

elect to transmit emergency alerts and for the devices and equipment used by such providers for transmitting such alerts.”⁴

2. In this Second Report and Order, we require NCE and public broadcast television stations to install equipment and technologies that will provide these licensees/permittees with the ability to enable the distribution of geo-targeted CMAS alerts to participating CMS providers. As explained in more detail below, in adopting these requirements, our goal is to implement section 602(c) in a manner consistent with the CMAS architecture and technologically neutral rules we adopted in the *CMAS First Report and Order*.⁵ The rules we adopt herein contemplate that NCE and public broadcast television licensees/permittees will provide a redundant, alternate path by which geo-targeted alerts may be received by participating CMS providers.⁶ As discussed below, we do not, in this Second Report and Order, require participating CMS providers to use this alternate path to receive geo-targeted alerts.

3. We also adopt rules requiring participating CMS providers to participate in required monthly testing and additional periodic testing of the interface between the Federal Alert Gateway and the participating CMS Provider Gateway. These testing requirements are consistent with the Commercial Mobile Service Alert Advisory Committee (CMSAAC) recommendations and CMS provider comments in this proceeding.

4. In adopting these rules today, we take another significant step towards implementing one of our highest priorities - - to ensure that all Americans have the capability to receive timely and accurate alerts, warnings and critical information regarding disasters and other emergencies. As we continue to learn from previous disasters such as the recent tornados that raged through our midwestern and southern states, it is essential to enable Americans to take appropriate action to protect their families and themselves from loss of life or serious injury. A comprehensive commercial mobile alerting system will bring great benefit to the public by ensuring that vital information reaches people quickly and efficiently. This Second Report and Order is also consistent with our obligation under Executive Order 13407 to “adopt rules to ensure that communications systems have the capacity to transmit alerts and warnings to the public as part of the public alert and warning system,”⁷ and our mandate under the Communications Act to promote the safety of life and property through the use of wire and radio communication.⁸

⁴ WARN Act, § 602(f).

⁵ The Commercial Mobile Alert System, PS Docket No. 07-287, *First Report and Order*, FCC 08-99, (Apr. 9, 2008) (*CMAS First Report and Order*).

⁶ As discussed in the *CMAS First Report and Order*, the CMAS architecture contemplates that a Federally-administered Alert Aggregator would receive, aggregate and authenticate alerts originated by an authorized alert initiator (*i.e.*, Federal, state, tribal and local government agencies) using the Common Alerting Protocol (CAP). A Federally-administered Alert Gateway would then formulate a 90 character alert based on key fields in the CAP alert sent by the alert initiator and then deliver the alert over a secure, interface to the CMS Provider Gateway. The CMS Provider Gateway would then formulate the alert in a manner consistent with the individual CMS provider’s available delivery technologies, mapping the alert to the associated set of cell sites/paging transceivers and handling congestion within the CMS provider infrastructure. *CMAS First Report and Order*, at ¶ 10.

⁷ Public Alert and Warning System, Exec. Order No. 13407, § 3(b)(iii), 71 Fed. Reg. 36975 (Jun. 26, 2006) (*Executive Order 13407*). In Executive Order 13407, the President noted that it was the “policy of the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in situations of war, terrorist attack, natural disaster, or other hazards to public safety and well-being . . .,” and established certain obligations in this regard for the Department of Homeland Security, the National Oceanic & Atmospheric Administration (NOAA), and the Commission.

⁸ See 47 U.S.C. § 151.

5. Finally, in the FNPRM, we seek comment on whether we should adopt rules that require NCE and public broadcast television station licensees and permittees to test the equipment that they are required to install pursuant to the rules adopted in the Second Report and Order. We also seek comment on how any such testing rules should be implemented.

II. BACKGROUND

6. As we noted in the *CMAS NPRM*,⁹ the WARN Act established a process for CMS providers to elect to transmit emergency alerts to their subscribers. In the almost two years since enactment of the WARN Act, we have been actively working to accomplish that goal and have met all of the WARN Act deadlines to date. Most recently, we released the *CMAS First Report and Order*, in which we adopted technical requirements and protocols necessary to enable CMS alerting by CMS providers who elect to transmit emergency alerts to their subscribers. As noted above, this Second Report and Order implements sections 602(c) and 602(f) of the WARN Act. The Commission will address the remaining WARN Act requirements in subsequent orders.

III. SECOND REPORT AND ORDER

A. Section 602(c) - Digital Television Transmission Towers Retransmission Capability

1. Scope of Section 602(c)

7. Section 602(c) requires the Commission to require "licensees and permittees of noncommercial educational broadcast stations or public broadcast stations (as those terms are defined in section 397(6) of the Communications Act of 1934 (47 U.S.C. 397(6))) to install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter . . ."¹⁰ Section 397(6) of the Communications Act defines the terms "noncommercial educational broadcast station" and "public broadcast station" to mean a television or radio broadcast station which: (1) under the rules and regulations of the Commission in effect on November 2, 1978, is eligible to be licensed by the Commission as a noncommercial educational radio or television broadcast station and which is owned and operated by a public agency or nonprofit private foundation, corporation, or association; or (2) is owned and operated by a municipality and which transmits only noncommercial programs for education purposes.¹¹

8. In the *CMAS NPRM* the Commission sought comment on the scope of section 602(c). We noted that although the caption of section 602(c) refers to digital television transmissions, it mandates that the Commission impose any equipment requirements on licensees and permittees of NCE and public broadcast stations as those terms are defined under section 397(6) of the Communications Act. That provision references both radio and television broadcast stations. We sought comment on this definition as it relates to section 602(c) of the WARN Act. We further asked whether it was a fair reading of the language to conclude that this section applies only to licensees and permittees of NCE and public broadcast television stations. The Association of Public Television Stations (APTS) notes in its comments that datacasting¹² and the equipment required for it depends on the "unique capabilities of

⁹ The Commercial Mobile Alert System, PS Docket No. 07-287, *Notice of Proposed Rulemaking*, 22 FCC Rcd 21975 (2007) (*CMAS NPRM*).

¹⁰ WARN Act § 602(c).

¹¹ 47 U.S.C. § 397(6).

¹² Datacasting is a one-way broadcast service where data is encoded and transmitted over-the-air within a public television station's digital signal. The transmission is then decoded by an inexpensive receiver. Through datacasting, digital public television stations can wirelessly distribute streamed video and data files to computers and
(continued...)

digital television,” and that accordingly, the section applies only to digital television transmission.¹³ DataFM asserts that section 602(c) requires installation of equipment at all NCE and public broadcast stations.¹⁴

9. We conclude that Congress intended the equipment requirements set forth in section 602(c) of the WARN Act to apply only to licensees and permittees of NCE and public broadcast television stations and not radio stations. Section 602(c) requires that the Commission complete a proceeding to require licensees and permittees of NCE or public broadcast stations to install necessary equipment and technologies “on, or as part of, *any broadcast television digital signal transmitter*” (emphasis added) to enable the distribution of geographically targeted alerts by CMS providers. This language clearly shows that Congress intended that these equipment requirements apply only to NCE and public broadcast television stations.¹⁵ The use of the term “any” indicates that if a station lacks a television transmitter – e.g., if the station is a radio broadcast station – there is no installation requirement. Additionally, APTS has indicated that its ability to perform the functions contemplated by section 602(c), enabling the distribution of geographically targeted alerts by participating CMS providers, is dependent on capabilities unique to digital television. For these reasons, we disagree with DataFM’s conclusion that section 602(c) requires installation of equipment at all NCE and public broadcast stations.

2. Necessary Equipment to Support CMS Provider Geo-targeting

10. In the *CMAS NPRM* we sought comment regarding the equipment required by section 602(c) of the WARN Act. Specifically, we asked how this digital television-based system would interface with the CMAS. We also asked how this requirement regarding the geo-targeting of CMAS alerts would fit into a centrally administered CMAS as envisioned by the CMSAAC. Further we sought comment regarding how the digital television-based system would implement the message formats defined by the “C” interface.¹⁶

11. Apart from APTS, no commenters addressed the specific type of equipment that would need to be installed to satisfy section 602(c) of the WARN Act. In its comments and reply comments, APTS argues that by including section 602(c) in the WARN Act, Congress required that datacasting, and the equipment necessary for its implementation, be part of the CMAS.¹⁷ APTS further notes that datacasting equipment would not be inconsistent with the CMAS as recommended by the CMSAAC, but rather would be “one component of a comprehensive alert and warning system that includes necessary redundancies to ensure that the public receives essential information under any

(...continued from previous page)

computer networks – with a capacity equal to thirteen T-1 data lines. *Definition of Datacasting*, The Association of Public Television Stations (APTS), <http://www.pts.org/PTVissues/digitalTV/datacasting.cfm>.

¹³ APTS Comments at 3-4. See also *Definition of Datacasting*, n.12, *infra*.

¹⁴ DataFM February 5, 2008 Comments at 14-15.

¹⁵ Even if the statutory language were unclear, any ambiguity would be removed by the title of this section of the WARN Act: “Digital Television Transmission Towers Retransmission Capability.”

¹⁶ The C interface is a secure interface over which alerts can be passed from the Aggregator/Gateway to the CMS Provider Gateway. Under our rules, the CMS provider must: (1) provide information for the authentication and validation of actions across the interface; (2) be able to receive new, updated or cancelled wireless alert messages from the Alert Gateway in a format that is suitable for the mobile devices and the wireless alert deliver technology or technologies implemented by the CMS provider; and (3) acknowledge the receipt of new, updated or cancelled wireless alert messages. *CMAS First Report and Order*, Appendix C, §§ 10.320-10.530.

