

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

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

NOTICE OF PROPOSED RULEMAKING AND NOTICE OF INQUIRY

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I. INTRODUCTION

1. Today, the Commission proposes measures to improve the clarity and accessibility of the visual message associated with nationwide tests of the Emergency Alert System (EAS), and examines broader measures to enhance the EAS’s overall functionality and accessibility. First, in the Notice of Proposed Rulemaking (NPRM), we propose rule changes to improve the clarity and descriptiveness of the visual message associated with the nationwide EAS test so that members of the public who are unable to access the test’s audio message, including persons who are deaf or hard of hearing, will be able to visually receive the critical informational elements of the test in a more understandable manner. Specifically, for broadcast-based nationwide EAS tests that are distributed to EAS Participants over the air (i.e., “legacy” EAS-based test alerts), we propose to require EAS Participants to use a predetermined script as the visual message for such alerts.¹ We also propose to change the terminology defined for the nationwide EAS test

¹ As described in detail in paragraphs 3 and 4, infra, the “legacy” EAS architecture involves EAS Participants monitoring the broadcasts of other EAS Participants – primarily, radio and television stations – for EAS alerts, (continued....)

event code (“NPT”) from “National Periodic Test” to “Nationwide Test of the Emergency Alert System,” so that the visual message constructed for Common Alerting Protocol (CAP)-formatted nationwide EAS tests is clearer. To increase the use of CAP alerting, which has superior visual message capabilities to legacy EAS-based alerts, we also propose to require EAS Participants to poll the Integrated Public Alert and Warning System Open Platform for Emergency Networks (IPAWS) when they receive a legacy-based State or Local Area EAS alert—including National Weather Service (“NWS”) alerts²—to confirm whether there is a CAP version of that alert, and if so, process such CAP version instead of the legacy version.³ Second, we adopt a Notice of Inquiry (NOI) to examine how the legacy EAS architecture can be modified, augmented, or redesigned to (i) enable alert originators to relay text matching their audio message as part of or in parallel with their legacy EAS alerts so that EAS Participants can generate a more useful visual crawl that matches the information in the audio message, and (ii) enable more functionality within the system as a whole. Taken together, we believe that the proposals in the NPRM will have a real near-term impact on the clarity of the visual information provided with nationwide EAS tests and legacy EAS alerts for everyone who receives these messages, and especially for persons who are deaf or hard of hearing or otherwise rely solely on the visual message content, while the NOI explores the feasibility of more substantial modifications and updates to the EAS that could result in even greater longer-term gains in terms of EAS accessibility, clarity, and overall capability.

II. BACKGROUND

2. The EAS is a national public warning system through which broadcasters, cable systems, and other EAS Participants deliver alerts to the public to warn them of impending emergencies and dangers to life and property.⁴ The primary purpose of the EAS is to provide the President with “the capability to provide immediate communications and information to the general public at the National, State and Local Area levels during periods of national emergency.”⁵ The EAS also is used to distribute alerts issued by Tribal, state, local, and territorial governments, as well as by the NWS and the Federal

which include certain codes received as audio tones that trigger EAS equipment in the monitoring stations to rebroadcast that alert.

² NWS alerts are classified and processed as State and Local Area alerts in the EAS. *See* 47 CFR § 11.31(e) (classifying weather-related event codes as “State and Local Codes”); National Weather Service, “Emergency Alert System (EAS) Event Codes,” <https://www.weather.gov/nwr/eventcodes> (listing weather-related event codes and noting “[t]hese are state and local codes used by the NWS”) (last visited November 16, 2021).

³ The different architectures for these two versions (CAP and legacy) are described below.

⁴ *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*, ET Docket No. 04-296, Fifth Report and Order, 27 FCC Rcd 642, 646, para. 6 (2012) (*Fifth Report and Order*); *Review of the Emergency Alert System*, EB Docket No. 04-296, Notice of Proposed Rulemaking, 19 FCC Rcd 15775, 15776-77, paras. 6-8 (2004). EAS Participants are the entities required to comply with the EAS rules: analog radio broadcast stations, including AM, FM, and Low-power FM stations; digital audio broadcasting stations, including digital AM, FM, and Low-power FM stations; Class A television and Low-power TV stations; digital television broadcast stations, including digital Class A and digital Low-power TV stations; analog cable systems; digital cable systems; wireline video systems; wireless cable systems; direct broadcast satellite service providers; and digital audio radio service providers. *See* 47 CFR §§ 11.2(b), 11.11(a).

⁵ 47 CFR § 11.1. Under the Part 11 rules, national activation of the EAS for a Presidential alert message, initiated by the transmission of an Emergency Action Notification (EAN) event code, is designed to provide the President the capability to transmit an alert message (in particular, an audio alert message) to the American public within ten minutes from any location at any time and must take priority over any other alert message and preempt other alert messages in progress. *See, e.g., Review of the Emergency Alert System*, EB Docket No. 04-296, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 18625, 18628, para. 8 (2005) (*First Report and Order*). *See also, e.g.,* 47 CFR §§ 11.33(a)(11), 11.51(m), (n).

Emergency Management Agency (FEMA).⁶ Although EAS Participants are required to broadcast national alerts,⁷ broadcasting State and Local Area EAS alerts is done on a voluntary basis.⁸ The Commission, FEMA, and the NWS implement the EAS at the federal level.⁹

3. *Legacy EAS Architecture.* The legacy EAS is a broadcast-based, hierarchical alert message distribution system in which an alert message originator at the Tribal, local, state, territorial or national level encodes (or arranges to have encoded) a message in the EAS Protocol.¹⁰ Under this protocol, the EAS alert is constructed as a four-part message in the following sequence: (1) preamble and EAS header codes (which identify (i) the originator of the alert; (ii) the type of emergency, (ii) the location(s) to which the alert applies; and (iv) the valid time period of the alert – collectively, the “who, what, where and when” of the alert); (2) audio attention signal; (3) audio message; and (4) preamble and End of Message (EOM) codes terminating the alert.¹¹ The entire alert is encoded in audio format for transmission over the audio carrier of the EAS Participant’s broadcast.¹² The alert originator selects the EAS header codes based on the circumstances of the emergency, and may record an audio message up to two minutes in length (with the exception of the Presidential EAN, which is not time-limited) including whatever information the alert originator deems appropriate.¹³ By contrast, the visual message associated with the alert is constructed automatically from the header codes, which are fixed codes with predetermined terminologies that cover specific emergency events.¹⁴ Accordingly, the alert originator has no control over the content of the visual message beyond selection of the header codes.

4. In terms of distribution, the alert is broadcast from one EAS Participant to another following a matrix of monitoring assignments set forth in State EAS Plans.¹⁵ Specifically, EAS Participants monitor the broadcasts of designated EAS Participants as assigned in the applicable State

⁶ The National Weather Service is the most prolific originator of alerts containing emergency weather information. NWS also administers NOAA Weather Radio. *See* National Weather Service, NOAA Weather Radio, <https://www.weather.gov/nwr/> (last visited Jan. 15, 2021).

⁷ *See, e.g.*, 47 CFR § 11.51(a). National alerts are defined at section 11.31(e) as the EAN, NPT, Required Monthly Test (RMT), Required Weekly Test (RWT), and National Information Center (NIC). *See* 47 CFR § 11.31(e). The requirements for how these alerts must be processed vary. *See, e.g.*, 47 CFR §§ 11.51 (m), (n), 11.61(a).

⁸ *See* 47 CFR § 11.55(a); *First Report and Order*, 20 FCC Rcd at 18628, para. 8.

⁹ The respective roles of the Commission, FEMA, and NWS are defined in a series of Executive documents. *See* 1981 State and Local Emergency Broadcasting System (EBS) Memorandum of Understanding Among the Federal Emergency Management Agency (FEMA), Federal Communications Commission (FCC), the National Oceanic and Atmospheric Administration (NOAA), and the National Industry Advisory Committee (NIAC) reprinted as Appendix K to Partnership for Public Warning Report 2004-1, The Emergency Alert System (EAS): An Assessment; Memorandum, Presidential Communications with the General Public During Periods of National Emergency, The White House (Sept. 15, 1995) (1995 Presidential Statement); and Public Alert and Warning System, Exec. Order No. 13407, 71 Fed. Reg. 36975 (June 26, 2006).

¹⁰ *See* 47 CFR § 11.31. Although the EAS Protocol specifies that the message can be audio, video, or text, in practice, only audio is sent.

¹¹ *See* 47 CFR § 11.31(a).

¹² *See id.* The various preamble, header and EOM codes are modulated into audible tones using the audio frequency-shift keying (AFSK) modulation scheme, and combined with the attention signal and audio message for transmission as a Radio Frequency signal (transmitted over the audio carrier). Because it is designed to relay baseband audio messages, legacy EAS is limited in the quantity and type of information it can relay. For technical and practical reasons, the only data the legacy EAS relays are the alert header and EOM codes. *See infra* note 54.

¹³ *See* 47 CFR § 11.33(a)(9). The audio message is passed through to EAS participants, who broadcast it unchanged.

¹⁴ *See infra* note 27.

¹⁵ *See* 47 CFR §§ 11.21, 11.52(d).

EAS Plan; the header codes in alerts broadcast by monitored source stations are decoded by the monitoring EAS Participants' EAS devices, and if the alert covers an alert event type and location relevant to that monitoring EAS Participant, the EAS Participant will rebroadcast the alert.¹⁶ That rebroadcast may be monitored by additional EAS Participants and, if so, the process of checking the alert and rebroadcasting those alerts that are relevant repeats itself until all affected EAS Participants have received the alert and delivered it to the public.¹⁷ This distribution process of passing along the alert from one EAS Participant to another is often called the “daisy chain” distribution architecture. Because this EAS architecture has been in place since the adoption of the EAS, and continues to serve as the core distribution mechanism for Presidential alerts due to its resiliency,¹⁸ it is often referred to as the “legacy EAS.”

5. *Internet Protocol (IP) EAS Architecture.* Since June 30, 2012, authorized emergency alert authorities also have been able to distribute EAS alerts over the Internet to EAS Participants (who in turn deliver the alert to the public) by formatting those alerts in CAP for distribution to EAS Participants through the FEMA-administered IPAWS.¹⁹ The two alert formats – legacy and CAP – differ significantly both in terms of their capabilities to relay information and their basic structure. While legacy EAS alerts are audio-based in their entirety and designed to be transmitted as an audio signal in over-the-air broadcasts,²⁰ a CAP message is an IP-based alert that is transmitted over IP links, and acts as a digital envelope into which varied information can be relayed. CAP messages can convey substantially more and different types of information than a legacy EAS message. For example, CAP messages can include data files, picture files, text, audio files, video files, and links to streaming audio or video, which cannot be supported through legacy EAS as currently designed. Because legacy EAS is considered more robust and survivable in the event of a national emergency, when the Commission adopted the CAP rules, it retained legacy EAS as the backbone of the EAS, with CAP serving as a parallel mechanism for alert originators to distribute alerts to EAS Participants.²¹ Accordingly, EAS Participants are required to convert CAP EAS alert messages into alert messages that comply with the audio-based EAS Protocol requirements for redistribution over the legacy EAS.²² As a result, an EAS Participant processing a CAP alert containing a map, photos or video file could broadcast those to its local audience over the video

¹⁶ If the EAS Participant is itself designated to be monitored by downstream EAS Participants, it will regenerate the entire alert so as to trigger the EAS decoders in such monitoring EAS Participant facilities.

¹⁷ At the national level, EAS message distribution starts at Primary Entry Point (PEP) stations, which are a group of geographically diverse, full-power radio stations designated by FEMA to transmit “Presidential Level” messages initiated by FEMA. *See Fifth Report and Order*, 27 FCC Rcd at 646-47, para. 7. At the state level, state and local emergency operations managers activate the EAS by utilizing state-designated EAS entry points—specifically, State Primary stations and “State Relay” stations. *See* 47 CFR § 11.18. State Relay stations relay both national and state emergency messages to local areas. *See id.* § 11.18(d).

¹⁸ *See Fifth Report and Order*, 27 FCC Rcd 642, 654-55, paras. 26-28.

