September 2022 WEA Performance Exercise

April 24, 2023





Public Safety and Homeland Security Bureau

EXECUTIVE SUMMARY

In September 2022, the Public Safety and Homeland Security Bureau (PSHSB) of the Federal Communications Commission partnered with 37 emergency management agencies across the country to conduct localized Wireless Emergency Alert (WEA) tests. The purpose of the test was threefold:

- (1) to learn about WEA's reliability (by measuring the proportion of people who were presented with a test message versus the number who should have been presented with it);
- (2) to learn about WEA's geographic overshoot (by taking two measurements: (1) the distance the mobile device was outside of the target test area when it presented the test alert message, and (2) the percentage of mobile devices that were not expected to present a test message, but still presented it); and finally,
- (3) to learn about WEA's speed (by measuring (1) the time between when FEMA IPAWS received an alert from an emergency management agency and when the device presented the alert, and (2) the time between when a Participating Commercial Mobile Service (CMS) Provider received the alert and when they transmitted it).

From the 38 tests that comprised this exercise, PSHSB collected almost 12,000 survey responses. The following report provides PSHSB's analysis of the test data. As explained in greater detail below, PSHSB learned the following:

- **Reliability** Test results show 91.1% of volunteers located within the target areas received a test alert.
- **Geographic Overshoot** The median distance for mobile devices that were outside of the allowable target test area and yet still presented the alert was 3.13 miles. Test results show that geofencing works approximately one third of the time.
- Speed The median time to receive a test alert was less than two minutes, and the
 median time to traverse a Participating CMS Provider's network was less than one
 second.

On April 20, 2023 the Commission adopted a Further Notice of Proposed Rulemaking that would address these issues.³

TEST METHODOLOGY

In April 2022, PSHSB issued a Public Notice soliciting partners to participate in the test. Over 60 entities responded. Forty-two emergency management agencies entered into a Memorandum

¹ The 37 partners conducted 38 tests; the State of Idaho Office of Emergency Management conducted two tests.

² Some responses were not usable because, for example, the survey responses contained incomplete information or could not be associated with a specific test.

³ See Wireless Emergency Alerts; Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System, PS Docket Nos. 15-91 and 15-94, Further Notice of Proposed Rulemaking (April 20, 2023).

of Understanding (MOU) with PSHSB to conduct the test.⁴ Ultimately, 37 emergency management agencies conducted a test.⁵ The partners represented different regions in the country, diverse geographic areas, and different demographic areas from rural areas in Montana and Oklahoma, to urban areas such as Seattle, Washington.

The tests were designed to use an alert message category that the public is opted into receiving by default.⁶ PSHSB required its partners to use a scripted alert message that prompted respondents to click an embedded link to complete a WEA performance survey.⁷ The survey asked respondents to identify, among other things, when and where they were when they received the alert.⁸

PSHSB asked its partners to recruit and train volunteers to participate in their tests. If these volunteers received the test alert, they were instructed to click the embedded link and complete the WEA performance survey. If they did not receive the test alert, they were instructed to access the survey and complete it by using a weblink that PSHSB provided to partner agencies in advance of the exercise. Regardless of whether the test was received or not, volunteers would enter a pre-assigned Group ID Number into the survey so their responses could be distinguished from those of the general public. PSHSB instructed its partners to position their volunteers entirely within a target area that the partners determined in advance. To reflect real-world device usage, volunteers were not specifically instructed to enable or disable the Location Services on their mobile device.

⁴ The MOU established the parameters of the test. For example, the MOU required the test partner to identify a circle or simple polygon that they wanted to test. These became the target test areas for the test.

⁵ A list of partners that participated in the test can be found in Appendix A to this report. The five entities that did not conduct a test—Kittitas County, WA, Cambria County, PA, California Governor's Office of Emergency Services, City of Laguna Beach, CA, and, City of Chicago, IL—did not test because of issues specific to them, e.g., emergencies or local issues, and not because of any action by the Commission or PSHSB.

⁶ Although PSHSB requested that its partners use a Public Safety Message, three partners—McDonough County Emergency Services and Disaster Agency, IL; Butte County Sheriff's Office, CA; and, Chester County Department of Emergency Services, PA—issued a State/Local WEA test. The public is not defaulted into receiving a State/Local WEA test message. The impact is that the general public is less likely to presented with alert messages issued under a State/Local WEA test. All of the other partners sent the test message via a test message that the public is opted into receiving by default.