¹⁷ APTS Comments at 1-2; APTS Reply Comments at 1-3.

circumstances.”¹⁸ Such redundancies, argues APTS, would enhance the effectiveness and security of the CMAS.¹⁹

12. APTS lists four types of equipment it says NCE/public broadcast television stations would need to install in order to transmit geo-targeted alerts to participating CMS providers.²⁰ In listing this equipment, APTS contemplates that the Public Broadcasting System (PBS) will receive CMAS alerts directly from the Alert Gateway and transmit the CMAS alert data via national satellite feed to NCE/public broadcast television stations.²¹ NCE/public broadcast television stations would then transmit the geo-targeted CMAS alerts via their digital television transmitters to CMS Provider Gateways located in their television service areas, providing a redundant, alternate method of delivery of CMAS alerts to CMS Provider Gateways. APTS describes the equipment needed as follows:

- *“Geo-targeting Systems.”* According to APTS, this equipment would have the capability to activate those NCE and public broadcast digital television transmitters necessary to transmit the CMAS alert to areas in which CMS Provider Gateways are located, while all other NCE and public broadcast digital television transmitters would ignore the CMAS alert transmission.
- *“Groomers.”* APTS states that this equipment (also referred to as “dynamic bitrate capability”) would automatically adjust a selected program service’s video bitrate to make room for CMAS alert data when that data is present. APTS states that such a capability would allow the licensee to have full use of its transmission capability when CMAS alert data is not present. APTS argues that installation of this equipment is necessary for each licensee’s master control (with redundancy) as well as at each licensee’s remote transmitter sites (also with redundancy).
- *“Data Receivers.”* APTS asserts that this equipment is necessary for the stations to receive the CMAS data from PBS.²² APTS proposes that each master control and each remote transmitter have redundant receivers. APTS also proposes that small satellite receive antennas be installed for each remote transmitter should the licensee’s data distribution via its studio-to-transmitter links be unavailable.
- *PBS Equipment.* Additionally, according to APTS, PBS will require equipment to route the CMAS data around its other functions. APTS reports that PBS will receive the CMAS data from appropriate origination point(s), process and bridge the data around the master control systems, and transmit the data via satellite to all licensees, remote transmitters, and other selected receive locations. APTS states that PBS will install redundant systems at both its main Network Operations Center (NOC) and its Disaster Recover Site (DRS), as well as install both data security and physical security at both locations.
- *Back-up Power Equipment.* Finally, APTS recommends that licensees of NCE and public broadcast television stations be required to install back-up power equipment.²³

¹⁸ APTS Reply Comments at 3.

¹⁹ *Id.*

²⁰ APTS Ex Parte Comments, PS Docket No. 07-287 (filed Apr. 24, 2008).

²¹ *Id.* The equipment list provided in APTS’s ex parte comments was submitted as a joint list from APTS and PBS.

²² As noted above, APTS assumes that PBS will provide the feed between the Alert Gateway to the NCE/public broadcast television station licensees/permittees.

²³ APTS Ex Parte Comments, PS Docket No. 07-287 (filed Apr. 24, 2008).

13. In order for NCE/public broadcast television station licensees/permittees to enable geo-targeting by participating CMS providers, they must be able to interface with the CMAS in a manner consistent with the rules adopted in the *CMAS First Report and Order*. We believe that the most appropriate way for them to do this is to install equipment that will allow them to receive CMAS alerts from the Alert Gateway over an interface and then to transmit such alerts to participating CMS providers. Under such an approach, licensees and permittees of NCE/public broadcast television stations would provide a redundant path by which participating CMS providers could receive geo-targeted alerts.²⁴ Accordingly, we require licensees and permittees of NCE/public broadcast television stations to install necessary equipment and technologies at, or as part of, their digital television transmitters that will provide them with the capability to receive CMAS alerts sent from the Alert Gateway over a secure interface and to transmit the alerts to the CMS Provider Gateways of participating CMS providers.

14. As noted above, APTS contemplates that licensees and permittees of NCE/public broadcast television stations will use datacasting technology to receive and deliver CMAS alerts to participating CMS providers. While we believe that datacasting technology and the associated equipment described above is one way of meeting this requirement, we do not want to foreclose other DTV transmitter-based technologies that may exist in the future. Accordingly, in keeping with our technologically neutral policy articulated in the *CMAS First Report and Order*, our rules will allow, but not require, the use of datacasting to fulfill the requirements of section 602(c) and our rules, as long as NCE and public broadcast television station licensees and permittees do so in a manner consistent with the Commission's CMAS rules, including the CMAS architecture previously adopted in the *CMAS First Report and Order*. We also recognize APTS's proposed use of datacasting assumes that PBS will provide a feed from the Alert Gateway to the NCE/public broadcast station digital television transmitters and associated receivers. For purposes of this Order, we assume that PBS or a similarly situated entity will provide the interface feed between the Alert Gateway and the NCE/public broadcast television stations. PBS or a similarly situated entity must work with the Alert Gateway Administrator to establish the necessary interface by which CMAS alerts will be sent to NCE and public broadcast television stations.²⁵

15. We further note that section 606(b) of the WARN Act provides that NCE and public broadcast station licensees and permittees shall be compensated by the Assistant Secretary of Commerce for Communications and Information for reasonable costs incurred in complying with the requirements imposed pursuant to section 602(c) of the WARN Act.²⁶ We note that some, if not all, NCE and public broadcast television stations may need this funding to comply with the equipment requirements we adopt in this Second Report and Order. Accordingly, we will require NCE and public broadcast television station licensees and permittees to install the required equipment no later than 18 months from the date of receipt of the funding permitted under section 606(b) of the WARN Act or 18 months from the effective date of these rules, whichever is later. This should give NCE and public broadcast television stations adequate time to obtain any necessary funding, determine the specific equipment needed and acquire and install that equipment.

²⁴ The *CMAS First Report and Order* adopted the CMAS architecture recommended by the CMSAAC, wherein CMAS alerts will be transported through the Alert Aggregator and Gateway to the CMS Provider Gateway over a secure "C" interface. *CMAS First Report and Order*, at ¶¶ 10-13. Although there would be one logical "C" interface per CMS provider, there could be multiple physical locations, any of which could change over time.

²⁵ The Department of Homeland Security's Federal Emergency Management Agency (FEMA) recently announced that it will perform this Alert Gateway role. See *FEMA to Assume Aggregator/Gateway Role for Nationwide Cell Phone Alert System*, Press Release (May 30, 2008), available at <http://www.fema.gov/news/newsrelease.fema?id=43619> (last viewed June 3, 2008).

²⁶ WARN Act, § 606(b).

16. The approach we take today satisfies section 602(c) and serves the public interest in that it requires NCE and public broadcast television station licensees and permittees to install necessary equipment on, or as part of, their digital television transmitters to enable geo-targeting by participating CMS providers. Our approach also ensures that NCE and public broadcast television station licensees and permittees fulfill this requirement in a way that complements the CMAS architecture envisioned by the CMSAAC and rules we adopted in the *CMAS First Report and Order*. In adopting these rules in this Second Report and Order, we provide participating CMS providers with a redundant, alternate distribution path by which they may choose to receive geo-targeted CMAS alerts from the Alert Gateway.²⁷ As such, this action will provide an increased level of redundancy to the CMAS architecture.²⁸

B. Section 602(f) – Testing

17. Section 602(f) of the WARN Act states that the Commission “shall require by regulation technical testing for commercial mobile service providers that elect to transmit emergency alerts and for the devices and equipment used by such providers for transmitting such alerts.”²⁹ In the *CMAS NPRM*, we sought comment on what type of testing regime the Commission should require.³⁰ We noted that the CMSAAC proposed that, in order to assure the reliability and performance of this new system, certain procedures for logging CMAS alerts at the Alert Gateway and for testing the system at the Alert Gateway and on an end-to-end basis should be implemented.³¹ We sought comment on these proposed procedures, and asked whether they satisfied the requirements of section 602(f) of the WARN Act.³² We also sought comment on whether there should be some form of testing of the CMAS that sends test messages to the mobile device and the subscriber.³³ We noted that the Commission had a testing regime in place for the Emergency Alert System (EAS), and asked whether the EAS testing rules

²⁷ Participating CMS providers must have the capability to receive geo-targeted CMAS alerts directly over the “C” interface as originally contemplated by the CMSAAC and the *CMAS First Report and Order*. See *CMAS First Report and Order*, at ¶ 19 and Appendix C, § 10.320(c) (requiring the CMS Provider Gateway to, among other things, support the defined CMAS “C” interface and associated protocols between the Federal Alert Gateway and the CMS Provider Gateway). Under this Order, CMS providers may choose whether or not to also install capabilities to receive such alerts via the alternate digital television-based pathway provided by NCE/public broadcast television station licensees and permittees as a backup.

²⁸ Section 602(c) solely concerns equipment necessary for NCE and public broadcast stations to successfully enable the distribution of geographically targeted alerts by CMS providers, and does not require that we address the issue of whether the CMAS is, or should be part of, or subsumed within, the Digital Emergency Alert System (DEAS). WARN Act, § 602(c). Accordingly, the questions raised in the *CMAS NPRM* regarding the relationship of the CMAS to the DEAS and other alerting systems need not be addressed in order to fulfill our obligations under section 602(c). Further, the *CMAS First Report and Order* did not adopt a specific technology for the delivery of CMAS alerts, but rather adopted rules that are technologically neutral. Concerns raised in comments about the relationship of the DEAS to the CMAS are irrelevant to the disposition of our obligations under section 602(c) of the WARN Act. See, e.g., AT&T Comments at 9.

²⁹ WARN Act, § 602(f).

³⁰ *CMAS NPRM*, 22 FCC Rcd at 21988-89.

³¹ *Id.* The CMSAAC defines end-to-end testing as “testing from the Alert Initiator to the CMSP Gateway.” According to the CMSAAC, such testing will “verify the A, B, and C reference points, as well as the function of the Alert Aggregator, Alert Gateway, and CMSP Gateway.” See CMSAAC recommendations at § 9.5.

³² *CMAS NPRM*, 22 FCC Rcd at 21988-89.

³³ *Id.* There was discussion of this issue during the October 3 CMSAAC meeting. See Transcript of October 3, 2007 Meeting, at pp. 155-159, available at <http://www.fcc.gov/pshs/docs/advisory/cmsaac/pdf/meeting-transcript100307.pdf> (last viewed May 22, 2008).

offered a model for CMAS testing.³⁴ We noted that in the EAS rules, internal system tests are combined with tests that are heard (or in some cases seen) by the public, and asked whether some similar form of test that alerts the public should be required for the CMAS.³⁵ We asked how subscribers should be made aware of such tests if testing were to involve subscribers.³⁶

18. Commenters generally support the testing regime recommended by the CMSAAC.³⁷ They do not object to testing during development and internal testing, and assume that some sort of logging of results will be part of the ultimate testing process. For example, the California Public Utilities Commission (CAPUC) supports the recommendations of the CMSAAC and endorses thorough testing before deployment.³⁸ Similarly, the National Emergency Numbering Association (NENA) endorses testing and notes that there needs to be ample time devoted to testing the CMAS before its deployment.³⁹ According to the Wireless RERC, there is a need to develop a thorough testing regime to ensure that the CMAS will be accessible and inclusive of all people, including those with disabilities and those who do not speak English.⁴⁰

19. Although all parties that commented on the testing issue agree that a thorough testing regime is essential for an effective CMAS, the parties differ regarding the timing of tests, or whether testing should affect end-users. For example, T-Mobile, Nokia, and Alltel all support testing, but recommend that the Commission follow the CMSAAC recommendations that end-to-end testing be defined as testing between the Alert initiator and the Alert Gateway, and that there be no testing that involves the end-user.⁴¹ According to Nokia, end-user testing would cause unnecessary network use and would result in customer confusion.⁴² AT&T agrees that any CMAS testing regime should follow the CMSAAC recommendations and asserts that "the EAS testing rules do not provide an effective model for testing the CMAS."⁴³ In its reply comments, Interstate Wireless supports testing to end-user "test units."⁴⁴ Similarly, by supporting the EAS testing regime as a model for testing the CMAS, CAPUC inherently supports testing to end-users.⁴⁵ CellCast recommends a separate rulemaking for testing, and believes that testing to the end-user is appropriate.⁴⁶ In its reply comments, CellCast also recommends that the Commission adopt a monthly end-to-end testing requirement.⁴⁷

³⁴ *CMAS NPRM*, 22 FCC Rcd at 21988-89.

