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

In the Matter of	)	
	)	
Improving Wireless Emergency Alerts and Community-Initiated Alerting	)	PS Docket No. 15-91
	)	

REPLY COMMENTS OF SPRINT CORPORATION

I. INTRODUCTION

Sprint Corporation ("Sprint") hereby submits these reply comments in response to comments filed in the Federal Communications Commission's ("FCC" or "Commission") docket on proposed amendments to its rules regarding the Wireless Emergency Alert ("WEA") system.[1] The WEA service was established as a voluntary service that Sprint embraced and was a leader in deploying. A number of the Commission's proposals, however, would entail new standards and changes to wireless networks and devices that would significantly alter the original program carriers volunteered to support. As noted by numerous Comments filed in this docket, these changes would significantly increase the cost of this program, create risk to network operations during emergencies, and provide minimal benefits. Accordingly, Sprint urges the Commission to limit changes to this program to those that are technically and financially feasible with reasonable timeframes.

[1] *Improving Wireless Emergency Alerts and Community-Initiated Alerting, Notice of Proposed Rulemaking*, PS Docket No. 15-91 (Rel. Nov. 19, 2015) ("NPRM").

II. DISCUSSION

A. WEA Messaging

i. Character Length

Commenters generally support increasing the character length from 90 to 360 characters, as the Commission has proposed. However, the timeline proposed in the NPRM is not sufficient to develop and implement appropriate standards. Moreover, once these standards are developed, carriers, alerting authorities, and FEMA will need additional time to make the requisite changes to their networks, software, and handsets.[2] ATIS references its recently completed *Feasibility Study for LTE WEA Message Length*, which detailed the need for changes to industry standards.[3] According to ATIS, "Once these changes are made, the industry will undertake standards changes to ATIS and 3GPP standards, modifications to the "C" interface between the Federal Emergency Management Agency (FEMA) Integrated Public Alert and Warning System (IPAWS) Federal Alert Gateway and the Commercial Mobile Service Provider (CMSP) Gateway, and modifications to network infrastructure and mobile devices."[4] Both this standards work and subsequent network changes will take significantly longer than the FCC has proposed.

A number of other commenters agree with Sprint regarding the need for additional time to complete standards work and necessary network changes.[5] AT&T explains that, "Standards changes alone will require a minimum of 12 months, followed by changes to the CMSP infrastructure, including development, testing and deployment. Coordination with changes to the FEMA IPAWS is required, as well as with alert originator updates."[6] San Joaquin County

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[2] Comments of Sprint at 3-4.
[3] *ATIS Feasibility Study for LTE WEA Message Length* (ATIS 0700023) (Oct. 2015).
[4] Comments of ATIS at 4.
[5] *See* Comments of Verizon at 5; Comments of AT&T at 7; Comments of Microsoft at 2-3.
[6] Comments of AT&T at 7.

Operational Area Response states, "It is a concern that the allotted time for Participating CMS Providers to come on line with mandated changes seems rushed, with only one year for Providers to come up with the necessary required modifications and the money to make that take place."[7]

While Sprint recognizes the value of the proposed change in character length, the consensus of carriers, standards bodies, and alerting authorities is that the time framed proposed is unrealistic. Rather than setting an arbitrary date for completion, the Commission should tie compliance to completion of standards, providing sufficient time for these new standards to be implemented.

ii. Classifying Emergency Government Information

Sprint opposes the creation of a separate category for Emergency Government Information. Many commenters, including several alerting authorities, share Sprint's concern and have highlighted potential problems associated with this proposal.[8] Beaufort County Emergency Management, Fire Marshal & Emergency Services, for example, states that, "Desensitizing the public to the emergency nature of WEA messages is a real concern if we add another category."[9] Similarly, according to Mason County Emergency Management: "While the inclusion of the new WEA category titled "Emergency Government Information" would be appropriate as a supplement to Imminent Threat Alerts; if this category were utilized as a standalone alerting classification, we feel that it would desensitize the public due to the fact that

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[7] Comments of San Joaquin County Office of Emergency Services at 1.

[8] *See* Comments of Denver Office of Emergency Management and Homeland Security at 1; Comments of Matanuska-Susitna Borough, Alaska at 1; Comments of Kansas City Emergency Management at 1; Comments of The Boulder Regional Emergency Telephone Service Authority ("BRETSA") at 15-16; Comments of San Francisco International Airport, Safety & Security Services at 1; Comments of NOAA National Weather Service at 2-3; Comments of T-Mobile at 5.

