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Gaps in Wireless Emergency Alert (WEA) Effectiveness

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Wireless RERC WEA Survey 2013-2014

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WEA Survey 2013 – 2014

Participant Profile	
Total	**1,830**
With Disability	321
Caregivers	202
Age Range	18-92
Average Age	50

Breakdown of the Respondents with Disabilities

Respondents with Disability	Percent
Caregiver	24.38%
Difficulty seeing	20.31%
Difficulty hearing	50.00%
Frequent worry, nervousness or anxiety	18.13%
Difficulty concentrating, remembering, or making decisions	12.50%
Difficulty speaking so people can understand you	5.94%
Difficulty using your arms	5.63%
Difficulty using hands and fingers	8.13%
Difficulty walking, standing, or climbing stairs	34.38%
Other disability	0.95%

Beginning in October 2013 the Rehabilitation Engineering Research Center for Wireless Technologies[1] surveyed the public (with emphasis on people with disabilities) to assess the awareness and understanding of Wireless Emergency Alerts. The survey ended in February of 2014.

A total of 1,818 people responded to the English version of the survey and 12 responded to the Spanish version of the survey, for a total of 1,830 respondents. Nearly 18% of the respondents indicated that they live with one or more of the following difficulties: seeing; hearing; concentrating; using their arms; using their hands or fingers; or walking, climbing stairs, and standing. Additionally, 11% of respondents indicated that they were a caregiver to an individual with a disability. The findings assisted the Federal Emergency Management Agency's (FEMA) Integrated Public Alert and Warning System (IPAWS) by highlighting potential gaps in WEA effectiveness for people with disabilities.[2]

The public does not know about Wireless Emergency Alerts. From our survey of over 1800 individuals, more than *a third found out about a WEA message after having received one*. Furthermore 27% were unaware if their mobile phone was able to receive a WEA message. Taken together, more than half of the survey respondents were unaware of WEA.

The geo targeting capabilities of the WEA alerts should be fine-tuned. While nearly ¼ of those that received a WEA alert took protective action, *nearly the same amount did not, due to not being near the event*.

WEA alerts need additional features to be more effective. Over 70% of respondents like the idea of including icons, graphics or maps in the WEA message; and 67% of respondents wanted a link to more information.

The open comments section of the WEA survey provided a means for more in-depth information on how the public views WEA alerts. The overwhelming majority liked the idea of WEA messages because they were **quicker, faster and more immediate**. As one respondent wrote, "[the] smartphone is always with me. NOAA weather radio is not."

Suggestions based on message content were relevant only to the alert originators and mimicked decades of research on the subject: (1) be mindful of the relevance of the message, (2) provide specificity, do not include jargon or acronyms and (3) make the length of the message longer. The other suggestions were synthesized into three categories: suggestions for alert originators, device manufacturers and wireless carriers.

	Suggestions		
	Alert Originators	**Device Manufacturers**	**Wireless Carriers**
Education	- Need to better alert the public	- Provide uniformity of options across devices	- Provide more visibility on carriers' involvement in WEA – many are unsure if their carrier participates
Distinction	- Make WEA distinct from subscription-based alerts or text messages	- Use a standard distinct WEA icon across different devices to enable the public to identify them from other text messages	
Timing		- Provide opt-out times for certain alerts (e.g. no AMBER from 1am – 5 am)	- Standardize the timing of alerts (some alerts repeated multiple times, while others only once)
Other features	- Include alerts in multiple languages - Provide links to apps, internet websites, or social media - Send test messages	- Enable the ability to save alerts - Provide sound options for certain hours of the day - Test alarm feature	- Provide better geo-location

Respondents with disabilities responded slightly different, expressing concerns with the receipt of WEA alerts, system consistency and requests for additional features. Some of their representative comments are below:

Issues with Receipt of WEA

"Those posting them should be mindful of the fact that the public at large likely do not fully understand their inside shorthand ..."

"Hard of hearing people need to be able to customize the audio alert because no one frequency will work for all kinds of hearing loss."

"The question is do you have a friendly deaf visual alarm with clear message…"

Education about WEA

"You need to publicize them more widely to make sure that everyone knows about WEA messages."

"WEA is very beneficial to everyone. More information about WEA MUST be promoted in ALL medias."

System Consistency

"Only one of my cell phones receives WEA Alerts… and both are on the same carrier…"

"Stop overwarning me. I later checked, and I was nowhere near the alerted warning I found later was issued from the National Weather Service. Plus, I do not know what a Flash Flood Warning means."

Additional Features

"I'd love to see them be opt-IN! Getting them at 3am just caused me (and many others) to disable the function entirely."

"Include a link to a page where I can receive more in-depth information."

"Improve geotargeting. Show my location on a map relative to the warned area and/or improve geotargeting through some form of geo-fencing. iPhone users should have a capability to opt-out of Severe alerts while still receiving Extreme alerts as with the Android. The WEA tones should be user configurable for the different types of alerts instead of one screaming tone for all alert types. Users should also have the ability to configure WEA so that it sets off a flashing strobe if desired."