³⁵ *Id.*

³⁶ *Id.*

³⁷ See, e.g., T-Mobile Comments at 22, AT&T Comments at 16-17, Alltel Comments at 6, CAPUC Comments at 5, TIA Comments at 7-8. See also CTIA – The Wireless Association® (CTIA) Comments at 6, 10 (acknowledging that the CMAS must be tested).

³⁸ CAPUC Comments at 29.

³⁹ NENA Comments at 4.

⁴⁰ Wireless RERC Comments at 17-18.

⁴¹ T-Mobile Reply Comments at 19, Alltel Comments at 6, Nokia Comments at 5.

⁴² Nokia Comments at 5.

⁴³ AT&T Comments at 17-18.

⁴⁴ Interstate Wireless Reply Comments at 6.

⁴⁵ CAPUC Comments at 29.

⁴⁶ CellCast Comments at 54-55.

⁴⁷ CellCast Reply Comments at 24.

20. In ex parte comments submitted on May 23, 2008, CTIA submitted a proposal for testing requirements that were developed together with Alltel, AT&T, Sprint Nextel, T-Mobile and Verizon Wireless.⁴⁸ Under CTIA's proposal, participating CMS providers would participate in monthly testing of the CMAS system. The monthly test would be initiated by the federally-administered Alert Gateway at a set day and time and would be distributed through the commercial mobile service provider infrastructure and by participating CMS providers over their networks.⁴⁹ Upon receipt of the test message, participating CMS providers would have a 24-hour window to distribute the test message in their CMAS coverage areas in a manner that avoids congestion or other adverse effects on their networks.⁵⁰ Under CTIA's proposal, mobile devices supporting CMAS would not be required to support reception of the required monthly test and participating CMS providers would not be required to deliver required monthly tests to subscriber handsets, but a participating CMS provider may provide mobile devices with the capability for receiving these tests. CTIA's testing proposal also features regular testing from the "C" interface to ensure the ability of the Federal Alert Gateway to communicate with the CMS Provider Gateway.⁵¹

21. We agree with the CMSAAC and most commenters that periodic testing of all components of the CMAS, including the CMS provider's components would serve the public interest and is consistent with the WARN Act.⁵² Accordingly, as recommended by CTIA and several CMS providers, we will require each participating CMS provider to participate in monthly testing of CMAS message delivery to the CMS Provider Gateway and within the CMS providers' infrastructure.⁵³ CMS providers must receive these required monthly test messages and must also distribute those test messages to their coverage area within 24 hours of receipt by the CMS Provider Gateway. CMS providers may determine how this delivery will be accomplished and may stagger the delivery of the required monthly test message over time and over geographic subsets of their coverage area to manage the traffic loads and accommodate maintenance windows. Participating CMS providers must keep an automated log of required monthly test messages received by the CMS Provider Gateway from the Federal Alert Gateway.

22. CMAS required monthly tests will be initiated only by the Federal Alert Gateway Administrator using a defined test message; real event codes and alert messages may not be used for test messages. A participating CMS provider may forego these monthly tests if pre-empted by actual alert traffic or in the event of unforeseen conditions in the CMS provider's infrastructure, but shall indicate this condition by a response code to the Federal Alert Gateway. We will not require that CMS providers make available mobile devices that support reception of the required monthly test. We do, however, allow CMS providers to choose to do so. However, CMS providers that choose not to make the required monthly test available to subscribers must find alternate methods of ensuring that subscriber handsets will be able to receive CMAS alert messages.

23. We also adopt CTIA's recommendation that, in addition to the required monthly test, there should be periodic testing of the interface between the Federal Alert Gateway and each CMS Provider Gateway to ensure the availability and viability of both gateway functions. Additional periodic testing to ensure that the Federal Alert Gateway is able to deliver CMAS alerts to the CMS Provider Gateway

⁴⁸ CTIA Ex Parte Comments at 1 (filed May 23, 2008).

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² See CMSAAC Recommendations at § 9.5.1, T-Mobile Comments at 22, AT&T Comments at 6, Alltel Comments at 6, TIA Comments at 8, CAPUC Comments at 29, Wireless RERC Comments at 17-18.

⁵³ CTIA Ex Parte Comments at 1-4 (filed May 23, 2008).

will further strengthen the reliability of the CMAS. CMS Provider Gateways must send an acknowledgement upon receipt of these interface test messages. CMS providers must comply with these testing requirements no later than the date of deployment of the CMAS, which is the date that CMAS development is complete and the CMAS is functional and capable of providing alerts to the public.⁵⁴ All of these testing requirements are consistent with the testing procedures advocated by CTIA.⁵⁵ We decline, however, to adopt some of the specific testing requirements that CTIA suggests, such as designating a specific day and time for the required monthly test and defining the exact parameters and content of the required monthly test, the expiration time for the required monthly test, and specific details of the periodic tests of the interface between the Federal Alert Gateway and participating CMS Provider Gateways. Because the CMAS must still undergo significant development and the Federal Alert Aggregator and Gateway have just recently been identified, we believe it would be premature to adopt such specific testing requirements at this time.⁵⁶

IV. FURTHER NOTICE OF PROPOSED RULEMAKING

24. In the Second Report and Order we adopt today, we take two further steps towards the establishment of a functioning CMAS. First, we adopt rules that require NCE and public broadcast television station licensees and permittees “to install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit emergency alerts . . .”⁵⁷ Second, we implement section 602(f) of the WARN Act which requires the Commission to adopt rules requiring “technical testing for commercial mobile service providers that elect to transmit emergency alerts and for the devices and equipment used by such providers for transmitting such alerts.”⁵⁸ In this FNPRM, we seek comment on whether we should adopt rules that require NCE and public broadcast television station licensees and permittees to test the equipment that we have required that they install in the attached Second Report and Order. Initially, we seek comment on our authority to require testing of this equipment by NCE and public broadcast television station licensees and permittees. Does our authority to require the testing of NCE and public broadcast television station equipment derive directly from section 602(c) and/or 602(f) of the WARN Act? Does it arise from some other legal authority?

25. In its recommendations, the CMSAAC noted that an important part of a successful CMAS will be the ability to effectively test and troubleshoot the various CMAS components and interfaces.⁵⁹ In this regard, the CMSAAC recommended that the Alert Gateway support several types of testing, including functional testing for the C interface.⁶⁰ Accordingly, as indicated above, we require Participating CMS providers to test CMAS alert delivery across the “C” interface. The rules we adopt today require licensees and permittees of NCE/public broadcast television stations to install necessary equipment and technologies at, or as part of, their digital television transmitters that will provide them with the capability to receive CMAS alerts sent from the Alert Gateway over a secure, alternate

⁵⁴ As noted by the CMSAAC, testing will also be necessary during CMAS development. We strongly encourage, but do not require, all participating CMS providers to participate in testing during development of the CMAS. We will address the issue of the timing of the initial CMAS deployment in a subsequent Order.

⁵⁵ *Id.*

⁵⁶ See *FEMA to Assume Aggregator/Gateway Role for Nationwide Cell Phone Alert System*, Press Release (May 30, 2008), available at <http://www.fema.gov/news/newsrelease.fema?id=43619> (last viewed June 3, 2008).

⁵⁷ WARN Act, § 602(c).

⁵⁸ WARN Act, § 602(f).

⁵⁹ CMSAAC Recommendations ¶ 9.5.1.

⁶⁰ CMSAAC Recommendations ¶ 9.5.2.

interface and to transmit the alerts to the CMS Provider Gateways of participating CMS providers. NCE and public broadcast television station licensees and permittees will, in essence, provide a redundant path by which participating CMS providers will be able to receive geo-targeted alerts. In light of this, should they be required to participate in CMAS testing? If so, how should this be implemented? Should we implement similar requirements as those we have adopted for participating CMS providers in the Second Report and Order? Should a different testing regime be implemented given the unique characteristics of NCE/public broadcast television stations and digital television technology? We seek comment on all of these issues.

V. PROCEDURAL MATTERS

A. Ex Parte Rules

26. These matters shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules.⁶¹ Persons making oral ex parte presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required.⁶² Other requirements pertaining to oral and written presentations are set forth in section 1.1206(b) of the Commission's rules.⁶³

B. Filing Requirements

27. Comments and Reply Comments. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments and reply comments to the FNPRM on or before the dates indicated on the first page of this document. All filings should refer to PS Docket No. 07-287. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. See Electronic Filing of Documents in Rulemaking Proceedings, 13 FCC Rcd 11322, 11326 (1998). For additional information on this proceeding, please contact Jeffrey Goldthorp ((202) 418-1096).

28. Comments and reply comments must include a short and concise summary of the substantive discussion and questions raised in the FNPRM. We further direct all interested parties to include the name of the filing party and the date of the filing on each page of their comments and reply comments. We strongly encourage that parties track the organization set forth in this FNPRM in order to facilitate our internal review process. Comments and reply comments must otherwise comply with section 1.48 and all other applicable sections of the Commission's rules.⁶⁴

29. Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments. For ECFS filers, if multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to

⁶¹ 47 C.F.R. §§ 1.1200-1.1216.

⁶² 47 C.F.R. § 1.1206(b)(2).

⁶³ 47 C.F.R. § 1.1206(b).

⁶⁴ See 47 C.F.R. § 1.48.

ecfs@fcc.gov, and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.

30. Paper Filers: Parties who choose to file by paper must file an original and four copies 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 (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission. The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE., Suite 110, Washington, DC 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class, Express, and Priority mail should be addressed to 445 12th Street, SW, Washington DC 20554.

C. Alternative Formats

31. Alternative formats (computer diskette, large print, audio cassette, and Braille) are available to persons with disabilities by sending an e-mail to FCC504@fcc.gov or calling the Consumer and Governmental Affairs Bureau at (202) 418-0530, TTY (202) 418-0432.

