

**Before the  
Federal Communications Commission  
Washington, DC 20554**

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

To: The Commission

**AMENDED COMMENTS OF  
THE BOULDER REGIONAL EMERGENCY TELEPHONE SERVICE AUTHORITY**

The Boulder Emergency Telephone Service Authority (“BRETSA”), by its attorney, hereby submits its Amended Comments on the Commission’s January 29, 2016 Notice of Proposed Rulemaking in the above-referenced Docket (“NPRM”).<sup>1</sup>

**I. The Current Emergency Alert System Is Not Useful For Local Emergency Alerting By PSAPs.**

The Emergency Alert System (“EAS”), progeny of the Cold War era Emergency Broadcast System, seems anachronistic in its focus on Presidential Alerts, and its limited location awareness. In all but the direst circumstances warranting a Presidential announcement, the President would likely make a prime-time address over the major broadcast networks rather than activating the EAS, in order to avoid causing additional and undue alarm and panic.

While PSAPs frequently initiate public emergency alerts using ENS and potentially other alerting systems such as WEA, the EAS is not practically available for such use in most circumstances. First, in most cases the coverage areas of broadcast stations which would transmit

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<sup>1</sup> BRETSA is a Colorado 9-1-1 Authority which establishes, collects and distributes the Colorado Emergency Telephone Surcharge to fund 9-1-1 service in Boulder County, Colorado. BRETSA initially filed its Comments on May 9, 2016. These Amended Comments are filed to better distinguish between the views of BRETSA and the Boulder County Office of Emergency Management regarding use of EAS for local alerting.

EAS alerts will include multiple counties and cities, such that an EAS alert issued by officials in one jurisdiction would be received in other jurisdictions. It would also “over-alert” the public, transmitting alerts to people who are not in harm’s way. Over-alerting increases the likelihood of people “tuning-out” future EAS alerts.<sup>2</sup> To be effective, emergency notification systems must be capable of *expeditiously* transmitting emergency messages to the public in areas at risk.

Until EAS becomes location-aware (able to display alerts only on receivers in a threatened area), and can be activated by PSAPs as expeditiously as ENS (*e.g.*, without creating a separate message through a separate system and waiting for approvals to use EAS), it will not be particularly useful for local alerting. For EAS to be location-aware would require that the Commission’s rules require broadcast receivers to be location-aware.

BRETSA notes that the Boulder County Office of Emergency Management, which is staffed full-time and not just during emergencies, *does* use EAS and finds it effective for public alerting. The Office uses EAS in connection with major emergencies where the need to provide emergency information to people, notwithstanding phone lines and cellular service being down in affected areas, outweighs the broadcast of emergency information beyond the affected area or the jurisdiction served by the Office.

## **II. If EAS Is Made Available To PSAPs, It should Be Integrated Into Emergency Alerting Systems With Which Local Officials Are Familiar.**

ENS is nearly ubiquitous. Public safety officials and PSAP personnel are familiar with the interfaces of the ENS systems to which their jurisdictions subscribe. PSAP personnel responsible for launching ENS and other alerts are already required to be familiar with a large

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<sup>2</sup> Like the proverbial boy who cried wolf, “over alerting” refers to transmitting messages to the public in areas which are not at risk, transmitting messages concerning non-emergencies or minor emergencies, or transmitting test messages so frequently that they become a nuisance; any of which will lead to the public to deactivating emergency alerts on their communications devices or disregarding the alerts. There is even anecdotal evidence of people deleting their numbers from ENS services after over-alerting of weather events by WEA, and the public not distinguishing between the different alerting systems.

number of systems. Requiring they learn multiple interfaces and alert-initiation procedures for multiple alerting systems is unrealistic and imprudent; it can only delay notifications and invite errors. If EAS is to be available to PSAPs for local alerting, then EAS APIs should be made available to ENS providers to integrate into their existing messaging platforms, rather than making EAS available only as a stand-alone service. Integration with other alerting platforms such as WEA and EAS will enable a local official to simultaneously create and launch an alert over multiple systems and media, expediting transmission and receipt of notifications.

Integration of such systems through commercially available ENS services would involve the service provider addressing compliance with WEA and EAS access and authorization requirements on the back end, making the process of launching alerts more user-friendly.

