

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of:	)	
	)	
Amendment of Part 11 of the Commission's	)	PS Docket No. 15-94
Rules Regarding the Emergency Alert System	)	
	)	
Wireless Emergency Alerts	)	PS Docket No. 15-91

**COMMENTS OF CTIA**

Thomas C. Power  
Senior Vice President and General Counsel

Thomas K. Sawanobori  
Senior Vice President and Chief Technology  
Officer

Scott K. Bergmann  
Senior Vice President, Regulatory Affairs

Matthew Gerst  
Assistant Vice President, Regulatory Affairs

**CTIA**  
1400 Sixteenth Street, NW  
Suite 600  
Washington, DC 20036  
(202) 785-0081

September 10, 2018

## **TABLE OF CONTENTS**

<b>I.</b>	<b>INTRODUCTION AND SUMMARY. ....</b>	<b>1</b>
<b>II.</b>	<b>WIRELESS EMERGENCY ALERTS ARE A PROVEN, LIFE-SAVING TOOL THAT ENABLE PUBLIC SAFETY TO INFORM AND WARN THE PUBLIC IN A RAPID, EFFECTIVE MANNER.....</b>	<b>3</b>
<b>III.</b>	<b>WEA MESSAGES ARE DELIVERED AND DISPLAYED TO THE OVERWHELMING MAJORITY OF WIRELESS SUBSCRIBERS. ....</b>	<b>4</b>
<b>IV.</b>	<b>PERFORMANCE REQUIREMENTS ARE INCONSISTENT WITH THE PURPOSE, TECHNICAL DESIGN, AND VOLUNTARY NATURE OF THE WEA PROGRAM. ....</b>	<b>8</b>
<b>V.</b>	<b>ONLY ALERT ORGINATORS AND FEMA CAN AND SHOULD BE EXPECTED TO REPORT FALSE ALERTS AND MONITOR TEST MESSAGES.....</b>	<b>10</b>
<b>VI.</b>	<b>CONCLUSION. ....</b>	<b>11</b>

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of:	)	
	)	
Amendment of Part 11 of the Commission's	)	PS Docket No. 15-94
Rules Regarding the Emergency Alert System	)	
	)	
Wireless Emergency Alerts	)	PS Docket No. 15-91

**COMMENTS OF CTIA**

CTIA<sup>1</sup> respectfully submits these comments in response to the Further Notice of Proposed Rulemaking seeking comment on proposals to facilitate false alert reporting and ensure that Wireless Emergency Alerts (WEA) are effectively delivered to the public.<sup>2</sup>

**I. INTRODUCTION AND SUMMARY.**

Since 2012, Participating Commercial Mobile Service (CMS) providers serving more than 99 percent of wireless subscribers have voluntarily distributed more than 36,000 WEA messages to millions of wireless consumers. WEA messages have been instrumental in saving countless lives during natural disasters such as hurricanes, flooding, and wildfires, and AMBER and Blue Alerts have been vital in enhancing law enforcement capabilities during emergency situations.

---

<sup>1</sup> CTIA® (www.ctia.org) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st century connected life. The association's members include wireless carriers, device manufacturers, suppliers as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. The association also coordinates the industry's voluntary best practices, hosts educational events that promote the wireless industry and co-produces the industry's leading wireless tradeshow. CTIA was founded in 1984 and is based in Washington, D.C.

<sup>2</sup> *Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System; Wireless Emergency Alerts*, PS Docket Nos. 15-94, 15-91, FCC 18-94 (rel. July 13, 2018) ("WEA False Alert FNPRM").

In the *WEA False Alert FNPRM*, the Commission seeks comment on why “some wireless subscribers did not receive” a WEA message, including asking if network congestion or other conditions could affect WEA delivery.<sup>3</sup> Even as WEA messages are delivered and displayed to the overwhelming majority of wireless subscribers - nearly nine out of ten smartphone users according to a recent consumer survey<sup>4</sup> - CTIA and its member companies are ready partners in the Commission’s efforts to ensure that as many consumers as possible are able to receive critical emergency alert and warning information in a timely manner. As explained below, determining why some subscribers with WEA-capable devices may not receive a WEA message requires evaluation of a complex mix of mobile wireless network and handset capabilities.

The Commission should proceed cautiously before adopting requirements to report and measure the performance of WEAs. Requiring the Participating CMS Providers to track delivery or display of WEA messages would be infeasible with the foundational cell-broadcast technology used to meet the public safety mission of WEA, and would undermine the voluntary nature of the WEA program as directed by Congress. As a result, CTIA and its member companies encourage WEA stakeholders to gather data that can help the wireless industry discover the root causes of any WEA message delivery or display issues rather than the Commission imposing any reporting or performance requirements on Participating CMS Providers. CTIA and its member companies look forward to engaging in a robust dialogue with all WEA stakeholders about ways to ensure this landmark program’s continued success.

