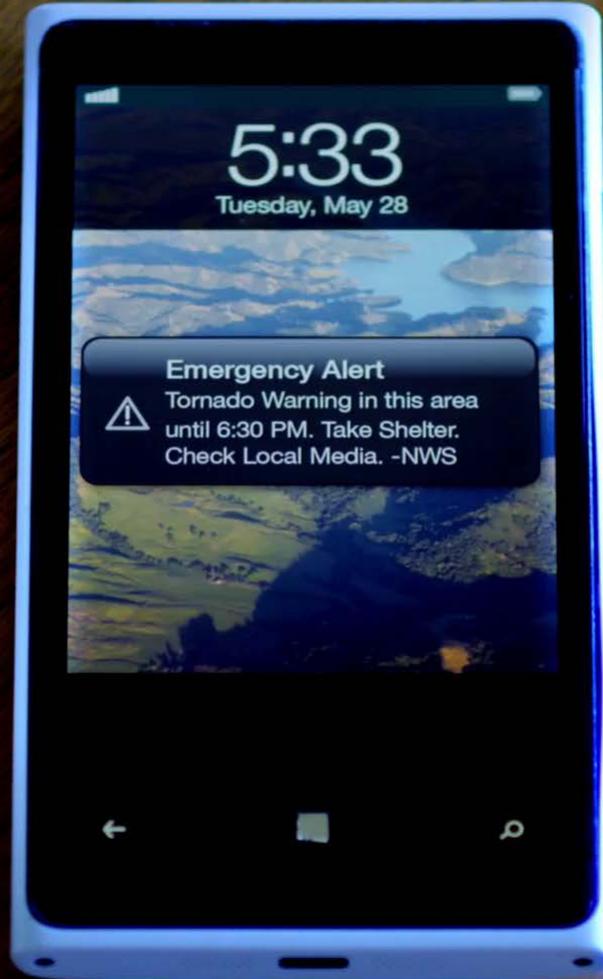


Wireless Emergency Alerts



NOAA
National Weather Service

Updated 2/5/2015



WEA Highlights



- **WEA credited by the public, EMs, and media for saving many lives**
 - Rose Hill, MS tornado on January 3, 2014
 - Cape Charles, VA on July 24, 2014
 - IL tornadoes of November 17, 2013
 - East Windsor, CT tornado on July 1, 2013
 - Elmira, NY tornado on July 26, 2012
- **WEA availability**
 - Dramatic increase in number of WEA-capable devices on market (too many to list)
 - All of the “Big Four” carriers fully rolled out across their networks
- **FCC tasked government/industry/academia to recommend improvements:**
 - Recommendations for WEA Testing forwarded to FCC in Summer 2014
 - Recommendations for geotargeting, message length, and content forwarded to FCC in Dec 2014
- **About 300 EMs capable of activating WEA through FEMA IPAWS. List is growing.**
 - <http://www.fema.gov/integrated-public-alert-warning-system-authorities>

NWS Activation of WEA Saves Lives



Rose Hill, MS (January 3, 2014) – Tornado destroyed 10 mobile homes. No injuries.

“I was...very nervous and scared. I didn't know what the outcome would be. We just took heed to the warning that we had received on our iPhone.”

– Jalesa Barnes on WTOK News Center 11

Cape Charles, VA (July 1, 2014) – Tornado hit Cherrystone campground. 1,300 people present.

“Gov. Terry McAuliffe said it's a blessing more people didn't die in the storm given the short notice that campers had to seek shelter.”

- AP, VA Gov. McAuliffe says it's a blessing more didn't die in Eastern Shore tornado (July 25, 2014)



“said Joe Colony...‘We got an emergency message on a cellphone and within 30 seconds, the thing hit and it blew down 40, 50 trees in the park’” – AP, VA Gov. McAuliffe to Tour Tornado Damage (July 25, 2014)

NWS Activation of WEA Saves Lives

continued...