⁷ Both the alert message and survey were available in English and Spanish language versions.

⁸ The English language version of the survey can be found in Appendix B.

⁹ PSHSB requested that partners designate a 0.5 square mile target in urban areas and 1.5 square mile target in nonurban areas. As discussed in detail below, after testing began, PSHSB requested two of its partners, Kitsap County, Washington, and King County Washington, to position their volunteers outside of the target area. This was done to supplement our data on accuracy and gather a better understanding of how well WEA geofencing works in practice.

¹⁰ "A participating CMS Provider's network infrastructure may be considered technically incapable of matching the target area in limited circumstances, including...when mobile devices have location services disabled...." *See* 47 CFR §10.450(a). Disabling Location Services on a mobile device may result in its inability to geofence.

PSHSB also wrote letters to and received responses from the three nationwide wireless providers about their networks' performance during these tests.

The Commission's Office of Economics and Analytics (OEA) provided support to PSHSB in cleaning, reviewing, and analyzing the survey responses.

WEA RELIABILITY

Section 10.450 of the Commission's rules establishes the "minimum requirements for the geographic targeting of WEA Alert Messages." Participating CMS Providers must deliver alert messages to an area that matches an area specified by a circle or polygon. A Participating CMS Provider is considered to have matched the target area when they deliver an Alert Message to 100% of the target area with no more than 0.1 of a mile overshoot. If an alert is delivered to a mobile device located within a specified area, the device should receive the alert and present it to the user.

Tests results show that 91.1% of volunteers located within the target areas reported that their devices received and presented them with a test alert.¹⁴

¹¹ See 47 CFR §10.450.

¹² The rules further provide that "[i]f some or all of a Participating CMS Provider's network infrastructure is technically incapable of matching the specified target area, then that Participating CMS Provider must deliver the Alert Message to an area that best approximates the specified target area on and only on those aspects of its network infrastructure that are incapable of matching the target area. A Participating CMS Provider's network infrastructure may be considered technically incapable of matching the target area in limited circumstances, including when the target area is outside of the Participating CMS Provider's network coverage area, when mobile devices have location services disabled, and when legacy networks or devices cannot be updated to support this functionality." 47 CFR §10.450(a).

¹³ For devices that support geofencing, there could be a distinction between receipt of an alert and presentation of an alert. Receipt refers to when the device receives the alert. Presentation refers to when the device displays the alert on the device. Devices that support geofencing have the ability to receive a WEA alert and not present it if the device is not within 0.1 miles of the area specified by the alert originator. *See* FEMA IPAWS Guidance, Wireless Emergency Alert Capabilities by Cellular Handset and Wireless Provider, https://www.fema.gov/sites/default/files/documents/fema_ipaws-guidance-wea-versions-provider-links.pdf (last visited Jan. 11, 2023). For mobile devices that are not capable of geofencing there is no distinction between receipt and presentation of a message; if these devices receive an alert message, they will present it.

¹⁴ Reliability is determined by dividing the number of volunteers who reported being presented with a test message by the total number of volunteers who responded to the survey. The number of volunteers who responded to the survey would include both those who were presented with the test message and those who were not.

Reliability Table 1: Among all volunteers who participated in this exercise while located within targeted test areas, what percentage reported being presented with the test alert?

Percentage of Volunteers	Percentage of Volunteers	Number of Volunteer
Who Were Presented with the Test Message	Who Were Not Presented with the Test Message	Respondents Who Were Within the Targeted Test
		Areas
91.1%	8.9%	51815

This finding is similar to PSHSB's finding from the 2021 nationwide WEA test, where 89.8% of volunteers reported receiving the alert.¹⁶

These test results were found to be consistent across several factors. There was no statistically significant difference in reliability among providers, mobile device manufacturers, operating systems, generations of wireless technology, between geofencing and non-geofencing capable devices, or based on whether the mobile device was in use, whether the user was indoors or outdoors, whether the user was a customer of a mobile virtual network operator (MVNO), or whether the user was in an urban or non-urban area.

