

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of
Review of the Emergency Alert System
EB Docket No. 04-296

SIXTH REPORT AND ORDER

Adopted: June 1, 2015

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By the Commission:

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I. INTRODUCTION

1. In this *Sixth Report and Order*, we take an important step to improve the operation and exercise of the Emergency Alert System (EAS), and reaffirm the Federal Communications Commission's (FCC or Commission) commitment to ensuring that all Americans have access to timely and accurate emergency alerts. Our rules governing these alerts must continue to evolve as legacy networks and services transition to next generation technologies. Our actions are guided by lessons learned from the November 9, 2011, nationwide EAS test, and will help facilitate the use of the EAS in a way that maximizes its overall effectiveness as a public warning and alert system.

2. In this *Sixth Report and Order*, we strengthen the EAS by establishing specific operational standards for use during future tests and actual emergencies. In particular:

- We adopt “six zeroes” (000000) as the national location code pertaining to every state and county in the United States, and we require EAS Participants to use equipment capable of processing this location code;
- We require that EAS Participants' equipment be capable of processing a National Periodic Test (NPT) event code for future nationwide EAS tests to bring consistency to the operation of EAS equipment in future national, regional, state and local activations;
- We require EAS Participants to file test data in an Electronic Test Report System (ETRS) that has been constructed to be a practical, accessible, and minimally burdensome tool for recording EAS dissemination data and developing an FCC Mapbook that can illustrate the manner in which an EAS alert is propagated throughout part or all of the United States; and
- We require EAS Participants to comply with minimum accessibility rules, in order to ensure that EAS visual messages are readable and accessible to all members of the public, including people with disabilities.

EAS Participants must comply with these rules within twelve months of their effective date, or as otherwise noted herein.¹

II. BACKGROUND

3. The EAS provides the President, as well as state and local government alert originators,

¹ As we indicated in the *EAS Operational Issues NPRM*, we will, in future proceedings, consider further enhancements to the EAS, such as considering and taking action on recent and future recommendations of the Commission's Communications Security, Reliability, and Interoperability Council (CSRIC) regarding the streamlining of the EAS State Plan process, and the addition of other elements of the Federal Emergency Management Agency's (FEMA) Integrated Public Alert and Warning System (IPAWS) to the testing paradigm. See Review of the Emergency Alert System, EB Docket No. 04-296, *Notice of Proposed Rulemaking*, 29 FCC Rcd 8123, 8124-25, ¶ 2 (2014) (*EAS Operational Issues NPRM*) (stating that we plan to take action, in a future proceeding, on EAS security issues, among others). We also note that the Public Safety and Homeland Security Bureau (Bureau) recently released two public notices reminding EAS Participants of the key role they play in ensuring the secure operations of EAS, and reminding them to employ best practices to facilitate the maintenance of the security of the EAS. See Public Safety and Homeland Security Bureau Seeks Comment on Implementation of Emergency Alert System Security Best Practices, *Public Notice*, DA 14-1628 (PSHSB 2014) (seeking comment on the implementation of voluntary security best practice recommendations, as part of the Commission's larger effort to develop effective and proactive private sector-driven cyber risk management); see also PSHSB Issues Advisory to EAS Participants to Check Equipment for Possible Queuing of Unauthorized EAS Message for Future Transmission; Requests Comment on Impact of Unauthorized EAS Alerts and Announces Inquiry into Circumstances of Retransmission of Unauthorized EAS Message in Several States, *Public Notice*, DA 14-1626 (PSHSB 2014).

with the ability to send critical alerts and warnings to the public over broadcast, cable, and other media communications facilities. Under the Commission's rules, EAS Participants must receive and retransmit EAS alerts initiated by the President.² In addition, EAS Participants may receive and retransmit EAS alerts issued by other government agencies on a voluntary basis.³

A. EAS Architecture

4. The EAS Protocol is a method of constructing an alert message that can be effectively, efficiently, and uniformly processed by EAS equipment. An alert formatted in the EAS Protocol begins with a preamble and header codes that contain information regarding, *inter alia*, the identity of the alert originator, the type of emergency (event code), and its location (location code).⁴ The header codes are followed by an audio attention signal, an alert message, and an end of message (EOM) code.⁵

5. Under the EAS's traditional architecture, alerts are distributed through a hierarchical, broadcast-based alert message distribution system in which an alert originator at the national, state or local level formats a message in either the EAS Protocol or the Common Alerting Protocol (CAP), as described in greater detail below.⁶ *Figure 1* illustrates the distribution hierarchy of an EAS Protocol alert. The alert originator initiates the transmission of an EAS Protocol alert at a designated entry point, after which the alert is relayed from one designated station to another until all affected EAS Participants have received the alert and have delivered it to the public.⁷

² See 47 C.F.R. § 11.1(c) (requiring analog radio and television stations, and wired and wireless cable television systems, DBS, DTV, SDARS, digital cable and DAB, and wireline video systems to comply with the Commission's EAS Rules, and defining them as "EAS Participants"); see also 47 C.F.R. § 11.2(a).

³ See 47 C.F.R. § 11.41(b)(2).

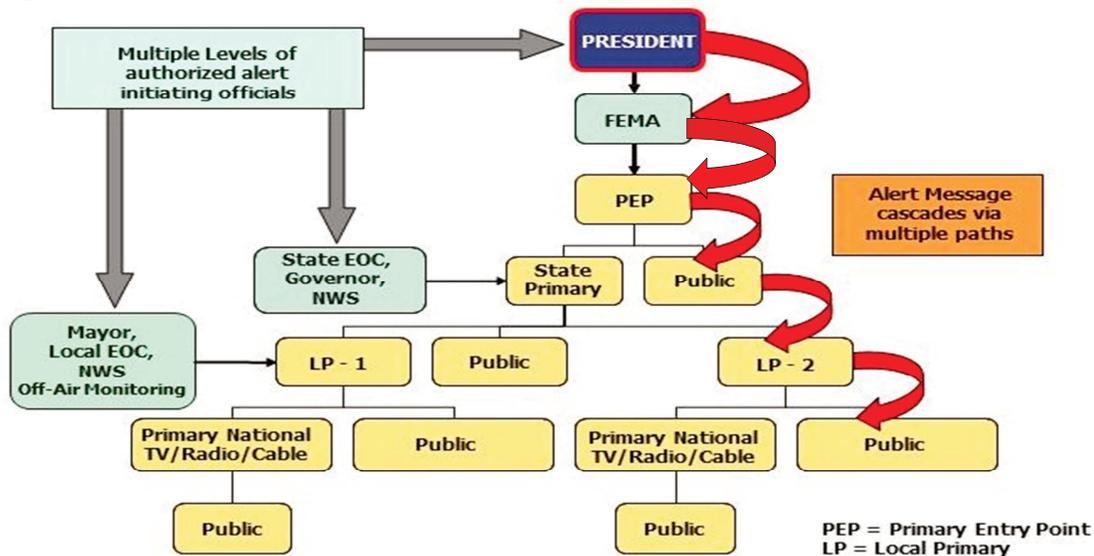
⁴ See 47 C.F.R. § 11.31(a).

⁵ See *id.*

⁶ See *id.*; see also *infra* ¶¶ 4-6 (describing the broadcast-based EAS distribution architecture).

⁷ See *infra* *Figure 1*; see also Review of the Emergency Alert System; Independent Spanish Broadcasters Association, The Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief, EB Docket No. 04-296, *Fifth Report and Order*, 27 FCC Rcd 642, 646, ¶ 7 (2012) (*Fifth Report and Order*) (describing the EAS alert distribution process by which EAS messages are relayed from station to station).

Figure 1: EAS Architecture



6. An EAS alert may also be distributed via the Common Alerting Protocol, or CAP. CAP is an open, interoperable, XML-based standard that can include multimedia such as streaming audio or video.⁸ CAP messages contain standardized fields that facilitate interoperability between and among devices. CAP is backwards-compatible with the EAS Protocol.⁹ All EAS Participants were required to be able to receive and retransmit CAP-formatted EAS alert messages issued by the Federal Emergency Management Agency (FEMA) as of June 30, 2012.¹⁰ An EAS Participant that receives a CAP-formatted message can utilize its contents to generate messages in synchronous audio and visual formats, which can then be broadcast to local viewers and listeners.¹¹ The Commission's alerting paradigm includes the required use of CAP alerts, while maintaining the broadcast-based EAS architecture.¹²

B. The First Nationwide EAS Test

7. The purpose of the first nationwide EAS test was to allow FEMA and the Commission to assess how the broadcast-based, national EAS architecture would perform in practice, and to develop and implement any necessary improvements to ensure that the national EAS, if activated in a real emergency,

⁸ See *Fifth Report and Order*, 27 FCC Rcd at 648, ¶ 10.

⁹ See *id.*

¹⁰ See *Review of the Emergency Alert System*; Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief; Randy Gehman Petition for Rulemaking, EB Docket 04-296, *Fourth Report and Order*, 26 FCC Rcd 13710, ¶ 1 (2011); see also 47 C.F.R. § 11.51(d) ("Effective June 30, 2012, visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with §3.6 of the 'ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0' (May 17, 2010), except that if the EAS Participant has deployed an Intermediary Device to meet its CAP-related obligations, this requirement shall be effective June 30, 2015, and until such date shall be subject to the general requirement to transmit a visual message containing the Originator, Event, Location and the valid time period of the EAS message.").

¹¹ See 47 C.F.R. §§ 11.51(d), (g)(3), (h)(3), (j)(2).

¹² See *Review of the Emergency Alert System*; Independent Spanish Broadcasters Association, the Office of Communications of the United Church of Christ, Inc., & the Minority Media & Telecommunications Council, Petition for Immediate Relief, EB Docket No. 04-296, *Third Further Notice of Proposed Rulemaking*, 26 FCC Rcd 8149, 8163-64, ¶¶ 27-28 (2011).

would perform as designed.¹³ In preparation for the first nationwide test, the Commission adopted the *Third Report and Order*, which required all EAS Participants to participate in nationwide EAS testing and to file test result data with the Commission.¹⁴ The Commission also determined that the event code used for the first nationwide EAS test would be an Emergency Action Notification (EAN),¹⁵ the live code that would be used by the President in an actual emergency.¹⁶ The Commission also delegated authority to the Public Safety & Homeland Security Bureau (Bureau), in coordination with FEMA, to establish the appropriate location code.¹⁷ The Bureau and FEMA decided to use the Washington, DC location code for the first nationwide test.¹⁸

8. At 2:00 p.m., EST, on Wednesday, November 9, 2011, FEMA initiated the first nationwide test by delivering an EAN to the EAS Primary Entry Point (PEP) stations,¹⁹ which, in turn, initiated the EAN distribution throughout the nation.²⁰

9. On April 12, 2013, the Bureau released a report that summarized the test results and made recommendations for strengthening the EAS.²¹ According to the *EAS Nationwide Test Report* (Report), a large majority of EAS Participants successfully received the EAN and, if required, retransmitted the EAN to other EAS Participants.²² The test demonstrated that the national EAS distribution architecture was fundamentally sound.²³

10. The *EAS Nationwide Test Report* also observed three major problems with the test: consumer confusion caused by the discrepancies between the audio and video portions of the test, public

¹³ See FEDERAL COMMUNICATIONS COMMISSION PUBLIC SAFETY AND HOMELAND SECURITY BUREAU, STRENGTHENING THE EMERGENCY ALERT SYSTEM (EAS): LESSONS LEARNED FROM THE FIRST NATIONWIDE EAS TEST 3 (2013), available at <http://www.fcc.gov/document/strengthening-emergency-alert-system> (last visited Oct. 6, 2014) (*EAS Nationwide Test Report*). The first nationwide EAS test did not test CAP or the entirety of the IPAWS-based delivery system. See *id.* at 17, n.45.

¹⁴ See Review of the Emergency Alert System, EB Docket No. 04-296, *Third Report and Order*, 26 FCC Rcd 1460, 1468, ¶ 19 (2011) (*Third Report and Order*); see also *id.* at 1486, ¶ 68.

¹⁵ See *Third Report and Order*, 26 FCC Rcd at 1470, ¶ 24.

¹⁶ See 47 C.F.R. § 11.2(a). The defining characteristics of an EAN are that it automatically takes precedence over all other EAS alerts and can be of indefinite duration, as opposed to all other EAS alerts that are limited to two minutes in length. See 47 C.F.R. §§ 11.33(a)(9), (11).

¹⁷ See *Third Report and Order*, 26 FCC Rcd at 1474, ¶ 32 (“We believe that resolution of such issues is appropriate for the Bureau, operating under delegated authority and in consultation with FEMA pursuant to planning for the conduct of the initial and subsequent national tests.”).

¹⁸ See Public Safety & Homeland Security Bureau Provides Additional Information to EAS Participants for the November 9, 2011 Nationwide Test of the Emergency Alert System, *Public Notice*, 26 FCC Rcd 11461, 11462 (2011).

¹⁹ See 47 C.F.R. § 11.2(b) (defining PEP stations as the private or commercial radio broadcast stations that cooperate with FEMA to provide emergency alert and warning information to the public prior to, during, and after incidents and disasters); see also *id.* (stating that PEP stations serve as the primary source of initial broadcast for a Presidential or National EAS message, and noting that this select group of geographically disparate, independently powered, and electromagnetic pulse (EMP) hardened radio stations collectively can reach over ninety percent of the American populace).

²⁰ See *supra* ¶¶ 4-6 (describing the EAS broadcast-based EAS distribution architecture).

²¹ See generally *EAS Nationwide Test Report* (reporting on test result data provided to the Commission by FEMA and by EAS Participants as required by 47 C.F.R. § 11.61(a)(ii)(3)(iv)).

²² See *EAS Nationwide Test Report* at 5.

²³ See *id.*

confusion and equipment errors caused by the use of the Washington, D.C., location code issues, and public confusion caused by the manner in which some EAS equipment displayed the visual portion of the alert.²⁴

11. *Inconsistent audio and visual portions of the alert caused consumer confusion.* The EAN is designed to combine a visual message generated from the EAS header codes with an audio feed from the President. The visual message is intended to notify the public that there is a national emergency, and the audio feed is intended to discuss the specifics of the emergency. The first nationwide EAS test followed this model by combining a visual message generated from the EAN header code indicating that there was a national emergency in the Washington, D.C., area, with a live audio feed generated from the FEMA operations centers stating that the event was only a test. As the Report indicated, this discrepancy caused confusion for the public, particularly members of the public with disabilities. To minimize this confusion, the Commission, in coordination with FEMA, engaged in a series of actions, including significant outreach to State and local government organizations and the public in advance of the nationwide test,²⁵ and the production of a slide indicating that the event was “Only a Test” for the use of broadcast television and other video service providers during the test. Some cable providers were unable to display the slide.²⁶

12. *The use of a Washington, D.C. location code caused customer confusion and equipment problems.* Although many EAS Participants outside of Washington, D.C., were able to process the Washington, D.C., location code, some EAS Participants reported that EAS and other network equipment rejected the alert as being “out of area,” and terminated the test alert partway through the transmission.²⁷

13. *Inconsistent alert message accessibility.* Finally, some EAS Participants and consumers reported that the language in the visual message that EAS equipment generates from the EAN differs among manufacturers, and many EAS Participants’ equipment generated a visual message that went by

²⁴ Following a request from the Alaska Department of Homeland Security, the FCC granted Alaska EAS Participants a rule waiver to excuse their performance in the Nationwide EAS Test due to severe weather conditions. Alaska’s non-participation had minimal impact on the test because FEMA and the FCC received EAS data from Alaska as a result of the two preliminary EAS tests FEMA and the FCC conducted there in 2010 and 2011. Notwithstanding this waiver and as indicated below, Alaska did provide some data in connection with the November 9, 2011 test, which was used to develop the aggregate analyses contained in this report.

²⁵ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8135, ¶ 21. The Commission conducted extensive outreach to the public, both directly and through state and local governments and civic associations, to ensure that the public would not confuse the broadcast of the live code with an actual alert. This outreach included the creation of a slide indicating that the alert was “Only a Test.” See also *EAS Nationwide Test Report* at 9-10 (describing the outreach efforts undertaken by FEMA and the Commission to avoid the public confusion that might have resulted from the use of the EAN for the first nationwide EAS test, including: the hosting of webinars and roundtables; the release of an EAS test handbook, EAS Best Practice Guide and toolkit; the sending of letters to state governors; the dissemination of FCC and FEMA newsletter blurbs, the targeting of outreach efforts to consumer groups representing individuals who do not speak English, or who have disabilities; the production of video and audio Public Service Announcements in English and Spanish with open and closed captioning; the development by EAS Participants of a slide stating that the test event was “Only a Test,” and the dissemination of consumer fact sheets, among others).

²⁶ See *EAS Nationwide Test Report* at 10, n.20.