¹⁹ CAP is an open, interoperable, XML-based standard that can be used to convey a wide variety of information. *See* OASIS CAP v1.2 (IPAWS Profile for the OASIS Common Alerting Protocol IPAWS USA). CAP messages contain standardized fields that facilitate interoperability between and among devices. *See id.* CAP also is backward-compatible with the EAS Protocol in so much as it can be used to relay the same data. *See* 47 CFR § 11.56 (EAS Participants must be capable of converting CAP EAS alerts messages into EAS Protocol-compliant messages for distribution over the legacy EAS); *see also Fifth Report and Order*, 27 FCC Rcd at 644-45, para. 4 (adopting CAP-related requirements).

²⁰ *See* 47 CFR § 11.31(a).

²¹ *See Fifth Report and Order*, 27 FCC Rcd 642, 654-55, paras. 26-28.

²² EAS Participants are required to convert CAP alert messages into messages that comply with the EAS Protocol requirements for distribution over the legacy EAS in accordance with the EAS-CAP Industry Group's (ECIG) Recommendations for a CAP EAS Implementation Guide, Version 1.0 (May 17, 2010) (“ECIG Implementation Guide”) (this document is available on ECIG's web site at: <http://eas-cap.org/documents.htm>) (last visited Jan. 20, 2021). *See* 47 CFR § 11.56.

portion of its broadcast, but the audio portion of its alert broadcast would adhere to the legacy EAS Protocol format.²³

6. *Legacy and CAP EAS Visual Messages.* EAS alerts are composed by Tribal, state, local, federal, and territorial alert originators. The alert originator chooses the applicable header codes and typically provides the audio message.²⁴ Because the legacy EAS does not relay text or other visual information, video service EAS Participants (e.g., TV broadcasters or cable providers) are required to construct a visual message (as a text crawl that scrolls across the top of the TV or other visual display device, or as block text overlaid on the screen) from the alert's header codes, which again identify the "who, what, where, and when" of the alert.²⁵ For example, the visual crawl for a legacy EAS tornado alert would look something like this: "The National Weather Service has issued a Tornado Warning for Washington, DC, beginning at 5:30 p.m. and ending at 6:30 p.m."²⁶ The terms used are taken directly from the EAS Protocol, but there are no requirements for transitional language between the required elements, thus, there may be slight wording variations among the various EAS device models in use.²⁷ Because the visual message is derived from these predefined terms, if the terms are unclear, the resulting visual message may be unclear.²⁸ Furthermore, because currently the content of the visual message

²³ Because the legacy EAS architecture only relays audio, none of the visual, data or text information that might be included in a CAP alert can be forwarded to monitoring stations using the legacy EAS; however, all EAS Participants are required to monitor IPAWS for CAP alerts and therefore can acquire the CAP alert with this information absent connectivity issues with the Internet.

²⁴ Alert audio messages for State and Local Area alerts are effectively limited to two minutes in length, however, there are no requirements regarding the audio message content, which is composed in its entirety by the alert originator. See 47 CFR § 11.33(a)(9). Alert originators are not required to provide an audio message, but customarily do, since the audio message is the only articulated message that is conveyed for radio services. For CAP alerts, if no audio file (or link to streaming audio) is provided by the alert originator, EAS Participants will generate audio based on the enhanced text, if included, or the same header code elements as are used in the visual crawl, using Text-to-Speech (TTS) technology, if installed in their EAS device. See ECIG Implementation Guide, § 3.5.1.

²⁵ See 47 CFR § 11.51(d), (g)(3), (h)(3) and (j)(2). The visual message can be formulated as a visual crawl or block text (whereby the text is not scrolled but rather the entire visual message is shown on the screen). Block text typically is employed only by cable systems that force tune subscribers to a given channel wherein the alert audio is played and the visual message is displayed using block text. See 47 CFR § 11.51(g)(5), (h)(5). EAS Participants' EAS equipment constructs the visual crawl automatically from the applicable codes – there is no human involvement in this process. Under the current rules, EAS Participants do not alter the audio or visual components of the alert message. (Slight variation in visual messages may arise due to a lack of uniformity in transitional words employed by different EAS device models connecting the predefined header code terms in the message text, not as a result of editing by EAS Participants.)

²⁶ The EAS Participant's call sign also would be included at the end of the text.

²⁷ See 47 CFR § 11.31. The "originator" code (ORG) is defined at section 11.31(c), and listed at section 11.31(d); the "event" code (EEE) is defined at section 11.31(c) and listed at section 11.31(e); the "location" code (PSSCCC) is defined at section 11.31(c); and the valid time period (+TTTT) is defined at section 11.31(c) based off the alert's release date/time stamp (JJJHHMM) also defined at section 11.31(c). In the Tornado Warning example, the header code elements are as follows: the originator is the National Weather Service (originator code: WXR); the emergency event type is "Tornado Warning" (event code: TOR); the affected geographic area is Washington, DC (location code: 11001); and the valid time period of the alert is 5:30 p.m. until 6:30 p.m. (composed from a date/time stamp equating to 5:30 p.m. and a valid time period equating to one hour).

²⁸ In the case of nationwide EAS tests issued over the legacy EAS, for example, the visual message may be difficult to follow because the header code terms from which it is constructed are technical terms that may not lend themselves to readily understandable messaging. The terminology for the nationwide test originator code – "PEP," is defined as "Primary Entry Point system" – and the event code – "NPT," is defined as "National Periodic Test." Taken together, they convey information that may appear technical and not entirely clear to the public. Specifically, the visual crawl for nationwide EAS tests currently will read as follows (with some variation among EAS device

(continued....)

generated from legacy EAS alerts is limited to the fixed header code terms, while the audio message content is not limited (except for duration), and may include whatever information the alert originator deems appropriate, the visual crawl and audio message will match only if the alert originator records an audio message that verbalizes only the header code-based informational elements used to generate the visual crawl. As indicated, the construction of the audio message is at the discretion of the alert originator.

7. By contrast, CAP can relay text and other visual information and, thus, the visual requirements for EAS alerts received in CAP are more expansive. Specifically, if a video service EAS Participant receives a CAP alert containing text in the “enhanced text” field, the EAS Participant is required to construct the visual crawl from that text.²⁹ Thus, with CAP alerts, the alert originator can include enhanced text that transcribes the audio message verbiage, beyond the basic header code-based information conveyed in legacy EAS alerts, enabling the visual messages broadcast by the EAS Participant receiving that CAP alert to convey more expansive information.³⁰ In adopting this requirement, the Commission observed that such functionality would make a significant advance in providing more informative alerts for all Americans and, in particular, members of the deaf and hard of hearing communities.³¹

8. In sum, whether issued in legacy EAS or CAP, alert originators have the capability to ensure that the information in the visual and audio messages for the EAS alerts they issue match. For legacy EAS, for which the visual message is limited to the “who, what, where and when” information contained in the alert header codes, the alert originator could record an audio message that contains only such header code information, thus ensuring that the visual and audio messages match (although such approach might result in an audio message that offers less information about the emergency than the alert originator might wish to provide). For CAP, the alert originator could include a transcription of the audio message in the enhanced text field – which is used to generate the visual message for CAP alerts – thus allowing for matching visual and audio messages (and that can convey significantly more information than the “who, what, where, and when” information contained in the alert header codes).³² While we recognize that some alert originators may not desire to match their audio messages to the visual messages

models): “The Primary Entry Point system has issued a National Periodic Test for the United States beginning at [time] and ending at [time].” (The EAS Participant’s call sign may also be included at the end of the text.) The visual crawl (or block text) constructed for a CAP-based nationwide EAS test may include additional information, but always will include this header code-based text at the start of that visual crawl. *See* ECIG Implementation Guide, § 3.6.4.1.

²⁹ *See* 47 CFR § 11.51(d), (g)(3), (h)(3) and (j)(2). The enhanced text field for CAP alerts is limited to 1,800 characters, which includes the “originator” code, “event” code, “location” code(s), and valid time period that form the header codes for legacy EAS alerts. These codes are still required in the CAP-based visual message (as the first sentence thereof). *See* ECIG Implementation Guide, § 3.6.4.1. As indicated, whether or not enhanced text is provided by the alert originator, the first sentence of the CAP visual message will be constructed from the header code information in the same manner as the visual message generated for legacy EAS alerts. *See id.*

³⁰ The one caveat is that the visual crawl must still include the “who, what, when and where” header code-based information required for visual crawls generated from legacy EAS alerts, thus, the audio message verbiage would need to articulate those header code elements to fully match. As indicated, for CAP alerts that do not already include an audio file (or a link to streaming audio), EAS Participants generate an audio message using TTS technology, if installed in the EAS device. The basis for such TTS-generated audio is the enhanced text (if included) or the basic header code information. *See* ECIG Implementation Guide, § 3.5.1. Accordingly, if no audio file is included in a CAP alert by the alert originator, the TTS-generated audio will match the visual crawl (because it will be verbalized from the same text).

³¹ *Fifth Report and Order*, 27 FCC Rcd at 655, para. 30.

³² As indicated, the “who, what, where, and when” header code information is still required to be in the CAP visual message – i.e., included in the enhanced text field – and forms the CAP visual message if no enhanced text is provided by the alert originator.

if doing so requires providing less information over the audio message than they might otherwise, we also acknowledge that promoting consistency between the information conveyed in the audio and visual messages may improve the overall efficacy and accessibility of the EAS.³³

9. Against this backdrop, the NPRM proposals below aim to, in the near term, more fully enable alert originators improve the language of the visual crawl constructed for nationwide EAS tests so that it more clearly presents the critical informational elements describing the alert, increasing its efficacy for the public.³⁴ We also seek to promote the use of CAP EAS alerts so as to increase the opportunities for alert originators to distribute alerts with matching audio and visual components, thus promoting accessibility of the EAS for all Americans, including persons with disabilities.³⁵ The NOI examines possible measures to enable the delivery of EAS alerts with fully matching visual and audio components in the longer term, as well as other information that could potentially increase the alerts' efficacy.³⁶

III. NOTICE OF PROPOSED RULEMAKING

A. Clarifying the Visual Message for Nationwide Tests of the EAS

10. We propose to clarify the visual crawl for legacy-based nationwide EAS tests by requiring video service EAS Participants to use scripted text for the nationwide test visual message (as opposed to constructing the visual crawl from the header code terminology). As noted earlier, the existing terminology used for the nationwide test originator and event codes convey information that may not be readily understandable to the public.³⁷ For CAP-based nationwide tests of the EAS, we propose to clarify the visual crawl by revising the terminology of the header codes used for the nationwide test (from which the first sentence of the CAP-based visual message is constructed). We believe these changes will

³³ Currently, the EAS rules address accessibility primarily in terms of ensuring that the visual crawl is readable and the audio message is heard in full. *See, e.g.*, 47 CFR § 11.51(d), (g)(3), (h)(3) and (j)(2). When it last addressed EAS accessibility requirements in 2015, the Commission declined to mandate that the audio and visual messages match, noting both that alert originators “have primary control over audiovisual synchronicity” as “the only party in a position to initiate a message that contains audio and text elements,” and that technical complications to synchronization can result from signal processing equipment downstream from the EAS equipment at EAS Participant facilities. *See Review of the Emergency Alert System*, Sixth Report and Order, 30 FCC Rcd 6520, 6542, para. 47 (2015) (*Sixth Report and Order*).

³⁴ This action is consistent with our request for comment, made in the *NDAA21 FNPRM*, on FEMA's recommendation to revise the PEP originator code terminology – “Primary Entry Point system” – which is used along with the NPT event code terminology to form the visual message for the nationwide EAS test, and the “EAN” event code acronym and terminology. *See Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System; Wireless Emergency Alerts*, PS Docket Nos. 15-94 and 15-91, Report and Order and Further Notice of Proposed Rulemaking, FCC 21-77, WL 2594854, at 25-26, para. 49-50 (June 17, 2021) (*NDAA21 FNPRM*). Those recommendations were grounded in improving the clarity of the visual message generated for alerts using those codes. *See id.* Because the PEP code terminology is used alongside the NPT code terminology in generating the visual crawl for the nationwide EAS test, related discussions in that proceeding may inform comments in this proceeding.

³⁵ *See, e.g., Public Safety And Homeland Security Bureau Issues Reminder Of Upcoming Nationwide Test Of The Emergency Alert System And Opt-In Wireless Emergency Alerts On August 11, 2021*, Public Notice, DA 21-955 (PSHSB August 5, 2021) (in which the Bureau acknowledged the importance of ensuring accessibility of legacy EAS alerts, and the disparity between the text and the audio message, further indicating that it is working with FEMA to examine potential technical solutions, and that an initiative on potential measures for action would be opened by the agency this year).