D. Initial and Final Regulatory Flexibility Act Analysis

32. Initial Regulatory Flexibility Act Analysis. As required by the Regulatory Flexibility Act of 1980, as amended, *see* 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis ("IRFA") for this FNPRM, of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this FNPRM. The IRFA is in Appendix D. 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 FNPRM. The Commission will send a copy of the FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.⁶⁵ In addition, the FNPRM and IRFA (or summaries thereof) will be published in the Federal Register.⁶⁶

33. Final Regulatory Flexibility Act Analysis. As required by section 603 of the Regulatory Flexibility Act (RFA), 5 U.S.C. § 604, the Commission has prepared a Final Regulatory Flexibility Analysis of the possible impact of the rule changes contained in this Second Report and Order on small entities. The Final Regulatory Flexibility Act analysis is set forth in Appendix C, *infra*. The Commission's Consumer & Government Affairs Bureau, Reference Information Center, will send a copy of this Second Report and Order, including the Final Regulatory Flexibility Act Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

E. Initial and Final Paperwork Reduction Act of 1995 Analysis

34. Initial Paperwork Reduction Act of 1995 Analysis. This FNPRM may result in a new or modified information collection requirement. If the Commission adopts any new or revised information collection requirement as a result of this proceeding, the Commission will publish a notice in the Federal Register inviting the public to comment on the new or revised information collection requirement, as required by the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13 (44 U.S.C. 3501-3520). In

⁶⁵ *See* 5 U.S.C. § 603(a).

⁶⁶ *Id.*

addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), the Commission will seek specific comment on how we might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

35. **Final Paperwork Reduction Act of 1995 Analysis.** This Second Report and Order adopts a new or revised information collection requirement subject to the PRA. This requirement will be submitted to the Office of Management and Budget (OMB) for review under section 3507 of the PRA. The Commission also will publish a separate notice in the Federal Register inviting comment on the new or revised information collection requirements adopted in this proceeding. The requirement will not go into effect until OMB has approved it and the Commission has published a notice announcing the effective date of the information collection requirement. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we will seek specific comment on how the Commission might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

F. Congressional Review Act Analysis

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

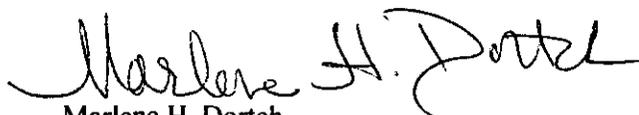
VI. ORDERING CLAUSES

37. IT IS ORDERED, that pursuant to sections 1, 4(i) and (o), 201, 303(r), 403, and 706 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i) and (o), 201, 303(r), 403, and 606, as well as by sections 602(a),(b),(c), (f), 603, 604 and 606 of the WARN Act, this Second Report and Order IS hereby ADOPTED. The rules adopted in this Second Report and Order shall become effective 60 days after publication in the Federal Register, except that new or modified information collection requirements contained in will not become effective prior to OMB approval.

38. IT IS FURTHER ORDERED, that pursuant to sections 1, 4(i) and (o), 201, 303(r), 403, and 706 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i) and (o), 201, 303(r), 403, and 606, as well as by sections 602(a),(b),(c), (f), 603, 604 and 606 of the WARN Act, this Further Notice of Proposed Rulemaking IS hereby ADOPTED.

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

FEDERAL COMMUNICATIONS COMMISSION



Marlene H. Dortch
Secretary

APPENDIX A

List of Commenters

Comments in PS Docket No. 07-287

<u>Commenters</u>	<u>Abbreviation</u>
3G Americas	3G Americas
Acision B.V. and One2Many B.V.	Acision
Alliance for Telecommunications Industry Solutions	ATIS
Alltel Communications, LLC	Alltel
American Association of Paging Carriers	AAPC
America's Emergency Network	AEN
Association of Public Television Stations	APTS
AT&T Inc.	AT&T
Audemat-Aztec Inc.	Audemat-Aztec
California Public Utilities Commission	CAPUC
CellCast Technologies, LLC	CellCast
Cellular Emergency Alert Service Association – US Chapter	CEASA-US
CTIA – The Wireless Association	CTIA
DataFM, Inc.	DataFM
Digital Alert Systems, LLC	DAS
Ericsson Inc.	Ericsson
Florida Association of Broadcasters	FAB
Global Security Systems, LLC	Global
Interstate Wireless Inc.	Interstate Wireless
Jacob Westfall	Westfall
Kendall Post	Post
Max Mayfield	Mayfield
MetroPCS Communications, Inc.	MetroPCS
Mississippi Association of Broadcasters	Mississippi Broadcasters
Mississippi Emergency Management Agency	MS-EMA
Mississippi Office of Homeland Security	MS-OHS
Motorola, Inc.	Motorola
National Association of Broadcasters	NAB
National Emergency Numbering Association	NENA
Nokia Inc. and Nokia Siemens Networks US LLC	Nokia
Pontotoc County Emergency Management Agency	Pontotoc EMA
Purple Tree Technologies	PTT
Rehabilitation Engineering Research Center for Wireless Technologies	Wireless RERC
Rural Cellular Association	RCA
Sheriff, Jefferson Davis Parish, Louisiana	Sheriff
SouthernLINC Wireless	SouthernLINC
Sprint Nextel Corporation	Sprint Nextel
SquareLoop, Inc.	SquareLoop
Telecommunications Industry Association	TIA
T-Mobile USA, Inc.	T-Mobile
Verizon Wireless	Verizon

Reply Commenters

Airadigm Communications - Einstein Wireless
 Alltel Communications, LLC
 American Association of Paging Carriers
 Association of Public Television Stations
 AT&T Inc.
 CellCast Technologies, LLC
 CTIA – The Wireless Association
 Cox Radio, Inc.
 DataFM, Inc.
 FEMA, Director, Office of Nat'l Security Coordination
 Global Security Systems, LLC
 Interstate Wireless Inc.
 King County, Washington
 Motorola, Inc.
 National Telecommunications Cooperative Association
 NTI Group, Inc.
 OnStar Corporation
 Rural Cellular Association
 SquareLoop, Inc.
 T-Mobile USA, Inc.
 Verizon Wireless

Abbreviation

Airadigm
 Alltel
 AAPC
 APTS
 AT&T
 CellCast
 CTIA
 Cox
 DataFM
 FEMA
 Global
 Interstate Wireless
 King County
 Motorola
 NTCA
 NTI
 OnStar
 RCA
 SquareLoop
 T-Mobile
 Verizon

Ex Parte Commenters

AC&C, Inc.
 Agile Communications Group, LLC
 Alliance for Telecommunications Industry Solutions
 American Association of Paging Carriers
 Association of Public Television Stations
 AT&T Inc.
 CTIA – The Wireless Association
 DataFM, Inc.
 First Alert Text Corporation and VeriSign, Inc.
 Global Security Systems, LLC
 National Association of Broadcasters
 National Telecommunications Cooperative Association
 OnStar Corporation
 Rural Cellular Association
 SpectraRep
 Telecommunications Industry Association

Abbreviation

AC&C
 Agile
 ATIS
 AAPC
 APTS
 AT&T
 CTIA
 DataFM
 First Alert
 Global
 NAB
 NTCA
 OnStar
 RCA
 SpectraRep
 TIA

APPENDIX B**Final Rules**

For the reasons discussed above, the Federal Communications Commission amends 47 C.F.R. Part 10 as follows:

PART 10—COMMERCIAL MOBILE ALERT SYSTEM

1. The authority citation for Part 10 continues to read as follows:

Authority: 47 U.S.C. §§ 151, 154(i) and (o), 201, 303(r), 403, and 606, as well as by sections 602(a),(b),(c), (f), 603, 604 and 606 of the WARN Act.

2. Add a new § 10.340 to read as follows:

§ 10.340 Digital Television Transmission Towers Retransmission Capability.

Licenses and permittees of noncommercial educational broadcast television stations (NCE) or public broadcast television stations (to the extent such stations fall within the scope of those terms as defined in section 397(6) of the Communications Act of 1934 (47 U.S.C. 397(6))) are required to install on, or as part of, any broadcast television digital signal transmitter, equipment to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit CMAS alerts. Such equipment and technologies must have the capability of allowing licensees and permittees of NCE and public broadcast television stations to receive CMAS alerts from the Alert Gateway over an alternate, secure interface and then to transmit such CMAS alerts to CMS Provider Gateways of participating CMS providers. This equipment must be installed no later than eighteen months from the date of receipt of funding permitted under section 606(b) of the WARN Act or 18 months from the effective date of these rules, whichever is later.

3. Add a new § 10.350 to read as follows:

§ 10.350 CMAS Testing Requirements

This section specifies the testing that will be required, no later than the date of deployment of the CMAS, of CMAS components.

(a) *Required Monthly Tests.* Testing of the CMAS from the Federal Alert Gateway to each Participating CMS Provider's infrastructure shall be conducted monthly.

(1) A Participating CMS Provider's Gateway shall support the ability to receive a required monthly test (RMT) message initiated by the Federal Alert Gateway Administrator.

(2) Participating CMS Providers shall schedule the distribution of the RMT to their CMAS coverage area over a 24 hour period commencing upon receipt of the RMT at the CMS Provider Gateway. Participating CMS Providers shall determine the method to distribute the RMTs, and may schedule over the 24 hour period the delivery of RMTs over geographic subsets of their coverage area to manage traffic loads and to accommodate maintenance windows.

(3) A Participating CMS Provider may forego an RMT if the RMT is pre-empted by actual alert traffic or if an unforeseen condition in the CMS Provider infrastructure precludes distribution of the RMT. A Participating CMS Provider Gateway shall indicate such an unforeseen condition by a response code to the Federal Alert Gateway.

(4) The RMT shall be initiated only by the Federal Alert Gateway Administrator using a defined test message. Real event codes or alert messages shall not be used for the CMAS RMT message.

(5) A Participating CMS Provider shall distribute an RMT within its CMAS coverage area within 24 hours of receipt by the CMS Provider Gateway unless pre-empted by actual alert traffic or unable due to an unforeseen condition.

(6) A Participating CMS Provider may provide mobile devices with the capability of receiving RMT messages.

(7) A Participating CMS Provider must retain an automated log of RMT messages received by the CMS Provider Gateway from the Federal Alert Gateway.

(b) *Periodic C Interface Testing.* In addition to the required monthly tests, a Participating CMS Provider must participate in periodic testing of the interface between the Federal Alert Gateway and its CMS Provider Gateway. This periodic interface testing is not intended to test the CMS Provider's infrastructure nor the mobile devices but rather is required to ensure the availability/viability of both gateway functions. Each CMS Provider Gateway shall send an acknowledgement to the Federal Alert Gateway upon receipt of such an interface test message. Real event codes or alert messages shall not be used for this periodic interface testing.