---

<sup>3</sup> *WEA False Alert FNPRM* ¶ 46.

<sup>4</sup> CTIA 2018 Harris Poll Wireless Emergency Alert Survey. This study was conducted August 6-8, 2018, online by Harris Poll on behalf of CTIA among 2,000 U.S. adults 18 and over, 1,785 of whom owned a smartphone.

## **II. WIRELESS EMERGENCY ALERTS ARE A PROVEN, LIFE-SAVING TOOL THAT ENABLE PUBLIC SAFETY TO INFORM AND WARN THE PUBLIC IN A RAPID, EFFECTIVE MANNER.**

Since the inception of the WEA system in 2012, the wireless industry has worked cooperatively and collaboratively with alert originators, the Federal Emergency Management Agency (FEMA), and the Commission to support the delivery of critical, life-saving emergency information directly to consumers. The hallmark of these efforts has been the development of reasonable and practical methods for designing, implementing, and enhancing the WEA system and allowing the time for standards-based technology to be developed, tested, and implemented. In just the past year, as well as throughout the next year, Participating CMS providers and equipment manufacturers have worked and will work diligently to enhance the WEA system by:

- Improving geo-targeting capabilities from cell sector to “best approximate” location in 2017;<sup>5</sup>
- Enabling embedded “clickable” links within a WEA message in 2017;<sup>6</sup>
- Adopting standards and working to deploy the capability to expand WEA message lengths from 90 to 360 characters by May of 2019,
- Adopting standards and working to deploy the capability to support Spanish language text by May of 2019,
- Adopting standards and working to deploy the capability to enable alert originators to live test WEA on an “opt in” basis by May of 2019;<sup>7</sup> and
- Supporting further enhancements to geo-targeting capabilities through device-based solutions to limit the overshoot of WEA messages by November of 2019.<sup>8</sup>

---

<sup>5</sup> 47 C.F.R. § 10.450(a).

<sup>6</sup> 47 C.F.R. § 10.441.

<sup>7</sup> 47 C.F.R. §§ 10.430, 10.480, 10.350.

<sup>8</sup> See *Wireless Emergency Alerts; Amendments to Part 11 of the Commission’s Rules Regarding the Emergency Alert System*, FCC 18-4, 15-94, Second Report and Order and Second Order on Reconsideration, ¶ 39 (2018) (adopting a revised section 10.450 of the Commission’s rules).

All these efforts have resulted in a number of successes associated with the WEA system. Participating CMS Providers serving more than 99 percent of wireless subscribers have voluntarily distributed more than 36,000 WEA messages to millions of wireless consumers about dangerous weather, missing children, and other emergency situations since its launch.<sup>9</sup> For example, WEA messages sent during recent wildfires in California helped to move people in affected communities to safety,<sup>10</sup> and the National Weather Service has credited the WEA system with continually alerting the public about severe weather and saving lives.<sup>11</sup> Similarly, WEAs used to transmit AMBER Alert messages are credited with the safe return of more than 50 missing children.<sup>12</sup> The architecture utilized for WEA messaging, cell broadcast, allows for delivery of one-to-many messages without delays from network congestion on commercial channels and serves as an effective and efficient platform, as evidenced by these achievements.<sup>13</sup>

### **III. WEA MESSAGES ARE DELIVERED AND DISPLAYED TO THE OVERWHELMING MAJORITY OF WIRELESS SUBSCRIBERS.**

Participating CMS providers have been successful in delivering WEA messages to millions of wireless subscribers, which has been the primary goal of the WEA program since inception. As noted above, a recent consumer survey conducted by The Harris Poll showed that

---

<sup>9</sup> Lisa M. Fowlkes, Chief, Public Safety and Homeland Security Bureau, FCC, *Wireless Emergency Alerts: An Update* (Apr. 10, 2018) <https://www.fcc.gov/news-events/blog/2018/04/10/wireless-emergency-alerts-update> (“FCC WEA Update”); See also, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Twentieth Report, 32 FCC Rcd 8968, ¶¶ 13-14 n.37-39, Table II.B.1 (2017)

<sup>10</sup> *Id.*

<sup>11</sup> National Weather Service, *Wireless Emergency Alerts continue to save lives; and we are hearing about it* (Mar. 21, 2017), <https://www.weather.gov/news/172103-wireless-emergency-alerts>.

