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soon as possible and shall be retained for a period of two years. As soon as possible means immediately absent unusual circumstances.

(c) *Public inspection file.* (1) Each SDARS applicant or licensee must also place in the online public file hosted by the Commission the records required to be placed in the public inspection file by 47 CFR 25.601 and 73.2080 (equal employment opportunities (EEO)) and retain those records for the period required by those rules.

(2) Each SDARS licensee must provide a link to the public inspection file hosted on the Commission’s Web site from the home page of its own Web site, if the licensee has a Web site, and provide on its Web site contact information for a representative who can assist any person with disabilities with issues related to the content of the public files. Each SDARS licensee also must include in the online public file the address of the licensee’s local public file, if the licensee retains documents in the local public file that are not available in the Commission’s online file, and the name, phone number, and email address of the licensee’s designated contact for questions about the public file.

[81 FR 10122, Feb. 29, 2016, as amended at 87 FR 7754, Feb. 10, 2022]

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AUTHORITY: 47 U.S.C. 154, 301, 302a, 303, 307, 309, 332, 336, 337, 1403, 1404, 1451, and 1452, unless otherwise noted.

SOURCE: 62 FR 9658, Mar. 3, 1997, unless otherwise noted.

Subpart A—General Information

§ 27.1 Basis and purpose.

This section contains the statutory basis for this part of the rules and provides the purpose for which this part is issued.

(a) *Basis*. The rules for miscellaneous wireless communications services (WCS) in this part are promulgated under the provisions of the Communications Act of 1934, as amended, that vest authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations.

(b) *Purpose*. This part states the conditions under which spectrum is made available and licensed for the provision of wireless communications services in the following bands.

- (1) 2305–2320 MHz and 2345–2360 MHz.
- (2) 746–758 MHz, 775–788 MHz, and 805–806 MHz.
- (3) 698–746 MHz.
- (4) 1390–1392 MHz.
- (5) 1392–1395 MHz and 1432–1435 MHz.
- (6) 1670–1675 MHz.
- (7) 1915–1920 MHz and 1995–2000 MHz.
- (8) 1710–1755 MHz and 2110–2155 MHz.
- (9) 2495–2690 MHz.

- (10) 2000–2020 MHz and 2180–2200 MHz.
- (11) 1695–1710 MHz.
- (12) 1755–1780 MHz.
- (13) 2155–2180 MHz.
- (14) 617–652 MHz and 663–698 MHz.
- (15) 3700–3980 MHz.
- (16) 897.5–900.5 MHz and 936.5–939.5 MHz.
- (17) 3450–3550 MHz.

(c) *Scope*. The rules in this part apply only to stations authorized under this part or authorized under another part of this chapter on frequencies or bands transitioning to authorizations under this part.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.1, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 27.2 Permissible communications.

(a) *Miscellaneous wireless communications services*. Except as provided in paragraph (b) or (d) of this section and subject to technical and other rules contained in this part, a licensee in the frequency bands specified in § 27.5 may provide any services for which its frequency bands are allocated, as set forth in the non-Federal Government column of the Table of Allocations in § 2.106 of this chapter (column 5).

(b) *775–776 MHz and 805–806 MHz bands*. Operators in the 775–776 MHz and 805–806 MHz bands may not employ a cellular system architecture. A cellular system architecture is defined, for purposes of this part, as one that consists of many small areas or cells (segmented from a larger geographic service area), each of which uses its own base station, to enable frequencies to be reused at relatively short distances.

(c) *Satellite DARS*. Satellite digital audio radio service (DARS) may be provided using the 2310–2320 and 2345–2360 MHz bands. Satellite DARS service shall be provided in a manner consistent with part 25 of this chapter.

(d) *2000–2020 MHz and 2180–2200 MHz bands*. Operators in the 2000–2020 MHz and 2180–2200 MHz bands may not provide the mobile-satellite service under the provisions of this part; rather, mobile-satellite service shall be provided

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in a manner consistent with part 25 of this chapter.

(e) *716–722 MHz and 722–728 MHz bands.* The 716–722 and 722–728 MHz frequencies may not be used for uplink transmission and must be used only for downlink transmissions.

[65 FR 3144, Jan. 20, 2000, as amended at 65 FR 17601, Apr. 4, 2000; 72 FR 48843, Aug. 24, 2007; 78 FR 8267, Feb. 5, 2013; 78 FR 66316, Nov. 5, 2013]

§ 27.3 Other applicable rule parts.

Other FCC rule parts applicable to the Wireless Communications Service include the following:

(a) *Part 0.* This part describes the Commission's organization and delegations of authority. Part 0 of this chapter also lists available Commission publications, standards and procedures for access to Commission records, and location of Commission Field Offices.

(b) *Part 1.* This part includes rules of practice and procedure for license applications, adjudicatory proceedings, procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; competitive bidding procedures; and the environmental requirements that, together with the procedures specified in § 17.4(c) of this chapter, if applicable, must be complied with prior to the initiation of construction. Subpart F includes the rules for the Wireless Telecommunications Services and the procedures for filing electronically via the ULS.

(c) *Part 2.* This part contains the Table of Frequency Allocations and special requirements in international regulations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning the marketing and importation of radio frequency devices, and for obtaining equipment authorization.

(d) *Part 5.* This part contains rules prescribing the manner in which parts of the radio frequency spectrum may be made available for experimentation.

(e) *Part 15.* This part sets forth the requirements and conditions applicable to certain radio frequency devices.

(f) *Part 17.* This part contains requirements for the construction, marking and lighting of antenna towers, and the environmental notification process

that must be completed before filing certain antenna structure registration applications.

(g) *Part 20.* This part sets forth the requirements and conditions applicable to commercial mobile radio service providers.

(h) *Part 22.* This part sets forth the requirements and conditions applicable to public mobile services.

(i) *Part 24.* This part sets forth the requirements and conditions applicable to personal communications services.

(j) *Part 25.* This part contains the requirements for satellite communications, including satellite DARS.

(k) *Part 51.* This part contains general duties of telecommunications carriers to provide for interconnection with other telecommunications carriers.

(l) *Part 64.* This part sets forth the requirements and conditions applicable to telecommunications carriers under the Communications Assistance for Law Enforcement Act.

(m) *Part 68.* This part contains technical standards for connection of terminal equipment to the telephone network.

(n) *Part 73.* This part sets forth the requirements and conditions applicable to radio broadcast services.

(o) *Part 74.* This part sets forth the requirements and conditions applicable to experimental radio, auxiliary, special broadcast and other program distributional services.

(p) *Part 90.* This part sets forth the requirements and conditions applicable to private land mobile radio services.

(q) *Part 101.* This part sets forth the requirements and conditions applicable to fixed microwave services.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 68954, Dec. 14, 1998; 65 FR 3144, Jan. 20, 2000; 67 FR 5510, Feb. 6, 2002; 69 FR 5714, Feb. 6, 2004; 69 FR 72031, Dec. 10, 2004; 70 FR 61059, Oct. 20, 2005; 77 FR 3955, Jan. 26, 2012]

§ 27.4 Terms and definitions.

3.45 GHz Service. A radiocommunication service licensed under this part for the frequency bands specified in § 27.5(o) (3450–3550 MHz band).

3.7 GHz Service. A radiocommunication service licensed under this part for the frequency bands

specified in § 27.5(m) (3700–3980 MHz band).

600 MHz service. A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5(l).

Advanced Wireless Service (AWS). A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5(h), 27.5(j), or 27.5(k).

Affiliate. This term shall have the same meaning as that for “affiliate” in part 1, § 1.2110(b)(5) of this chapter.

Assigned frequency. The center of the frequency band assigned to a station.

Attended operation. Operation of a station by a designated person on duty at the place where the transmitting apparatus is located with the transmitter in the person’s plain view.

Authorized bandwidth. The maximum width of the band of frequencies permitted to be used by a station. This is normally considered to be the necessary or occupied bandwidth, whichever is greater.

Average terrain. The average elevation of terrain between 3 and 16 kilometers from the antenna site.

Base station. A land station in the land mobile service.

Booster service area. A geographic area to be designated by an applicant for a booster station, within which the booster station shall be entitled to protection against interference as set forth in this part. The booster service area must be specified by the applicant so as not to overlap the booster service area of any other booster authorized to or proposed by the applicant. However, a booster station may provide service to receive sites outside of its booster service area, at the licensee’s risk of interference. The booster station must be capable of providing substantial service within the designated booster service area.

Broadband Radio Service (BRS). A radio service using certain frequencies in the 2150–2162 and 2496–2690 MHz bands which can be used to provide fixed and mobile services, except for aeronautical services.

Broadcast services. This term shall have the same meaning as that for “broadcasting” in section 3(6) of the Communications Act of 1934, *i.e.*, “the

dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations.” 47 U.S.C. 153(6).

Commence operations. A 600 MHz Band licensee is deemed to commence operations when it begins pre-launch site activation and commissioning tests using permanent base station equipment, antennas and/or tower locations as part of its site and system optimization in the area of its planned commercial service infrastructure deployment.

Documented complaint. A complaint that a party is suffering from non-consensual interference. A documented complaint must contain a certification that the complainant has contacted the operator of the allegedly offending facility and tried to resolve the situation prior to filing. The complaint must then specify the nature of the interference, whether the interference is constant or intermittent, when the interference began and the site(s) most likely to be causing the interference. The complaint should be accompanied by a videotape or other evidence showing the effects of the interference. The complaint must contain a motion for a temporary order to have the interfering station cease transmitting. The complaint must be filed with the Secretary’s office and served on the allegedly offending party.

Educational Broadband Service (EBS). A radiocommunication service licensed under this part for the frequency bands specified in § 27.5(i).

Effective Radiated Power (ERP) (in a given direction). The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.

Equivalent Isotropically Radiated Power (EIRP). The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Fixed service. A radio communication service between specified fixed points.

Fixed station. A station in the fixed service.

Land mobile service. A mobile service between base stations and land mobile stations, or between land mobile stations.

Land mobile station. A mobile station in the land mobile service capable of

surface movement within the geographic limits of a country or continent.

Land station. A station in the mobile service not intended to be used while in motion.

Lower Band Segment (LBS). Segment of the BRS/EBS band consisting of channels in the frequencies 2496–2572 MHz.

Middle Band Segment (MBS). Segment of the BRS/EBS band consisting of channels in the frequencies 2572–2614 MHz.

Mobile service. A radio communication service between mobile and land stations, or between mobile stations.

Mobile station. A station in the mobile service intended to be used while in motion or during halts at unspecified points.

National Geodetic Reference System (NGRS). The name given to all geodetic control data contained in the National Geodetic Survey (NGS) data base. (Source: National Geodetic Survey, U.S. Department of Commerce)

Point-to-point Broadband station. A Broadband station that transmits a highly directional signal from a fixed transmitter location to a fixed receive location.

Portable device. Transmitters designed to be used within 20 centimeters of the body of the user.

Post-auction transition period. The 39-month period commencing upon the public release of the Channel Reassignment Public Notice as defined in § 73.3700(a) of this chapter.

Public Safety Broadband Licensee. The licensee of the Public Safety Broadband License in the 763–768 MHz and 793–798 MHz bands.

Radiodetermination. The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

Radiolocation. Radiodetermination used for purposes other than those of radionavigation.

Radiolocation land station. A station in the radiolocation service not intended to be used while in motion.

Radiolocation mobile station. A station intended to be used while in motion or during halts at unspecified points.

Radionavigation. Radiodetermination used for the purpose of navigation, including obstruction warning.

Remote control. Operation of a station by a designated person at a control position from which the transmitter is not visible but where suitable control and telemetering circuits are provided which allow the performance of the essential functions that could be performed at the transmitter.

Satellite Digital Audio Radio Service (satellite DARS). A radiocommunication service in which compact disc quality programming is digitally transmitted by one or more space stations.

Sectorization. The use of an antenna system at any broadband station, booster station and/or response station hub that is capable of simultaneously transmitting multiple signals over the same frequencies to different portions of the service area and/or simultaneously receiving multiple signals over the same frequencies from different portions of the service area.

Spectrum Act. The term *Spectrum Act* means Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96).

Studio to transmitter link (STL). A directional path used to transmit a signal from a station's studio to its transmitter.

Temporary fixed broadband station. A broadband station used for the transmission of material from temporary unspecified points to a broadband station.

Time division multiple access (TDMA). A multiple access technique whereby users share a transmission medium by being assigned and using (one-at-a-time) for a limited number of time division multiplexed channels; implies that several transmitters use one channel for sending several bit streams.

Time division multiplexing (TDM). A multiplexing technique whereby two or more channels are derived from a transmission medium by dividing access to the medium into sequential intervals. Each channel has access to the entire bandwidth of the medium during its interval. This implies that one transmitter uses one channel to send several bit streams of information.

Unattended operation. Operation of a station by automatic means whereby

the transmitter is turned on and off and performs its functions without attention by a designated person.

Universal Licensing System. The Universal Licensing System (ULS) is the consolidated database, application filing system, and processing system for all Wireless Radio Services. ULS supports electronic filing of all applications and related documents by applicants and licensees in the Wireless Radio Services, and provides public access to licensing information.

Upper 700 MHz D Block license. The Upper 700 MHz D Block license is the nationwide license associated with the 758–763 MHz and 788–793 MHz bands.

Upper Band Segment (UBS). Segment of the BRS/EBS band consisting of channels in the frequencies 2614–2690 MHz

Wireless communications service. A radiocommunication service licensed pursuant to this part for the frequency bands specified in § 27.5.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.4, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 27.5 Frequencies.

(a) *2305–2320 MHz and 2345–2360 MHz bands.* The following frequencies are available for WCS in the 2305–2320 MHz and 2345–2360 MHz bands:

(1) Two paired channel blocks are available for assignment on a Major Economic Area basis as follows:

Block A: 2305–2310 and 2350–2355 MHz; and
Block B: 2310–2315 and 2355–2360 MHz.

(2) Two unpaired channel blocks are available for assignment on a Regional Economic Area Grouping basis as follows:

Block C: 2315–2320 MHz; and
Block D: 2345–2350 MHz.

(b) *746–758 MHz, 775–788 MHz, and 805–806 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands:

(1) Two paired channels of 1 megahertz each are available for assignment

in Block A in the 757–758 MHz and 787–788 MHz bands.

(2) Two paired channels of 1 megahertz each are available for assignment in Block B in the 775–776 MHz and 805–806 MHz bands.

(3) Two paired channels of 11 megahertz each are available for assignment in Block C in the 746–757 MHz and 776–787 MHz bands. In the event that no licenses for two channels in this Block C are assigned based on the results of the first auction in which such licenses were offered because the auction results do not satisfy the applicable reserve price, the spectrum in the 746–757 MHz and 776–787 MHz bands will instead be made available for assignment at a subsequent auction as follows:

(i) Two paired channels of 6 megahertz each available for assignment in Block C1 in the 746–752 MHz and 776–782 MHz bands.

(ii) Two paired channels of 5 megahertz each available for assignment in Block C2 in the 752–757 MHz and 782–787 MHz bands.

(c) *698–746 MHz band.* The following frequencies are available for licensing pursuant to this part in the 698–746 MHz band:

(1) Three paired channel blocks of 12 megahertz each are available for assignment as follows:

Block A: 698–704 MHz and 728–734 MHz;
Block B: 704–710 MHz and 734–740 MHz; and
Block C: 710–716 MHz and 740–746 MHz.

(2) Two unpaired channel blocks of 6 megahertz each are available for assignment as follows:

Block D: 716–722 MHz; and
Block E: 722–728 MHz.

(d) *1390–1392 MHz band.* The 1390–1392 MHz band is available for assignment on a Major Economic Area basis.

(e) *The paired 1392–1395 and 1432–1435 MHz bands.* The paired 1392–1395 MHz and 1432–1435 MHz bands are available for assignment on an Economic Area Grouping basis as follows: Block A: 1392–1393.5 MHz and 1432–1433.5 MHz; and Block B: 1393.5–1395 MHz and 1433.5–1435 MHz.

(f) *1670–1675 MHz band.* The 1670–1675 MHz band is available for assignment on a nationwide basis.

(g) [Reserved]

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(h) 1710–1755 MHz, 2110–2155 MHz, 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands. The following frequencies are available for licensing pursuant to this part in the 1710–1755 MHz, 2110–2155 MHz, 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands:

(1) Four paired channel blocks of 10 megahertz each are available for assignment as follows:

- Block A: 1710–1720 MHz and 2110–2120 MHz;
Block B: 1720–1730 MHz and 2120–2130 MHz;
Block F: 1745–1755 MHz and 2145–2155 MHz;
and
Block J: 1770–1780 MHz and 2170–2180 MHz.

(2) Six paired channel blocks of 5 megahertz each are available for assignment as follows:

- Block C: 1730–1735 MHz and 2130–2135 MHz;
Block D: 1735–1740 MHz and 2135–2140 MHz;
Block E: 1740–1745 MHz and 2140–2145 MHz;
Block G: 1755–1760 MHz and 2155–2160 MHz;
Block H: 1760–1765 MHz and 2160–2165 MHz;
and
Block I: 1765–1770 MHz and 2165–2170 MHz.

(3) One unpaired block of 5 megahertz and one unpaired block of 10 megahertz each are available for assignment as follows:

- Block A1: 1695–1700 MHz
Block B1: 1700–1710 MHz.

NOTE TO PARAGRAPH (h). Licenses to operate in the 1695–1710 MHz and 1755–1780 MHz bands are subject to the condition that the licensee must not cause harmful interference to an incumbent Federal entity relocating from these bands under an approved Transition Plan. This condition remains in effect until NTIA terminates the applicable authorization of the incumbent Federal entity.

(i) Frequency assignments for the BRS/EBS band. (1) Pre-transition frequency assignments.

- BRS Channel 1: 2150–2156 MHz or 2496–2500 MHz
BRS Channel 2: 2156–2162 MHz or 2686–2690 MHz
BRS Channel 2A: 2156–2160 MHz
EBS Channel A1: 2500–2506 MHz
EBS Channel B1: 2506–2512 MHz
EBS Channel A2: 2512–2518 MHz
EBS Channel B2: 2518–2524 MHz
EBS Channel A3: 2524–2530 MHz
EBS Channel B3: 2530–2536 MHz
EBS Channel A4: 2536–2542 MHz
EBS Channel B4: 2542–2548 MHz
EBS Channel C1: 2548–2554 MHz
EBS Channel D1: 2554–2560 MHz
EBS Channel C2: 2560–2566 MHz
EBS Channel D2: 2566–2572 MHz
EBS Channel C3: 2572–2578 MHz
EBS Channel D3: 2578–2584 MHz

- EBS Channel C4: 2584–2590 MHz
EBS Channel D4: 2590–2596 MHz
BRS Channel E1: 2596–2602 MHz
BRS Channel F1: 2602–2608 MHz
BRS Channel E2: 2608–2614 MHz
BRS Channel F2: 2614–2620 MHz
BRS Channel E3: 2620–2626 MHz
BRS Channel F3: 2626–2632 MHz
BRS Channel E4: 2632–2638 MHz
BRS Channel F4: 2638–2644 MHz
EBS Channel G1: 2644–2650 MHz
BRS Channel H1: 2650–2656 MHz
EBS Channel G2: 2656–2662 MHz
BRS Channel H2: 2662–2668 MHz
EBS Channel G3: 2668–2674 MHz
BRS Channel H3: 2674–2680 MHz
EBS Channel G4: 2680–2686 MHz
I Channels: 2686–2690 MHz

(2) Post transition frequency assignments. The frequencies available in the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) are listed in this section in accordance with the frequency allocations table of § 2.106 of this chapter.

(i) Lower Band Segment (LBS): The following channels shall constitute the Lower Band Segment:

- BRS Channel 1: 2496–2502 MHz or 2150–2156 MHz
EBS Channel A1: 2502–2507.5 MHz
EBS Channel A2: 2507.5–2513 MHz
EBS Channel A3: 2513–2518.5 MHz
EBS Channel B1: 2518.5–2524 MHz
EBS Channel B2: 2524–2529.5 MHz
EBS Channel B3: 2529.5–2535 MHz
EBS Channel C1: 2535–2540.5 MHz
EBS Channel C2: 2540.5–2546 MHz
EBS Channel C3: 2546–2551.5 MHz
EBS Channel D1: 2551.5–2557 MHz
EBS Channel D2: 2557–2562.5 MHz
EBS Channel D3: 2562.5–2568 MHz
EBS Channel JA1: 2568.00000–2568.33333 MHz
EBS Channel JA2: 2568.33333–2568.66666 MHz
EBS Channel JA3: 2568.66666–2569.00000 MHz
EBS Channel JB1: 2569.00000–2569.33333 MHz
EBS Channel JB2: 2569.33333–2569.66666 MHz
EBS Channel JB3: 2569.66666–2570.00000 MHz
EBS Channel JC1: 2570.00000–2570.33333 MHz
EBS Channel JC2: 2570.33333–2570.66666 MHz
EBS Channel JC3: 2570.66666–2571.00000 MHz
EBS Channel JD1: 2571.00000–2571.33333 MHz
EBS Channel JD2: 2571.33333–2571.66666 MHz
EBS Channel JD3: 2571.66666–2572.00000 MHz

(ii) Middle Band Segment (MBS): The following channels shall constitute the Middle Band Segment:

- EBS Channel A4: 2572–2578 MHz
EBS Channel B4: 2578–2584 MHz
EBS Channel C4: 2584–2590 MHz
EBS Channel D4: 2590–2596 MHz
EBS Channel G4: 2596–2602 MHz
BRS/EBS Channel F4: 2602–2608 MHz

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BRS/EBS Channel E4: 2608–2614 MHz

(iii) Upper Band Segment (UBS): The following channels shall constitute the Upper Band Segment:

BRS Channel KH1: 2614.00000–2614.33333 MHz.
BRS Channel KH2: 2614.33333–2614.66666 MHz.
BRS Channel KH3: 2614.66666–2615.00000 MHz.
EBS Channel KG1: 2615.00000–2615.33333 MHz.
EBS Channel KG2: 2615.33333–2615.66666 MHz.
EBS Channel KG3: 2615.66666–2616.00000 MHz.
BRS Channel KF1: 2616.00000–2616.33333 MHz.
BRS Channel KF2: 2616.33333–2616.66666 MHz.
BRS Channel KF3: 2616.66666–2617.00000 MHz.
BRS Channel KE1: 2617.00000–2617.33333 MHz.
BRS Channel KE2: 2617.33333–2617.66666 MHz.
BRS Channel KE3: 2617.66666–2618.00000 MHz.
BRS Channel 2: 2618–2624 MHz or 2156–2162 MHz.
BRS Channel 2A: 2618–2624 MHz or 2156–2160 MHz.
BRS/EBS Channel E1: 2624–2629.5 MHz.
BRS/EBS Channel E2: 2629.5–2635 MHz.
BRS/EBS Channel E3: 2635–2640.5 MHz.
BRS/EBS Channel F1: 2640.5–2646 MHz.
BRS/EBS Channel F2: 2646–2651.5 MHz.
BRS/EBS Channel F3: 2651.5–2657 MHz.
BRS Channel H1: 2657–2662.5 MHz.
BRS Channel H2: 2662.5–2668 MHz.
BRS Channel H3: 2668–2673.5 MHz.
EBS Channel G1: 2673.5–2679 MHz.
EBS Channel G2: 2679–2684.5 MHz.
EBS Channel G3: 2684.5–2690 MHz.

NOTE TO PARAGRAPH (i)(2): No 125 kHz channels are provided for channels in operation in this service. The 125 kHz channels previously associated with these channels have been re-allocated to Channel G3 in the upper band segment.

(3) [Reserved]

(4) A temporary fixed broadband station may use any available broadband channel on a secondary basis, except that operation of temporary fixed broadband stations is not allowed within 56.3 km (35 miles) of Canada.

(5)(i) A point-to-point EBS station on the E and F-channel frequencies, may be involuntarily displaced by a BRS applicant or licensee, provided that suitable alternative spectrum is available and that the BRS entity bears the expenses of the migration. Suitability of spectrum will be determined on a case-by-base basis; at a minimum, the alternative spectrum must be licensable by broadband operators on a primary basis (although it need not be specifically allocated to the broadband service), and must provide a signal that is equivalent to the prior signal in picture quality and reliability, unless the

broadband licensee will accept an inferior signal. Potential expansion of the BRS licensee may be considered in determining whether alternative available spectrum is suitable.

(ii) If suitable alternative spectrum is located pursuant to paragraph (h)(6)(i) of this section, the initiating party must prepare and file the appropriate application for the new spectrum, and must simultaneously serve a copy of the application on the EBS licensee to be moved. The initiating party will be responsible for all costs connected with the migration, including purchasing, testing and installing new equipment, labor costs, reconfiguration of existing equipment, administrative costs, legal and engineering expenses necessary to prepare and file the migration application, and other reasonable documented costs. The initiating party must secure a bond or establish an escrow account to cover reasonable incremental increase in ongoing expenses that may fall upon the migrated licensee. The bond or escrow account should also account for the possibility that the initiating party subsequently becomes bankrupt. If it becomes necessary for the Commission to assess the sufficiency of a bond or escrow amount, it will take into account such factors as projected incremental increase in electricity or maintenance expenses, or relocation expenses, as relevant in each case.

(iii) The EBS licensee to be moved will have a 60-day period in which to oppose the involuntary migration. The broadband party should state its opposition to the migration with specificity, including engineering and other challenges, and a comparison of the present site and the proposed new site. If involuntary migration is granted, the new facilities must be operational before the initiating party will be permitted to begin its new or modified operations. The migration must not disrupt the broadband licensee's provision of service, and the broadband licensee has the right to inspect the construction or installation work.

(j) *2000–2020 MHz and 2180–2200 MHz bands.* The following frequencies are available for licensing pursuant to this part in the 2000–2020 MHz and 2180–2200 MHz (AWS-4) bands:

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(1) Two paired channel blocks of 10 megahertz each are available for assignment as follows: Block A: 2000–2010 MHz and 2180–2190 MHz; and Block B: 2010–2020 MHz and 2190–2200 MHz.

(2) [Reserved]

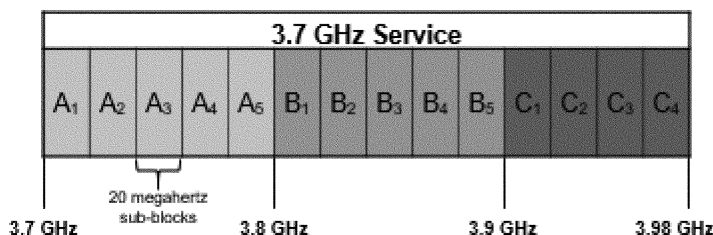
(k) 1915–1920 MHz and 1995–2000 MHz bands. The paired 1915–1920 MHz and 1995–2000 MHz bands are available for assignment on an Economic Area (EA) basis.

(l) 600 MHz band. The 600 MHz band (617–652 MHz and 663–698 MHz) has seven pairs of 5 megahertz channel blocks available for assignment on a Partial Economic Area basis as follows:

- Block A: 617–622 MHz and 663–668 MHz;
- Block B: 622–627 MHz and 668–673 MHz;
- Block C: 627–632 MHz and 673–678 MHz;
- Block D: 632–637 MHz and 678–683 MHz;
- Block E: 637–642 MHz and 683–688 MHz;
- Block F: 642–647 MHz and 688–693 MHz; and
- Block G: 647–652 MHz and 693–698 MHz.

(m) 3700–3980 MHz band. The 3.7 GHz Service is comprised of Block A (3700–3800 MHz); Block B (3800–3900 MHz); and Block C (3900–3980 MHz). These blocks are licensed as 14 individual 20 megahertz sub-blocks available for assignment in the contiguous United States on a Partial Economic Area basis, see § 27.6(m), as follows:

Figure 1 to paragraph (m)



(n) 900 MHz broadband. The paired 897.5–900.5 MHz and 936.5–939.5 MHz bands are available for assignment on a geographic basis. For operations in the 897.5–900.5 MHz and 936.5–939.5 MHz bands (designated as Channels 120–360 in section 90.613 of this chapter), no new applications will be accepted in transitioned markets for narrowband systems under part 90, subpart S of this chapter.

(o) 3450–3550 MHz band. The 3.45 GHz Service is licensed as ten individual 10 megahertz blocks available for assignment in the contiguous United States on a Partial Economic Area basis, see § 27.6(n).

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.5, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 27.6 Service areas.

(a) Composition of service areas. WCS service areas include Economic Areas (EAs), Major Economic Areas (MEAs), Regional Economic Area Groupings (REAGs), cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs), and a nationwide area. MEAs and REAGs are defined in the Table immediately following paragraph (a)(1) of this section. Both MEAs and REAGs are based on the U.S. Department of Commerce’s EAs. See 60 FR 13114 (March 10, 1995). In addition, the Commission shall separately license Guam and the Northern Mariana Islands, Puerto Rico and the United States Virgin Islands, American Samoa, and the Gulf of Mexico, which have been assigned Commission-created EA numbers 173–176, respectively. The nationwide area is composed of the contiguous 48 states, Alaska, Hawaii, the Gulf of Mexico, and the U.S. territories. Maps of the EAs, MEAs, MSAs, RSAs, and REAGs are available on the

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FCC’s website at *www.fcc.gov/auctions* through the “Maps” submenu. composed of one or more MEAs, as defined in the table below:

(1) The 52 MEAs are composed of one or more EAs and the 12 REAGs are

REAGs	MEAs	EAs
1 (Northeast)	1 (Boston)	1–3.
	2 (New York City)	4–7, 10.
	3 (Buffalo)	8.
	4 (Philadelphia)	11–12.
2 (Southeast)	5 (Washington)	13–14.
	6 (Richmond)	15–17, 20.
	7 (Charlotte-Greensboro-Greenville-Raleigh)	18–19, 21–26, 41–42, 46.
	8 (Atlanta)	27–28, 37–40, 43.
	9 (Jacksonville)	29, 35.
	10 (Tampa-St. Petersburg-Orlando)	30, 33–34.
	11 (Miami)	31–32.
3 (Great Lakes)	12 (Pittsburgh)	9, 52–53.
	13 (Cincinnati-Dayton)	48–50.
	14 (Columbus)	51.
	15 (Cleveland)	54–55.
	16 (Detroit)	56–58, 61–62.
	17 (Milwaukee)	59–60, 63, 104–105, 108.
	18 (Chicago)	64–66, 68, 97, 101.
	19 (Indianapolis)	67.
	20 (Minneapolis-St. Paul)	106–107, 109–114, 116.
	21 (Des Moines-Quad Cities)	100, 102–103, 117.
4 (Mississippi Valley)	22 (Knoxville)	44–45.
	23 (Louisville-Lexington-Evansville)	47, 69–70, 72.
	24 (Birmingham)	36, 74, 78–79.
	25 (Nashville)	71.
	26 (Memphis-Jackson)	73, 75–77.
	27 (New Orleans-Baton Rouge)	80–85.
	28 (Little Rock)	90–92, 95.
	29 (Kansas City)	93, 99, 123.
	30 (St. Louis)	94, 96, 98.
5 (Central)	31 (Houston)	86–87, 131.
	32 (Dallas-Fort Worth)	88–89, 127–130, 135, 137–138.
	33 (Denver)	115, 140–143.
	34 (Omaha)	118–121.
	35 (Wichita)	122.
	36 (Tulsa)	124.
	37 (Oklahoma City)	125–126.
	38 (San Antonio)	132–134.
	39 (El Paso-Albuquerque)	136, 139, 155–157.
	40 (Phoenix)	154, 158–159.
6 (West)	41 (Spokane-Billings)	144–147, 168.
	42 (Salt Lake City)	148–150, 152.
	43 (San Francisco-Oakland-San Jose)	151, 162–165.
	44 (Los Angeles-San Diego)	153, 160–161.
	45 (Portland)	166–167.
	46 (Seattle)	169–170.
7 (Alaska)	47 (Alaska)	171.
8 (Hawaii)	48 (Hawaii)	172.
9 (Guam and the Northern Mariana Islands)	49 (Guam and the Northern Mariana Islands)	173.
10 (Puerto Rico and U.S. Virgin Islands) ..	50 (Puerto Rico and U.S. Virgin Islands) ..	174.
11 (American Samoa)	51 (American Samoa)	175.
12 (Gulf of Mexico)	52 (Gulf of Mexico)	176.