### **III. EAS And Crowdsourced Feedback On Public Safety Events And Incidents Must Be Spontaneous To Be Reliable And Useful.**

The Commission cites a study based upon Boulder County's use of Twitter to identify areas for aerial damage assessment after the 2013 floods in North-Central Colorado,<sup>3</sup> and asks to what extent community feedback via EAS or WEA could be used to prioritize emergency managers' information gathering efforts. EAS and WEA are systems for sending alerts, suggesting the Commission's intent is to use them to prompt crowdsourced responses.

During the 2013 floods, the Boulder County Office of Emergency Management (OEM) was monitoring/mining Twitter data from before the flooding started, based upon weather reports.<sup>4</sup> The Twitter data was ahead of stream gauges in reporting the progress of the rising waters. Twitter data is thus already being mined and used by local officials. In the event of an

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<sup>3</sup> Guido Cervone, et al., *Using Twitter for Tasking Remote Data Collection and Damage Assessment: 2013 Boulder Flood Case Study* (2016), <http://dx.doi.org/10.1080/01431161.2015.1117684> (last visited May 2, 2016) ("Cervone Study").

<sup>4</sup> The Boulder County Office of Emergency Management has a staff of 15, which it considers necessary to provide effective Emergency Support Function and leverage crowdsourced data. PSAPs lack such personnel resources which can be tasked with social media datamining during a major public safety incident.

event or incident which occurs spontaneously (*e.g.*, a wildfire or tornado rather than a blizzard or rain-driven flooding event) during off-hours when OEM is not staffed, the standard in Boulder County is that the office be operational within one-hour. The first thing OEM officials do upon getting into the office is to activate the social media datamining software for the incident.

In Boulder County, the OEM is a support-coordination, consequence-management agency, while the First Responder agencies provide incident command and crisis management. Thus, OEM provides information it gathers to the incident command agencies for them to utilize as appropriate and feasible under the circumstances. For example, during the initial hours of the 2013 floods First Responders were busy saving lives, and did not make significant use of the social media data for emergency response. After the initial emergency response, First Responders would more likely have used the data for traffic control and other purposes.

Social media crowdsourced feedback is more abundant and useful in more urbanized or populated areas. In the more sparsely populated mountainous areas of Boulder County, there are fewer people to engage in social networking, wireless coverage is less reliable, and wireless service may be interrupted by events such as fires or floods (floods may also wash out wireline facilities connecting cell sites to the MSC). The “legacy social media” of Ham Radio continues to be an information source in such areas even when social media in an area “goes dark.”

The software used by officials to datamine social media shows *trends*, and the reliability of the information comes from this, and from the fact that the social media traffic being analyzed is spontaneously prompted by the event of concern. The use of EAS or other alerting systems to prompt crowdsourced feedback could thus distort the data. Members of the public would be prompted to place themselves in danger to assess the situation and provide a response, their

laymen's assessment may be inaccurate and delayed (delay defeating the trend analysis), and some individuals would take the opportunity to engage in hoax reporting.

The Boulder County Office of Emergency Management shares the concerns of BRETSA that use of alerting systems to prompt crowdsourcing would (i) compromise the reliability and utility of crowdsourced data, (ii) be viewed by some as nuisance alerting causing them to deactivate or ignore alerts, and (iii) draw people into the hazard area, placing them at risk and interfering with Emergency Response operations. The OEM has had issues with unofficial blogs and sites posting inaccurate data, and is concerned that public alerts soliciting crowdsourced feedback would further encourage such blogs and sites to publish data without safeguards to assure accuracy.

The *Cervone Study* referenced use of Twitter Feeds to identify areas for aerial reconnaissance for damage assessment. Aerial damage assessment in the 2013 floods occurred *after* the initial flooding. During the initial hours of the flooding, there were flight restrictions in effect, including limitations on use of drones, to avoid interference with air resources engaged in rescue operations. Weather conditions would also have impacted aerial assessments.