<sup>12</sup> See FCC WEA Update.

<sup>13</sup> Comments of CTIA, PS Docket Nos. 15-91, 15-94, at 7-11 (filed May 29, 2018) (“CTIA Multimedia Comments”).

nearly nine out of ten smartphone users 18 and older reported having received an emergency alert or AMBER Alert on their phone.<sup>14</sup> However, as described below, answering the question of why a subset of subscribers with WEA-capable devices may not receive a WEA message requires careful evaluation of a complex mix of network and handset capabilities.

In the *WEA False Alert FNPRM*, the Commission seeks comment on why “some wireless subscribers did not receive” a WEA message, including asking if network congestion or other conditions could affect WEA delivery.<sup>15</sup> The Commission noted several reasons a subscriber may not receive a WEA message, including: (1) the subscriber has opted out of viewing imminent threat or AMBER alert WEA messages on their handset; (2) inability of devices to receive WEA messages; (3) lack of radio coverage; (4) use of a 3G device that was engaged in a voice or data session; and (5) lack of device network connection.<sup>16</sup> In addition to the examples cited by the Commission, subscribers also may not receive a WEA message if their WEA-capable device is: (1) in Wi-Fi only mode; (2) served by a cell site that is outside the geo-targeted area for the alert, even though the device itself may be within the geo-targeted area; or (3) served by a network extender, repeater, or in-building microcell that is not identified by the Participating CMS Provider’s network as part of an alert area.

Notably, due to use of cell broadcast technology that is designed to distribute a single WEA message simultaneously to any capable device within reach of a cell-site – even if there are millions of WEA-capable devices in the geo-targeted area – WEA message delivery should not

---

<sup>14</sup> CTIA 2018 Harris Poll Wireless Emergency Alert Survey. This study was conducted August 6-8, 2018, online by Harris Poll on behalf of CTIA among 2,000 U.S. adults 18 and over, 1785 of which owned a smartphone.

<sup>15</sup> *WEA False Alert FNPRM* ¶ 46.

<sup>16</sup> *Id.*

be affected by the type of network congestion issues raised in the *WEA False Alert FNPRM*.<sup>17</sup> Cell broadcast technology was selected for WEA's public safety mission to rapidly disseminate emergency information to any WEA-capable mobile device throughout a targeted area, while minimizing the risk of congestion by avoiding the use of commercial data channels that could delay dissemination of the WEA message.<sup>18</sup> In contrast, one-to-one text messaging traffic (e.g., SMS or MMS) and data channels use the commercial wireless networks to deliver high bandwidth content like video and broadband data, but may be more susceptible to congestion that may delay delivery.<sup>19</sup>

As noted in CTIA's comments to the Commission's *WEA Multimedia Public Notice*, efforts to increase the amount of information contained within a WEA message can raise issues about network congestion that may delay WEA message delivery.<sup>20</sup> Further, the Commission should recognize that content delivered over commercial data channels from a URL embedded within a WEA message may be susceptible to congestion on commercial wireless networks. The Commission should therefore work with FEMA and alert originators to ensure that WEA message content is carefully managed, as the WEA architecture is limited by the control channel bandwidth and demand on commercial networks may increase during emergency events.

Moreover, while the Commission's *WEA False Alert FNPRM* focused on receipt of a WEA message by a WEA-capable device, whether the device *displays* a received message also

---

<sup>17</sup> *WEA False Alert FNPRM* ¶ 46 (asking "Is it possible that due to certain network conditions, such as congestion, certain cell sites within the alert's geo-target area may not transmit a particular alert message? Are there any network conditions or resource scheduler-related issues that may cause the Participating CMS Provider's network to delay or fail to transmit WEA alert messages that it has received from IPAWS?").

<sup>18</sup> CTIA Multimedia Comments at 6.

<sup>19</sup> *Id.*

<sup>20</sup> CTIA Multimedia Comments at 7-10 (noting that adding more data and information to WEA messages may overwhelm the limited resources available to the control channel and also result in delays in delivery).



factors into whether a subscriber sees a WEA message. In addition to device-setting options regarding opting-out of displaying imminent threat or AMBER alert messages, a device may not display a received WEA message if a consumer has chosen not to update their WEA-capable device with the latest software that can support WEA capabilities. Further, as the Commission continues to encourage enhanced geo-targeting features through device-based geo-targeting, the issues related to when a device displays a received WEA message may be further compounded by devices moving in and out of the alert area throughout the duration of WEA message broadcast.