(2) The Gulf of Mexico EA extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(b) 746–758 MHz, 775–788 MHz, and 805–806 MHz bands. WCS service areas for the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands are as follows.

(1) Service areas for Block A in the 757–758 MHz and 787–788 MHz bands and Block B in the 775–776 MHz and 805–806 MHz bands are based on Major Economic Areas (MEAs), as defined in paragraphs (a)(1) and (a)(2) of this section.

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(2) Service areas for Block C in the 746–757 MHz and 776–787 MHz bands are based on Regional Economic Area Groupings (REAGs) as defined by paragraph (a) of this section. In the event that no licenses with respect to service areas for Block C in the 746–757 MHz and 776–787 MHz bands are assigned based on the results of the first auction in which such licenses are offered because the auction results do not satisfy the applicable reserve price, then service areas for the spectrum at 746–757 MHz and 776–787 MHz will instead be available for assignment as follows:

(i) Service areas for Block C1 in the 746–752 MHz and 776–782 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(ii) Service areas for Block C2 in the 752–757 MHz and 782–787 MHz bands are based on Regional Economic Area Groupings (REAGs) as defined by paragraph (a) of this section.

(c) *698–746 MHz band.* WCS service areas for the 698–746 MHz band are as follows:

(1) Service areas for Block A in the 698–704 MHz and 728–734 MHz bands and Block E in the 722–728 MHz band are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(2) Service areas for Block B in the 704–710 MHz and 734–740 MHz bands and Block C in the 710–716 MHz and 740–746 MHz bands are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public No-

tice Report No. CL–92–40 “Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,” dated January 24, 1992, DA 92–109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(3) Service areas for Block D in the 716–722 MHz band are based on Economic Area Groupings (EAGs) as defined by the Federal Communications Commission. See 62 FR 15978 (April 3, 1997) extended with the Gulf of Mexico. See also paragraphs (a)(1) and (2) of this section and 62 FR 9636 (March 3, 1997), in which the Commission created an additional four economic area-like areas for a total of 176. Maps of the EAGs and the FEDERAL REGISTER Notice that established the 172 Economic Areas (EAs) are available for public inspection through the Federal Communications Commission’s Reference Information Center. These maps and data are also available on the FCC website at <https://www.fcc.gov/oet/info/maps/areas/>.

(i) There are 6 EAGs, which are composed of multiple EAs as defined in the table below:

Economic area groupings	Name	Economic areas
EAG001	Northeast	1–11, 54.
EAG002	Mid-Atlantic	12–26, 41, 42, 44–53, 70.
EAG003	Southeast	27–40, 43, 69, 71–86, 88–90, 95, 96, 174, 176 (part).
EAG004	Great Lakes	55–68, 97, 100–109.
EAG005	Central/Mountain	87, 91–94, 98, 99, 110–146, 148, 149, 152, 154–159, 176 (part).
EAG006	Pacific	147, 150, 151, 153, 160–173, 175.

NOTE 1 TO PARAGRAPH (c)(3)(i): Economic Area Groupings are defined by the Federal Communications Commission; see 62 FR 15978 (April 3, 1997) extended with the Gulf of Mexico.

NOTE 2 TO PARAGRAPH (c)(3)(i): Economic Areas are defined by the Regional Economic Analysis Division, Bureau of Economic Analysis, U.S. Department of Commerce February 1995 and extended by the Federal Com-

munications Commission, see 62 FR 9636 (March 3, 1997).

(ii) For purposes of paragraph (c)(3)(i) of this section, EA 176 (the Gulf of Mexico) will be divided between EAG003 (the Southeast EAG) and EAG005 (the Central/Mountain EAG) in accordance with the configuration of the Eastern/Central and Western Planning Area established by the Mineral Management

Services Bureau of the Department of the Interior (MMS). That portion of EA 176 contained in the Eastern and Central Planning Areas as defined by MMS will be included in EAG003; that portion of EA 176 contained in the Western Planning Area as defined by MMS will be included in EAG005. Maps of these areas may be found on the MMS Web site: <http://www.gomr.mms.gov/homepg/offshore/offshore.html>.

(d) *1390–1392 MHz band.* Service areas for the 1390–1392 MHz band is based on Major Economic Areas (MEAs), as defined in paragraphs (a)(1) and (a)(2) of this section.

(e) *The paired 1392–1395 and 1432–1435 MHz bands.* Service areas for the paired 1392–1395 and 1432–1435 MHz bands are as follows. Service areas for Block A in the 1392–1393.5 MHz and 1432–1433.5 MHz bands and Block B in the 1393.5–1395 MHz and 1433.5–1435 MHz bands are based on Economic Area Groupings (EAGs) as defined in paragraph (c)(3) of this section.

(f) *1670–1675 MHz band.* Service areas for the 1670–1675 MHz band are available on a nationwide basis.

(g) [Reserved]

(h) *1710–1755 and 2110–2155 MHz bands.* AWS service areas for the 1710–1755 MHz and 2110–2155 MHz bands are as follows:

(1) Service areas for Block A (1710–1720 MHz and 2110–2120 MHz) are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public Notice Report No. CL–92–40 “Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,” dated January 24, 1992, DA 92–109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(2) Service areas for Blocks B (1720–1730 MHz and 2120–2130 MHz) and C (1730–1735 MHz and 2130–2135 MHz) are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(3) Service areas for blocks D (1735–1740 MHz and 2135–2140 MHz), E (1740–1745 MHz and 2140–2145 MHz) and F (1745–1755 MHz and 2145–2155 MHz) are based on Regional Economic Area Groupings (REAGs) as defined by paragraph (a) of this section.

(i) *2000–2020 MHz and 2180–2200 MHz bands.* AWS service areas for the 2000–2020 MHz and 2180–2200 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(j) *1915–1920 MHz and 1995–2000 MHz bands.* AWS service areas for the 1915–1920 MHz and 1995–2000 MHz bands are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(k) *1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.* AWS service areas for the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands are as follows:

(1) Service areas for Block G (1755–1760 MHz and 2155–2160 MHz) are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public Notice Report No. CL–92–40 “Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,” dated January 24, 1992, DA 92–109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(2) Service areas for Blocks H (1760–1765 MHz and 2160–2165 MHz), I (1765–1770 MHz and 2165–2170 MHz), J (1770–1780 MHz and 2170–2180 MHz), A1 (1695–1700 MHz) and B1 (1700–1710 MHz) are based on Economic Areas (EAs) as defined in paragraph (a) of this section.

(1) *600 MHz band.* Service areas for the 600 MHz band are based on Partial Economic Areas (PEAs) as defined by *Wireless Telecommunications Bureau Provides Details About Partial Economic Areas*, Public Notice, 29 FCC Rcd 6491, App. B (2014). The service areas of PEAs that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline. The service area of the Gulf of Mexico PEA

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(PEA 416) that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

(m) *3700–3980 MHz Band.* Service areas in the 3.7 GHz Service are based on Partial Economic Areas (PEAs) as defined by appendix A to this subpart (see *Wireless Telecommunications Bureau Provides Details About Partial Economic Areas*, DA 14–759, Public Notice, released June 2, 2014, for more information). The 3.7 GHz Service will be licensed in the contiguous United States, *i.e.*, the contiguous 48 states and the District of Columbia as defined by Partial Economic Areas Nos. 1–41, 43–211, 213–263, 265–297, 299–359, and 361–411. The service areas of PEAs that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline. The 3.7 GHz Service will not be licensed for the following PEAs:

TABLE 3 TO PARAGRAPH (m)

PEA No.	PEA name
42	Honolulu, HI.
212	Anchorage, AK.
264	Kodiak, AK.
298	Fairbanks, AK.
360	Juneau, AK.
412	Puerto Rico.
413	Guam-Northern Mariana Islands.
414	US Virgin Islands.
415	American Samoa.

(n) *3450–3550 MHz Band.* Service areas in the 3.45 GHz Service are based on Partial Economic Areas (PEAs) as defined by appendix A to this subpart.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.6, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 27.9 Operation of certificated signal boosters.

Individuals and non-individuals may operate certificated Consumer Signal Boosters on frequencies regulated under this part provided that such operation complies with all applicable rules under this part and § 20.21 of this chapter. Failure to comply with all applicable rules voids the authority to operate a signal booster.

[78 FR 21564, Apr. 11, 2013]

APPENDIX A TO SUBPART A OF PART 27—
LIST OF PARTIAL ECONOMIC AREAS
WITH CORRESPONDING COUNTIES

PEA No.	Federal Information Processing System No.	County name	State
1	09001	Fairfield	CT
1	09003	Hartford	CT
1	09005	Litchfield	CT
1	09007	Middlesex	CT
1	09009	New Haven	CT
1	09011	New London	CT
1	09013	Tolland	CT
1	09015	Windham	CT
1	34003	Bergen	NJ
1	34013	Essex	NJ
1	34017	Hudson	NJ
1	34019	Hunterdon	NJ
1	34021	Mercer	NJ
1	34023	Middlesex	NJ
1	34025	Monmouth	NJ
1	34027	Morris	NJ
1	34029	Ocean	NJ
1	34031	Passaic	NJ
1	34035	Somerset	NJ
1	34037	Sussex	NJ
1	34039	Union	NJ
1	34041	Warren	NJ
1	36005	Bronx	NY
1	36027	Dutchess	NY
1	36047	Kings	NY
1	36059	Nassau	NY
1	36061	New York	NY
1	36071	Orange	NY
1	36079	Putnam	NY
1	36081	Queens	NY
1	36085	Richmond	NY
1	36087	Rockland	NY
1	36103	Suffolk	NY
1	36105	Sullivan	NY
1	36111	Ulster	NY
1	36119	Westchester	NY
1	42025	Carbon	PA
1	42069	Lackawanna	PA
1	42077	Lehigh	PA
1	42079	Luzerne	PA
1	42089	Monroe	PA
1	42095	Northampton	PA
2	06029	Kern	CA
2	06037	Los Angeles	CA
2	06059	Orange	CA
2	06065	Riverside	CA
2	06071	San Bernardino	CA
2	06079	San Luis Obispo	CA
2	06083	Santa Barbara	CA
2	06111	Ventura	CA
3	17031	Cook	IL
3	17043	DuPage	IL
3	17063	Grundy	IL
3	17089	Kane	IL
3	17091	Kankakee	IL
3	17093	Kendall	IL
3	17097	Lake	IL
3	17111	McHenry	IL
3	17197	Will	IL
3	18091	La Porte	IN
3	18089	Lake	IN
3	18127	Porter	IN
4	06001	Alameda	CA
4	06013	Contra Costa	CA
4	06041	Marin	CA
4	06053	Monterey	CA
4	06055	Napa	CA

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
4	06075	San Francisco	CA	8	48251	Johnson	TX
4	06077	San Joaquin	CA	8	48257	Kaufman	TX
4	06081	San Mateo	CA	8	48367	Parker	TX
4	06085	Santa Clara	CA	8	48397	Rockwall	TX
4	06087	Santa Cruz	CA	8	48439	Tarrant	TX
4	06095	Solano	CA	8	48497	Wise	TX
4	06097	Sonoma	CA	9	12011	Broward	FL
4	06099	Stanislaus	CA	9	12043	Glades	FL
5	11001	District of Columbia	DC	9	12051	Hendry	FL
5	24003	Anne Arundel	MD	9	12061	Indian River	FL
5	24005	Baltimore	MD	9	12085	Martin	FL
5	24510	Baltimore City	MD	9	12086	Miami-Dade	FL
5	24009	Calvert	MD	9	12087	Monroe	FL
5	24011	Caroline	MD	9	12093	Okeechobee	FL
5	24013	Carroll	MD	9	12099	Palm Beach	FL
5	24017	Charles	MD	9	12111	St. Lucie	FL
5	24019	Dorchester	MD	10	48039	Brazoria	TX
5	24025	Harford	MD	10	48071	Chambers	TX
5	24027	Howard	MD	10	48157	Fort Bend	TX
5	24029	Kent	MD	10	48167	Galveston	TX
5	24031	Montgomery	MD	10	48201	Harris	TX
5	24033	Prince George's	MD	10	48291	Liberty	TX
5	24035	Queen Anne's	MD	10	48339	Montgomery	TX
5	24037	St. Mary's	MD	10	48473	Waller	TX
5	24041	Talbot	MD	11	13011	Banks	GA
5	51510	Alexandria City	VA	11	13013	Barrow	GA
5	51013	Arlington	VA	11	13035	Butts	GA
5	51059	Fairfax	VA	11	13057	Cherokee	GA
5	51600	Fairfax City	VA	11	13059	Clarke	GA
5	51610	Falls Church City	VA	11	13063	Clayton	GA
5	51107	Loudoun	VA	11	13067	Cobb	GA
5	51683	Manassas City	VA	11	13085	Dawson	GA
5	51685	Manassas Park City	VA	11	13089	DeKalb	GA
5	51153	Prince William	VA	11	13097	Douglas	GA
6	10001	Kent	DE	11	13105	Elbert	GA
6	10003	New Castle	DE	11	13113	Fayette	GA
6	24015	Cecil	MD	11	13117	Forsyth	GA
6	34001	Atlantic	NJ	11	13119	Franklin	GA
6	34005	Burlington	NJ	11	13121	Fulton	GA
6	34007	Camden	NJ	11	13133	Greene	GA
6	34009	Cape May	NJ	11	13135	Gwinnett	GA
6	34011	Cumberland	NJ	11	13137	Habersham	GA
6	34015	Gloucester	NJ	11	13139	Hall	GA
6	34033	Salem	NJ	11	13147	Hart	GA
6	42011	Berks	PA	11	13151	Henry	GA
6	42017	Bucks	PA	11	13157	Jackson	GA
6	42029	Chester	PA	11	13159	Jasper	GA
6	42045	Delaware	PA	11	13187	Lumpkin	GA
6	42071	Lancaster	PA	11	13195	Madison	GA
6	42091	Montgomery	PA	11	13211	Morgan	GA
6	42101	Philadelphia	PA	11	13217	Newton	GA
7	25001	Barnstable	MA	11	13219	Oconee	GA
7	25005	Bristol	MA	11	13221	Oglethorpe	GA
7	25007	Dukes	MA	11	13223	Paulding	GA
7	25009	Essex	MA	11	13241	Rabun	GA
7	25017	Middlesex	MA	11	13247	Rockdale	GA
7	25019	Nantucket	MA	11	13257	Stephens	GA
7	25021	Norfolk	MA	11	13265	Taliaferro	GA
7	25023	Plymouth	MA	11	13297	Walton	GA
7	25025	Suffolk	MA	11	13311	White	GA
7	25027	Worcester	MA	12	26049	Genesee	MI
7	44001	Bristol	RI	12	26087	Lapeer	MI
7	44003	Kent	RI	12	26093	Livingston	MI
7	44005	Newport	RI	12	26099	Macomb	MI
7	44007	Providence	RI	12	26125	Oakland	MI
7	44009	Washington	RI	12	26155	Shiawassee	MI
8	48085	Collin	TX	12	26147	St. Clair	MI
8	48113	Dallas	TX	12	26161	Washtenaw	MI
8	48121	Denton	TX	12	26163	Wayne	MI
8	48139	Ellis	TX	13	12009	Brevard	FL
8	48181	Grayson	TX	13	12017	Citrus	FL
8	48221	Hood	TX	13	12035	Flagler	FL

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
13	12049	Hardee	FL	21	12101	Pasco	FL
13	12055	Highlands	FL	21	12103	Pinellas	FL
13	12069	Lake	FL	22	06005	Amador	CA
13	12083	Marion	FL	22	06007	Butte	CA
13	12095	Orange	FL	22	06011	Colusa	CA
13	12097	Osceola	FL	22	06017	El Dorado	CA
13	12105	Polk	FL	22	06021	Glenn	CA
13	12117	Seminole	FL	22	06057	Nevada	CA
13	12119	Sumter	FL	22	06061	Placer	CA
13	12127	Volusia	FL	22	06067	Sacramento	CA
14	39007	Ashtabula	OH	22	06101	Sutter	CA
14	39019	Carroll	OH	22	06113	Yolo	CA
14	39029	Columbiana	OH	22	06115	Yuba	CA
14	39035	Cuyahoga	OH	23	42003	Allegheny	PA
14	39043	Erie	OH	23	42005	Armstrong	PA
14	39055	Geauga	OH	23	42007	Beaver	PA
14	39077	Huron	OH	23	42019	Butler	PA
14	39085	Lake	OH	23	42063	Indiana	PA
14	39093	Lorain	OH	23	42073	Lawrence	PA
14	39099	Mahoning	OH	23	42125	Washington	PA
14	39103	Medina	OH	23	42129	Westmoreland	PA
14	39133	Portage	OH	24	17005	Bond	IL
14	39151	Stark	OH	24	17027	Clinton	IL
14	39153	Summit	OH	24	17121	Marion	IL
14	39155	Trumbull	OH	24	17133	Monroe	IL
14	42085	Mercer	PA	24	17163	St. Clair	IL
15	04013	Maricopa	AZ	24	29071	Franklin	MO
16	53009	Clallam	WA	24	29099	Jefferson	MO
16	53031	Jefferson	WA	24	29183	St. Charles	MO
16	53033	King	WA	24	29189	St. Louis	MO
16	53035	Kitsap	WA	24	29510	St. Louis City	MO
16	53053	Pierce	WA	25	21015	Boone	KY
16	53061	Snohomish	WA	25	21023	Bracken	KY
17	27003	Anoka	MN	25	21037	Campbell	KY
17	27009	Benton	MN	25	21077	Gallatin	KY
17	27019	Carver	MN	25	21081	Grant	KY
17	27025	Chisago	MN	25	21117	Kenton	KY
17	27037	Dakota	MN	25	21135	Lewis	KY
17	27053	Hennepin	MN	25	21161	Mason	KY
17	27123	Ramsey	MN	25	21191	Pendleton	KY
17	27139	Scott	MN	25	39001	Adams	OH
17	27141	Sherburne	MN	25	39015	Brown	OH
17	27145	Stearns	MN	25	39017	Butler	OH
17	27163	Washington	MN	25	39025	Clermont	OH
17	27171	Wright	MN	25	39027	Clinton	OH
17	55109	St. Croix	WI	25	39061	Hamilton	OH
18	06073	San Diego	CA	25	39071	Highland	OH
19	41003	Benton	OR	25	39165	Warren	OH
19	41005	Clackamas	OR	26	04015	Mohave	AZ
19	41007	Clatsop	OR	26	32003	Clark	NV
19	41009	Columbia	OR	27	49011	Davis	UT
19	41041	Lincoln	OR	27	49035	Salt Lake	UT
19	41043	Linn	OR	27	49045	Tooele	UT
19	41047	Marion	OR	27	49049	Utah	UT
19	41051	Multnomah	OR	27	49057	Weber	UT
19	41053	Polk	OR	28	48013	Atascosa	TX
19	41057	Tillamook	OR	28	48029	Bexar	TX
19	41067	Washington	OR	28	48091	Comal	TX
19	41071	Yamhill	OR	28	48187	Guadalupe	TX
19	53011	Clark	WA	29	12001	Alachua	FL
19	53015	Cowlitz	WA	29	12003	Baker	FL
19	53069	Wahkiakum	WA	29	12007	Bradford	FL
20	08001	Adams	CO	29	12019	Clay	FL
20	08005	Arapahoe	CO	29	12023	Columbia	FL
20	08013	Boulder	CO	29	12029	Dixie	FL
20	08014	Broomfield	CO	29	12031	Duval	FL
20	08031	Denver	CO	29	12041	Gilchrist	FL
20	08035	Douglas	CO	29	12047	Hamilton	FL
20	08047	Gilpin	CO	29	12067	Lafayette	FL
20	08059	Jefferson	CO	29	12075	Levy	FL
21	12053	Hernando	FL	29	12089	Nassau	FL
21	12057	Hillsborough	FL	29	12107	Putnam	FL

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
29	12109	St. Johns	FL	38	55089	Ozaukee	WI
29	12121	Suwannee	FL	38	55131	Washington	WI
29	12125	Union	FL	38	55133	Waukesha	WI
30	20091	Johnson	KS	39	40017	Canadian	OK
30	20209	Wyandotte	KS	39	40027	Cleveland	OK
30	29037	Cass	MO	39	40031	Comanche	OK
30	29047	Clay	MO	39	40051	Grady	OK
30	29095	Jackson	MO	39	40081	Lincoln	OK
30	29165	Platte	MO	39	40083	Logan	OK
30	29177	Ray	MO	39	40087	McClain	OK
31	18011	Boone	IN	39	40109	Oklahoma	OK
31	18035	Delaware	IN	39	40125	Pottawatomie	OK
31	18057	Hamilton	IN	40	01015	Calhoun	AL
31	18063	Hendricks	IN	40	01073	Jefferson	AL
31	18081	Johnson	IN	40	01117	Shelby	AL
31	18095	Madison	IN	40	01115	St. Clair	AL
31	18097	Marion	IN	40	01121	Talladega	AL
32	21047	Christian	KY	40	01125	Tuscaloosa	AL
32	47021	Cheatham	TN	40	01127	Walker	AL
32	47037	Davidson	TN	41	36011	Cayuga	NY
32	47043	Dickson	TN	41	36017	Chenango	NY
32	47125	Montgomery	TN	41	36023	Cortland	NY
32	47147	Robertson	TN	41	36025	Delaware	NY
32	47149	Rutherford	TN	41	36043	Herkimer	NY
32	47165	Sumner	TN	41	36053	Madison	NY
32	47187	Williamson	TN	41	36065	Oneida	NY
32	47189	Wilson	TN	41	36067	Onondaga	NY
33	37053	Currituck	NC	41	36075	Oswego	NY
33	51550	Chesapeake City	VA	41	36077	Otsego	NY
33	51620	Franklin City	VA	41	36097	Schuyler	NY
33	51073	Gloucester	VA	41	36109	Tompkins	NY
33	51650	Hampton City	VA	42	15001	Hawaii	HI
33	51093	Isle of Wight	VA	42	15003	Honolulu	HI
33	51095	James City	VA	42	15005	Kalawao	HI
33	51115	Mathews	VA	42	15007	Kauai	HI
33	51700	Newport News City	VA	42	15009	Maui	HI
33	51710	Norfolk City	VA	43	37071	Gaston	NC
33	51735	Poquoson City	VA	43	37119	Mecklenburg	NC
33	51740	Portsmouth City	VA	43	37179	Union	NC
33	51175	Southampton	VA	44	36037	Genesee	NY
33	51800	Suffolk City	VA	44	36051	Livingston	NY
33	51181	Surry	VA	44	36055	Monroe	NY
33	51810	Virginia Beach City	VA	44	36069	Ontario	NY
33	51830	Williamsburg City	VA	44	36073	Orleans	NY
33	51199	York	VA	44	36099	Seneca	NY
34	06019	Fresno	CA	44	36101	Steuben	NY
34	06031	Kings	CA	44	36117	Wayne	NY
34	06039	Madera	CA	44	36121	Wyoming	NY
34	06107	Tulare	CA	44	36123	Yates	NY
35	48209	Hays	TX	45	37063	Durham	NC
35	48331	Milam	TX	45	37135	Orange	NC
35	48453	Travis	TX	45	37183	Wake	NC
35	48491	Williamson	TX	46	05005	Baxter	AR
36	22051	Jefferson Parish	LA	46	05009	Boone	AR
36	22057	Lafourche Parish	LA	46	05015	Carroll	AR
36	22071	Orleans Parish	LA	46	05023	Cleburne	AR
36	22075	Plaquemines Parish	LA	46	05029	Conway	AR
36	22087	St. Bernard Parish	LA	46	05045	Faulkner	AR
36	22089	St. Charles Parish	LA	46	05049	Fulton	AR
36	22093	St. James Parish	LA	46	05063	Independence	AR
36	22095	St. John the Baptist Parish	LA	46	05065	Izard	AR
36	22103	St. Tammany Parish	LA	46	05067	Jackson	AR
36	22105	Tangipahoa Parish	LA	46	05069	Jefferson	AR
36	22109	Terrebonne Parish	LA	46	05071	Johnson	AR
36	22117	Washington Parish	LA	46	05085	Lonoke	AR
36	28109	Pearl River	MS	46	05089	Marion	AR
37	39041	Delaware	OH	46	05101	Newton	AR
37	39045	Fairfield	OH	46	05105	Perry	AR
37	39049	Franklin	OH	46	05115	Pope	AR
37	39097	Madison	OH	46	05117	Prairie	AR
37	39129	Pickaway	OH	46	05119	Pulaski	AR
38	55079	Milwaukee	WI	46	05125	Saline	AR

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
46	05129	Searcy	AR	52	54081	Raleigh	WV
46	05135	Sharp	AR	52	54085	Ritchie	WV
46	05137	Stone	AR	52	54087	Roane	WV
46	05141	Van Buren	AR	52	54089	Summers	WV
46	05145	White	AR	52	54099	Wayne	WV
46	05147	Woodruff	AR	52	54101	Webster	WV
46	05149	Yell	AR	52	54105	Wirt	WV
47	48061	Cameron	TX	52	54107	Wood	WV
47	48215	Hidalgo	TX	52	54109	Wyoming	WV
47	48427	Starr	TX	53	04003	Cochise	AZ
47	48489	Willacy	TX	53	04019	Pima	AZ
48	42001	Adams	PA	53	04023	Santa Cruz	AZ
48	42041	Cumberland	PA	54	36029	Erie	NY
48	42043	Dauphin	PA	54	36063	Niagara	NY
48	42067	Juniata	PA	55	01033	Colbert	AL
48	42075	Lebanon	PA	55	01049	DeKalb	AL
48	42099	Perry	PA	55	01055	Etowah	AL
48	42133	York	PA	55	01059	Franklin	AL
49	36001	Albany	NY	55	01071	Jackson	AL
49	36021	Columbia	NY	55	01077	Lauderdale	AL
49	36035	Fulton	NY	55	01079	Lawrence	AL
49	36039	Greene	NY	55	01083	Limestone	AL
49	36041	Hamilton	NY	55	01089	Madison	AL
49	36057	Montgomery	NY	55	01095	Marshall	AL
49	36083	Rensselaer	NY	55	01103	Morgan	AL
49	36091	Saratoga	NY	55	47103	Lincoln	TN
49	36093	Schenectady	NY	56	26005	Allegan	MI
49	36095	Schoharie	NY	56	26015	Barry	MI
49	36113	Warren	NY	56	26023	Branch	MI
49	36115	Washington	NY	56	26025	Calhoun	MI
50	37149	Polk	NC	56	26067	Ionia	MI
50	45007	Anderson	SC	56	26077	Kalamazoo	MI
50	45021	Cherokee	SC	56	26107	Mecosta	MI
50	45045	Greenville	SC	56	26117	Montcalm	MI
50	45073	Oconee	SC	56	26121	Muskegon	MI
50	45077	Pickens	SC	56	26123	Newaygo	MI
50	45083	Spartanburg	SC	56	26127	Oceana	MI
50	45087	Union	SC	56	26159	Van Buren	MI
51	18019	Clark	IN	57	51036	Charles City	VA
51	18043	Floyd	IN	57	51041	Chesterfield	VA
51	18077	Jefferson	IN	57	51057	Essex	VA
51	18143	Scott	IN	57	51075	Goochland	VA
51	21029	Bullitt	KY	57	51085	Hanover	VA
51	21041	Carroll	KY	57	51087	Henrico	VA
51	21103	Henry	KY	57	51097	King and Queen	VA
51	21111	Jefferson	KY	57	51101	King William	VA
51	21185	Oldham	KY	57	51103	Lancaster	VA
51	21211	Shelby	KY	57	51119	Middlesex	VA
51	21223	Trimble	KY	57	51127	New Kent	VA
52	21019	Boyd	KY	57	51133	Northumberland	VA
52	21043	Carter	KY	57	51145	Powhatan	VA
52	21063	Elliott	KY	57	51159	Richmond	VA
52	21089	Greenup	KY	57	51760	Richmond City	VA
52	39053	Gallia	OH	58	17023	Clark	IL
52	39087	Lawrence	OH	58	18007	Benton	IN
52	39105	Meigs	OH	58	18015	Carroll	IN
52	39167	Washington	OH	58	18017	Cass	IN
52	54005	Boone	WV	58	18021	Clay	IN
52	54007	Braxton	WV	58	18023	Clinton	IN
52	54011	Cabell	WV	58	18045	Fountain	IN
52	54013	Calhoun	WV	58	18055	Greene	IN
52	54015	Clay	WV	58	18067	Howard	IN
52	54019	Fayette	WV	58	18093	Lawrence	IN
52	54021	Gilmer	WV	58	18103	Miami	IN
52	54035	Jackson	WV	58	18105	Monroe	IN
52	54039	Kanawha	WV	58	18107	Montgomery	IN
52	54043	Lincoln	WV	58	18109	Morgan	IN
52	54045	Logan	WV	58	18117	Orange	IN
52	54053	Mason	WV	58	18119	Owen	IN
52	54067	Nicholas	WV	58	18121	Parke	IN
52	54073	Pleasants	WV	58	18133	Putnam	IN
52	54079	Putnam	WV	58	18153	Sullivan	IN

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
58	18157	Tippecanoe	IN	70	41011	Coos	OR
58	18159	Tipton	IN	70	41015	Curry	OR
58	18165	Vermillion	IN	70	41019	Douglas	OR
58	18167	Vigo	IN	70	41029	Jackson	OR
58	18171	Warren	IN	70	41033	Josephine	OR
58	18181	White	IN	70	41039	Lane	OR
59	05035	Crittenden	AR	71	47001	Anderson	TN
59	47157	Shelby	TN	71	47009	Blount	TN
59	47167	Tipton	TN	71	47013	Campbell	TN
60	33001	Belknap	NH	71	47093	Knox	TN
60	33011	Hillsborough	NH	71	47105	Loudon	TN
60	33013	Merrimack	NH	71	47129	Morgan	TN
60	33015	Rockingham	NH	71	47145	Roane	TN
60	33017	Strafford	NH	71	47151	Scott	TN
61	39039	Defiance	OH	71	47173	Union	TN
61	39051	Fulton	OH	72	12005	Bay	FL
61	39063	Hancock	OH	72	12013	Calhoun	FL
61	39065	Hardin	OH	72	12037	Franklin	FL
61	39069	Henry	OH	72	12039	Gadsden	FL
61	39095	Lucas	OH	72	12045	Gulf	FL
61	39123	Ottawa	OH	72	12063	Jackson	FL
61	39125	Paulding	OH	72	12065	Jefferson	FL
61	39143	Sandusky	OH	72	12073	Leon	FL
61	39147	Seneca	OH	72	12077	Liberty	FL
61	39171	Williams	OH	72	12079	Madison	FL
61	39173	Wood	OH	72	12123	Taylor	FL
61	39175	Wyandot	OH	72	12129	Wakulla	FL
62	39021	Champaign	OH	72	13087	Decatur	GA
62	39023	Clark	OH	72	13099	Early	GA
62	39057	Greene	OH	72	13131	Grady	GA
62	39109	Miami	OH	72	13201	Miller	GA
62	39113	Montgomery	OH	72	13253	Seminole	GA
62	39135	Preble	OH	72	13275	Thomas	GA
63	40021	Cherokee	OK	73	48141	El Paso	TX
63	40037	Creek	OK	74	13047	Catoosa	GA
63	40097	Mayes	OK	74	13083	Dade	GA
63	40113	Osage	OK	74	13295	Walker	GA
63	40131	Rogers	OK	74	47007	Bledsoe	TN
63	40143	Tulsa	OK	74	47011	Bradley	TN
63	40145	Wagoner	OK	74	47065	Hamilton	TN
64	18039	Elkhart	IN	74	47115	Marion	TN
64	18049	Fulton	IN	74	47107	McMinn	TN
64	18085	Kosciusko	IN	74	47121	Meigs	TN
64	18087	Lagrange	IN	74	47123	Monroe	TN
64	18099	Marshall	IN	74	47139	Polk	TN
64	18131	Pulaski	IN	74	47143	Rhea	TN
64	18141	St. Joseph	IN	74	47153	Sequatchie	TN
64	18149	Starke	IN	75	35001	Bernalillo	NM
64	26021	Berrien	MI	75	35043	Sandoval	NM
64	26027	Cass	MI	76	06003	Alpine	CA
64	26149	St. Joseph	MI	76	06027	Inyo	CA
65	12021	Collier	FL	76	06035	Lassen	CA
65	12071	Lee	FL	76	06051	Mono	CA
66	26037	Clinton	MI	76	06063	Plumas	CA
66	26045	Eaton	MI	76	06091	Sierra	CA
66	26059	Hillsdale	MI	76	32510	Carson City	NV
66	26065	Ingham	MI	76	32001	Churchill	NV
66	26075	Jackson	MI	76	32005	Douglas	NV
66	26091	Lenawee	MI	76	32007	Elko	NV
66	26115	Monroe	MI	76	32011	Eureka	NV
67	12015	Charlotte	FL	76	32013	Humboldt	NV
67	12027	DeSoto	FL	76	32015	Lander	NV
67	12081	Manatee	FL	76	32019	Lyon	NV
67	12115	Sarasota	FL	76	32027	Pershing	NV
68	26081	Kent	MI	76	32029	Storey	NV
68	26139	Ottawa	MI	76	32031	Washoe	NV
69	25003	Berkshire	MA	76	32033	White Pine	NV
69	25011	Franklin	MA	77	23001	Androskoggin	ME
69	25013	Hampden	MA	77	23005	Cumberland	ME
69	25015	Hampshire	MA	77	23007	Franklin	ME
69	50003	Bennington	VT	77	23013	Knox	ME
70	06015	Del Norte	CA	77	23015	Lincoln	ME