³⁶ *See id.*; *Sixth Report and Order*, 30 FCC Rcd at 6542, paras. 47-8.

³⁷ *See supra* note 28. *See also NDAA21 FNPRM* at 26, para. 50 (seeking comment on FEMA's recommendation to change the “PEP” originator code terminology from “Primary Entry Point system” to “National Authority” on grounds that the use of “Primary Entry Point system” in EAS visual messages may be confusing to the public).

clarify the critical informational elements included in nationwide EAS tests, particularly for members of the public that cannot access the audio message.

11. *Clarifying the Legacy EAS-based Visual Message for Nationwide EAS Tests.* We propose to require video service EAS Participants to use the following script as the visual crawl (or block text) whenever they receive a legacy EAS Protocol-formatted alert containing the NPT event code and the “All-U.S.” geographic location code (instead of generating a visual crawl or block text from the header codes): “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.”³⁸ We believe that requiring video service EAS Participants to use the proposed script for the nationwide test offers the benefit of providing additional language beyond the header code elements to make the script more readily understandable, and will enable a visual message that is uniform across all EAS device models. In addition, because the nationwide EAS test does not reflect an actual emergency, a single scripted message should be capable of sufficiently and comprehensively conveying the critical informational elements of the test in plain language. Additionally, using this more easily-understood scripted visual message creates the opportunity for the test message originator to arrange for the audio component of the message to match the visual component, should it choose to do so. This proposed script approach would only apply to legacy EAS nationwide tests – not CAP-based nationwide tests – because CAP already provides a mechanism to include enhanced text in the visual crawl.

12. *Clarifying the CAP-based Visual Message for Nationwide EAS Tests.* Although CAP provides the capability to include enhanced text beyond the header code-based, “who, what, where, and when” of the alert, in the visual message, the header code-based information always is included at the beginning of the nationwide test visual message.³⁹ We propose to change the terminology for the nationwide test event code (“NPT”) from “National Periodic Test” to “Nationwide Test of the Emergency Alert System.” Under this proposal, the system event code would remain “NPT” – only the terminology that code represents (which is what the public sees) would change. Because the event code terminology is included in the visual message for CAP alerts, changing the NPT terminology to “Nationwide Test of the Emergency Alert System” should improve the visual information displayed for CAP-based nationwide EAS tests so that members of the public can obtain the critical informational elements of the alert visually in a clearer and more readily understandable manner.

13. In the *NDAA21 FNPRM*, we sought comment on FEMA’s recommendation that we change the terminology used for the “PEP” originator code (which also is used to construct the nationwide EAS test visual crawl) from “Primary Entry Point system” to “National Authority.”⁴⁰ If this proposal from the *NDAA21 FNPRM* were adopted, taken together, these two proposed changes would change the minimum required information in the CAP-based nationwide test visual crawl (or block text) from “The Primary Entry Point system has issued a National Periodic Test for the United States beginning at [time] and ending at [time]” to “The National Authority has issued a Nationwide Test of the

³⁸ The time period information would be derived from the alert’s release date/time (JJJHHMM) and valid time period (+ TTTT) header codes just as the visual crawl for all legacy EAS alerts currently is constructed. *See supra* note 27.

³⁹ *See supra* note 29.

⁴⁰ *See NDAA21 FNPRM* at 26, para. 50.

Emergency Alert System for the United States beginning at [time] and ending at [time].”⁴¹ Any enhanced text included for the CAP-based nationwide EAS test by FEMA would follow.⁴²

14. We seek comment on whether these proposals will improve the public’s understanding of the critical elements of a nationwide EAS test. How would accessibility for individuals with disabilities be enhanced by these proposals? With respect to requiring video service EAS Participants to rely on a script for legacy nationwide EAS tests, is this approach preferable to relying solely upon changing the NPT event code (and possibly PEP originator code) terminology for relaying the critical elements concerning the test? Is the proposed script sufficient, or should it be revised for greater clarity? If the proposal for scripting the visual message for legacy-based nationwide EAS tests is adopted, should it also be applied to CAP-based nationwide EAS tests to maintain consistency between the visual messages created for legacy – and CAP-based nationwide EAS tests or would such an approach limit additional flexibility for communicating emergency alert information that CAP otherwise affords? Would changing the NPT event code terminology to “Nationwide Test of the Emergency Alert System” (possibly also changing the PEP originator code terminology) make the visual message for CAP-based nationwide EAS tests more understandable and informative, or would different language be clearer? If so, what alternative language is preferable? Are there particular concerns with changing the terminology of the NPT event code? Should the requirement to construct the minimum required information in the visual message for CAP alerts from the applicable header codes be eliminated for CAP-based NPT alerts that include enhanced text, thus allowing FEMA to create the entire visual message for such alerts? Regardless of whether the PEP originator code terminology from the *NDAA21 FNPRM* is adopted, should we still change the NPT event code terminology as proposed?

15. We seek comment on implementation of these proposals. Could the proposed NPT code terminology change and script be effectuated in EAS devices via a software update? Could these proposed changes be effectuated in all EAS device models, and at what cost? We ask commenters to discuss how long it would take to develop the necessary software updates, and for EAS Participants to install such updates once they are available. Would these changes have any impact on EAS test processing or the validity of test results? Would these changes have any impact on processing systems downstream from the EAS device that generate the visual crawl? We observe that the proposed script requires the valid time period to be generated using the alert’s header code information – does that make it more difficult to implement within existing EAS equipment models? Is including the valid time period in the visual message necessary for the scripted and/or header code-based visual messages generated for the nationwide EAS test?⁴³ Are there costs or other burdens arising from our proposal beyond updating EAS devices? For example, would these proposed changes require amending existing cable or other system standards? Are there more efficient and less burdensome alternatives to changing the NPT

⁴¹ The EAS Participant’s call sign may also be included at the end of the text. If only the NPT event code terminology were changed, as proposed herein, and the current PEP originator code terminology were retained, the visual crawl for the nationwide EAS test would instead read: “The Primary Entry Point system has issued a Nationwide Test of the Emergency Alert System for the United States beginning at [time] and ending at [time].”

⁴² We acknowledge that EAS Participants may receive a legacy version of the CAP-based nationwide EAS test alert prior to receiving the CAP version. See *infra* note 46. In such occurrences, absent a requirement to check for a CAP version of the test alert (which we are not proposing here for the NPT), the scripted visual message for NPT alerts, if adopted, would apply. If the scripted visual message proposal for legacy-based nationwide EAS tests were not adopted, however, and the NPT code terminology proposed herein were adopted, the visual message for legacy-based EAS nationwide tests would be constructed from the header codes, and mirror the minimum required, header code-based visual message for CAP-based nationwide EAS tests, minus any enhanced text that might have been included in the CAP version.

⁴³ The valid time period is required for alert validation within the EAS Participants’ EAS equipment. See 47 CFR § 11.33(a)(10). The question here is whether that time frame needs to be included in the alert visual message for purposes of visually expressing that the broadcast of the NPT alert is a test, or whether excluding it enhances that message, at least in the case of the scripted visual message, by removing any notion that it might be one of a series of test alerts within that time frame.

terminology and script approach that might achieve comparable results? Since conducting nationwide EAS tests using the legacy EAS, as FEMA occasionally does, is intended, in part, to test the reliability of delivery of the EAN (Presidential) alert – the visual message for which is constructed from the header codes (i.e., not scripted) – would requiring a scripted visual message for the nationwide tests using the legacy EAS reduce their effectiveness for testing the EAS’s performance in processing the EAN?

16. We also seek comment on what public safety benefits would arise from our proposal. While it is possible for the audio message in a legacy EAS nationwide test alert to include different information than the visual message, is the information conveyed by the proposed NPT terminology and/or script changes sufficient to ensure that any person unable to access the audio will nonetheless have all the information reasonably necessary to understand that a nationwide test is underway, as opposed to an actual emergency that might require action on their part?

17. Are there other EAS alert events (e.g., forest fires or flash flooding) that would benefit from using a uniform scripted visual message rather than the current header code-based approach to visual messaging? To the extent that commenters believe a scripted approach might improve the visual message for other alert events, we request that they provide proposed language for those messages. Would such action be more costly to implement than implementation of the scripted visual message for only the NPT alert? Are there alternatives to our proposals that would result in visual crawl information that fully matches the audio message information, or that would be more useful to those who are unable to access the audio message, including those who are deaf or hard of hearing, even if the visual and audio content of the alert do not match? Would the benefit of implementing our proposed changes or any alternative approach a commenter may suggest exceed whatever costs are associated with their implementation? Although we do not propose to apply the script approach to CAP-based nationwide EAS test alerts (because CAP already provides for relaying enhanced text to form the visual message), would either the NPT terminology change or script approach require changes to the ECIG Implementation Guide, which governs CAP-to-EAS protocol conversion, and if so, what revisions would be required? What adjustments, if any, should the Commission consider making to its proposals to account for their impact on smaller entities (e.g., EAS Participants, equipment manufacturers)?

B. Increasing the Use of CAP

18. To promote the use of CAP and its capacity to provide matching visual and audio messages, we propose to require EAS Participants, when they receive a legacy State or Local Area EAS⁴⁴ alert, to poll the IPAWS CAP EAS server to confirm whether there is a CAP version of that alert, and if so, use that CAP version instead of the legacy version.⁴⁵ EAS Participants typically receive legacy and

⁴⁴ State and Local Area alerts include weather alerts issued by NWS and alerts issued by state and local alerting authorities, such as 911 Telephone Outage Emergency and Hazardous Materials Warning alerts. *See* 47 CFR § 11.311. Although currently for weather emergency messages the FEMA IPAWS EAS Atom Feed is blocked per NWS request due to unrelated technical issues, when these issues are resolved we anticipate that some NWS weather alerts may be delivered to EAS participants using CAP. *See* CSRIC VII, Working Group 1, *Report on Recommendations To Resolve Duplicate National Weather Service Alerts* 11 (March 10, 2021) available at <https://www.fcc.gov/about-fcc/advisory-committees/communications-security-reliability-and-interoperability-council-vii>. The Commission currently is reviewing the findings and recommendations in this report.

⁴⁵ The Commission last addressed this issue in the *Blue Alert Order*, concluding that checking for a CAP version of a received State or Local Area legacy EAS alert is consistent with the processing rules for State and Local Area EAS alerts. *See Amendment of Part 11 of the Commission’s Rules Regarding Emergency Alert System*, PS Docket No. 15-94, Report and Order, 32 FCC Rcd 10812, 10817, para. 11 (2017) (*Blue Alerts Order*). The Commission did not mandate its use but rather permitted it. *See id.* The Commission declined to address the use of such CAP polling for the EAN or NPT. *See id.* at note 44. The Commission also declined to address the meaning of “immediately” for processing alerts that use the EAN and NPT codes (*citing* 47 CFR §§ 11.31(e), 11.51(n), 11.54(a)). *See id.*

CAP versions of the same alert at different times.⁴⁶ Currently, our rules do not specify any preference as to which version of the alert – legacy or CAP – is processed and delivered to recipients. The rules permit but do not require EAS Participants to check for CAP versions of State and Local Area legacy EAS alerts. Unless the EAS Participant has programmed its EAS equipment to check for a CAP version of the alert upon receiving a legacy version, the EAS equipment will process whichever is received first. As indicated above, CAP allows alert originators to relay enhanced text that can transcribe full audio messages, thus providing for visual messages that can match longer audio messages as compared to legacy EAS. Any action that increases the likelihood that the CAP version of a given alert will be processed over the legacy alert version makes it more likely that alerts will be broadcast with more information, potentially including matching visual and audio messages. Accordingly, we believe this proposal would increase access to more informative visual text information from the EAS for all, including persons with disabilities.