²⁷ EAS equipment is programmed to retransmit only such alerts that pertain to the geographic location in which the encoder/decoder is located. Although the Bureau believed that all EAS equipment was programmed to receive and retransmit an alert with the Washington, D.C. location code as though it pertained to the entire nation, some EAS equipment ignored the EAN during the first nationwide EAS test because the Washington, D.C. code was processed as though it only pertained to Washington, DC. See, e.g., *EAS Nationwide Test Report*, at 14 (citing *Emergency Alert System Didn’t Work in Oregon*, KVAL.COM (Nov. 9, 2011, 10:06 AM), <http://www.kval.com/news/national/133545908.html>).

too quickly or was in a difficult to read font.²⁸ In order to address these problems, the *EAS Nationwide Test Report* suggested that the Commission commence a rulemaking proceeding to address any operational nationwide EAS test issues left open in previous EAS orders, such as mandating a nationwide location code for national EAS activations and using a national test event code that would allow FEMA and the FCC to conduct less disruptive nationwide tests.²⁹

14. On June 25, 2014, the Commission adopted the *EAS Operational Issues NPRM*, which sought comment on measures to strengthen the EAS, as discussed below.³⁰ We received sixteen comments and five reply comments in response to the *EAS Operational Issues NPRM*.³¹

III. DISCUSSION

A. National Location Code

15. In the *EAS Operational Issues NPRM*, we proposed that EAS Participants must be capable of receiving and processing a national location code,³² and that “six zeroes” be designated as that code.³³ We explained that adoption of a “six zeroes” location code would bring additional consistency to the EAS alert distribution hierarchy, and, along with our requirement that header codes not be “amended, extended or abridged,” could enable more precise geo-targeting of EAS alerts.³⁴ We also explained that adoption of “six zeroes” as the national location code could have the additional long-term benefit of ensuring the desired harmony between our EAS rules and industry CAP standards, which, in turn, will facilitate the integration of the EAS into IP-based alerting systems such as IPAWS.³⁵

16. Commenters unanimously supported our adoption of the “six zeroes” national location code.³⁶ For the reasons set forth herein, we agree and accordingly adopt “six zeroes” as the national

²⁸ See *EAS Nationwide Test Report* at 16.

²⁹ See *id.* at 18.

³⁰ *EAS Operational Issues NPRM*, 29 FCC Rcd at 8132, 8134-35, 8137, 8141-47, ¶¶ 14, 19-21, 28, 35-38, 40-42, 44-50. Prior to the *EAS Operational Issues NPRM*, the Bureau released a public notice seeking comment on related issues, in order to develop as robust as possible for the rulemaking proceeding. See Public Safety and Homeland Security Bureau Seeks Comment Regarding Equipment and Operational Issues Identified Following the First Nationwide Test of the Emergency Alert System, DA 13-1969, *Public Notice*, 28 FCC Rcd 13810 (2013) (*EAS Operational Issues Public Notice*).

³¹ See *infra* Appendix C (containing a list of commenters to the *EAS Operational Issues NPRM*).

³² The location code is a six-digit, standardized code conforming to the American National Standards Institute (ANSI) standard ANSI INCITS 31-2009 that utilizes six character numbers assigned to various states, counties, cities and portions of counties. See 47 C.F.R. § 11.31(c). A location code is composed of six whole number integers indicating the polarity (P), state (SS), and county (CCC) to be targeted by an alert (PSSCCC). An EAS alert can contain no more than thirty-one such location codes. By default, the use of “zero” for any subset of location code integers denominates an alert that is relevant to that entire area. To date there has been no *per se* “national location code.”

³³ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8131-32, ¶ 14.

³⁴ See *id.*

³⁵ See *id.* at 8132, ¶ 14. IPAWS provides public safety officials with an effective way to alert and warn the public about serious emergencies using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems from a single interface. See FEMA, INTEGRATED PUBLIC ALERT AND WARNING SYSTEM (IPAWS), <https://www.fema.gov/integrated-public-alert-warning-system> (last visited Dec. 19, 2014).

³⁶ See, e.g., FEMA Reply Comments at 2; Trilithic Comments at 1; Monroe Comments at 1; Sage Comments at 2; NAB Comments at 4-5; NCTA Comments at 13; AT&T Comments at 1.

location code for any future nationwide EAS test, as well as for any future nationwide EAS alerts.³⁷ The rule we adopt today requires that EAS Participants' EAS encoder/decoder equipment be capable of processing "000000" in the location code field as a header code indicating that the alert is relevant to the entire United States.³⁸

17. Implementation of "six zeroes" as the national location code will present negligible costs to EAS Participants because most EAS equipment deployed in the field already supports the "six zeroes" national location code or would require only a software update to provide such support.³⁹ For example, NCTA asserts that cable providers may have to engage in firmware updates and testing to verify that the new code functions within their systems.⁴⁰ For this reason, NCTA asserts that adopting "six zeroes" as the national location code will present cable service provider EAS Participants with approximately \$1.1 million in aggregated capital and operational costs for the entire cable industry.⁴¹ Similarly, in the *EAS Operational Issues NPRM*, we estimated that costs confronting broadcasters also would approach \$1.1 million, for an aggregate cost of \$2.2 million for the implementation of "six zeroes" as the national location code.⁴² No commenter challenges our estimated costs for either cable providers or broadcasters. Moreover, commenters agree this cost is justified by the benefits.⁴³

18. Use of "six zeroes" as the national location code promises to improve the efficacy of the EAS. Adoption of "six zeroes" as the national location code has the long-term benefit of ensuring consistency between the EAS rules and industry CAP standards, which already recognize "six zeroes" as the national location code.⁴⁴ This, in turn, will facilitate the integration of the EAS into the IP-based

³⁷ See revision to 47 C.F.R. §11.31(f) in Appendix A.

³⁸ We acknowledge the comments of Sage that characterizing the new "000000" nationwide code as "00" in the rules appendix of the *EAS Operational NPRM* could lead to some anomalous and unintended results. See Sage Comments at 2-3. Accordingly, we define the new nationwide location code as "000000." See *infra* Appendix A.

³⁹ See Trilithic Comments to *EAS Operational Issues Public Notice* at 1 ("Trilithic currently has two different EAS Encoder/Decoder platforms in the field, and both platforms can be updated to support the national location code. The upgrade process is a simple software upload to the EAS Encoder/Decoder that can be accomplished in less than five minutes. No cost will be passed on to Trilithic customers for this firmware modification.); see also Monroe Comments to *EAS Operational Issues Public Notice* at 1 ("Monroe Electronics re-confirms to the Commission all of its EAS/CAP products (including the Digital Alert Systems DASDEC and DASDEC-II and the Monroe Electronics R189 One-Net and R189 One-Net SE) currently provide the capability to receive and process a national location code, specifically the "six zeroes" proposed code for both the EAN and NPT event codes."); but see Sage Comments to *EAS Operational Issues Public Notice* at 3-4 (stating that Sage will charge customers operating newer Sage equipment for a firmware update allowing them to process the "six zeroes" location code, and that older Sage equipment will need to be replaced entirely because its hardware and software support for that model ended in 2011).

⁴⁰ See NCTA Comments at 3.

⁴¹ See Letter from Loretta Polk, Vice President and Associate General Counsel for the National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296, at 2 (filed March 13, 2014) (NCTA March 13, 2014 *Ex Parte* Letter); see also NCTA Comments at 12 (reiterating the \$1.1 million figure for the cable industry). We note that representatives of the cable industry have reported that industry revenue totaled \$104.5 billion in 2012. See NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION, CABLE ACROSS AMERICA: AN ECONOMIC IMPACT REPORT 9 (Bortz Media and Sports Group, 2013).

⁴² Cf. Monroe Comments at 3 ("[A] relatively small minority of broadcast TV stations also uses similar middleware to cable/IPTV industry. Therefore the NCTA estimates may also be extrapolated to apply to the middleware used by these particular broadcast TV operations.")

⁴³ See *supra* note 36 (unanimous support).

⁴⁴ See EAS-CAP INDUSTRY GROUP, ECIG RECOMMENDATIONS FOR A CAP EAS IMPLEMENTATION GUIDE, VERSION 1.0 12 (2010), available at http://www.eas-cap.org/ecig-cap-to-eas_implementation_guide-v1-0.pdf (last visited June 2, 2015) (*ECIG Implementation Guide*).

IPAWS.⁴⁵ We note that use of a “six zeroes” location code is also consistent with our requirement that EAS header codes not be “amended, extended, or abridged.”⁴⁶ We have observed that using a single locality’s location code for a national alert can cause confusion. We also recognize that to issue an alert for the entire United States without recourse to a national location code would require two separate alerts because the EAS alert headers can only hold thirty-one distinct location codes.⁴⁷ Thus, we agree with Trilithic that the use of a single national location code simplifies our national alerting infrastructure.⁴⁸ Finally, Monroe opines that “use of a national location code would provide improved geo-targeting of an EAN should the President wish to address a particular part of the country rather than the nation as a whole.”⁴⁹ In light of these benefits, we find that adoption of a “six zeroes” national location code serves the public interest in promoting the effective use of the EAS.⁵⁰

B. National Periodic Test Code

19. In the *EAS Operational Issues NPRM*, we proposed to amend our rules to allow use of the NPT for future EAS testing as a less burdensome and potentially less confusing alternative to the EAN.⁵¹ We also recognized that the NPT could be tailored in different ways, with different costs and benefits, and sought further comment on what operational requirements the Commission should require for the NPT to facilitate effective and minimally burdensome testing.⁵² Specifically, we sought to develop a more robust record on whether the NPT should: (a) have the same two-minute maximum duration and limited priority as all other non-EAN EAS event codes; or (b) fully emulate the EAN in its mandatory priority and indefinite length.⁵³ We stated that our intent was to provide FEMA with maximum flexibility to test the EAS in the most appropriate manner, while also articulating a clear and feasible standard for EAS Participants and other stakeholders.⁵⁴ In this regard, we noted that, unlike an EAN-emulating NPT, an NPT that shares the priority and two-minute limit of other alert event codes would accommodate FEMA’s stated desire to perform a national EAS test in the near future, and would do so at a dramatically lower cost than an EAN-emulating NPT.⁵⁵ We sought comment, in the alternative, on how the cost of conducting another EAN-based nationwide test, including any outreach specifically tied to use of the EAN, would compare with the costs of conducting a test with an NPT that fully emulates the EAN. We also noted that an NPT with limited duration and priority would have all of the

⁴⁵ See FEMA Comments to *EAS Operational Issues Public Notice* at 2; see also Monroe Comments to *EAS Operational Issues Public Notice* at 1 (“Monroe agrees that that the utilization of this national location code will bring additional consistency to the operation of EAS equipment in both national and local activations.”); Trilithic Comments to *EAS Operational Issues Public Notice*, at 1; NAB Comments to *EAS Operational Issues Public Notice* at 5.

⁴⁶ See 47 C.F.R. § 11.31(c); see also *EAS Operational Issues NPRM*, 29 FCC Rcd at 8149-50, ¶¶ 52-54.

⁴⁷ Fifty distinct location codes would be necessary for the equipment to send an alert to each state. EAS equipment can process only thirty-one location codes at once, so a national alert or test would have to be split in two unless a national alert code or a fix using the Washington, D.C. code is used. See *Third Report and Order*, 26 FCC Rcd 1460, 1472, ¶ 30.

⁴⁸ See Trilithic Comments at 1.

⁴⁹ Monroe Comments at 1; see also FEMA Reply Comments at 2 (continuing to support the use of a “six zeroes” location code to allow geo-targeting to the entire United States).

⁵⁰ We discuss the timeline for compliance with this header code rule *infra* at ¶ 54.

⁵¹ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8134, ¶ 19.

⁵² See *id.*

⁵³ See *id.*

⁵⁴ See *id.*

⁵⁵ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8135, ¶ 20.

benefits of full-EAN emulation, except that it would not test the reset function triggered by an alert lasting longer than two minutes.⁵⁶ Finally, the Commission sought comment on whether the reset functionality triggered by an alert lasting longer than two minutes was testable in a test bed.⁵⁷

20. Commenters unanimously agree that the NPT – not the EAN, and not an NPT that is reprogrammed to fully emulate the EAN – should be the national test event code.⁵⁸ Accordingly, and for reasons discussed in further detail below, we adopt the NPT as the test event code for the purpose of nationwide EAS testing, and further require that the NPT as used in such tests be limited in duration to two minutes or less, and have normal priority.⁵⁹ In order to comply with FEMA’s stated intent that the NPT be disseminated with the “same immediacy as the EAN,” we further require that the NPT be retransmitted immediately upon receipt.⁶⁰ We also reiterate that any national or occasional “special” EAS tests referred to in the Part 11 rules that use the NPT will replace the required monthly test (RMT) of the EAS for any month in which such an NPT-based test is scheduled.⁶¹

21. The record indicates that the cost of upgrading EAS equipment to allow the NPT to function in the manner we adopt today will not be significant.⁶² The NPT is already present in Section 11.31 of the EAS rules as a required event code and, as such, has already been programmed into most EAS equipment.⁶³ According to EAS equipment manufacturers, “the NPT code is already recognized by

⁵⁶ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8134, ¶ 20; see also 47 C.F.R. § 11.33(a)(9) (stating that EAS equipment must provide a method to automatically or manually reset the decoder to the normal monitoring condition after a time interval not less than two minutes if it received an EAS header code but not an end-of-message code, but that this reset functionality is disabled in the case of an EAN).

⁵⁷ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8135, ¶ 21.

⁵⁸ See, e.g., Trilithic Comments at 1; Monroe Comments at 2; Sage Comments at 4; NAB Comments at 5; AT&T Comments at 1-2; SBE Comments at 3; NCTA Comments at 4; Gary Timm Comments at 2; Letter from Richard R. Zaragoza, Attorney for Pillsbury, Winthrop & Shaw, counsel in this matter for the Named State Broadcasters Association (NSBA), to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296, at 2 (filed September 9, 2014) (NSBA September 9, 2014 *Ex Parte* Letter) (stating that the costs of an EAN-emulating NPT do not outweigh the benefits).

⁵⁹ See NAB Comments at 7; Trilithic Comments at 2; Monroe Comments at 2; NSBA September 9, 2014 *Ex Parte* Letter, at 2; AT&T Comments at 2. We note that our adoption of the NPT does not preclude a future “live code” nationwide test.

⁶⁰ See FEMA Comments to *EAS Operational Issues Public Notice* at 2; see also FEMA Reply Comments at 2; Sage Comments at 5 (stating that the NPT “can be tagged to play immediately, just as an EAN”). See revision to 47 C.F.R. §§ 11.51(m)(2); 11.51(n); 11.52(e); 11.54(a) in Appendix A.

⁶¹ See 47 C.F.R. § 11.61(a)(3), (stating that national tests preclude EAS Participants’ obligation to conduct otherwise required weekly and monthly tests); see also 47 C.F.R. § 11.61(a)(4) (stating that “the EAS may be activated for emergencies or special tests at the State or Local Area level by an EAS Participant instead of the monthly or weekly tests required by this [S]ection” so long as the special test includes transmission of the EAS header codes, attention signal, emergency message and EOM code, and comply with accessibility requirements); Amendment of Part 73, Subpart G, of the Commission’s Rules Regarding the Emergency Broadcast System, FO Docket Nos. 91-171, 91-301, *Report and Order and Further Notice of Proposed Rule Making*, 10 FCC Rcd 1786, Appendix E (1994) (providing as an example of a “Special Test” a test initiated by State and local authorities in conjunction with a coordinated nuclear power plants drill). In any instance where the NPT is used for a national test, it supersedes the RMT. In any instance where the NPT is used for a special test (which is not indicated or implied by this *Order*) then it may supersede the RMT. Any use of a special test must be undertaken in a manner that is consistent with the Commission’s Part 11 rules.

⁶² See *infra* note 174 (manifesting agreement among commenters that compliance with the NPT rules we adopt today will present EAS Participants with costs that are not substantial).

⁶³ See 47 C.F.R. § 11.31(c); see also Sage Comments at 5; Monroe Comments at 3; Trilithic Comments at 2.

virtually all existing EAS devices or can be easily enabled by EAS [P]articipants through simple reconfigurations of the code filters on their encoder devices.”⁶⁴ The costs that EAS Participants must incur as a result of our requirement are limited to those incurred by the relatively small number of EAS Participants who will have to manually change the settings of their EAS equipment to automatically respond to the NPT.⁶⁵ Any additional regulatory costs that are imposed by this requirement will be further offset by the reduction in regulatory burdens that will result from broadcast, cable and satellite EAS Participants not having to explain to the public through video replacement slides and other outreach efforts that the alert displayed on the screen is not an actual alert.

22. We contrast the minimal costs imposed by the NPT functionality we require today with those that EAS Participants would incur were the NPT to fully emulate the EAN. Commenters argue that full-EAN emulation would require three years to implement, and would cost at least \$3.3 million more than implementing an NPT with standard duration and priority.⁶⁶ During that time, firmware in EAS equipment would need to be modified such that an NPT would take priority over all other alerts and to avoid triggering the reset functionality that automatically ends an alert after two minutes.⁶⁷ The standards and other proprietary protocols governing the operation of downstream equipment also would need to be updated.⁶⁸ That equipment would then need to be upgraded, tested, and deployed in order to achieve operational readiness for an EAS test with an EAN-emulating NPT.⁶⁹ We also note that an NPT with maximum priority would supersede any live alert that may be delivered in an area of the country subject to the test.⁷⁰ We believe that this would be inconsistent with the life-saving purpose of the EAS. For these reasons, we decline to adopt an NPT that fully emulates the EAN.

⁶⁴ See Letter from Allen Studer, Engineer for Trilithic, Inc., to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296, at 3 (filed January 15, 2014) (Trilithic January 15, 2014 *Ex Parte* Letter); see also Monroe Comments to *EAS Operational Issues Public Notice*, at 6 (“It is technically feasible to use an NPT on a national basis.”); NAB Comments at 6.