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77	23017	Oxford	ME	84	01035	Conecuh	AL
77	23023	Sagadahoc	ME	84	01053	Escambia	AL
77	23031	York	ME	84	01097	Mobile	AL
78	37001	Alamance	NC	84	01099	Monroe	AL
78	37081	Guilford	NC	84	01129	Washington	AL
78	37151	Randolph	NC	84	01131	Wilcox	AL
79	28001	Adams	MS	85	45015	Berkeley	SC
79	28005	Amite	MS	85	45019	Charleston	SC
79	28021	Claiborne	MS	85	45029	Colleton	SC
79	28023	Clarke	MS	85	45035	Dorchester	SC
79	28029	Copiah	MS	86	21005	Anderson	KY
79	28031	Covington	MS	86	21011	Bath	KY
79	28035	Forrest	MS	86	21017	Bourbon	KY
79	28037	Franklin	MS	86	21049	Clark	KY
79	28041	Greene	MS	86	21067	Fayette	KY
79	28061	Jasper	MS	86	21069	Fleming	KY
79	28063	Jefferson	MS	86	21073	Franklin	KY
79	28065	Jefferson Davis	MS	86	21097	Harrison	KY
79	28067	Jones	MS	86	21113	Jessamine	KY
79	28069	Kemper	MS	86	21165	Menifee	KY
79	28073	Lamar	MS	86	21167	Mercer	KY
79	28075	Lauderdale	MS	86	21173	Montgomery	KY
79	28077	Lawrence	MS	86	21181	Nicholas	KY
79	28079	Leake	MS	86	21187	Owen	KY
79	28085	Lincoln	MS	86	21201	Robertson	KY
79	28091	Marion	MS	86	21205	Rowan	KY
79	28099	Neshoba	MS	86	21209	Scott	KY
79	28101	Newton	MS	86	21239	Woodford	KY
79	28111	Perry	MS	87	12033	Escambia	FL
79	28113	Pike	MS	87	12091	Okaloosa	FL
79	28123	Scott	MS	87	12113	Santa Rosa	FL
79	28127	Simpson	MS	87	12131	Walton	FL
79	28129	Smith	MS	88	24001	Allegany	MD
79	28147	Walthall	MS	88	24021	Frederick	MD
79	28153	Wayne	MS	88	24023	Garrett	MD
80	19155	Pottawattamie	IA	88	24043	Washington	MD
80	31055	Douglas	NE	88	42055	Franklin	PA
80	31153	Sarpy	NE	88	42057	Fulton	PA
81	26001	Alcona	MI	88	54057	Mineral	WV
81	26011	Arenac	MI	89	45063	Lexington	SC
81	26017	Bay	MI	89	45079	Richland	SC
81	26035	Clare	MI	90	22025	Catahoula Parish	LA
81	26051	Gladwin	MI	90	22029	Concordia Parish	LA
81	26057	Gratiot	MI	90	22065	Madison Parish	LA
81	26063	Huron	MI	90	22107	Tensas Parish	LA
81	26069	Iosco	MI	90	28007	Attala	MS
81	26073	Isabella	MI	90	28049	Hinds	MS
81	26111	Midland	MI	90	28051	Holmes	MS
81	26129	Ogemaw	MI	90	28089	Madison	MS
81	26145	Saginaw	MI	90	28121	Rankin	MS
81	26151	Sanilac	MI	90	28149	Warren	MS
81	26157	Tuscola	MI	90	28163	Yazoo	MS
82	22005	Ascension Parish	LA	91	08041	El Paso	CO
82	22007	Assumption Parish	LA	91	08119	Teller	CO
82	22033	East Baton Rouge Parish	LA	92	17019	Champaign	IL
82	22047	Iberville Parish	LA	92	17025	Clay	IL
82	22063	Livingston Parish	LA	92	17029	Coles	IL
82	22121	West Baton Rouge Parish	LA	92	17035	Cumberland	IL
83	18001	Adams	IN	92	17041	Douglas	IL
83	18003	Allen	IN	92	17045	Edgar	IL
83	18009	Blackford	IN	92	17049	Effingham	IL
83	18033	De Kalb	IN	92	17051	Fayette	IL
83	18053	Grant	IN	92	17053	Ford	IL
83	18069	Huntington	IN	92	17079	Jasper	IL
83	18075	Jay	IN	92	17115	Macon	IL
83	18113	Noble	IN	92	17139	Moultrie	IL
83	18151	Steuben	IN	92	17147	Piatt	IL
83	18169	Wabash	IN	92	17173	Shelby	IL
83	18179	Wells	IN	92	17183	Vermilion	IL
83	18183	Whitley	IN	93	22001	Acadia Parish	LA
84	01003	Baldwin	AL	93	22039	Evangeline Parish	LA
84	01025	Clarke	AL	93	22045	Iberia Parish	LA

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
93	22055	Lafayette Parish	LA	97	27091	Martin	MN
93	22097	St. Landry Parish	LA	97	27085	McLeod	MN
93	22099	St. Martin Parish	LA	97	27093	Meeker	MN
93	22101	St. Mary Parish	LA	97	27101	Murray	MN
93	22113	Vermilion Parish	LA	97	27103	Nicollet	MN
94	48027	Bell	TX	97	27105	Nobles	MN
94	48099	Coryell	TX	97	27127	Redwood	MN
94	48145	Falls	TX	97	27129	Renville	MN
94	48309	McLennan	TX	97	27131	Rice	MN
95	21025	Breathitt	KY	97	27143	Sibley	MN
95	21065	Estill	KY	97	27147	Steele	MN
95	21071	Floyd	KY	97	27161	Waseca	MN
95	21109	Jackson	KY	97	27165	Watsonwan	MN
95	21115	Johnson	KY	97	27173	Yellow Medicine	MN
95	21119	Knott	KY	98	47019	Carter	TN
95	21127	Lawrence	KY	98	47059	Greene	TN
95	21129	Lee	KY	98	47073	Hawkins	TN
95	21133	Letcher	KY	98	47163	Sullivan	TN
95	21153	Magoffin	KY	98	47171	Unicoi	TN
95	21159	Martin	KY	98	47179	Washington	TN
95	21175	Morgan	KY	98	51520	Bristol City	VA
95	21189	Owsley	KY	98	51169	Scott	VA
95	21193	Perry	KY	98	51173	Smyth	VA
95	21195	Pike	KY	98	51191	Washington	VA
95	21197	Powell	KY	99	28003	Alcorn	MS
95	21237	Wolfe	KY	99	28013	Calhoun	MS
95	51021	Bland	VA	99	28017	Chickasaw	MS
95	51027	Buchanan	VA	99	28019	Choctaw	MS
95	51051	Dickenson	VA	99	28025	Clay	MS
95	51105	Lee	VA	99	28043	Grenada	MS
95	51720	Norton City	VA	99	28057	Itawamba	MS
95	51167	Russell	VA	99	28081	Lee	MS
95	51185	Tazewell	VA	99	28087	Lowndes	MS
95	51195	Wise	VA	99	28095	Monroe	MS
95	54047	McDowell	WV	99	28097	Montgomery	MS
95	54055	Mercer	WV	99	28103	Noxubee	MS
95	54059	Mingo	WV	99	28105	Oktibbeha	MS
96	21001	Adair	KY	99	28115	Pontotoc	MS
96	21013	Bell	KY	99	28117	Prentiss	MS
96	21021	Boyle	KY	99	28139	Tippah	MS
96	21045	Casey	KY	99	28141	Tishomingo	MS
96	21051	Clay	KY	99	28145	Union	MS
96	21053	Clinton	KY	99	28155	Webster	MS
96	21079	Garrard	KY	99	28159	Winston	MS
96	21087	Green	KY	99	47071	Hardin	TN
96	21095	Harlan	KY	99	47109	McNairy	TN
96	21121	Knox	KY	100	37013	Beaufort	NC
96	21125	Laurel	KY	100	37031	Carteret	NC
96	21131	Leslie	KY	100	37049	Craven	NC
96	21137	Lincoln	KY	100	37055	Dare	NC
96	21151	Madison	KY	100	37079	Greene	NC
96	21147	McCreary	KY	100	37095	Hyde	NC
96	21199	Pulaski	KY	100	37103	Jones	NC
96	21203	Rockcastle	KY	100	37107	Lenoir	NC
96	21207	Russell	KY	100	37117	Martin	NC
96	21217	Taylor	KY	100	37137	Pamlico	NC
96	21231	Wayne	KY	100	37147	Pitt	NC
96	21235	Whitley	KY	100	37177	Tyrrell	NC
96	47025	Claiborne	TN	100	37187	Washington	NC
97	19143	Osceola	IA	101	20015	Butler	KS
97	27013	Blue Earth	MN	101	20173	Sedgwick	KS
97	27015	Brown	MN	102	08015	Chaffee	CO
97	27023	Chippewa	MN	102	08019	Clear Creek	CO
97	27033	Cottonwood	MN	102	08027	Custer	CO
97	27043	Faribault	MN	102	08029	Delta	CO
97	27047	Freeborn	MN	102	08037	Eagle	CO
97	27063	Jackson	MN	102	08043	Fremont	CO
97	27067	Kandiyohi	MN	102	08045	Garfield	CO
97	27073	Lac qui Parle	MN	102	08049	Grand	CO
97	27079	Le Sueur	MN	102	08051	Gunnison	CO
97	27081	Lincoln	MN	102	08053	Hinsdale	CO
97	27083	Lyon	MN	102	08057	Jackson	CO

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102 ..	08065	Lake	CO	110 ..	47005	Benton	TN
102 ..	08077	Mesa	CO	110 ..	47017	Carroll	TN
102 ..	08081	Moffat	CO	110 ..	47023	Chester	TN
102 ..	08085	Montrose	CO	110 ..	47033	Crockett	TN
102 ..	08091	Ouray	CO	110 ..	47039	Decatur	TN
102 ..	08093	Park	CO	110 ..	47045	Dyer	TN
102 ..	08097	Pitkin	CO	110 ..	47047	Fayette	TN
102 ..	08103	Rio Blanco	CO	110 ..	47053	Gibson	TN
102 ..	08107	Routt	CO	110 ..	47069	Hardeman	TN
102 ..	08113	San Miguel	CO	110 ..	47075	Haywood	TN
102 ..	08117	Summit	CO	110 ..	47077	Henderson	TN
103 ..	51043	Clarke	VA	110 ..	47079	Henry	TN
103 ..	51061	Fauquier	VA	110 ..	47095	Lake	TN
103 ..	51069	Frederick	VA	110 ..	47097	Lauderdale	TN
103 ..	51139	Page	VA	110 ..	47113	Madison	TN
103 ..	51157	Rappahannock	VA	110 ..	47131	Obion	TN
103 ..	51171	Shenandoah	VA	110 ..	47183	Weakley	TN
103 ..	51187	Warren	VA	111 ..	05007	Benton	AR
103 ..	51840	Winchester City	VA	111 ..	05087	Madison	AR
103 ..	54003	Berkeley	WV	111 ..	05143	Washington	AR
103 ..	54023	Grant	WV	111 ..	29119	McDonald	MO
103 ..	54027	Hampshire	WV	111 ..	40001	Adair	OK
103 ..	54031	Hardy	WV	111 ..	40041	Delaware	OK
103 ..	54037	Jefferson	WV	112 ..	21003	Allen	KY
103 ..	54065	Morgan	WV	112 ..	21009	Barren	KY
103 ..	54083	Randolph	WV	112 ..	21031	Butler	KY
103 ..	54093	Tucker	WV	112 ..	21057	Cumberland	KY
104 ..	08069	Larimer	CO	112 ..	21061	Edmonson	KY
104 ..	08123	Weld	CO	112 ..	21099	Hart	KY
105 ..	13073	Columbia	GA	112 ..	21141	Logan	KY
105 ..	13181	Lincoln	GA	112 ..	21169	Metcalfe	KY
105 ..	13189	McDuffie	GA	112 ..	21171	Monroe	KY
105 ..	13245	Richmond	GA	112 ..	21213	Simpson	KY
105 ..	13317	Wilkes	GA	112 ..	21219	Todd	KY
105 ..	45003	Aiken	SC	112 ..	21227	Warren	KY
105 ..	45037	Edgefield	SC	112 ..	47027	Clay	TN
106 ..	39009	Athens	OH	112 ..	47035	Cumberland	TN
106 ..	39047	Fayette	OH	112 ..	47049	Fentress	TN
106 ..	39059	Guernsey	OH	112 ..	47087	Jackson	TN
106 ..	39073	Hocking	OH	112 ..	47111	Macon	TN
106 ..	39079	Jackson	OH	112 ..	47133	Overton	TN
106 ..	39115	Morgan	OH	112 ..	47137	Pickett	TN
106 ..	39119	Muskingum	OH	112 ..	47141	Putnam	TN
106 ..	39121	Noble	OH	112 ..	47169	Trousdale	TN
106 ..	39127	Perry	OH	113 ..	42031	Clarion	PA
106 ..	39131	Pike	OH	113 ..	42039	Crawford	PA
106 ..	39141	Ross	OH	113 ..	42049	Erie	PA
106 ..	39145	Scioto	OH	113 ..	42053	Forest	PA
106 ..	39163	Vinton	OH	113 ..	42121	Venango	PA
107 ..	23003	Aroostook	ME	113 ..	42123	Warren	PA
107 ..	23009	Hancock	ME	114 ..	42051	Fayette	PA
107 ..	23011	Kennebec	ME	114 ..	42059	Greene	PA
107 ..	23019	Penobscot	ME	114 ..	54001	Barbour	WV
107 ..	23021	Piscataquis	ME	114 ..	54017	Doddridge	WV
107 ..	23025	Somerset	ME	114 ..	54033	Harrison	WV
107 ..	23027	Waldo	ME	114 ..	54041	Lewis	WV
107 ..	23029	Washington	ME	114 ..	54049	Marion	WV
108 ..	19049	Dallas	IA	114 ..	54061	Monongalia	WV
108 ..	19153	Polk	IA	114 ..	54077	Preston	WV
108 ..	19181	Warren	IA	114 ..	54091	Taylor	WV
109 ..	37065	Edgecombe	NC	114 ..	54097	Upshur	WV
109 ..	37069	Franklin	NC	115 ..	37021	Buncombe	NC
109 ..	37077	Granville	NC	115 ..	37087	Haywood	NC
109 ..	37083	Halifax	NC	115 ..	37089	Henderson	NC
109 ..	37127	Nash	NC	115 ..	37099	Jackson	NC
109 ..	37131	Northampton	NC	115 ..	37115	Madison	NC
109 ..	37145	Person	NC	115 ..	37173	Swain	NC
109 ..	37181	Vance	NC	115 ..	37175	Transylvania	NC
109 ..	37185	Warren	NC	116 ..	17007	Boone	IL
109 ..	37195	Wilson	NC	116 ..	17201	Winnebago	IL
110 ..	21075	Fulton	KY	116 ..	55105	Rock	WI
110 ..	21105	Hickman	KY	117 ..	13045	Carroll	GA

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117 ..	13077	Coweta	GA	127 ..	18125	Pike	IN
117 ..	13143	Haralson	GA	127 ..	18129	Posey	IN
117 ..	13149	Heard	GA	127 ..	18147	Spencer	IN
117 ..	13171	Lamar	GA	127 ..	18163	Vanderburgh	IN
117 ..	13199	Meriwether	GA	127 ..	18173	Warrick	IN
117 ..	13231	Pike	GA	128 ..	13009	Baldwin	GA
117 ..	13255	Spalding	GA	128 ..	13021	Bibb	GA
117 ..	13263	Talbot	GA	128 ..	13023	Bleckley	GA
117 ..	13285	Troup	GA	128 ..	13091	Dodge	GA
117 ..	13293	Upton	GA	128 ..	13153	Houston	GA
118 ..	18005	Bartholomew	IN	128 ..	13169	Jones	GA
118 ..	18013	Brown	IN	128 ..	13225	Peach	GA
118 ..	18031	Decatur	IN	128 ..	13235	Pulaski	GA
118 ..	18041	Fayette	IN	128 ..	13289	Twiggs	GA
118 ..	18059	Hancock	IN	128 ..	13315	Wilcox	GA
118 ..	18065	Henry	IN	128 ..	13319	Wilkinson	GA
118 ..	18071	Jackson	IN	129 ..	17001	Adams	IL
118 ..	18079	Jennings	IN	129 ..	17009	Brown	IL
118 ..	18135	Randolph	IN	129 ..	17017	Cass	IL
118 ..	18139	Rush	IN	129 ..	17021	Christian	IL
118 ..	18145	Shelby	IN	129 ..	17061	Greene	IL
118 ..	18161	Union	IN	129 ..	17107	Logan	IL
118 ..	18177	Wayne	IN	129 ..	17129	Menard	IL
119 ..	53005	Benton	WA	129 ..	17135	Montgomery	IL
119 ..	53021	Franklin	WA	129 ..	17137	Morgan	IL
119 ..	53077	Yakima	WA	129 ..	17149	Pike	IL
120 ..	05027	Columbia	AR	129 ..	17167	Sangamon	IL
120 ..	05073	Lafayette	AR	129 ..	17169	Schuyler	IL
120 ..	22013	Bienville Parish	LA	129 ..	17171	Scott	IL
120 ..	22015	Bossier Parish	LA	130 ..	53063	Spokane	WA
120 ..	22017	Caddo Parish	LA	131 ..	37037	Chatham	NC
120 ..	22027	Claiborne Parish	LA	131 ..	37085	Harnett	NC
120 ..	22119	Webster Parish	LA	131 ..	37101	Johnston	NC
120 ..	22127	Winn Parish	LA	131 ..	37105	Lee	NC
121 ..	42009	Bedford	PA	131 ..	37163	Sampson	NC
121 ..	42013	Blair	PA	132 ..	48007	Aransas	TX
121 ..	42021	Cambria	PA	132 ..	48025	Bee	TX
121 ..	42061	Huntingdon	PA	132 ..	48355	Nueces	TX
121 ..	42087	Mifflin	PA	132 ..	48391	Refugio	TX
121 ..	42111	Somerset	PA	132 ..	48409	San Patricio	TX
122 ..	55025	Dane	WI	133 ..	48005	Angelina	TX
123 ..	39005	Ashland	OH	133 ..	48161	Freestone	TX
123 ..	39033	Crawford	OH	133 ..	48225	Houston	TX
123 ..	39067	Harrison	OH	133 ..	48289	Leon	TX
123 ..	39075	Holmes	OH	133 ..	48293	Limestone	TX
123 ..	39139	Richland	OH	133 ..	48313	Madison	TX
123 ..	39157	Tuscarawas	OH	133 ..	48347	Nacogdoches	TX
123 ..	39169	Wayne	OH	133 ..	48373	Polk	TX
124 ..	53027	Grays Harbor	WA	133 ..	48395	Robertson	TX
124 ..	53041	Lewis	WA	133 ..	48403	Sabine	TX
124 ..	53045	Mason	WA	133 ..	48405	San Augustine	TX
124 ..	53049	Pacific	WA	133 ..	48407	San Jacinto	TX
124 ..	53067	Thurston	WA	133 ..	48419	Shelby	TX
125 ..	17013	Calhoun	IL	133 ..	48455	Trinity	TX
125 ..	17083	Jersey	IL	133 ..	48471	Walker	TX
125 ..	17117	Macoupin	IL	134 ..	39031	Coshocton	OH
125 ..	17119	Madison	IL	134 ..	39083	Knox	OH
125 ..	29073	Gasconade	MO	134 ..	39089	Licking	OH
125 ..	29113	Lincoln	MO	134 ..	39091	Logan	OH
125 ..	29139	Montgomery	MO	134 ..	39101	Marion	OH
125 ..	29163	Pike	MO	134 ..	39117	Morrow	OH
125 ..	29219	Warren	MO	134 ..	39159	Union	OH
126 ..	04007	Gila	AZ	135 ..	48199	Hardin	TX
126 ..	04009	Graham	AZ	135 ..	48241	Jasper	TX
126 ..	04011	Greenlee	AZ	135 ..	48245	Jefferson	TX
126 ..	04021	Pinal	AZ	135 ..	48351	Newton	TX
127 ..	18027	Daviess	IN	135 ..	48361	Orange	TX
127 ..	18037	Dubois	IN	135 ..	48457	Tyler	TX
127 ..	18051	Gibson	IN	136 ..	42035	Clinton	PA
127 ..	18083	Knox	IN	136 ..	42037	Columbia	PA
127 ..	18101	Martin	IN	136 ..	42081	Lycoming	PA
127 ..	18123	Perry	IN	136 ..	42093	Montour	PA

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136 ..	42097	Northumberland	PA	141 ..	27151	Swift	MN
136 ..	42109	Snyder	PA	141 ..	27153	Todd	MN
136 ..	42113	Sullivan	PA	141 ..	27159	Wadena	MN
136 ..	42119	Union	PA	142 ..	06009	Calaveras	CA
136 ..	42131	Wyoming	PA	142 ..	06043	Mariposa	CA
137 ..	27049	Goodhue	MN	142 ..	06047	Merced	CA
137 ..	55005	Barron	WI	142 ..	06069	San Benito	CA
137 ..	55013	Burnett	WI	142 ..	06109	Tuolumne	CA
137 ..	55017	Chippewa	WI	143 ..	33003	Carroll	NH
137 ..	55033	Dunn	WI	143 ..	33005	Cheshire	NH
137 ..	55035	Eau Claire	WI	143 ..	33007	Coos	NH
137 ..	55091	Pepin	WI	143 ..	33009	Grafton	NH
137 ..	55093	Pierce	WI	143 ..	33019	Sullivan	NH
137 ..	55095	Polk	WI	143 ..	50009	Essex	VT
137 ..	55107	Rusk	WI	143 ..	50017	Orange	VT
137 ..	55113	Sawyer	WI	143 ..	50025	Windham	VT
137 ..	55129	Washburn	WI	143 ..	50027	Windsor	VT
138 ..	50001	Addison	VT	144 ..	48063	Camp	TX
138 ..	50005	Caledonia	VT	144 ..	48119	Delta	TX
138 ..	50007	Chittenden	VT	144 ..	48147	Fannin	TX
138 ..	50011	Franklin	VT	144 ..	48159	Franklin	TX
138 ..	50013	Grand Isle	VT	144 ..	48223	Hopkins	TX
138 ..	50015	Lamoille	VT	144 ..	48231	Hunt	TX
138 ..	50019	Orleans	VT	144 ..	48277	Lamar	TX
138 ..	50021	Rutland	VT	144 ..	48379	Rains	TX
138 ..	50023	Washington	VT	144 ..	48387	Red River	TX
139 ..	05001	Arkansas	AR	144 ..	48449	Titus	TX
139 ..	05003	Ashley	AR	144 ..	48459	Upshur	TX
139 ..	05011	Bradley	AR	144 ..	48467	Van Zandt	TX
139 ..	05013	Calhoun	AR	144 ..	48499	Wood	TX
139 ..	05017	Chicot	AR	145 ..	47003	Bedford	TN
139 ..	05019	Clark	AR	145 ..	47015	Cannon	TN
139 ..	05025	Cleveland	AR	145 ..	47031	Coffee	TN
139 ..	05039	Dallas	AR	145 ..	47041	DeKalb	TN
139 ..	05041	Desha	AR	145 ..	47051	Franklin	TN
139 ..	05043	Drew	AR	145 ..	47055	Giles	TN
139 ..	05051	Garland	AR	145 ..	47061	Grundy	TN
139 ..	05053	Grant	AR	145 ..	47117	Marshall	TN
139 ..	05057	Hempstead	AR	145 ..	47119	Maury	TN
139 ..	05059	Hot Spring	AR	145 ..	47127	Moore	TN
139 ..	05061	Howard	AR	145 ..	47159	Smith	TN
139 ..	05079	Lincoln	AR	145 ..	47175	Van Buren	TN
139 ..	05095	Monroe	AR	145 ..	47177	Warren	TN
139 ..	05097	Montgomery	AR	145 ..	47185	White	TN
139 ..	05099	Nevada	AR	146 ..	37019	Brunswick	NC
139 ..	05103	Ouachita	AR	146 ..	37047	Columbus	NC
139 ..	05109	Pike	AR	146 ..	37129	New Hanover	NC
139 ..	05139	Union	AR	146 ..	37141	Pender	NC
140 ..	51033	Caroline	VA	147 ..	10005	Sussex	DE
140 ..	51047	Culpeper	VA	147 ..	24039	Somerseset	MD
140 ..	51630	Fredericksburg City	VA	147 ..	24045	Wicomico	MD
140 ..	51099	King George	VA	147 ..	24047	Worcester	MD
140 ..	51113	Madison	VA	147 ..	51001	Accomack	VA
140 ..	51137	Orange	VA	147 ..	51131	Northampton	VA
140 ..	51177	Spotsylvania	VA	148 ..	53029	Island	WA
140 ..	51179	Stafford	VA	148 ..	53055	San Juan	WA
140 ..	51193	Westmoreland	VA	148 ..	53057	Skagit	WA
141 ..	27001	Aitkin	MN	148 ..	53073	Whatcom	WA
141 ..	27007	Beltrami	MN	149 ..	28039	George	MS
141 ..	27021	Cass	MN	149 ..	28045	Hancock	MS
141 ..	27029	Clearwater	MN	149 ..	28047	Harrison	MS
141 ..	27035	Crow Wing	MN	149 ..	28059	Jackson	MS
141 ..	27041	Douglas	MN	149 ..	28131	Stone	MS
141 ..	27051	Grant	MN	150 ..	29029	Camden	MO
141 ..	27057	Hubbard	MN	150 ..	29059	Dallas	MO
141 ..	27059	Isanti	MN	150 ..	29065	Dent	MO
141 ..	27065	Kanabec	MN	150 ..	29085	Hickory	MO
141 ..	27095	Mille Lacs	MN	150 ..	29105	Laclede	MO
141 ..	27097	Morrison	MN	150 ..	29125	Maries	MO
141 ..	27115	Pine	MN	150 ..	29131	Miller	MO
141 ..	27121	Pope	MN	150 ..	29141	Morgan	MO
141 ..	27149	Stevens	MN	150 ..	29149	Oregon	MO

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
150 ..	29161	Phelps	MO	161 ..	17065	Hamilton	IL
150 ..	29167	Polk	MO	161 ..	17069	Hardin	IL
150 ..	29169	Pulaski	MO	161 ..	17077	Jackson	IL
150 ..	29203	Shannon	MO	161 ..	17081	Jefferson	IL
150 ..	29215	Texas	MO	161 ..	17087	Johnson	IL
150 ..	29225	Webster	MO	161 ..	17145	Perry	IL
150 ..	29229	Wright	MO	161 ..	17151	Pope	IL
151 ..	37067	Forsyth	NC	161 ..	17153	Pulaski	IL
151 ..	37169	Stokes	NC	161 ..	17157	Randolph	IL
152 ..	48183	Gregg	TX	161 ..	17165	Saline	IL
152 ..	48203	Harrison	TX	161 ..	17181	Union	IL
152 ..	48423	Smith	TX	161 ..	17189	Washington	IL
153 ..	55027	Dodge	WI	161 ..	17199	Williamson	IL
153 ..	55039	Fond du Lac	WI	162 ..	18025	Crawford	IN
153 ..	55047	Green Lake	WI	162 ..	18061	Harrison	IN
153 ..	55055	Jefferson	WI	162 ..	18175	Washington	IN
153 ..	55127	Walworth	WI	162 ..	21027	Breckinridge	KY
154 ..	45033	Dillon	SC	162 ..	21085	Grayson	KY
154 ..	45043	Georgetown	SC	162 ..	21093	Hardin	KY
154 ..	45051	Horry	SC	162 ..	21123	Larue	KY
154 ..	45067	Marion	SC	162 ..	21155	Marion	KY
155 ..	55015	Calumet	WI	162 ..	21163	Meade	KY
155 ..	55087	Outagamie	WI	162 ..	21179	Nelson	KY
155 ..	55139	Winnebago	WI	162 ..	21215	Spencer	KY
156 ..	16001	Ada	ID	162 ..	21229	Washington	KY
157 ..	04012	La Paz	AZ	163 ..	19163	Scott	IA
157 ..	04027	Yuma	AZ	163 ..	17073	Henry	IL
157 ..	06025	Imperial	CA	163 ..	17161	Rock Island	IL
158 ..	30029	Flathead	MT	164 ..	01001	Autauga	AL
158 ..	30039	Granite	MT	164 ..	01051	Elmore	AL
158 ..	30047	Lake	MT	164 ..	01101	Montgomery	AL
158 ..	30049	Lewis and Clark	MT	165 ..	01017	Chambers	AL
158 ..	30053	Lincoln	MT	165 ..	01019	Cherokee	AL
158 ..	30061	Mineral	MT	165 ..	01029	Cleburne	AL
158 ..	30063	Missoula	MT	165 ..	01111	Randolph	AL
158 ..	30077	Powell	MT	165 ..	13015	Bartow	GA
158 ..	30081	Ravalli	MT	165 ..	13055	Chattooga	GA
158 ..	30089	Sanders	MT	165 ..	13115	Floyd	GA
159 ..	13007	Baker	GA	165 ..	13233	Polk	GA
159 ..	13017	Ben Hill	GA	166 ..	06049	Modoc	CA
159 ..	13019	Berrien	GA	166 ..	06089	Shasta	CA
159 ..	13027	Brooks	GA	166 ..	06093	Siskiyou	CA
159 ..	13037	Calhoun	GA	166 ..	06103	Tehama	CA
159 ..	13061	Clay	GA	166 ..	41035	Klamath	OR
159 ..	13071	Colquitt	GA	167 ..	51005	Alleghany	VA
159 ..	13075	Cook	GA	167 ..	51015	Augusta	VA
159 ..	13101	Echols	GA	167 ..	51017	Bath	VA
159 ..	13155	Irwin	GA	167 ..	51530	Buena Vista City	VA
159 ..	13173	Lanier	GA	167 ..	51580	Covington City	VA
159 ..	13185	Lowndes	GA	167 ..	51660	Harrisonburg City	VA
159 ..	13205	Mitchell	GA	167 ..	51091	Highland	VA
159 ..	13243	Randolph	GA	167 ..	51678	Lexington City	VA
159 ..	13273	Terrell	GA	167 ..	51163	Rockbridge	VA
159 ..	13277	Tift	GA	167 ..	51165	Rockingham	VA
159 ..	13287	Turner	GA	167 ..	51790	Staunton City	VA
159 ..	13321	Worth	GA	167 ..	51820	Waynesboro City	VA
160 ..	48015	Austin	TX	167 ..	54025	Greenbrier	WV
160 ..	48051	Burleson	TX	167 ..	54071	Pendleton	WV
160 ..	48057	Calhoun	TX	167 ..	54075	Pocahontas	WV
160 ..	48089	Colorado	TX	168 ..	17143	Peoria	IL
160 ..	48123	DeWitt	TX	168 ..	17179	Tazewell	IL
160 ..	48149	Fayette	TX	168 ..	17203	Woodford	IL
160 ..	48175	Goliad	TX	169 ..	37061	Duplin	NC
160 ..	48239	Jackson	TX	169 ..	37133	Onslow	NC
160 ..	48285	Lavaca	TX	169 ..	37191	Wayne	NC
160 ..	48321	Matagorda	TX	170 ..	01005	Barbour	AL
160 ..	48469	Victoria	TX	170 ..	01031	Coffee	AL
160 ..	48477	Washington	TX	170 ..	01039	Covington	AL
160 ..	48481	Wharton	TX	170 ..	01045	Dale	AL
161 ..	17003	Alexander	IL	170 ..	01061	Geneva	AL
161 ..	17055	Franklin	IL	170 ..	01067	Henry	AL
161 ..	17059	Gallatin	IL	170 ..	01069	Houston	AL