Illinois (November 17, 2013) – 24 tornadoes

“Daniel Bennett was officiating Sunday services before 600 to 700 people when...’two dozen phones started going off in the service’...many townspeople said those messages helped minimize deaths and injuries” – Associated Press

“My phone was alerting...that’s why, despite the disaster you see, that there was minimal loss of life” --Illinois Rep. Aaron Schock on NPR



Robert Cohen / AP/St. Louis Post-Dispatch

Tannen Maury / European Pressphoto Agency

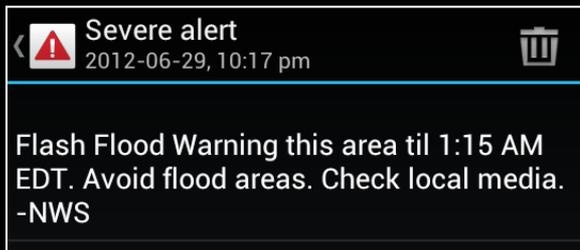
East Windsor, CT (July 1, 2013) – Up to 34 lives saved (29 children). Tornado WEA prompted soccer dome manager to evacuate everyone. Seconds later, dome thrown high above highway.



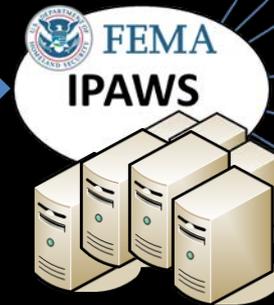
Elmira, NY (July 26, 2012)
10 mile tornado. 2000 structures damaged. EM officials surprised to find no fatalities or injuries. Interviews with residents revealed they sought shelter in response to WEA.

WEA and IPAWS

WEA is a free public mobile alerting service that targets your current location using radio like technology



IPAWS is a national alerts aggregator run by FEMA that feeds CMAS/WEA and other alerting channels



iNWS

An experimental SMS text message alerting service for community decision leaders. You get alerts for the areas you've subscribed.

iNWS is independent of WEA and IPAWS.

A screenshot of the iNWS website. At the top left is the NOAA logo. The main heading is "iNWS - Interactive NWS" with the subtitle "National Weather Service Mobile Decision Support Services (MDSS)". Below this is a section titled "iNWS MOBILE ALERTING" with the text "Receive customized text message and e-mail alerts for National Weather Service products that you care about." To the right of this text is an image of a laptop and a mobile phone. Below the "iNWS MOBILE ALERTING" section is a "Welcome." section with text about the service. To the right of the "Welcome." section is a "Recent News." section with several links. At the bottom of the page is a small text box stating that iNWS is an experimental service intended for NWS core partners.

iNWS - Interactive NWS
National Weather Service Mobile Decision Support Services (MDSS)

iNWS MOBILE ALERTING
Receive customized text message and e-mail alerts for National Weather Service products that you care about.

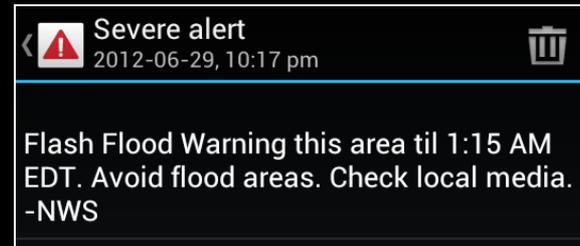
Welcome.
InteractiveNWS (iNWS) is the home of new mobile and desktop innovations of the National Weather Service. This application suite allows NWS partners to receive National Weather Service products in new and innovative ways, such as text messaging and mobile-enabled webpages. iNWS strives to fulfill our mission of protecting life and property by using new technology to reach out to our customers.