⁶⁵ See Monroe Comments at 3 (“Adding the NPT to the list of event codes to be forwarded and provisioning automatic forwarding would take some additional effort on the part of users, but this is a matter of configuration settings on the existing DASDEC/OneNet platforms”); see also Trilithic Comments at 2 (“Sending the NPT as a normal two-minute message will impose less cost on EAS participants, can be deployed much faster, and would not require any further modifications to Trilithic EAS Encoder/Decoders beyond supporting the national location code.”); Sage Comments at 5 (stating that “[a]ll Sage products (blue and grey) are able to carry an NPT alert, they need only to be configured by the user with a filter that specifies that this alert be carried,” but also noting that while enabling the NPT to function like any other alert would require only a settings change in Sage equipment, pairing the NPT with the national location code would require a software update that could be applied at no additional cost so long as the requirements are adopted contemporaneously).

⁶⁶ See NCTA March 13, 2014 *Ex Parte* Letter, at 2 (stating that an EAN-emulating NPT would cost \$4.4 million to implement, relative to the \$1.1 million that would be required to implement an NPT with normal priority and duration limitations); see also NSBA September 9, 2014 *Ex Parte* Letter, at 2; Trilithic Comments at 1-2; Monroe Comments at 3; AT&T Comments at 2.

⁶⁷ See Trilithic Comments at 1-2; see also Monroe Comments at 3 (affirming these costs and stating that they might be passed along to EAS Participants).

⁶⁸ See Trilithic Comments at 1-2; see also Monroe Comments at 3. The primary standard that would require revision would be the SCTE-18 2013, also known as ANSI J-STD-42B-2013, a standard that defines an Emergency Alert signaling method for use by cable systems to signal emergencies to digital receiving devices. See NCTA March 13, 2014 *Ex Parte* Letter, at 2.

⁶⁹ See Trilithic Comments at 1-2.

⁷⁰ See NSBA September 9, 2014 *Ex Parte* Letter, at 2; see also Monroe Comments at 2 (“We are concerned over any possibility that a test code could delay or impede the issuance of an alert intended to safeguard the lives and property of citizens.”).

23. We agree with commenters' assertions that an NPT that shares the priority and two minute time limit of all other event codes will still advance the most important goal of this proceeding, namely, to ready the national alerting infrastructure for a test that FEMA intends to conduct in the near future.⁷¹ Further, we agree with commenters that an NPT with the characteristics we require today will "sufficiently test the reliability of the EAS dissemination ecosystem, providing adequate data for the Commission and FEMA to fully assess the hierarchy and dissemination of EAS alerts throughout the EAS system, via both legacy and CAP-enabled EAS devices."⁷² We also agree with commenters that the approach we take today has the benefit of being "clearly marked as a test, preventing any public confusion."⁷³ As noted earlier, the use of the EAN in conjunction with the first nationwide test necessitated extensive outreach to ensure that the public understood that the event was only a test; none of this outreach would be required with the use of the NPT. Finally, as commenters suggest, we note that it may be possible for FEMA to test EAS equipment's ability to successfully process the priority and duration elements of an EAN in a test bed, thus ensuring that all elements of the system are tested.⁷⁴

C. Electronic Test Reporting System

24. As the Bureau reported in the *EAS Nationwide Test Report*, of the EAS Participants who submitted test result data, the vast majority chose to use the voluntary, temporary, electronic filing system employed for the first nationwide EAS test, rather than to submit paper filings.⁷⁵ The data available from the electronic reporting system allowed the Commission to generate reports on EAS Participants' monitoring assignments at all points throughout the EAS' national distribution architecture that would not have been feasible with paper filings alone.⁷⁶ As a result of the positive response to this temporary electronic filing system and the enhanced analytics it enabled, the *EAS Nationwide Test Report* recommended that the Commission develop a permanent electronic reporting system based on the system used during the first nationwide EAS test to provide a similarly efficient mechanism to expedite the filing

⁷¹ See FEMA Comments to *EAS Operational Issues Public Notice*, at 2 (stating FEMA's desire to conduct a national test of the EAS in "the near future"); see also NAB Reply Comments at 1-2 ("[T]he NPT, as currently configured, is the only reasonable way to accommodate another nationwide EAS test in the next 12-15 months."); AT&T Comments at 2; NSBA September 9, 2014 *Ex Parte* Letter, at 2; NCTA Comments at 7.

⁷² NAB Comments at 6-7; see also AT&T Comments at 2 (stating that the use of an NPT test would "provide a basis for obtaining robust test data concerning performance of the EAS"); Trilithic Comments at 1; Gary Timm Comments at 2.

⁷³ NAB Comments at 6; see also Consumer Groups Comments at 6 (stating that use of the NPT instead of an EAN would bypass problems encountered by the deaf and hard of hearing) (The parties represented by the Consumer Groups filing include Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), Association of Late-Deafened Adults, Inc. (ALDA), National Association of the Deaf (NAD), Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), California Coalition of Agencies Serving the Deaf and Hard of Hearing (CCASDHH), Deaf-Hearing Communication Centre ("DHCC"), Hearing Loss Association of America (HLAA), Cerebral Palsy and Deaf Organization (CPADO), and American Association of the Deaf-Blind (AADB)); SBE Comments at 3.

⁷⁴ See NSBA September 9, 2014 *Ex Parte* Letter, at 2 (stating that the ability of EAS equipment to carry an EAN which exceeds the normal two-minute limitation of all other EAS codes can be examined in a test bed); see also Trilithic Comments at 1 ("While this would not test all of the unique aspects of an EAN, such as priority, immediate processing, and open-ended duration, this behavior can and should be verified in a lab environment. Downstream equipment that behaves differently for an EAN also should be tested in a lab."); James Gorman Comments at 1 (stating that EAN testing can be conducted by every manufacturer on a test bed).

⁷⁵ *EAS Nationwide Test Report*, at 11.

⁷⁶ See Federal Communications Commission Reminds EAS Participants about November 9, 2011 Nationwide EAS Test, DA 11-1788, *Public Notice*, 26 FCC Rcd 15109 (2011) (noting that electronic filing will allow EAS Participants to provide useful data to the Commission in a manner that is quicker and less burdensome than paper filing).

of test result data by EAS Participants.⁷⁷ Subsequently, at its March 20, 2014 meeting, the Communications Security, Reliability, and Interoperability Council (CSRIC) also recommended that the Commission develop a federal government database to contain EAS Participants' monitoring assignments.⁷⁸

25. In the *EAS Operational Issues NPRM*, we proposed an improved electronic filing system and related database, the ETRS, based on the system the Commission used for the first nationwide EAS test. Use of this new system would be mandatory for EAS Participants, and the system would offer improvements over the prior version of the system designed to further expedite filing and minimize burdens on EAS Participants.⁷⁹ As proposed, the ETRS would follow the structure of the system used in 2011, and be composed of three forms.⁸⁰ Form One would ask each EAS Participant for identifying and background information, including EAS designation, EAS monitoring assignments, facility location, equipment type, contact information, and other relevant data. Form Two would ask each EAS Participant whether it received the Nationwide EAS Test alert code and, if required to do so, whether the EAS Participant propagated the alert code downstream. Form Three would ask each EAS Participant to submit detailed information regarding its receipt and propagation, if applicable, of the alert code, including an explanation of any complications in receiving or propagating the code.

26. We also proposed certain improved processing procedures for the ETRS based on lessons learned from the first nationwide EAS test. In particular, we proposed that EAS Participants: (1) would have the capability to review filings prior to final submission and to retrieve previous filings to correct errors; (2) would not be required to input data into the ETRS that EAS Participants have previously provided to the Commission elsewhere; and (3) would receive a filing receipt upon successful completion of the required report.⁸¹ We further proposed to revise our rules to integrate the identifying information provided by Form One of the new ETRS into the State EAS Plans filed pursuant to Section 11.21 of the Commission's EAS rules, and to consolidate those State EAS Plans into an EAS Mapbook.⁸² Finally, we proposed that EAS Participants submit Form One, the self-identifying portion of the ETRS, within one year of the effective date of the reporting rules, and to update the information that EAS Participants are required to supply in Form One on a yearly basis, and as required by any updates or waivers to State EAS Plans.⁸³

⁷⁷ *EAS Nationwide Test Report*, at 19.

⁷⁸ See CSRIC IV, WORKING GROUP THREE, EMERGENCY ALERT SYSTEM, STATE EAS PLANS SUBCOMMITTEE, FINAL REPORT (2014), available at http://transition.fcc.gov/bureaus/pshs/advisory/csr4/CSRIC_IV_WG3_FINAL_03252014.pdf (last visited Nov. 11, 2014) ("The subcommittee concludes that State Emergency Communications Committees (SECC) need the resource of a federal government database to assure EAN dissemination"). The CSRIC is a federal advisory committee charged with providing recommendations to the FCC to ensure, among other things, the optimal security and reliability of communications systems, including telecommunications, media, and public safety systems, subject to the requirements of the Federal Advisory Committee Act (FACA). See 5 U.S.C.A. § 10.

⁷⁹ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8136, ¶ 25.

⁸⁰ See *id.* at 8137, ¶ 27.

⁸¹ See *id.* at 8137, ¶¶ 26-28.

⁸² 47 C.F.R. § 11.21 (describing the Mapbook as an aggregation of EAS State Plans, organizing all EAS Participants according to their state and local areas, and their monitoring assignments). EAS State Plans contain guidelines that must be followed by EAS Participants' personnel, emergency officials, and NWS personnel to activate the EAS.

⁸³ The information that EAS Participants would be required to input would not include any information pre-populated into ETRS from other databases, such as the Commission's broadcast license database. We note, however, that ETRS filing would not obviate the requirement that EAS Participants otherwise comply with Part 11, particularly the requirements in Section 11.35 that during an FCC inspection, EAS Participants demonstrate that monitoring and transmission functions are available and operational, and to produce any required logs with entries (continued....)

27. Commenters unanimously support the Commission's ETRS proposal because it eases the data-entry burden on EAS Participants and facilitates effective analysis of the EAS infrastructure.⁸⁴ We agree, and therefore adopt a revised version of the ETRS, as described below.⁸⁵ Although the ETRS we adopt today largely resembles the 2011 version, it also contains certain improvements supported by commenters. For example, in order to minimize EAS Participants' filing burden, the ETRS database will be pre-populated with the types of identifying information (*e.g.*, broadcaster call letters and geographic location of transmitters) that EAS providers have provided in the Universal Licensing System and related FCC databases.⁸⁶ We find that pre-populating the ETRS in this manner is technically feasible and will encourage timely filings by streamlining the process and reducing burdens on filers significantly. We thus require that the ETRS have this functionality.⁸⁷ Further, we agree that EAS Participants should be able to review their filings prior to final submission, to retrieve previous filings to correct errors for thirty days after submission, and to provide filers with a filing receipt verifying submission of a completed report.⁸⁸ We also agree that the integration of ETRS data into the EAS Mapbook will "ease the data-entry burden on EAS Participants and make the best use of the Commission's time and resources," and that the advent of ETRS gives the Commission the tool it needs to create the data tables necessary to complete it.⁸⁹ The EAS Mapbook will also allow the Commission to maintain a centralized database containing all EAS monitoring assignments and alert distribution pathways, enabling new analyses of alert distribution at the national, state, and local levels. Accordingly, we require that the ETRS have the capability to create maps that indicate the propagation of an EAN throughout the EAS architecture.⁹⁰ Finally, subsequent to any nationwide EAS test, we require EAS Participants to submit detailed information regarding their receipt and propagation, if applicable, of the alert code, including an explanation of any complications in receiving or propagating the code.⁹¹

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that note whether any EAS tests were not received, and the cause of any failure to receive required tests or activations. *See* 47 C.F.R. § 11.35(a).

⁸⁴ *See, e.g.*, Gary Timm Comments at 2 ("Considering that an electronic EAS test reporting system eases the entry of information by EAS participants and the FCC's task of analyzing the results, requiring EAS Participants to utilize an electronic reporting system is reasonable and prudent . . . In that the Commission feels that the electronic reporting system used for the 2011 Nationwide EAS Test worked well, it is logical to base a future reporting system on that model."); FEMA Reply Comments at 2; Verizon Comments at 1; AT&T Comments at 2; NSBA September 9, 2014 *Ex Parte* Letter, at 3.

⁸⁵ *See infra* ¶¶ 28-29; see also revisions to 47 C.F.R. §§ 11.21; 11.61(a)(3) in Appendix A.

⁸⁶ *See, e.g.*, NSBA September 9, 2014 *Ex Parte* Letter, at 3; SBE Comments at 4; NCTA Comments at 11; Gary Timm Comments at 5; *cf.* Gary Timm Comments at 4 (stating that it would not be feasible for the Commission to pull EAS Participant data from the Disaster Information Reporting System).

⁸⁷ We note that EAS Participants nevertheless must review and confirm the accuracy of any pre-populated information, and attest that such information is correct.

⁸⁸ *See* Verizon Comments at 2; *see also* NCTA Comments at 11; NAB Comments at 3; NSBA September 9, 2014 *Ex Parte* Letter, at 3. In order to maintain a history of information submitted, including any corrections to prior submissions, ETRS should retain date-stamped copies of all submitted reports.

⁸⁹ Gary Timm Comments at 2.

⁹⁰ Other elements of the 2011 ETRS remain unchanged. For example, we also note that test data received from EAS Participants, or any reports – including those in the EAS Mapbook – that contain individual test data, shall continue to be treated as presumptively confidential. However, as was done previously, the Commission will allow test data and reports containing individual test data to be shared on a confidential basis with other Federal agencies and state governmental emergency management agencies that have confidentiality protection at least equal to that provided by the Freedom of Information Act (FOIA). *See* 5 U.S.C. § 552 (2006), amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524 (stating the FOIA confidentiality standard, along with relevant exemptions).

⁹¹ EAS Participants may also use the ETRS to report other instances of complications or non-compliance with our rules.

28. In order to address commenters' concerns expressed in the record, we adopt the following additional requirements for the ETRS:

- The ETRS will require a filer to identify itself as a radio broadcaster, television broadcaster, cable system, wireless cable system, Direct Broadcast Satellite (DBS), Satellite Digital Audio Radio Service (SDARS), wireline video system, or "other," instead of the previous options (limited to "broadcaster" or "cable operator").⁹²
- The ETRS will reflect that the Physical System ID (PSID) is not necessarily equivalent to the geographic area in which an EAS Participant delivers emergency alerts.⁹³ In addition to a PSID field, the system will include a new field called "Geographic Zone" so that EAS Participants can provide more granular information, if appropriate. For example, when the applicable PSID includes multiple geographic areas that span across counties or states, one ETRS filing for a PSID containing multiple "Geographic Zones" will be accepted.
- The ETRS will permit EAS Participants to supply latitude and longitude information as separate fields, using the North American Datum of 1983 (NAD83).⁹⁴
- The ETRS will require filers to supply contact information related to the individual who completes the form.⁹⁵
- The ETRS will allow for batch filing to facilitate more efficient reporting, consistent with the record on this issue.⁹⁶
- EAS Participants will be required to attest to the truthfulness of their filings in the ETRS, and are reminded that they are responsible for the accuracy of the information they file with the Commission, including any pre-populated data.⁹⁷

29. We find that the ETRS will minimize filing burdens on EAS Participants. In comparison to equivalent paper filings, the costs associated with requiring EAS Participants to file test result data in ETRS will be minimal, and the database improvements we adopt today are aimed at streamlining the filing process and reducing these costs even further.⁹⁸ Most of the information that we propose EAS Participants submit to the ETRS has already been populated in other FCC databases, and thus compliance

⁹² See 47 C.F.R. §11.2(d); see also AT&T Comments at 3 (requesting that a mechanism be provided for filers to identify themselves as IPTV providers).

⁹³ The electronic filing system used in conjunction with the first nationwide EAS test made this assumption, but this is not the case in all cable networks. See Verizon Comments at 2.

⁹⁴ See SBE Comments at 4 ("SBE also recommends that an additional field be added to indicate whether the data being entered in these fields is using NAD 27 or some other datum. At the very least, the data in these fields needs to be made uniform."). We use NAD83 in many of the Commission's other reporting systems. See, e.g., *Universal Licensing System – North American Datum of 1983 Coordinates*, FCC.GOV, <http://wireless.fcc.gov/uls/index.htm?job=nadcon> (last visited Nov. 14, 2014).

⁹⁵ See SBE Comments at 4 (requesting this change).

⁹⁶ See, e.g., Monroe Reply Comments at 4; NAB Reply Comments at 3; NSBA September 9, 2014 *Ex Parte* Letter, at 3; Verizon Comments at 2; NCTA Comments at 11. This improvement to the ETRS will ease the filing burden on many large EAS Participants by allowing them to complete the required filings of their many facilities all at once, rather than submitting separate filings for each facility.

⁹⁷ We remind EAS Participants that failure to ensure the accuracy of information filed with the Commission could result in enforcement action.