[9] Comments of Beaufort County Emergency Management, Fire Marshal and Emergency Services ("Beaufort County") at 2.

some local authorities would over utilize the system."[10] The Commission should refrain from creating a separate category for Emergency Government Information. Instead, the FCC should expand the definitions associated with the existing alerting categories to include additional types of information.

iii. Content in WEA Alerts

One of the most serious concerns raised by all the wireless carriers is the inclusion of URLs within WEA alerts. This proposal would cause serious congestion on wireless networks during emergencies, the precise time network capacity will already be challenged.[11] This outcome would ultimately undermine consumers' ability to communicate effectively during an emergency situation and undermine the WEA program. The recent findings of ATIS, which are outlined in ATIS' comments, support this view. In its comments ATIS references its recently completed *Feasibility Study for WEA Supplemental Text* in which it found that, "…introducing URLs in a WEA message could result in significant challenges within the service provider infrastructure network and may increase the likelihood of severe network congestion resulting in the inability of subscribers to make calls."[12]

Other commenters have also raised similar concerns. The U.S. Coast Guard aptly explains: "… in emergency weather situations, often the local cellular radiotelephone network is under extreme duress, both externally from downed towers or power outages, and internally due to high traffic volumes over the network. In this situation, the government should not be encouraging the public to impose more stress on the network by using their cell phones to try to

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[10] Comments of Mason County Emergency Management at 1.
[11] Comments of Verizon at 8; Comments of T-Mobile at 6; Comments of AT&T at 12-13; Comments of Sprint at 6.
[12] Comments of ATIS at 7-8, referencing *Feasibility Study for WEA Supplemental Text (*ATIS-0700026) (Dec. 2015).

access web-sites or embedded phone numbers."[13] Similarly, the International Association of Fire Chiefs ("IAFC") states, "The IAFC is concerned whether by doing so will further strain wireless networks that are already congested during an emergency, potentially impeding public safety communications and operations."[14]

In addition to concerns regarding network congestion, commenters have also identified other issues associated with the use of URLs. ATIS discusses the fact that its *Feasibility Study for WEA Supplemental Text* identified the need to evaluate cybersecurity issues related to the use of URLs.[15] The U.S. Coast Guard also discusses potential cybersecurity issues, similar to those identified by ATIS, related to the use of URLs.[16] The Wyoming Department of Transportation ("WYDOT") raises valid concerns regarding the use of URLs arguing, "Uniform Resource Locators (URLs) can be difficult to work with on cell phones. Repeated manual entry of URLs is also difficult and distracting. URLs do provide a method for delivering better information, but browsing while driving is something that is against state law in most jurisdictions and should not be promoted."[17]

While a number of well-intentioned commenters indicate support for including URLs in WEA messages, in general these commenters fail to address the serious concerns raised about network congestion and cybersecurity. Due to the potential impacts on network congestion and cybersecurity, and public safety (such as when driving), the Commission should refrain from revising its WEA rules to allow URLs to be included in WEA messages.

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[13] Comments of the U.S. Coast Guard at 11.
[14] Comments of IAFC at 2.
[15] Comments of ATIS at 7-8.
[16] Comments of the U.S. Coast Guard at 11.
[17] Comments of Wyoming DOT at 1.

B. WEA Geo-Targeting

Some commenters argue in support of device-based geo-targeting.[18] These comments, however, do not take into account the way that Global Positioning Satellite ("GPS") location information is actually gathered and utilized. Wireless device positioning depends, in large part, on capabilities within the network and resources not designed for significant coincidental traffic loads. Wireless devices do not independently calculate location based only on GPS data pulled directly from satellites. Instead, wireless devices rely on multiple sources of information, much of it derived from cell towers, such as signal strength, time delay, and WARN data that speeds satellite acquisition. These additional sources of information are particularly important when the device does not have a clear line-of-site to the satellites. All of this data, as well as additional information not available to the handset, such as the location of towers and the configuration of the network, must be resolved using centralized processors within the network. By seeking to require all devices within a particular area to access these centralized processors simultaneously, the system is likely to be overloaded. Ultimately, this could produce less accurate geo-targeting than the current cell/sector level WEA broadcast and add congestion to cellular networks at times when network capacity may already be constrained.

More accurate geo-targeting of alerts through device-assisted methods cannot be addressed on the carrier networks at the expected traffic levels. Carriers understand the desire to improve geo-targeting through device-assisted methods, but there are limitations with how and where GPS works and performs through carrier networks that make it different from commercial over-the-top location-based services that run as applications on user equipment. Any effort to modify how GPS is currently used could be intensely burdensome on a wireless network and,

[18] Comments of AC&C LLC at 2; Comments of U.S. Geological Survey at 2; Comments of City of Houston at 3.

even with any resulting modifications, it is not likely to be a timely enough method for use with a WEA alert where timing of delivery to the customer is essential.

In its comments, ATIS discusses the numerous technical challenges associated with device-based geo-targeting that it identified through its *Feasibility Study for WEA Cell Broadcast Geo-Targeting*.[19] Other commenters have also identified major technical challenges and potential costs associated with device-based geo-targeting that must be taken into serious consideration by the Commission.[20] Given these technical issues, and the concern that increased load on location platforms would undermine network performance during emergencies, the Commission should not adopt any rules regarding use of device-based, network-assisted or network-based geo-targeting for WEA.[21]

C. Alert Logging and Test Reporting

Sprint does not believe that the Commission's proposed logging and reporting requirements will provide useful information to alerting authorities. Imposing these requirements will, however, result in an increased burden for carriers participating in the service on a voluntary basis. It is, of course, easy to suggest that another entity collect and generate reports that may or may not be useful and the bulk of which will undoubtedly never be used. There is no evidence in the record, however, that the cost of generating such reports is outweighed by any concrete public benefit or that they can provide the information sought.