Recent News.
[Text Message Alerts Unlocked for All iNWS Users](#)
[New Version of the iNWS Web Page Released](#)
[All Advisories, Watches and Warnings Restored to iNWS Text Message Alerts](#)
[iNWS Text Message Alerts Limited to Warning Products](#)
[Important Change to iNWS User Profiles](#)

iNWS is an experimental service intended for NWS core partners, including emergency managers, community leaders and other government agencies only. You are encouraged to complete a [short survey](#) on iNWS. See the iNWS [Service Description Document](#) for more information.



iNWS and WEA Serve Different Purposes



iNWS

- Available to community leaders
- Alerts for user defined areas
- Includes link to graphic and full text
- **SMS subject to network congestion**
- **Still experimental**

WEA

- Available to general public
- Alerts for your current location
- **No graphics or full text**
- Not subject to network congestion
- Cemented in FCC regulations
- **Cell broadcast bleed-over can cause false alarm for some**

Quick Facts about WEA

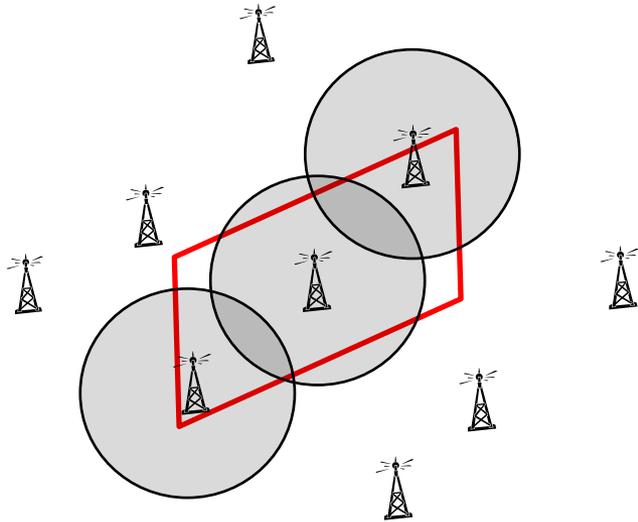
- **Doesn't replace other alerting systems.**
- **Is a free opt-out service**
- **Uses cell broadcast technology**
 - *Merely a radio broadcast, so the service doesn't track you*
 - *Alerts not subject to network congestion as with traditional text messaging*
- **Major carriers are committed to producing WEA capable phones**
- **If you travel into an alert area after the alert was originally sent, you should 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**

WEA Availability

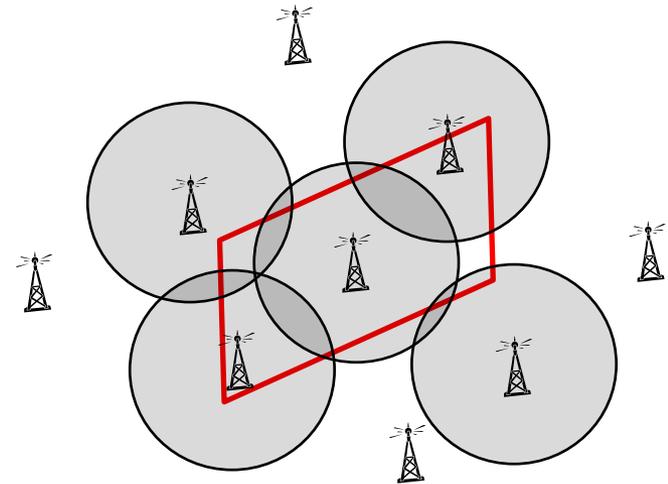
- **WEA-capable cell phones**
 - *Dramatic increase in WEA-capable cell phones on market (too many to list)*
 - *Usually called Emergency Alerts (Android) or Government Alerts (iPhone)*
- **Coverage**
 - *“Big Four” fully rolled out across their networks*
- **Contact your carrier for questions**
 - *See CTIA.org/WEA*

Geo-targeting of the WEA Broadcast

FCC regulations say carriers only have to geotarget at the county level, but many carriers including the “big four” now target the polygon if provided by the alert originator.



Carriers broadcast from cell towers within the defined warning area



At least one carrier also broadcasts from towers where signal overlaps the defined warning area

Note: Map is not drawn to scale and is for illustrative purposes only.