WEA OVERSHOOT

The Commission's rules require Participating CMS Providers to deliver WEA Alert Messages to a specified circle or polygon with no more than 0.1 of a mile overshoot.¹⁷ WEA-capable mobile devices that are "technically incapable" of geofencing are excepted from this geotargeting requirement. For those devices that are technically incapable of geofencing, our rules require Participating CMS Providers deliver Alert Messages to an area that "best approximates" the specified target area.¹⁸

PSHSB measured overshoot in two ways: (1) the linear distance devices were outside of the "allowable presentation area" when they presented the test message, 19 and (2) the percentage of

(continued....)

¹⁵ These observations represent the responses of all volunteers across all tests, except for those in Kitsap County, WA, and King County, WA.

¹⁶ See Report: August 11, 2021 Nationwide WEA Test, Wireless Emergency Alerts, PS Docket No. 15-91, at 1 (2021), https://docs.fcc.gov/public/attachments/DOC-378907A1.pdf.

¹⁷ 47 CFR §10.450(a). WEA "overshoot" occurs when a mobile device presents a WEA message while it is located outside of the target area specified by the alert originator.

¹⁸ "If some or all of a Participating CMS Provider's network infrastructure is technically incapable of matching the specified target area, then that Participating CMS Provider must deliver the Alert Message to an area that best approximates the specified target area on and only on those aspects of its network infrastructure that are incapable of matching the target area. A Participating CMS Provider's network infrastructure may be considered technically incapable of matching the target area in limited circumstances, including when the target area is outside of the Participating CMS Provider's network coverage area, when mobile devices have location services disabled, and when legacy networks or devices cannot be updated to support this functionality." 47 CFR §10.450(a).

¹⁹ Section 10.450(a) states, in part: "A Participating CMS Provider must deliver any Alert Message that is specified by a circle or polygon to an area that matches the specified circle or polygon. A Participating CMS Provider is

geofencing-capable mobile devices outside of the allowable presentation area when they presented the test message. The data show there was significant overshoot in terms of the number of mobile devices outside of the target test area that received the test message. The data show that these devices were substantially outside of the target test area when they received the test message. The data also show that less than 50% of identifiable devices used in the exercise were capable of geofencing. Finally, the data show that more than two thirds of geofencing-capable devices located outside of the allowable presentation area nevertheless presented the alert message.

A. Mobile Devices are Receiving WEA Alerts Outside of the Allowable Presentation Area

The data show that 4,768 mobile devices were located outside of the allowable presentation area when they presented the test alert message. While target areas were designed to be 0.5 square miles in urban areas and 1.5 square miles in non-urban areas, the median delivery distance outside of the allowable presentation area was 3.13 miles. The data show that 25% of respondents were within 1.23 miles of the allowable presentation area and that 10% of respondents, approximately 477 devices, were more than 11.76 miles from the allowable presentation area.

Overshoot Table 1: How far from the target area did respondents receive the alert message?

	25 th percentile	50 th percentile	90 th percentile	Number of Respondents who were outside of the target area
Distance Outside of Allowable Presentation Area	1.23 miles	3.13 miles	11.76 miles	4,768 ²⁰

considered to have matched the target area when they deliver an Alert Message to 100 percent of the target area with no more than 0.1 of a mile overshoot." Because the Commission's rules allow for 0.1 of a mile of overshoot, for purposes of this report, the "allowable presentation area" is the target test area plus the 0.1 mile overshoot allowed by the Commission's rules. For those devices that are technically incapable of geofencing, the Commission's rules require Participating CMS Providers to deliver Alert Messages to an area that "best approximates" the specified target area. See 47 CFR §10.450(a).

²⁰ This table represents findings based on all credible responses from respondents that reported their location as outside of the target area in tests where the target area was specified as a circle. All but six of PSHSB's partners—Charlotte-Mecklenburg, NC; Delaware County, OH; Jefferson County, CO; San Diego County, CA; Sedgwick County, KS; and Sutter County, CA—used a circle to specify their target test area. It is possible to measure the distance from a polygonal target areas, but PSHSB anticipates that it would not meaningfully change the findings presented here.