19. We seek comment on this proposal, and whether our proposal would increase EAS accessibility for those individuals who cannot access the audio message, including those who are deaf and hard of hearing. Could such a change be effectuated in EAS devices via a software update? Could such change be effectuated in all EAS device models, and at what cost? We ask commenters to discuss how long it would take to develop the necessary software updates and for EAS Participants to install such updates, and at what cost. Are there other costs or other burdens arising from our proposal beyond updating EAS devices? Would implementing this proposal require changes to the ECIG Implementation Guide, and if so, what changes would be required? What alternatives to our proposal exist for requiring EAS Participants to poll IPAWS for CAP alerts, and would any such alternatives better enable delivery of matching visual and audio information to those with hearing disabilities in a less burdensome manner? Would the benefit of implementing this change exceed whatever costs might be imposed by implementing it? Are there other actions (including steps besides rule revisions) the Commission can take to promote greater usage of CAP? Apart from our EAS rules governing EAS Participants, are there ways the Commission can facilitate alert originators' use of CAP to initiate EAS alerts with enhanced text that transcribes the verbiage in the audio message? What public safety benefits would arise from our proposal, particularly for members of the public with hearing disabilities? While our CAP prioritization proposal is premised largely upon increasing the distribution of EAS alerts with matching (or similar information, if it does not compromise the quality of the emergency information) visual and audio messages, CAP can relay a wide variety of information, such as hazard symbols, maps and video files. Apart from the proposed revisions to our EAS rules, are there other aspects of CAP we should explore or enable to increase the utility of the EAS to alert originators and the public, and in particular, persons with disabilities?

⁴⁶ This is due to the distribution architecture for legacy and CAP alert distribution. EAS Participants poll the IPAWS CAP EAS server at regular intervals, set by the EAS Participant (typically between 30 second and one minute) to acquire CAP alerts. In between these polling cycles, an EAS Participant can receive a legacy version of an EAS alert issued in CAP. Specifically, an upstream monitored source may acquire and process the CAP version of the alert from the IPAWS CAP EAS server, convert such alert into a legacy EAS alert, and broadcast it to the public; a downstream EAS Participant monitoring such broadcast may receive that legacy EAS alert in between its polling cycles for checking the IPAWS CAP EAS server (in other words, the CAP version was made available on the IPAWS CAP EAS server after the EAS Participant's last polling cycle, but during the interim before its next polling cycle that would have acquired the CAP alert, in between which, the EAS Participant received the legacy version of that alert). There are also delays associated with processing and broadcasting alerts in legacy format, such as delays associated with downstream system processing routines, which vary from one EAS Participant to another. These processing delays can also impact whether a CAP version of an alert is acquired before receiving the legacy version (the longer the processing delay in transmitting the legacy version of the alert, the more likely that a monitoring station's CAP polling cycle will occur and the CAP version will be acquired before receiving such legacy version). In addition, EAS Participants are allotted 15 minutes to broadcast received State and Local Area alerts (the EAN and NPT alerts are required to be aired "immediately"), which also can impact the likelihood of acquiring the CAP version of an alert prior to the legacy version. *See, e.g.*, 47 CFR §§ 11.51(m)(2), (n).

20. We do not propose to extend our proposed CAP prioritization mandate to the nationwide EAS test because that test often is used to test the EAS's performance in distributing the Presidential EAN message under circumstances where only legacy EAS is available.⁴⁷ Requiring EAS Participants to check for a CAP version of a legacy-only nationwide EAS test alert would not mirror how the Presidential EAN traditionally has functioned within the EAS. We nonetheless seek comment on whether there are compelling reasons why we should extend the mandate to check for CAP versions of received legacy alerts to received legacy nationwide EAS test alerts and/or the EAN. Would checking for a CAP version of a legacy-based NPT or EAN alert have any appreciable impact on the requirement to process such alerts "immediately"?⁴⁸ We understand CAP not to have the capability to carry a live audio message in near real-time consistent with the expectations for the EAN. Is this correct? Do problems with Internet connectivity arise with any regularity that prevent the CAP version of an alert from being acquired? Should EAS Participants be allowed some minimum time frame, for example, 5-15 seconds, upon polling IPAWS for a CAP version of the received State or Local Area (or NPT or EAN) legacy alert to account for delays in the polling process, before determining that no CAP version is available? Should the CAP prioritization proposal include the Required Monthly Test and Required Weekly Test, which are classified as national alerts rather than State and Local Area alerts?

21. We seek comment on alternatives to our proposal regarding polling for CAP alerting, including what adjustments, if any, the Commission should consider to account for the impact of this proposal on smaller entities.

22. We note that in order to effectively codify the proposals herein, some wording changes clarifying national alert processing requirements and terminology are proposed in Appendix A.⁴⁹ Some of these changes may not be directly implicated by the proposals herein, but are indirectly implicated in that they involve overlapping terms or operational elements that the proposed rule changes seek to harmonize to enhance clarity and ensure administrative efficiency. Accordingly, we seek comment specifically on the proposed rules in Appendix A.

23. *Digital Equity and Inclusion.* Finally, the Commission, as part of its continuing effort to advance digital equity for all,⁵⁰ including people of color, persons with disabilities, persons who live in

⁴⁷ The nationwide EAS has been used to test the performance of the EAS without relying on Internet connectivity. See FEMA, *Frequently Asked Questions for 2021 IPAWS National Test*, <https://www.fema.gov/fact-sheet/frequently-asked-questions-2021-ipaws-national-test> (last visited November 18, 2021). It is unlikely that the President would be using the EAN to communicate to the American public were the regular platforms for communications distribution, such as TV, radio, cable, satellite, and the Internet, functioning normally, because the President could more effectively use such platforms to get his or her message to the public. In any national emergency causing the President to issue an EAN, the worst-case assumption is that the regular communications platforms (and the Internet) are or soon will be incapacitated, whereas the EAS likely would still be sufficiently operational to reach most of the public due to its resiliency. See, e.g., *Fifth Report and Order*, 27 FCC Rcd 642, 654-55, paras. 26-28. Moreover, neither the ECIG Implementation Guide nor the IPAWS standards currently specify complete operational parameters for processing streaming sessions – particularly with respect to streaming a "live" audio Presidential alert – thus, the capability to issue the Presidential EAN via IPAWS currently is not available.

⁴⁸ See, e.g., 47 CFR §§ 11.51(m)(2), (n), 11.52(e)(2).

⁴⁹ For example, section 11.51(m) currently states, among other things, that "[i]f an EAS source originates an EAS message with the Event codes in this paragraph [currently, EAN and RMT], it must include the location codes for the State and counties in its service area." 47 CFR § 11.51(m). We propose to clarify that by changing the sentence to read: "If an EAS source originates an EAS message with the Event codes in this paragraph, it must include the location codes for the State and counties in its service area (except for national event codes using the "All U.S." location code, which includes all States and counties)." See also, e.g., the proposed amendments in Appendix A to 47 CFR §§ 11.52(d)(2) and 11.55(c).

⁵⁰ Section 1 of the Communications Act of 1934 as amended provides that the FCC "regulat[es] interstate and foreign commerce in communication by wire and radio so as to make [such service] available, so far as possible, to

(continued...)

rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations⁵¹ and benefits (if any) that may be associated with the proposals and issues discussed herein. Specifically, we seek comment on how our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well the scope of the Commission’s relevant legal authority.

IV. NOTICE OF INQUIRY

24. In this NOI we seek comment on further steps that can be taken to improve the accessibility and utility of the EAS. Specifically, we seek comment on whether and how the legacy EAS architecture could be modified to enable alert originators to relay visual information matching the audio components of their legacy EAS alerts. We also seek comment on other improvements and redesigns to the EAS architecture that might enable greater functionality and accessibility within the system as a whole.

25. As explained above, the EAS enables the President or the President’s authorized designee to communicate with the public during an emergency, as specified under section 706(c) of the Communications Act (as amended), by providing a mechanism to take command of EAS Participants’ audio transmission to deliver an audio address to the public in times of national emergencies.⁵² Being an audio-based system designed to deliver an audio message to the public, the legacy EAS architecture was not designed with visual display of text in mind, and has only a limited capacity to relay visual information. For legacy EAS-based alerts, alert originators currently can generate an audio message that verbalizes the header code elements used to generate the visual message, thus ensuring that the information in both the visual and audio messages match. Such approach, however, may leave time in the two-minute allotment for the audio message unused – time that could be used to include information beyond the “who, what, where and when” of the alert, such as remedial measures to ameliorate or avoid the emergency event’s impact.⁵³ Fully utilizing the two-minute audio, on the other hand, could mean that the visual information will not match the audio information, resulting in different or less information conveyed visually to people who are unable to access the audio portion of the alert. Accordingly, we seek to explore whether and how the legacy EAS might be modified, augmented, or redesigned to enable the distribution of text sufficient to transcribe the entirety of a two-minute audio message, as well as potentially other functionalities, and whether this can be done without compromising the integrity of the implementation by the FCC and the relevant Executive Branch agencies of the Presidential directions issued pursuant to section 706(c) of the Act. More broadly, we seek comment on whether and how a

all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex.” 47 U.S.C. § 151.

⁵¹ The term “equity” is used here consistent with Executive Order 13985 as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. *See* Exec. Order No. 13985, 86 Fed. Reg. 7009, Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (January 20, 2021).

⁵² *See* 47 U.S.C. § 606(c) (which states, in pertinent part: “Upon proclamation by the President that there exists war or a threat of war, or a state of public peril or disaster or other national emergency . . . the President . . . may authorize the use or control of any [station for radio communication, or any device capable of emitting electromagnetic radiations between 10 kilocycles and 100,000 megacycles] and/or its apparatus and equipment, by any department of the Government under such regulations as he may prescribe . . .”). The legacy EAS enables this communication through the issuance of an EAN, which effectively redirects the audio broadcast of all EAS Participants to the President for as long as the President requires. *See, e.g.*, 47 CFR §§ 11.1, 11.2(a), 11.33(a)(9) and (11), 11.51(m), 11.52(e), 11.54(a).

⁵³ *See supra* note 24.

modified, augmented, or redesigned EAS could better ensure and enhance the quality of the individual elements of the alert, such as readability of the visual component, sound quality of the audio component, alert information conveyed, accessibility for persons with visual and hearing disabilities, and accessibility by persons who do not speak English. Such improvements would be ones that alert originators could choose to utilize.

26. First, short of redesigning the entire system, how could the legacy EAS architecture be modified or augmented to enable alert originators to distribute text sufficient to transcribe a two-minute audio message? As described above, the legacy EAS uses AFSK modulation to convert data into audible tones, but that process is cumbersome and theoretically would result in a tone roughly 30 seconds in length for average two-minute audio verbiage (approximately 1,800 characters of text).⁵⁴ Is it feasible to utilize the existing AFSK modulation process to relay sufficient text to match the verbiage in a two-minute audio message, and assuming it is, could the resulting tone be integrated into the existing legacy EAS alert construct? Is there a practical limit to how long an added audible tone can be before the overall number and duration of tones in the alert cause an adverse reaction among the public and EAS Participants? Is there a more functional compression or modulation scheme that could replace AFSK and deliver the same EAS Protocol information as well as additional data to more generally improve accessibility for persons with disabilities, yet function across all EAS Participant services and still deliver “live” audio (and possibly video)? Is there a mechanism that could be employed in parallel with the legacy EAS to deliver text matching the audio information to and among EAS Participants, such as using a subchannel of a digital transmission? Can we take advantage of digital transmission standards like ATSC 3.0 and HDR standards to improve EAS’s capabilities, if EAS Participants elect to use them?⁵⁵ Are there commonalities among the broadcast transmission standards in use today that would allow the transmission of CAP alerts or more useful information, such as hazard symbols, text, video files, and other information, that could be integrated into the legacy EAS architecture? Could the visual message for an EAS alert be displayed as a picture-in-picture instead of a visual crawl? Would packetizing the alert or other measures ensure good audio quality for alerts distributed using the legacy EAS? Is there some other mechanism whereby CAP alerts could be distributed over-the-air to and among EAS Participants? Are there other modifications or augmentations of the legacy EAS architecture, short of

⁵⁴ The AFSK modulation process converts data into audible tones at a rate of 520.83 bits per second, which equates to 65.1 characters per second. See 47 CFR § 11.31(a)(1). Thus, for example, 650 characters of text would equate to a 10-second audible tone. All data tones in the legacy EAS are repeated twice (for a total of three tonal bursts), each followed by a one-second pause, to validate the content (using bit-by-bit comparison to confirm that at least two of the tones match), which would equate to 30 seconds of audible tones to process 650 characters of text. See 47 CFR §§ 11.31(c), 11.33(a)(10). Those 30 seconds of audible tones would occur prior to the audio message, along with roughly 22 seconds of audible tones associated with the header codes and the attention signal. And 650 characters does not reflect an average two-minute audio message. The character limit for enhanced text in CAP alerts, which is intended to reflect the number of characters in a two-minute audio message, is 1,800 characters (minus the number of characters required to compose the required header code text string, which is included in the CAP visual crawl formation). Relaying 1,800 characters in legacy EAS form would require an audio tone of just under 30 seconds, or 1.5 minutes, if repeated twice (not including roughly 22 seconds of seconds of audible tones associated with the header codes and the attention signal). It is not technically feasible to modulate and transmit text for “live” audio using the AFSK modulation process. Thus, the Presidential audio, which is assumed to be “live,” cannot be converted to a visual crawl within the legacy EAS architecture.

