

Wireless Emergency Alerts Getting the Word Out



Jim Allsopp

NOAA/National Weather Service, Chicago, IL

DuPage County Advanced Spotter Training, 2013

Commercial Carriers and Government Respond to the Need for Mobile Alerts



WARN Act of 2006 authorized DHS and FCC to begin activities toward development of a Commercial Mobile Alert Service (CMAS)



In 2007-08, joint commercial and government committee developed recommendations for mobile alerts

- **Cell tower broadcast (not SMS text), so no network congestion**
- **90 character maximum**
- **Opt-out**

Rollout

- **Called Wireless Emergency Alerts (WEA)**
- **Carrier rollout started April 2012**
- **NWS started alert push late May 2012**



Wireless Emergency Alerts (WEA)



Alert Categories

- Presidential
- Imminent threat to life and property (e.g., severe weather, HazMat, earthquake)
- AMBER Alert/child abduction

Alert Message Content (90 characters)

- What is happening (e.g., Tornado)
- Area affected (“in this area”)
- Time (e.g., til 4:15PM EST)
- Recommended action (e.g. take shelter)
- Sending agency (e.g., NWS)

Quick Facts about WEA

- **WEA is a free service and opt-out**
- **Cell tower broadcast to cell phones.**
 - *Not a privacy issue. Service does not track you. WEA is just a broadcast.*
 - *Not subscription based. You only receive alert if you are in the threat area.*
- **Purpose is notification, recipient must seek additional info**
- **Acronym soup – CMAS and WEA are both names for the same service**
- **Major carriers are committed to producing WEA capable phones**
- **If you travel into an area after an alert was originally sent, you will still receive it**
- **Each WEA is only displayed once, so you don't receive duplicates**
- **WEA has a distinct vibration cadence and audio tone**
- **Alerts do not interrupt when you are in a voice or data session on the device**