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Notice of Proposed Rulemaking in PSHSB Docket 07-287 (*CMAS NPRM*). The Commission sought written public comments on the proposals in the *CMAS NPRM*, including comment on the IRFA. Comments on the IRFA were to have been explicitly identified as being in response to the IRFA and were required to be filed by the same deadlines as that established in section IV of the *CMAS NPRM* for other comments to the *CMAS NPRM*. The Commission sent a copy of the *CMAS NPRM*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the *CMAS NPRM* and IRFA were published in the Federal Register.³ This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.⁴

A. Need for, and Objectives of, the Order

2. Section 602(c) of the WARN Act requires the Commission to, “[w]ithin 90 days after the date on which the Commission adopts relevant technical standards based on recommendations of the Commercial Mobile Service Alert Advisory Committee . . . complete a proceeding to require licensees and permittees of noncommercial educational broadcast stations or public broadcast stations (as those terms are defined in section 397(6) of the Communications Act of 1934 (47 U.S.C. 397(6))) to install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit emergency alerts under this section.”⁵ Although the *CMAS NPRM* solicited comment on issues related to section 602(a) (CMAS Technical requirements) and 602(b) (CMS provider election to the CMAS), this Second Report and Order only addresses issues raised by sections 602(c) and 602(f) of the WARN Act.⁶ Accordingly, this FRFA only addresses the manner in which any commenters to the IRFA addressed the Commission’s adoption of rules regarding NCE and public television licensee’s installation of digital television transmission towers retransmission equipment, as required by section 602(c) of the WARN Act, and the Commission’s adoption of rules for testing the CMAS as required by section 602(f) of the WARN Act.

3. This Second Report and Order adopts further rules necessary to enable CMS alerting capability for CMS providers who elect to transmit emergency alerts to their subscribers. Specifically, the Order adopts rules that require NCE and public television stations to install on, or as part of, any broadcast television digital signal transmitter equipment to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit CMAS alerts. This equipment will interface with the CMAS Alert Gateway and enable the transmission of the national CMAS alert feed from the CMAS Alert Gateway to all covered broadcast television digital towers. As we discuss in greater detail below, it is necessary that NCE and public broadcast television stations install

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ 73 FR 546-01 (January 3, 2008).

⁴ See 5 U.S.C. § 604.

⁵ WARN Act § 602(c).

⁶ As the *CMAS First Report and Order* indicated in note 16 the Commission will address these other provisions of the WARN Act and related issues in subsequent Orders within the deadlines established by the statute.

this equipment to further enable the distribution of geographically targeted alerts by CMS providers that participate in the CMAS. The installation and operation of this equipment is consistent with the technologically neutral requirements adopted in the *CMAS First Report and Order*.

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

4. There were no comments filed that specifically addressed the IRFA. The only commenter that explicitly identified itself as a small business was Interstate Wireless, Inc., whose comments addressed only the technical requirements and protocols relevant to section 602(a) of the WARN Act. Interstate Wireless Inc.'s comments were addressed in the *CMAS First Report and Order*.⁷

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

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the rules adopted herein.⁸ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁹ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.¹⁰ 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 Small Business Administration (SBA).¹¹

6. Wireless Telecommunications Carriers (except Satellite). Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.¹² Prior to that time, the SBA had developed a small business size standard for wireless firms within the now-superseded census categories of "Paging" and "Cellular and Other Wireless Telecommunications."¹³ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the first category of Paging, data for 2002 show that there were 807 firms that operated for the entire year.¹⁴ Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.¹⁵ For the second category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year.¹⁶ Of this total, 1,378 firms had employment of

⁷ See *CMAS First Report and Order*, n.58.

⁸ 5 U.S.C. § 603(b).

⁹ 5 U.S.C. § 601(6).

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

¹¹ 15 U.S.C. § 632.

¹² 13 C.F.R. § 121.201, NAICS code 517210.

¹³ 13 C.F.R. § 121.201, NAICS codes 517211, 517212.

¹⁴ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517211 (issued Nov. 2005).

¹⁵ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

¹⁶ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517212 (issued Nov. 2005).

999 or fewer employees, and 19 firms had employment of 1,000 employees or more.¹⁷ Thus, using the prior categories and the available data, we estimate that the majority of wireless firms can be considered small.

7. Cellular Radiotelephone Service. As noted, the SBA has developed a small business size standard for small businesses in the category “Wireless Telecommunications Carriers (except satellite).”¹⁸ Under that SBA category, a business is small if it has 1,500 or fewer employees.¹⁹ Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.²⁰ Prior to that time, the SBA had developed a small business size standard for wireless firms within the now-superseded census categories of “Paging” and “Cellular and Other Wireless Telecommunications.”²¹ Accordingly, the pertinent data for this category is contained within the prior Wireless Telecommunications Carriers (except Satellite) category. For the category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year.²² Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.²³ Thus, using the prior category and the available data, we estimate that the majority of wireless firms can be considered small.

8. Auctions. Initially, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

9. Broadband Personal Communications Service. The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.²⁴ For Block F, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.²⁵ These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.²⁶ No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were

¹⁷ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

¹⁸ 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

¹⁹ *Id.*

²⁰ 13 C.F.R. § 121.201, NAICS code 517210.

²¹ 13 C.F.R. § 121.201, NAICS codes 517211, 517212.

²² U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

²³ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

²⁴ See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, Report and Order, 11 FCC Rcd 7824, 7850-7852 ¶¶ 57-60 (1996); see also 47 C.F.R. § 24.720(b).

²⁵ See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, Report and Order, 11 FCC Rcd 7824, 7852 ¶ 60.

²⁶ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

90 winning bidders that qualified as small entities in the C Block auctions. A total of 93 "small" and "very small" business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.²⁷ On March 23, 1999, the Commission reaucted 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.²⁸ On January 26, 2001, the Commission completed the auction of 422 C and F PCS licenses in Auction 35.²⁹ Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

10. Narrowband Personal Communications Service. The Commission held an auction for narrowband Personal Communications Service (PCS) licenses that commenced on July 25, 1994, and closed on July 29, 1994. A second commenced on October 26, 1994 and closed on November 8, 1994. For purposes of the first two narrowband PCS auctions, "small businesses" were entities with average gross revenues for the prior three calendar years of \$40 million or less.³⁰ Through these auctions, the Commission awarded a total of forty-one licenses, 11 of which were obtained by four small businesses.³¹ To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.³² A "small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million.³³ A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million.³⁴ The SBA has approved these small business size standards.³⁵ A third auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (MTA and nationwide) licenses.³⁶ Three of these claimed status as a small or very small entity and won 311 licenses.

11. Wireless Communications Service. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses in the 2305-2320 MHz and 2345-2360 MHz bands. The Commission defined "small business" for the wireless communications service (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a "very small

²⁷ FCC News, "Broadband PCS, D, E and F Block Auction Closes," No. 71744 (rel. January 14, 1997).

²⁸ See "C, D, E, and F Block Broadband PCS Auction Closes," Public Notice, 14 FCC Rcd 6688 (WTB 1999).

²⁹ See "C and F Block Broadband PCS Auction Closes; Winning Bidders Announced," Public Notice, 16 FCC Rcd 2339 (2001).

³⁰ Implementation of section 309(j) of the Communications Act – Competitive Bidding Narrowband PCS, Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd 175, 196 ¶ 46 (1994).

³¹ See "Announcing the High Bidders in the Auction of ten Nationwide Narrowband PCS Licenses, Winning Bids Total \$617,006,674," Public Notice, PNWL 94-004 (rel. Aug. 2, 1994); "Announcing the High Bidders in the Auction of 30 Regional Narrowband PCS Licenses; Winning Bids Total \$490,901,787," Public Notice, PNWL 94-27 (rel. Nov. 9, 1994).

³² Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, Second Report and Order and Second Further Notice of Proposed Rule Making, 15 FCC Rcd 10456, 10476 ¶ 40 (2000).

³³ *Id.*

³⁴ *Id.*

³⁵ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

³⁶ See "Narrowband PCS Auction Closes," Public Notice, 16 FCC Rcd 18663 (WTB 2001).

business” as an entity with average gross revenues of \$15 million for each of the three preceding years.³⁷ The SBA has approved these definitions.³⁸ The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

12. 700 MHz Guard Bands Licenses. In the *700 MHz Guard Bands Order*, the Commission adopted size standards for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.³⁹ A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.⁴⁰ Additionally, a “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.⁴¹ SBA approval of these definitions is not required.⁴² An auction of 52 Major Economic Area (MEA) licenses for each of two spectrum blocks commenced on September 6, 2000, and closed on September 21, 2000.⁴³ Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of remaining 700 MHz Guard Bands licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.⁴⁴ Subsequently, in the *700 MHz Second Report and Order*, the Commission reorganized the licenses pursuant to an agreement among most of the licensees, resulting in a spectral relocation of the first set of paired spectrum block licenses, and an elimination of the second set of paired spectrum block licenses (many of which were already vacant, reclaimed by the Commission from Nextel).⁴⁵ A single licensee that did not participate in the agreement was grandfathered in the initial spectral location for its two licenses in the second set of paired spectrum blocks.⁴⁶ Accordingly, at this time there are 54 licenses in the 700 MHz Guard Bands.

13. 700 MHz Band Commercial Licenses. There is 80 megahertz of non-Guard Band spectrum in the 700 MHz Band that is designated for commercial use: 698-757, 758-763, 776-787, and 788-793

³⁷ Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS), Report and Order, 12 FCC Rcd 10785, 10879 ¶ 194 (1997).

³⁸ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

³⁹ See Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, Second Report and Order, 15 FCC Rcd 5299 (2000).

⁴⁰ *Id.* at 5343 ¶ 108.

⁴¹ *Id.*

⁴² *Id.* At 5343 ¶ 108 n.246 (for the 746-764 MHz and 776-704 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain Small Business Administration approval before adopting small business size standards).

⁴³ See “700 MHz Guard Bands Auction Closes: Winning Bidders Announced,” Public Notice, 15 FCC Rcd 18026 (2000).

⁴⁴ See “700 MHz Guard Bands Auctions Closes: Winning Bidders Announced,” Public Notice, 16 FCC Rcd 4590 (WTB 2001).

⁴⁵ See In the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket 06-150, Second Report and Order, 22 FCC Rcd 15289, 15339-15344 ¶¶ 118-134 (2007) (700 MHz Second Report and Order).

⁴⁶ *Id.*

MHz Bands. With one exception, the Commission adopted criteria for defining two groups of small businesses for purposes of determining their eligibility for bidding credits at auction. These two categories are: (1) "small business," which is defined as an entity that has attributed average annual gross revenues that do not exceed \$15 million during the preceding three years; and (2) "very small business," which is defined as an entity with attributed average annual gross revenues that do not exceed \$40 million for the preceding three years.⁴⁷ In Block C of the Lower 700 MHz Band (710-716 MHz and 740-746 MHz), which was licensed on the basis of 734 Cellular Market Areas, the Commission adopted a third criterion for determining eligibility for bidding credits: an "entrepreneur," which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.⁴⁸ The SBA has approved these small size standards.⁴⁹

14. An auction of 740 licenses for Blocks C (710-716 MHz and 740-746 MHz) and D (716-722 MHz) of the Lower 700 MHz Band commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business, or entrepreneur status and won a total of 329 licenses.⁵⁰ A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: five EAG licenses and 251 CMA licenses.⁵¹ Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.⁵²

15. The remaining 62 megahertz of commercial spectrum is currently scheduled for auction on January 24, 2008. As explained above, bidding credits for all of these licenses will be available to "small businesses" and "very small businesses."