⁵⁵ See, e.g., Communications Security, Reliability, and Interoperability Council (CSRIC) VI, Working Group 2, Final Report – Comprehensive Re-imagining of Emergency Alerting – Amended (Dec. 13, 2018), available at <https://www.fcc.gov/file/14854/download> (CSRIC 2018 Report). VI, WG2, Final Report; ATSC, *SPECIAL REPORT: ‘RE-IMAGINING’ EMERGENCY ALERTING WITH ATSC 3.0* (July 10, 2018), <https://www.atsc.org/news/special-report-re-imagining-emergency-alerting-with-atsc-3-0>; Xperi Holding Corporation Comments, PS Docket Nos. 15-94, 15-91 (rec. May 11, 2021) (<https://ecfsapi.fcc.gov/file/105111691606932/Xperi%20EAS%20NOI%20Comments.pdf>); Xperi Holding Corporation, UPGRADING THE EMERGENCY ALERT SYSTEM: HD RADIO™ DIGITAL EMERGENCY ALERTING (February 2019), <http://www.insideradio.com/app/Image2019/EASHD.pdf>.

redesigning the entire system, that could improve accessibility for all persons that might receive EAS alerts?

27. What burdens and costs would be associated with pursuing any such modification or augmentation? What kind of preliminary and final testing would be required? Would existing EAS devices need to be modified or replaced? At what cost? Would downstream processing systems be affected? Would consumer and enterprise emergency radios be affected? Would receipt of legacy NWS alerts be affected? Would the benefits of enabling the delivery of text matching the audio message verbiage outweigh the costs of making any such modification or augmentation? Would pursuing any such modification or augmentation enable Presidential emergency communications under section 706(c) of the Act?

28. Rather than focusing on ways to modify or augment the legacy EAS to relay text or CAP, would it make sense to use legacy EAS only for the EAN (i.e., national emergencies) and NPT (to test the legacy system's performance in delivering the EAN), but require use of CAP for all other alerts?⁵⁶ Would such an approach maximize the chances for distribution of alerts with matching visual and audio elements? Would there be any additional benefits, such as resolving the current undetectable duplicate alert issue associated with CAP-based NWS alerts?⁵⁷ Is the CAP distribution system, which depends on IP links, sufficiently resilient and reliable to serve as the sole mechanism for delivery of State and Local Area alerts?⁵⁸ What are commenters' views on the Commission's legal authority to require that State and Local Area alerts distributed via the EAS be initiated in CAP? Would such an action place any burdens on, or otherwise be objectionable to Tribal, state, local, and territorial alert originators or EAS Participants?

29. If the legacy EAS cannot reasonably be modified or augmented to enable alert originators to distribute text sufficient to transcribe a two-minute audio message, should the legacy EAS architecture be redesigned altogether? The legacy EAS is audio-based, and daisy chain-based, because a relatively small number of hardened, full-power AM radio stations can reach 90 percent of the continental U.S. population, potentially allowing the President to communicate to the public during a national emergency. The system is centered on the EAS Protocol because it allows for automated EAS operation on the EAS Participants' parts, and it is the same protocol used for NWS alerts broadcast over the National Weather Radio system. When the Commission adopted the CAP EAS rules in 2012, it kept the legacy EAS because of its resiliency in the face of a national emergency, and because there was no fully CAP-centric system in place – where EAS messages are inputted and outputted in CAP format rather than the EAS Protocol format – to replace it.⁵⁹ Do these factors remain as true and relevant today? Can the EAS architecture be redesigned to achieve the resiliency and automation provided by the legacy EAS (including delivery of “live” audio), but with the functionalities provided with CAP – such as a system where the alert is still delivered over-the-air using daisy chain distribution, but the alert is formatted in CAP, with “live” audio enabled by an instruction in the CAP contents? What burdens and costs would be associated with pursuing such a redesign? What kind of preliminary and final testing would be required? Would existing EAS devices need to be modified or replaced? At what cost? Would downstream processing systems be affected? Would consumer and enterprise emergency radios be affected? Would receipt of legacy NWS alerts be affected? Would pursuing such a wholesale redesign of the EAS enable Presidential emergency communications under section 706(c) of the Act? Are there other ways that a

⁵⁶ See, e.g., Communications Security, Reliability, and Interoperability Council (CSRIC) VI, Working Group 2, Final Report – Comprehensive Re-imagining of Emergency Alerting – Amended (Dec. 13, 2018) at 23, available at <https://www.fcc.gov/file/14854/download> (CSRIC 2018 Report).

⁵⁷ See *supra* note 44.

⁵⁸ We are not suggesting that EAS Participants would be required to process State and Local Area alerts whether distributed in CAP or legacy EAS. Some State and Local Area alert originators may be of the opinion that being able to initiate EAS alerts in the legacy EAS Protocol format is necessary as a back-up to IP-based CAP alert distribution via IPAWS.

⁵⁹ See *Fifth Report and Order*, 27 FCC Rcd at 654, para. 27.

redesign of the EAS architecture could promote accessibility of EAS alerts for all persons who might receive them, including persons with disabilities? To the extent that the Commission should rely on legal authority other than that listed herein to support more fundamental changes to EAS, commenters should identify such sources of legal authority.

V. PROCEDURAL MATTERS

30. *Ex Parte Rules.*—The Notice of Proposed Rulemaking portion of this proceeding shall be treated as “permit-but-disclose” proceedings in accordance with the Commission’s *ex parte* rules.⁶⁰ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must: (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made; and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

31. *Comment Filing Procedures.* —Interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). *See* Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.
- Paper Filers: Parties that choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
- Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.
 - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701
 - Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street, NE, Washington DC 20554
- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19.

⁶⁰ The Notice of Inquiry portion of this proceeding is exempt from the *ex parte* rules. *See, e.g.*, 47 CFR §1204(b)(1).

- During the time the Commission’s building is closed to the general public and until further notice, if more than one docket or rulemaking number appears in the caption of a proceeding, paper filers need not submit two additional copies for each additional docket or rulemaking number; an original and one copy are sufficient.

32. *People with Disabilities:* 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.

33. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA),⁶¹ requires that a regulatory flexibility analysis be prepared for notice and comment rulemaking proceedings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.”⁶² Accordingly, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of rule and policy change proposals on small entities in the Further Notice of Proposed Rulemaking. The IRFA is set forth in Appendix A.

34. *Initial Paperwork Reduction Act Analysis.* This Notice of Proposed Rulemaking may contain potential new or revised information collection requirements. Therefore, we seek comment on potential new or revised information collections subject to the Paperwork Reduction Act of 1995.⁶³ If the Commission adopts any new or revised information collection requirements, the Commission will publish a notice in the Federal Register inviting the general public and the Office of Management and Budget to comment on the information collection requirements, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

35. *Further Information.* For further information regarding the Notice of Proposed Rulemaking and the Notice of Inquiry, contact David Munson, Attorney Advisor, Public Safety and Homeland Security Bureau at 202-418-2921 or via e-mail at David.Munson@fcc.gov.

VI. ORDERING CLAUSES

36. 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 713 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 613 and Section 202 of the Twenty-First Century Communications and Video Accessibility Act of 2010, as amended (also codified at 47 U.S.C. § 613), that this Notice of Proposed Rulemaking and Notice of Inquiry in PS Docket Nos. 15-94 ARE HEREBY ADOPTED and ARE EFFECTIVE upon publication in the *Federal Register*.

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

FEDERAL COMMUNICATIONS COMMISSION

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

⁶² *Id.* § 605(b).

⁶³ Public Law 104-13.

Marlene H. Dortch
Secretary

APPENDIX A

Proposed 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 is revised to read as follows:

Authority: 47 U.S.C. 151, 152, 154(i), 154(o), 301, 303(r), 303(v), 307, 309, 335, 403, 544(g), 606, and 613, and Pub. L. 116-283, 134 Stat. 3388, § 9201.

2. Amend § 11.31 by revising paragraph (e) to read as follows:

§ 11.31 EAS protocol.

* * * * *

(e) The following Event (EEE) codes are presently authorized:

Nature of activation	Event codes
National Codes (Required):	
Emergency Action Notification (National only)	EAN.
National Information Center	NIC
Nationwide Test of the Emergency Alert System	NPT.
Required Monthly Test	RMT.
Required Weekly Test	RWT.
State and Local Codes (Optional):	
Administrative Message	ADR.
Avalanche Warning	AVW.
Avalanche Watch	AVA.

Blizzard Warning	BZW.
Blue Alert	BLU.
Child Abduction Emergency	CAE.
Civil Danger Warning	CDW.
Civil Emergency Message	CEM.
Coastal Flood Warning	CFW.
Coastal Flood Watch	CFA.
Dust Storm Warning	DSW.
Earthquake Warning	EQW.
Evacuation Immediate	EVI.
Extreme Wind Warning	EWV.
Fire Warning	FRW.
Flash Flood Warning	FFW.
Flash Flood Watch	FFA.
Flash Flood Statement	FFS.
Flood Warning	FLW.
Flood Watch	FLA.
Flood Statement	FLS.
Hazardous Materials Warning	HMW.
High Wind Warning	HWV.

High Wind Watch	HWA.
Hurricane Warning	HUW.
Hurricane Watch	HUA.
Hurricane Statement	HLS.
Law Enforcement Warning	LEW.
Local Area Emergency	LAE.
Network Message Notification	NMN.
911 Telephone Outage Emergency	TOE.
Nuclear Power Plant Warning	NUW.
Practice/Demo Warning	DMO.
Radiological Hazard Warning	RHW.
Severe Thunderstorm Warning	SVR.
Severe Thunderstorm Watch	SVA.
Severe Weather Statement	SVS.
Shelter in Place Warning	SPW
Special Marine Warning	SMW.
Special Weather Statement	SPS.
Storm Surge Watch	SSA.
Storm Surge Warning	SSW.
Tornado Warning	TOR.

Tornado Watch	TOA.
Tropical Storm Warning	TRW.
Tropical Storm Watch	TRA.
Tsunami Warning	TSW.
Tsunami Watch	TSA.
Volcano Warning	VOW.
Winter Storm Warning	WSW.
Winter Storm Watch	WSA.

* * * * *

3. Amend § 11.51 by revising paragraphs (d), (g)(3), (h)(3), (j)(2) and (m) to read as follows:

§ 11.51 EAS code and Attention Signal Transmission requirements.

* * * * *

(d) Analog and digital television broadcast stations shall transmit a visual message containing the Originator, Event, Location and the valid time period of an EAS message, except that for national test alerts (EAS messages using the NPT Event code) received in the EAS Protocol format (as opposed to the Common Alerting Protocol (CAP) format), with the “All U.S.” location code specified at § 11.31(f), the required visual message shall state the following: “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.”

Note: The “from [time] until [time]” portion of the message shall be determined from the alert’s release date/time (JJJHHMM) and valid time period (+TTTT) header codes specified at § 11.31(c).

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).

(1) * * * * *

(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, except that for national test alerts (EAS messages using the NPT Event code) received in the EAS Protocol format (as opposed to the CAP format), with the “All U.S.” location code specified at § 11.31(f), the required visual message shall state the following: “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.”

Note: The “from [time] until [time]” portion of the message shall be determined from the alert’s release date/time (JJJHHMM) and valid time period (+TTTT) header codes specified at § 11.31(c).

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).

(i) * * * * *

(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, except that for national test alerts (EAS messages using the NPT Event code) received in the EAS Protocol format (as opposed to the CAP format), with the “All U.S.” location code specified at § 11.31(f), the required visual message shall state the following: “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.”