B. Less Than Half of Respondents Used Geofencing-Capable Mobile Devices

Replacing non-geofencing-capable devices with geofencing-capable devices is key to limiting overshoot to 0.1 of a mile outside of a specified target area. Only geofencing-capable devices are capable of suppressing the presentation of an alert when it is received outside the allowable presentation area. Non-geofencing-capable devices cannot suppress an alert and must rely on network-based targeting to limit overshoot.

In July 2022, CTIA reported that approximately 60% of active smartphones support geofencing, an increase from the 34% market penetration that it reported in 2021, and the 18% market penetration that it reported in 2020.²¹ Data from the WEA performance exercise, however, show that 49.4% of respondents' devices supported geofencing.²² PSHSB identified the geofencing capability of respondents' devices by taking the reported manufacturer and model, and comparing them to the wireless industry's determinations as to whether the device was capable of geofencing.²³

Overshoot Table 2: What percentage of deployed mobile devices support geofencing?

WEA Functionality	Percentage of Devices	Number of Respondents' Mobile Devices
Supports only basic WEA functions	1.1%	81
Supports some modern WEA functions, but not geofencing	49.5%	3,549
Supports modern WEA functions, including geofencing	49.4%	3,540
Total	100.0%	7,170 ²⁴

²¹ Letter from Amy E. Bender, Vice President, Regulatory Affairs, CTIA, to Debra Jordan, Bureau Chief, FCC Public Safety and Homeland Security Bureau at 2 (July 28, 2022) (filed in PS Docket 15-91). CTIA's estimates are based on International Data Corporation data on handset shipments in the United States.

²² Similarly, data from the 2021 nationwide WEA test showed that CTIA's estimate exceeded observed results by about 10 percentage points.

²³ See, e.g., Verizon WEA Compatible Devices List; Appalachian Wireless, Wireless Emergency Alert Capable Devices, https://www.appalachianwireless.com/wea-capable-devices (last visited Jan. 11, 2023).

²⁴ The number of device observations listed in this table, 7,170, is substantially below the number of total observations because many survey responses included insufficient information for OEA and PSHSB to determine the specific type of device being used by the respondent. For example, many respondents only listed "iPhone." While newer iPhones are capable of geofencing, older models are not.

The data show that 49.5% of respondents were using devices capable of supporting some modern WEA functions, but not geofencing. The remaining 1.1% of respondents were using mobile devices that support only basic WEA functions. As a result, three years after the Commission's enhanced WEA geo-targeting requirement became effective, over half of deployed devices are still geo-targeting based on Participating CMS Providers' "best approximat[ion of] the specified target area, while less than half have technology designed to meet the Commission's requirements to limit overshoot to 0.1 of a mile.25

C. Geofencing Did Not Suppress Presentation of the Test Alert Message in Two-Thirds of Geofencing-Capable Devices

To assess whether WEA geofencing works, PSHSB asked two of its partners—Kitsap County, WA, and King County, WA-to position their volunteers between 0.3 and 1.1 miles outside of the target area. This was done to make it as likely as practicable that the volunteers were outside of the target test area and the 0.1 mile overshoot allowed by the Commission's rules, but not so far that they would be outside of the broadcast area of the alert.²⁶

The data collected on geofencing indicate that geofencing works approximately one third of the time. Approximately two thirds of the time, geofencing capable devices located outside of the allowable presentation area presented the alert. To determine whether geofencing worked as required, PSHSB and OEA compared the performance of geofencing-capable devices inside the allowable presentation area with geofencing-capable devices outside of that area. Similar to the overall reliability numbers discussed above, the data show 91.4% of geofencing-capable devices located inside of the allowable presentation area presented the alert message. The data also show 67.9 % of devices located outside of the allowable presentation area also presented the test message. The data show that geofencing-capable devices located outside of the allowable presentation area suppressed the test alert message less than one third (32.1%) of the time.

²⁵ See 47 CFR §10.450(a).

²⁶ In order to determine if geofencing works, the mobile device being tested must receive the alert message. Once it receives the alert, the device would perform the geofence to determine if it is within the target area. If the device is within the target area, the device would present the alert message. If the device is outside of the target area, it should suppress the message and not present it. It should be noted this analysis does not distinguish between successfully suppressing the alert message and simply not receiving the alert message. As a result, the number of successful geofences may include false positives caused by non-receipt of the alert message.