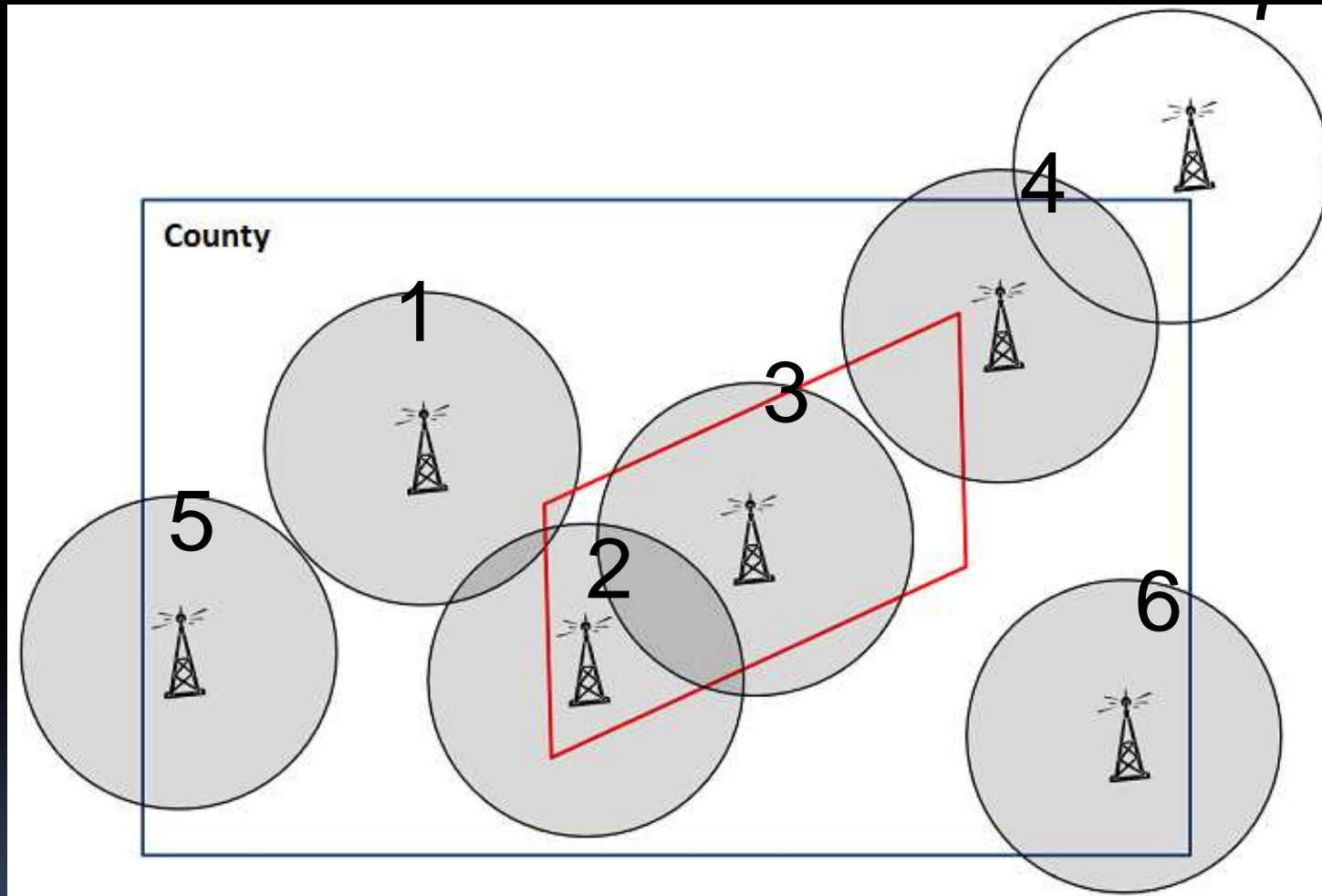
Fine Tuning the Message

- 1. WEA is intended to act as a bell ringer**
 - *You are within reach of the threat (e.g., could be driving into the area)*
 - *Possibly in the path*
- 2. Not a replacement for other warning systems**
 - *When safe, seek additional information*
 - *Should still be monitoring TV/radio, NWR, community warning systems, EAS, mobile/desktop apps, etc.*
- 3. Provided on best effort basis and as with any new service, there may be hiccups early on**
 - *A numbers of factors determine whether or not you receive a message*
- 4. Contact your wireless carrier for more information**

WEA Issues

- **Winter warnings often issued with early morning forecast cycle (4:00 AM) for a storm beginning later in the day. May drop blizzard warnings due to complaints**
- **Even though all major carriers broadcast by NWS polygons, there are numerous cell network complexities that could result in under/over-warning**
- **Some Counties, especially in western US, are very large – leading to perception of overwarning**

Carrier Targeting of the WEA Broadcast



- As of 2/7/13, all major carriers target sub-county when sub-county alerts are issued
 - *Some carriers broadcast from cell towers within sub-county alert area (towers 2 and 3)*
 - *Some also broadcast where signal overlaps sub-county alert area (adds towers 1 and 4)*