Commenters expressing support for these requirements list an inconsistent and varied set of reasons for their support, which indicates there is no consensus view on what these reports should contain or how they would be used. The Commission relies on findings of the

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[19] Comments of ATIS at 13-14, referencing *Feasibility Study for WEA Cell Broadcast Geo-targeting* (ATIS-0700027) (Dec. 2015).
[20] Comments of Verizon at 12.
[21] Comments of Sprint at 8-10.

Commercial Mobile Service Alert Advisory Committee ("CMSAAC") made before the WEA system became operational in support of the proposed requirements, but the assumptions made by the CMSAAC have now been superseded by real world experience. Moreover, as explained below, one portion of the Commission's proposed logging and reporting requirements is not even supported by current standards.

Although several commenters argue in support of adopting logging and reporting for participating wireless carriers, support is far from unanimous.[22] The Cochise Board of Supervisors, for example, states that, "Except for special post-use circumstances, the data would not be generally useful to most local public safety agencies."[23] Moreover, the proposed logging and reporting requirements are unlikely to provide meaningful data that is in line with alert originators' expectations. For example, some commenters expect the reports will tell them whether geo-targeting is accurate,[24] but for valid technical reasons that type of data is not, and could not be, included in the proposed requirements. Others expect to receive information on how fast the WEA alerts will start to be broadcast in their areas after submission by the alert originator,[25] but there is no mechanism in the standards that would allow for this measurement.

Before the Commission moves forward with adopting any reporting and logging requirements, it should fully assess what the intended use and purpose of the information would be and whether the information being sought is truly beneficial to recipients. As one commenter aptly observed, "It would seem that before the FCC requires reporting from these carriers who

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[22] *See e.g*. Comments of Douglas County at 2; Comments of Cari Leidholt, Preparedness Team Leader, South Dakota Office of Emergency Management at 2; Comments of Beaufort County at 4; Comments of City of Los Angeles at 2; Comments of Portland Board of Emergency Management at 9.
[23] Comments of Cochise Board of Supervisors at 2.
[24] Comments of Clark County at 3.
[25] Comments of Jefferson Parish Emergency Management at 4.

are voluntarily participating in WEA, the audience and need for this reporting should be established."[26] If the Commission determines there is legitimate value in logging and reporting of WEA information, it would be more appropriate for this information to be issued by the Federal Emergency Management Agency and/or the Department of Homeland Security, rather than carriers, since these agencies receive all responses associated with all WEA messages sent by all carriers via the Federal Alert Gateway. These agencies could perform logging as well as create generalized reports across all carriers.

As noted above, the Commission references findings of the Commercial Mobile Service Alert Advisory Committee in support of its proposals to adopt logging and reporting requirements.[27] Notably, however, CMSAAC made these assumptions about reporting in 2007, well before the WEA system was designed, and made predictions about what information would be available in the network and how it could be accessed. The subsequent design took a different course and, as a result, these assumptions about reporting may no longer support this conclusion.

Some aspects of the Commission's proposed logging and reporting requirements are also not feasible because there are no standards to support them. The Commission's proposed rules include a requirement that the CMS provider gateway, "Generate monthly system and performance statistics reports based on category of alert, alert originator, alert area, and other alerting attributes."[28] Providing this type of information is not supported today by 3GPP (LTE) standards and would require a complex and lengthy process to change.

If the Commission adopts logging and reporting requirements, carriers will incur additional operating expenses for collecting and producing the reports in order to support a

[26] Comments of Gary E. Timm at 5.
[27] NPRM at Par. 56.
[28] NPRM, Appendix A, Proposed Rule § 10.320 Provider alert gateway requirements.

voluntary system. Several commenters have expressed concerns regarding the impact on carrier costs. Norman Sturm from the Cochise County Board of Supervisors states, "I am very hesitant to suggest that carriers be required to collect and report alerting data. Especially if this would become a costly endeavor."[29] Even supporters of logging and reporting requirements recognize there are challenges. According to Beaufort County: "The downside to this is the cost to the carriers and the coordination necessary to ensure the data comes in a configuration and program that is compatible with all our different computer software."[30] The Commission should not adopt logging and reporting requirements in light of the factors discussed herein.

III. CONCLUSION

The Commission should refrain from adopting changes to the WEA system that would fundamentally alter the original scope and intent of the service. Rather than focus on overhauling a system that is currently operational and effective, the Commission should examine ways to promote more widespread use of WEA by state and local authorities.

Respectfully submitted,

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[29] Comments of Cochise Board of Supervisors at 2.
[30] Comments of Beaufort County at 4.