As WEA messages are received by millions of wireless subscribers, CTIA believes further evaluation is necessary to determine if there are any identifiable reasons a limited subset of WEA-capable devices are not receiving or displaying WEA messages. CTIA recommends that the Commission encourage wireless technical experts and alert originators, as well as FEMA, to evaluate issues and seek to capture more granular data on WEA message delivery and display during upcoming distribution of WEA test messages by alert originators. Specifically, alert originator WEA test messages during the forthcoming opt-in testing capabilities and well-coordinated live test messages (*e.g.*, National Capital Region, Nationwide Presidential Alert) can offer opportunities to understand the reasons for any non-delivery or non-display issues.

CTIA and its member companies would be pleased to collaborate with FEMA, the FCC, and alert originator stakeholders to help develop an approach, including questions for post-testing surveys, which would provide the data needed to better assess WEA performance and potentially identify root causes of any non-delivery or non-display issues. Once this data is gathered, technical experts can evaluate solutions that may further increase the likelihood that

WEA messages will be displayed even beyond the vast majority of WEA messages that are received by wireless subscribers today.

#### **IV. PERFORMANCE REQUIREMENTS ARE INCONSISTENT WITH THE PURPOSE, TECHNICAL DESIGN, AND VOLUNTARY NATURE OF THE WEA PROGRAM.**

While the Commission seeks comment on how stakeholders could report on WEA performance, as well as whether the Commission should adopt technical standards or benchmarks for WEA performance and delivery,<sup>21</sup> WEA performance requirements would be inconsistent with WEA's purpose, technical design and the voluntary nature of the WEA program.

The WEA system (formerly known as the Commercial Mobile Alert System, or CMAS) was designed as a bell ringer system that would disseminate alert messages as rapidly and broadly as possible. In establishing the CMAS, the Commission defined a critical, but limited role for Participating CMS Providers to disseminate WEA messages. Specifically, the Commission noted that the CMS Provider Gateway would only be responsible for formulating an alert in a manner consistent with the individual CMS provider's available delivery technologies, mapping the alert to the associated set of cell sites, and handling congestion.<sup>22</sup> Further, the mobile device would specifically need to authenticate interactions with the CMS provider's network, monitor for alerts, maintain customer options (like opt-out), and activate the alert indicator (sound/visual/vibration for an alert message).<sup>23</sup> WEA performance metrics or requirements presume a more expansive set of responsibilities for Participating CMS Providers

---

<sup>21</sup> *WEA False Alert FNPRM* ¶¶ 48-49.

<sup>22</sup> *See Commercial Mobile Alert System*, 23 FCC Rcd 6144, ¶ 19 (2008).

<sup>23</sup> *Id.* ¶ 20.

than the limited role defined in the Commission's initial CMAS Orders of simply disseminating WEA messages to as many people and as quickly as possible.

Further, as previously noted, Participating CMS Providers selected cell broadcast technology specifically for WEA's public safety mission to rapidly disseminate emergency information to any WEA-capable mobile device throughout a targeted area, while minimizing the risk of congestion by avoiding the use of commercial data channels that could delay dissemination of the WEA message. Cell broadcast technology cannot measure the performance of message delivery because the protocol is a simple broadcast transmit function with no capability for receipt acknowledgement or confirmation from the mobile device.<sup>24</sup> For this reason, Participating CMS providers cannot: (1) monitor the information carried over the broadcast control channel or (2) provide delivery information about WEA messages. In addition, the mobile device displays a WEA message in accordance with the Commission's rules and relevant technical standards but has not been designed to monitor message display in any way. Monitoring WEA message delivery or display would also require the transmission of information over commercial networks that would run the risk of network congestion issues noted above. Therefore, the Commission's proposal to impose WEA performance reporting obligations would require a fundamental redesign of the technology underpinning the success of the existing WEA system.

Finally, even if it were technically feasible to monitor and measure the performance of WEA delivery and display, the Commission's proposal to establish performance benchmarks raises fundamental questions about the voluntary nature of the WEA program. Performance metrics may subject voluntarily Participating CMS Providers to an enforcement regime that

---

<sup>24</sup> See 3GPP TS 23.041, TS 36.331, and TS 36.413.

would be inconsistent with voluntary nature of the WEA program that Congress directed the Commission to implement through the Warning, Alert, and Response Network Act (WARN Act).<sup>25</sup> For these reasons, in lieu of an enforcement regime of performance metrics, the Commission should work with Participating CMS providers, equipment manufacturers, FEMA, and alert originator stakeholders to encourage a collaborative approach to evaluating any issues affecting a subset of WEA-capable devices that may not receive or display WEA messages.