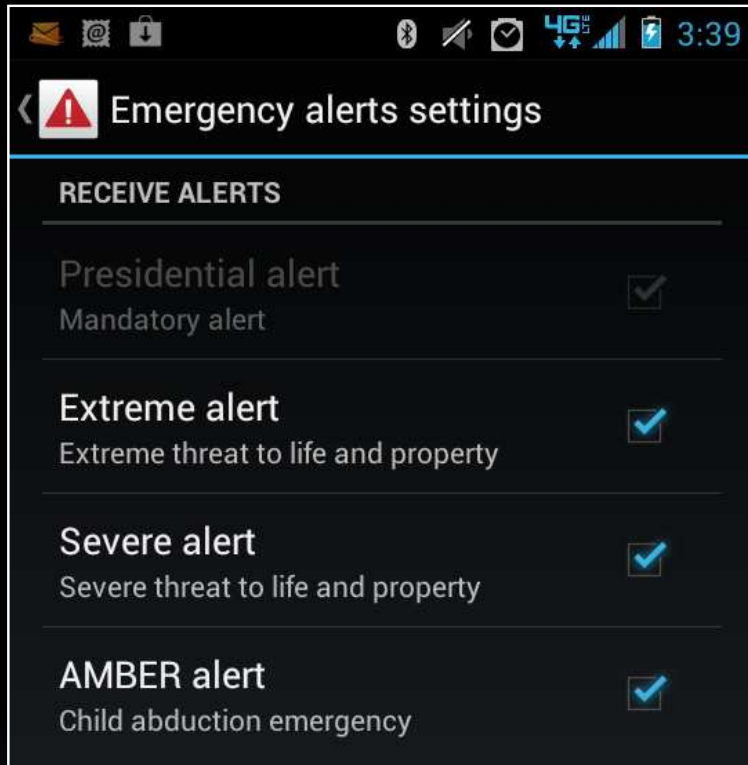
CMAS Messages Originated by NWS

Warning Type	CMAS Message
Tsunami Warning	Tsunami danger on the coast. Go to high ground or move inland. Check local media. -NWS
★ Tornado Warning	Tornado Warning in this area til hh:mm tzT. Take shelter now. -NWS
★ Extreme Wind Warning	Extreme Wind Warning this area til hh:mm tzT ddd. Take shelter. -NWS
★ Flash Flood Warning	Flash Flood Warning this area til hh:mm tzT. Avoid flooded areas. Check local media. -NWS
Hurricane Warning	Hurricane Warning this area til hh:mm tzT ddd. Check local media and authorities. -NWS
Typhoon Warning	Typhoon Warning this area til hh:mm tzT ddd. Check local media and authorities. -NWS
★ Blizzard Warning	Blizzard Warning this area til hh:mm tzT ddd. Prepare. Avoid Travel. Check media. -NWS
★ Ice Storm Warning	Ice Storm Warning this area til hh:mm tzT ddd. Prepare. Avoid Travel. Check media. -NWS
Dust Storm Warning	Dust Storm Warning in this area til hh:mm tzT ddd. Avoid travel. Check local media. -NWS

Legend
 tzT = timezone
 ddd= day of the week

★ = Issued by WFO Chicago

Configuring WEA on a Phone

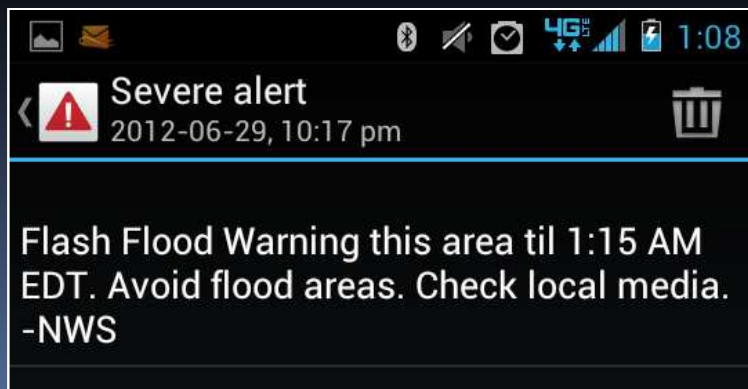


Alert Categories

- **Presidential**
- **Imminent threat to life and property (e.g., severe weather, HazMat, earthquake)**
- **AMBER Alert/child abduction**

Opt-out/in differences between cell phones

- **Many droid phones break out imminent threats into two categories- Extreme and Severe**
- **Can opt out of Severe and still get Extreme**



Extreme

Tornado Warning
Extreme Wind Warning
Tsunami Warning*
Hurricane/Typhoon Warnings

Severe

Flash Flood Warning
Dust Storm Warning
Blizzard Warning
Ice Storm Warning

*Tsunami Warnings coming to WEA later in 2013

ctia.org/wea



CTIA is the International Association for the Wireless Telecommunications Industry, Dedicated to Expanding the Wireless Frontier

Find CTIA on: [f](#) [t](#) [v](#) [p](#) [in](#) [Share This](#) [Email](#) [Print](#)

[Text Only](#) | [Join Now](#) | [Shop CTIA](#) | [Member Login](#)

[ABOUT US](#) | [MEDIA](#) | [ADVOCACY](#) | [CONSUMER INFO](#) | [MEMBERSHIP](#) | [CONVENTIONS & EVENTS](#) | [BUSINESS RESOURCES](#)

[Your Wireless Service](#) | [Wireless Safety](#) | [Multimedia Library](#)

CTIA Consumer Info

Provider-specific Wireless Emergency Alert Information



AT&T

[Wireless Emergency Alerts Information](#)

Cellcom:

[WEA Main Page](#)

Cricket:

[CMAS Press Release](#)

Sprint Nextel Corporation:

[Wireless Emergency Alerts Information](#)

T-Mobile USA:

[Wireless Emergency Alerts Information](#)

U.S. Cellular:

[Wireless Emergency Alerts | U.S. Cellular](#)

Verizon Wireless:

[Wireless Emergency Alerts Information](#)

For more information on Wireless Emergency Alerts, please visit:

- ▶ [FCC Personal Localized Alerting Network \(PLAN\) for Consumers](#)
- ▶ [FCC Public Safety and Homeland Security Bureau CMAS Commercial Mobile Telephone Alerts](#)
- ▶ [FEMA: Commercial Mobile Alert System \(CMAS\)](#)

[Home](#) > [Consumer Info](#) > [Wireless Safety](#)

Wireless Emergency Alerts on Your Mobile Device

CTIA-The Wireless Association® and the wireless industry joined the Federal Communications Commission (FCC) and Federal Emergency Management Agency (FEMA) to offer Americans a robust and reliable wireless emergency alert system.