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170 ..	12059	Holmes	FL	178 ..	29217	Vernon	MO
170 ..	12133	Washington	FL	179 ..	19007	Appanoose	IA
170 ..	13239	Quitman	GA	179 ..	19051	Davis	IA
171 ..	05033	Crawford	AR	179 ..	19057	Des Moines	IA
171 ..	05047	Franklin	AR	179 ..	19087	Henry	IA
171 ..	05083	Logan	AR	179 ..	19099	Jasper	IA
171 ..	05127	Scott	AR	179 ..	19101	Jefferson	IA
171 ..	05131	Sebastian	AR	179 ..	19107	Keokuk	IA
171 ..	40061	Haskell	OK	179 ..	19111	Lee	IA
171 ..	40077	Latimer	OK	179 ..	19123	Mahaska	IA
171 ..	40079	Le Flore	OK	179 ..	19125	Marion	IA
171 ..	40135	Sequoyah	OK	179 ..	19135	Monroe	IA
172 ..	27017	Carlton	MN	179 ..	19157	Poweshiek	IA
172 ..	27031	Cook	MN	179 ..	19177	Van Buren	IA
172 ..	27061	Itasca	MN	179 ..	19179	Wapello	IA
172 ..	27071	Koochiching	MN	179 ..	17067	Hancock	IL
172 ..	27075	Lake	MN	179 ..	17071	Henderson	IL
172 ..	27137	St. Louis	MN	179 ..	29045	Clark	MO
172 ..	55031	Douglas	WI	179 ..	29199	Scotland	MO
173 ..	51019	Bedford	VA	180 ..	04005	Coconino	AZ
173 ..	51515	Bedford City	VA	180 ..	04025	Yavapai	AZ
173 ..	51035	Carroll	VA	181 ..	05081	Little River	AR
173 ..	51063	Floyd	VA	181 ..	05091	Miller	AR
173 ..	51067	Franklin	VA	181 ..	05113	Polk	AR
173 ..	51071	Giles	VA	181 ..	05133	Sevier	AR
173 ..	51121	Montgomery	VA	181 ..	40013	Bryan	OK
173 ..	51155	Pulaski	VA	181 ..	40023	Choctaw	OK
173 ..	51750	Radford City	VA	181 ..	40089	McCurtain	OK
173 ..	54063	Monroe	WV	181 ..	40127	Pushmataha	OK
174 ..	29043	Christian	MO	181 ..	48037	Bowie	TX
174 ..	29077	Greene	MO	181 ..	48067	Cass	TX
175 ..	28009	Benton	MS	181 ..	48315	Marion	TX
175 ..	28033	DeSoto	MS	181 ..	48343	Morris	TX
175 ..	28071	Lafayette	MS	182 ..	19103	Johnson	IA
175 ..	28093	Marshall	MS	182 ..	19113	Linn	IA
175 ..	28107	Panola	MS	183 ..	29019	Boone	MO
175 ..	28119	Quitman	MS	183 ..	29027	Callaway	MO
175 ..	28137	Tate	MS	183 ..	29051	Cole	MO
175 ..	28143	Tunica	MS	183 ..	29053	Cooper	MO
175 ..	28161	Yalobusha	MS	183 ..	29089	Howard	MO
176 ..	19015	Boone	IA	183 ..	29135	Moniteau	MO
176 ..	19025	Calhoun	IA	183 ..	29151	Osage	MO
176 ..	19027	Carroll	IA	184 ..	22021	Caldwell Parish	LA
176 ..	19047	Crawford	IA	184 ..	22035	East Carroll Parish	LA
176 ..	19073	Greene	IA	184 ..	22041	Franklin Parish	LA
176 ..	19075	Grundy	IA	184 ..	22049	Jackson Parish	LA
176 ..	19079	Hamilton	IA	184 ..	22061	Lincoln Parish	LA
176 ..	19083	Hardin	IA	184 ..	22067	Morehouse Parish	LA
176 ..	19091	Humboldt	IA	184 ..	22073	Ouachita Parish	LA
176 ..	19127	Marshall	IA	184 ..	22083	Richland Parish	LA
176 ..	19161	Sac	IA	184 ..	22111	Union Parish	LA
176 ..	19169	Story	IA	184 ..	22123	West Carroll Parish	LA
176 ..	19171	Tama	IA	185 ..	26013	Baraga	MI
176 ..	19187	Webster	IA	185 ..	26043	Dickinson	MI
176 ..	19197	Wright	IA	185 ..	26053	Gogebic	MI
177 ..	13029	Bryan	GA	185 ..	26061	Houghton	MI
177 ..	13051	Chatham	GA	185 ..	26071	Iron	MI
177 ..	13103	Effingham	GA	185 ..	26083	Keweenaw	MI
178 ..	20003	Anderson	KS	185 ..	26103	Marquette	MI
178 ..	20011	Bourbon	KS	185 ..	26109	Menominee	MI
178 ..	20059	Franklin	KS	185 ..	26131	Ontonagon	MI
178 ..	20107	Linn	KS	185 ..	55037	Florence	WI
178 ..	20121	Miami	KS	185 ..	55051	Iron	WI
178 ..	29013	Bates	MO	185 ..	55075	Marinette	WI
178 ..	29015	Benton	MO	185 ..	55078	Menominee	WI
178 ..	29039	Cedar	MO	185 ..	55083	Oconto	WI
178 ..	29083	Henry	MO	185 ..	55115	Shawano	WI
178 ..	29101	Johnson	MO	186 ..	45023	Chester	SC
178 ..	29107	Lafayette	MO	186 ..	45057	Lancaster	SC
178 ..	29159	Pettis	MO	186 ..	45091	York	SC
178 ..	29195	Saline	MO	187 ..	16005	Bannock	ID
178 ..	29185	St. Clair	MO	187 ..	16011	Bingham	ID

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
187 ..	16019	Bonneville	ID	195 ..	16061	Lewis	ID
187 ..	16033	Clark	ID	195 ..	16069	Nez Perce	ID
187 ..	16043	Fremont	ID	195 ..	16079	Shoshone	ID
187 ..	16051	Jefferson	ID	196 ..	29017	Bollinger	MO
187 ..	16065	Madison	ID	196 ..	29023	Butler	MO
187 ..	16077	Power	ID	196 ..	29031	Cape Girardeau	MO
187 ..	16081	Teton	ID	196 ..	29035	Carter	MO
188 ..	36003	Allegany	NY	196 ..	29093	Iron	MO
188 ..	36009	Cattaraugus	NY	196 ..	29123	Madison	MO
188 ..	36013	Chautauqua	NY	196 ..	29133	Mississippi	MO
188 ..	42083	McKean	PA	196 ..	29143	New Madrid	MO
188 ..	42105	Potter	PA	196 ..	29157	Perry	MO
189 ..	22003	Allen Parish	LA	196 ..	29179	Reynolds	MO
189 ..	22009	Avoyelles Parish	LA	196 ..	29181	Ripley	MO
189 ..	22011	Beauregard Parish	LA	196 ..	29201	Scott	MO
189 ..	22043	Grant Parish	LA	196 ..	29207	Stoddard	MO
189 ..	22059	La Salle Parish	LA	196 ..	29223	Wayne	MO
189 ..	22079	Rapides Parish	LA	197 ..	39013	Belmont	OH
189 ..	22115	Vernon Parish	LA	197 ..	39081	Jefferson	OH
190 ..	30019	Daniels	MT	197 ..	39111	Monroe	OH
190 ..	30021	Dawson	MT	197 ..	54009	Brooke	WV
190 ..	30031	Gallatin	MT	197 ..	54029	Hancock	WV
190 ..	30033	Garfield	MT	197 ..	54051	Marshall	WV
190 ..	30037	Golden Valley	MT	197 ..	54069	Ohio	WV
190 ..	30057	Madison	MT	197 ..	54095	Tyler	WV
190 ..	30055	McCone	MT	197 ..	54103	Wetzel	WV
190 ..	30065	Musselshell	MT	198 ..	05021	Clay	AR
190 ..	30067	Park	MT	198 ..	05031	Craighead	AR
190 ..	30069	Petroleum	MT	198 ..	05055	Greene	AR
190 ..	30083	Richland	MT	198 ..	05075	Lawrence	AR
190 ..	30085	Roosevelt	MT	198 ..	05093	Mississippi	AR
190 ..	30091	Sheridan	MT	198 ..	05111	Poinsett	AR
190 ..	30095	Stillwater	MT	198 ..	05121	Randolph	AR
190 ..	30097	Sweet Grass	MT	198 ..	29069	Dunklin	MO
190 ..	30105	Valley	MT	198 ..	29155	Pemiscot	MO
190 ..	30111	Yellowstone	MT	199 ..	13111	Fannin	GA
191 ..	51007	Amelia	VA	199 ..	13123	Gilmer	GA
191 ..	51025	Brunswick	VA	199 ..	13129	Gordon	GA
191 ..	51029	Buckingham	VA	199 ..	13213	Murray	GA
191 ..	51037	Charlotte	VA	199 ..	13227	Pickens	GA
191 ..	51570	Colonial Heights City	VA	199 ..	13281	Towns	GA
191 ..	51049	Cumberland	VA	199 ..	13291	Union	GA
191 ..	51053	Dinwiddie	VA	199 ..	13313	Whitfield	GA
191 ..	51595	Emporia City	VA	200 ..	37033	Caswell	NC
191 ..	51081	Greensville	VA	200 ..	37157	Rockingham	NC
191 ..	51670	Hopewell City	VA	200 ..	51590	Danville City	VA
191 ..	51111	Lunenburg	VA	200 ..	51089	Henry	VA
191 ..	51117	Mecklenburg	VA	200 ..	51690	Martinsville City	VA
191 ..	51135	Nottoway	VA	200 ..	51141	Patrick	VA
191 ..	51730	Petersburg City	VA	200 ..	51143	Pittsylvania	VA
191 ..	51147	Prince Edward	VA	201 ..	48019	Bandera	TX
191 ..	51149	Prince George	VA	201 ..	48127	Dimmit	TX
191 ..	51183	Sussex	VA	201 ..	48163	Frio	TX
192 ..	37051	Cumberland	NC	201 ..	48171	Gillespie	TX
193 ..	20005	Atchison	KS	201 ..	48259	Kendall	TX
193 ..	20043	Doniphan	KS	201 ..	48265	Kerr	TX
193 ..	20045	Douglas	KS	201 ..	48283	La Salle	TX
193 ..	20103	Leavenworth	KS	201 ..	48323	Maverick	TX
193 ..	29003	Andrew	MO	201 ..	48325	Medina	TX
193 ..	29021	Buchanan	MO	201 ..	48385	Real	TX
194 ..	42023	Cameron	PA	201 ..	48463	Uvalde	TX
194 ..	42027	Centre	PA	201 ..	48507	Zavala	TX
194 ..	42033	Clearfield	PA	202 ..	01113	Russell	AL
194 ..	42047	Elk	PA	202 ..	13053	Chattahoochee	GA
194 ..	42065	Jefferson	PA	202 ..	13145	Harris	GA
195 ..	16009	Benewah	ID	202 ..	13197	Marion	GA
195 ..	16017	Bonner	ID	202 ..	13215	Muscogee	GA
195 ..	16021	Boundary	ID	202 ..	13259	Stewart	GA
195 ..	16035	Clearwater	ID	202 ..	13307	Webster	GA
195 ..	16049	Idaho	ID	203 ..	26009	Antrim	MI
195 ..	16055	Kootenai	ID	203 ..	26019	Benzie	MI
195 ..	16057	Latah	ID	203 ..	26055	Grand Traverse	MI

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203 ..	26079	Kalkaska	MI	214 ..	31109	Lancaster	NE
203 ..	26085	Lake	MI	215 ..	37003	Alexander	NC
203 ..	26089	Leelanau	MI	215 ..	37023	Burke	NC
203 ..	26101	Manistee	MI	215 ..	37035	Catawba	NC
203 ..	26105	Mason	MI	216 ..	20021	Cherokee	KS
203 ..	26113	Missaukee	MI	216 ..	20037	Crawford	KS
203 ..	26133	Osceola	MI	216 ..	29011	Barton	MO
203 ..	26165	Wexford	MI	216 ..	29097	Jasper	MO
204 ..	21055	Crittenden	KY	216 ..	29145	Newton	MO
204 ..	21059	Daviess	KY	216 ..	40115	Ottawa	OK
204 ..	21091	Hancock	KY	217 ..	48303	Lubbock	TX
204 ..	21101	Henderson	KY	218 ..	55073	Marathon	WI
204 ..	21107	Hopkins	KY	218 ..	55097	Portage	WI
204 ..	21149	McLean	KY	218 ..	55141	Wood	WI
204 ..	21177	Muhlenberg	KY	219 ..	19019	Buchanan	IA
204 ..	21183	Ohio	KY	219 ..	19021	Buena Vista	IA
204 ..	21225	Union	KY	219 ..	19023	Butler	IA
204 ..	21233	Webster	KY	219 ..	19033	Cerro Gordo	IA
205 ..	06023	Humboldt	CA	219 ..	19037	Chickasaw	IA
205 ..	06033	Lake	CA	219 ..	19041	Clay	IA
205 ..	06045	Mendocino	CA	219 ..	19059	Dickinson	IA
205 ..	06105	Trinity	CA	219 ..	19063	Emmet	IA
206 ..	53001	Adams	WA	219 ..	19065	Fayette	IA
206 ..	53007	Chelan	WA	219 ..	19067	Floyd	IA
206 ..	53017	Douglas	WA	219 ..	19069	Franklin	IA
206 ..	53025	Grant	WA	219 ..	19081	Hancock	IA
206 ..	53037	Kittitas	WA	219 ..	19109	Kossuth	IA
206 ..	53047	Okanogan	WA	219 ..	19131	Mitchell	IA
207 ..	13003	Atkinson	GA	219 ..	19147	Palo Alto	IA
207 ..	13005	Bacon	GA	219 ..	19151	Pocahontas	IA
207 ..	13025	Brantley	GA	219 ..	19189	Winnebago	IA
207 ..	13039	Camden	GA	219 ..	19195	Worth	IA
207 ..	13049	Charlton	GA	220 ..	48135	Ector	TX
207 ..	13065	Clinch	GA	220 ..	48329	Midland	TX
207 ..	13069	Coffee	GA	221 ..	48247	Jim Hogg	TX
207 ..	13127	Glynn	GA	221 ..	48479	Webb	TX
207 ..	13191	McIntosh	GA	221 ..	48505	Zapata	TX
207 ..	13229	Pierce	GA	222 ..	47029	Cocke	TN
207 ..	13299	Ware	GA	222 ..	47057	Grainger	TN
208 ..	37097	Iredell	NC	222 ..	47063	Hamblen	TN
208 ..	37159	Rowan	NC	222 ..	47067	Hancock	TN
209 ..	55009	Brown	WI	222 ..	47089	Jefferson	TN
209 ..	55029	Door	WI	222 ..	47155	Sevier	TN
209 ..	55061	Kewaunee	WI	223 ..	19061	Dubuque	IA
210 ..	36007	Broome	NY	223 ..	19097	Jackson	IA
210 ..	36107	Tioga	NY	223 ..	17085	Jo Daviess	IL
210 ..	42115	Susquehanna	PA	223 ..	55043	Grant	WI
211 ..	40005	Atoka	OK	223 ..	55045	Green	WI
211 ..	40019	Carter	OK	223 ..	55049	Iowa	WI
211 ..	40029	Coal	OK	223 ..	55065	Lafayette	WI
211 ..	40033	Cotton	OK	224 ..	17015	Carroll	IL
211 ..	40049	Garvin	OK	224 ..	17037	DeKalb	IL
211 ..	40063	Hughes	OK	224 ..	17103	Lee	IL
211 ..	40067	Jefferson	OK	224 ..	17141	Ogle	IL
211 ..	40069	Johnston	OK	224 ..	17177	Stephenson	IL
211 ..	40085	Love	OK	225 ..	27055	Houston	MN
211 ..	40095	Marshall	OK	225 ..	55053	Jackson	WI
211 ..	40099	Murray	OK	225 ..	55063	La Crosse	WI
211 ..	40107	Oktuskee	OK	225 ..	55081	Monroe	WI
211 ..	40123	Pontotoc	OK	225 ..	55121	Trempealeau	WI
211 ..	40133	Seminole	OK	225 ..	55123	Vernon	WI
211 ..	40137	Stephens	OK	226 ..	39003	Allen	OH
212 ..	02020	Anchorage Borough	AK	226 ..	39011	Auglaize	OH
213 ..	41013	Crook	OR	226 ..	39107	Mercer	OH
213 ..	41017	Deschutes	OR	226 ..	39137	Putnam	OH
213 ..	41027	Hood River	OR	226 ..	39161	Van Wert	OH
213 ..	41031	Jefferson	OR	227 ..	36045	Jefferson	NY
213 ..	41037	Lake	OR	227 ..	36049	Lewis	NY
213 ..	41055	Sherman	OR	227 ..	36089	St. Lawrence	NY
213 ..	41065	Wasco	OR	228 ..	51023	Botetourt	VA
213 ..	53039	Klickitat	WA	228 ..	51045	Craig	VA
213 ..	53059	Skamania	WA	228 ..	51161	Roanoke	VA

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PEA No.	Federal Information Processing System No.	County name	State	PEA No.	Federal Information Processing System No.	County name	State
228 ..	51770	Roanoke City	VA	237 ..	13183	Long	GA
228 ..	51775	Salem City	VA	237 ..	13251	Screven	GA
229 ..	32009	Esmeralda	NV	237 ..	13267	Tattnall	GA
229 ..	32017	Lincoln	NV	237 ..	13305	Wayne	GA
229 ..	32021	Mineral	NV	238 ..	45031	Darlington	SC
229 ..	32023	Nye	NV	238 ..	45041	Florence	SC
229 ..	49001	Beaver	UT	238 ..	45089	Williamsburg	SC
229 ..	49017	Garfield	UT	239 ..	37025	Cabarrus	NC
229 ..	49021	Iron	UT	239 ..	37167	Stanly	NC
229 ..	49031	Piute	UT	240 ..	51003	Albemarle	VA
229 ..	49053	Washington	UT	240 ..	51540	Charlottesville City	VA
230 ..	37017	Bladen	NC	240 ..	51065	Fluvanna	VA
230 ..	37093	Hoke	NC	240 ..	51079	Greene	VA
230 ..	37155	Robeson	NC	240 ..	51109	Louisa	VA
230 ..	37165	Scotland	NC	240 ..	51125	Nelson	VA
231 ..	31003	Antelope	NE	241 ..	13001	Appling	GA
231 ..	31011	Boone	NE	241 ..	13107	Emanuel	GA
231 ..	31021	Burt	NE	241 ..	13141	Hancock	GA
231 ..	31023	Butler	NE	241 ..	13161	Jeff Davis	GA
231 ..	31025	Cass	NE	241 ..	13167	Johnson	GA
231 ..	31037	Colfax	NE	241 ..	13175	Laurens	GA
231 ..	31039	Cuming	NE	241 ..	13209	Montgomery	GA
231 ..	31053	Dodge	NE	241 ..	13237	Putnam	GA
231 ..	31119	Madison	NE	241 ..	13271	Telfair	GA
231 ..	31125	Nance	NE	241 ..	13279	Toombs	GA
231 ..	31139	Pierce	NE	241 ..	13283	Treutlen	GA
231 ..	31141	Platte	NE	241 ..	13303	Washington	GA
231 ..	31143	Polk	NE	241 ..	13309	Wheeler	GA
231 ..	31155	Saunders	NE	242 ..	22019	Calcasieu Parish	LA
231 ..	31167	Stanton	NE	242 ..	22023	Cameron Parish	LA
231 ..	31177	Washington	NE	242 ..	22053	Jefferson Davis Parish	LA
231 ..	31179	Wayne	NE	243 ..	17127	Massac	IL
232 ..	20013	Brown	KS	243 ..	21007	Ballard	KY
232 ..	20031	Coffey	KS	243 ..	21033	Caldwell	KY
232 ..	20085	Jackson	KS	243 ..	21035	Calloway	KY
232 ..	20087	Jefferson	KS	243 ..	21039	Carlisle	KY
232 ..	20139	Osage	KS	243 ..	21083	Graves	KY
232 ..	20177	Shawnee	KS	243 ..	21139	Livingston	KY
233 ..	37045	Cleveland	NC	243 ..	21143	Lyon	KY
233 ..	37109	Lincoln	NC	243 ..	21157	Marshall	KY
233 ..	37161	Rutherford	NC	243 ..	21145	McCracken	KY
234 ..	37057	Davidson	NC	244 ..	20017	Chase	KS
234 ..	37059	Davie	NC	244 ..	20027	Clay	KS
234 ..	37197	Yadkin	NC	244 ..	20041	Dickinson	KS
235 ..	48375	Potter	TX	244 ..	20061	Geary	KS
235 ..	48381	Randall	TX	244 ..	20111	Lyon	KS
236 ..	31001	Adams	NE	244 ..	20117	Marshall	KS
236 ..	31015	Boyd	NE	244 ..	20127	Morris	KS
236 ..	31017	Brown	NE	244 ..	20131	Nemaha	KS
236 ..	31019	Buffalo	NE	244 ..	20149	Pottawatomie	KS
236 ..	31035	Clay	NE	244 ..	20161	Riley	KS
236 ..	31041	Custer	NE	244 ..	20197	Wabaunsee	KS
236 ..	31047	Dawson	NE	244 ..	20201	Washington	KS
236 ..	31071	Garfield	NE	245 ..	29009	Barry	MO
236 ..	31077	Greeley	NE	245 ..	29057	Dade	MO
236 ..	31079	Hall	NE	245 ..	29067	Douglas	MO
236 ..	31081	Hamilton	NE	245 ..	29091	Howell	MO
236 ..	31089	Holt	NE	245 ..	29109	Lawrence	MO
236 ..	31093	Howard	NE	245 ..	29153	Ozark	MO
236 ..	31103	Keya Paha	NE	245 ..	29209	Stone	MO
236 ..	31115	Loup	NE	245 ..	29213	Taney	MO
236 ..	31121	Merrick	NE	246 ..	01027	Clay	AL
236 ..	31129	Nuckolls	NE	246 ..	01037	Coosa	AL
236 ..	31149	Rock	NE	246 ..	01081	Lee	AL
236 ..	31163	Sherman	NE	246 ..	01087	Macon	AL
236 ..	31175	Valley	NE	246 ..	01123	Tallapoosa	AL
236 ..	31181	Webster	NE	247 ..	16027	Canyon	ID
236 ..	31183	Wheeler	NE	247 ..	16039	Elmore	ID
237 ..	13031	Bulloch	GA	247 ..	16073	Owyhee	ID
237 ..	13043	Candler	GA	248 ..	45027	Clarendon	SC
237 ..	13109	Evans	GA	248 ..	45055	Kershaw	SC
237 ..	13179	Liberty	GA	248 ..	45061	Lee	SC

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248 ..	45085	Sumter	SC	258 ..	01043	Cullman	AL
249 ..	48041	Brazos	TX	258 ..	01057	Fayette	AL
249 ..	48185	Grimes	TX	258 ..	01093	Marion	AL
250 ..	35013	Dona Ana	NM	258 ..	01133	Winston	AL
250 ..	35051	Sierra	NM	259 ..	35005	Chaves	NM
251 ..	20007	Barber	KS	259 ..	35015	Eddy	NM
251 ..	20009	Barton	KS	259 ..	35025	Lea	NM
251 ..	20033	Comanche	KS	259 ..	48165	Gaines	TX
251 ..	20047	Edwards	KS	259 ..	48501	Yoakum	TX
251 ..	20051	Ellis	KS	260 ..	26007	Alpena	MI
251 ..	20053	Ellsworth	KS	260 ..	26029	Charlevoix	MI
251 ..	20097	Kiowa	KS	260 ..	26031	Cheboygan	MI
251 ..	20115	Marion	KS	260 ..	26039	Crawford	MI
251 ..	20113	McPherson	KS	260 ..	26047	Emmet	MI
251 ..	20135	Ness	KS	260 ..	26119	Montmorency	MI
251 ..	20145	Pawnee	KS	260 ..	26135	Oscoda	MI
251 ..	20151	Pratt	KS	260 ..	26137	Otsego	MI
251 ..	20159	Rice	KS	260 ..	26141	Presque Isle	MI
251 ..	20165	Rush	KS	260 ..	26143	Roscommon	MI
251 ..	20167	Russell	KS	261 ..	27027	Clay	MN
251 ..	20169	Saline	KS	261 ..	38017	Cass	ND
251 ..	20185	Stafford	KS	262 ..	45013	Beaufort	SC
251 ..	20195	Trego	KS	262 ..	45049	Hampton	SC
252 ..	19035	Cherokee	IA	262 ..	45053	Jasper	SC
252 ..	19093	Ida	IA	263 ..	35019	Guadalupe	NM
252 ..	19133	Monona	IA	263 ..	35028	Los Alamos	NM
252 ..	19141	O'Brien	IA	263 ..	35033	Mora	NM
252 ..	19149	Plymouth	IA	263 ..	35047	San Miguel	NM
252 ..	19167	Sioux	IA	263 ..	35049	Santa Fe	NM
252 ..	19193	Woodbury	IA	264 ..	02013	Aleutians East Borough	AK
252 ..	46127	Union	SD	264 ..	02016	Aleutians West Census Area ..	AK
253 ..	55001	Adams	WI	264 ..	02050	Bethel Census Area	AK
253 ..	55021	Columbia	WI	264 ..	02060	Bristol Bay Borough	AK
253 ..	55023	Crawford	WI	264 ..	02070	Dillingham Census Area	AK
253 ..	55057	Juneau	WI	264 ..	02122	Kenai Peninsula Borough	AK
253 ..	55077	Marquette	WI	264 ..	02150	Kodiak Island Borough	AK
253 ..	55103	Richland	WI	264 ..	02164	Lake and Peninsula Borough ..	AK
253 ..	55111	Sauk	WI	264 ..	02170	Matanuska-Susitna Borough ...	AK
254 ..	55003	Ashland	WI	264 ..	02261	Valdez-Cordova Census Area ..	AK
254 ..	55007	Bayfield	WI	265 ..	19089	Howard	IA
254 ..	55019	Clark	WI	265 ..	19191	Winneshiek	IA
254 ..	55041	Forest	WI	265 ..	27039	Dodge	MN
254 ..	55067	Langlade	WI	265 ..	27045	Fillmore	MN
254 ..	55069	Lincoln	WI	265 ..	27099	Mower	MN
254 ..	55085	Oneida	WI	265 ..	27157	Wabasha	MN
254 ..	55099	Price	WI	265 ..	27169	Winona	MN
254 ..	55119	Taylor	WI	265 ..	55011	Buffalo	WI
254 ..	55125	Vilas	WI	266 ..	37009	Ashe	NC
255 ..	28011	Bolivar	MS	266 ..	37011	Avery	NC
255 ..	28015	Carroll	MS	266 ..	37027	Caldwell	NC
255 ..	28027	Coahoma	MS	266 ..	37189	Watauga	NC
255 ..	28053	Humphreys	MS	266 ..	47091	Johnson	TN
255 ..	28055	Issaquena	MS	267 ..	55071	Manitowoc	WI
255 ..	28083	Leflore	MS	267 ..	55117	Sheboygan	WI
255 ..	28125	Sharkey	MS	268 ..	19031	Cedar	IA
255 ..	28133	Sunflower	MS	268 ..	19045	Clinton	IA
255 ..	28135	Tallahatchie	MS	268 ..	19115	Louisa	IA
255 ..	28151	Washington	MS	268 ..	19139	Muscatine	IA
256 ..	51009	Amherst	VA	268 ..	17131	Mercer	IL
256 ..	51011	Appomattox	VA	268 ..	17195	Whiteside	IL
256 ..	51031	Campbell	VA	269 ..	55101	Racine	WI
256 ..	51083	Halifax	VA	270 ..	17011	Bureau	IL
256 ..	51680	Lynchburg City	VA	270 ..	17099	La Salle	IL
257 ..	56001	Albany	WY	270 ..	17105	Livingston	IL
257 ..	56005	Campbell	WY	270 ..	17155	Putnam	IL
257 ..	56009	Converse	WY	271 ..	36015	Chemung	NY
257 ..	56011	Crook	WY	271 ..	42015	Bradford	PA
257 ..	56021	Laramie	WY	271 ..	42117	Tioga	PA
257 ..	56027	Niobrara	WY	272 ..	48035	Bosque	TX
257 ..	56031	Platte	WY	272 ..	48049	Brown	TX
257 ..	56045	Weston	WY	272 ..	48083	Coleman	TX
258 ..	01009	Blount	AL	272 ..	48093	Comanche	TX