⁹⁸ See Public Information Collections Approved by the Office of Management and Budget (OMB), 76 FR 68756-01 (November 7, 2011).

with the ETRS merely requires EAS Participants to review and update the pre-populated data fields to ensure the information is accurate and up to date. For the few data fields that EAS Participants must complete, we conclude that compliance would entail a one-time cost of approximately \$125.00 per EAS Participant. This \$125.00 figure for the cost of complying with ETRS filing requirements is based on the cost of filing in the comparable system used for the first nationwide EAS test,⁹⁹ a cost which has already been reviewed and approved by the Office of Management and Budget in the Paperwork Reduction Act analysis.¹⁰⁰ We also note that no commenter objects to this figure. Accordingly, we conclude that the aggregate cost for all EAS Participants to file test result data with the Commission is approximately \$3.4 million.¹⁰¹

30. We decline to make several changes to the ETRS proposal that were requested in the record. We do not agree that EAS Participants should only be required to report test results once.¹⁰² The purpose of “day of test” reporting is to provide an instant “yes/no” answer to whether the test worked for a particular EAS Participant. In the aggregate, such reporting provides the Commission and its Federal partners with near to near real-time situational awareness of all or any portion of the system. We believe that the burden of supplying such “yes/no” information is small compared to the benefit of knowing, in close to real time, any specific geographic areas where a national test has not been successful. For example, such instant reporting would allow the Commission and FEMA to map a particular area where a test may have failed and immediately identify any point of failure within the EAS alert distribution hierarchy that may have caused downstream failures.¹⁰³ We also do not agree that a streamlined waiver process is necessary for those few EAS Participants who do not have Internet access and may need to file their test results on paper.¹⁰⁴ While the Commission recognizes that some areas of the nation may lack widespread Internet access, we believe that it is unnecessary to develop a streamlined waiver process for this reason alone.¹⁰⁵ We believe the existing waiver process under Section 1.3 of the Commission’s rules is sufficient and will review such requests accordingly.¹⁰⁶

31. Further, we will not, as Consumer Groups suggest, allow the ETRS to be used as a

⁹⁹ *See id.*. We note that the steps we have taken today to lessen the time burden of filing EAS test result data will likely reduce the cost burden as well.

¹⁰⁰ *Id.*

¹⁰¹ *See* FCC, *Broadcast Station Totals as of December 31, 2013*, http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0108/DOC-325039A1.pdf (last visited Oct. 6, 2014) (stating that there were 20,332 radio broadcasters in the United States as of the end of 2013, not including FM, VHF and UHF translators); *see also* *The Number of Cable Headends in the United States*, STATISTA.COM (2014), <http://www.statista.com/statistics/186996/number-of-cable-headends-in-the-united-states-since-1998/> (last visited Oct. 6, 2014) (stating that there were 7,136 cable headends in the United States in 2011); *EAS Operational Issues EAS Operational Issues NPRM*, 79 FR 41159, 41159 (stating that the cost of compliance with this filing requirement would be \$3,423,611.52). These figures were not opposed by any commenters.

¹⁰² *See* NAB Comments at 3 (requesting this change); NSBA September 9, 2014 *Ex Parte* Letter, at 3 (requesting this change).

¹⁰³ Further, EAS Participants must submit information regarding any complications in receiving or propagating the alert code, which will help us monitor compliance and implementation of our rules and identify whether any additional rules are necessary to ensure the efficient and accurate propagation of EAS alerts. *See infra* ¶ 28.

¹⁰⁴ *See* NSBA September 9, 2014 *Ex Parte* Letter, at 3-4.

¹⁰⁵ NSBA September 9, 2014 *Ex Parte* Letter, at 4.

¹⁰⁶ *See* 47 C.F.R. § 1.3. In support of their request for waiver relief, we encourage EAS Participants to access the National Broadband Map and to use this resource to support their assertion that broadband is not available in the area where their facility is located. *See* NATIONAL BROADBAND MAP, <http://www.broadbandmap.gov/> (last visited Oct. 9, 2014).

mechanism for consumer feedback about EAS accessibility and other test outcomes.¹⁰⁷ The ETRS is a filing system for EAS Participants to facilitate increased understanding and improved analysis of the EAS alert distribution hierarchy, as well as for EAS Participants to identify or report any complications with the receipt or propagation of emergency alerts. As we discuss in further detail below, however, because of the importance of making EAS alerts more accessible, we will monitor all EAS accessibility complaints filed with the Commission through the normal channels.¹⁰⁸ We also direct the Bureau, in coordination with the Consumer and Governmental Affairs Bureau (CGB) and other relevant Commission Bureaus and Offices, to establish a mechanism to receive public feedback on the test.¹⁰⁹

32. We also do not adopt the suggestion that, because the ETRS database will be used to construct the EAS Mapbook, State Emergency Coordination Committees (SECCs) must be granted access to the ETRS beyond that envisioned by the presumptively confidential nature of ETRS filings.¹¹⁰ It is not feasible to provide SECCs with such access without compromising the confidentiality of EAS Participant's filings, or risking that the SECC might unintentionally delete or corrupt a filing. Rather, we will, upon request from an SECC, provide the SECC with a report of their state's aggregated data.¹¹¹ SECCs can use these reports to remedy monitoring anomalies evident from EAS Participant filings in their state.¹¹²

33. Finally, we find that the implementation of the ETRS will be best accomplished by the Bureau. Accordingly, we direct the Bureau to implement the ETRS pursuant to the principles and requirements we discuss above.¹¹³ We direct the Bureau to release a subsequent public notice, providing additional information regarding the implementation of the ETRS closer to the launch date of the ETRS, and as subsequently required for future EAS tests and State EAS Plan filings.

D. Visual Crawl and Audio Accessibility

34. The EAS provides a critical means of delivering life- and property-saving information to the public. The Commission's rules ensure that this information is delivered to the public in an accessible manner, primarily by requiring that EAS Participants deliver EAS alerts in both audio and visual

¹⁰⁷ See Consumer Groups Comments at 7 (“The Consumer Groups propose that the ETRS system be expanded to allow individuals to share concerns and reports regarding accessibility issues they may have during future tests of the EAS system or any of its components.”).

¹⁰⁸ See *infra* ¶ 44.

¹⁰⁹ We direct the Bureau to provide additional information regarding the process for submitting feedback in a future Public Notice.

¹¹⁰ Gary Timm Comments at 8.

¹¹¹ *Id.*

¹¹² See *id.*

¹¹³ See 47 C.F.R. §§ 0.191, 0.392.

formats.¹¹⁴ The visual display of an EAS alert is generally presented as a page of fixed text, but it can also be presented as a video crawl that scrolls along the top of the screen.¹¹⁵

35. The EAS visual message that was transmitted during the first nationwide EAS test was inaccessible to some consumers.¹¹⁶ For example, stakeholders noted that the visual message in some of the video crawls scrolled across the screen too quickly, or the font was otherwise difficult to read.¹¹⁷ Others stated that both the audio and visual presentation of the national EAS test message were inconsistent.¹¹⁸

36. In the *EAS Operational Issues NPRM*, we proposed to amend the EAS rules to require that the EAS video crawl meet minimum accessibility requirements for crawl speed, completeness and placement.¹¹⁹ Our proposed accessibility rules for the EAS video crawls were based upon our quality requirements for closed captions.¹²⁰ Specifically, we proposed that the video crawl: (1) be displayed on the screen at a speed that can be read by viewers; (2) be displayed continuously throughout the duration of any EAS activation; (3) not block other important visual content on the screen; (4) utilize a text font that is sized appropriately for legibility; (5) prevent overlap of lines of text with one another; and (6) position

¹¹⁴ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8138-39, ¶ 31; see also 47 C.F.R. § 11.51(d) (stating that broadcast stations must transmit a visual message containing the Originator, Event, Location and the valid time period of an EAS message; and, effective June 30, 2012, that visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with § 3.6 of the *ECIG Implementation Guide*); 47 C.F.R. § 11.51(c) (stating that analog and digital radio and television stations must transmit EAS messages in the main audio channel; DAB stations on all audio streams; and DTV broadcast stations on all program streams); 47 C.F.R. § 11.61(a)(1) (stating that EAS Participants must conduct RMTs that includes script content developed by SECCs in cooperation with affected EAS Participants).

¹¹⁵ See, e.g., 47 C.F.R. § 11.51(d); see also NCTA Comments at 8 (stating that most EAS visual messages take the form of fixed text).

¹¹⁶ See, *EAS Nationwide Test Report* at 14-15.

¹¹⁷ See Letter from Helena Mitchell, Ph.D., Executive Director, Center for Advanced Communications Policy, and Principal Investigator, Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC), Georgia Institute of Technology, to Marlene H. Dortch, Secretary, FCC (Mar. 22, 2012), and accompanying “Report on the National EAS Test On-line Survey and Focus Group Findings” at 19, 23-24 (Mar. 20, 2012) (*Wireless RERC 2012 EAS Report*). Survey respondents and focus group participants also noted the lack of audible and visual attention signals, and use of unfamiliar acronyms such as “EAS.” *Id.* at 17, 23. Survey respondents who listened to the EAS test by radio reported difficulty understanding the audio message, when provided, because the voices used in the message were either themselves unclear or obscured by background noise. *Id.* at 20-21.

¹¹⁸ See *Wireless RERC 2012 EAS Report* at 19. The Wireless RERC also reported that 35.8% of 229 individuals with disabilities who responded to a survey conducted prior to the nationwide EAS test indicated that they had problems understanding EAS messages; 39.8% did not hear the alert attention signal and missed part of the on-screen information; 18.3% heard the attention signal but there was no audio describing the emergency; and 41.9% had other problems, including reports that the EAS visual message contained no captions, blocked text, text that was too small, a video crawl that was too fast, audio that was unclear, and the absence of necessary additional information. See *id.* at 9-10. When questioned about EAS alerts prior to the nationwide EAS test, focus group participants discussed the “need to have both audio and visual formats for the alert message” and the lack of access by individuals who are blind or have low vision as well as individuals who are deaf and hard of hearing. *Id.* at 25. Finally, as noted above, during the first EAS test, certain video distribution systems were unable to convey that the alert was only a test, *i.e.*, on these systems, it appeared that this was actually an EAS alert because information alerting viewers that this was only a test could not be displayed. See *supra* ¶ 11.

¹¹⁹ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8142, ¶ 37.

¹²⁰ See Closed Captioning of Video Programming, Telecommunications for the Deaf and Hard of Hearing, Inc. Petition for Rulemaking, CG Docket No. 05-231, *Report and Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking*, 29 FCC Rcd 2221 (2014) (*Closed Captioning Quality Report and Order*).

the video crawl adequately so it does not run off the edge of the video screen.¹²¹ We also sought comment on methods of ensuring that EAS audio and EAS visual elements contained essentially the same information.¹²²

37. Commenters agree that the EAS visual message, at a minimum, must be accessible if the EAS is to fulfill its purpose of informing all Americans, including Americans with disabilities, of imminent dangers to life and property.¹²³ Commenters suggest, however, that given the complexity of the EAS alert distribution infrastructure,¹²⁴ further discussion and collaboration is necessary and that the Commission should refrain from adopting accessibility requirements at this time.¹²⁵ We observe that the Commission tasked the CSRIC with examining the operational issues – including recommended methods to improve alert accessibility – identified in the *EAS Operational Issues Public Notice* that arose out of the first nationwide EAS test, but the CSRIC did not make specific recommendations on accessibility standards.¹²⁶

38. The Commission is committed to public/private partnership, and has consistently sought to collaborate with stakeholders and to provide EAS Participants with the opportunity to suggest (and take action on) solutions to EAS technical issues.¹²⁷ However, given the life-saving importance of the EAS, we cannot afford to delay adoption of minimum rules in favor of further collaboration alone.¹²⁸ Viewers are entitled to expect that the EAS visual message be legible to the general public, including people with disabilities. Accordingly, we agree with Consumer Groups that we must adopt a set of baseline accessibility requirements to ensure that EAS messages are accessible to all Americans.¹²⁹ We will assess compliance with these minimum requirements through careful monitoring of the informal complaint and consumer inquiry processes, followed by enforcement action to the extent necessary.

39. *Display Legibility.* First, in addition to requiring that the EAS visual message, whether video crawl or block text, be displayed in a manner that is consistent with our current rules (*i.e.*, “at the top of the television screen or where it will not interfere with other visual messages”),¹³⁰ we amend Sections 11.51(d), (g)(3), (h)(3) and (j)(2) of the Commission’s EAS rules to require that the visual

¹²¹ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8142, ¶ 38.

¹²² See *id.* at 8142-43, ¶ 39.

¹²³ See NSBA September 9, 2014 *Ex Parte* Letter, at 4; see also DirecTV and DISH Reply Comments at 1 (“EAS alerts must be accessible to the blind and visually impaired and . . . such alerts must be delivered ‘in a format that is readily understood by the public’”); Consumer Groups Reply Comments at 3.

¹²⁴ See, e.g., Trilithic Comments at 2; Monroe Reply Comments at 1.

¹²⁵ See, e.g., Monroe Reply Comments at 1; NAB Comments at 11-13; but see Consumer Groups Reply Comments at 8 (stating that “the Consumer Groups believe interim rules should be implemented to ensure some form of accessibility is available in the short-term with eventual refining of those standards through the working group”).

¹²⁶ See CSRIC IV, WORKING GROUP THREE, EMERGENCY ALERT SYSTEM, EMERGENCY ALERT SYSTEM NATIONAL TESTING AND OPERATIONAL ISSUES TASK GROUP, FINAL REPORT, 5 (2014), available at http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG-3_Final-Report_061814.pdf (last visited Oct. 16, 2014).

¹²⁷ For example, in the *EAS Operational Issues NPRM*, we invited parties representing industry and consumers, including those with disabilities, to work together to develop alternative recommendations and to submit them promptly in the record for the Commission’s consideration in this proceeding. *EAS Operational Issues NPRM*, 29 FCC Rcd at 8141, ¶ 45. To this date, no specific recommendations have been submitted.

¹²⁸ We note that while we adopt a minimum set of accessibility standards, these standards do not prevent continued collaboration in the future. To this end, we discuss additional opportunities for collaboration below. See *infra* ¶ 50.

¹²⁹ See Consumer Groups Reply Comments at 8.

¹³⁰ See, e.g., 47 C.F.R. § 11.51(d).

message also be displayed in a size, color, contrast, location, and speed that is readily readable and understandable.¹³¹

40. While parties do not agree on a common definition of ideal crawl speed or font size for the EAS video crawl,¹³² there is agreement in the record that alert legibility is essential to ensure the effectiveness of the alerts.¹³³ For the purposes of our rules, we do not mandate a specific crawl speed or font size, nor do we believe such specificity is necessary at this time. Instead, we afford EAS Participants the flexibility to implement this requirement in accordance with their particular best practices and equipment capabilities. We expect EAS Participants to determine and implement effective practices that will ensure alert legibility. While we acknowledge commenters' statements that not all EAS devices are capable of crawling text,¹³⁴ EAS Participants that use devices that display block text must nonetheless generate such text in a manner that remains on the screen for a sufficient length of time to be read.¹³⁵

41. *Completeness.* We also amend Sections 11.51(d), (g)(3), (h)(3) and (j)(2) of the Commission's EAS rules to require that the EAS visual message be displayed in its entirety at least once during any EAS alert message.¹³⁶ It would be confusing and potentially dangerous for anyone to be deprived of any portion of the EAS visual message while that alert is being delivered; EAS equipment must be capable of delivering such a basic service. On the other hand, we agree with commenters that the completeness requirement, as originally proposed in the *EAS Operational Issues NPRM*, should not be adopted.¹³⁷ In the *NPRM*, we proposed to revise Section 11.51(d) of the Commission's EAS rules to require that the EAS video crawl be displayed continuously throughout the duration of any EAS activation.¹³⁸ We note, however, that EAS equipment is not always capable of controlling the duration of the video crawl,¹³⁹ and further, even if it were, non-Presidential alerts are designed to last no longer than

¹³¹ See revision to 47 C.F.R. §§ 11.51(d),(g)(3),(h)(3) and (j)(2) in Appendix A.

¹³² See Consumer Groups Comments at 5 (suggesting that the DCMP Standard crawl speed of one hundred twenty words per minute (WPM) be adopted); see also Tad Ushijima Comments at 1 (stating that the average adult reads at two hundred fifty to three hundred WPM); Trilithic Comments at 2 (stating that crawl speed may be defined in terms of characters per second, pixels per frame, or a more subjective gradation like "slow" or "fast"); Wireless RERC Comments at 4, 6 (suggesting that the ideal crawl speed and font size should be developed through iterative research with contributions from the accessibility community).

¹³³ See, e.g., Trilithic Comments at 2 (stating that the Commission should require the video crawl to be displayed at a speed that can be read by viewers); Tad Ushijima Comments at 1 ("I believe a standard that defines 'captions be displayed on the screen at a speed that can be read by viewers,' should be established."); NSBA September 9, 2014 *Ex Parte* Letter, at 4; Verizon Comments at 3.

¹³⁴ See NAB Reply Comments at 5; see also Trilithic Comments at 2; NCTA Comments at 8.

¹³⁵ See, e.g., *Closed Captioning Quality Report and Order*, 29 FCC Rcd at 2243, n.120. ("While we recognize that everyone reads at a different speed, captions should not blink on and off at a speed that is too quickly to read or otherwise be paced at a speed that is difficult to read.")

¹³⁶ See revision to 47 C.F.R. §§ 11.51(d),(g)(3),(h)(3) and (j)(2) in Appendix A.