Overshoot Table 3: Comparing the performance of geofencing-capable mobile devices located inside and outside of the target area.

	Inside Target Area	Outside Target Area
Percentage of Volunteers Who Were Presented with the Test Message	91.4%	67.9%
Percentage of Volunteers Who Were Not Presented with the Test Message	8.6%	32.1%
Number of Volunteer Respondents with Geofencing Capable Devices	337 ²⁷	5628

Because this analysis is based on 56 datapoints, there are wide confidence intervals. PSHSB and OEA estimate that the proportion of geofencing-capable devices that would successfully suppress the test message in the typical use case is somewhere between 20% to 46%, while the proportion that would improperly display an overshooting alert in the typical use case would be somewhere between 54% to 80%. We note that not having Location Services enabled may account for why some normally-geofencing devices failed to suppress the test alert messages.

WEA SPEED

There is no established FCC rule for the speed at which WEA alerts must be delivered. PSHSB measured speed in two ways. The first way approximated an end-to-end measurement by measuring the time from when FEMA IPAWS received the alert until the time when the mobile device user was presented with the message.²⁹ The second way measured the time from when a Participating CMS Provider received the alert message until it transmitted the alert.

A. Half of Respondents Received the Test Alert Within Two Minutes, and a Quarter of Respondents Received it Within One Minute

As indicated in the chart below, 50% of respondents to the WEA Performance Exercise reported receiving the alert less than two minutes after it was received by FEMA IPAWS. The data also

²⁷ These 337 observations represent the total number of credible responses that the Commission received from tests conducted in locations other than in Kitsap and King Counties from respondents using mobile devices capable of geofencing.

²⁸ Notwithstanding our instructions to all other test partners that their volunteers must be located entirely inside of the target area, some volunteers, including from tests other than Kitsap and King County, WA, located themselves outside of the target area for their tests. We integrate those datapoints into this finding. These respondents' responses were otherwise credible and otherwise qualify for inclusion in this sample.

²⁹ It was not possible to capture a complete end-to-end time because different entities used different clocks. To correct this issue and use a universal clock that applied to all tests, the time FEMA IPAWS received the test was used to determine this measurement.

show that 25% of respondents reported receiving the alert less than one minute after it was received by FEMA IPAWS.

Speed Table 1: Interval between when FEMA IPAWS received a WEA alert and when a respondent reported receiving it.

	Number of	Mean Time	25 th	50 th	90 th	99 th
	Respondents	to	Percentile	Percentile	Percentile	Percentile
		Presentation				
Interval between FEMA IPAWS Receipt and Respondent Presentation	9,948 ³⁰	7.639 mins	< 1 min	1 -2 mins	24 mins	91 mins

The mobile device manufacturer, operating system, whether the device was capable of geofencing, whether the phone was in use, or whether the user was in an urban or non-urban area had no statistically significant impact on the above data.

B. Measuring the Time Between When the Participating CMS Provider's Facilities Received the Alert Until the Time They Transmitted It

The second method for measuring speed shows that the median time between when AT&T, T-Mobile, and Verizon received an alert message at their gateway and when they transmitted it on their network was less than one second.³¹

Speed Table 2: Median Interval between alert receipt at gateway and transmission on wireless network³²

	AT&T	Verizon	T-Mobile
Median Interval Between Receipt and Transmission of Alert	0.4025 seconds	0.806 seconds	0.7095 seconds

³⁰ These observations represent all credible responses to the WEA test survey that indicated a time of receipt within 3 hours of transmission. PSHSB does not treat as credible data reported more than three hours after transmission of a test alert because it is concerned with the reliability of such data, especially when it concerns remembering exact times and locations.

³¹ This measurement does not account for how long it takes for the alert to travel from the alert originator to FEMA IPAWS. It also does not account for the time it takes for an alert to be presented on the mobile device.

³² The data used to calculate these results was supplied to PSHSB by the carriers, in response to PSHSB's letter to them requesting this information.

For all three nationwide carriers, the median time between receipt and transmission of the alert was less than one second.