Wireless Emergency Alerts (WEA), also known as Commercial Mobile Alert System (CMAS) or Personal Localized Alerting Network (PLAN), is a national emergency alert system to send concise, text-like messages to users' WEA-capable mobile devices starting April 2012. Wireless providers representing nearly 97 percent of subscribers are participating in distributing wireless emergency alerts.

*Mobile users will **not** be charged for receiving these text-like alerts and are automatically enrolled to receive them.*

There are three different kinds of alerts:

- ▶ Presidential Alerts – Alerts issued by the President or a designee;
- ▶ Imminent Threat Alerts – Alerts that include severe man-made or natural disasters, such as hurricanes, earthquakes, tornadoes, etc., where an imminent threat to life or property exists; and
- ▶ AMBER Alerts – Alerts that meet the U.S. Department of Justice's criteria to help law enforcement search for and locate an abducted child.

While these alerts will appear on a person's mobile device similar to a text message, Wireless Emergency Alerts are not text messages. Instead, Wireless Emergency Alerts use a different kind of technology to ensure they are delivered immediately and are not subjected to potential congestion (or delays) on wireless networks.

In addition, Wireless Emergency Alerts are a point-to-multipoint system, which means alert messages will be sent to those within a targeted area, unlike text messages which are not location aware. For example, if a person with a WEA-capable device from Washington, D.C. happened to be in southern California when an earthquake occurred in that area, they would receive an "Imminent Threat Alert" on their device.

There are a number of WEA-capable devices available today, and many of the new phones that are sold from participating carriers will be able to transmit these alerts. If your device has the CTIA Wireless Emergency Alerts logo, then it is WEA-capable. To receive these alerts, you might need to only upgrade your device's software, rather than purchase a new one. To confirm Wireless Emergency Alerts are available in your area and your device is capable of receiving the alerts, please check with your carrier.

Wireless Emergency Alerts FAQ

- ▶ [FAQ for Consumers](#)
- ▶ [FAQ on Program](#)

Becoming an Alert Originator

<http://www.fema.gov/emergency/ipaws>

The screenshot shows the FEMA website's IPAWS section. At the top left is the FEMA logo. To the right are navigation links for Mobile Resources, Contact Us, A-Z Index, FAQs, Español, and Additional Languages. Below these is a search bar and a 'Go' button. Further down are links for Blog, Photos, Videos, and Email Updates. A horizontal menu contains: Home, Plan & Prepare, Recover & Rebuild, Apply for Assistance, Disasters & Maps, FEMA Audiences, About FEMA, and News & Media. On the left side, there is a vertical navigation menu with items: National Continuity Programs Directorate, Integrated Public Alert and Warning System (IPAWS), IPAWS Overview, History of IPAWS, Alert Origination, Mobile Alerts, Emergency Alert System, CAP Feed, IPAWS Components, IPAWS Developers, Calendar of Events, Accomplishments and Milestones, Informational Materials, and Contact Us. The main content area is titled 'Integrated Public Alert and Warning System (IPAWS)' and features a video player with the IPAWS logo. Below the video is a quote from George W. Bush's Executive Order 13407. A large black arrow points from the video to the 'IPAWS Stakeholders' section, which is organized into five columns: Alerting Authorities, Federal Governance, Private Sector Industry, Non-profit and Advocacy, and American Public. Each column contains images and lists of stakeholders.

Mobile Resources | Contact Us | A-Z Index | FAQs | Español | Additional Languages

Search Go Advanced Search

Blog Photos Videos Email Updates

Home Plan & Prepare Recover & Rebuild Apply for Assistance Disasters & Maps FEMA Audiences About FEMA News & Media

Print Preview

Integrated Public Alert and Warning System (IPAWS)

"It is the policy of the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people...and to ensure under all conditions the President can communicate with the American people."
George W. Bush, Executive Order 13407, signed June 26, 2006

IPAWS Stakeholders

Alerting Authorities	Federal Governance	Private Sector Industry	Non-profit and Advocacy	American Public
 Local State Tribal Territorial Federal	 Executive Legislative	 Alert Origination Service Providers Commercial Mobile Service Providers EAS Participants NWS Systems Internet Service Providers Unique Systems Future Systems	 Intergovernmental Organizations Access and Functional Needs Organizations Older Adults Organizations Children Organizations Charities and Health Organizations Limited English Proficiency Organizations	 America People Media



Questions?

Contact Information:

Jim Allsopp

jim.allsopp@noaa.gov