16. Advanced Wireless Services. In the *AWS-1 Report and Order*, the Commission adopted rules that affect applicants who wish to provide service in the 1710-1755 MHz and 2110-2155 MHz bands.⁵³ The Commission did not know precisely the type of service that a licensee in these bands might seek to provide. Nonetheless, the Commission anticipated that the services that will be deployed in these bands may have capital requirements comparable to those in the broadband Personal Communications Service (PCS), and that the licensees in these bands will be presented with issues and costs similar to those presented to broadband PCS licensees. Further, at the time the broadband PCS service was established, it was similarly anticipated that it would facilitate the introduction of a new generation of service. Therefore, the *AWS-1 Report and Order* adopts the same small business size definition that the Commission adopted for the broadband PCS service and that the SBA approved.⁵⁴ In particular, the

⁴⁷ See Auction of 700 MHz Band Licenses Scheduled for January 24, 2008, AU Docket No. 07-157, Notice and Filing Requirements, Minimum Opening Bids, Reserve Prices, Upfront Payments, and Other Procedures for Auctions 73 and 76, DA 07-4171 at ¶ 70 (WTB rel. Oct. 5, 2007); Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), Report and Order, 17 FCC Rcd 1022, 1087-88 (2002).

⁴⁸ *Id.* at 1088.

⁴⁹ See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

⁵⁰ See "Lower 700 MHz Band Auction Closes," Public Notice, 17 FCC Rcd 17272 (WTB 2002).

⁵¹ See "Lower 700 MHz Band Auction Closes," Public Notice, 18 FCC Rcd 11873 (WTB 2003).

⁵² *Id.*

⁵³ Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, Report and Order, 18 FCC Rcd 25162 (2003) (AWS-1 Report and Order).

⁵⁴ See Implementation of section 309(j) of the Communications Act -- Competitive Bidding, Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd 175, 196 (1995); Implementation of section 309(j) of the Communications Act -- Competitive Bidding, Fifth Report and Order, 9 FCC Rcd 5581-5584 (1995); 47 C.F.R. §§ 24.320(b) and 24.720(b).

AWS-1 Report and Order defines a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. The *AWS-1 Report and Order* also provides small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent.

17. Common Carrier Paging. As noted, the SBA has developed a small business size standard for wireless firms within the broad economic census category of “Wireless Telecommunications Carriers (except Satellite).”⁵⁵ Under this category, the SBA deems a business to be small if it has 1,500 or fewer employees. Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.⁵⁶ Prior to that time, the SBA had developed a small business size standard for wireless firms within the now-superseded census categories of “Paging” and “Cellular and Other Wireless Telecommunications.”⁵⁷ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the first category of Paging, data for 2002 show that there were 807 firms that operated for the entire year.⁵⁸ Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.⁵⁹ For the second category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year.⁶⁰ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.⁶¹ Thus, using the prior categories and the available data, we estimate that the majority of wireless firms can be considered small. Thus, under this category, the majority of firms can be considered small.

18. In the *Paging Third Report and Order*, we developed a small business size standard for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.⁶² A “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.⁶³ The SBA has approved these small business size standards.⁶⁴ An auction of

⁵⁵ 13 C.F.R. § 121.201, NAICS code 517211.

⁵⁶ 13 C.F.R. § 121.201, NAICS code 517210.

⁵⁷ 13 C.F.R. § 121.201, NAICS codes 517211, 517210.

⁵⁸ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517211 (issued Nov. 2005).

⁵⁹ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁶⁰ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

⁶¹ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁶² Amendment of Part 90 of the Commission’s Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, PR Docket No. 89-552, Third Report and Order and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11068-70, ¶¶s. 291-295, 62 FR 16004 (Apr. 3, 1997).

⁶³ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from A. Alvarez, Administrator, SBA (Dec. 2, 1998).

Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000.⁶⁵ Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won. Also, according to Commission data, 365 carriers reported that they were engaged in the provision of paging and messaging services.⁶⁶ Of those, we estimate that 360 are small, under the SBA-approved small business size standard.⁶⁷

19. Wireless Communications Service. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission established small business size standards for the wireless communications service (WCS) auction.⁶⁸ A “small business” is an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” is an entity with average gross revenues of \$15 million for each of the three preceding years. The SBA has approved these small business size standards.⁶⁹ The Commission auctioned geographic area licenses in the WCS service. In the auction, there were seven winning bidders that qualified as “very small business” entities, and one that qualified as a “small business” entity.

20. Wireless Communications Equipment Manufacturers. While these entities are merely indirectly affected by our action, we are describing them to achieve a fuller record. The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these 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.” The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.⁷⁰ According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year. Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999. Thus, under this size standard, the majority of firms can be considered small.⁷¹

21. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these 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.”⁷² The SBA has

(...continued from previous page)

⁶⁴ Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, ¶¶s. 98-107 (1999).

⁶⁵ *Id.* at 10085, ¶. 98.

⁶⁶ FCC Wireline Competition Bureau, Industry Analysis and Technology Division, “Trends in Telephone Service” at Table 5.3., page 5-5 (Feb. 2007). This source uses data that are current as of October 20, 2005.

⁶⁷ *Id.*

⁶⁸ Public Notice, “Auction of Wireless Communications Services, Auction Notes and Filing Requirements for 128 WCS Licenses Scheduled for April 15, 1997,” DA 97-386, Feb. 21, 1997.

⁶⁹ SBA Dec. 2, 1998 Letter.

⁷⁰ NAICS code 334220.

⁷¹ NAICS code 11210.

⁷² U.S. Census Bureau, 2002 NAICS Definitions, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing”; <http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342>.

developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.⁷³ According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.⁷⁴ Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.⁷⁵ Thus, under this size standard, the majority of firms can be considered small.

22. Software Publishers. While these entities are merely indirectly affected by our action, we are describing them to achieve a fuller record. These companies may design, develop or publish software and may provide other support services to software purchasers, such as providing documentation or assisting in installation. The companies may also design software to meet the needs of specific users. The SBA has developed a small business size standard of \$23 million or less in average annual receipts for the category of Software Publishers. For Software Publishers, Census Bureau data for 2002 indicate that there were 6,155 firms in the category that operated for the entire year. Of these, 7,633 had annual receipts of under \$10 million, and an additional 403 firms had receipts of between \$10 million and \$24,999,999. For providers of Custom Computer Programming Services, the Census Bureau data indicate that there were 32,269 firms that operated for the entire year. Of these, 31,416 had annual receipts of under \$10 million, and an additional 565 firms had receipts of between \$10 million and \$24,999,999. Consequently, we estimate that the majority of the firms in this category are small entities that may be affected by our action.

23. NCE and Public Broadcast Stations. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in broadcasting images together with sound. These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public."⁷⁶ The SBA has created a small business size standard for Television Broadcasting entities, which is: such firms having \$13 million or less in annual receipts.⁷⁷ According to Commission staff review of the BIA Publications, Inc., Master Access Television Analyzer Database as of May 16, 2003, about 814 of the 1,220 commercial television stations in the United States had revenues of \$12 (twelve) million or less. We note, however, that in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations⁷⁸ 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.

24. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish

⁷³ 13 C.F.R. § 121.201, NAICS code 334220.

⁷⁴ U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released May 26, 2005); <http://factfinder.census.gov>. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 929.

⁷⁵ *Id.* An additional 18 establishments had employment of 1,000 or more.

⁷⁶ U.S. Census Bureau, 2002 NAICS Definitions, "515120 Television Broadcasting" (partial definition); <http://www.census.gov/epcd/naics02/def/NDEF515.HTM>.

⁷⁷ 13 C.F.R. § 121.201, NAICS code 515120.

⁷⁸ "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 to power to control both." 13 C.F.R. § 21.103(a)(1).

whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent. There are also 2,117 low power television stations (LPTV).⁷⁹ Given the nature of this service, we will presume that all LPTV licensees qualify as small entities under the above SBA small business size standard.

25. The Commission has, under SBA regulations, estimated the number of licensed NCE television stations to be 380.⁸⁰ We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations⁸¹ 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. 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.

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

26. This Report and Order may contain new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. If the Commission determines that the Report and Order contains collection subject to the PRA, it will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA at an appropriate time. At that time, OMB, the general public, and other Federal agencies will be invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might "further reduce the information collection burden for small business concerns with fewer than 25 employees.

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

27. The RFA requires an agency to describe any significant alternatives that it has considered in developing its 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 and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities."⁸²

28. As noted in paragraph 2 above, this Second Report and Order deals only with the WARN Act section 602 (c) requirement that the Commission complete a proceeding to require licensees and permittees of noncommercial educational broadcast stations or public broadcast stations to install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by commercial mobile service providers that

⁷⁹ FCC News Release, "Broadcast Station Totals as of September 30, 2005."

⁸⁰ *See* Broadcast Station Totals, *supra* IRFA, n. 11.

⁸¹ "[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 to power to control both." 13 C.F.R. § 121.103(a)(1).

⁸² 5 U.S.C. § 603(c)(1) – (c)(4).

have elected to transmit emergency alerts under this section.”⁸³ Many of the entities affected by this Order are the member stations for the Association of Public Broadcasters (APBS), which was a member of the CMSAAC. Further, in its formation of the CMSAAC, the Commission made sure to include representatives of small businesses among the advisory committee members. The WARN ACT NPRM also sought comment on a number of alternatives to the recommendations of the CMSAAC, such as the Digital EAS.⁸⁴ In its consideration of this and other alternatives the CMSAAC recommendations, the Commission has attempted to impose minimal regulation on small entities to the extent consistent with our goal of advancing our public safety mission by adopting technical requirements, standards and protocols for a CMAS that CMS providers would elect to provide alerts and warnings to their customers. The Commission’s action in this Second Report and Order neither requires nor forecloses the exact outcome requested by the entities most affected, as represented by APBS.

Report to Congress: The Commission will send a copy of the Second Report and Order, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.⁸⁵ In addition, the Commission will send a copy of the Second Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Second Report and Order and FRFA (or summaries thereof) will also be published in the Federal Register.⁸⁶

⁸³ WARN Act § 602(c).

⁸⁴ See *CMAS NPRM*, ¶ 39.

⁸⁵ See 5 U.S.C. § 801(a)(1)(A).

⁸⁶ See 5 U.S.C. § 604(b).

APPENDIX D**Initial Regulatory Flexibility Analysis**

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ the Commission has prepared this present 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 this Further Notice of Proposed Rulemaking (FNPRM). 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 FNPRM provided in Section IV of the item. The Commission will send a copy of the FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the FNPRM and IRFA (or summaries thereof) will be published in the Federal Register.³

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

2. With the FNPRM, the Federal Communications Commission (Commission) seeks comment whether it should require non-commercial educational (NCE) and public broadcast television station licensees and permittees to test the "necessary equipment and technologies [that they have installed] on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit emergency alerts." The Commission seeks comment on this issue in order to satisfy the statutory requirement imposed by the WARN Act that the Commission implement an effective Commercial Mobile Alert System (CMAS).