These findings indicate that localized WEA alerts transit wireless networks significantly faster than nationwide WEA activations.³³

CONCLUSION

WEA is an important public safety tool that has the potential to save lives and protect property. To make WEA even more effective, the Commission recently proposed to require Participating CMS Providers to report on WEA's performance.³⁴ PSHSB will submit this report on the September 2022 WEA Performance Exercise into the record of that proceeding for the Commission's consideration and to inform possible future action.

³³ AT&T, Verizon, and T-Mobile's after-action reports on the 2021 nationwide WEA test stated that the test traversed their wireless networks in 41.1 seconds, 55.305-55.769 seconds, and 36.679 seconds, respectively. The wireless providers attributed this delay to the processing time required to map a nationwide WEA activation to every cell facility in their nationwide network.

³⁴ See Wireless Emergency Alerts; Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System, PS Docket Nos. 15-91 and 15-94, Further Notice of Proposed Rulemaking (April 20, 2023).

APPENDIX A – LIST OF PARTNERING GOVERNMENTS AND AGENCIES

Entity	State	Shape of Target Test Area	Date of test 9/12/22	Date of test 9/13/22	Date of test 9/19/22	Date of test 9/20/22	Type of Alert Message
Adams County	WA	circle	X	7/13/22	7/17/22	7120122	Public Safety
Bannock County Sherriff's Office	ID	circle		X			Public Safety
Beckham County - Oklahoma Department of Emergency Management and Homeland Security	ОК	circle		X			No Special Handling
Berrien County Sheriff's Office	MI	circle	X				Public Safety
Butte County Sheriff's Office	CA	circle		x			State and Local Test
Calhoun County Emergency Management Division	MI	circle	X				Public Safety
Charlotte-Mecklenburg Emergency Management	NC	polygon		X			No Special Handling
Chester County Department of Emergency Services	PA	circle		x			State and Local Test
City of Chula Vista Fire Department	CA	circle	х				Public Safety
City of Woodward - Oklahoma Department of Emergency Management and Homeland Security	ОК	circle	X				No Special Handling
Combined Regional Communications Center, Fremont and Custer Counties	СО	circle	X				Public Safety
County of Orange	CA	circle		X			Public Safety
County of San Diego Office of Emergency Services	CA	polygon		X			Public Safety
Delaware County Office of Homeland Security & Emergency Management	ОН	polygon		X			Public Safety
Fairfax County Department of Emergency Management and Security	VA	circle	x				Public Safety

Entity	State	Shape of Target Test Area	Date of test 9/12/22	Date of test 9/13/22	Date of test 9/19/22	Date of test 9/20/22	Type of Alert Message
Flagler County Emergency Management	FL	circle	X				No Special Handling
Gilmer County Public Safety	GA	circle		x			Public Safety
Grundy County Emergency Management Agency	IL	circle		X			No Special Handling
Jefferson County Emergency Communications Authority	СО	polygon		X			Public Safety
King County Office of Emergency Management	WA	circle				X	Public Safety
Kitsap County	WA	circle			x		Public Safety
Marion County Sheriff's Office - Division of Emergency Management	FL	circle		X			Public Safety
McDonough County Emergency Services and Disaster Agency	IL	circle	X				State and Local Test
Norfolk Virginia Department of Emergency Preparedness and Response (DEPR)	VA	circle		X			Public Safety
Oconee County Emergency Management Agency	GA	circle	X				No Special Handling
Pennsylvania Emergency Management Agency	PA	circle		X			Public Safety
Pierce County	WA	circle		X			No Special Handling
Pitkin County Regional Emergency Dispatch Center	СО	circle		X			Public Safety
Sedgwick County Emergency Management	KS	polygon	x				Public Safety
Sheridan County Emergency Management	WY	circle		X			No Special Handling

Entity	State	Shape of Target Test Area	Date of test 9/12/22	Date of test 9/13/22	Date of test 9/19/22	Date of test 9/20/22	Type of Alert Message
South Carolina Emergency Management Division	SC	circle	X				No Special Handling
State of Idaho Office of Emergency Management	ID	circle	X	x			Public Safety
Suffolk County Department of Fire, Rescue, and Emergency Services	NY	circle		X			Public Safety
Summit County Government's Office of Emergency Management	СО	circle	X				Public Safety
Sutter County Office of Emergency Management	CA	polygon		X			Public Safety
Thurston County	WA	circle	X				Public Safety
Treasure County	МТ	circle			X		Public Safety