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272 ..	48133	Eastland	TX	281 ..	40091	McIntosh	OK
272 ..	48143	Erath	TX	281 ..	40101	Muskogee	OK
272 ..	48193	Hamilton	TX	281 ..	40111	Okmulgee	OK
272 ..	48217	Hill	TX	281 ..	40121	Pittsburg	OK
272 ..	48333	Mills	TX	282 ..	17057	Fulton	IL
272 ..	48425	Somervell	TX	282 ..	17095	Knox	IL
273 ..	17039	De Witt	IL	282 ..	17123	Marshall	IL
273 ..	17113	McLean	IL	282 ..	17125	Mason	IL
274 ..	16013	Blaine	ID	282 ..	17109	McDonough	IL
274 ..	16025	Camas	ID	282 ..	17175	Stark	IL
274 ..	16031	Cassia	ID	282 ..	17187	Warren	IL
274 ..	16047	Gooding	ID	283 ..	36019	Clinton	NY
274 ..	16053	Jerome	ID	283 ..	36031	Essex	NY
274 ..	16063	Lincoln	ID	283 ..	36033	Franklin	NY
274 ..	16067	Minidoka	ID	284 ..	45001	Abbeville	SC
274 ..	16083	Twin Falls	ID	284 ..	45047	Greenwood	SC
275 ..	48001	Anderson	TX	284 ..	45059	Laurens	SC
275 ..	48213	Henderson	TX	284 ..	45065	McCormick	SC
275 ..	48349	Navarro	TX	285 ..	04001	Apache	AZ
276 ..	30011	Carter	MT	285 ..	35006	Cibola	NM
276 ..	38001	Adams	ND	285 ..	35031	McKinley	NM
276 ..	46019	Butte	SD	286 ..	46099	Minnehaha	SD
276 ..	46033	Custer	SD	287 ..	55059	Kenosha	WI
276 ..	46047	Fall River	SD	288 ..	48059	Callahan	TX
276 ..	46063	Harding	SD	288 ..	48253	Jones	TX
276 ..	46081	Lawrence	SD	288 ..	48441	Taylor	TX
276 ..	46093	Meade	SD	289 ..	49007	Carbon	UT
276 ..	46103	Pennington	SD	289 ..	49013	Duchesne	UT
276 ..	46105	Perkins	SD	289 ..	49015	Emery	UT
277 ..	20035	Cowley	KS	289 ..	49019	Grand	UT
277 ..	20049	Elk	KS	289 ..	49029	Morgan	UT
277 ..	20073	Greenwood	KS	289 ..	49043	Summit	UT
277 ..	20077	Harper	KS	289 ..	49047	Uintah	UT
277 ..	20079	Harvey	KS	289 ..	49051	Wasatch	UT
277 ..	20095	Kingman	KS	289 ..	49055	Wayne	UT
277 ..	20155	Reno	KS	290 ..	27011	Big Stone	MN
277 ..	20191	Sumner	KS	290 ..	27117	Pipestone	MN
278 ..	20001	Allen	KS	290 ..	27133	Rock	MN
278 ..	20019	Chautauqua	KS	290 ..	27155	Traverse	MN
278 ..	20099	Labette	KS	290 ..	46005	Beadle	SD
278 ..	20125	Montgomery	KS	290 ..	46011	Brookings	SD
278 ..	20133	Neosho	KS	290 ..	46025	Clark	SD
278 ..	20205	Wilson	KS	290 ..	46029	Codington	SD
278 ..	20207	Woodson	KS	290 ..	46039	Deuel	SD
278 ..	40035	Craig	OK	290 ..	46051	Grant	SD
278 ..	40105	Nowata	OK	290 ..	46057	Hamlin	SD
278 ..	40147	Washington	OK	290 ..	46077	Kingsbury	SD
279 ..	16041	Franklin	ID	290 ..	46079	Lake	SD
279 ..	16071	Oneida	ID	290 ..	46097	Miner	SD
279 ..	49003	Box Elder	UT	290 ..	46101	Moody	SD
279 ..	49005	Cache	UT	290 ..	46109	Roberts	SD
280 ..	20025	Clark	KS	290 ..	46111	Sanborn	SD
280 ..	20055	Finney	KS	291 ..	37123	Montgomery	NC
280 ..	20057	Ford	KS	291 ..	37125	Moore	NC
280 ..	20067	Grant	KS	291 ..	37153	Richmond	NC
280 ..	20069	Gray	KS	292 ..	08101	Pueblo	CO
280 ..	20071	Greeley	KS	293 ..	21221	Trigg	KY
280 ..	20075	Hamilton	KS	293 ..	47081	Hickman	TN
280 ..	20081	Haskell	KS	293 ..	47083	Houston	TN
280 ..	20083	Hodgeman	KS	293 ..	47085	Humphreys	TN
280 ..	20093	Kearny	KS	293 ..	47099	Lawrence	TN
280 ..	20101	Lane	KS	293 ..	47101	Lewis	TN
280 ..	20119	Meade	KS	293 ..	47135	Perry	TN
280 ..	20129	Morton	KS	293 ..	47161	Stewart	TN
280 ..	20171	Scott	KS	293 ..	47181	Wayne	TN
280 ..	20175	Seward	KS	294 ..	19013	Black Hawk	IA
280 ..	20187	Stanton	KS	294 ..	19017	Bremer	IA
280 ..	20189	Stevens	KS	295 ..	40071	Kay	OK
280 ..	20203	Wichita	KS	295 ..	40103	Noble	OK
280 ..	40007	Beaver	OK	295 ..	40117	Pawnee	OK
280 ..	40025	Cimarron	OK	295 ..	40119	Payne	OK
280 ..	40139	Texas	OK	296 ..	42107	Schuylkill	PA

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297 ..	41001	Baker	OR	307 ..	19119	Lyon	IA
297 ..	41021	Gilliam	OR	307 ..	31027	Cedar	NE
297 ..	41023	Grant	OR	307 ..	31107	Knox	NE
297 ..	41049	Morrow	OR	307 ..	46009	Bon Homme	SD
297 ..	41059	Umatilla	OR	307 ..	46027	Clay	SD
297 ..	41061	Union	OR	307 ..	46061	Hanson	SD
297 ..	41063	Wallowa	OR	307 ..	46067	Hutchinson	SD
297 ..	41069	Wheeler	OR	307 ..	46083	Lincoln	SD
298 ..	02068	Denali Borough	AK	307 ..	46087	McCook	SD
298 ..	02090	Fairbanks North Star Borough	AK	307 ..	46125	Turner	SD
298 ..	02180	Nome Census Area	AK	307 ..	46135	Yankton	SD
298 ..	02185	North Slope Borough	AK	308 ..	13079	Crawford	GA
298 ..	02188	Northwest Arctic Borough	AK	308 ..	13081	Crisp	GA
298 ..	02240	Southeast Fairbanks Census Area	AK	308 ..	13093	Dooly	GA
298 ..	02270	Wade Hampton Census Area	AK	308 ..	13193	Macon	GA
298 ..	02290	Yukon-Koyukuk Census Area	AK	308 ..	13207	Monroe	GA
299 ..	29001	Adair	MO	308 ..	13249	Schley	GA
299 ..	29025	Caldwell	MO	308 ..	13261	Sumter	GA
299 ..	29033	Carroll	MO	308 ..	13269	Taylor	GA
299 ..	29049	Clinton	MO	309 ..	37015	Bertie	NC
299 ..	29061	Daviess	MO	309 ..	37029	Camden	NC
299 ..	29063	DeKalb	MO	309 ..	37041	Chowan	NC
299 ..	29079	Grundy	MO	309 ..	37073	Gates	NC
299 ..	29081	Harrison	MO	309 ..	37091	Hertford	NC
299 ..	29103	Knox	MO	309 ..	37139	Pasquotank	NC
299 ..	29117	Livingston	MO	309 ..	37143	Perquimans	NC
299 ..	29129	Mercer	MO	310 ..	29055	Crawford	MO
299 ..	29171	Putnam	MO	310 ..	29187	St. Francois	MO
299 ..	29197	Schuyler	MO	310 ..	29186	Ste. Genevieve	MO
299 ..	29211	Sullivan	MO	310 ..	29221	Washington	MO
300 ..	01011	Bullock	AL	311 ..	08003	Alamosa	CO
300 ..	01013	Butler	AL	311 ..	08009	Baca	CO
300 ..	01041	Crenshaw	AL	311 ..	08011	Bent	CO
300 ..	01047	Dallas	AL	311 ..	08017	Cheyenne	CO
300 ..	01085	Lowndes	AL	311 ..	08021	Conejos	CO
300 ..	01105	Perry	AL	311 ..	08023	Costilla	CO
300 ..	01109	Pike	AL	311 ..	08025	Crowley	CO
301 ..	27109	Olmsted	MN	311 ..	08055	Huerfano	CO
302 ..	40003	Alfalfa	OK	311 ..	08061	Kiowa	CO
302 ..	40011	Blaine	OK	311 ..	08071	Las Animas	CO
302 ..	40015	Caddo	OK	311 ..	08079	Mineral	CO
302 ..	40047	Garfield	OK	311 ..	08089	Otero	CO
302 ..	40053	Grant	OK	311 ..	08099	Prowers	CO
302 ..	40073	Kingfisher	OK	311 ..	08105	Rio Grande	CO
302 ..	40093	Major	OK	311 ..	08109	Saguache	CO
302 ..	40151	Woods	OK	311 ..	35007	Coffax	NM
303 ..	30005	Blaine	MT	312 ..	35045	San Juan	NM
303 ..	30013	Cascade	MT	313 ..	48021	Bastrop	TX
303 ..	30015	Chouteau	MT	313 ..	48055	Caldwell	TX
303 ..	30035	Glacier	MT	313 ..	48287	Lee	TX
303 ..	30041	Hill	MT	314 ..	48073	Cherokee	TX
303 ..	30051	Liberty	MT	314 ..	48365	Panola	TX
303 ..	30073	Pondera	MT	314 ..	48401	Rusk	TX
303 ..	30099	Teton	MT	315 ..	30003	Big Horn	MT
303 ..	30101	Toole	MT	315 ..	30009	Carbon	MT
304 ..	37171	Surry	NC	315 ..	30017	Custer	MT
304 ..	37193	Wilkes	NC	315 ..	30025	Fallon	MT
305 ..	40009	Beckham	OK	315 ..	30075	Powder River	MT
305 ..	40039	Custer	OK	315 ..	30079	Prairie	MT
305 ..	40043	Dewey	OK	315 ..	30087	Rosebud	MT
305 ..	40045	Ellis	OK	315 ..	30103	Treasure	MT
305 ..	40055	Greer	OK	315 ..	56003	Big Horn	WY
305 ..	40057	Harmon	OK	315 ..	56019	Johnson	WY
305 ..	40059	Harper	OK	315 ..	56029	Park	WY
305 ..	40065	Jackson	OK	315 ..	56033	Sheridan	WY
305 ..	40075	Kiowa	OK	316 ..	16007	Bear Lake	ID
305 ..	40129	Roger Mills	OK	316 ..	16029	Caribou	ID
305 ..	40149	Washita	OK	316 ..	49009	Daggett	UT
305 ..	40153	Woodward	OK	316 ..	49033	Rich	UT
306 ..	48077	Clay	TX	316 ..	56007	Carbon	WY
306 ..	48485	Wichita	TX	316 ..	56023	Lincoln	WY
306 ..				316 ..	56035	Sublette	WY

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316 ..	56037	Sweetwater	WY	329 ..	48297	Live Oak	TX
316 ..	56041	Uinta	WY	329 ..	48311	McMullen	TX
317 ..	31059	Fillmore	NE	330 ..	17033	Crawford	IL
317 ..	31067	Gage	NE	330 ..	17047	Edwards	IL
317 ..	31095	Jefferson	NE	330 ..	17101	Lawrence	IL
317 ..	31097	Johnson	NE	330 ..	17159	Richland	IL
317 ..	31127	Nemaha	NE	330 ..	17185	Wabash	IL
317 ..	31131	Otoe	NE	330 ..	17191	Wayne	IL
317 ..	31133	Pawnee	NE	330 ..	17193	White	IL
317 ..	31147	Richardson	NE	331 ..	48079	Cochran	TX
317 ..	31151	Saline	NE	331 ..	48189	Hale	TX
317 ..	31159	Seward	NE	331 ..	48219	Hockley	TX
317 ..	31169	Thayer	NE	331 ..	48279	Lamb	TX
317 ..	31185	York	NE	331 ..	48305	Lynn	TX
318 ..	27069	Kittson	MN	331 ..	48437	Swisher	TX
318 ..	27077	Lake of the Woods	MN	331 ..	48445	Terry	TX
318 ..	27089	Marshall	MN	332 ..	37007	Anson	NC
318 ..	27113	Pennington	MN	332 ..	45025	Chesterfield	SC
318 ..	27125	Red Lake	MN	332 ..	45069	Marlboro	SC
318 ..	27135	Roseau	MN	333 ..	39037	Darke	OH
318 ..	38005	Benson	ND	333 ..	39149	Shelby	OH
318 ..	38019	Cavalier	ND	334 ..	48011	Armstrong	TX
318 ..	38027	Eddy	ND	334 ..	48065	Carson	TX
318 ..	38063	Nelson	ND	334 ..	48075	Childress	TX
318 ..	38067	Pembina	ND	334 ..	48087	Collingsworth	TX
318 ..	38071	Ramsey	ND	334 ..	48101	Cottle	TX
318 ..	38079	Rolette	ND	334 ..	48129	Donley	TX
318 ..	38091	Steele	ND	334 ..	48179	Gray	TX
318 ..	38095	Towner	ND	334 ..	48191	Hall	TX
318 ..	38097	Trail	ND	334 ..	48195	Hansford	TX
318 ..	38099	Walsh	ND	334 ..	48211	Hemphill	TX
319 ..	13095	Dougherty	GA	334 ..	48233	Hutchinson	TX
319 ..	13177	Lee	GA	334 ..	48295	Lipscomb	TX
320 ..	48235	Irion	TX	334 ..	48357	Ochiltree	TX
320 ..	48413	Schleicher	TX	334 ..	48393	Roberts	TX
320 ..	48435	Sutton	TX	334 ..	48483	Wheeler	TX
320 ..	48451	Tom Green	TX	335 ..	22031	De Soto Parish	LA
321 ..	18029	Dearborn	IN	335 ..	22069	Natchitoches Parish	LA
321 ..	18047	Franklin	IN	335 ..	22081	Red River Parish	LA
321 ..	18115	Ohio	IN	335 ..	22085	Sabine Parish	LA
321 ..	18137	Ripley	IN	336 ..	27119	Polk	MN
321 ..	18155	Switzerland	IN	336 ..	38035	Grand Forks	ND
322 ..	38009	Bottineau	ND	337 ..	48097	Cooke	TX
322 ..	38013	Burke	ND	337 ..	48237	Jack	TX
322 ..	38023	Divide	ND	337 ..	48337	Montague	TX
322 ..	38049	McHenry	ND	337 ..	48363	Palo Pinto	TX
322 ..	38053	McKenzie	ND	338 ..	08007	Archuleta	CO
322 ..	38061	Mountrail	ND	338 ..	08033	Dolores	CO
322 ..	38075	Renville	ND	338 ..	08067	La Plata	CO
322 ..	38101	Ward	ND	338 ..	08083	Montezuma	CO
322 ..	38105	Williams	ND	338 ..	08111	San Juan	CO
323 ..	35003	Catron	NM	339 ..	31007	Banner	NE
323 ..	35053	Socorro	NM	339 ..	31013	Box Butte	NE
323 ..	35057	Torrance	NM	339 ..	31033	Cheyenne	NE
323 ..	35061	Valencia	NM	339 ..	31045	Dawes	NE
324 ..	42103	Pike	PA	339 ..	31105	Kimball	NE
324 ..	42127	Wayne	PA	339 ..	31123	Morrill	NE
325 ..	38015	Burleigh	ND	339 ..	31157	Scotts Bluff	NE
325 ..	38059	Morton	ND	339 ..	31165	Sioux	NE
326 ..	27005	Becker	MN	339 ..	56015	Goshen	WY
326 ..	27087	Mahnomen	MN	340 ..	35009	Curry	NM
326 ..	27107	Norman	MN	340 ..	35011	DeBaca	NM
326 ..	27111	Otter Tail	MN	340 ..	35021	Harding	NM
326 ..	27167	Wilkin	MN	340 ..	35037	Quay	NM
327 ..	45017	Calhoun	SC	340 ..	35041	Roosevelt	NM
327 ..	45075	Orangeburg	SC	340 ..	35059	Union	NM
328 ..	04017	Navajo	AZ	341 ..	35027	Lincoln	NM
329 ..	48047	Brooks	TX	341 ..	35035	Otero	NM
329 ..	48131	Duval	TX	342 ..	46003	Aurora	SD
329 ..	48249	Jim Wells	TX	342 ..	46015	Brule	SD
329 ..	48261	Kenedy	TX	342 ..	46017	Buffalo	SD
329 ..	48273	Kleberg	TX	342 ..	46023	Charles Mix	SD

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342 ..	46035	Davison	SD	351 ..	38085	Sioux	ND
342 ..	46043	Douglas	SD	351 ..	38087	Slope	ND
342 ..	46053	Gregory	SD	351 ..	38089	Stark	ND
342 ..	46059	Hand	SD	351 ..	46031	Corson	SD
342 ..	46065	Hughes	SD	352 ..	48177	Gonzales	TX
342 ..	46069	Hyde	SD	352 ..	48255	Karnes	TX
342 ..	46073	Jerauld	SD	352 ..	48493	Wilson	TX
342 ..	46085	Lyman	SD	353 ..	17075	Iroquois	IL
342 ..	46117	Stanley	SD	353 ..	18073	Jasper	IN
342 ..	46119	Sully	SD	353 ..	18111	Newton	IN
342 ..	46123	Tripp	SD	354 ..	55135	Waupaca	WI
343 ..	48043	Brewster	TX	354 ..	55137	Waushara	WI
343 ..	48103	Crane	TX	355 ..	56025	Natrona	WY
343 ..	48105	Crockett	TX	356 ..	53019	Ferry	WA
343 ..	48243	Jeff Davis	TX	356 ..	53043	Lincoln	WA
343 ..	48301	Loving	TX	356 ..	53051	Pend Oreille	WA
343 ..	48371	Pecos	TX	356 ..	53065	Stevens	WA
343 ..	48377	Presidio	TX	357 ..	35039	Rio Arriba	NM
343 ..	48383	Reagan	TX	357 ..	35055	Taos	NM
343 ..	48389	Reeves	TX	358 ..	48031	Blanco	TX
343 ..	48443	Terrell	TX	358 ..	48053	Burnet	TX
343 ..	48461	Upton	TX	358 ..	48299	Llano	TX
343 ..	48475	Ward	TX	359 ..	08075	Logan	CO
343 ..	48495	Winkler	TX	359 ..	08075	Morgan	CO
344 ..	01007	Bibb	AL	359 ..	08095	Phillips	CO
344 ..	01021	Chilton	AL	359 ..	08121	Washington	CO
344 ..	01065	Hale	AL	359 ..	08125	Yuma	CO
345 ..	45039	Fairfield	SC	359 ..	31057	Dundy	NE
345 ..	45071	Newberry	SC	360 ..	02100	Haines Borough	AK
345 ..	45081	Saluda	SC	360 ..	02105	Hoonah-Angoon Census Area	AK
346 ..	37039	Cherokee	NC	360 ..	02110	Juneau Borough	AK
346 ..	37043	Clay	NC	360 ..	02130	Ketchikan Gateway Borough ..	AK
346 ..	37075	Graham	NC	360 ..	02195	Petersburg	AK
346 ..	37113	Macon	NC	360 ..	02198	Prince of Wales-Hyder	AK
347 ..	22037	East Feliciana Parish	LA	360 ..	02220	Sitka Borough	AK
347 ..	22077	Pointe Coupee Parish	LA	360 ..	02230	Skagway Municipality	AK
347 ..	22091	St. Helena Parish	LA	360 ..	02275	Wrangell	AK
347 ..	22125	West Feliciana Parish	LA	360 ..	02282	Yakutat Borough	AK
347 ..	28157	Wilkinson	MS	361 ..	49023	Juab	UT
348 ..	46013	Brown	SD	361 ..	49027	Millard	UT
348 ..	46021	Campbell	SD	361 ..	49039	Sanpete	UT
348 ..	46037	Day	SD	361 ..	49041	Sevier	UT
348 ..	46041	Dewey	SD	362 ..	16003	Adams	ID
348 ..	46045	Edmunds	SD	362 ..	16015	Boise	ID
348 ..	46049	Faulk	SD	362 ..	16045	Gem	ID
348 ..	46091	Marshall	SD	362 ..	16075	Payette	ID
348 ..	46089	McPherson	SD	362 ..	16085	Valley	ID
348 ..	46107	Potter	SD	362 ..	16087	Washington	ID
348 ..	46115	Spink	SD	363 ..	48003	Andrews	TX
348 ..	46129	Walworth	SD	363 ..	48033	Borden	TX
348 ..	46137	Ziebach	SD	363 ..	48115	Dawson	TX
349 ..	37111	McDowell	NC	363 ..	48173	Glasscock	TX
349 ..	37121	Mitchell	NC	363 ..	48227	Howard	TX
349 ..	37199	Yancey	NC	363 ..	48317	Martin	TX
350 ..	05037	Cross	AR	364 ..	30001	Beaverhead	MT
350 ..	05077	Lee	AR	364 ..	30007	Broadwater	MT
350 ..	05107	Phillips	AR	364 ..	30023	Deer Lodge	MT
350 ..	05123	St. Francis	AR	364 ..	30043	Jefferson	MT
351 ..	30109	Wibaux	MT	364 ..	30093	Silver Bow	MT
351 ..	38007	Billings	ND	365 ..	40141	Tillman	OK
351 ..	38011	Bowman	ND	365 ..	48009	Archer	TX
351 ..	38025	Dunn	ND	365 ..	48023	Baylor	TX
351 ..	38029	Emmons	ND	365 ..	48155	Foard	TX
351 ..	38033	Golden Valley	ND	365 ..	48197	Hardeman	TX
351 ..	38037	Grant	ND	365 ..	48429	Stephens	TX
351 ..	38041	Hettinger	ND	365 ..	48447	Throckmorton	TX
351 ..	38043	Kidder	ND	365 ..	48487	Wilbarger	TX
351 ..	38047	Logan	ND	365 ..	48503	Young	TX
351 ..	38051	McIntosh	ND	366 ..	53003	Asotin	WA
351 ..	38055	McLean	ND	366 ..	53023	Garfield	WA
351 ..	38057	Mercer	ND	366 ..	53075	Whitman	WA
351 ..	38065	Oliver	ND	367 ..	29007	Audrain	MO

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367 ..	29137	Monroe	MO	378 ..	13165	Jenkins	GA
367 ..	29175	Randolph	MO	378 ..	13301	Warren	GA
367 ..	29205	Shelby	MO	379 ..	26033	Chippewa	MI
368 ..	20029	Cloud	KS	379 ..	26095	Luce	MI
368 ..	20039	Decatur	KS	379 ..	26097	Mackinac	MI
368 ..	20065	Graham	KS	380 ..	26003	Alger	MI
368 ..	20089	Jewell	KS	380 ..	26041	Delta	MI
368 ..	20105	Lincoln	KS	380 ..	26153	Schoolcraft	MI
368 ..	20123	Mitchell	KS	381 ..	48137	Edwards	TX
368 ..	20137	Norton	KS	381 ..	48271	Kinney	TX
368 ..	20141	Osborne	KS	381 ..	48465	Val Verde	TX
368 ..	20143	Ottawa	KS	382 ..	56013	Fremont	WY
368 ..	20147	Phillips	KS	382 ..	56017	Hot Springs	WY
368 ..	20153	Rawlins	KS	382 ..	56043	Washakie	WY
368 ..	20157	Republic	KS	383 ..	19039	Clarke	IA
368 ..	20163	Rooks	KS	383 ..	19053	Decatur	IA
368 ..	20183	Smith	KS	383 ..	19117	Lucas	IA
369 ..	19003	Adams	IA	383 ..	19159	Ringgold	IA
369 ..	19071	Fremont	IA	383 ..	19175	Union	IA
369 ..	19129	Mills	IA	383 ..	19185	Wayne	IA
369 ..	19137	Montgomery	IA	384 ..	19005	Allamakee	IA
369 ..	19145	Page	IA	384 ..	19043	Clayton	IA
369 ..	19173	Taylor	IA	384 ..	19055	Delaware	IA
369 ..	29005	Atchison	MO	385 ..	29111	Lewis	MO
370 ..	19011	Benton	IA	385 ..	29127	Marion	MO
370 ..	19095	Iowa	IA	385 ..	29173	Ralls	MO
370 ..	19183	Washington	IA	386 ..	45005	Allendale	SC
371 ..	37005	Alleghany	NC	386 ..	45009	Bamberg	SC
371 ..	51640	Galax City	VA	386 ..	45011	Barnwell	SC
371 ..	51077	Grayson	VA	387 ..	38003	Barnes	ND
371 ..	51197	Wythe	VA	387 ..	38021	Dickey	ND
372 ..	08039	Elbert	CO	387 ..	38039	Griggs	ND
372 ..	08063	Kit Carson	CO	387 ..	38045	LaMoure	ND
372 ..	08073	Lincoln	CO	387 ..	38073	Ransom	ND
372 ..	20023	Cheyenne	KS	387 ..	38077	Richland	ND
372 ..	20063	Gove	KS	387 ..	38081	Sargent	ND
372 ..	20109	Logan	KS	388 ..	19009	Audubon	IA
372 ..	20179	Sheridan	KS	388 ..	19029	Cass	IA
372 ..	20181	Sherman	KS	388 ..	19085	Harrison	IA
372 ..	20193	Thomas	KS	388 ..	19165	Shelby	IA
372 ..	20199	Wallace	KS	389 ..	31061	Franklin	NE
373 ..	53013	Columbia	WA	389 ..	31063	Frontier	NE
373 ..	53071	Walla Walla	WA	389 ..	31065	Furnas	NE
374 ..	08115	Sedgwick	CO	389 ..	31073	Gosper	NE
374 ..	31005	Arthur	NE	389 ..	31083	Harlan	NE
374 ..	31009	Blaine	NE	389 ..	31085	Hayes	NE
374 ..	31029	Chase	NE	389 ..	31087	Hitchcock	NE
374 ..	31049	Deuel	NE	389 ..	31099	Kearney	NE
374 ..	31069	Garden	NE	389 ..	31137	Phelps	NE
374 ..	31091	Hooker	NE	389 ..	31145	Red Willow	NE
374 ..	31101	Keith	NE	390 ..	48151	Fisher	TX
374 ..	31111	Lincoln	NE	390 ..	48335	Mitchell	TX
374 ..	31113	Logan	NE	390 ..	48353	Nolan	TX
374 ..	31117	McPherson	NE	390 ..	48415	Scurry	TX
374 ..	31135	Perkins	NE	391 ..	41025	Harney	OR
374 ..	31171	Thomas	NE	391 ..	41045	Malheur	OR
375 ..	35017	Grant	NM	392 ..	29075	Gentry	MO
375 ..	35023	Hidalgo	NM	392 ..	29087	Holt	MO
375 ..	35029	Luna	NM	392 ..	29147	Nodaway	MO
376 ..	48111	Dallam	TX	392 ..	29227	Worth	MO
376 ..	48117	Deaf Smith	TX	393 ..	29041	Chariton	MO
376 ..	48205	Hartley	TX	393 ..	29115	Linn	MO
376 ..	48341	Moore	TX	393 ..	29121	Macon	MO
376 ..	48359	Oldham	TX	394 ..	46007	Bennett	SD
376 ..	48421	Sherman	TX	394 ..	46055	Haakon	SD
377 ..	01023	Choctaw	AL	394 ..	46071	Jackson	SD
377 ..	01063	Greene	AL	394 ..	46075	Jones	SD
377 ..	01091	Marengo	AL	394 ..	46095	Mellette	SD
377 ..	01119	Sumter	AL	394 ..	46113	Shannon	SD
378 ..	13033	Burke	GA	394 ..	46121	Todd	SD
378 ..	13125	Gascock	GA	395 ..	38031	Foster	ND
378 ..	13163	Jefferson	GA	395 ..	38069	Pierce	ND

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395 ..	38083	Sheridan	ND	412 ..	72039	Ciales	PR
395 ..	38093	Stutsman	ND	412 ..	72041	Cidra	PR
395 ..	38103	Wells	ND	412 ..	72043	Coamo	PR
396 ..	19001	Adair	IA	412 ..	72045	Comerio	PR
396 ..	19077	Guthrie	IA	412 ..	72047	Corozal	PR
396 ..	19121	Madison	IA	412 ..	72049	Culebra	PR
397 ..	01075	Lamar	AL	412 ..	72051	Dorado	PR
397 ..	01107	Pickens	AL	412 ..	72053	Fajardo	PR
398 ..	31043	Dakota	NE	412 ..	72054	Florida	PR
398 ..	31051	Dixon	NE	412 ..	72055	Guanica	PR
398 ..	31173	Thurston	NE	412 ..	72057	Guayama	PR
399 ..	48281	Lampasas	TX	412 ..	72059	Guayanilla	PR
399 ..	48411	San Saba	TX	412 ..	72061	Guaynabo	PR
400 ..	48017	Bailey	TX	412 ..	72063	Gurabo	PR
400 ..	48069	Castro	TX	412 ..	72065	Hatillo	PR
400 ..	48369	Parmer	TX	412 ..	72067	Hormigueros	PR
401 ..	48045	Briscoe	TX	412 ..	72069	Humacao	PR
401 ..	48107	Crosby	TX	412 ..	72071	Isabela	PR
401 ..	48125	Dickens	TX	412 ..	72073	Jayuya	PR
401 ..	48153	Floyd	TX	412 ..	72075	Juana Diaz	PR
401 ..	48169	Garza	TX	412 ..	72077	Juncos	PR
401 ..	48263	Kent	TX	412 ..	72079	Lajas	PR
401 ..	48345	Motley	TX	412 ..	72081	Lares	PR
402 ..	48095	Concho	TX	412 ..	72083	Las Marias	PR
402 ..	48267	Kimble	TX	412 ..	72085	Las Piedras	PR
402 ..	48319	Mason	TX	412 ..	72087	Loiza	PR
402 ..	48307	McCulloch	TX	412 ..	72089	Luquillo	PR
402 ..	48327	Menard	TX	412 ..	72091	Manati	PR
403 ..	30027	Fergus	MT	412 ..	72093	Maricao	PR
403 ..	30045	Judith Basin	MT	412 ..	72095	Maunabo	PR
403 ..	30059	Meagher	MT	412 ..	72097	Mayaguez	PR
403 ..	30071	Phillips	MT	412 ..	72099	Moca	PR
403 ..	30107	Wheatland	MT	412 ..	72101	Morovis	PR
404 ..	49025	Kane	UT	412 ..	72103	Naguabo	PR
404 ..	49037	San Juan	UT	412 ..	72105	Naranjito	PR
405 ..	56039	Teton	WY	412 ..	72107	Orocovis	PR
406 ..	19105	Jones	IA	412 ..	72109	Patillas	PR
407 ..	16023	Butte	ID	412 ..	72111	Penuelas	PR
407 ..	16037	Custer	ID	412 ..	72113	Ponce	PR
407 ..	16059	Lemhi	ID	412 ..	72115	Quebradillas	PR
408 ..	48081	Coke	TX	412 ..	72117	Rincon	PR
408 ..	48399	Runnels	TX	412 ..	72119	Rio Grande	PR
408 ..	48431	Sterling	TX	412 ..	72121	Sabana Grande	PR
409 ..	48207	Haskell	TX	412 ..	72123	Salinas	PR
409 ..	48269	King	TX	412 ..	72125	San German	PR
409 ..	48275	Knox	TX	412 ..	72127	San Juan	PR
409 ..	48417	Shackelford	TX	412 ..	72129	San Lorenzo	PR
409 ..	48433	Stonewall	TX	412 ..	72131	San Sebastian	PR
410 ..	31031	Cherry	NE	412 ..	72133	Santa Isabel	PR
410 ..	31075	Grant	NE	412 ..	72135	Toa Alta	PR
410 ..	31161	Sheridan	NE	412 ..	72137	Toa Baja	PR
411 ..	48109	Culberson	TX	412 ..	72139	Trujillo Alto	PR
411 ..	48229	Hudspeth	TX	412 ..	72141	Utuaado	PR
412 ..	72001	Adjuntas	PR	412 ..	72143	Vega Alta	PR
412 ..	72003	Aguada	PR	412 ..	72145	Vega Baja	PR
412 ..	72005	Aguadilla	PR	412 ..	72147	Vieques	PR
412 ..	72007	Aguas Buenas	PR	412 ..	72149	Villalba	PR
412 ..	72009	Aibonito	PR	412 ..	72151	Yabucoa	PR
412 ..	72011	Anasco	PR	412 ..	72153	Yauco	PR
412 ..	72013	Arecibo	PR	413 ..	66010	Guam	GU.
412 ..	72015	Arroyo	PR	413 ..	69085	Northern Islands	MP
412 ..	72017	Barceloneta	PR	413 ..	69100	Rota	MP
412 ..	72019	Barranquitas	PR	413 ..	69110	Saipan	MP
412 ..	72021	Bayamon	PR	413 ..	69120	Tinian	MP
412 ..	72023	Cabo Rojo	PR	414 ..	78010	St. Croix	VI
412 ..	72025	Caguas	PR	414 ..	78020	St. John	VI
412 ..	72027	Camuy	PR	414 ..	78030	St. Thomas	VI
412 ..	72029	Canovanas	PR	415 ..	60010	Eastern District	AS
412 ..	72031	Carolina	PR	415 ..	60020	Manu'a District	AS
412 ..	72033	Catano	PR	415 ..	60030	Rose Island	AS
412 ..	72035	Cayey	PR	415 ..	60040	Swains Island	AS
412 ..	72037	Ceiba	PR	415 ..	60050	Western District	AS

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PEA No.	Federal Information Processing System No.	County name	State
416 ..	99023	Gulf of Mexico Central and East.	GM
416 ..	99001	Gulf of Mexico West	GM

[85 FR 22865, Apr. 23, 2020]

Subpart B—Applications and Licenses

§ 27.10 Regulatory status.