3. Section 602(c) of the WARN Act requires the Commission to adopt rules under which licensees and permittees of noncommercial educational (NCE) broadcast stations or public broadcast stations install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by CMS providers that have elected to participate in the CMAS. Further, section 602(f) of the WARN Act requires the Commission to adopt rules for technical testing requirements for CMS providers that elect to transmit emergency alerts and for the devices and equipment used by such providers for transmitting such alerts. In this FNPRM we seek comment on questions concerning the testing obligations of NCE and public broadcast television station licensees and permittees that have installed the equipment required by section 602(c) of the WARN Act.

B. Legal Basis

4. Authority for the actions proposed in the FNPRM may be found in sections 1, 4(i) and (o), 201, 303(r), 403, and 706 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i) and (o), 201, 303(r), 403, and 606, as well as sections 602(a),(b),(c), (f), 603, 604 and 606 of the WARN Act.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the rules adopted herein.⁴ The RFA generally defines

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ *Id.*

⁴ 5 U.S.C. § 603(b).

the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁵ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁶ 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 Small Business Administration (SBA).⁷

6. Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.⁸ A “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”⁹ Nationwide, as of 2002, there were approximately 1.6 million small organizations.¹⁰ The term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”¹¹ Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.¹² We estimate that, of this total, 84,377 entities were “small governmental jurisdictions.”¹³ Thus, we estimate that most governmental jurisdictions are small.

7. Wireless Telecommunications Carriers (except Satellite). Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.¹⁴ Prior to that time, the SBA had developed a small business size standard for wireless firms within the now-superseded census categories of “Paging” and “Cellular and Other Wireless Telecommunications.”¹⁵ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the first category of Paging, data for 2002 show that there were 807 firms that operated for the entire year.¹⁶ Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.¹⁷ For the second category of Cellular and Other Wireless Telecommunications, data for 2002 show that

⁵ 5 U.S.C. § 601(6).

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

⁷ 15 U.S.C. § 632.

⁸ See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

⁹ 5 U.S.C. § 601(4).

¹⁰ Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

¹¹ 5 U.S.C. § 601(5).

¹² U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, Section 8, page 272, Table 415.

¹³ We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, section 8, page 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

¹⁴ 13 C.F.R. § 121.201, NAICS code 517210.

¹⁵ 13 C.F.R. § 121.201, NAICS codes 517211, 517212.

¹⁶ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517211 (issued Nov. 2005).

¹⁷ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

there were 1,397 firms that operated for the entire year.¹⁸ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.¹⁹ Thus, using the prior categories and the available data, we estimate that the majority of wireless firms can be considered small.

8. Cellular Radiotelephone Service. As noted, the SBA has developed a small business size standard for small businesses in the category “Wireless Telecommunications Carriers (except satellite).”²⁰ Under that SBA category, a business is small if it has 1,500 or fewer employees.²¹ Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.²² Prior to that time, the SBA had developed a small business size standard for wireless firms within the now-superseded census categories of “Paging” and “Cellular and Other Wireless Telecommunications.”²³ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data.

9. For the first category of Paging, data for 2002 show that there were 807 firms that operated for the entire year.²⁴ Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.²⁵ For the second category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year.²⁶ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.²⁷ Thus, using the prior categories and the available data, we estimate that the majority of wireless firms can be considered small.

10. Auctions. In addition, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

11. Broadband Personal Communications Service. The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than \$40 million in the three previous

¹⁸ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

¹⁹ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

²⁰ 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

²¹ *Id.*

²² 13 C.F.R. § 121.201, NAICS code 517210.

²³ 13 C.F.R. § 121.201, NAICS codes 517211, 517212.

²⁴ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517211 (issued Nov. 2005).

²⁵ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

²⁶ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

²⁷ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

calendar years.²⁸ For Block F, an additional small business size standard for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.²⁹ These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.³⁰ No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the C Block auctions. A total of 93 “small” and “very small” business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.³¹ On March 23, 1999, the Commission reaucted 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.³² On January 26, 2001, the Commission completed the auction of 422 C and F PCS licenses in Auction 35.³³ Of the 35 winning bidders in this auction, 29 qualified as “small” or “very small” businesses. Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

12. Narrowband Personal Communications Service. The Commission held an auction for narrowband Personal Communications Service (PCS) licenses that commenced on July 25, 1994, and closed on July 29, 1994. A second commenced on October 26, 1994 and closed on November 8, 1994. For purposes of the first two narrowband PCS auctions, “small businesses” were entities with average gross revenues for the prior three calendar years of \$40 million or less.³⁴ Through these auctions, the Commission awarded a total of forty-one licenses, 11 of which were obtained by four small businesses.³⁵ To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.³⁶ A “small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million.³⁷ A “very small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million.³⁸ The SBA has approved these small business size standards.³⁹ A third

²⁸ See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7850-7852 ¶¶ 57-60 (1996); see also 47 C.F.R. § 24.720(b).

²⁹ See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7852 ¶ 60.

³⁰ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

³¹ FCC News, “Broadband PCS, D, E and F Block Auction Closes,” No. 71744 (rel. January 14, 1997).

³² See “C, D, E, and F Block Broadband PCS Auction Closes,” *Public Notice*, 14 FCC Rcd 6688 (WTB 1999).

³³ See “C and F Block Broadband PCS Auction Closes; Winning Bidders Announced,” *Public Notice*, 16 FCC Rcd 2339 (2001).

³⁴ Implementation of Section 309(j) of the Communications Act – Competitive Bidding Narrowband PCS, *Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 175, 196 ¶ 46 (1994).

³⁵ See “Announcing the High Bidders in the Auction of ten Nationwide Narrowband PCS Licenses, Winning Bids Total \$617,006,674,” *Public Notice*, PNWL 94-004 (rel. Aug. 2, 1994); “Announcing the High Bidders in the Auction of 30 Regional Narrowband PCS Licenses; Winning Bids Total \$490,901,787,” *Public Notice*, PNWL 94-27 (rel. Nov. 9, 1994).

³⁶ Amendment of the Commission’s Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 15 FCC Rcd 10456, 10476 ¶ 40 (2000).

³⁷ *Id.*

³⁸ *Id.*

auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (MTA and nationwide) licenses.⁴⁰ Three of these claimed status as a small or very small entity and won 311 licenses.

13. Wireless Communications Services. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses in the 2305-2320 MHz and 2345-2360 MHz bands. 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.⁴¹ The SBA has approved these definitions.⁴² The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

14. 700 MHz Guard Bands Licenses. In the *700 MHz Guard Bands Order*, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.⁴³ A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.⁴⁴ Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.⁴⁵ SBA approval of these definitions is not required.⁴⁶ An auction of 52 Major Economic Area (MEA) licenses for each of two spectrum blocks commenced on September 6, 2000, and closed on September 21, 2000.⁴⁷ Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of remaining 700 MHz Guard Bands licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.⁴⁸ Subsequently,

(...continued from previous page)

³⁹ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

⁴⁰ See "Narrowband PCS Auction Closes," *Public Notice*, 16 FCC Rcd 18663 (WTB 2001).

⁴¹ Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), *Report and Order*, 12 FCC Rcd 10785, 10879 ¶ 194 (1997).

⁴² See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

⁴³ See Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000).

⁴⁴ *Id.* at 5343 ¶ 108.

⁴⁵ *Id.*

⁴⁶ *Id.* At 5343 ¶ 108 n.246 (for the 746-764 MHz and 776-704 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain Small Business Administration approval before adopting small business size standards).

⁴⁷ See "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 18026 (2000).

⁴⁸ See "700 MHz Guard Bands Auctions Closes: Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

in the 700 MHz *Second Report and Order*, the Commission reorganized the licenses pursuant to an agreement among most of the licensees, resulting in a spectral relocation of the first set of paired spectrum block licenses, and an elimination of the second set of paired spectrum block licenses (many of which were already vacant, reclaimed by the Commission from Nextel).⁴⁹ A single licensee that did not participate in the agreement was grandfathered in the initial spectral location for its two licenses in the second set of paired spectrum blocks.⁵⁰ Accordingly, at this time there are 54 licenses in the 700 MHz Guard Bands.

15. 700 MHz Band Commercial Licenses. There is 80 megahertz of non-Guard Band spectrum in the 700 MHz Band that is designated for commercial use: 698-757, 758-763, 776-787, and 788-793 MHz Bands. With one exception, the Commission adopted criteria for defining two groups of small businesses for purposes of determining their eligibility for bidding credits at auction. These two categories are: (1) "small business," which is defined as an entity that has attributed average annual gross revenues that do not exceed \$15 million during the preceding three years; and (2) "very small business," which is defined as an entity with attributed average annual gross revenues that do not exceed \$40 million for the preceding three years.⁵¹ In Block C of the Lower 700 MHz Band (710-716 MHz and 740-746 MHz), which was licensed on the basis of 734 Cellular Market Areas, the Commission adopted a third criterion for determining eligibility for bidding credits: an "entrepreneur," which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.⁵² The SBA has approved these small size standards.⁵³

16. An auction of 740 licenses for Blocks C (710-716 MHz and 740-746 MHz) and D (716-722 MHz) of the Lower 700 MHz Band commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business, or entrepreneur status and won a total of 329 licenses.⁵⁴ A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: five EAG licenses and 251 CMA licenses.⁵⁵ Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.⁵⁶

17. The remaining 62 megahertz of commercial spectrum is currently scheduled for auction on January 24, 2008. As explained above, bidding credits for all of these licenses will be available to "small businesses" and "very small businesses."

⁴⁹ See *In the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket 06-150, *Second Report and Order*, 22 FCC Rcd 15289, 15339-15344 ¶¶ 118-134 (2007) (*700 MHz Second Report and Order*).

⁵⁰ *Id.*

⁵¹ See *Auction of 700 MHz Band Licenses Scheduled for January 24, 2008*, AU Docket No. 07-157, *Notice and Filing Requirements, Minimum Opening Bids, Reserve Prices, Upfront Payments, and Other Procedures for Auctions 73 and 76*, DA 07-4171 at ¶ 70 (WTB rel. Oct. 5, 2007); *Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59)*, *Report and Order*, 17 FCC Rcd 1022, 1087-88 (2002).

⁵² *Id.* at 1088.

