue, and we applaud the committee's interest in the Homeland Security Advisory System. We look forward to working with you on this vital issue.

Thank you.