Note: The “from [time] until [time]” portion of the message shall be determined from the alert’s release date/time (JJJHHMM) and valid time period (+TTTT) header codes specified at § 11.31(c).

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).

(i) * * * * *

(j) * * *

(2) The visual message shall contain the Originator, Event, Location, and the valid time period of the EAS message, except that for national test alerts (EAS messages using the NPT Event code) received in the EAS Protocol format (as opposed to the CAP format), with the “All U.S.” location code specified at § 11.31(f), the required visual message shall state the following: “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.”

Note: The “from [time] until [time]” portion of the message shall be determined from the alert’s release date/time (JJJHHMM) and valid time period (+TTTT) header codes specified at § 11.31(c).

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).

(i) * * * * *

(m) EAS Participants are required to transmit all received EAS messages in which the header code contains the Event codes for Emergency Action Notification (EAN), Nationwide Test of the Emergency Alert System (NPT), and Required Monthly Test (RMT), and when the accompanying location codes include their State or State/county. These EAS messages shall be retransmitted unchanged except for the LLLLLLLL-code which identifies the EAS Participant retransmitting the message. See § 11.31(c). If an

EAS source originates an EAS message with the Event codes in this paragraph, it must include the location codes for the State and counties in its service area (except for national event codes using the “All U.S.” location code, which includes all States and counties). When transmitting the required weekly test, EAS Participants shall use the event code RWT. The location codes are the State and county for the broadcast station city of license or system community or city. Other location codes may be included upon approval of station or system management. EAS messages may be transmitted automatically or manually.

(1) * * *

(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 national 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.

* * * * *

4. Amend § 11.51 by revising paragraphs (d)(2) and (e), and adding new paragraph (d)(5) to read as follows:

§ 11.52 EAS code and Attention Signal Monitoring requirements.

* * * * *

(d) * * *

(2) With respect to monitoring EAS messages formatted in accordance with the specifications set forth in § 11.56(a)(2), EAS Participants’ EAS equipment must interface with the Federal Emergency Management Agency’s Integrated Public Alert and Warning System (IPAWS) EAS Atom Feed to enable the distribution of Common Alert Protocol (CAP)-formatted alert messages from the IPAWS system to EAS Participants’ EAS equipment.

* * *

(5) Immediately upon receipt of a State or Local EAS message that has been formatted in the EAS Protocol, EAS Participants must poll the IPAWS EAS Atom Feed to determine whether a CAP-formatted version of that received EAS Protocol-formatted alert is available, and if a CAP version of the alert is

available, acquire and process that CAP version instead of the EAS Protocol-formatted version, as specified in § 11.55(c).

* * * * *

(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), Nationwide Test of the Emergency Alert System (NPT), or the Required Monthly Test (RMT) for their State or State/county location.

(1) * * *

(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 national 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, NPT, RMT and RWT Event header codes with the appropriate accompanying location codes.

* * * * *

5. Amend § 11.55 by revising paragraph (c) to read as follows:

§ 11.55 EAS operation during a State or Local Area emergency.

* * * * *

(c) Immediately upon receipt of a State or Local Area EAS message that has been formatted in the EAS Protocol, EAS Participants must poll the Federal Emergency Management Agency's Integrated Public Alert and Warning System (IPAWS) EAS Atom Feed to determine whether a Common Alerting Protocol (CAP)-formatted version of that received EAS Protocol-formatted alert is available, and if a CAP version of the alert is available, acquire and process that CAP version instead of the EAS Protocol-formatted version. Following this step, whether processing the alert formatted in the EAS Protocol or CAP, EAS Participants participating in the State or Local Area EAS must do the following:

* * * * *

6. Amend § 11.61 by revising paragraph (a)(3)(i) to read as follows:

§ 11.61 Tests of EAS procedures.

* * * * *

(a) * * *

(3) National tests.

(i) All EAS Participants shall participate in national tests as scheduled by the Commission in consultation with the Federal Emergency Management Agency (FEMA). Such tests will use the NPT event code and may be initiated in the EAS Protocol format and/or the Common Alerting Protocol (CAP) format. If an EAS Participant receives a national test alert (an EAS message using the NPT Event code) in the EAS Protocol format (as opposed to the CAP format), with the “All U.S.” location code specified at § 11.31(f), and is required to transmit a visual message, such visual message shall state the following: “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.”

Note: The “from [time] until [time]” portion of the message shall be determined from the alert’s release date/time (JJJHHMM) and valid time period (+TTTT) header codes specified at § 11.31(c).

Visual messages derived from CAP-formatted national test alerts 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).

(ii) * * * * *

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),⁶⁴ the Commission has prepared this 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 Notice of Proposed Rulemaking (*Notice*). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Notice*. The Commission will send a copy of the *Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).⁶⁵ In addition, the *Notice* and IRFA (or summaries thereof) will be published in the Federal Register.⁶⁶

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

2. In the *Notice*, the Commission seeks comment on proposed changes to the Emergency Alert System (EAS) rules associated with visual messages constructed from legacy EAS-based alerts and visual messages constructed from Common Alerting Protocol (CAP)-formatted alerts. Specifically, the Commission seeks comment on proposed rule changes to: (i) replace the EAS National Periodic Test (or “NPT”) event code terminology from “National Periodic Test” to “Nationwide Test of the Emergency Alert System”; (ii) require EAS Participants to use the following scripted text: “This is a nationwide test of the Emergency Alert System issued by the Federal Emergency Management Agency covering the United States from [time] until [time]. This is only a test. No action is required by the public.” as the visual crawl (or block text) whenever they receive a legacy EAS alert containing the NPT event code and the “All-U.S.” geographic location code (instead of generating a visual crawl or block text from the header codes); and (iii) require EAS Participants to poll the Integrated Public Alert and Warning System (IPAWS) CAP EAS server when they receive a state or local legacy EAS-based alert to confirm whether there is a CAP version of that alert, and if so, use the CAP version instead of the legacy EAS-based version. The proposed rule changes are intended to improve the clarity and descriptiveness of the visual messages generated for nationwide EAS test alerts and State and Local Area alerts issued using the legacy EAS; improve the chances that visual messages for State and Local Area alerts will contain the same information contained in the audio message, so members of the public who are unable to access the audio message of the alert are able to receive critical informational elements of an EAS test in plain, understandable language; and increase the use of CAP alerting which has superior visual messaging capabilities relative to legacy EAS

B. Legal Basis

3. The proposed action is authorized pursuant to Sections 1, 2, 4(i), 4(o), 301, 303(r), 303(v), 307, 309, 335, 403, 624(g), 706, and 713 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 613 and Section 202 of the Twenty-First Century Communications and Video Accessibility Act of 2010, as amended (also codified at 47 U.S.C. § 613).

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will 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 proposed rules, if adopted.⁶⁷ The RFA generally

⁶⁴ See 5 U.S.C. § 603. The RFA, 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).

⁶⁵ See 5 U.S.C. § 603(a).

⁶⁶ See *id.*

⁶⁷ See *id.*

defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁶⁸ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁶⁹ A “small business 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.⁷⁰

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 broad groups of small entities that could be directly affected herein.⁷¹ First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA’s Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.⁷² These types of small businesses represent 99.9% of all businesses in the United States which translates to 30.7 million businesses.⁷³

6. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”⁷⁴ Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.⁷⁵ Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.⁷⁶

7. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special

⁶⁸ *See id.*

⁶⁹ *See id.* (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 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.”

⁷⁰ 15 U.S.C. § 632.

⁷¹ *See* 5 U.S.C. § 601(3)-(6).

⁷² *See* SBA, Office of Advocacy, “What’s New With Small Business,” <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf> (Sept. 2019).

⁷³ *Id.*

⁷⁴ 5 U.S.C. § 601(4).

⁷⁵ The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. *See* Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), “Who must file,” <https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

⁷⁶ *See* Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

districts, with a population of less than fifty thousand.”⁷⁷ U.S. Census Bureau data from the 2017 Census of Governments indicate that there were 90,056 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.⁷⁸ Of this number there were 36,931 General purpose governments (county⁷⁹, municipal and town or township⁸⁰) with populations of less than 50,000 and 12,040 special purpose governments – independent school districts⁸¹ with enrollment of less than 50,000.⁸² Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”⁸³

8. *Radio Stations.* This Economic Census category comprises establishments primarily engaged in broadcasting aural programs by radio to the public. Programming may originate in their own studio, from an affiliated network, or from external sources.⁸⁴ The SBA has established a small business size standard for this category as firms having \$41.5 million or less in annual receipts.⁸⁵ Economic Census data for 2012 show that 2,849 radio station firms operated during that year.⁸⁶ Of that number, 2,806 firms operated with annual receipts of less than \$25 million per year, 17 with annual receipts

⁷⁷ 5 U.S.C. § 601(5).

⁷⁸ See U.S. Census Bureau, 2017 Census of Governments—Organization, Table 2. Local Governments by Type and State: 2017 [CG1700ORG02], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also Table 2. CG1700ORG02 Table Notes_Local Governments by Type and State_2017.

⁷⁹ See *id* at Table 5, County Governments by Population-Size Group and State: 2017 [CG1700ORG05], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township)

⁸⁰ See *id* at Table 6, Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

⁸¹ See *id* at Table 10, Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. See also Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes Special Purpose Local Governments by State_Census Years 1942 to 2017.

⁸² While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

⁸³ This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

⁸⁴ See U.S. Census Bureau, 2017 NAICS Definition, “515112 Radio Stations,” <https://www.census.gov/naics/?input=515112&year=2017&details=515112>.

⁸⁵ See 13 CFR § 121.201, NAICS Code 515112.

⁸⁶ See U.S. Census Bureau, 2012 Economic Census of the United States, Table ID: EC1251SSSZ4, *Information: Subject Series—Estab and Firm Size: Receipts Size of Firms for the U.S.: 2012*, NAICS Code 515112, <https://data.census.gov/cedsci/table?text=EC1251SSSZ4&n=515112&tid=ECNSIZE2012.EC1251SSSZ4&hidePrevIew=false>.

between \$25 million and \$49,999,999 million and 26 with annual receipts of \$50 million or more.⁸⁷ Therefore, based on the SBA's size standard the majority of such entities are small entities.

9. In addition to the U.S. Census Bureau's data, based on Commission data we estimate that there are 4,560 licensed AM radio stations, 6,704 commercial FM radio stations and 8,339 FM translator and booster stations.⁸⁸ The Commission has also determined that there are 4,196 noncommercial educational (NCE) FM radio stations.⁸⁹ The Commission however does not compile and does not otherwise have access to information on the revenue of NCE stations that would permit it to determine how many such stations would qualify as small entities under the SBA size standard.

10. We also note, that in assessing whether a business entity qualifies as small under the above definition, business control affiliations must be included.⁹⁰ The Commission's estimate therefore likely overstates the number of small entities that might be affected by its action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. In addition, to be determined a "small business," an entity may not be dominant in its field of operation.⁹¹ We further note, that it is difficult at times to assess these criteria in the context of media entities, and the estimate of small businesses to which these rules may apply does not exclude any radio station from the definition of a small business on these bases, thus our estimate of small businesses may therefore be over-inclusive. Also, as noted above, an additional element of the definition of "small business" is that the entity must be independently owned and operated. The Commission notes that it is difficult at times to assess these criteria in the context of media entities and the estimates of small businesses to which they apply may be over-inclusive to this extent.

11. *FM Translator Stations and Low-Power FM Stations.* FM translators and Low Power FM Stations are classified in the category of Radio Stations and are assigned the same NAICS Code as licensees of radio stations.⁹² This U.S. industry, Radio Stations, comprises establishments primarily engaged in broadcasting aural programs by radio to the public.⁹³ Programming may originate in their own studio, from an affiliated network, or from external sources.⁹⁴ The SBA has established a small business size standard which consists of all radio stations whose annual receipts are \$38.5 million dollars or less.⁹⁵ U.S. Census Bureau data for 2012 indicate that 2,849 radio station firms operated during that year.⁹⁶ Of that number, 2,806 operated with annual receipts of less than \$25 million per year, 17 with annual receipts

⁸⁷ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁸⁸ See Broadcast Station Totals as of September 30, 2020, FCC News Release (rel. Oct. 2, 2020) (Sept. 30, 2020 Broadcast Station Totals), <https://docs.fcc.gov/public/attachments/DOC-367270A1.pdf>.