The following rules apply concerning the regulatory status in the frequency bands specified in § 27.5.

(a) *Single authorization.* Authorization will be granted to provide any or a combination of the following services in a single license: common carrier, non-common carrier, private internal communications, and broadcast services. A licensee may render any kind of communications service consistent with the regulatory status in its license and with the Commission’s rules applicable to that service. An applicant or licensee may submit a petition at any time requesting clarification of the regulatory status for which authorization is required to provide a specific communications service.

(b) *Designation of regulatory status in initial application.* An applicant shall specify in its initial application if it is requesting authorization to provide common carrier, non-common carrier, private internal communications, or broadcast services, or a combination thereof.

(c) *Amendment of pending applications.* The following rules apply to amendments of a pending application.

(1) Any pending application may be amended to:

(i) Change the carrier regulatory status requested, or

(ii) Add to the pending request in order to obtain common carrier, non-common carrier, private internal communications, or broadcast services status, or a combination thereof, in a single license.

(2) Amendments to change, or add to, the carrier regulatory status in a pending application are minor amendments filed under § 1.927 of this chapter.

(d) *Modification of license.* The following rules apply to amendments of a license.

(1) A licensee may modify a license to:

(i) Change the regulatory status authorized, or

(ii) Add to the status authorized in order to obtain a combination of services of different regulatory status in a single license.

(2) Applications to change, or add to, the carrier status in a license are modifications not requiring prior Commission authorization. The licensee must notify the Commission within 30 days of the change. If the change results in the discontinuance, reduction, or impairment of an existing service, the licensee is subject to the provisions of § 27.66.

[65 FR 3146, Jan. 20, 2000, as amended at 65 FR 17602, Apr. 4, 2000; 67 FR 5510, Feb. 6, 2002; 67 FR 41854, June 20, 2002; 68 FR 66286, Nov. 25, 2003; 72 FR 27709, May 16, 2007]

§ 27.11 Initial authorization.

(a) An applicant must file a single application for an initial authorization for all markets won and frequency blocks desired. Initial authorizations shall be granted in accordance with § 27.5. Applications for individual sites are not required and will not be accepted, except where required for environmental assessments, in accordance with §§ 1.1301 through 1.1319 of this chapter.

(b) *2305–2320 MHz and 2345–2360 MHz bands.* Initial authorizations for the 2305–2320 MHz and 2345–2360 MHz bands shall be for 10 megahertz of spectrum in accordance with § 27.5(a).

(1) Authorizations for Blocks A and B will be based on Major Economic Areas (MEAs), as specified in § 27.6(a)(1).

(2) Authorizations for Blocks C and D will be based on Regional Economic Area Groupings (REAGs), as specified in § 27.6(a)(2).

(c) *746–758 MHz, 775–788 MHz, and 805–806 MHz bands.* Initial authorizations for the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands shall be for paired channels of 1, 5, 6, or 11 megahertz of spectrum in accordance with § 27.5(b).

(1) Authorizations for Block A, consisting of two paired channels of 1 megahertz each, will be based on those

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geographic areas specified in § 27.6(b)(1).

(2) Authorizations for Block B, consisting of two paired channels of 1 megahertz each, will be based on those geographic areas specified in § 27.6(b)(1).

(3) Authorizations for Block C, consisting of two paired channels of 11 megahertz each, will be based on those geographic areas specified in § 27.6(b)(2). In the event that no licenses granting authorizations for Block C, consisting of two paired channels of 11 megahertz each, are assigned based on the results of the first auction in which such licenses are offered because the auction results do not satisfy the applicable reserve price, then the authorizations for the spectrum in the 746–757 MHz and 776–787 MHz bands will instead be as follows:

(i) Authorizations for Block C1, consisting of two paired channels of 6 megahertz each in the 746–752 MHz and 776–782 MHz bands, will be based on those geographic areas specified in § 27.6(b)(2)(i).

(ii) Authorizations for Block C2, consisting of two paired channels of 5 megahertz each in the 752–757 MHz and 782–787 MHz bands, will be based on those geographic areas specified in § 27.6(b)(2)(ii).

(d) *698–746 MHz band.* Initial authorizations for the 698–746 MHz band shall be for 6 or 12 megahertz of spectrum in accordance with § 27.5(c).

(1) Authorizations for Block A, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(1).

(2) Authorizations for Block B, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(2).

(3) Authorizations for Block C, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(2).

(4) Authorizations for Block D, consisting of an unpaired channel block of 6 megahertz, will be based on those geographic areas specified in § 27.6(c)(3).

(5) Authorizations for Block E, consisting of an unpaired channel block of 6 megahertz, will be based on those geographic areas specified in § 27.6(c)(1).

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(e) *1390–1392 MHz band.* Initial authorizations for the 1390–1392 MHz band shall be for 2 megahertz of spectrum in accordance with § 27.5(d). Authorizations will be based on Major Economic Areas (MEAs), as specified in § 27.6(d).

(f) *The paired 1392–1395 MHz and 1432–1435 MHz bands.* Initial authorizations for the paired 1392–1395 MHz and 1432–1435 MHz bands shall be for 3 megahertz of paired spectrum in accordance with § 27.5(e). Authorization for Blocks A and B will be based on Economic Areas Groupings (EAGs), as specified in § 27.6(e).

(g) *1670–1675 MHz band.* Initial authorizations for the 1670–1675 MHz band shall be for 5 megahertz of spectrum in accordance with § 27.5(f). Authorizations will be on a nationwide basis.

(h) [Reserved]

(i) *1710–1755 MHz and 2110–2155 MHz bands.* Initial authorizations for the 1710–1755 MHz and 2110–2155 MHz bands shall be for 5 or 10 megahertz of spectrum in each band in accordance with § 27.5(h) of this part.

(1) Authorizations for Block A, consisting of two paired channels of 10 megahertz each, will be based on those geographic areas specified in § 27.6(h)(1).

(2) Authorizations for Block B, consisting of two paired channels of 10 megahertz each, will be based on those geographic areas specified in § 27.6(h)(2).

(3) Authorizations for Block C, consisting of two paired channels of 5 megahertz each, will be based on those geographic areas specified in § 27.6(h)(2).

(4) Authorizations for Blocks D, consisting of two paired channels of 5 megahertz each, will be based on those geographic areas specified in § 27.6(h)(3).

(5) Authorizations for Blocks E, consisting of two paired channels of 5 megahertz each, will be based on those geographic areas specified in § 27.6(h)(3).

(6) Authorizations for Block F, consisting of two paired channels of 10 megahertz each, will be based on those geographic areas specified in § 27.6(h)(3).

(j) *1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands.* (1) Initial authorizations for the 1695–1710 MHz band shall be based on the frequency blocks specified in § 27.5(h)(3) and the corresponding service area specified in § 27.6(k)(2).

(2) Initial authorizations for the 1755–1780 MHz and 2155–2180 MHz shall be based on the paired frequency blocks specified in § 27.5(h)(1) and (2) and the corresponding service areas specified in § 27.6(k)(1) and (2).

(k) *600 MHz band.* Initial authorizations for the 600 MHz band will be based on Partial Economic Areas (PEAs), as specified in § 27.6(1), and, shall be paired channels that each consist of a 5 megahertz channel block in the 600 MHz downlink band (617–652 MHz), paired with a 5 megahertz channel block in the 600 MHz uplink band (663–698 MHz), based on the frequency blocks specified in § 27.5(1).

(l) *3700–3980 MHz band.* Authorizations for licenses in the 3.7 GHz Service will be based on Partial Economic Areas (PEAs), as specified in § 27.6(m), and the frequency sub-blocks specified in § 27.5(m).

(m) *3450–3550 MHz band.* Authorizations for licenses in the 3.45 GHz Service will be based on Partial Economic Areas (PEAs), as specified in § 27.6(n), and the frequency blocks specified in § 27.5(o).

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 68954, Dec. 14, 1998; 65 FR 3146, Jan. 20, 2000; 67 FR 5511, Feb. 6, 2002; 67 FR 41854, June 20, 2002; 69 FR 5715, Feb. 6, 2004; 69 FR 39867, July 1, 2004; 69 FR 77950, Dec. 29, 2004; 70 FR 58065, Oct. 5, 2005; 72 FR 48845, Aug. 24, 2007; 79 FR 597, Jan. 6, 2014; 79 FR 32410, June 4, 2014; 79 FR 48536, Aug. 15, 2014; 82 FR 47160, Oct. 11, 2017; 85 FR 22881, Apr. 23, 2020; 86 FR 17952, Apr. 7, 2021]

§ 27.12 Eligibility.

(a) Except as provided in paragraph (b) of this section and in §§ 27.604, 27.1201, 27.1202, and 27.1503, any entity other than those precluded by section 310 of the Communications Act of 1934, as amended, 47 U.S.C. 310, is eligible to hold a license under this part.

(b) A person described in 47 U.S.C. 1404(c) is ineligible to hold a license that is required by 47 U.S.C. Chapter 13 (Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96, 125

Stat. 156 (2012)) to be assigned by a system of competitive bidding under § 309(j) of the Communications Act, 47 U.S.C. 309(j).

[78 FR 50254, Aug. 16, 2013, as amended at 85 FR 43134, July 16, 2020]

§ 27.13 License period.

(a) *2305–2320 MHz and 2345–2360 MHz bands.* Initial WCS authorizations for the 2305–2320 MHz and 2345–2360 MHz bands will have a term not to exceed ten years from the date of original issuance or renewal.

(b) *698–763 MHz, 776–793, 775–776, and 805–806 MHz bands.* Initial authorizations for the 698–758 MHz and 776–788 MHz bands will extend for a term not to exceed ten years from June 13, 2009, except that initial authorizations for a part 27 licensee that provides broadcast services, whether exclusively or in combination with other services, will not exceed eight years. Initial authorizations for the 775–776 MHz and 805–806 MHz bands shall not exceed April 27, 2015. Licensees that initiate the provision of a broadcast service, whether exclusively or in combination with other services, may not provide this service for more than eight years or beyond the end of the license term if no broadcast service had been provided, whichever period is shorter in length.

(c) *1390–1392 MHz band.* Initial authorizations for the 1390–1392 MHz band will have a term not to exceed ten years from the date of initial issuance or renewal.

(d) *The paired 1392–1395 and 1432–1435 MHz bands.* Initial WCS authorizations for the paired 1392–1395 MHz and 1432–1435 MHz bands will have a term not to exceed ten years from the date of initial issuance or renewal.

(e) *1670–1675 MHz band.* Initial authorizations for the 1670–1675 MHz band will have a term not to exceed ten years from the date of initial issuance or renewal.

(f) [Reserved]

(g) *1710–1755 MHz and 2110–2155 MHz bands.* Authorizations for the 1710–1755 MHz and 2110–2155 MHz bands will have a term not to exceed ten years from the date of initial issuance or renewal, except that authorizations issued on or before December 31, 2009, shall have a term of fifteen years.

(h) *BRS and EBS*. BRS and EBS authorizations shall have a term not to exceed ten years from the date of original issuance or renewal. Unless otherwise specified by the Commission, incumbent BRS authorizations shall expire on May 1 in the year of expiration.

(i) *2000–2020 MHz and 2180–2200 MHz bands*. Authorizations for the 2000–2020 MHz and 2180–2200 MHz bands will have a term not to exceed ten years from the date of issuance or renewal.

(j) *1915–1920 MHz and 1995–2000 MHz bands*. Authorizations for 1915–1920 MHz and 1995–2000 MHz bands will have a term not to exceed ten years from the date of issuance or renewal.

(k) *1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands*. Authorizations for the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands will have a term not to exceed twelve (12) years from the date of issuance and ten (10) years from the date of any subsequent license renewal.

(l) *600 MHz band*. Authorizations for the 600 MHz band will have an initial term not to exceed twelve years from the date of issuance and ten years from the date of any subsequent license renewal.

(m) *3700–3980 MHz band*. Authorizations for licenses in the 3.7 GHz Service in the 3700–3980 MHz band will have a term not to exceed 15 years from the date of issuance or renewal.

(n) *900 MHz broadband*. Authorizations for broadband licenses in the 897.5–900.5 MHz and 936.5–939.5 MHz bands will have a term not to exceed 15 years from the date of initial issuance and ten (10) years from the date of any subsequent renewal.

(o) *3450–3550 MHz Band*. Authorizations for licenses in the 3.45 GHz Service in the 3450–3550 MHz band will have a term not to exceed fifteen (15) years from the date of issuance.

[65 FR 3146, Jan. 20, 2000]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.13, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 27.14 Construction requirements.

(a) AWS and WCS licensees, with the exception of WCS licensees holding authorizations for the 600 MHz band,

Block A in the 698–704 MHz and 728–734 MHz bands, Block B in the 704–710 MHz and 734–740 MHz bands, Block E in the 722–728 MHz band, Block C, C1, or C2 in the 746–757 MHz and 776–787 MHz bands, Block A in the 2305–2310 MHz and 2350–2355 MHz bands, Block B in the 2310–2315 MHz and 2355–2360 MHz bands, Block C in the 2315–2320 MHz band, Block D in the 2345–2350 MHz band, in the 3450–3550 MHz band, and in the 3700–3980 MHz band, and with the exception of licensees holding AWS authorizations in the 1915–1920 MHz and 1995–2000 MHz bands, the 2000–2020 MHz and 2180–2200 MHz bands, or 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands, must, as a performance requirement, make a showing of “substantial service” in their license area within the prescribed license term set forth in § 27.13. “Substantial service” is defined as service which is sound, favorable and substantially above a level of mediocre service which just might minimally warrant renewal. Failure by any licensee to meet this requirement will result in forfeiture of the license and the licensee will be ineligible to regain it.

(b)–(f) [Reserved]

(g) WCS licensees holding EA authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, cellular market authorizations for Block B in the 704–710 MHz and 734–740 MHz bands, or EA authorizations for Block E in the 722–728 MHz band, if the results of the first auction in which licenses for such authorizations are offered satisfy the reserve price for the applicable block, shall provide signal coverage and offer service over at least 35 percent of the geographic area of each of their license authorizations no later than June 13, 2013 (or within four years of initial license grant if the initial authorization in a market is granted after June 13, 2009), and shall provide such service over at least 70 percent of the geographic area of each of these authorizations by the end of the license term. In applying these geographic benchmarks, licensees are not required to include land owned or administered by government as a part of the relevant service area. Licensees may count covered government land for purposes of meeting

their geographic construction benchmark, but are required to add the covered government land to the total geographic area used for measurement purposes. Licensees are required to include those populated lands held by tribal governments and those held by the Federal Government in trust or for the benefit of a recognized tribe.

(1) If an EA or CMA licensee holding an authorization in these particular blocks fails to provide signal coverage and offer service over at least 35 percent of the geographic area of its license authorization by no later than June 13, 2013 (or within four years of initial license grant, if the initial authorization in a market is granted after June 13, 2009), the term of that license authorization will be reduced by two years and such licensee may be subject to enforcement action, including forfeitures. In addition, an EA or CMA licensee that provides signal coverage and offers service at a level that is below this interim benchmark may lose authority to operate in part of the remaining unserved areas of the license.

(2) If any such EA or CMA licensee fails to provide signal coverage and offer service to at least 70 percent of the geographic area of its license authorization by the end of the license term, that licensee's authorization will terminate automatically without Commission action for those geographic portions of its license in which the licensee is not providing service, and those unserved areas will become available for reassignment by the Commission. Such licensee may also be subject to enforcement action, including forfeitures. In addition, an EA or CMA licensee that provides signal coverage and offers service at a level that is below this end-of-term benchmark may be subject to license termination. In the event that a licensee's authority to operate in a license area terminates automatically without Commission action, such areas will become available for reassignment pursuant to the procedures in paragraph (j) of this section.

(3) For licenses under paragraph (g) of this section, the geographic service area to be made available for reassignment must include a contiguous area of at least 130 square kilometers (50

square miles), and areas smaller than a contiguous area of at least 130 square kilometers (50 square miles) will not be deemed unserved.

(h) WCS licensees holding REAG authorizations for Block C in the 746–757 MHz and 776–787 MHz bands or REAG authorizations for Block C2 in the 752–757 MHz and 782–787 MHz bands shall provide signal coverage and offer service over at least 40 percent of the population in each EA comprising the REAG license area no later than June 13, 2013 (or within four years of initial license grant, if the initial authorization in a market is granted after June 13, 2009), and shall provide such service over at least 75 percent of the population of each of these EAs by the end of the license term. For purposes of compliance with this requirement, licensees should determine population based on the most recently available U.S. Census Data.

(1) If a licensee holding a Block C authorization fails to provide signal coverage and offer service over at least 40 percent of the population in each EA comprising the REAG license area by no later than June 13, 2013 (or within four years of initial license grant if the initial authorization in a market is granted after June 13, 2009), the term of the license authorization will be reduced by two years and such licensee may be subject to enforcement action, including forfeitures. In addition, a licensee that provides signal coverage and offers service at a level that is below this interim benchmark may lose authority to operate in part of the remaining unserved areas of the license.

(2) If a licensee holding a Block C authorization fails to provide signal coverage and offer service over at least 75 percent of the population in any EA comprising the REAG license area by the end of the license term, for each such EA that licensee's authorization will terminate automatically without Commission action for those geographic portions of its license in which the licensee is not providing service. Such licensee may also be subject to

enforcement action, including forfeitures. In the event that a licensee's authority to operate in a license area terminates automatically without Commission action, such areas will become available for reassignment pursuant to the procedures in paragraph (j) of this section. In addition, a REAG licensee that provides signal coverage and offers service at a level that is below this end-of-term benchmark within any EA may be subject to license termination within that EA.

(3) For licenses under paragraph (h), the geographic service area to be made available for reassignment must include a contiguous area of at least 130 square kilometers (50 square miles), and areas smaller than a contiguous area of at least 130 square kilometers (50 square miles) will not be deemed unserved.

(i) WCS licensees holding EA authorizations for Block A in the 698–704 MHz and 728–734 MHz bands, cellular market authorizations for Block B in the 704–710 MHz and 734–740 MHz bands, or EA authorizations for Block E in the 722–728 MHz band, if the results of the first auction in which licenses for such authorizations in Blocks A, B, and E are offered do not satisfy the reserve price for the applicable block, as well as EA authorizations for Block C1 in the 746–752 MHz and 776–782 MHz bands, are subject to the following:

(1) If a licensee holding a cellular market area or EA authorization subject to this paragraph (i) fails to provide signal coverage and offer service over at least 40 percent of the population in its license area by no later than June 13, 2013 (or within four years of initial license grant, if the initial authorization in a market is granted after June 13, 2009), the term of that license authorization will be reduced by two years and such licensee may be subject to enforcement action, including forfeitures. In addition, such licensee that provides signal coverage and offers service at a level that is below this interim benchmark may lose authority to operate in part of the remaining unserved areas of the license. For purposes of compliance with this requirement, licensees should determine population based on the most recently available U.S. Census Data.

(2) If a licensee holding a cellular market area or EA authorization subject to this paragraph (i) fails to provide signal coverage and offer service over at least 75 percent of the population in its license area by the end of the license term, that licensee's authorization will terminate automatically without Commission action for those geographic portions of its license in which the licensee is not providing service, and those unserved areas will become available for reassignment by the Commission. Such licensee may also be subject to enforcement action, including forfeitures. In the event that a licensee's authority to operate in a license area terminates automatically without Commission action, such areas will become available for reassignment pursuant to the procedures in paragraph (j) of this section. In addition, such a licensee that provides signal coverage and offers service at a level that is below this end-of-term benchmark may be subject to license termination. For purposes of compliance with this requirement, licensees should determine population based on the most recently available U.S. Census Data.

(3) For licenses under paragraph (i), the geographic service area to be made available for reassignment must include a contiguous area of at least 130 square kilometers (50 square miles), and areas smaller than a contiguous area of at least 130 square kilometers (50 square miles) will not be deemed unserved.

(j) In the event that a licensee's authority to operate in a license area terminates automatically under paragraphs (g), (h), or (i) of this section, such areas will become available for reassignment pursuant to the following procedures:

(1) The Wireless Telecommunications Bureau is delegated authority to announce by public notice that these license areas will be made available and establish a 30-day window during which third parties may file license applications to serve these areas. During this 30-day period, licensees that had their authority to operate terminate automatically for unserved areas may not file applications to provide service to these areas. Applications filed by third

parties that propose areas overlapping with other applications will be deemed mutually exclusive, and will be resolved through an auction. The Wireless Telecommunications Bureau, by public notice, may specify a limited period before the filing of short-form applications (FCC Form 175) during which applicants may enter into a settlement to resolve their mutual exclusivity, subject to the provisions of §1.935 of this chapter.

(2) Following this 30-day period, the original licensee and third parties can file license applications for remaining unserved areas where licenses have not been issued or for which there are no pending applications. If the original licensee or a third party files an application, that application will be placed on public notice for 30 days. If no mutually exclusive application is filed, the application will be granted, provided that a grant is found to be in the public interest. If a mutually exclusive application is filed, it will be resolved through an auction. The Wireless Telecommunications Bureau, by public notice, may specify a limited period before the filing of short-form applications (FCC Form 175) during which applicants may enter into a settlement to resolve their mutual exclusivity, subject to the provisions of §1.935 of this chapter.

(3) The licensee will have one year from the date the new license is issued to complete its construction and provide signal coverage and offer service over 100 percent of the geographic area of the new license area. If the licensee fails to meet this construction requirement, its license will automatically terminate without Commission action and it will not be eligible to apply to provide service to this area at any future date.

(k) Licensees holding WCS or AWS authorizations in the spectrum blocks enumerated in paragraphs (g), (h), (i), (q), (r), (s), (t), (v), and (w) of this section, including any licensee that obtained its license pursuant to the procedures set forth in paragraph (j) of this section, shall demonstrate compliance with performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the applicable bench-

mark, in accordance with the provisions set forth in §1.946(d) of this chapter. The licensee must certify whether it has met the applicable performance requirements. The licensee must file a description and certification of the areas for which it is providing service. The construction notifications must include electronic coverage maps, supporting technical documentation and any other information as the Wireless Telecommunications Bureau may prescribe by public notice.

(l) WCS licensees holding authorizations in the spectrum blocks enumerated in paragraphs (g), (h), or (i) of this section, excluding any licensee that obtained its license pursuant to the procedures set forth in subsection (j) of this section, shall file reports with the Commission that provide the Commission, at a minimum, with information concerning the status of their efforts to meet the performance requirements applicable to their authorizations in such spectrum blocks and the manner in which that spectrum is being utilized. The information to be reported will include the date the license term commenced, a description of the steps the licensee has taken toward meeting its construction obligations in a timely manner, including the technology or technologies and service(s) being provided, and the areas within the license area in which those services are available. Each of these licensees shall file its first report with the Commission no later than June 13, 2011 and no sooner than 30 days prior to this date. Each licensee that meets its interim benchmarks shall file a second report with the Commission no later than June 13, 2016 and no sooner than 30 days prior to this date. Each licensee that does not meet its interim benchmark shall file this second report no later than on June 13, 2015 and no sooner than 30 days prior to this date.

(m)–(n) [Reserved]

(o) With respect to initial BRS licenses issued on or after November 6, 2009, the licensee must make a showing of substantial service within four years from the date of issue of the license. With respect to EBS licenses issued after October 25, 2019, the licensee must comply with paragraph (u) of this section. “Substantial service” is defined

as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal. Substantial service for BRS and EBS licensees is satisfied if a licensee meets the requirements of paragraph (o)(1), (2), or (3) of this section. If a licensee has not met the requirements of paragraph (o)(1), (2), or (3) of this section, then demonstration of substantial service shall proceed on a case-by-case basis. Except as provided in paragraphs (o)(4) and (5) of this section, all substantial service determinations will be made on a license-by-license basis. Failure by any licensee to demonstrate substantial service will result in forfeiture of the license and the licensee will be ineligible to regain it.

(1) A BRS or EBS licensee has provided “substantial service” by:

(i) Constructing six permanent links per one million people for licensees providing fixed point-to-point services;

(ii) Providing coverage of at least 30 percent of the population of the licensed area for licensees providing mobile services or fixed point-to-multipoint services;

(iii) Providing service to “rural areas” (a county (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data) and areas with limited access to telecommunications services:

(A) For mobile service, where coverage is provided to at least 75% of the geographic area of at least 30% of the rural areas within its service area; or

(B) for fixed service, where the BRS or EBS licensee has constructed at least one end of a permanent link in at least 30% of the rural areas within its licensed area.

(iv) Providing specialized or technologically sophisticated service that does not require a high level of coverage to benefit consumers; or

(v) Providing service to niche markets or areas outside the areas served by other licensees.

(2) An EBS license initially issued prior to October 25, 2019 has provided “substantial service” when:

(i) The EBS licensee is using its spectrum (or spectrum to which the EBS licensee’s educational services are shift-

ed) to provide educational services within the EBS licensee’s GSA;

(ii) the EBS licensee’s license is actually being used to serve the educational mission of one or more accredited public or private schools, colleges or universities providing formal educational and cultural development to enrolled students; or

(iii) The level of service provided by the EBS licensee meets or exceeds the minimum usage requirements specified in § 27.1214 contained in the edition of 47 CFR parts 20 through 39, revised as of October 1, 2017.

(3) An EBS or BRS licensee may be deemed to provide substantial service through a leasing arrangement if the lessee is providing substantial service under paragraph (o)(1) of this section.

(4) If the GSA of a licensee is less than 1924 square miles in size, and there is an overlapping co-channel station licensed or leased by the licensee or its affiliate, substantial service may be demonstrated by meeting the requirements of paragraph (o)(1) or (o)(2) of this section with respect to the combined GSAs of both stations.

(5) If the GSA of a BTA authorization holder, is less than one-half of the area within the BTA for every BRS channel, substantial service may be demonstrated for the licenses in question by meeting the requirements of paragraph (o)(1) or (o)(2) of this section with respect to the combined GSAs of the BTA authorization holder, together with any incumbent authorizations licensed or leased by the licensee or its affiliates.

(p) This section enumerates performance requirements for licensees holding authorizations for Block A in the 2305–2310 MHz and 2350–2355 MHz bands, Block B in the 2310–2315 MHz and 2355–2360 MHz bands, Block C in the 2315–2320 MHz band, and Block D in the 2345–2350 MHz band.

(1) For mobile and point-to-multipoint systems in Blocks A and B, and point-to-multipoint systems in Blocks C and D, a licensee must provide reliable signal coverage and offer service to at least 40 percent of the license area’s population by March 13, 2017, and to at least 75 percent of the license area’s population by September 13, 2019. If, when filing the construction

notification required under § 1.946(d) of this chapter, a WCS licensee demonstrates that 25 percent or more of the license area's population for Block A, B or D is within a coordination zone as defined by § 27.73(a) of the rules, the foregoing population benchmarks are reduced to 25 and 50 percent, respectively. The percentage of a license area's population within a coordination zone equals the sum of the Census Block Centroid Populations within the area, divided by the license area's total population.

(2) For point-to-point fixed systems, except those deployed in the Gulf of Mexico license area, a licensee must construct and operate a minimum of 15 point-to-point links per million persons (one link per 67,000 persons) in a license area by March 13, 2017, and 30 point-to-point links per million persons (one link per 33,500 persons) in a licensed area by September 13, 2019. The exact link requirement is calculated by dividing a license area's total population by 67,000 and 33,500 for the respective milestones, and then rounding upwards to the next whole number. For a link to be counted towards these benchmarks, both of its endpoints must be located in the license area. If only one endpoint of a link is located in a license area, it can be counted as a one-half link towards the benchmarks.

(3) For point-to-point fixed systems deployed on any spectrum block in the Gulf of Mexico license area, a licensee must construct and operate a minimum of 15 point-to-point links by March 13, 2017, and a minimum of 15 point-to-point links by September 13, 2019.

(4) Under paragraph (p)(2) and (p)(3) of this section, each fixed link must provide a minimum bit rate, in bits per second, equal to or greater than the bandwidth specified by the emission designator in Hertz (*e.g.*, equipment transmitting at a 5 Mb/s rate must not require a bandwidth of greater than 5 MHz).

(5) If an initial authorization for a license area is granted after March 13, 2013, then the applicable benchmarks in paragraphs (p)(1), (2) and (3) of this section must be met within 48 and 78

months, respectively, of the initial authorization grant date.

(6) Licensees must use the most recently available U.S. Census Data at the time of measurement to meet these performance requirements.

(7) Licensees must certify compliance with the applicable performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the relevant performance milestone, pursuant to § 1.946(d) of this chapter. Each construction notification must include electronic coverage maps, supporting technical documentation, and any other information as the Wireless Telecommunications Bureau may prescribe by public notice. Electronic coverage maps must accurately depict the boundaries of each license area (Regional Economic Area Grouping, REAG, or Major Economic Area, MEA) in the licensee's service territory. Further, REAG maps must depict MEA boundaries and MEA maps must depict Economic Area boundaries. If a licensee does not provide reliable signal coverage to an entire license area, its map must accurately depict the boundaries of the area or areas within each license area not being served. Each licensee also must file supporting documentation certifying the type of service it is providing for each REAG or MEA within its service territory and the type of technology used to provide such service. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal strength necessary to provide reliable service with the licensee's technology.

(8) If a licensee fails to meet any applicable performance requirement, its authorization will terminate automatically without further Commission action as of the applicable performance milestone and the licensee will be ineligible to regain it.

(q) The following provisions apply to any licensee holding an AWS authorization in the 2000-2020 MHz and 2180-2200 MHz bands (an "AWS-4 licensee"):

(1) An AWS-4 licensee shall provide terrestrial signal coverage and offer terrestrial service within four (4) years from the date of the license to at least

forty (40) percent of the total population in the aggregate service areas that it has licensed in the 2000–2020 MHz and 2180–2200 MHz bands (“AWS-4 Interim Buildout Requirement”). For purposes of this subpart, a licensee’s total population shall be calculated by summing the population of each license area that a licensee holds in the 2000–2020 MHz and 2180–2200 MHz bands; and

(2) An AWS-4 licensee shall provide terrestrial signal coverage and offer terrestrial service within seven (7) years from the date of the license to at least seventy (70) percent of the population in each of its license areas in the 2000–2020 MHz and 2180–2200 MHz bands (“AWS-4 Final Buildout Requirement”).

(3) If any AWS-4 licensee fails to establish that it meets the AWS-4 Interim Buildout Requirement, the AWS-4 Final Buildout requirement shall be accelerated by one year from (seven to six years).

(4) If any AWS-4 licensee fails to establish that it meets the AWS-4 Final Buildout Requirement in any of its license areas in the 2000–2020 MHz and 2180–2200 MHz bands, its authorization for each license area in which it fails to meet the requirement shall terminate automatically without Commission action. To the extent that the AWS-4 licensee also holds the 2 GHz MSS rights for the affected license area, failure to meet the AWS-4 Final Buildout Requirement in an EA shall also result in the MSS protection rule in §27.1136 no longer applying in that license area.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will only be deemed served by the licensee if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may only in-

clude the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license.

(6) Failure by any AWS-4 licensee to meet the AWS-4 Final Buildout Requirement in paragraph (q)(4) of this section will result in forfeiture of the license and the licensee will be ineligible to regain it.

(r) The following provisions apply to any licensee holding an AWS authorization in the 1915–1920 MHz and 1995–2000 MHz bands:

(1) A licensee shall provide signal coverage and offer service within four (4) years from the date of the initial license to at least forty (40) percent of the population in each of its licensed areas (“Interim Buildout Requirement”).

(2) A licensee shall provide signal coverage and offer service within ten (10) years from the date of the initial license to at least seventy-five (75) percent of the population in each of its licensed areas (“Final Buildout Requirement”).

(3) If a licensee fails to establish that it meets the Interim Buildout Requirement for a particular licensed area, then the Final Buildout Requirement (in this paragraph (r)) and the license term (as set forth in §27.13(j)) for each license area in which it fails to meet the Interim Buildout Requirement shall be accelerated by two years (from ten to eight years).

(4) If a licensee fails to establish that it meets the Final Buildout Requirement for a particular licensed area, its authorization for each license area in which it fails to meet the Final Buildout Requirement shall terminate automatically without Commission action and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will only be deemed served by

the licensee if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may only include the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license.