⁵³ See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

⁵⁴ See "Lower 700 MHz Band Auction Closes," *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

⁵⁵ See "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

⁵⁶ *Id.*

18. Advanced Wireless Services. In the *AWS-1 Report and Order*, the Commission adopted rules that affect applicants who wish to provide service in the 1710-1755 MHz and 2110-2155 MHz bands.⁵⁷ The Commission did not know precisely the type of service that a licensee in these bands might seek to provide. Nonetheless, the Commission anticipated that the services that will be deployed in these bands may have capital requirements comparable to those in the broadband Personal Communications Service (PCS), and that the licensees in these bands will be presented with issues and costs similar to those presented to broadband PCS licensees. Further, at the time the broadband PCS service was established, it was similarly anticipated that it would facilitate the introduction of a new generation of service. Therefore, the *AWS-1 Report and Order* adopts the same small business size definition that the Commission adopted for the broadband PCS service and that the SBA approved.⁵⁸ In particular, the *AWS-1 Report and Order* defines a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. The *AWS-1 Report and Order* also provides small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent.

19. Broadband Radio Service and Educational Broadband Service. Broadband Radio Service ("BRS"), formerly known as Multipoint Distribution Service ("MDS"),⁵⁹ and Educational Broadband Service ("EBS"), formerly known as Instructional Television Fixed Service ("ITFS"),⁶⁰ use frequencies at 2150-2162 and 2500-2690 MHz to transmit video programming and provide broadband services to residential subscribers.⁶¹ These services, collectively referred to as "wireless cable," were originally designed for the delivery of multichannel video programming, similar to that of traditional cable systems, but over the past several years licensees have focused their operations instead on providing two-way high-speed Internet access services.⁶² We estimate that the number of wireless cable subscribers is approximately 100,000, as of March 2005. As described below, the SBA small business size standard for the broad census category of Cable and Other Program Distribution, which consists of such entities generating \$13.5 million or less in annual receipts, appears applicable to MDS and ITFS.⁶³ Other standards also apply, as described.

⁵⁷ Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162 (2003) (*AWS-1 Report and Order*).

⁵⁸ See Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, *Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 175, 196 (1995); Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, *Fifth Report and Order*, 9 FCC Rcd 5581-5584 (1995); 47 C.F.R. §§ 24.320(b) and 24.720(b).

⁵⁹ See 47 C.F.R. Part 21, subpart K; Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands; Part 1 of the Commission's Rules - Further Competitive Bidding Procedures; Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions; Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico, 19 FCC Rcd 14165 (2004) (*MDS/ITFS Order*).

⁶⁰ See 47 C.F.R. Part 74, subpart I; *MDS/ITFS Order*, 19 FCC Rcd 14165.

⁶¹ See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eleventh Annual Report*, 20 FCC Rcd 2507, 2565 ¶ 131 (2006) (*"2006 Cable Competition Report"*).

⁶² *Id.*

⁶³ 13 C.F.R. § 121.201, NAICS code 515210.

20. The Commission has defined small MDS (now BRS) entities in the context of Commission license auctions. In the 1996 MDS auction,⁶⁴ the Commission defined a small business as an entity that had annual average gross revenues of less than \$40 million in the previous three calendar years.⁶⁵ This definition of a small entity in the context of MDS auctions has been approved by the SBA.⁶⁶ In the MDS auction, 67 bidders won 493 licenses. Of the 67 auction winners, 61 claimed status as a small business. At this time, the Commission estimates that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent MDS licensees that have gross revenues that are not more than \$40 million and are thus considered small entities.⁶⁷ MDS licensees and wireless cable operators that did not receive their licenses as a result of the MDS auction fall under the SBA small business size standard for Cable and Other Program Distribution. Information available to us indicates that there are approximately 850 of these licensees and operators that do not generate revenue in excess of \$13.5 million annually. Therefore, we estimate that there are approximately 850 small entity MDS (or BRS) providers, as defined by the SBA and the Commission's auction rules.

21. Educational institutions are included in this analysis as small entities; however, the Commission has not created a specific small business size standard for ITFS (now EBS).⁶⁸ We estimate that there are currently 2,032 EBS licensees, and all but 100 of the licenses are held by educational institutions. Thus, we estimate that at least 1,932 EBS licensees are small entities.

22. Common Carrier Paging. As noted, the SBA has developed a small business size standard for wireless firms within the broad economic census category of "Wireless Telecommunications Carriers (except Satellite)."⁶⁹ Under this category, the SBA deems a business to be small if it has 1,500 or fewer employees. Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.⁷⁰ Prior to that time, the SBA had developed a small business size standard for wireless firms within the now-superseded census categories of "Paging" and "Cellular and Other Wireless Telecommunications."⁷¹ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the first category of Paging, data for 2002 show that there were 807 firms that operated for the entire year.⁷² Of this total, 804 firms had employment of 999 or fewer employees, and three firms had

⁶⁴ MDS Auction No. 6 began on November 13, 1995, and closed on March 28, 1996 (67 bidders won 493 licenses).

⁶⁵ 47 C.F.R. § 21.961(b)(1).

⁶⁶ See *ITFS Order*, 10 FCC Rcd at 9589.

⁶⁷ 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 standards for "all other telecommunications" (annual receipts of \$23.5 million or less). See 13 C.F.R. § 121.201, NAICS code 517919.

⁶⁸ In addition, the term "small entity" under SBREFA applies to small organizations (nonprofits) 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). We do not collect annual revenue data on EBS licensees.

⁶⁹ 13 C.F.R. § 121.201, NAICS code 517211.

⁷⁰ 13 C.F.R. § 121.201, NAICS code 517210.

⁷¹ 13 C.F.R. § 121.201, NAICS codes 517211, 517210.

⁷² U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517211 (issued Nov. 2005).

employment of 1,000 employees or more.⁷³ For the second category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year.⁷⁴ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.⁷⁵ Thus, using the prior categories and the available data, we estimate that the majority of wireless firms can be considered small. Thus, under this category, the majority of firms can be considered small.

23. In the Paging *Third Report and Order*, we developed a small business size standard for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.⁷⁶ A “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.⁷⁷ The SBA has approved these small business size standards.⁷⁸ An auction of Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000.⁷⁹ Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won. Also, according to Commission data, 365 carriers reported that they were engaged in the provision of paging and messaging services.⁸⁰ Of those, we estimate that 360 are small, under the SBA-approved small business size standard.⁸¹

24. Wireless Communications Service. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission established small business size standards for the wireless communications services (WCS) auction.⁸² A “small business” is an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” is an entity with average gross revenues of \$15 million for each of the three preceding years. The SBA has approved these small business size standards.⁸³ The Commission auctioned geographic area licenses in

⁷³ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁷⁴ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

⁷⁵ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁷⁶ *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, PR Docket No. 89-552, Third Report and Order and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11068-70, paras. 291-295, 62 FR 16004 (Apr. 3, 1997).

⁷⁷ See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from A. Alvarez, Administrator, SBA (Dec. 2, 1998).

⁷⁸ *Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems*, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, paras. 98-107 (1999).

⁷⁹ *Id.* at 10085, para. 98.

⁸⁰ FCC Wireline Competition Bureau, Industry Analysis and Technology Division, “Trends in Telephone Service” at Table 5.3., page 5-5 (Feb. 2007). This source uses data that are current as of October 20, 2005.

⁸¹ *Id.*

⁸² Public Notice, “Auction of Wireless Communications Services, Auction Notes and Filing Requirements for 128 WCS Licenses Scheduled for April 15, 1997,” DA 97-386, Feb. 21, 1997.

⁸³ SBA Dec. 2, 1998 Letter.

the WCS service. In the auction, there were seven winning bidders that qualified as "very small business" entities, and one that qualified as a "small business" entity.

25. Wireless Communications Equipment Manufacturers. While these entities are merely indirectly affected by our action, we see are describing them to achieve a fuller record. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these 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." The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees. According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year. Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999. Thus, under this size standard, the majority of firms can be considered small.

26. Software Publishers. While these entities are merely indirectly affected by our action, we are describing them to achieve a fuller record. These companies may design, develop or publish software and may provide other support services to software purchasers, such as providing documentation or assisting in installation. The companies may also design software to meet the needs of specific users. The SBA has developed a small business size standard of \$23 million or less in average annual receipts for the category of Software Publishers. For Software Publishers, Census Bureau data for 2002 indicate that there were 6,155 firms in the category that operated for the entire year. Of these, 7,633 had annual receipts of under \$10 million, and an additional 403 firms had receipts of between \$10 million and \$24,999,999. For providers of Custom Computer Programming Services, the Census Bureau data indicate that there were 32,269 firms that operated for the entire year. Of these, 31,416 had annual receipts of under \$10 million, and an additional 565 firms had receipts of between \$10 million and \$24,999,999. Consequently, we estimate that the majority of the firms in this category are small entities that may be affected by our action.

27. NCE and Public Broadcast Stations. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in broadcasting images together with sound. These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public."⁸⁴ The SBA has created a small business size standard for Television Broadcasting entities, which is: such firms having \$13 million or less in annual receipts.⁸⁵ According to Commission staff review of the BIA Publications, Inc., Master Access Television Analyzer Database as of May 16, 2003, about 814 of the 1,220 commercial television stations in the United States had revenues of \$12 (twelve) million or less. We note, however, that in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations⁸⁶ 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.

28. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish

⁸⁴ U.S. Census Bureau, 2002 NAICS Definitions, "515120 Television Broadcasting" (partial definition); <http://www.census.gov/epcd/naics02/def/NDEF515.HTM>.

⁸⁵ 13 C.F.R. § 121.201, NAICS code 515120.

⁸⁶ "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 to power to control both." 13 C.F.R. § 21.103(a)(1).

whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent. There are also 2,117 low power television stations (LPTV).⁸⁷ Given the nature of this service, we will presume that all LPTV licensees qualify as small entities under the above SBA small business size standard.

29. The Commission has, under SBA regulations, estimated the number of licensed NCE television stations to be 380.⁸⁸ We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations⁸⁹ 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. 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.

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

30. There are potential reporting or recordkeeping requirements proposed in this FNPRM. For example, any testing regime will entail some form of record keeping. The FNPRM also seeks comment on potential testing procedures for the CMAS that could affect CMS providers as well as Wireless Communications Equipment Manufacturers. The proposals set forth in the FNPRM are intended to advance our public safety mission and establish an effective CMAS in a manner that imposes minimal regulatory burdens on affected entities.

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

31. The RFA requires an agency to describe any significant alternatives that it has considered in developing its 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 and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities."⁹⁰

32. As noted in paragraph 1 above, this FNPRM seeks comment on the narrow question of whether the Commission should require NCE and public broadcasting television licensees and permittees to test any equipment that they are required to install pursuant to section 602(c) of the WARN Act. In commenting on this question, commenters are invited to propose steps that the Commission may take to minimize any significant economic impact on small entities. When considering proposals made by other parties, commenters are invited to propose significant alternatives that serve the goals of these proposals.

⁸⁷ *FCC News Release*, "Broadcast Station Totals as of September 30, 2005."

⁸⁸ See *Broadcast Station Totals*, *supra* IRFA note 11.

⁸⁹ "[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 to power to control both." 13 C.F.R. § 121.103(a)(1).

⁹⁰ 5 U.S.C. § 603(c)(1) – (c)(4).

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

None.