

Wireless Emergency Alerts (WEA) 2015 Survey Findings

Project Objective: Collect quantitative and qualitative data on how people with sensory disabilities experience the Wireless Emergency Alert System (WEA).

Methodology: National Online Survey

- The survey was designed to gain a greater understanding of the extent to which WEA attention signals effectively alert people with disabilities of incoming WEA messages, the accessibility of the messages, and to identify how people with sensory disabilities and those with access and functional needs respond to WEA messages.
- 1334 people completed the survey; 55% reported having a disability (4% blind, 9% low vision, 10% Deaf, and 16% hard of hearing) and 45% indicated they did not have a disability.

WEA MESSAGE AWARENESS & RECEIPT

- 60% of all respondents had heard of WEA prior to the survey. Respondents without a disability were more likely to report **having heard of WEA** (69%) than those respondents with a disability (53%).
- 65% of respondents reported receiving WEA messages, a 20% increase since the 2013-2014 data which showed only 45% of respondents had received a WEA message.
- More respondents without a disability (72%) reported they had **received WEA** messages than those with disability (60%).

WEA IMPROVEMENT

61% of all respondents indicated that WEA was an improvement from how they have received alerts in the past.

Improvement Suggestions:

- (24%) Education
- (22%) Need more information
- (18%) Location accuracy
- (14%) Attention signal (sound, vibration, light)
- (9%) Access to message content (language, dictation)

WEA ATTENTION SIGNALS

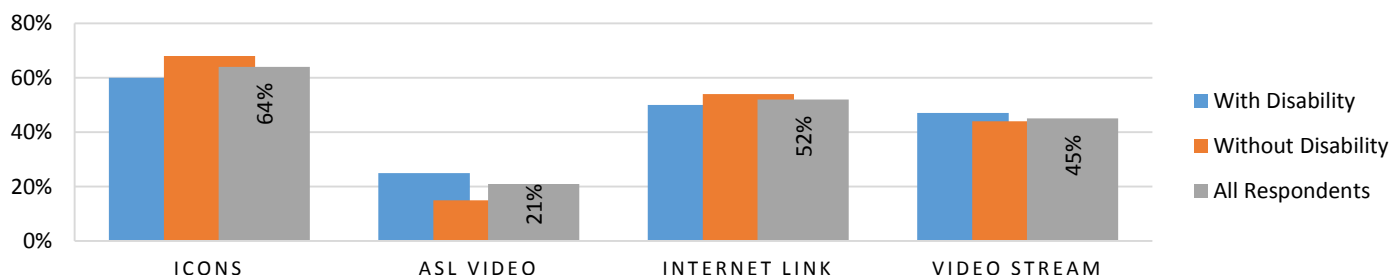
- Respondents without a disability **rely on sound** at a greater rate (50%) than those with disabilities (32%).
- Respondents with a disability have a higher dependence on the **vibration signal** (16%) than those without a disability (14%).
- Visual indicator preferences: screen flash was the most popular option (45%), followed by strobe (15%), customizable light patterns (15%), colored lights (14%), and other (9%).

RESPONSE

- 48% of the respondents with prior WEA knowledge strongly agree or agree that they did not take action because the alert was not near them.
- Indicated they would take immediate action after receipt of a WEA message, with a disability (56%), without a disability (50%).
- Verified WEA alerts before they took action, respondents with a disability (45%) without a disability (39%).

NEXT GENERATION WEA FEATURES

Icons and internet links are the most preferred alternate ways to present alerts. Potential features not currently included in WEA messages, include: icons, ASL Video, an internet link to additional information, and live/audio video streaming of news broadcasts.



NATIONAL WEA ACCESSIBILITY STUDY

BACKGROUND: WEA represents the first national emergency notification system that was mandated by law to be proactively inclusive of people with disabilities. The implementation of the WEA service in 2012 necessitated continued research on how people with disabilities use mobile phones during emergencies, identifying the device and user needs requirements for effectively alerting this population, and protective actions taken in response to emergency messages. Communications are a critical component of disaster/emergency management and response. Historically, vulnerable populations such as people with disabilities, the economically disadvantaged, the elderly, women, children and immigrants have been disproportionately affected during disasters.

Georgia Institute of Technology researchers conducted a national online survey (2015 *WEA Survey*) to collect data on WEA awareness, accessibility, trust and validation of message content, frequency of receipt of WEA messages, actions taken upon receipt, and future features for the next generations of WEA (NG-WEA).

RECOMMENDATIONS:

Based on the analysis the following recommendations are meant to inform industry, policymakers, emergency management practitioners and citizens to make informed choices that result in maximizing message diffusion and ensuring the same timely and effective access to alerts and warnings for people with disabilities.

- WEA messages and the devices on which they are received should be optimized for accessibility with regard to the attention signals and the message content.
- Given that 48% of all respondents either agree or strongly agree that they did not take action because the emergency was not near them and WEA messages were designed to be geo-located, the WEA messages should be more precise regarding location accuracy.
- Mobile phone manufacturers should design handsets with the capability to adjust the strength of the vibration, sound frequency, and include a WEA light cadence.
- The FCC should release a rulemaking concerning NG-WEA that includes a prescribed light cadence for WEA messages.
- Most respondents learned of WEA by receiving a WEA message for the first time. People with prior knowledge of WEA were more likely to trust the message and take immediate action. Therefore, more effort should be made to educate the public on WEA.
- The data indicates a diverse response regarding an individual's need to verify information in alert messages. Alert originators should continue to work to make the alert content clear and actionable to encourage more individuals to take immediate protective actions. For example, exclude the use of acronyms, jargon, and abbreviations in alert messages.

CONCLUSION: Greater awareness and exposure to WEA alerts would increase trust and appropriateness of individual responses to alerts. The analysis of the survey data showed this to be true. Individuals who were familiar with WEA were more likely to act immediately, less likely to be unsure of what action to take, and less likely to make judgments about whether the emergency alert applied to them. As further data becomes available, behavioral models can be developed that identify the relationships between awareness of WEA alerts, disability type, and behavioral responses.

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