WEA Messages Originated by NWS

Extreme

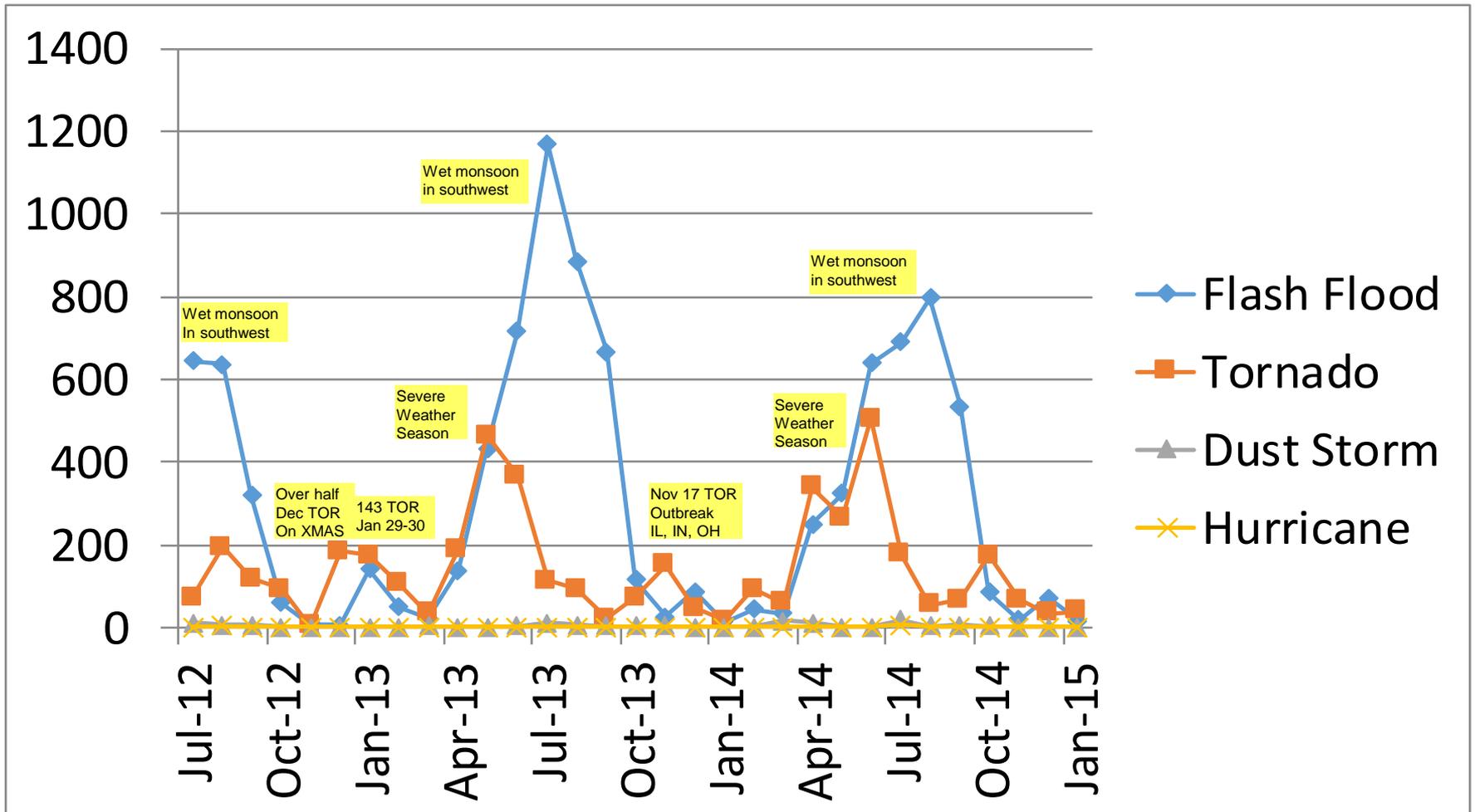
Severe

Warning Type	WEA Message
Tsunami Warning	Tsunami danger on the coast. Go to high ground or move inland. Listen to local news. -NWS
Tornado Warning	Tornado Warning in this area til hh:mm tzT. Take shelter now. Check local media. -NWS
Extreme Wind Warning	Extreme Wind Warning this area til hh:mm tzT ddd. Take shelter. -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
Flash Flood Warning	Flash Flood Warning this area til hh:mm tzT. Avoid flooded areas. Check local 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= three letter abbreviation
 for day of the week

NWS Warnings Activating WEA

(Approximate)



Improvements to WEA

- **WEA activation for extreme T-storms being actively explored. *Stay tuned!!***
- **NWS next gen warning tools under development (couple years away)**
 - *Activate WEA based on impact rather than product type alone*
 - *Exploring tsunami WEA activation by polygon*
- **Carriers, gov't, and academia tasked by FCC to recommend improvements**
 - ***WEA testing recommendations reported to FCC during Summer 2014***
 - Local testing with trusted opt-in audience such as spotters, civic groups, etc.
 - Status: under review by the FCC
 - ***Geo-targeting/message length/content recommendations to FCC in Dec 2014***
 - Increase maximum message length from 90 to 280 characters on 4G LTE
 - Feasibility study for including graphical info (e.g., threat area map with user location or photo)
 - Feasibility study for mobile-assisted geo-targeting
 - Develop WEA Geo-targeting Best Practices for cell broadcast
 - FEMA enhance Alert Originator training on WEA message composition
 - Others

Getting the Word Out

- **Set realistic expectations – WEA Is a bell ringer, not a replacement for traditional warning systems**
- **Create one-page web/social media/handout**
preparemetrokc.org/WirelessEmergencyAlertFlier.pdf
- **New Ready/FEMA /Ad Council PSAs**
 - **:30 Spot:** http://www.youtube.com/watch?v=K9U_iOYx3aM
 - **:15 Spot:** <http://www.youtube.com/watch?v=y-btLGsjQYc>