**V. ONLY ALERT ORIGINATORS AND FEMA CAN AND SHOULD BE EXPECTED TO REPORT FALSE ALERTS AND MONITOR TEST MESSAGES.**

The Commission also seeks comment on whether there should be a dedicated mechanism by which Participating CMS Providers could report false alerts.<sup>26</sup> By design, Participating CMS Providers will distribute any authenticated WEA message received from FEMA’s gateway to distribute a message to as many subscribers as quickly as possible. Thus, Participating CMS providers have no discretion on whether to send a WEA message or determine the veracity of a “false” WEA message.

WEA messages are originated exclusively by alert originators, and FEMA’s Integrated Public Alert and Warning System (IPAWS) is solely responsible for originating, authenticating, and validating alert messages that are then delivered to Participating CMS Providers for dissemination.<sup>27</sup> Since the Participating CMS providers are simply a conduit for WEA message delivery, they should have no role in the reporting of false alerts—this function should be the

---

<sup>25</sup> Warning, Alert, and Response Network Act, Title VI of the Security and Accountability for Every Port Act of 2006, Pub. L. No. 109-347, 120 Stat. 1884, § 602(b)(2)(A) (2006).

<sup>26</sup> *WEA False Alert FNPRM* ¶ 40.

<sup>27</sup> Communications Security, Reliability and Interoperability Council V (CSRIC V), Working Group 3 – Emergency Alert Systems (WG-3), *Final Report – EAS Security Best Practices Adoption*, at 8-11 (Mar. 2016), [https://transition.fcc.gov/bureaus/pshs/advisory/csric5/WG3\\_Security\\_Final\\_Report\\_0316.pdf](https://transition.fcc.gov/bureaus/pshs/advisory/csric5/WG3_Security_Final_Report_0316.pdf).

sole responsibility of alert originators and FEMA/IPAWS who are responsible for emergency messages and for determination of whether an alert is “false” or not.

For similar reasons, Participating CMS providers should have no responsibility to monitor their WEA systems for the dissemination of test messages.<sup>28</sup> However, alert originators should be encouraged to coordinate test messages with Participating CMS providers to mitigate consumer confusion or concerns consistent with the FCC’s conditions for granting waivers to disseminate live WEA test messages.<sup>29</sup>

## **VI. CONCLUSION.**

Even as WEA messages are delivered and displayed to the overwhelming majority of wireless subscribers, CTIA and its member companies support the Commission’s efforts to ensure that as many subscribers as possible are able to receive critical public safety information in a timely manner. In doing so, however, the Commission should recognize that Participating CMS providers have a limited role in the distribution of WEA messages and a complex mix of network and handset capabilities enable the delivery and display of WEA messages. Rather than adopting WEA performance or reporting requirements, CTIA encourages the Commission to examine how the WEA stakeholders can work together to further improve the delivery and

---

<sup>28</sup> *WEA False Alert FNPRM* ¶¶ 47 – 48.

<sup>29</sup> See e.g., *Improving Wireless Emergency Alerts and Community-Initiated Alerting; Amendments to Part 11 of the Commission’s Rules Regarding the Emergency Alert System*; PS Docket Nos. 15-91, 15-94, DA 18-606 (rel. June 11, 2018)(granting a limited waiver for a WEA test for Missouri State Highway Patrol and requiring public outreach and coordination); *Improving Wireless Emergency Alerts and Community-Initiated Alerting; Amendments to Part 11 of the Commission’s Rules Regarding the Emergency Alert System*; PS Docket Nos. 15-91, 15-94, DA 18-511 (rel. May 18, 2018)(granting a limited waiver for a WEA test by the State of Minnesota and requiring public outreach and coordination); *Improving Wireless Emergency Alerts and Community-Initiated Alerting*; PS Docket No. 15-91, DA 18-450 (rel. May 1, 2018)(granting a limited waiver for a WEA test by Vail Public Safety Communications Center and requiring public outreach and coordination).

display of WEA messages. CTIA and its member companies look forward to engaging in a robust dialogue with all stakeholders to ensure the continued success of WEA.

Respectfully Submitted,

/s/ Matthew Gerst

Matthew Gerst  
Assistant Vice President, Regulatory Affairs

Thomas C. Power  
Senior Vice President and General Counsel

Thomas K. Sawanobori  
Senior Vice President and Chief Technology  
Officer

Scott K. Bergmann  
Senior Vice President, Regulatory Affairs

**CTIA**  
1400 Sixteenth Street, NW  
Suite 600  
Washington, DC 20036  
(202) 785-0081

Dated: September 10, 2018