⁸⁹ See *id.*

⁹⁰ "[Business concerns] are affiliates of each other when one concern controls or has the power to control the other, or a third party or parties controls or has power to control both." 13 CFR § 121.103(a)(1).

⁹¹ 13 CFR § 121.102(b).

⁹² See U.S. Census Bureau, 2017 NAICS Definition, "515112 Radio Stations," <https://www.census.gov/naics/?input=515112&year=2017&details=515112>.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ See 13 CFR § 121.201, NAICS Code 515112.

⁹⁶ See U.S. Census Bureau, 2012 Economic Census of the United States, Table ID: EC1251SSSZ4, *Information: Subject Series—Estab and Firm Size: Receipts Size of Firms for the U.S.:2012*, NAICS Code 515112, <https://data.census.gov/cedsci/table?text=EC1251SSSZ4&n=515112&tid=ECNSIZE2012.EC1251SSSZ4&hidePreview=false>.

between \$25 million and \$49,999,999 million and 26 with annual receipts of \$50 million or more.⁹⁷ Therefore, based on the SBA's size standard we conclude that the majority of FM Translator Stations and Low Power FM Stations are small.

12. We note again, however, that in assessing whether a business concern qualifies as "small" under the above definition, business (control) affiliations must be included.⁹⁸ Because we do not include or aggregate revenues from affiliated companies in determining whether an entity meets the applicable revenue threshold, our estimate of the number of small radio broadcast stations affected is likely overstated. In addition, as noted above, one element of the definition of "small business" is that an entity would not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific radio broadcast station is dominant in its field of operation. Accordingly, our estimate of small radio stations potentially affected by the rule revisions discussed in the NPRM includes those that could be dominant in their field of operation. For this reason, such estimate likely is over-inclusive.

13. *Television Broadcasting.* This Economic Census category "comprises establishments primarily engaged in broadcasting images together with sound."⁹⁹ These establishments operate television broadcast studios and facilities for the programming and transmission of programs to the public.¹⁰⁰ 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 studio, from an affiliated network, or from external sources. The SBA has created the following small business size standard for such businesses: those having \$41.5 million or less in annual receipts.¹⁰¹ The 2012 Economic Census reports that 751 firms in this category operated in that year.¹⁰² Of that number, 656 had annual receipts of \$25,000,000 or less, and 25 had annual receipts between \$25,000,000 and \$49,999,999.¹⁰³ Based on this data we therefore estimate that the majority of commercial television broadcasters are small entities under the applicable SBA size standard.

14. The Commission has estimated the number of licensed commercial television stations to be 1,368.¹⁰⁴ According to Commission staff review of the BIA Kelsey Inc. Media Access Pro Television Database (BIA) on November 16, 2017, 1,258 stations (or about 91 percent) had revenues of \$38.5 million or less, and therefore these licensees qualified as small entities under the SBA definition. In addition, the Commission has estimated the number of licensed noncommercial educational television

⁹⁷ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁹⁸ "[Business concerns] are affiliates of each other when one concern controls or has the power to control the other, or a third party or parties controls or has power to control both." 13 CFR § 121.103(a)(1).

⁹⁹ See U.S. Census Bureau, *2017 NAICS Definition, "515120 Television Broadcasting,"* <https://www.census.gov/naics/?input=515120&year=2017&details=515120>.

¹⁰⁰ *Id.*

¹⁰¹ See 13 CFR § 121.201, NAICS Code 515120.

¹⁰² See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ4, *Information: Subject Series—Estab and Firm Size: Receipts Size of Firms for the U.S.: 2012*, NAICS Code 515120, <https://data.census.gov/cedsci/table?text=EC1251SSSZ4&n=515120&tid=ECNSIZE2012.EC1251SSSZ4&hidePreview=false>.

¹⁰³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁰⁴ See *Broadcast Station Totals* as of September 30, 2020, FCC News Release (rel. Oct. 2, 2020) (Sept. 30, 2020 Broadcast Station Totals), <https://docs.fcc.gov/public/attachments/DOC-367270A1.pdf>.

stations to be 390.¹⁰⁵ Notwithstanding, the Commission does not compile and otherwise does not have access to information on the revenue of NCE stations that would permit it to determine how many such stations would qualify as small entities. There are also 2,246 low power television stations, including Class A stations (LPTV), and 3,543 TV translator stations.¹⁰⁶ Given the nature of these services, we will presume that all of these entities qualify as small entities under the above SBA small business size standard.

15. We note, however, that in assessing whether a business concern qualifies as “small” under the above definition, business (control) affiliations¹⁰⁷ must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. In addition, another element of the definition of “small business” requires that an entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television broadcast station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply does not exclude any television station from the definition of a small business on this basis and is therefore possibly over-inclusive. Also, as noted above, an additional element of the definition of “small business” is that the entity must be independently owned and operated. The Commission notes that it is difficult at times to assess these criteria in the context of media entities and its estimates of small businesses to which they apply may be over-inclusive to this extent.

16. *Cable and Other Subscription Programming.* The U.S. Census Bureau defines this industry as 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.¹⁰⁸ The SBA size standard for this industry establishes as small, any company in this category which receives annual receipts of \$41.5 million or less.¹⁰⁹ According to 2012 U.S. Census Bureau data, 367 firms operated for the entire year.¹¹⁰ Of that number, 319 operated with annual receipts of less than \$25 million a year and 48 firms operated with annual receipts of \$25 million or more.¹¹¹ Based on this data, the Commission estimates that the majority of firms operating in this industry are small.

17. *Cable System Operators (Rate Regulation Standard).* The Commission has developed its own small business size standards for the purpose of cable rate regulation. Under the Commission’s

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ “[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has the power to control both.” 13 CFR § 21.103(a)(1).

¹⁰⁸ See U.S. Census Bureau, *2017 NAICS Definition, “515210 Cable and Other Subscription Programming,”* <https://www.census.gov/naics/?input=515210&year=2017&details=515210>.

¹⁰⁹ See 13 CFR 121.201, NAICS Code 515210.

¹¹⁰ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ4, *Information: Subject Series - Estab & Firm Size: Receipts Size of Firms for the U.S.: 2012*, NAICS Code 515210, <https://data.census.gov/cedsci/table?text=EC1251SSSZ4&n=515210&tid=ECNSIZE2012.EC1251SSSZ4&hidePreview=false>.

¹¹¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

rules, a “small cable company” is one serving 400,000 or fewer subscribers nationwide.¹¹² Industry data indicate that there are 4,600 active cable systems in the United States.¹¹³ Of this total, all but five cable operators nationwide are small under the 400,000-subscriber size standard.¹¹⁴ In addition, under the Commission’s rate regulation rules, a “small system” is a cable system serving 15,000 or fewer subscribers.¹¹⁵ Commission records show 4,600 cable systems nationwide.¹¹⁶ Of this total, 3,900 cable systems have fewer than 15,000 subscribers, and 700 systems have 15,000 or more subscribers, based on the same records.¹¹⁷ Thus, under this standard as well, we estimate that most cable systems are small entities.

18. *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 one 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.”¹¹⁸ As of 2019, there were approximately 48,646,056 basic cable video subscribers in the United States.¹¹⁹ Accordingly, an operator serving fewer than 486,460 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.¹²⁰ Based on available data, we find that all but nine incumbent cable operators are small entities under this size standard.¹²¹ 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.¹²² Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million, 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.

¹¹² 47 CFR § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation*, MM Docket No. 92-266, MM Docket No. 93-215, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

¹¹³ The number of active, registered cable systems comes from the Commission’s Cable Operations and Licensing System (COALS) database on August 15, 2015. *See* FCC, *Cable Operations and Licensing System (COALS)*, www.fcc.gov/coals.

¹¹⁴ S&P Global Market Intelligence, *Top Cable MSOs as of 12/2019*, <https://platform.marketintelligence.spglobal.com>. The five cable operators all had more than 400,000 basic cable subscribers.

¹¹⁵ 47 CFR § 76.901(c).

¹¹⁶ *See supra* note 50.

¹¹⁷ *Id.*

¹¹⁸ 47 U.S.C. § 543(m)(2); *see also* 47 CFR § 76.901(e).

¹¹⁹ S&P Global Market Intelligence, *U.S. Cable Subscriber Highlights, Basic Subscribers(actual) 2019, U.S. Cable MSO Industry Total, see also U.S. Multichannel Industry Benchmarks, U.S. Cable Industry Benchmarks, Basic Subscribers 2019Y*, <https://platform.marketintelligence.spglobal.com>.

¹²⁰ 47 CFR § 76.901(e).

¹²¹ S&P Global Market Intelligence, *Top Cable MSOs as of 12/2019*, <https://platform.marketintelligence.spglobal.com>. The five cable operators all had more than 486,460 basic cable subscribers.

¹²² 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(e) of the Commission’s rules. *See* 47 CFR § 76.910(b).

19. *Satellite Telecommunications.* This category comprises firms “primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”¹²³ Satellite telecommunications service providers include satellite and earth station operators. The category has a small business size standard of \$35 million or less in average annual receipts, under SBA rules.¹²⁴ For this category, U.S. Census Bureau data for 2012 show that there was a total of 333 firms that operated for the entire year.¹²⁵ Of this total, 299 firms had annual receipts of less than \$25 million.¹²⁶ Consequently, we estimate that the majority of satellite telecommunications providers are small entities.

20. *All Other Telecommunications.* The “All Other Telecommunications” category is comprised of establishments that are primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.¹²⁷ This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.¹²⁸ Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.¹²⁹ The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$32.5 million or less.¹³⁰ For this category, U.S. Census data for 2012 show that there were 1,442 firms that operated for the entire year.¹³¹ Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million.¹³² Thus, the Commission estimates that the majority of “All Other Telecommunications” firms potentially affected by our action can be considered small.

21. *Broadband Radio Service and Educational Broadband Service.* Broadband Radio Service systems, previously 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

¹²³ See U.S. Census Bureau, *2017 NAICS Definition*, “517410 Satellite Telecommunications,” <https://www.census.gov/naics/?input=517410&year=2017&details=517410>.

¹²⁴ See 13 CFR § 121.201, NAICS Code 517410.

¹²⁵ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ4, *Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the U.S.: 2012*, NAICS Code 517410, <https://data.census.gov/cedsci/table?text=EC1251SSSZ4&n=517410&tid=ECNSIZE2012.EC1251SSSZ4&hidePreview=false&vintage=2012>.

¹²⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹²⁷ See U.S. Census Bureau, *2017 NAICS Definition*, “517919 All Other Telecommunications,” <https://www.census.gov/naics/?input=517919&year=2017&details=517919>.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ See 13 CFR § 121.201, NAICS Code 517919.

¹³¹ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ4, *Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the U.S.: 2012*, NAICS Code 517919, <https://data.census.gov/cedsci/table?text=EC1251SSSZ4&n=517919&tid=ECNSIZE2012.EC1251SSSZ4&hidePreview=false>.

¹³² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)).¹³³

22. *BRS*—In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than \$40 million in the previous three calendar years.¹³⁴ 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 86 incumbent BRS licensees that are considered small entities (18 incumbent BRS licensees do not meet the small business size standard).¹³⁵ After adding the number of small business auction licensees to the number of incumbent licensees not already counted, there are currently approximately 133 BRS licensees that are defined as small businesses under either the SBA or the Commission's rules.

23. In 2009, the Commission conducted Auction 86, the sale of 78 licenses in the BRS areas.¹³⁶ 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) received 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) received a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed \$3 million for the preceding three years (entrepreneur) received a 35 percent discount on its winning bid.¹³⁷ Auction 86 concluded in 2009 with the sale of 61 licenses.¹³⁸ Of the ten winning bidders, two bidders that claimed small business status won 4 licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

24. *EBS*—Educational Broadband Service has been included within the broad economic census category and SBA size standard for Wired Telecommunications Carriers since 2007. Wired Telecommunications Carriers are comprised of 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.”¹³⁹ The

¹³³ *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 and Implementation of Section 309(j) of the Communications Act—Competitive Bidding*, Report and Order, 10 FCC Rcd 9589, 9593, para. 7 (1995).

¹³⁴ 47 CFR § 21.961(b)(1).

¹³⁵ 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.

¹³⁶ *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).

¹³⁷ *Id.* at 8296, para. 73.