APPENDIX B – WIRELESS EMERGENCY ALERT (WEA) SURVEY

	♦ English (United States) ∨
Wireless Emergency A	Jert (WEA)
OMB Control No. 3060-1269 Estimated time per response: 0.25 hours	
July 2021	
OMB Notice	
We have estimated that your response to this collection	n of information will take 15 minutes or .25 hours. Our sthrough existing records, gather and maintain required
	ponse. If you have any comments on this estimate, or on
how we can improve the collection and reduce the burd	
Communications Commission, Office of Managing Direct Reduction Act Project (3060 1269). We will also accept to	ctor, AMD PERM, Washington, DC 20554, Paperwork our PRA comments via the Internet if you send an e-mail
to PRA@fcc.gov.	iodi i tot comments via the internet il you sena dire mail
Please DO NOT SEND COMPLETED SURVEYS TO THIS A	DDRESS. You are not required to respond to a collection
of information sponsored by the Federal government, a	
This collection has been assigned an OMB control numb	rol number and/or we fail to provide you with this notice. ber of 3060 1269.
THIS NOTICE IS REQUIRED BY THE PAPERWORK REDUC	TION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1
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Persons with disabilities can request assistance in compto: FCC504@fcc.gov or calling the Consumer & Governr * Required 1. If you have a control group ID number [NNN) blank. Enter your answer	leting this survey by either sending an e-mail mental Affairs Bureau at 202-418-0530 (voice).
* Required 1. If you have a control group ID number [NNNN blank. Enter your answer 2. Did you receive the WEA test alert? *	leting this survey by either sending an e-mail mental Affairs Bureau at 202-418-0530 (voice).
Persons with disabilities can request assistance in compto: FCC504@fcc.gov or calling the Consumer & Governr * Required 1. If you have a control group ID number [NNNN blank. Enter your answer 2. Did you receive the WEA test alert? *	leting this survey by either sending an e-mail mental Affairs Bureau at 202-418-0530 (voice).

L	Please input date (M/d/yyyy)
I. P	lease enter the time you received the alert *
	ime must be entered in military time: HH:MM (ex. 1:23pm = 13:23)
	Enter your answer
). P	lease enter your Time Zone *
	Eastern
	Central
) Mountain
) Pacific
5. D	old you receive the alert more than once? *
	Yes
	O No
	Not Sure
7 \/	What is the make and model of your mobile device (e.g., "Samsung Galaxy S10," "Apple iPhone
	")? If you do not know, leave this field blank.
	Enter your answer
3. V	Vhat is your mobile device's operating system?
	Apple iOS

9. Wh	o is your wireless service provider for your mobile device?
\circ	AT&T
0	T-Mobile
\circ	Verizon
0	Other
	ere were you located when you received the test alert? (Ex. 123 North Main St) * se provide a street address
Er	ter your answer
1 (:+-	*
1. City	
Er	ter your answer
2. Sta	e/Territory *
Se	lect your answer
3. Zip	Code
Fr	ter your answer
	ter year answer
4. Ind	pors or Outdoors?
	Indoors

En	er your answer
	your mobile device have cellular service on your service provider's network when you ived the test alert?
0	res, my device had cellular service from my service provider.
0	No, my device was roaming on another service provider's network.
0	No, my device was not connected to a cellular network but it was connected to Wi-FI.
0	No, my device was not connected to a cellular network of Wi-Fl
0	Other
	at type of cellular service did your mobile device have?
0	
0	5G 4G
0	5G 4G 8G
0	5G 4G 8G
0 0 0 0 0 0	5G 4G 8G 8G 8G PG Wy device did not have cellular service
O	5G 4G 8G 8C 8C My device did not have cellular service Other
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	your device in use when you received the alert (for example, were you on a call, surfing the , using an app or sending a text)?

F	lease provide any optional comments about the WEA test below:
	Enter your answer
. I	have reviewed my responses for accuracy prior to submission *
-	Yes
') tes
') tes
	Submit
	Submit
9V6	
leve	Submit
eve	Submit
is	Submit