¹³⁷ See Letter from Michael Maginity, EAS Engineering Manager for Trilithic, Inc., to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296, at 2 (filed September 30, 2014) (Trilithic September 30, 2014 *Ex Parte* Letter) ("This approach could result in a requirement to replace large amounts of equipment in systems that rely on audio and text files that are placed on a carousel for independent presentation by a set-top box."); see also NAB Reply Comments at 5 ("There are also obstacles to ensuring the completeness of [video] crawls, such as the inability of some equipment to control the duration of the [visual message]"); Verizon Comments at 3; James Gorman Comments at 1; Consumer Groups Comment at 8; Gary Timm Comments at 9.

¹³⁸ *EAS Operational Issues NPRM*, 29 FCC Rcd at 8142, ¶ 36.

¹³⁹ See Trilithic Comments at 2 (stating that many equipment providers do not provide a method to control the duration of the video crawl).

two minutes. It would be inconsistent with the design of the system and a significant burden on EAS Participants to require that the video crawl last for the duration of the event that prompted the EAS alert, (which could potentially last for hours).¹⁴⁰ Nonetheless, because EAS equipment is already capable of ensuring that an EAS visual message is displayed in its entirety at least once during any EAS message,¹⁴¹ and because doing so will avoid public confusion and dangers to life and property, we amend our rules accordingly to require that any EAS visual message be displayed in full at least one during the pendency of an EAS alert message. In addition, EAS Participants should display any EAS visual message in its entirety more than once, if possible, in order to ensure that viewers are able to re-read and capture the information conveyed by the visual message.

42. *Placement.* As we note above, we reiterate our requirement that the EAS visual message shall “be displayed at the top of the television screen or where it will not interfere with other video messages,”¹⁴² and we amend Section 11.51(d), (g)(3), (h)(3) and (j)(2) to require that the visual message not (1) contain overlapping lines of EAS text or (2) extend beyond the viewable display except for crawls that intentionally scroll on and off of the screen.¹⁴³ We are persuaded by the weight of the record that the placement requirement we proposed in the *EAS Operational Issues NPRM*, which stated that the EAS visual message shall not “block other important visual content on the screen,” should not be adopted.¹⁴⁴ Such a requirement would be inappropriate in light of commenters’ assertions that, unlike closed caption producers, EAS Participants and equipment manufacturers cannot know where to place a video crawl on a screen in a way that will not interfere with non-EAS emergency information or regularly scheduled programming.¹⁴⁵ On the other hand, Trilithic asserts that EAS Participants can render alerts that do not contain overlapping lines of EAS text, and do not run off the edge of the video screen (except for crawls that intentionally scroll on and off of the screen).¹⁴⁶ According to Trilithic, these placement requirements are “reasonable expectations and would help ensure that viewers are able to read and understand the text.”¹⁴⁷ We adopt these placement requirements accordingly.

43. *Enforcement Standard.* We acknowledge that the creation and delivery of an accessible visual message is not solely within the control of any one entity, and often requires coordination and

¹⁴⁰ See Verizon Comments at 3 (stating that the Commission should amend proposed Section 11.51(d)(3) which currently states that the video crawl must be displayed “[c]ontinuously throughout the duration of any EAS activation” to read “continuously throughout the duration of any EAS message”); see also Gary Timm Comments at 9 (concurring that the Commission should amend proposed Section 11.51(d)(3) to read “continuously throughout the duration of any EAS message” because it would be imprudent to require an EAS crawl to endure, for example, throughout the six-hour duration of a Tornado Watch). Note that an EAS activation is contemporaneous with the event that prompted the EAS alert.

¹⁴¹ See Monroe October 3, 2014 *Ex Parte* Letter, at 3 (“In the case where the audio message exceeds the amount of time to display the [visual] message, our system will continue to cycle the [video crawl] on screen until the audio is concluded. In the case where the audio message is shorter than the time required to cycle the [video crawl], the [video crawl] will continue to display until completed.”); see also Sage September 30, 2014 *Ex Parte* Letter, at 1 (“We also suggest adding ‘[t]he complete [visual] message must be displayed at least once, even if the audio portion of the message is shorter than the time needed to display the [video crawl].’”).

¹⁴² See 47 C.F.R. § 11.51(d); see also *supra* ¶ 39.

¹⁴³ See revision to 47 C.F.R. §§ 11.51(d),(g)(3),(h)(3) and (j)(2) in Appendix A.

¹⁴⁴ *EAS Operational Issues NPRM*, 29 FCC Rcd at 8142, ¶ 38.

¹⁴⁵ See Trilithic Comments at 2; see also NAB Reply Comments at 5; but see Verizon Comments at 3-4 (encouraging the Commission to adopt placement requirements); Consumer Groups Comments at 9.

¹⁴⁶ See Trilithic Comments at 2.

¹⁴⁷ *Id.*

execution among many connected parties and equipment in the EAS alert distribution chain.¹⁴⁸ While we agree with commenters' assertions that EAS equipment is responsible for deriving the visual message from the EAS header codes or CAP text that an alert originator places within an alert,¹⁴⁹ it remains the responsibility of the EAS Participant to purchase Part 11-compliant equipment and to ensure that its equipment operates in a manner compliant with our Part 11 rules.¹⁵⁰

44. The minimum accessibility rules we adopt today establish clear guidelines for the acceptable appearance of an EAS visual message, in order to ensure that EAS Participants offer accessible EAS video crawls and block text. We direct the Bureau to monitor the informal complaint process for complaints pertaining to EAS visual messages and, where appropriate, bring any potential noncompliance to the attention of the Enforcement Bureau for its review. We also note that, subsequent to a nationwide EAS test, EAS Participants must provide information in the ETRS regarding any complications in receiving or propagating the alert test. Such complications would include any failure to comply with the minimum accessibility requirements we adopt today.

45. Finally, we disagree with those commenters who argue that our adaptation of the Commission's minimum accessibility rules in the *Closed Captioning Quality Report and Order* to fit EAS visual messages is inappropriate because, unlike captions, the production of EAS visual messages is not within the control of the EAS Participants.¹⁵¹ We recognize that EAS visual messages are produced differently from closed captions, that the presentation of such a visual message can be affected by equipment downstream of the EAS Participant, and that there is no real time opportunity for EAS Participants to edit the text.¹⁵² At the same time, however, the rules we adopt today are technology neutral and do not necessitate that EAS visual messages be produced similarly to closed captions. The EAS accessibility rules we adopt today and our closed captioning requirements only share the foundational requirement that on-screen text be legible, complete, and appropriately placed. Further, we note that several commenters agree that the closed captioning rules can inform the formatting of the EAS visual message.¹⁵³ In light of the importance of EAS visual messages, we find that it is reasonable to adopt rules that ensure that EAS video crawls and block text are at least as legible, complete, and appropriately placed as are closed captions.

46. We expect that the minimal accessibility rules we adopt today should have little impact on the operations of EAS equipment manufacturers whose equipment already produces a legible, complete, and appropriately placed EAS visual message, and on EAS Participants who deploy certified EAS equipment at their facilities.¹⁵⁴ Accordingly, we do not anticipate that our revised rules will impose significant costs and burdens upon the majority of EAS Participants. As Trilithic notes, "[m]any of the

¹⁴⁸ See *id.*

¹⁴⁹ See NAB Comments at 11 ("The EAS [visual message] is often automatically generated by the encoder/decoder device based on data contained in the EAS message."); see also NCTA Comments at 8-9; DirecTV and DISH Reply Comments at 2-3.

¹⁵⁰ See 47 C.F.R. § 11.34(a).

¹⁵¹ See NAB Comments at 10-13; see also Wireless RERC Comments at 7 ("Without testing, the Wireless RERC is not convinced that the FCC's closed captioning rules would be directly applicable to EAS crawls.").

¹⁵² See NAB Comments at 10, 12-13.

¹⁵³ See Verizon Comments at 3 ("the Commission's recently adopted quality standards and best practices for closed captioning of television programming provide a useful model for display of the EAS [visual] message."); see also Consumer Groups Reply Comments at 6 ("We believe that [broadcasters' lack of control over the content of their messages] is irrelevant to the question of whether or not the closed captioning rules could be a good model for EAS. . . . They could simply be applied to . . . whoever [*sic*] is in control.").

¹⁵⁴ See NCTA Comments at 8 (stating that "in the vast majority of cases, EAS equipment generates a high-quality video crawl that is accessible to most, if not all viewers").

proposed requirements for . . . [visual message] accessibility require minimal changes and cost.”¹⁵⁵ Further, we are not dictating the precise formatting of the EAS visual message, but rather, we are adopting rules that provide EAS Participants and equipment manufacturers with flexibility to meet our minimum requirements in the most cost-effective manner for their systems.

47. *Audiovisual Synchronicity.* We decline to adopt rules requiring audiovisual synchronicity at this time. We agree with commenters that alert originators have primary control over audiovisual synchronicity because they are the only party in a position to initiate a message that contains identical audio and text elements.¹⁵⁶ We also agree that downstream equipment in control of the audio presentation “is not always the same equipment used to control the video presentation” and further study would be required to determine how to coordinate these disparate elements of the alert distribution hierarchy.¹⁵⁷ We further agree with Trilithic that message originators should be “free to include as much important information in both mediums as can be made to fit, which may not always result in identical content.”¹⁵⁸ As commenters suggest, we expect that EAS Participants and equipment manufacturers will work together to develop methods to improve audiovisual synchronicity, including the increased use of CAP, to the extent that it does not interfere with alert quality.¹⁵⁹ Accordingly, we encourage EAS Participants to develop a greater capacity to generate both the audio and the visual elements of alerts in a manner that provides viewers with equal information within the same or similar timeframes. We will revisit the need for specific rules addressing this matter in the future if it is brought to our attention that problems with audiovisual synchronicity are impeding access to EAS alerts.¹⁶⁰

48. We note that FEMA has already addressed and corrected the primary audio quality problems experienced during the first nationwide EAS test, *i.e.*, a technical malfunction that occurred at the National Primary level that affected the underlying quality of EAS audio nationwide.¹⁶¹ However, as we stated in the *EAS Operational Issues NPRM*,¹⁶² we are concerned that the audio and visual elements should convey the same message. Accordingly, consistent with the overall accessibility rules we adopt today, including the requirements for the visual portion of an EAS alert, we require that the audio portion of any EAS alert must play in full at least once during any EAS message.¹⁶³ Furthermore, we expect the audio portion of an EAS message to be delivered in a manner and cadence that is sufficient for the consumer who does not have a hearing loss to readily comprehend it. We will continue to monitor future EAS activations and tests to determine whether we need to adopt any additional rules to ensure that the audio portion of an EAS message is accessible.

49. *Text-to-Speech.* The Commission currently allows text-to-speech (TTS) to be used as a

¹⁵⁵ Trilithic Comments at 3.

¹⁵⁶ See Monroe Comments at 4 (“For conventional broadcast EAS, the alert originator maintains control over the audio content of the alert message. For CAP-based EAS, where audio file resources are included, the alert originator similarly controls the audio content of the message. As such, the ability to synchronize the audio and textual content of the message will remain partly in the alert originators’ hands.”); see also NCTA Comments at 9-10.

¹⁵⁷ See Trilithic Comments at 2; see also Monroe Comments at 4.

¹⁵⁸ Trilithic Comments at 2; see also Monroe Comments at 4 (“CAP-based EAS messages can contain expanded textual content, better enabling the synchronization of the visual and audio messages.”).

¹⁵⁹ See, e.g., Monroe Comments at 5; NCTA Comments at 10.

¹⁶⁰ In addition, as noted below, we consider this issue as an appropriate one for discussion at an upcoming workshop to explore EAS accessibility. See *infra* ¶ 50.

¹⁶¹ See *EAS Nationwide Test Report* at 14.

¹⁶² *EAS Operational Issues NPRM* at 8142, ¶ 39.

¹⁶³ See revision to 47 C.F.R. § 11.51 in Appendix A.

method of providing audio for EAS alerts.¹⁶⁴ We agree with commenters that while TTS is an appropriate technology for rendering alert audio in some cases,¹⁶⁵ and may support audiovisual parity when combined with CAP text,¹⁶⁶ we do not mandate its use at this time. The technology is maturing,¹⁶⁷ but mandating its use may require extensive and costly changes to EAS equipment for small EAS Participants.

Nonetheless, given the critical and urgent nature of emergency information, as recommended by Wireless RERC, we encourage its use to construct EAS audio from the EAS header codes, especially when no separate audio file is provided by the alert originator, in order to provide access to the emergency information by individuals who are blind or visually impaired.¹⁶⁸ We will continue to monitor the feasibility of adopting TTS requirements as the technology continues to evolve. In particular, as part of the workshop we direct the Bureau to convene below, stakeholders should examine, among other issues, the state of TTS technology, including ongoing research and development and readiness for reliable, cost-effective implementation as part of EAS.

50. *Workshop to Promote Accessibility and Wider Use of EAS.* In addition to the accessibility rules we adopt today, we direct the Bureau to continue collaborative efforts to ensure that the EAS is accessible and widely utilized. Specifically, we direct the Bureau to collaborate with FEMA and other relevant EAS stakeholders by hosting a workshop within three months of the adoption date of this order. The object of this workshop will be to ensure that EAS remains a reliable and effective resource for all Americans by addressing and making recommendations regarding two key issues: increasing the flexibility of the EAS to expand its use by emergency managers at the state and local levels, and the improvement of alert accessibility. The workshop should discuss methods to empower and encourage state and local emergency managers to utilize the EAS and Wireless Emergency Alert (WEA) system more widely for localized alerts and exercises. The workshop also should build upon cumulative efforts to improve the accessibility of EAS visual messages by examining, *inter alia*, the technical feasibility of improving the synchronicity of EAS audio with the EAS visual crawl, as well as the readiness of TTS technology for increased usage in national and local alerting.¹⁶⁹ The Commission may refer additional

¹⁶⁴ See *Fifth Report and Order, Order on Reconsideration*, 27 FCC Rcd at 4432, ¶ 8 (2012). See also *Accessible Emergency Information, and Apparatus Requirements for Emergency Information and Video Description: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010; Video Description: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010, Report and Order and Further Notice of Proposed Rulemaking*, 28 FCC Rcd 4871, 4883-84, ¶¶ 15-16 (2013) (permitting, but not requiring, the use of TTS to provide an aural rendition of emergency information and providing qualitative standards when TTS is used to ensure that the information is intelligible and uses correct pronunciation of relevant information, including the names noted in the visual information).

¹⁶⁵ See Trilithic Comments at 3.

¹⁶⁶ See Monroe Comments at 5 (“The visual display of extended CAP information, accompanied by TTS translation of that same information, would synchronize the content of both the audio and visual portions of the message.”).

¹⁶⁷ See Trilithic Comments at 3 (“TTS is not uniform between EAS Encoders, is generally harder to understand than a human voice, and often has problems pronouncing proper nouns such as locations and names.”); *but see* Wireless RERC Comments at 8 (“Some of the TTS issues that have occurred in the past may reside in the authoring of the alert content and not the technical capability of TTS. For example, the use of acronyms and abbreviations in the text version of the message may not be read intelligibly by some TTS software.”).

¹⁶⁸ See Wireless RERC Comments at 7 (“We recommend that the Commission encourage the use of text-to-speech (TTS) software when EAS participants transmit the EAS crawl from the EAS digital signal for an alert.”). See also Trilithic Comments at 3 (“TTS is a useful backup mechanism for messages that are missing audio, and should continue being used for this purpose.”).

¹⁶⁹ See FCC, *Forum to Promote Advances in Accessible Wireless Emergency Communications Technology* (November 7, 2014, 9:00 a.m.), <http://www.fcc.gov/document/fcc-forum-promote-accessible-wireless-emergency-communications> (last visited Oct. 17, 2014) (discussing the latest advances in wireless emergency communications, including text-to-911); see also FCC, *Workshop for Older Americans: Stay Safe, Healthy and Connected*, Presentation by Karen Coates and Everett Sedgwick, Office of Disability Integration and Coordination, FEMA, and (continued....)

issues arising out of the workshop to the CSRIC and other FCC federal advisory committees, as appropriate.