(s) The following provisions apply to any licensee holding an AWS authorization in the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands:

(1) A licensee shall provide reliable signal coverage and offer service within six (6) years from the date of the initial license to at least forty (40) percent of the population in each of its licensed areas (“Interim Buildout Requirement”).

(2) A licensee shall provide reliable signal coverage and offer service within twelve (12) years from the date of the initial license to at least seventy-five (75) percent of the population in each of its licensed areas (“Final Buildout Requirement”).

(3) If a licensee fails to establish that it meets the Interim Buildout Requirement for a particular licensed area, then the Final Buildout Requirement (in this paragraph (s)) and the AWS license term (as set forth in § 27.13(k)) for each license area in which it fails to meet the Interim Buildout Requirement shall be accelerated by two (2) years (from twelve (12) to ten (10) years).

(4) If a licensee fails to establish that it meets the Final Buildout Requirement for a particular licensed area, its authorization for each license area in which it fails to meet the Final Buildout Requirement shall terminate automatically without Commission action and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract

level. The population within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. For the Gulf of Mexico license area, the licensee shall demonstrate compliance with these performance requirements, using off-shore platforms, including production, manifold, compression, pumping and valving platforms as a proxy for population in the Gulf of Mexico.

(t) The following provisions apply to any licensee holding an authorization in the 600 MHz band:

(1) A licensee shall provide reliable signal coverage and offer service within six (6) years from the date of the initial license to at least forty (40) percent of the population in each of its license areas (“Interim Buildout Requirement”).

(2) A licensee shall provide reliable signal coverage and offer service within twelve (12) years from the date of the initial license to at least seventy-five (75) percent of the population in each of its license areas (“Final Buildout Requirement”).

(3) If a licensee fails to establish that it meets the Interim Buildout Requirement for a particular licensed area, then the Final Buildout Requirement (in this paragraph (t)) and the license term (as set forth in § 27.13(1)) for each license area in which it fails to meet the Interim Buildout Requirement shall be accelerated by two (2) years (from twelve (12) to ten (10) years).

(4) If a licensee fails to establish that it meets the Final Buildout Requirement for a particular license area, its authorization for each license area in which it fails to meet the Final Buildout Requirement shall terminate automatically without Commission action,

and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(5) To demonstrate compliance with these performance requirements, licensees shall use the most recently available decennial U.S. Census Data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides reliable signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. For the Gulf of Mexico license area, the licensee shall demonstrate compliance with these performance requirements, using offshore platforms, including production, manifold, compression, pumping and valving platforms as a proxy for population in the Gulf of Mexico.

(u) This section enumerates performance requirements for EBS licenses initially issued after October 25, 2019. Licensees shall demonstrate compliance with performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the applicable benchmark, in accordance with the provisions set forth in § 1.946(d) of this chapter.

(1) All EBS licenses initially issued after October 25, 2019, must demonstrate compliance with the performance requirements described in this paragraph (u). All equipment used to demonstrate compliance must be in use and actually providing service, either for internal use or to unaffiliated customers, as of the interim deadline or final deadline, whichever is applicable.

(2) Except for licensees with licenses applied for in the Tribal Priority Window, licensees providing mobile or point-to-multipoint service must demonstrate reliable signal coverage of 50%

of the population of the geographic service area within four years of initial license grant, and 80% of the population of the geographic service area within eight years of initial license grant.

(3) Except for licensees with licenses applied for in the Tribal Priority Window, licensees providing fixed point-to-point service must demonstrate operation of one link for each 50,000 persons in the geographic service area within four years of initial license grant, and one link for each 25,000 persons in the geographic service area within eight years of initial license grant.

(4) Licensees with licenses applied for in the Tribal Priority Window must make an interim showing under paragraph (u)(2) or (3) of this section within two years of initial license grant. Licensees with licenses applied for in the Tribal Priority Window must make a final showing under paragraph (u)(2) or (3) of this section within five years of initial license grant.

(5) If an EBS licensee (other than the licensee of a license issued pursuant to the Tribal Priority Window) fails to meet interim performance requirements described in paragraph (u)(2) or (3) of this section, the deadline for that authorization to meet its final performance requirement will be advanced by two years. If an EBS licensee of a license issued pursuant to the Tribal Priority Window fails to meet interim performance requirements described in paragraph (u)(2) or (3) of this section, the deadline for that authorization to meet its final performance requirement will be advanced by one year. If an EBS licensee fails to meet its final performance requirement, its license shall automatically terminate without specific Commission action.

(v) The following provisions apply to any licensee holding an authorization in the 3700–3980 MHz band:

(1) Licensees relying on mobile or point-to-multipoint service shall provide reliable signal coverage and offer service within eight (8) years from the date of the initial license to at least forty-five (45) percent of the population in each of its license areas (“First Buildout Requirement”). Licensee shall provide reliable signal coverage and offer service within twelve (12)

years from the date of the initial license to at least eighty (80) percent of the population in each of its license areas (“Second Buildout Requirement”). Licensees relying on point-to-point service shall demonstrate within eight years of the license issue date that they have four links operating and providing service to customers or for internal use if the population within the license area is equal to or less than 268,000 and, if the population is greater than 268,000, that they have at least one link in operation and providing service to customers, or for internal use, per every 67,000 persons within a license area (“First Buildout Requirement”). Licensees relying on point-to-point service shall demonstrate within 12 years of the license issue date that they have eight links operating and providing service to customers or for internal use if the population within the license area is equal to or less than 268,000 and, if the population within the license area is greater than 268,000, shall demonstrate they are providing service and have at least two links in operation per every 67,000 persons within a license area (“Second Buildout Requirement”).

(2) In the alternative, a licensee offering Internet of Things-type services shall provide geographic area coverage within eight (8) years from the date of the initial license to thirty-five (35) percent of the license (“First Buildout Requirement”). A licensee offering Internet of Things-type services shall provide geographic area coverage within twelve (12) years from the date of the initial license to sixty-five (65) percent of the license (“Second Buildout Requirement”).

(3) If a licensee fails to establish that it meets the First Buildout Requirement for a particular license area, the licensee’s Second Buildout Requirement deadline and license term will be reduced by two years. If a licensee fails to establish that it meets the Second Buildout Requirement for a particular license area, its authorization for each license area in which it fails to meet the Second Buildout Requirement shall terminate automatically without Commission action, and the licensee will be ineligible to regain it if the Commis-

sion makes the license available at a later date.

(4) To demonstrate compliance with these performance requirements, licensees shall use the most recently available decennial U.S. Census Data at the time of measurement and shall base their measurements of population or geographic area served on areas no larger than the Census Tract level. The population or area within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides reliable signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population or geographic area within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. If a licensee does not provide reliable signal coverage to an entire license area, the license must provide a map that accurately depicts the boundaries of the area or areas within each license area not being served. Each licensee also must file supporting documentation certifying the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal strength necessary to provide reliable service with the licensee’s technology.

(w) The following provisions apply to any licensee holding an authorization in the 3450–3550 MHz band:

(1) *Performance requirements.* Licensees in the 3.45 GHz Service must meet the following benchmarks, based on the type of service they provide.

(i) *Mobile/point-to-multipoint service.* Licensees relying on mobile or point-to-multipoint service shall provide reliable signal coverage and offer service within four (4) years from the date of the initial license to at least forty-five (45) percent of the population in each of its license areas (“First Performance Benchmark”). Licensees shall provide

reliable signal coverage and offer service within eight (8) years from the date of the initial license to at least eighty (80) percent of the population in each of its license areas (“Second Performance Benchmark”).

(ii) *Point-to-point service.* Licensees relying on point-to-point service shall demonstrate within four (4) years of the license issue date that, if the population within the license area is equal to or less than 268,000, they have four links operating and either provide service to customers or for internal use. If the population is greater than 268,000, they shall demonstrate they have at least one link in operation and either provide service to customers or for internal use per every 67,000 persons within a license area (“First Performance Benchmark”). Licensees shall demonstrate within eight (8) years of the license issue date that, if the population within license area is equal to or less than 268,000, they have eight links operating and either provide service to customers or for internal use. If the population within the license area is greater than 268,000, they shall demonstrate they have at least two links in operation and either provide service to customers or for internal use per every 67,000 persons within a license area (“Second Performance Benchmark”).

(iii) *Internet of Things service.* Licensees offering Internet of Things-type services shall provide geographic area coverage within four (4) years from the date of the initial license to thirty-five (35) percent of the license (“First Performance Benchmark”). Licensees shall provide geographic area coverage within eight (8) years from the date of the initial license to sixty-five (65) percent of the license (“Second Performance Benchmark”).

(2) *Failure to meet performance requirements.* If a licensee fails to establish that it meets the First Performance Benchmark for a particular license area in paragraph (w)(1) of this section, the licensee’s Second Performance Benchmark deadline and license term in paragraph (w)(1) of this section will be reduced by one year. If a licensee fails to establish that it meets the Second Performance Benchmark for a particular license area, its authorization

for each license area in which it fails to meet the Second Performance Benchmark shall terminate automatically without Commission action, and the licensee will be ineligible to regain it if the Commission makes the license available at a later date.

(3) *Compliance procedures.* To demonstrate compliance with the performance requirements in paragraph (w)(1) of this section, licensees shall use the most recently available decennial U.S. Census Data at the time of measurement and shall base their measurements of population or geographic area served on areas no larger than the Census Tract level. The population or area within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides reliable signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population or geographic area within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license. If a licensee does not provide reliable signal coverage to an entire license area, the license must provide a map that accurately depicts the boundaries of the area or areas within each license area not being served. Each licensee also must file supporting documentation certifying the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal strength necessary to provide reliable service with the licensee’s technology.

[62 FR 9658, Mar. 3, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.14, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 27.15 Geographic partitioning and spectrum disaggregation.

(a) *Eligibility.* (1) Parties seeking approval for partitioning and disaggregation shall request from the Commission an authorization for partial assignment of a license pursuant to § 1.948.

(2) AWS and WCS licensees may apply to partition their licensed geographic service area or disaggregate their licensed spectrum at any time following the grant of their licenses.

(b) *Technical Standards*—(1) *Partitioning.* In the case of partitioning, applicants and licensees must file FCC Form 603 pursuant to section 1.948 and list the partitioned service area on a schedule to the application. The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1983 North American Datum (NAD83).

(2) *Disaggregation.* Spectrum may be disaggregated in any amount.

(3) *Combined partitioning and disaggregation.* The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.

(4) *Signal levels.* For purposes of partitioning and disaggregation, part 27 systems must be designed so as not to exceed the signal level specified for the particular spectrum block in § 27.55 at the licensee's service area boundary, unless the affected adjacent service area licensees have agreed to a different signal level.

(c) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in § 27.13.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 68954, Dec. 14, 1998; 65 FR 3146, Jan. 20, 2000; 65 FR 57268, Sept. 21, 2000; 67 FR 45373, July 9, 2002; 69 FR 5715, Feb. 6, 2004; 72 FR 48848, Aug. 24, 2007; 78 FR 8268, Feb. 5, 2013; 78 FR 50255, Aug. 16, 2013; 79 FR 596, Jan. 6, 2014; 79 FR 32412, June 4, 2014; 79 FR 48537, Aug. 15, 2014; 82 FR 41548, Sept. 1, 2017]

§ 27.16 Network access requirements for Block C in the 746–757 and 776–787 MHz bands.

(a) *Applicability.* This section shall apply only to the authorizations for Block C in the 746–757 and 776–787 MHz bands assigned and only if the results of the first auction in which licenses for such authorizations are offered satisfied the applicable reserve price.

(b) *Use of devices and applications.* Licensees offering service on spectrum subject to this section shall not deny, limit, or restrict the ability of their customers to use the devices and applications of their choice on the licensee's C Block network, except:

(1) Insofar as such use would not be compliant with published technical standards reasonably necessary for the management or protection of the licensee's network, or

(2) As required to comply with statute or applicable government regulation.

(c) *Technical standards.* For purposes of paragraph (b)(1) of this section:

(1) Standards shall include technical requirements reasonably necessary for third parties to access a licensee's network via devices or applications without causing objectionable interference to other spectrum users or jeopardizing network security. The potential for excessive bandwidth demand alone shall not constitute grounds for denying, limiting or restricting access to the network.

(2) To the extent a licensee relies on standards established by an independent standards-setting body which is open to participation by representatives of service providers, equipment manufacturers, application developers, consumer organizations, and other interested parties, the standards will carry a presumption of reasonableness.

(3) A licensee shall publish its technical standards, which shall be non-proprietary, no later than the time at which it makes such standards available to any preferred vendors, so that the standards are readily available to customers, equipment manufacturers, application developers, and other parties interested in using or developing products for use on a licensee's networks.

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(d) *Access requests.* (1) Licensees shall establish and publish clear and reasonable procedures for parties to seek approval to use devices or applications on the licensees' networks. A licensee must also provide to potential customers notice of the customers' rights to request the attachment of a device or application to the licensee's network, and notice of the licensee's process for customers to make such requests, including the relevant network criteria.

(2) If a licensee determines that a request for access would violate its technical standards or regulatory requirements, the licensee shall expeditiously provide a written response to the requester specifying the basis for denying access and providing an opportunity for the requester to modify its request to satisfy the licensee's concerns.

(e) *Handset locking prohibited.* No licensee may disable features on handsets it provides to customers, to the extent such features are compliant with the licensee's standards pursuant to paragraph (b) of this section, nor configure handsets it provides to prohibit use of such handsets on other providers' networks.

(f) *Burden of proof.* Once a complainant sets forth a prima facie case that the C Block licensee has refused to attach a device or application in violation of the requirements adopted in this section, the licensee shall have the burden of proof to demonstrate that it has adopted reasonable network standards and reasonably applied those standards in the complainant's case. Where the licensee bases its network restrictions on industry-wide consensus standards, such restrictions would be presumed reasonable.

[72 FR 48849, Aug. 24, 2007]

Subpart C—Technical Standards

§ 27.50 Power limits and duty cycle.

(a) The following power limits and related requirements apply to stations transmitting in the 2305–2320 MHz band or the 2345–2360 MHz band.

(1) *Base and fixed stations.* (i) For base and fixed stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band:

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(A) The average equivalent isotropically radiated power (EIRP) must not exceed 2,000 watts within any 5 megahertz of authorized bandwidth and must not exceed 400 watts within any 1 megahertz of authorized bandwidth.

(B) The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

(ii) For base and fixed stations transmitting in the 2315–2320 MHz band or the 2345–2350 MHz band, the peak EIRP must not exceed 2,000 watts.

(2) *Fixed customer premises equipment stations.* For fixed customer premises equipment (CPE) stations transmitting in the 2305–2320 MHz band or in the 2345–2360 MHz band, the peak EIRP must not exceed 20 watts within any 5 megahertz of authorized bandwidth. Fixed CPE stations transmitting in the 2305–2320 MHz band or in the 2345–2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications. The use of outdoor antennas for CPE stations or outdoor CPE station installations operating with 2 watts per 5 megahertz or less average EIRP using the stepped emissions mask prescribed in § 27.53(a)(3) is prohibited except if professionally installed in locations removed by 20 meters from roadways or in locations where it can be shown that the ground power level of –44 dBm in the A or B blocks or –55 dBm in the C or D blocks will not be exceeded at the nearest road location. The use of outdoor antennas for fixed CPE stations operating with 2 watts per 5 megahertz or less average EIRP and the emissions mask prescribed in § 27.53(a)(1)(i) through (iii) is permitted in all locations. For fixed WCS CPE using TDD technology, the duty cycle must not exceed 38 percent;

(3) *Mobile and portable stations.* (i) For mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, *except that* for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305–2315 MHz and 2350–2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305–2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

(ii) Mobile and portable stations are not permitted to transmit in the 2315–2320 MHz and 2345–2350 MHz bands.

(iii) *Automatic transmit power control.* Mobile and portable stations transmitting in the 2305–2315 MHz band or in the 2350–2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications.

(iv) *Prohibition on external vehicle-mounted antennas.* The use of external vehicle-mounted antennas for mobile and portable stations transmitting in the 2305–2315 MHz band or the 2350–2360 MHz band is prohibited.

(b) The following power and antenna height limits apply to transmitters operating in the 746–758 MHz, 775–788 MHz and 805–806 MHz bands:

(1) Fixed and base stations transmitting a signal in the 757–758 and 775–776 MHz bands must not exceed an effective radiated power (ERP) of 1000 watts and an antenna height of 305 m height above average terrain (HAAT), except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

(2) Fixed and base stations transmitting a signal in the 746–757 MHz and

776–787 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 1000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

(3) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth of 1 MHz or less must not exceed an ERP of 2000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts ERP in accordance with Table 2 of this section.

(4) Fixed and base stations transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP in accordance with Table 3 of this section.

(5) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 746–757 MHz and 776–787 MHz bands with an emission bandwidth greater than 1 MHz must not exceed an ERP of 2000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts/MHz ERP in accordance with Table 4 of this section.

(6) Licensees of fixed or base stations transmitting a signal in the 746–757 MHz and 776–787 MHz bands at an ERP greater than 1000 watts must comply with the provisions set forth in paragraph (b)(8) of this section and § 27.55(c).

(7) Licensees seeking to operate a fixed or base station located in a county with population density of 100 or

fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 746–757 MHz and 776–787 MHz bands at an ERP greater than 1000 watts must:

(i) Coordinate in advance with all licensees authorized to operate in the 698–758 MHz, 775–788, and 805–806 MHz bands within 120 kilometers (75 miles) of the base or fixed station;

(ii) coordinate in advance with all regional planning committees, as identified in §90.527 of this chapter, with jurisdiction within 120 kilometers (75 miles) of the base or fixed station.

(8) Licensees authorized to transmit in the 746–757 MHz and 776–787 MHz bands and intending to operate a base or fixed station at a power level permitted under the provisions of paragraph (b)(6) of this section must provide advanced notice of such operation to the Commission and to licensees authorized in their area of operation. Licensees who must be notified are all licensees authorized to operate in the 758–775 MHz and 788–805 MHz bands under part 90 of this chapter within 75 km of the base or fixed station and all regional planning committees, as identified in §90.527 of this chapter, with jurisdiction within 75 km of the base or fixed station. Notifications must provide the location and operating parameters of the base or fixed station, including the station's ERP, antenna coordinates, antenna height above ground, and vertical antenna pattern, and such notifications must be provided at least 90 days prior to the commencement of station operation.

(9) Control stations and mobile stations transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands and fixed stations transmitting in the 787–788 MHz and 805–806 MHz bands are limited to 30 watts ERP.

(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

(11) For transmissions in the 757–758, 775–776, 787–788, and 805–806 MHz bands, maximum composite transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of RMS-

equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true maximum composite measurement for the emission in question over the full bandwidth of the channel.

(12) For transmissions in the 746–757 and 776–787 MHz bands, licensees may employ equipment operating in compliance with either the measurement techniques described in paragraph (b)(11) of this section or a Commission-approved average power technique. In both instances, equipment employed must be authorized in accordance with the provisions of §27.51.

(c) The following power and antenna height requirements apply to stations transmitting in the 600 MHz band and the 698–746 MHz band:

(1) Fixed and base stations transmitting a signal with an emission bandwidth of 1 MHz or less must not exceed an effective radiated power (ERP) of 1000 watts and an antenna height of 305 m height above average terrain (HAAT), except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section;

(2) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal with an emission bandwidth of 1 MHz or less must not exceed an ERP of 2000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts ERP in accordance with Table 2 of this section;

(3) Fixed and base stations transmitting a signal with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP in accordance with Table 3 of this section;

(4) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal with an emission bandwidth greater than 1 MHz must not exceed an ERP of 2000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts/MHz ERP in accordance with Table 4 of this section;

(5) Licensees, except for licensees operating in the 600 MHz downlink band, seeking to operate a fixed or base station located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal at an ERP greater than 1000 watts must:

(i) Coordinate in advance with all licensees authorized to operate in the 698–758 MHz, 775–788, and 805–806 MHz bands within 120 kilometers (75 miles) of the base or fixed station;

(ii) coordinate in advance with all regional planning committees, as identified in §90.527 of this chapter, with jurisdiction within 120 kilometers (75 miles) of the base or fixed station.

(6) Licensees of fixed or base stations transmitting a signal at an ERP greater than 1000 watts and greater than 1000 watts/MHz must comply with the provisions of paragraph (c)(8) of this section and §27.55(b), except that licensees of fixed or base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, must comply with the provisions of paragraph (c)(8) of this section and §27.55(b) only if transmitting a signal at an ERP greater than 2000 watts and greater than 2000 watts/MHz;

(7) A licensee authorized to operate in the 710–716 or 740–746 MHz bands may operate a fixed or base station at an ERP up to a total of 50 kW within its authorized, 6 megahertz spectrum block if the licensee complies with the provisions of §27.55(b). The antenna height for such stations is limited only

to the extent required to satisfy the requirements of §27.55(b).

(8) Licensees intending to operate a base or fixed station at a power level permitted under the provisions of paragraph (c)(6) of this section must provide advanced notice of such operation to the Commission and to licensees authorized in their area of operation. Licensees who must be notified are all licensees authorized under this part to operate on an adjacent spectrum block within 75 km of the base or fixed station. Notifications must provide the location and operating parameters of the base or fixed station, including the station's ERP, antenna coordinates, antenna height above ground, and vertical antenna pattern, and such notifications must be provided at least 90 days prior to the commencement of station operation.

(9) Control and mobile stations in the 698–746 MHz band are limited to 30 watts ERP.

(10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698–746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

(11) Licensees may employ equipment operating in compliance with either the measurement techniques described in paragraph (b)(11) of this section or a Commission-approved average power technique. In both instances, equipment employed must be authorized in accordance with the provisions of §27.51.

(12) A licensee authorized to operate in the 716–722 or 722–728 MHz bands may operate a fixed or base station at an ERP up to a total of 50 kW within its authorized, 6 megahertz spectrum block if the licensee complies with the provisions of §27.55(b), obtains written concurrences from all affected licensees in the 698–746 MHz bands within 120 km of the proposed high power site, and files a copy of each written concurrence with the Wireless Telecommunications Bureau on FCC Form 601. The antenna height for such stations is limited only to the extent required to satisfy the requirements of §27.55(b).

(13) Licensees authorized to operate in the 716–722 or 722–728 MHz bands must coordinate with licensees with uplink operations in the 698–716 MHz

band to mitigate the potential for harmful interference. Licensees authorized to operate in the 716–722 or 722–728 MHz bands must mitigate harmful interference to licensees' uplink operations in the 698–716 MHz band within 30 days after receiving written notice from the affected licensees. A licensee authorized to operate in the 716–722 or 722–728 MHz bands must ensure that 716–728 MHz band transmissions are filtered at least to the extent that the 716–728 MHz band transmissions are filtered in markets where the 716–728 MHz band licensee holds any license in the 698–716 band, as applicable. For purposes of coordination and mitigations measures in paragraphs (i) and (iii) below, network will be deemed “deployed” as of the date upon which the network is able to support a commercial mobile or data service. The coordination and mitigation measures should include, but are not limited to, the following:

(i) If a licensee operating in the 698–716 and 728–746 MHz band deploys a network after the 716–722 or 722–728 MHz bands licensee deploys a network on its 716–722 or 722–728 MHz spectrum in the same geographic market, the 716–722 or 722–728 MHz bands licensee will work with the licensee with uplink operations in the 698–716 MHz band to identify sites that will require additional filtering, and will help the licensee operating in the 698–716 and 728–746 MHz bands to identify proper filters;

(ii) The 716–722 or 722–728 MHz bands licensee must permit licensees operating in the 698–716 and 728–746 MHz bands to collocate on the towers it owns at prevailing market rates; and

(iii) If a 698–716 and 728–746 MHz bands licensee deploys a network before a licensee in the 716–722 or 722–728 MHz bands deploys a network in the same geographic market, the 716–722 or 722–728 MHz bands licensee will work with licensees in the 698–716 and 728–746 MHz bands to identify sites that will need additional filtering and will purchase and pay for installation of required filters on such sites.

(d) The following power and antenna height requirements apply to stations transmitting in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155

MHz, 2155–2180 MHz and 2180–2200 MHz bands:

(1) The power of each fixed or base station transmitting in the 1995–2000 MHz, 2110–2155 MHz, 2155–2180 MHz or 2180–2200 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 3280 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 3280 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(2) The power of each fixed or base station transmitting in the 1995–2000 MHz, the 2110–2155 MHz 2155–2180 MHz band, or 2180–2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(3) A licensee operating a base or fixed station in the 2110–2155 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must coordinate such operations in advance with all Government and non-Government satellite entities in the 2025–2110 MHz band. A licensee operating a base or fixed station in the 2110–2180 MHz band utilizing power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with the following licensees authorized to operate within 120 kilometers (75 miles) of the base or fixed station operating in this band: All Broadband Radio Service (BRS) licensees authorized under this part in the 2155–2160 MHz band and all advanced wireless services (AWS) licensees authorized to operate on adjacent frequency blocks in the 2110–2180 MHz band.

(4) Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695–1710 MHz

and 1755–1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710–1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(6) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(7) Fixed, mobile, and portable (hand-held) stations operating in the 2000–2020 MHz band are limited to 2 watts EIRP, except that the total power of any portion of an emission that falls within the 2000–2005 MHz band may not exceed 5 milliwatts. A licensee of AWS-4 authority may enter into private operator-to-operator agreements with all 1995–2000 MHz licensees to operate in 2000–2005 MHz at power levels above 5 milliwatts EIRP; except the total power of the AWS-4 mobile emissions may not exceed 2 watts EIRP.

(8) A licensee operating a base or fixed station in the 2180–2200 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with all AWS licensees authorized to operate on adjacent frequency blocks in the 2180–2200 MHz band.

(9) Fixed, mobile and portable (hand-held) stations operating in the 1915–1920 MHz band are limited to 300 milliwatts EIRP.

(10) A licensee operating a base or fixed station in the 1995–2000 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with all PCS G Block licensees authorized to operate on adjacent frequency blocks in the 1990–1995 MHz band within 120 kilometers of the base or fixed station operating in this band.

(e) The following power limits apply to the paired 1392–1395 MHz and 1432–1435 MHz bands as well as the unpaired 1390–1392 MHz band (1.4 GHz band):

(1) Fixed stations transmitting in the 1390–1392 MHz and 1432–1435 MHz bands are limited to 2000 watts EIRP peak power. Fixed stations transmitting in the 1392–1395 MHz band are limited to 100 watts EIRP peak power.

(2) Mobile stations transmitting in the 1390–1392 MHz and 1432–1435 MHz bands are limited to 4 watts EIRP peak power. Mobile stations transmitting in the 1392–1395 MHz band are limited to 1 watt EIRP peak power.

(f) The following power limits apply to the 1670–1675 MHz band:

(1) Fixed and base stations are limited to 2000 watts EIRP peak power.

(2) Mobile stations are limited to 4 watts EIRP peak power.

(g) [Reserved]

(h) The following power limits shall apply in the BRS and EBS:

(1) *Main, booster and base stations.* (i) The maximum EIRP of a main, booster or base station shall not exceed 33 dBW + 10log(X/Y) dBW, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition, except as provided in paragraph (h)(1)(ii) of this section.

(ii) If a main or booster station sectorizes or otherwise uses one or more transmitting antennas with a non-omnidirectional horizontal plane radiation pattern, the maximum EIRP in dBW in a given direction shall be determined by the following formula: EIRP = 33 dBW + 10 log(X/Y) dBW + 10

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$\log(360/\text{beamwidth})$ dBW, where X is the actual channel width in MHz, Y is either (i) 6 MHz if prior to transition or the station is in the MBS following transition or (ii) 5.5 MHz if the station is in the LBS and UBS following transition, and beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points.

(2) *Mobile and other user stations.* Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

(3) For television transmission, the peak power of the accompanying aural signal must not exceed 10 percent of the peak visual power of the transmitter. The Commission may order a reduction in aural signal power to diminish the potential for harmful interference.

(4) For main, booster and response stations utilizing digital emissions with non-uniform power spectral density (e.g. unfiltered QPSK), the power measured within any 100 kHz resolution bandwidth within the 6 MHz channel occupied by the non-uniform emission cannot exceed the power permitted within any 100 kHz resolution bandwidth within the 6 MHz channel if it were occupied by an emission with uniform power spectral density, i.e., if the maximum permissible power of a station utilizing a perfectly uniform power spectral density across a 6 MHz channel were 2000 watts EIRP, this would result in a maximum permissible power flux density for the station of $2000/60 = 33.3$ watts EIRP per 100 kHz bandwidth. If a non-uniform emission were substituted at the station, station power would still be limited to a maximum of 33.3 watts EIRP within any 100 kHz segment of the 6 MHz channel, irrespective of the fact that this would result in a total 6 MHz channel power of less than 2000 watts EIRP.

(i) Peak transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared

to the emission bandwidth, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(j) The following power requirements apply to stations transmitting in the 3700–3980 MHz band:

(1) The power of each fixed or base station transmitting in the 3700–3980 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3700–3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(3) Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(4) Equipment employed must be authorized in accordance with the provisions of §27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(5) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for

any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, and any other relevant factors, so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(k) The following power requirements apply to stations transmitting in the 3450–3550 MHz band:

(1) The power of each fixed or base station transmitting in the 3450–3550 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3450–3550 MHz band and situated in any geographic location other than that described in paragraph (k)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(3) Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(4) Equipment employed must be authorized in accordance with the provisions of §27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (k)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(5) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, and any other relevant factors, so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

TABLE 1 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 757–758 AND 775–776 MHz BANDS AND FOR BASE AND FIXED STATIONS IN THE 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz AND 788–793 MHz BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH OF 1 MHz OR LESS

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

TABLE 2 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz AND 788–793 MHz BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH OF 1 MHz OR LESS

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	130

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TABLE 2 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz AND 788–793 MHz BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH OF 1 MHz OR LESS—Continued

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

TABLE 3 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz AND 788–793 MHz BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH GREATER THAN 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

TABLE 4 TO § 27.50—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE AND FIXED STATIONS IN THE 600 MHz, 698–757 MHz, 758–763 MHz, 776–787 MHz AND 788–793 MHz BANDS TRANSMITTING A SIGNAL WITH AN EMISSION BANDWIDTH GREATER THAN 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

[62 FR 16497, Apr. 7, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.50, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 27.51 Equipment authorization.

(a) Each transmitter utilized for operation under this part must be of a

type that has been authorized by the Commission under its certification procedure.

(b) Any manufacturer of radio transmitting equipment to be used in these services may request equipment authorization following the procedures set forth in subpart J of part 2 of this chapter. Equipment authorization for

an individual transmitter may be requested by an applicant for a station authorization by following the procedures set forth in part 2 of this chapter.

[65 FR 3147, Jan. 20, 2000]

§ 27.52 RF exposure.

Licenseses and manufacturers shall ensure compliance with the Commission's radio frequency exposure requirements in §§1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of mobile or portable devices operating under this section must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[85 FR 18151, Apr. 1, 2020]

§ 27.53 Emission limits.

(a) For operations in the 2305-2320 MHz band and the 2345-2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:

(1) For base and fixed stations' operations in the 2305-2320 MHz band and the 2345-2360 MHz band:

(i) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, and not less than $75 + 10 \log (P)$ dB on all frequencies between 2320 and 2345 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $70 + 10 \log (P)$ dB on all frequencies between 2287.5 and 2300 MHz, $72 + 10 \log (P)$ dB on all frequencies between 2285 and 2287.5 MHz, and $75 + 10 \log (P)$ dB below 2285 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2362.5 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2362.5 and 2365 MHz, $70 + 10 \log (P)$ dB on all frequencies between 2365 and 2367.5 MHz, $72 + 10 \log (P)$ dB on all frequencies be-

tween 2367.5 and 2370 MHz, and $75 + 10 \log (P)$ dB above 2370 MHz.