 - **Spanish Version:** <http://www.youtube.com/watch?v=iltPObaagWk>
- **CTIA links to WEA information for each major carrier at ctia.org/wea**
- **NWS FAQ at weather.gov/wirelessalerts**
- **Contact your wireless carrier for more information**

Integrated Public Alert and Warning System

Wireless Emergency Alerts

In weather emergencies, warnings can save lives. But traditional warning methods such as television, radio and outdoor sirens don't always reach everyone.

By July 2012, emergency officials will have a new way to send warnings directly to cell phones in affected areas — Wireless Emergency Alerts (WEAs).

These short messages may look like a text message, but unlike texts, which are sent directly to your phone number, these warnings will be broadcast to all phones within range of designated cell towers through the Commercial Mobile Alert System (CMAS).

The alerts will tell you the type of warning, the affected area, and the duration. You'll need to turn to other sources, such as television or your NOAA All-Hazards radio, to get more detailed information about what is happening and what actions you should take.



Key Things to Know:

- WEA messages may look like a text, or appear over your home screen.
- The alert message will include a unique ringtone and vibration.
- You will never be charged for WEA messages.
- Emergency alerts will not interrupt any calls or downloads in progress. If you're on the phone when the alert goes out, you'll get the message when you end your call.
- You need not have GPS or any other special features turned on to receive the alerts.
- The system does not identify your location or phone number — it simply sends the message to all devices in a given area.
- If you're on the road and enter an area with an active warning, you'll receive a WEA message as soon as you come within range of one of the affected cell towers.

Is your phone ready for WEA?

If you have an older model phone, you may not receive the Wireless Emergency Alerts. Some, such as newer-model iPhone and Android phones, will soon receive software updates that add this feature.