E. Public Policy Analysis

51. In this Section, we conclude that the benefits of the rules we adopt today exceed their associated implementation costs. In the *EAS Operational Issues NPRM*, we sought comment on the specific costs and benefits associated with the implementation of our proposed rules establishing essential operational improvements to the EAS.¹⁷⁰ Although the proposed rules covered a wide range of issues associated with the EAS, each with its own cost of development and deployment, we expected that their implementation would present a one-time, maximum aggregate cost of \$13.6 million, and that all proposed rules shared the common expected benefit of saving human lives, reducing injuries, mitigating property damage, and minimizing the disruption of our national economy on an ongoing basis.¹⁷¹

52. No commenter opposes our analysis of the costs or benefits associated with implementation of our proposed rules. In large part, we adopt the rules proposed in the *EAS Operational Issues NPRM*. The rules we adopt today present EAS Participants with minimum implementation costs and a significant degree of implementation flexibility. To the extent our final rules differ from the proposed rules, however, those differences should actually result in the same or lower costs for EAS Participants. In particular, because we adopt NPT rules that do not require the use of the EAN (or an NPT that emulates the use of the EAN),¹⁷² the maximum costs of implementing our requirements will be \$6.6 million less than originally proposed.¹⁷³ Accordingly, we find that the upper bound of the cost of compliance with the rules we adopt today is \$7 million, rather than \$13.6 million as initially proposed.¹⁷⁴

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Susan Johnson-Sellars, FEMA IPAWS, *Communications Access During Disaster and Other Emergencies/Alerts and Warnings* (May 22, 2014, 10:00 a.m.), available at <http://www.fcc.gov/events/workshop-older-americans-stay-safe-healthy-and-connected> (last visited Oct. 17, 2014) (addressing collaboration between FEMA and AARP to ensure the safety of older adults during an emergency, and detailing FEMA's efforts to provide accessible emergency relief to individuals with disabilities); CSRIC IV, WORKING GROUP THREE, EMERGENCY ALERT SYSTEM, EMERGENCY ALERT SYSTEM NATIONAL TESTING AND OPERATIONAL ISSUES TASK GROUP, FINAL REPORT (2014), available at http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG-3_Final-Report_061814.pdf (last visited Oct. 15, 2014); see also CSRIC IV, WORKING GROUP TWO, WIRELESS EMERGENCY ALERTS, TESTING SUBGROUP, FINAL REPORT (2014), available at http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG-2_Testing-Rprt_061814.pdf (last visited Oct. 15, 2014).

¹⁷⁰ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8144-48, ¶¶ 42-50.

¹⁷¹ See *id.* at 8144, ¶ 42. In the *EAS Operational Issues NPRM*, we estimate the upper bound on total implementation costs to be \$13.6 million. *EAS Operational Issues NPRM*, 29 FCC Rcd at 8148, ¶ 50. This total is composed of a combined maximum cost of \$2.2 million for our national location code rules, \$3.4 million for our ETRS rules, \$1.4 million for our video and audio accessibility rules, and \$6.6 million for implementing an NPT that fully emulates an EAN.

¹⁷² See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8146, ¶ 46 (estimating that proposed rules that would require the NPT to emulate the EAN would result in \$3.3 million in compliance costs for cable and broadcast-based EAS Participants, for a total of \$6.6 million).

¹⁷³ See *id.* (seeking comment on whether the cost of implementing an NPT that is limited in duration to two minutes and has regular priority would present EAS Participants with *de minimis* costs); Monroe Comments at 3 (“If the NPT is utilized as a ‘conventional’ EAS alert, we suggest that the costs may not be significant.”); NAB Comments at 6 (“the NPT code is already recognized by virtually all existing EAS devices or can be easily enabled by EAS participants through simple reconfigurations of the code filters on their encoder devices.”).

¹⁷⁴ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8148, ¶ 50. This total was composed of a combined maximum cost of \$2.2 million for our national location code rules, \$3.4 million for our ETRS rules, \$1.4 million for our video and audio accessibility rules, and \$6.6 million for implementing an NPT that fully emulates an EAN in both the cable and broadcast industries.

53. With regard to benefits, we find that the EAS is a resilient public alert and warning tool that is essential to help save lives and protect property during times of national, state, regional, and local emergencies.¹⁷⁵ Although the EAS, as tested in 2011, works largely as designed, the improvements we adopt today are responsive to operational inconsistencies uncovered by the first nationwide EAS test. These operational inconsistencies, left unaddressed, would adversely affect the continued efficacy of the system. These rules also will enable the Commission to improve its ability to collect, process and evaluate data about EAS alerting pathways,¹⁷⁶ and will lead to higher quality alerts for every American.¹⁷⁷ In sum, the rules we adopt today will preserve safety of life through more effective alerting. We find, therefore, that it is reasonable to expect that the improvements to the EAS that will result from the rules we adopt today will save lives and result in numerous other benefits that are less quantifiable but still advance important public interest objectives.¹⁷⁸

F. Compliance Timing

54. *National Location Code and NPT Rules Compliance Timeline.* We conclude that EAS Participants should be given up to twelve months from the effective date of the rule amendments requiring use of the national location code and NPT rules to come into compliance with these amendments. In light of the fact that FEMA intends to conduct a nationwide EAS test “in the near future,” and that such a test will use both the NPT and the “six zeroes” location code, it is imperative that we ensure that EAS Participants are capable of processing a test with these characteristics as rapidly as possible.¹⁷⁹ In the *EAS Operational Issues NPRM*, we addressed this concern by proposing to require compliance with the national location code and NPT requirements we proposed within six months from the effective date of their codification into our rules.¹⁸⁰ Some commenters, such as Monroe and Verizon, agree that a period as short as six months could be sufficient to implement our rules.¹⁸¹ NCTA and AT&T, on the other hand, argue that a six-month timeline would not provide EAS Participants with sufficient time to develop, test, and deploy the required system updates, and argue instead for a twelve-

¹⁷⁵ See *Background on the Emergency Alert System (EAS)*, FEMA.GOV (2014), <https://www.fema.gov/emergency-alert-system#1> (last visited Nov. 11, 2014).

¹⁷⁶ By requiring EAS Participants to file test result data in the ETRS, the Commission can maintain a centralized database containing all EAS monitoring assignments and alert distribution pathways, enabling it to perform new analyses of alert distribution at the national, state and local levels. See *supra* ¶ 27.

¹⁷⁷ By establishing operational requirements for the use of an NPT code for national tests, instead of a live alert, we preserve the use of the EAN for actual emergencies only. See *supra* ¶ 23. Further, by providing alerts that meet minimum accessibility standards, we ensure that every American can enjoy the benefits of EAS. See *supra* ¶ 38.

¹⁷⁸ The value of a statistical life (VSL) is currently estimated at \$9.1 million. See Memorandum from Polly Trottenberg, Under Secretary for Policy, Office of the Secretary for Transportation, and Robert S. Rivkin, General Counsel, Department of Transportation, Guidance on Treatment of the Economic Value of a Statistical Life in U.S. Department of Transportation Analyses (Feb. 28, 2013), at 1, available at http://www.dot.gov/sites/dot.gov/files/docs/VSL_Guidance_2013.pdf (last visited Oct. 6, 2014). The Department of Transportation defines VSL as “the additional cost that individuals would be willing to bear for improvements in safety (that is, reductions in risks) that, in the aggregate, reduce the expected number of fatalities by one.” *Id.* at 2. Accordingly, the value of this risk reduction to the public, measured in terms of expected lives saved, is at least \$9.1 million, which exceeds the one-time, \$7 million aggregated cost of implementing the rules.

¹⁷⁹ See FEMA Comments to *EAS Operational Issues Public Notice* at 3.

¹⁸⁰ See *EAS Operational Issues NPRM*, 29 FCC Rcd at 8143, ¶ 41.

¹⁸¹ See Monroe Comments at 5; see also Letter from William D. Wallace, Assistant General Counsel for Verizon, to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296, at 1 (filed Sept. 30, 2014) (Verizon September 30, 2014 *Ex Parte* Letter).

month implementation timeline.¹⁸² Specifically, AT&T asserts that their “Approval For Use” process, that is standardized throughout the AT&T networks, must take at least one year to complete, because it is an iterative process, especially in the new Internet Protocol TV markets in which they operate, whereby their engineers failure test EAS equipment programming, then send the product back to the manufacturer for further updates if they find errors, and then retest the updated equipment recursively until one hundred percent certainty can be established that the device will perform as expected within their system.¹⁸³ According to AT&T, this is not the kind of process that can be accelerated merely by the increased expenditure of resources.¹⁸⁴

55. Our goal in this and related rulemakings is to ensure that the EAS is efficient and secure, and we acknowledge that this goal would not be furthered by requiring any EAS Participant to short circuit their testing process for new rules. Accordingly, we provide herein that EAS Participants are granted a period of up to, but no longer than, twelve months in which to come into compliance with the national location code and NPT requirements that are reflected in the rule amendments we adopt today. This twelve-month period will run from the effective date of these rule amendments, which is thirty days after their publication in the Federal Register.

56. *ETRS Compliance Timeline.* We require EAS Participants to complete the identifying information initially required by the ETRS filing requirement we adopt today within sixty days of the effective date of the ETRS rules we adopt today, or within sixty days of the launch of the ETRS, whichever is later.¹⁸⁵ We agree that the requirement for EAS Participants to provide ETRS identifying information within sixty days of adoption of these rules would be a reasonable time period, but that it makes sense for the compliance triggering event to be the date on which the ETRS becomes operational.¹⁸⁶ We further require EAS Participants to update their identifying information concurrently with any update to their EAS State Plans, and require EAS Participants to complete the “day of test” portion of their filing obligation within 24 hours of any test, and the remainder of the filing obligation within forty-five days of the next EAS nationwide test, the same timeline that we successfully implemented for the first nationwide EAS test.¹⁸⁷

57. We believe it is reasonable for EAS Participants to complete their filings on this timeline because no equipment changes or attendant processes are required in order to achieve compliance with this rule. Furthermore, the electronic filing system should allow EAS Participants to complete their filing obligation even more quickly than they did for the first nationwide test, in which we adopted the same compliance timeline for submitting test data.

58. *Accessibility Compliance Timeline.* We also provide herein that EAS Participants will be

¹⁸² See NCTA Comments at 2; see also AT&T Comments at 2 (stating that implementing an NPT that acts like any other alert would take at least one year); Trilithic September 30, 2014 *Ex Parte* Letter, at 1 (stating that Trilithic is ready to release an update to enable its equipment to comply with the rules we adopt today, and from the date of release, many EAS Participants will “need twelve months to test and deploy the firmware update”).

¹⁸³ See Letter from James K. Smith, Assistant Vice President Federal Regulatory, AT&T, to Marlene Dortch, Secretary, FCC, EB Docket No. 04-296, at 1-2 (filed October 8, 2014) (AT&T October 8, 2014 *Ex Parte* Letter).

¹⁸⁴ See AT&T October 8, 2014 *Ex Parte* Letter.

¹⁸⁵ See revisions to 47 C.F.R. § 11.61(a)(3) in Appendix A. These rules will not take effect until we have published notice of approval from the U.S. Office of Management and Budget (OMB) of the rules’ information collections under the Paperwork Reduction Act. See Paperwork Reduction Act of 1995, 44 U.S.C. 3501 *et seq.* (2002).

¹⁸⁶ See Gary Timm Comments at 11.

¹⁸⁷ See Federal Communications Commission Reminds EAS Participants about November 9, 2011 Nationwide EAS Test, DA 11-1788, *Public Notice*, 26 FCC Rcd 15109 (2011) (requiring EAS Participants to file test result data within forty-five days of the test, and noting that electronic filing will allow EAS Participants to provide useful data to the Commission in a manner that is quicker and less burdensome than paper filing).

given a period of up to, but no longer than, six months in which to come into compliance with the display legibility, completeness and placement requirements that are reflected in the rule amendments we adopt today. This six-month period will run from the effective date of these rule amendments, which is thirty days after their publication in the Federal Register. We note that NCTA avers that EAS Participants generally are already compliant with the majority of accessibility rules as proposed in the *EAS Operational Issues NPRM*.¹⁸⁸ While Trilithic argues that our proposed completeness rule would require significantly longer than a year to implement, because EAS equipment is not capable of controlling the duration of the EAS visual crawl, we do not require the EAS visual crawl to last for the duration of the EAS activation and, as such, Trilithic's argument is now inapplicable.¹⁸⁹ On the other hand, we also decline to adopt a shorter timeframe for implementation of these accessibility requirements, as urged by some consumer groups.¹⁹⁰ We fully recognize the exigency of providing accessible alerts to all Americans, and it is for that reason that we adopt these accessibility rules today, but it would be counterproductive to require compliance with these rules sooner than we reasonably could expect that EAS Participants would generally be able to meet such requirements. Commenters generally did not object to implementing the accessibility rules we proposed in the *EAS Operational Issues NPRM* within six months.¹⁹¹ We therefore find that six months will provide sufficient time for EAS Participants to comply with the EAS accessibility rules we adopt today.

IV. PROCEDURAL MATTERS

A. Accessible Formats

59. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

B. Regulatory Flexibility Analysis

60. As required by the Regulatory Flexibility Act of 1980, *see* 5 U.S.C. § 604, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The FRFA is set forth in Appendix B.

C. Paperwork Reduction Analysis

61. The *Sixth Report and Order* contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law No. 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the new information collection requirements

¹⁸⁸ *See* NCTA Comments at 8 (“EAS equipment in cable systems generally display visual crawls that are readable by viewers, do not pass too quickly, and continue throughout the duration of the EAS activation. Cable-delivered EAS messages generally do not block important visual content, are legible, do not overlap lines of content, and do not run off the edge of the video screen.”).

¹⁸⁹ *See* Trilithic Comments at 3 (“Establishing a rule on visual crawl completeness could result in a significantly longer implementation period due to the need to make appropriate modifications. Downstream protocols would need to be changed or added, and equipment currently in the field that is being used to display the [video] crawl may need to be replaced. Several protocols currently used to activate downstream equipment do not provide the capability of specifying the display duration.”).

¹⁹⁰ *See* Consumer Groups Comments at 9-10 (stating that shortcomings in accessibility often expose people with disabilities to extremely dangerous situations, and reasoning, therefore, that the timeline for compliance with our rules should be no longer than three months).

¹⁹¹ *But see* Consumer Groups Comments at 10 (The Commission should require compliance with its proposed accessibility rules within three months).

contained in this proceeding.

62. We note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”¹⁹² In addition, we have described impacts that might affect small businesses, which includes most businesses with fewer than 25 employees, in the FRFA in Appendix B, *infra*.

D. Congressional Review Act

63. The Commission will send a copy of this *Sixth Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act (CRA), see 5 U.S.C. § 801(a)(1)(A).

V. ORDERING CLAUSES

64. Accordingly, IT IS ORDERED, pursuant to Sections 1, 2, 4(i), 4(o), 301, 303(r), 303(v), 307, 309, 335, 403, 624(g), 706, and 715 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(o), 301, 301(r), 303(v), 307, 309, 335, 403, 544(g), 606, and 615 that the *Sixth Report and Order* in EB Docket No. 04-296 IS ADOPTED and shall become effective thirty (30) days after publication of the text or summary thereof in the Federal Register, except for those rules and requirements involving Paperwork Reduction Act burdens, which shall become effective upon publication in the *Federal Register* of a notice announcing the approval by the Office of Management and Budget of the modified information collection requirements under the Paperwork Reduction Act of 1995 and an effective date of those rule amendments.¹⁹³

65. IT IS FURTHER ORDERED that notwithstanding paragraph [64] above, EAS Participants are granted a period of twelve months from the effective date of the rule amendments contained in 47 C.F.R. §§ 11.31, 11.51(m)(2) and (n), 11.52, and 11.54, in which to come into compliance with those amendments.

66. IT IS FURTHER ORDERED that notwithstanding paragraph [64] above, EAS Participants are granted a period of six months from the effective date of the rule amendments contained in 47 C.F.R. §§ 11.51(d), (g)(3), (h)(3), and (j)(2) in which to come into compliance with those amendments.

67. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Sixth Report and Order*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

¹⁹² See *EAS Operational Issues NPRM*, 29 FCC Rcd at Appendix B.

¹⁹³ Pub. L. No. 104-13, 109 Stat. 163 (May 22, 1995), *codified at* 44 U.S.C. §§ 3501 *et seq.*

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A**Final Rules**

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 C.F.R. Part 11 to read as follows:

PART 11 – EMERGENCY ALERT SYSTEM (EAS)

1. The authority citation for Part 11 continues to read as follows:

Authority: 47 U.S.C. 151, 154 (i) and (o), 303(r), 544(g) and 606.

2. Amend § 11.21 by revising paragraphs (a) and (c) to read as follows:

§ 11.21 State and Local Area plans and FCC Mapbook.

* * * * *

(a) The State EAS Plan contains procedures for State emergency management and other State officials, the NWS, and EAS Participants' personnel to transmit emergency information to the public during a State emergency using the EAS. EAS State Plans should include a data table, in computer readable form, clearly showing monitoring assignments and the specific primary and backup path for emergency action notification ("EAN") messages that are formatted in the EAS Protocol (specified in § 11.31), from the PEP to each station in the plan. If a state's emergency alert system is capable of initiating EAS messages formatted in the Common Alerting Protocol (CAP), its EAS State Plan must include specific and detailed information describing how such messages will be aggregated and distributed to EAS Participants within the state, including the monitoring requirements associated with distributing such messages. Consistent with the requirements of paragraph 11.61(a)(3)(iv) of this Part, EAS Participants shall provide the identifying information required by the EAS Test Reporting System (ETRS) no later than sixty days after the publication in the *Federal Register* of a notice announcing the approval by the Office of Management and Budget of the modified information collection requirements under the Paperwork Reduction Act of 1995 and an effective date of the rule amendment, or within sixty days of the launch of the ETRS, whichever is later, and shall renew this identifying information on a yearly basis or as required by any revision of the EAS Participant's State EAS Plan filed pursuant to Section 11.21 of this Part.

* * *

(c) The FCC Mapbook is based on the consolidation of the data table required in each State EAS plan with the identifying data contained in the ETRS. The Mapbook organizes all EAS Participants according to their State, EAS Local Area, and EAS designation.

* * * * *

3. Amend § 11.31 by revising paragraph (f) to read as follows:

§ 11.31 EAS protocol.