¹³⁸ *Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, Down Payments Due November 23, 2009, Final Payments Due December 8, 2009, Ten-Day Petition to Deny Period*, Public Notice, 24 FCC Rcd 13572 (2009).

¹³⁹ See U.S. Census Bureau, *2017 NAICS Definition*, “517311 Wired Telecommunications Carriers,” <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

SBA's small business size standard for this category is all such firms having 1,500 or fewer employees.¹⁴⁰ U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated that year.¹⁴¹ Of this total, 3,083 operated with fewer than 1,000 employees.¹⁴² Thus, under this size standard, the majority of firms in this industry can be considered small. In addition to U.S. Census Bureau data, March 2019 there are 1,300 licensees holding over 2,190 active EBS licenses. The Commission estimates that of these 2,190 licenses, the majority are held by non-profit educational institutions and school districts, which are by statute defined as small businesses.¹⁴³

25. *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 is included in the category of "Wired Telecommunications Carriers."¹⁴⁴ The Wired Telecommunications Carriers 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.¹⁴⁵ Transmission facilities may be based on a single technology or 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.¹⁴⁶ By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.¹⁴⁷ The SBA size standard considers a wireline business is small if it has fewer than 1,500 employees.¹⁴⁸ U.S. Census Bureau data for 2012 indicates that 3,117 wireline companies were operational during that year.¹⁴⁹ Of that number, 3,083 operated with fewer than 1,000 employees.¹⁵⁰ Based on that data, we conclude that the majority of wireline firms are small under the

¹⁴⁰ See 13 CFR § 121.201, NAICS Code 517311 (previously 517110).

¹⁴¹ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms for the U.S.: 2012* NAICS Code 517110, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517110&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false>.

¹⁴² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁴³ 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\(4\)-\(6\)](#).

¹⁴⁴ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers"*, <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

¹⁴⁵ *Id.*

¹⁴⁶ See *id.* 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); CCTV services; VoIP service providers, using own operated wired telecommunications infrastructure; DTH services; telecommunications carriers (wired); satellite television distribution systems; and MMDS.

¹⁴⁷ *Id.*

¹⁴⁸ See 13 CFR § 121.201, NAICS Code 517311 (previously 517110).

¹⁴⁹ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012*, NAICS Code 517110, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517110&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false>.

¹⁵⁰ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

applicable SBA standard. Currently, however, only two entities provide DBS service, which requires a great deal of capital for operation: DIRECTV (owned by AT&T) and DISH Network.¹⁵¹ DIRECTV and DISH Network each report annual revenues that are in excess of the threshold for a small business. Accordingly, we must conclude that internally developed FCC data are persuasive that, in general, DBS service is provided only by large firms.

26. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless Internet access, and wireless video services.¹⁵² The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.¹⁵³ For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.¹⁵⁴ Of this total, 955 firms had employment of 999 or fewer employees, and 12 firms had employment of 1,000 employees or more.¹⁵⁵ Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

27. *Wireless Communications Services*. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined “small business” for the wireless communications services (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years.¹⁵⁶ The SBA has approved these small business size standards.¹⁵⁷ In the Commission’s auction for geographic area licenses in the WCS there were seven winning bidders that qualified as “very small business” entities, and one that qualified as a “small business” entity.¹⁵⁸

28. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing*. This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment.¹⁵⁹ Examples of products made by these

¹⁵¹ See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eighteenth Report*, Table III.A.5, 32 FCC Rcd 568, 595 (Jan. 17, 2017).

¹⁵² See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (except Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁵³ See 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

¹⁵⁴ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePrevious=false&vintage=2012>.

¹⁵⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁵⁶ *Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS)*, Report and Order, 12 FCC Rcd 10785, 10879, para. 194 (1997).

¹⁵⁷ See Letter from Aida Alvarez, Administrator, SBA, to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC (filed Dec. 2, 1998) (*Alvarez Letter 1998*).

¹⁵⁸ See *WCS Auction Closes; Winning Bidders in the Auction of 128 Wireless Communications Licenses; FCC Form 600s Due May 12, 1997*, 12 FCC Rcd 21653, DA-97-886, Report No. AUC-997-14-E (Auction No.14) (April 28, 1997).

¹⁵⁹ See U.S. Census Bureau, *2017 NAICS Definition*, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing,” <https://www.census.gov/naics/?input=334220&year=2017&details=334220>.

establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.¹⁶⁰ The SBA has established a small business size standard for this industry of 1,250 employees or less.¹⁶¹ U.S. Census Bureau data for 2012 shows that 841 establishments operated in this industry in that year.¹⁶² Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees, and 6 establishments operated with 2,500 or more employees.¹⁶³ Based on this data, we conclude that a majority of manufacturers in this industry are small.

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

29. The proposed changes for which comment is sought in the *Notice*, if adopted, would impose new or modified reporting, recordkeeping or other compliance obligations on certain small, as well as other, entities required to distribute EAS alerts to the public (i.e., “EAS Participants”), and that manufacture EAS equipment. At this time the Commission is not currently in a position to determine whether, if adopted, the proposed changes will require small entities to hire attorneys, engineers, consultants, or other professionals to comply and cannot quantify the cost of compliance with the potential rule changes and compliance obligations raised for comment in the *Notice*. In our request for comments on the proposals, we have requested information on the cost of implementing the proposed changes as well as potential alternatives to the proposals, particularly less costly alternatives that should be considered.

30. The Commission’s proposal to replace the EAS event code terminology for the NPT event code from “National Periodic Test” to “Nationwide Test of the Emergency Alert System,” to require using prepared script for the visual message for the legacy-based nationwide EAS test alert, and to require EAS Participants, when they receive a state or local legacy EAS alert, to poll the IPAWS CAP EAS server to confirm whether there is a CAP version of that alert and use that CAP version will likely require EAS equipment manufacturers to develop software updates to implement such changes in deployed EAS equipment and EAS equipment in production. EAS Participants would also be required to acquire and install such software updates in their EAS devices. Any EAS device models currently in deployment incapable of being updated to reflect these proposed changes likely would have to be replaced. Updating or replacing deployed devices to reflect these proposed changes would be at the expense of EAS Participants.

31. To help the Commission more fully evaluate the cost of compliance if we were to adopt the proposed changes, in the *Notice* we request comments on the cost implications to implement these proposals and ask whether there are more efficient and less burdensome alternatives that might achieve the same results, including alternatives specific to smaller entities. We expect the information we receive in comments including cost and benefit analyses, to help the Commission identify and evaluate relevant matters for small entities, including compliance costs and other burdens that may result if the proposed recommendations in the *Notice* were adopted.

¹⁶⁰ *Id.*

¹⁶¹ See 13 CFR § 121.201, NAICS Code 334220.

¹⁶² See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334220, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.

¹⁶³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

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

32. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, 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 such small entities; (3) the use of performance, rather than design, standards; and (4) and exemption from coverage of the rule, or any part thereof, for such small entities.”¹⁶⁴

33. In the *Notice*, the Commission raised for consideration the alternatives discussed below, which could minimize any significant economic impact on small entities, if the EAS proposed rules changes are adopted. The proposed nationwide test event code change is limited in scope and only changes the terminology/text seen by the public. The proposal does not change the system event code for the nationwide EAS tests. The system event code will remain “NPT,” which the Commission believes should minimize the installation burdens borne by EAS Participants. Similarly, the proposed use of scripted text requirement is also limited in scope. Rather than proposing this requirement for both for legacy-based EAS alerts and CAP alerts, we have only proposed the requirement for legacy-based EAS alerts. The Commission recognizes that implementation of the proposed changes associated with the nationwide EAS test alert will require small entities and other EAS Participants to make changes to EAS enabled devices and take additional steps to effectuate. With this in mind, we inquire about the implications for EAS and other equipment, for other EAS and related Commission rules, and for technical and operation plans and protocols relating to implementation of the proposed changes to EAS alerts and seek comment on these matters. In addition, we seek information on the costs that would be incurred and by whom, in implementing the proposed changes, on what, if any ancillary costs would be associated with modifying equipment, and whether the costs of implementing the proposal be would be outweighed by any benefit of making the visual alert crawl more informative to hearing impaired individuals.

34. Having data on the various issues the Commission has raised and requested comment on in the *Notice* relating to the technical feasibility, costs, benefits and the potential impact of implementing the proposed EAS rule changes, including alternatives specific to smaller entities, will assist with the Commission’s evaluation of the economic impact on small entities, and help to determine if the proposed rule changes are adopted, how to minimize any significant economic for small entities and identify any potential alternatives not already considered. The Commission expects to more fully consider the economic impact and alternatives for small entities following the review of comments and reply comments filed in response to the *Notice*. Moreover, the Commission’s evaluation of the comments will shape the final alternatives it considers, the final conclusions it reaches, and the actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities, if any of the proposed rule changes are adopted.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

35. None.

¹⁶⁴ 5 U.S.C. § 603(c)(1)-(4).

**STATEMENT OF
CHAIRWOMAN JESSICA ROSENWORCEL**

Re: *Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System; Wireless Emergency Alerts*, PS Docket Nos. 15-94, Notice of Proposed Rulemaking and Notice of Inquiry (December 14, 2021)

Late last week, a tornado tore through Arkansas, Illinois, Kentucky, Mississippi, Missouri, and Tennessee. It ripped through whole communities, downing trees, flattening homes, and razing businesses. The images are a stark reminder of just what devastating weather can do. But the words about the storm sting, too. Just yesterday, Governor Andy Beshear of Kentucky announced that it may be a week or more before the state has a final count of the deceased. The ages of those who died, he said, ranged from five months to 86 years. Six were younger than 18.

It is hard to know what kind of warning is adequate when freak weather like this comes along. But we do know that we are seeing these kinds of storms with greater frequency. And I think we have a responsibility to improve the warning systems we have, to get people the news they need in an emergency.

For more than half a century, the public has relied on the Emergency Alert System or its predecessor for the broadcast of timely information in disaster. Today, along with Wireless Emergency Alerts, EAS is a critical part of our communications alerting infrastructure. EAS alerts can be generated by a wide range of authorities—from state and local officials to the President of the United States. The National Weather Service can generate these alerts, too. In fact, they issued dozens of them in the six states affected by the tornado.

In disaster, many of us instinctively turn on the television. When EAS alerts are displayed on the screen, they have both an audio component and a visual component. In other words, they feature both a recorded message and a text crawl. But because of the legacy television architecture of EAS, the audio component may not always match the visual text. This can mean that in some circumstances, less information may be conveyed to either those individuals who have access only to the visual component or to those who have access only to the audio component. It can cause real confusion. This is especially true for those with disabilities, who it has been demonstrated have greater difficulty preparing for and recovering from emergency and disaster.

Today's rulemaking and inquiry is an effort to fix this problem and deliver more consistent EAS alerts in disaster. For starters, we propose to improve the script for visual text during nationwide tests of the legacy system. We also propose changes to our rules that would bring similar clarity to nationwide tests using the newer, internet-based common alerting protocol, or CAP. Then, because there is greater ability to include enhanced text with CAP alerts, we propose to require broadcasters to check to see if a CAP version of an alert is available when they receive an emergency alert over the legacy system. Finally, we ask what additional steps can be taken to rethink the architecture of EAS and improve the functionality of the system as a whole.

We're looking for all the good ideas here, both big and small, because we know first-hand

they can make a difference. In fact, the agency's Public Safety and Homeland Security Bureau has been in close contact with FEMA, state and local emergency managers, carriers, and broadcasters in the states the tornado visited last week. We know that improving outreach is vital and that keeping our alerting practices up-to-date is essential—and that is what we seek to do here.

Thank you to the staff who worked on this effort, including Steve Carpenter, Chris Fedeli, Lisa Fowlkes, Nicole McGinnis, Dave Munson, and Renee Roland from the Public Safety and Homeland Security Bureau; David Horowitz, Bill Richardson, and Anjali Singh from the Office of General Counsel; Michelle Schaefer and Emily Talaga from the Office of Economics and Analytics; Kari Hicks and Charles Mathias from the Wireless Telecommunications Bureau; Debra Patkin and Suzy Singleton from the Consumer and Governmental Affairs Bureau; Hillary DeNigro and Evan Morris from the Media Bureau; Shannon Lipp, Jeremy Marcus, and Ashley Tyson from the Enforcement Bureau; and Chana Wilkerson from the Office of Communications Business Opportunities.