Check with your service provider to find out if your phone is WEA-capable. AT&T, Cricket, Sprint, T-Mobile and Verizon all have information about the new alert system on their websites. Search for WEA (Wireless Emergency Alerts) or CMAS (Commercial Mobile Alert System) to find your provider's list of WEA-capable phones.



PrepareMetro KC.org
Help supply kit. Save a job. Stay informed.

Multimedia Outreach Examples

FEMA PSAs



Cal OES - calalerts.org



Becoming an Alert Originator

FEMA

What are you looking for?

Plan, Prepare & Mitigate
Before, During & After a Disaster

Disaster Survivor Assistance
Hurricane Sandy, Apply for Assistance,

Response & Recovery
Tools, Teams, Individual & Public Assistance

Topics & Audiences
Grants, How to Help, Private Sector, Think Tank, Tribal

Blog, Newsroom, Videos & Photos
News Releases, Social Media.

About FEMA
Offices, Careers, Employee Info, Policies, FAQs

Home > Plan, Prepare & Mitigate > Integrated Public Alert & Warning System

Integrated Public Alert & Warning System [Share/Email This Page](#)

Related Links

- [IPAWS Alerting Authority Online Training \(IS-247.a\)](#)
- [Receive emails about IPAWS news and webinars](#)
- [Wireless Industry Information on WEA](#)
- ["Cheat Sheet" Video on WEA](#)

Alerting Authorities

State and local alerting authorities are signing up to use IPAWS. View a list of [IPAWS Alerting Authorities](#) in each state.

Learn more about [Wireless Emergency Alerts \(WEA\)](#).

- **Around 300 EMs capable of activating WEA**

State/Territory	Alerting Authority
AK	Kenai Peninsula Borough Office of Emergency Management
AK	State of Alaska Division of Homeland Security and Emergency Management
AL	Baldwin County
AL	Jefferson County
AL	Mobile County Emergency Management Agency
AL	University of Alabama
AR	Arkansas Department of Emergency Management
AR	Benton County Office of Emergency Communications
AR	City of North Little Rock
AZ	Arizona Division of Emergency Management (ADEM)
AZ	Maricopa County Department of Emergency Management
CA	California Governor's Office of Emergency Services
CA	City of Monterey Park
CA	City of Moreno Valley Emergency Operations Center
CA	City of San Leandro
CA	Contra Costa County Office of the Sheriff
CA	County of Los Angeles
CA	County of Sacramento
CA	County of Tulare
CA	Monterey County
CA	Northern California Regional Intelligence Center
CA	Orange County
CA	Riverside & San Bernardino Counties (LECC)
CA	San Diego County Office of Emergency Services
CA	San Francisco Department of Emergency Management
CA	San Joaquin County Office of Emergency Services
CA	San Luis Obispo County Office of Emergency Services
CA	Siskiyou County
CA	Ventura County Sheriff's Office - Office of Emergency Services

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

<http://www.fema.gov/integrated-public-alert-warning-system-authorities>

CAP Authoring Tool Webinars for EMs

- **FEMA hosted webinars where vendors demonstrate alert authoring tools for IPAWS, WEA, and NWS Hazcollect**
 - *Go to link below and click View Event Recordings on the top right*
<https://femaipawslab.webex.com/mw04011/mywebex/default.do?siteurl=femaipawslab>
 - *Sign up to be notified of future webinars at*
https://public.govdelivery.com/accounts/USDHSFEMA/subscriber/new?topic_id=USDHSFEMA_165
- **Webinar point of contact:**
 - Charles McCobb*
 - Program Manager*
 - IPAWS@FEMA.DHS.GOV*

Takeaways

- **WEA is not intended to replace other alerting stems**
- **While WEA is relatively new, many lives have already been saved**
- **“Big Four” carriers performing better than FCC requires by geotargeting WEA broadcasts at the sub-county level**
- **Potential WEA improvements identified and under consideration**
- **More work needed by all partners to get the word out about WEA**
- **EMs should apply with FEMA IPAWS to become an alert originator**