* * * * *

(f) The All U.S., State, Territory and Offshore (Marine Area) ANSI number codes (SS) are as follows. County ANSI numbers (CCC) are contained in the State EAS Mapbook.

	ANSI#
All U.S.	000000
State:	
AL	01
AK	02
AZ	04
AR	05
CA	06
CO	08
CT	09
DE	10
DC	11
FL	12
GA	13
HI	15
ID	16
IL	17
IN	18
IA	19
KS	20
KY	21
LA	22
ME	23
MD	24
MA	25
MI	26
MN	27
MS	28
MO	29
MT	30
NE	31
NV	32

NH	33
NJ	34
NM	35
NY	36
NC	37
ND	38
OH	39
OK	40
OR	41
PA	42
RI	44
SC	45
SD	46
TN	47
TX	48
UT	49
VT	50
VA	51
WA	53
WV	54
WI	55
WY	56
Terr.:	
AS	60
FM	64
GU	66
MH	68
MH	68
PR	72
PW	70
UM	74
	78
Offshore (Marine Areas) ¹ :	
Eastern North Pacific Ocean, and along U.S. West Coast from Canadian border to Mexican border	57
North Pacific Ocean near Alaska, and along Alaska coastline, including the Bering Sea and the Gulf of Alaska	58
Central Pacific Ocean, including Hawaiian waters	59
South Central Pacific Ocean, including American Samoa waters	61
Western Pacific Ocean, including Mariana Island waters	65
Western North Atlantic Ocean, and along U.S. East Coast, from Canadian border south to Currituck Beach Light, N.C	73

displayed:

- (i) At the top of the television screen or where it will not interfere with other visual messages
- (ii) In a manner (*i.e.*, font size, color, contrast, location, and speed) that is readily readable and

understandable,

- (iii) That does not contain overlapping lines of EAS text or extend beyond the viewable display (except for video crawls that intentionally scroll on and off of the screen), and

- (iv) In full at least once during any EAS message.

- (2) The audio portion of an EAS message must play in full at least once during any EAS message.

* * *

(g)

* * *

(3) Shall transmit a visual EAS message on at least one channel. The visual message shall contain the Originator, Event, Location, and the valid time period of the EAS message. Effective June 30, 2012, visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with §3.6 of the “ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0” (May 17, 2010), except that if the EAS Participant has deployed an Intermediary Device to meet its CAP-related obligations, this requirement shall be effective June 30, 2015, and until such date shall be subject to the general requirement to transmit a visual message containing the Originator, Event, Location and the valid time period of the EAS message.

(i) The visual message portion of an EAS alert, whether video crawl or block text, must be displayed:

- (a) At the top of the television screen or where it will not interfere with other visual messages

(b) In a manner (*i.e.*, font size, color, contrast, location, and speed) that is readily readable and understandable,

(c) That does not contain overlapping lines of EAS text or extend beyond the viewable display (except for video crawls that intentionally scroll on and off of the screen), and

(d) In full at least once during any EAS message.

(ii) The audio portion of an EAS message must play in full at least once during any EAS message.

* * *

(h)

* * *

(3) Shall transmit the EAS visual message on all downstream channels. The visual message shall contain the Originator, Event, Location, and the valid time period of the EAS message. Effective June 30, 2012, visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with §3.6 of the “ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0” (May 17, 2010), except that if the EAS Participant has deployed an Intermediary Device to meet its CAP-related obligations, this requirement shall be effective June 30, 2015, and until such date shall be subject to the general requirement to transmit a visual message containing the Originator, Event, Location and the valid time period of the EAS message.

(i) The visual message portion of an EAS alert, whether video crawl or block text, must be displayed:

(a) At the top of the television screen or where it will not interfere with other visual messages

(b) In a manner (*i.e.*, font size, color, contrast, location, and speed) that is readily readable and understandable,

(c) That does not contain overlapping lines of EAS text or extend beyond the viewable display (except for video crawls that intentionally scroll on and off of the screen), and

(d) In full at least once during any EAS message.

(ii) The audio portion of an EAS message must play in full at least once during any EAS

message.

* * *

(j)

* * *

(2) The visual message shall contain the Originator, Event, Location, and the valid time period of the EAS message. Effective June 30, 2012, visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with §3.6 of the “ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0” (May 17, 2010), except that if the EAS Participant has deployed an Intermediary Device to meet its CAP-related obligations, this requirement shall be effective June 30, 2015, and until such date shall be subject to the general requirement to transmit a visual message containing the Originator, Event, Location and the valid time period of the EAS message.

(i) The visual message portion of an EAS alert, whether video crawl or block text, must be displayed:

(a) At the top of the television screen or where it will not interfere with other visual messages

(b) In a manner (*i.e.*, font size, color, contrast, location, and speed) that is readily readable and understandable,

(c) That does not contain overlapping lines of EAS text or extend beyond the viewable display (except for video crawls that intentionally scroll on and off of the screen), and

(d) In full at least once during any EAS message.

(ii) The audio portion of an EAS message must play in full at least once during any EAS message.

(m)

* * *

(2) Manual interrupt of programming and transmission of EAS messages may be used. EAS messages with the EAN Event code, or the National Periodic Test (NPT) Event code in the case of a nationwide test of the EAS, must be transmitted immediately; Monthly EAS test messages must be transmitted within 60 minutes. All actions must be logged and include the minimum information required for EAS video messages.

(n) EAS Participants may employ a minimum delay feature, not to exceed 15 minutes, for automatic interruption of EAS codes. However, this may not be used for the EAN Event code, or the NPT Event code in the case of a nationwide test of the EAS, which must be transmitted immediately. The delay time for an RMT message may not exceed 60 minutes.

* * * * *

5. Amend § 11.52 by revising paragraph (e) as follows:

§ 11.52 EAS code and Attention Signal Monitoring requirements.

* * * * *

(e) EAS Participants are required to interrupt normal programming either automatically or manually when they receive an EAS message in which the header code contains the Event codes for Emergency Action Notification (EAN), the National Periodic Test (NPT), or the Required Monthly Test (RMT) for their State or State/county location.

* * *

(2) *Manual* interrupt of programming and transmission of EAS messages may be used. EAS messages with the EAN Event code, or the NPT Event code in the case of a nationwide test of the EAS, must be transmitted immediately; Monthly EAS test messages must be transmitted within 60 minutes. All actions must be logged and recorded as specified in §§11.35(a) and 11.54(a)(3). Decoders must be programmed for the EAN Event header code and the RMT and RWT Event header codes (for required monthly and weekly tests), with the appropriate accompanying State and State/county location codes.

* * * * *

6. Amend § 11.54 by revising paragraph (a) as follows:

§ 11.54 EAS operation during a National Level emergency

(a) Immediately upon receipt of an EAN message, or the NPT Event code in the case of a nationwide test of the EAS, EAS Participants must comply with the following requirements, as applicable:

* * * * *

7. Amend § 11.61 by revising paragraphs (a)(3)(iv) as follows:

§ 11.61 Tests of EAS procedures.

* * * * *

(3) National Tests

* * *

(iv) Test results as required by the Commission shall be logged by all EAS Participants into the EAS Test Reporting System (ETRS) as determined by the Commission's Public Safety and Homeland Security Bureau, subject to the following requirements.

(1) EAS Participants shall provide the identifying information required by the ETRS initially no later than sixty days after the publication in the *Federal Register* of a notice announcing the approval by the Office of Management and Budget of the modified information collection requirements under the Paperwork Reduction Act of 1995 and an effective date of the rule amendment, or within sixty days of the launch of the ETRS, whichever is later, and shall renew this identifying information on a yearly basis or as required by any revision of the EAS Participant's State EAS Plan filed pursuant to Section 11.21 of this Part.

(2) "Day of test" data shall be filed in the ETRS within 24 hours of any nationwide test or as otherwise required by the Public Safety and Homeland Security Bureau.

(3) Detailed post-test data shall be filed in the ETRS within forty five (45) days following any nationwide test.

* * * * *

APPENDIX B

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA)¹⁹⁴ the Commission incorporated an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *EAS Operational Issues Notice of Proposed Rulemaking*. No comments were filed addressing the IRFA regarding the issues raised in the *EAS Operational Issues Notice of Proposed Rulemaking*. Because the Commission amends the rules in this *Sixth Report and Order*, the Commission has included this Final Regulatory Flexibility Analysis (FRFA). This present FRFA conforms to the RFA.¹⁹⁵

A. Need for, and Objectives of, the Final Rules

2. Today's *Sixth Report and Order* adopts rules to resolve problems with the EAS uncovered in the first nationwide Emergency Alert System (EAS) test conducted on November 9, 2011, and to evolve the paradigm for the future testing, exercise and use of the EAS to enhance the effectiveness of the EAS as an alerting tool for the public. In this *Sixth Report and Order*, we adopt "six zeroes" as the national location code; and require that a National Periodic Test code with limited duration and regular priority be used to evaluate the readiness of the EAS for a live EAN. We also establish a reporting requirement using an updated, online EAS test reporting system (ETRS). Finally, we establish minimum requirements for video crawl speed, and completeness that will improve the accessibility of EAS alerts. These final rules will help to ensure that the EAS better protects the life and property of all Americans.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

3. No commenter raised issues in response to the IRFA included in the *EAS Operational Issues Notice of Proposed Rulemaking*. The Commission concludes that these mandates provide EAS Participants with a sufficient measure of flexibility to account for technical and cost-related concerns. In the event that small entities face unique circumstances that restrict their ability to comply with the Commission's rules, the Commission can address them through the waiver process. The Commission has determined that implementing these improvements to the EAS is technically feasible and the cost of implementation is small.

C. Description and Estimate of the Number of Small Entities to Which the Final Rules Would Apply

4. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the rules adopted, herein.¹⁹⁶ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."¹⁹⁷ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.¹⁹⁸ A "small business

¹⁹⁴ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996, (SBREFA) Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

¹⁹⁵ See 5 U.S.C. § 604.

¹⁹⁶ 5 U.S.C. § 603(b)(3).

¹⁹⁷ 5 U.S.C. § 601(6).

¹⁹⁸ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity (continued....)"

concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁹⁹ Below, we describe and estimate the number of small entity licensees that may be affected by the adopted rules.

5. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions.* Our action may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards.²⁰⁰ First, nationwide, there are a total of approximately 28.2 million small businesses, according to the SBA.²⁰¹ As of 2011, small businesses comprise 99.7 percent of all employer firms in the US.²⁰² In addition, a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”²⁰³ Nationwide, as of 2007, there were approximately 1,621,315 small organizations.²⁰⁴ Finally, the term “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”²⁰⁵ Census Bureau data for 2011 indicate that there were 89,476 local governmental jurisdictions in the United States.²⁰⁶ We estimate that, of this total, as many as 88,506 entities may qualify as “small governmental jurisdictions.”²⁰⁷ Thus, we estimate that most governmental jurisdictions are small.

6. *Radio Stations.* This Economic Census category comprises establishments primarily engaged in broadcasting aural programs by radio to the public. Programming may originate in the station’s own studio, from an affiliated network, or from an external source.²⁰⁸ The SBA defines a radio broadcasting entity that has \$38.5 million or less in annual receipts as a small business.²⁰⁹ According to Commission staff review of the BIA Kelsey Inc. Media Access Radio Analyzer Database as of June 5,

(Continued from previous page) _____
for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

¹⁹⁹ 15 U.S.C. § 632.

²⁰⁰ See 5 U.S.C. §§ 601(3)–(6).

²⁰¹ See SBA, Office of Advocacy, “Frequently Asked Questions,” <http://web.sba.gov/faqs> (showing figures are from March 2014).

²⁰² See SBA, Office of Advocacy, “Frequently Asked Questions,” available at http://www.sba.gov/sites/default/files/FAQ_Sept_2012.pdf (last visited Nov. 14, 2014).

²⁰³ 5 U.S.C. § 601(4).

²⁰⁴ INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2010).

²⁰⁵ 5 U.S.C. § 601(5).

²⁰⁶ U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2011, Table 427 (2007)

²⁰⁷ The 2007 U.S. Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89,476 small governmental organizations in 2007. If we assume that county, municipal, township and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,125. If we make the same assumption about special districts, and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 special districts. Therefore, of the 89,476 small governmental organizations documented in 2007, as many as 88,506 may be considered small under the applicable standard. This data may overestimate the number of such organizations that has a population of 50,000 or less. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES 2011, Tables 427, 426 (Data cited therein are from 2007).

²⁰⁸ U.S. Census Bureau, 2007 NAICS Definitions, “515112 Radio Stations”; [http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=515112&search=2007 NAICS Search](http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=515112&search=2007%20NAICS%20Search).

²⁰⁹ See 13 C.F.R. § 121.201, NAICS Code 515112. See also Small Business Size Standards, 77 Fed. Reg. at 72704.

2013, about 90 percent of the 11,340 of commercial radio stations in the United States have revenues of \$38.5 million or less. Therefore, the majority of such entities are small entities. The Commission has estimated the number of licensed noncommercial radio stations to be 3,917.²¹⁰ We do not have revenue data or revenue estimates for these stations. These stations rely primarily on grants and contributions for their operations, so we will assume that all of these entities qualify as small businesses. We note that in assessing whether a business entity qualifies as small under the above definition, business control affiliations must be included.²¹¹ In addition, to be determined to be a “small business,” the entity may not be dominant in its field of operation.²¹² We note that it is difficult at times to assess these criteria in the context of media entities, and our estimate of small businesses may therefore be over-inclusive.

7. *Low-Power FM Stations.* The same SBA definition that applies to radio broadcast licensees would apply to low-power FM (“LPFM”) stations. The SBA defines a radio broadcast station as a small business if such station has no more than \$38.5 million in annual receipts. Currently, there are approximately 864 licensed LPFM stations. Given the nature of these services, we will presume that all of these licensees qualify as small entities under the SBA definition.

8. *Television Broadcasting.* The SBA defines a television broadcasting station as a small business if such station has no more than \$38.5 million in annual receipts.²¹³ Business concerns included in this industry are those “primarily engaged in broadcasting images together with sound.”²¹⁴ These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public.²¹⁵ These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in turn broadcast the programs to the public on a predetermined schedule.²¹⁶ Programming may originate in the station’s own studio, from an affiliated network, or from an external source.²¹⁷

9. According to Commission staff review of the BIA Financial Network, Inc. Media Access Pro Television Database as of March 31, 2013, about 90 percent of an estimated 1,385 commercial television stations in the United States have revenues of \$38.5 million or less. Based on this data and the associated size standard, we conclude that the majority of such establishments are small. The Commission has estimated the number of licensed noncommercial educational (“NCE”) stations to be

²¹⁰ *March 31, 2013 Broadcast Station Totals Press Release.*

²¹¹ “[Businesses] are affiliates of each other when one [business] controls or has the power to control the other or a third party or parties controls or has the power to control both.” 13 C.F.R. § 121.103(a)(1).

²¹² *See* 13 C.F.R. § 121.102(b).

²¹³ *See* 13 C.F.R. § 121.201, NAICS Code 515120 (2007).

²¹⁴ *Id.* This category description continues, “These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public. These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in turn broadcast the programs to the public on a predetermined schedule. Programming may originate in their own studios, from an affiliated network, or from external sources.” Separate census categories pertain to businesses primarily engaged in producing programming. *See* Motion Picture and Video Production, NAICS code 512110; Motion Picture and Video Distribution, NAICS Code 512120; Teleproduction and Other Post-Production Services, NAICS Code 512191; and Other Motion Picture and Video Industries, NAICS Code 512199.

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ U.S. Census Bureau, 2007 NAICS Definitions, “515112 Radio Stations;” [http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=515112&search=2007 NAICS Search](http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=515112&search=2007%20NAICS%20Search).

396.²¹⁸ We do not have revenue estimates for NCE stations. These stations rely primarily on grants and contributions for their operations, so we will assume that all of these entities qualify as small businesses. In addition, there are approximately 567 licensed Class A stations, 2,227 licensed low-power television (“LPTV”) stations, and 4,518 licensed TV translators.²¹⁹ Given the nature of these services, we will presume that all LPTV licensees qualify as small entities under the above SBA small business size standard.

10. We note that in assessing whether a business entity qualifies as small under the above definition, business control affiliations must be included.²²⁰ Our estimate, therefore, likely overstates the number of small entities affected by the proposed rules, because the revenue figures on which this estimate is based do not include or aggregate revenues from affiliated companies.

11. In addition, an element of the definition of “small business” is that the entity not be dominant in its field of operation. The Commission is unable at this time and in this context to define or quantify the criteria that would establish whether a specific television station is dominant in its market of operation. Accordingly, the foregoing estimate of small businesses to which the rules may apply does not exclude any television stations from the definition of a small business on this basis and is therefore over-inclusive to that extent. An additional element of the definition of “small business” is that the entity must be independently owned and operated. It is difficult at times to assess these criteria in the context of media entities, and our estimates of small businesses to which they apply may be over-inclusive to this extent.