Areas were identified and prioritized for aerial damage assessment based upon multiple data sources including (i) existing mapping of flood-prone areas, (ii) First Responder reports, (iii) 9-1-1 calls, (iv) media reports, and (v) social media datamining. The aerial assessments were most useful *outside* the cities of Boulder and Longmont. In those more-urbanized areas, the locations in which flooding and the damage had occurred were more readily ascertainable from 9-1-1 calls, First Responders, news media reports, etc. In the mountainous areas, including areas rendered inaccessible to vehicular or even foot-traffic by the flooding, the aerial assessments were more critical; but wireless and wireline services were interrupted to some of the most

severely affected areas due to the landlines (which also connecting cell towers to the MSC) being washed away. Crowdsourced data would be limited from areas in which wireless service was interrupted. The extent to which such circumstances and limitations may prevail during and after *any* event will vary. Local officials must assess the availability, reliability and utility of data from available sources under the circumstances of any particular event.

BRETSA believes there are several important conclusions that can be drawn from experience in use of crowdsourcing in emergency response:

1. The spontaneous use of social media in response to events which are occurring, and the analysis of trends in social media messaging, are what makes social media crowdsourcing or datamining reliable and useful. *Prompting* use of social media for crowdsourced feedback could adversely impact its utility and reliability.
2. The public safety community is ahead of the Commission in using crowdsourcing, and is learning from that experience. The public safety system has been developed through years of experience, with different entities having different areas of responsibility but together providing superior service to the public. The structure may differ in different communities for different reasons, and the experiences of lessons-learned are communicated through the public safety community using well-established organizations and channels. Thus, use of social media crowdsourcing for public safety purposes does not seem an appropriate area for the development of best practices *by the Commission*.
3. While each state and community must be free to develop the structure and business rules for its public safety agencies which best serves its constituents; PSAPs are generally *not* appropriate entities to take responsibility for assessing,

evaluating or mining social media data. PSAP personnel have specific roles and responsibilities, and specific characteristics and skill sets which are essential to meeting those responsibilities. PSAPS face difficulty in recruiting and retaining qualified personnel. The Commission should not continue to regard PSAP personnel as an unlimited resource to provide tactical, analytical or datamining services, lest they destroy the effectiveness of the PSAP. Further, in the type of events in which social media datamining would be most useful, PSAP personnel are fully engaged in performing their primary responsibilities, *e.g.*, receiving 9-1-1 calls, dispatching First Responders, coordinating First Responder units move-ups, providing EMD, and performing other PSAP functions.

In summary, EAS or WEA prompting of social media feedback is neither required, nor would be as reliable and useful as data mined from spontaneously generated social media traffic. Local officials are in the best position to determine whether, when and how to use such data as is available in any particular circumstance.

#### **IV. PSAPs Cannot Assist In Ensuring EAS Alerts Are Accessible Or Available To Non-English Speakers.**

The Commission asks whether PSAPs can play a role in ensuring that EAS alerts are accessible to individuals with communications disabilities, and non-English speakers. While there may be exceptions, the answer is “no.” Requiring PSAPs to do so would impose a substantial unfunded mandate on local governments.

PSAPs are ideally staffed at a level to meet call volumes.<sup>5</sup> Multilingual skills and sign language capability are preferable, but is not generally a part of the required skillset for telecommunicators. Most PSAPs rely upon Language Line-type services and Telephone or

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<sup>5</sup> Most PSAPs face difficulties in recruiting and retaining qualified telecommunicators.

Internet Relay Services for calls from non-English Speakers, the deaf or hard-of-hearing. If PSAPs lack the resources to handle non-English 9-1-1 calls, they lack the resources to assist with making EAS alerts accessible or available to non-English speakers. State and local jurisdictions would have to divert resources from other public safety purposes, or raise taxes, to assist in improving accessibility of EAS alerts.

**V. Live Code Testing Should Not Be Undertaken Without Advance Notice to PSAPs.**

Any live code testing should be initiated only with advance notice to PSAPs in the test area; and live code tests should be planned in cooperation with such PSAPs including provision for suspension of testing in the event of a major incident or event in the area in which the test is to be conducted. PSAPs must be aware of the testing as they are likely to receive calls from the public receiving EAS alerts. The level of calling in response to a live code test may also impede a PSAP's ability to deal with any significant ongoing incidents.

Respectfully submitted,

**BOULDER REGIONAL EMERGENCY  
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