12. *Cable and Other Subscription Programming.* This industry comprises establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis. The broadcast programming is typically narrowcast in nature (e.g., limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming from external sources. The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers. The SBA size standard for this industry establishes as small any company in this category which receives annual receipts of \$38.5 million or less.²²¹ Based on U.S. Census data for 2007, in that year 659 establishments operated for the entire year. Of that 659, 197 operated with annual receipts of \$10 million a year or more. The remaining 462 establishments operated with annual receipts of less than \$10 million. Based on this data, the Commission estimates that the majority of establishments operating in this industry are small.²²²

13. *Cable System Operators (Rate Regulation Standard).* The Commission has developed its own small business size standard for cable system operators, for purposes of rate regulation. Under the Commission’s Rules, a “small cable company” is one serving 400,000 or fewer subscribers nationwide.²²³

²¹⁸ News Release, *Broadcast Station Totals as of March 31, 2013* (MB rel. Apr. 12, 2013) (“*March 31, 2013 Broadcast Station Totals Press Release*”), available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0412/DOC-320138A1.pdf.

²¹⁹ See *March 31, 2013 Broadcast Station Totals Press Release*.

²²⁰ “[Businesses] are affiliates of each other when one [business] controls or has the power to control the other, or a third party or parties controls or has the power to control both.” 13 C.F.R. § 121.103(a)(1).

²²¹ See 13 C.F.R. 121.201, NAICS Code 515210.

²²² AMERICAN FACT FINDER, UNITED STATES CENSUS BUREAU, http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ1&prodType=prodType=table. (last visited Mar. 16, 2015).

²²³ 47 C.F.R. § 76.901(e). The Commission developed this definition based on its determination that a small cable system operator is one with annual revenues of \$100 million or less. *Implementation of Sections of the 1992 Cable* (continued....)

Industry data shows that there were 1,141 cable companies at the end of June 2012.²²⁴ Of this total, all but 10 incumbent cable companies are small under this size standard.²²⁵ In addition, under the Commission's rate regulation rules, a "small system" is a cable system serving 15,000 or fewer subscribers.²²⁶ Current Commission records show 4,945 cable systems nationwide.²²⁷ Of this total, 4,380 cable systems have less than 20,000 subscribers, and 565 systems have 20,000 subscribers or more, based on the same records. Thus, under this standard, we estimate that most cable systems are small.

14. *Cable System Operators (Telecom Act Standard)*. The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."²²⁸ The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.²²⁹ Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.²³⁰ We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million.²³¹ Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed \$250,000,000, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

15. *Satellite Telecommunications*. The Commission has not developed a small business size (Continued from previous page) _____
Act: Rate Regulation, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393 (1995), 60 FR 10534 (February 27, 1995).

²²⁴ NCTA, Industry Data, Number of Cable Operating Companies (June 2012), <http://www.ncta.com/Statistics.aspx> (visited Sept. 28, 2012). Depending upon the number of homes and the size of the geographic area served, cable operators use one or more cable systems to provide video service. See *Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming*, MB Docket No. 12-203, Fifteenth Report, FCC 13-99 at ¶ 24 (rel. July 22, 2013) ("*15th Annual Competition Report*").

²²⁵ See SNL Kagan, "Top Cable MSOs – 12/12 Q"; available at <http://www.snk.com/InteractiveX/TopCableMSOs.aspx?period=2012Q4&sortcol=subscribersbasic&sortorder=desc>. We note that, when applied to an MVPD operator, under this size standard (*i.e.*, 400,000 or fewer subscribers) all but 14 MVPD operators would be considered small. See NCTA, Industry Data, Top 25 Multichannel Video Service Customers (2012), <http://www.ncta.com/industry-data> (visited Aug. 30, 2013). The Commission applied this size standard to MVPD operators in its implementation of the CALM Act. See *Implementation of the Commercial Advertisement Loudness Mitigation (CALM) Act*, MB Docket No. 11-93, Report and Order, 26 FCC Rcd 17222, 17245-46, ¶ 37 (2011) ("*CALM Act Report and Order*") (defining a smaller MVPD operator as one serving 400,000 or fewer subscribers nationwide, as of December 31, 2011).

²²⁶ 47 C.F.R. § 76.901(c).

²²⁷ The number of active, registered cable systems comes from the Commission's Cable Operations and Licensing System (COALS) database on Aug. 28, 2013. A cable system is a physical system integrated to a principal headend.

²²⁸ 47 U.S.C. § 543(m)(2); see also 47 C.F.R. § 76.901(f).

²²⁹ 47 C.F.R. § 76.901(f); see also Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

²³⁰ These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

²³¹ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. See 47 C.F.R. § 76.909(b).

standard specifically for providers of satellite service. The SBA definition of small Satellite Telecommunications entities comprises those that have \$32.5 million or less in average annual receipts.²³² For this category, Census Bureau data for 2007 show that there were a total of 512 satellite communications firms that operated for the entire year.²³³ Of this total, 464 firms had annual receipts of under \$10 million, and 18 firms had receipts of \$10 million to \$24,999,999.²³⁴ Consequently, the Commission estimates that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

16. *Other Telecommunications.* This category includes “establishments primarily engaged in . . . providing satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems.”²³⁵ The SBA definition of Other Telecommunications entities comprises those that have \$32.5 million or less in average annual receipts.²³⁶ Of this total, 2,346 firms had annual receipts of under \$25 million and 37 firms had annual receipts of \$25 million to \$49,999,999.²³⁷ Consequently, the Commission estimates that the majority of *Other Telecommunications* firms are small entities that might be affected by our action.

17. *The Educational Broadcasting Services.* In addition, the SBA’s placement of Cable Television Distribution Services in the category of Wired Telecommunications Carriers is applicable to cable-based Educational Broadcasting Services. Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers, which was developed for small wireline businesses. This category is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services; wired (cable) audio and video programming distribution; and wired broadband Internet services.”²³⁸ The SBA has developed a small business size standard for this category, which is: all such businesses having 1,500 or fewer employees.²³⁹ Census data for 2007 shows that there were 31,996

²³² 13 C.F.R. § 121.201, NAICS code 517410.

²³³ See http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en.

²³⁴ *Id.*

²³⁵ Office of Management and Budget, North American Industry Classification System, 513 (1997) (NAICS code 517910).

²³⁶ 13 C.F.R. § 121.201, NAICS code 517910.

²³⁷ http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en.

²³⁸ U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Carriers” (partial definition) at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>. Examples of this category are: broadband Internet service providers (e.g., cable, DSL); local telephone carriers (wired); cable television distribution services; long-distance telephone carriers (wired); closed circuit television (“CCTV”) services; VoIP service providers, using own operated wired telecommunications infrastructure; direct-to-home satellite system (“DTH”) services; telecommunications carriers (wired); satellite television distribution systems; and multichannel multipoint distribution services (“MMDS”).

²³⁹ 13 C.F.R. § 121.201; 2012 NAICS code 517110.

establishments that operated that year.²⁴⁰ Of this total, 30,178 establishments had fewer than 100 employees, and 1,818 establishments had 100 or more employees.²⁴¹ Therefore, under this size standard, we estimate that the majority of businesses can be considered small entities. In addition to Census data, the Commission's internal records indicate that as of September 2014, there are 2,207 active EBS licenses.²⁴² The Commission estimates that of these 2,207 licenses, the majority are held by non-profit educational institutions and school districts, which are by statute defined as small businesses.²⁴³

18. *Broadband Radio Service.* Broadband Radio Service systems, also referred to as Multipoint Distribution Service ("MDS") and Multichannel Multipoint Distribution Service ("MMDS") systems, and "wireless cable," transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service ("BRS") and Educational Broadband Service ("EBS").²⁴⁴ In connection with the 1996 BRS auction, the Commission established a "small business" as an entity that had annual average gross revenues of no more than \$40 million in the previous three years.²⁴⁵ The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas ("BTAs"). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.²⁴⁶ After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission's rules. In 2009, the Commission conducted Auction 86, which resulted in the licensing of 78 authorizations in the BRS areas.²⁴⁷ The Commission offered three levels of bidding credits: (i) a bidder with attributed average annual gross revenues that exceed \$15 million and do not exceed \$40 million for the preceding three years (small business) will receive a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed \$3 million and do not exceed \$15 million for the preceding three years (very small business) will receive a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed \$3

²⁴⁰ U.S. Census Bureau, 2007 Economic Census. See U.S. Census Bureau, American FactFinder, "Information: Subject Series – Estab and Firm Size: Employment Size of Establishments for the United States: 2007 – 2007 Economic Census," NAICS code 517110, Table EC0751SSSZ2; available at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁴¹ *Id.*

²⁴² ULS LICENSE SEARCH, http://wireless2.fcc.gov/UlsApp/UlsSearch/results.jsp;JSESSIONID_ULSSEARCH=wJ50JkbCQKvNWBjv1s0ZZWQs1FnmNDjQwvSHsDG2FHSyGV6hdf!203694623!-701794836.

²⁴³ The term "small entity" within SBREFA applies to small organizations (non-profits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6).

²⁴⁴ Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, MM Dkt. No. 94-131, *Report and Order*, 10 FCC Rcd 9589, 9593 ¶ 7 (1995).

²⁴⁵ *Id.* at 9670-73, ¶¶ 190-92.

²⁴⁶ 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard of 1500 or fewer employees.

²⁴⁷ Auction of Broadband Radio Service (BRS) Licenses, Scheduled for October 27, 2009, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 86, *Public Notice*, 24 FCC Rcd 8277 (2009).

million for the preceding three years (entrepreneur) will receive a 35 percent discount on its winning bid.²⁴⁸ Auction 86 concluded in 2009 with the sale of 61 licenses.²⁴⁹ Of the ten winning bidders, two bidders that claimed small business status won four licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

19. *Direct Broadcast Satellite (“DBS”) Service.* DBS service is a nationally distributed subscription service that delivers video and audio programming via satellite to a small parabolic “dish” antenna at the subscriber’s location. DBS, by exception, is now included in the SBA’s broad economic census category, Wired Telecommunications Carriers,²⁵⁰ which was developed for small wireline businesses. Under this category, the SBA deems a wireline business to be small if it has 1,500 or fewer employees.²⁵¹ Census data for 2007 shows that there were 31,996 establishments that operated that year.²⁵² Of this total, 30,178 establishments had fewer than 100 employees, and 1,818 establishments had 100 or more employees.²⁵³ Therefore, under this size standard, the majority of such businesses can be considered small. However, the data we have available as a basis for estimating the number of such small entities were gathered under a superseded SBA small business size standard formerly titled “Cable and Other Program Distribution.” The definition of Cable and Other Program Distribution provided that a small entity is one with \$12.5 million or less in annual receipts.²⁵⁴ Currently, only two entities provide DBS service, which requires a great investment of capital for operation: DIRECTV and DISH Network.²⁵⁵ Each currently offers subscription services. DIRECTV and DISH Network each report annual revenues that are in excess of the threshold for a small business. Because DBS service requires significant capital, we believe it is unlikely that a small entity as defined by the SBA would have the financial wherewithal to become a DBS service provider.

²⁴⁸ *Id.* at 8296 ¶ 73.

²⁴⁹ Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, *Public Notice*, 24 FCC Rcd 13572 (2009).

²⁵⁰ See 13 C.F.R. § 121.201; 2012 NAICS code 517110. This category of Wired Telecommunications Carriers is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services; wired (cable) audio and video programming distribution; and wired broadband Internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.” (*Emphasis added to text relevant to satellite services.*) U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Carriers” at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

²⁵¹ 13 C.F.R. § 121.201; 2012 NAICS code 517110.

²⁵² U.S. Census Bureau, 2007 Economic Census. See U.S. Census Bureau, American FactFinder, “Information: Subject Series – Estab and Firm Size: Employment Size of Establishments for the United States: 2007 – 2007 Economic Census,” NAICS code 517110, Table EC0751SSSZ2; available at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

²⁵³ *Id.*

²⁵⁴ 13 C.F.R. § 121.201; NAICS code 517510 (2002).

²⁵⁵ See 15th *Annual Competition Report*, at ¶ 27. As of June 2012, DIRECTV is the largest DBS operator and the second largest MVPD in the United States, serving approximately 19.9 million subscribers. DISH Network is the second largest DBS operator and the third largest MVPD, serving approximately 14.1 million subscribers. *Id.* at ¶¶ 27, 110-11.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

20. In the *Sixth Report and Order*, the Commission amends its Part 11 rules to require EAS Participants, as defined in the Commission's EAS rules, to improve the functionality of their EAS equipment and to report test data to the Commission through an Electronic Test Reporting System (ETRS).

21. The projected compliance requirements resulting from the *Sixth Report and Order* will apply to all entities in the same manner. The Commission believes that applying the same rules equally to all entities in this context is necessary to alleviate potential consumer confusion from adopting different rules for different EAS Participants. The Commission believes, and the record in this proceeding confirms, that the costs and/or administrative burdens associated with the rules will not unduly burden small entities. Moreover, the ETRS that the Commission adopts in this item presents EAS Participants with less cost than the former electronic test reporting system, will implicate no additional legal or engineering concerns, and will require no additional professional assistance.²⁵⁶

22. Compliance costs for rules we adopt today will be small, requiring only minimal software and equipment updates, testing and deployment costs. Based on the record, EAS Participants have agreed that these changes are technically and financially feasible, with relatively small costs to affected entities. Further, this *Sixth Report and Order* establishes an improved Electronic Test Reporting System (ETRS) that will minimize the costs and burdens for EAS Participants' filing of data pertaining to their compliance with the EAS rules relative to the reporting required of EAS Participants, including small entities, in the November, 2011, Nationwide EAS Test, a collection that was approved by OMB. The impact on small entities of the ETRS is therefore less than their past OMB-approved practice under the EAS rules, and thus would impose no undue burden.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

23. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its conclusions, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities."²⁵⁷

24. Based on the Commission's review of the record, the Commission finds that it is practicable for all EAS Participants, including small and rural EAS Participants, to implement EAS improvements without incurring unduly burdensome costs. The record also reflects that it would not be unduly burdensome EAS Participants to improve the operation of EAS equipment and to continue EAS reporting.²⁵⁸ The *Sixth Report and Order* recognizes the technical and operational issues that must be addressed before commencing the next nationwide EAS test, and allows time for EAS Participants to achieve compliance with today's rules.

25. In considering the record received in response to the *EAS Operational Issues Notice of Proposed Rulemaking*, the Commission examined alternatives to ease the burden on small and rural EAS

²⁵⁶ See *supra* ¶ 27; see also *supra* note 99.

²⁵⁷ 5 U.S.C. §§ 603(c)(1)-(c)(4).

²⁵⁸ See, e.g., Letter from Rebecca Murphy Thompson, General Counsel, to Marlene H. Dortch, Secretary, Federal Communications Commission, in PS Docket No. 11-153 and PS Docket No. 10-255, March 25, 2013 (CCA *Ex Parte*); Proximi Comments at 1.

Participants. These alternatives included extending the implementation deadline, or exempting small and rural EAS Participants. However, the record in this proceeding indicates that the technical and financial costs for implementing improvements to EAS and complying with our reporting requirements are small.²⁵⁹ All covered EAS Participants have 10 months from the effective date of the rules we adopt today to attain compliance. Additionally, the rules adopted in the *Sixth Report and Order* are technologically neutral in order to enable small entities flexibility to comply with our rules using EAS equipment offered by a variety of vendors.

26. Further, the *Sixth Report and Order* contains a detailed Cost-Benefit Analysis which finds that the life-saving public safety benefits of imposing requirements to improve the testing and operation of the EAS far outweigh the costs of such a rule.

27. Finally, in the event that small entities face unique circumstances with respect to these rules, such entities may request waiver relief from the Commission. Accordingly, the Commission finds that it has discharged its duty to consider the burdens imposed on small entities.

F. Legal Basis

28. The legal basis for any action that may be taken pursuant to this *Sixth Report and Order* is contained in Sections 1, 2, 4(i), 4(o), 301, 303(r), 303(v), 307, 309, 335, 403, 624(g), 706, and 715 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(o), 301, 303(r), 303(v), 307, 309, 335, 403, 544(g), 606, and 615

²⁵⁹ See *supra* ¶ 29.

APPENDIX C

List of Commenters to the EAS Operational Issues Notice of Proposed Rulemaking

Comments in EB Docket No. 04-296

<u>Commenters</u>	<u>Abbreviation</u>
AT&T Services, Inc.	AT&T
Cohen, Dippell & Everist, P.C.	CD&E
Federal Emergency Management Agency	FEMA
James Gorman	Gorman
Monroe Electronics, Inc.	Monroe
National Association of Broadcasters	NAB
National Cable and Telecommunications Association	NCTA
Read, Aaron	Read
Sage Alerting Systems, Inc.	Sage
Society of Broadcast Engineers	SBE
Timm, Gary	Timm
Trilithic, Inc.	Trilithic
Telecommunications for the Deaf and Hard of Hearing, <i>et al.</i>	Consumer Groups
Ushijima, Tad	Ushijima
Wagner, James	Wagner
Wireless RERC	Wireless RERC
Verizon	Verizon
<u>Reply Commenters</u>	<u>Abbreviation</u>
DirecTV, LLC & DISH Network, LLC	DirecTV & DISH
Monroe Electronics, Inc.	Monroe
National Association of Broadcasters	NAB
Telecommunications for the Deaf and Hard of Hearing, <i>et al.</i>	Consumer Groups
<u>Ex Parte Commenters</u>	<u>Abbreviation</u>
AT&T	AT&T
Monroe Electronics, Inc.	Monroe
Named State Broadcasters Association	NSBA
Sage Alerting Systems, Inc.	Sage

Trilithic, Inc.
Verizon

Trilithic
Verizon