(2) For fixed customer premises equipment (CPE) stations operating in the 2305-2320 MHz band and the 2345-2360 MHz band transmitting with more than 2 watts per 5 megahertz average EIRP:

(i) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, and not less than $75 + 10 \log (P)$ dB on all frequencies between 2320 and 2345 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $70 + 10 \log (P)$ dB on all frequencies between 2287.5 and 2300 MHz, $72 + 10 \log (P)$ dB on all frequencies between 2285 and 2287.5 MHz, and $75 + 10 \log (P)$ dB below 2285 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2362.5 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2362.5 and 2365 MHz, $70 + 10 \log (P)$ dB on all frequencies between 2365 and 2367.5 MHz, $72 + 10 \log (P)$ dB on all frequencies between 2367.5 and 2370 MHz, and $75 + 10 \log (P)$ dB above 2370 MHz.

(3) For fixed CPE stations operating in the 2305-2320 MHz and 2345-2360 MHz bands transmitting with 2 watts per 5 megahertz average EIRP or less:

(i) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

(4) For mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands:

(i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

(5) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.*, 1 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(6) [Reserved]

(7) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power;

(8) Waiver requests of any of the out-of-band emission limits in paragraphs (a)(1) through (a)(7) of this section shall be entertained only if interference protection equivalent to that afforded by the limits is shown;

(9) [Reserved]

(10) The out-of-band emissions limits in paragraphs (a)(1) through (a)(3) of this section may be modified by the private contractual agreement of all affected licensees, who must maintain a copy of the agreement in their station files and disclose it to prospective assignees, transferees, or spectrum lessees and, upon request, to the Commission.

(b) *For WCS Satellite DARS operations:* The limits set forth in § 25.202(f) of this chapter shall apply, except that Satellite DARS operations shall be limited to a maximum power flux density of -197 dBW/m²/4 kHz in the 2370–2390 MHz band at Arecibo, Puerto Rico.

(c) For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(d) [Reserved]

(e) For operations in the 775–776 MHz and 805–806 MHz bands, transmitters must comply with either paragraphs (d)(1) through (5) of this section or the ACP emission limitations set forth in paragraphs (d)(6) to (d)(9) of this section.

(1) On all frequencies between 758–775 MHz and 788–805 MHz, the power of any emission outside the licensee’s frequency bands of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;

(2) On all frequencies between 758–775 MHz and 788–805 MHz, the power of any emission outside the licensee’s frequency bands of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

(3) On any frequency outside the 775–776 MHz and 805–806 MHz bands, the power of any emission shall be attenuated outside the band below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB;

(4) Compliance with the provisions of paragraphs (e)(1) and (e)(2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted

to indicate spectral energy in a 6.25 kHz segment;

(5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(6) The adjacent channel power (ACP) requirements for transmitters designed for various channel sizes are shown in the following tables. Mobile station requirements apply to handheld, car mounted and control station units. The tables specify a value for the ACP as a function of the displacement from the channel center frequency and measurement bandwidth. In the following tables, “(s)” indicates a swept measurement may be used.

6.25 KHZ MOBILE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
6.25	6.25	-40
12.5	6.25	-60
18.75	6.25	-60
25.00	6.25	-65
37.50	25.00	-65
62.50	25.00	-65
87.50	25.00	-65
150.00	100.00	-65
250.00	100.00	-65
350.00	100.00	-65
>400 kHz to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

12.5 KHZ MOBILE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
9.375	6.25	-40
15.625	6.25	-60
21.875	6.25	-60
37.50	25.00	-60
62.50	25.00	-65
87.50	25.00	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
>400 to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

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25 KHz MOBILE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
15.625	6.25	-40
21.875	6.25	-60
37.50	25	-60
62.50	25	-65
87.50	25	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
>400 kHz to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

150 KHz MOBILE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
100	50	-40
200	50	-50
300	50	-50
400	50	-50
600–1000	30(s)	-60
1000 to receive band	30(s)	-70
In the receive band	30(s)	-100

6.25 KHz BASE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
6.25	6.25	-40
12.50	6.25	-60
18.75	6.25	-60
25.00	6.25	-65
37.50	25	-65
62.50	25	-65
87.50	25	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
>400 kHz to 12 MHz	30(s)	-80
12 MHz to paired receive band	30(s)	-80
In the paired receive band	30(s)	¹ -85

¹ Although we permit individual base transmitters to radiate a maximum ACP of -85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of -100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

12.5 KHz BASE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
9.375	6.25	-40
15.625	6.25	-60
21.875	6.25	-60

12.5 KHz BASE TRANSMITTER ACP REQUIREMENTS—Continued

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
37.5	25	-60
62.5	25	-65
87.5	25	-65
150	100	-65
250	100	-65
350.00	100	-65
>400 kHz to 12 MHz	30(s)	-80
12 MHz to paired receive band	30(s)	-80
In the paired receive band	30(s)	¹ -85

¹ Although we permit individual base transmitters to radiate a maximum ACP of -85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of -100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

25 KHz BASE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
15.625	6.25	-40
21.875	6.25	-60
37.5	25	-60
62.5	25	-65
87.5	25	-65
150	100	-65
250	100	-65
350	100.00	-65
>400 kHz to 12 MHz	30(s)	-80
12 MHz to paired receive band	30(s)	-80
In the paired receive band	30(s)	¹ -85

¹ Although we permit individual base transmitters to radiate a maximum ACP of -85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of -100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

150 KHz BASE TRANSMITTER ACP REQUIREMENTS

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
100	50	-40
200	50	-50
300	50	-55
400	50	-60
600–1000	30(s)	-65
1000 to receive band	30(s)	-75 (continues at -6dB/oct
In the receive band	30(s)	¹ -85

¹ Although we permit individual base transmitters to radiate a maximum ACP of -85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of -100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

(7) *ACP measurement procedure.* The following procedures are to be followed for making ACP transmitter measurements. For time division multiple access (TDMA) systems, the measurements are to be made under TDMA operation only during time slots when the transmitter is on. All measurements must be made at the input to the transmitter's antenna. Measurement bandwidth used below implies an instrument that measures the power in many narrow bandwidths (*e.g.*, 300 Hz) and integrates these powers across a larger band to determine power in the measurement bandwidth.

(i) *Setting reference level.* Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. For example, for a 6.25 kHz transmitter, set the measurement bandwidth to 6.25 kHz; for a 150 kHz transmitter, set the measurement bandwidth to 150 kHz. Set the frequency offset of the measurement bandwidth to zero and adjust the center frequency of the spectrum analyzer to give the power level in the measurement bandwidth. Record this power level in dBm as the "reference power level".

(ii) *Non-swept power measurement.* Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth as shown in the tables above. Measure the ACP in dBm. These measurements should be made at maximum power. Calculate the coupled power by subtracting the measurements made in this step from the reference power measured in the previous step. The absolute ACP values must be less than the values given in the table for each condition above.

(iii) *Swept power measurement.* Set a spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and sample mode detection. Sweep \pm MHz from the carrier frequency. Set the reference level to the RMS value of the transmitter power and note the absolute power. The response at frequencies greater than 600 kHz must be less than the values in the tables above.

(8) *Out-of-band emission limit.* On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the

unmodulated carrier power (P) by at least $43 + 10 \log (P)$ dB.

(9) *Authorized bandwidth.* Provided that the ACP requirements of this section are met, applicants may request any authorized bandwidth that does not exceed the channel size.

(f) For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

(g) For operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(h) *AWS emission limits*—(1) *General protection levels.* Except as otherwise specified below, for operations in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz, and 2180–2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

(2) *Additional protection levels.* Notwithstanding the foregoing paragraph (h)(1) of this section:

(i) Operations in the 2180–2200 MHz band are subject to the out-of-band emission requirements set forth in § 27.1134 for the protection of federal government operations operating in the 2200–2290 MHz band.

(ii) For operations in the 2000–2020 MHz band, the power of any emissions

below 2000 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(iii) For operations in the 1915–1920 MHz band, the power of any emission between 1930–1995 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(iv) For operations in the 1995–2000 MHz band, the power of any emission between 2005–2020 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(3) *Measurement procedure.* (i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

(4) *Private agreements.* (i) For AWS operations in the 2000–2020 MHz and 2180–2200 MHz bands, to the extent a licensee establishes unified operations across the AWS blocks, that licensee may choose not to observe the emission limit specified in paragraph (h)(1), above, strictly between its adjacent block licenses in a geographic area, so long as it complies with other Commission rules and is not adversely affecting the operations of other parties by virtue of exceeding the emission limit.

(ii) For AWS operations in the 2000–2020 MHz band, a licensee may enter into private agreements with all licensees operating between 1995 and 2000 MHz to allow the $70 + 10 \log_{10}(P)$ dB

limit to be exceeded within the 1995–2000 MHz band.

(iii) An AWS licensee who is a party to a private agreement described in this section (4) must maintain a copy of the agreement in its station files and disclose it, upon request, to prospective AWS assignees, transferees, or spectrum lessees and to the Commission.

(i) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(j)(1) For operations in the unpaired 1390–1392 MHz band and the paired 1392–1395 MHz and 1432–1435 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the procedures described in paragraph (a)(5) of this section.

(2) In the 1390–1395 MHz and 1432–1435 MHz bands, licensees are encouraged to take all reasonable steps to ensure that unwanted emission power does not exceed the following levels in the band 1400–1427 MHz:

(i) For stations of point-to-point systems in the fixed service: -45 dBW/27 MHz.

(ii) For stations in the mobile service: -60 dBW/27 MHz.

(k) For operations in the 1670–1675 MHz, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the procedures described in paragraph (a)(5) of this section.

(l) *3.7 GHz Service.* The following emission limits apply to stations transmitting in the 3700–3980 MHz band:

(1) For base station operations in the 3700–3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately

outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(2) For mobile operations in the 3700–3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (1)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.

(1) Prior to the transition, and thereafter, solely within the MBS, for analog operations with an EIRP in excess of –9 dBW, the signal shall be attenuated at the channel edges by at least 38 dB relative to the peak visual carrier, then linearly sloping from that level to at least 60 dB of attenuation at 1 MHz below the lower band edge and 0.5 MHz

above the upper band edge, and attenuated at least 60 dB at all other frequencies.

(2) For digital base stations, the attenuation shall be not less than $43 + 10 \log (P)$ dB, unless a documented interference complaint is received from an adjacent channel licensee with an overlapping Geographic Service Area. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS No. 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. Provided that a documented interference complaint cannot be mutually resolved between the parties prior to the applicable deadline, then the following additional attenuation requirements shall apply:

(i) If a pre-existing base station suffers harmful interference from emissions caused by a new or modified base station located 1.5 km or more away, within 24 hours of the receipt of a documented interference complaint the licensee of the new or modified base station must attenuate its emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz, above or below, from the channel edge of its frequency block and shall immediately notify the complaining licensee upon implementation of the additional attenuation. No later than 60 days after the implementation of such additional attenuation, the licensee of the complaining base station must attenuate its base station emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(ii) If a pre-existing base station suffers harmful interference from emissions caused by a new or modified base station located less than 1.5 km away, within 24 hours of receipt of a documented interference complaint the licensee of the new or modified base station must attenuate its emissions by at least $67 + 10 \log (P) - 20 \log (D_{km}/1.5)$ dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the complaining licensee, or if both base stations are co-located, limit its undesired signal level

at the pre-existing base station receiver(s) to no more than -107 dBm measured in a 5.5 megahertz bandwidth and shall immediately notify the complaining licensee upon such reduction in the undesired signal level. No later than 60 days after such reduction in the undesired signal level, the complaining licensee must attenuate its base station emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(iii) If a new or modified base station suffers harmful interference from emissions caused by a pre-existing base station located 1.5 km or more away, within 60 days of receipt of a documented interference complaint the licensee of each base station must attenuate its base station emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the other licensee.

(iv) If a new or modified base station suffers harmful interference from emissions caused by a pre-existing base station located less than 1.5 km away, within 60 days of receipt of a documented interference complaint: (a) The licensee of the new or modified base station must attenuate its OOB by at least $67 + 10 \log (P) - 20 \log (D \text{ km}/1.5)$ measured 3 megahertz above or below, from the channel edge of its frequency block of the other licensee, or if the base stations are co-located, limit its undesired signal level at the other base station receiver(s) to no more than -107 dBm measured in a 5.5-megahertz bandwidth; and (b) the licensee causing the interference must attenuate its emissions by at least $67 + 10 \log (P)$ dB measured at 3 megahertz, above or below, from the channel edge of its frequency block of the new or modified base station.

(v) For all fixed digital user stations, the attenuation factor shall be not less than $43 + 10 \log (P)$ dB at the channel edge.

(3) Prior to transition and thereafter solely within the MBS, and notwithstanding paragraph (1)(2) of this section, the maximum out-of-band power of a digital transmitter operating on a single 6 MHz channel with an EIRP in

excess of -9 dBW employing digital modulation for the primary purpose of transmitting video programming shall be attenuated at the 6 MHz channel edges at least 25 dB relative to the licensed average 6 MHz channel power level, then attenuated along a linear slope to at least 40 dB at 250 kHz beyond the nearest channel edge, then attenuated along a linear slope from that level to at least 60 dB at 3 MHz above the upper and below the lower licensed channel edges, and attenuated at least 60 dB at all other frequencies.

(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

(5) Notwithstanding the provisions of paragraphs (1)(2) and (1)(4) of this section, prior to transition, a licensee may continue to operate facilities deployed as of January 10, 2005 provided that such facilities operate in compliance with the emission mask applicable to those services prior to January 10, 2005.

(6) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile

digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495–2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495–2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

(7) *Alternative out of band emission limit.* Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(n) *3.45 GHz Service.* The following emission limits apply to stations transmitting in the 3450–3550 MHz band:

(1) For base station operations in the 3450–3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with the provisions of this paragraph (n)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one

percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Notwithstanding the channel edge requirement of –13 dBm per megahertz, for base station operations in the 3450–3550 MHz band, the conducted power of any emission below 3440 MHz or above 3560 MHz shall not exceed –25 dBm/MHz, and the conducted power of emissions below 3430 MHz or above 3570 MHz shall not exceed –40 dBm/MHz.

(2) For mobile operations in the 3450–3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(o) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

[62 FR 16497, Apr. 7, 1997]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 27.53, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

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§ 27.54 Frequency stability.

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

§ 27.55 Power strength limits.

(a) *Field strength limits.* For the following bands, the predicted or measured median field strength at any location on the geographical border of a licensee's service area shall not exceed the value specified unless the adjacent affected service area licensee(s) agree(s) to a different field strength. This value applies to both the initially offered service areas and to partitioned service areas.

(1) 1995–2000 MHz, 2110–2155, 2155–2180, 2180–2200, 2305–2320, and 2345–2360 MHz bands: 47 dB μ V/m.

(2) 600 MHz, 698–758, and 775–787 MHz bands: 40 dB μ V/m.

(3) The paired 1392–1395 MHz and 1432–1435 MHz bands and the unpaired 1390–1392 MHz band (1.4 GHz band): 47 dB μ V/m.

(4) BRS and EBS: The predicted or measured median field strength at any location on the geographical border of a licensee's service area shall not exceed the value specified unless the adjacent affected service area licensee(s) agree(s) to a different field strength. This value applies to both the initially offered services areas and to partitioned services areas. Licensees may exceed this signal level where there is no affected licensee that is constructed and providing service. Once the affected licensee is providing service, the original licensee will be required to take whatever steps necessary to comply with the applicable power level at its GSA boundary, absent consent from the affected licensee.

(i) Prior to transition, the signal strength at any point along the licensee's GSA boundary does not exceed the greater of that permitted under the licensee's Commission authorizations as of January 10, 2005 or 47 dB μ V/m.

(ii) Following transition, for stations in the LBS and UBS, the signal strength at any point along the licensee's GSA boundary must not exceed 47 dB μ V/m. This field strength is to be measured at 1.5 meters above the ground over the channel bandwidth

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(i.e., each 5.5 MHz channel for licensees that hold a full channel block, and for the 5.5 MHz channel for licensees that hold individual channels).

(iii) Following transition, for stations in the MBS, the signal strength at any point along the licensee's GSA boundary must not exceed the greater of $-73.0 + 10 \log(X/6)$ dBW/m², where X is the bandwidth in megahertz of the channel, or for facilities that are substantially similar to the licensee's pre-transition facilities (including modifications that do not alter the fundamental nature or use of the transmissions), the signal strength at such point that resulted from the station's operations immediately prior to the transition, provided that such operations complied with paragraph (a)(4)(i) of this section.

(b) *Power flux density limit for stations operating in the 698–746 MHz bands.* For base and fixed stations operating in the 698–746 MHz band in accordance with the provisions of § 27.50(c)(6), the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

(c) *Power flux density limit for stations operating in the 746–757 MHz and 776–787 MHz bands.* For base and fixed stations operating in the 746–757 MHz and 776–787 MHz bands in accordance with the provisions of § 27.50(b)(6), the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

(d) *Power flux density for stations operating in the 3700–3980 MHz band.* For base and fixed stations operation in the 3700–3980 MHz band in accordance with the provisions of § 27.50(j), the power flux density (PFD) at any location on the geographical border of a licensee's service area shall not exceed -76 dBm/m²/MHz. This power flux density will be measured at 1.5 meters above ground. Licensees in adjacent geographic areas may voluntarily agree to operate under

a higher PFD at their common boundary.

(e) *Power flux density for stations operating in the 3450–3550 MHz band.* For base and fixed stations operation in the 3450–3550 MHz band in accordance with the provisions of § 27.50(k), the power flux density (PFD) at any location on the geographical border of a licensee's service area shall not exceed -76 dBm/m²/MHz. This power flux density will be measured at 1.5 meters above ground. Licensees in adjacent geographic areas may voluntarily agree to operate under a higher PFD at their common boundary.

[69 FR 5715, Feb. 6, 2004, as amended at 69 FR 72034, Dec. 10, 2004; 72 FR 27712, May 16, 2007; 72 FR 48852, Aug. 24, 2007; 73 FR 26040, May 8, 2008; 78 FR 8270, Feb. 5, 2013; 78 FR 50256, Aug. 16, 2013; 79 FR 599, Jan. 6, 2014; 79 FR 32413, June 4, 2014; 79 FR 48539, Aug. 15, 2014; 85 FR 22882, Apr. 23, 2020; 86 FR 17954, Apr. 7, 2021]

§ 27.56 Antenna structures; air navigation safety.

A licensee that owns its antenna structure(s) must not allow such antenna structure(s) to become a hazard to air navigation. In general, antenna structure owners are responsible for registering antenna structures with the FCC if required by part 17 of this chapter, and for installing and maintaining any required marking and lighting. However, in the event of default of this responsibility by an antenna structure owner, the FCC permittee or licensee authorized to use an affected antenna structure will be held responsible by the FCC for ensuring that the antenna structure continues to meet the requirements of part 17 of this chapter. See § 17.6 of this chapter.

(a) *Marking and lighting.* Antenna structures must be marked, lighted and maintained in accordance with part 17 of this chapter and all applicable rules and requirements of the Federal Aviation Administration. For any construction or alteration that would exceed the requirements of section 17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460-1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, WTB,

1270 Fairfield Road, Gettysburg, PA 17325.

(b) *Maintenance contracts.* Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) may enter into contracts with other entities to monitor and carry out necessary maintenance of antenna structures. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) that make such contractual arrangements continue to be responsible for the maintenance of antenna structures in regard to air navigation safety.

§ 27.57 International coordination.

(a) WCS operations in the border areas shall be subject to coordination with those countries and provide protection to non-U.S. operations in the 2305–2320 and 2345–2360 MHz bands as appropriate. In addition, satellite DARS operations in WCS spectrum shall be subject to international satellite coordination procedures.

(b) Wireless operations in the 512–608 MHz, 614–763 MHz, 775–793 MHz, and 805–806 MHz bands are subject to current and future international agreements between the United States and Canada and the United States and Mexico. Unless otherwise modified by international treaty, licenses must not cause interference to, and must accept harmful interference from, television broadcast operations in Mexico and Canada, where these services are coprimary in the band.

(c) Operation in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz, 2180–2200 MHz, 3450–3550 MHz, and 3700–3980 MHz bands is subject to international agreements with Mexico and Canada.

[62 FR 9658, Mar. 3, 1997, as amended at 67 FR 5511, Feb. 6, 2002; 69 FR 5715, Feb. 6, 2004; 72 FR 48852, Aug. 24, 2007; 79 FR 599, Jan. 6, 2014; 79 FR 32413, June 4, 2014; 79 FR 48539, Aug. 15, 2014; 86 FR 17954, Apr. 7, 2021]

§ 27.58 Interference to BRS/EBS receivers.

(a) WCS licensees shall bear full financial obligation to remedy interference to BRS/EBS block

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downconverters if all of the following conditions are met:

(1) The complaint is received by the WCS licensee prior to February 20, 2002;

(2) The BRS/EBS downconverter was installed prior to August 20, 1998;

(3) The WCS fixed or land station transmits at 50 or more watts peak EIRP;

(4) The BRS/EBS downconverter is located within a WCS transmitter's free space power flux density contour of -34 dBW/m²; and

(5) The BRS/EBS customer or licensee has informed the WCS licensee of the interference within one year from the initial operation of the WCS transmitter or within one year from any subsequent power increases at the WCS station.

(b) Resolution of the complaint shall be at no cost to the complainant.

(c) Two or more WCS licensees collocating their antennas on the same tower shall assume shared responsibility for remedying interference complaints within the area determined by paragraph (a)(4) of this section unless an offending station can be readily determined and then that station shall assume full financial responsibility.

(d) If the WCS licensee cannot otherwise eliminate interference caused to BRS/EBS reception, then that licensee must cease operations from the offending WCS facility.

(e) At least 30 days prior to commencing operations from any new WCS transmission site or with increased power from any existing WCS transmission site, a WCS licensee shall notify all BRS/EBS licensees in or through whose licensed service areas they intend to operate of the technical parameters of the WCS transmission facility. WCS and BRS/EBS licensees are expected to coordinate voluntarily and in good faith to avoid interference problems and to allow the greatest operational flexibility in each other's operations.

[62 FR 16498, Apr. 7, 1997, as amended at 69 FR 72034, Dec. 10, 2004]

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§ 27.59 [Reserved]

§ 27.60 TV/DTV interference protection criteria.

Base, fixed, control, and mobile transmitters in the 698-758 MHz, 775-788 MHz, and 805-806 MHz frequency bands must be operated only in accordance with the rules in this section to reduce the potential for interference to public reception of the signals of existing TV and DTV broadcast stations transmitting on TV Channels 51 through 68.

(a) *D/U ratios.* Licensees must choose site locations that are a sufficient distance from co-channel and adjacent channel TV and DTV stations, and/or must use reduced transmitting power or transmitting antenna height such that the following minimum desired signal-to-undesired signal ratios (D/U ratios) are met.

(1) The minimum D/U ratio for co-channel stations is:

(i) 40 dB at the hypothetical Grade B contour (64 dB μ V/m) (88.5 kilometers (55 miles)) of the TV station;

(ii) For transmitters operating in the 698-746 MHz frequency band, 23 dB at the equivalent Grade B contour (41 dB μ V/m) (88.5 kilometers (55 miles)) of the DTV station; or

(iii) For transmitters operating in the 746-758 MHz, 775-788 MHz, and 805-806 MHz frequency bands, 17 dB at the equivalent Grade B contour (41 dB μ V/m) (88.5 kilometers (55 miles)) of the DTV station.

(2) The minimum D/U ratio for adjacent channel stations is 0 dB at the hypothetical Grade B contour (64 dB μ V/m) (88.5 kilometers (55 miles)) of the TV station or -23 dB at the equivalent Grade B contour (41 dB μ V/m) (88.5 kilometers (55 miles)) of the DTV station.

(b) *TV stations and calculation of contours.* The methods used to calculate TV contours and antenna heights above average terrain are given in §§ 73.683 and 73.684 of this chapter. Tables to determine the necessary minimum distance from the 698-758 MHz, 775-788 MHz, and 805-806 MHz station to the TV/DTV station, assuming that the TV/DTV station has a hypothetical or equivalent Grade B contour of 88.5 kilometers (55 miles), are located in § 90.309 of this chapter and labeled as Tables B, D, and E. The locations of existing and

proposed TV/DTV stations during the period of transition from analog to digital TV service are given in part 73 of this chapter and in the final proceedings of MM Docket No. 87-268.

(1) Licensees of stations operating within the ERP and HAAT limits of § 27.50 must select one of four methods to meet the TV/DTV protection requirements, subject to Commission approval:

(i) Utilize the geographic separation specified in Tables B, D, and E of § 90.309 of this chapter, as appropriate;

(ii) When station parameters are greater than those indicated in the tables, calculate geographic separation in accordance with the required D/U ratios, as provided in paragraph (a) of this section;

(iii) Submit an engineering study justifying the proposed separations based on the parameters of the land mobile station and the parameters, including authorized and/or applied for facilities, of the TV/DTV station(s) it is trying to protect; or,

(iv) Obtain written concurrence from the applicable TV/DTV station(s). If this method is chosen, a copy of the agreement must be submitted with the application.

(2) The following is the method for geographic separations. (i) Base and fixed stations that operate in the 746-758 MHz and 775-787 MHz bands having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table B (co-channel frequencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in § 90.309 of this chapter. Base and fixed stations that operate in the 698-746 MHz band having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to adjacent channel DTV stations in accordance with the values specified in Table E in § 90.309 of this chapter, shall afford protection to co-channel DTV stations by providing 23 dB protection to such stations' equivalent Grade B contour (41 dB μ V/m), and shall afford protection to co-channel and adjacent channel TV stations in accordance with the values specified in Table B (co-channel fre-

quencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in § 90.309 of this chapter. For base and fixed stations having an antenna height (HAAT) between 152-914 meters (500-3,000 ft.) the effective radiated power must be reduced below 1 kilowatt in accordance with the values shown in the power reduction graph in Figure B in § 90.309 of this chapter. For heights of more than 152 m. (500 ft.) above average terrain, the distance to the radio path horizon will be calculated assuming smooth earth. If the distance so determined equals or exceeds the distance to the hypothetical or equivalent Grade B contour of a co-channel TV/DTV station (*i.e.*, it exceeds the distance from the appropriate Table in § 90.309 of this chapter to the relevant TV/DTV station), an authorization will not be granted unless it can be shown in an engineering study (*see* paragraph (b)(1)(iii) of this section) that actual terrain considerations are such as to provide the desired protection at the actual Grade B contour (64 dB μ V/m for TV and 41 dB μ V/m for DTV stations) or unless the effective radiated power will be further reduced so that, assuming free space attenuation, the desired protection at the actual Grade B contour (64 dB μ V/m for TV and 41 dB μ V/m coverage contour for DTV stations) will be achieved. Directions for calculating powers, heights, and reduction curves are listed in § 90.309 of this chapter for land mobile stations. Directions for calculating coverage contours are listed in §§ 73.683 through 73.685 of this chapter for TV stations and in § 73.625 of this chapter for DTV stations.

(ii) Control, fixed, and mobile stations (including portables) that operate in the 787-788 MHz and 805-806 MHz bands and control and mobile stations (including portables) that operate in the 698-757 MHz and 776-787 MHz bands are limited in height and power and therefore shall afford protection to co-channel and adjacent channel TV/DTV stations in the following manner:

(A) For control, fixed, and mobile stations (including portables) that operate in the 787-788 MHz and 805-806 MHz bands and control and mobile stations (including portables) that operate in the 746-757 MHz and 776-787 MHz

bands, co-channel protection shall be afforded in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection for TV stations and 17 dB for DTV stations) in §90.309 of this chapter.

(B) For control and mobile stations (including portables) that operate in the 698–746 MHz band, co-channel protection shall be afforded to TV stations in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection) and to DTV stations by providing 23 dB protection to such stations' equivalent Grade B contour (41 dBµV/m).

(C) For control, fixed, and mobile stations (including portables) that operate in the 787–788 MHz and 805–806 MHz bands and control and mobile stations (including portables) that operate in the 698–757 MHz and 776–787 MHz bands, adjacent channel protection shall be afforded by providing a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV stations and –23 dB for DTV stations).

(D) Since control, fixed, and mobile stations may affect different TV/DTV stations than the associated base or fixed station, particular care must be taken by applicants/licensees to ensure that all appropriate TV/DTV stations are considered (*e.g.*, a base station may be operating within TV Channel 62 and the mobiles within TV Channel 67, in which case TV Channels 61, 62, 63, 66, 67 and 68 must be protected). Control, fixed, and mobile stations shall keep a minimum distance of 96.5 kilometers (60 miles) from all adjacent channel TV/DTV stations. Since mobiles and portables are able to move and communicate with each other, licensees must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations.

NOTE TO §27.60: The 88.5 km (55mi) Grade B service contour (64 dBµV/m) is based on a hypothetical TV station operating at an effective radiated power of one megawatt, a transmitting antenna height above average terrain of 610 meters (2000 feet) and the Commission's R-6602 F(50,50) curves. See §73.699 of this chapter. Maximum facilities for TV stations operating in the UHF band are 5 megawatts effective radiated power at an an-

tenna HAAT of 610 meters (2,000 feet). See §73.614 of this chapter. The equivalent contour for DTV stations is based on a 41 dBµV/m signal strength and the distance to the F(50,90) curve. See §73.625 of this chapter.

[72 FR 48852, Aug. 24, 2007, as amended at 79 FR 599, Jan. 6, 2014]

§§ 27.61–27.62 [Reserved]

§ 27.64 Protection from interference.

Wireless Communications Service (WCS) stations operating in full accordance with applicable FCC rules and the terms and conditions of their authorizations are normally considered to be non-interfering. If the FCC determines, however, that interference which significantly interrupts or degrades a radio service is being caused, it may, after notice and an opportunity for a hearing, require modifications to any WCS station as necessary to eliminate such interference.

(a) *Failure to operate as authorized.* Any licensee causing interference to the service of other stations by failing to operate its station in full accordance with its authorization and applicable FCC rules shall discontinue all transmissions, except those necessary for the immediate safety of life or property, until it can bring its station into full compliance with the authorization and rules.

(b) *Intermodulation interference.* Licensees should attempt to resolve such interference by technical means.

(c) *Situations in which no protection is afforded.* Except as provided elsewhere in this part, no protection from interference is afforded in the following situations:

(1) *Interference to base receivers from base or fixed transmitters.* Licensees should attempt to resolve such interference by technical means or operating arrangements.

(2) *Interference to mobile receivers from mobile transmitters.* No protection is provided against mobile-to-mobile interference.

(3) *Interference to base receivers from mobile transmitters.* No protection is provided against mobile-to-base interference.

(4) *Interference to fixed stations.* Licensees should attempt to resolve such interference by technical means or operating arrangements.

(5) *Anomalous or infrequent propagation modes.* No protection is provided against interference caused by tropospheric and ionospheric propagation of signals.

(d) *Harmful interference to SDARS operations requiring resolution.* The following conditions will be presumed to constitute harmful interference to SDARS operations from WCS operations in the 2305–2320 MHz and 2345–2360 MHz bands and require WCS operators to work cooperatively with SDARS operators to address areas where such power levels are exceeded and harmful interference occurs:

(1) A WCS ground signal level greater than –44 dBm in the upper or lower A or B block, or –55 dBm in the C or D block, present at a location on a roadway, where a test demonstrates that SDARS service would be muted over a road distance of greater than 50 meters; or

(2) A WCS ground signal level exceeding –44 dBm in the upper or lower A or B block, or –55 dBm in the C or D block on a test drive route, which is mutually agreed upon by the WCS licensee and the SDARS licensee, for more than 1 percent of the cumulative surface road distance on that drive route, where a test demonstrates that SDARS service would be muted over a cumulative road distance of greater than 0.5 percent (incremental to any muting present prior to use of WCS frequencies in the area of that drive test).

[62 FR 9658, Mar. 3, 1997, as amended at 78 FR 9621, Feb. 11, 2013]

§ 27.65 Acceptance of interference in 2000–2020 MHz.

(a) Receivers operating in the 2000–2020 MHz band must accept interference from lawful operations in the 1995–2000 MHz band, where such interference is due to:

(1) The in-band power of any operations in 1995–2000 MHz (i.e., the portion transmit power contained in the 1995–2000 MHz band); or

(2) The portion of out-of-band emissions contained in 2000–2005 MHz.

(b) [Reserved]

[78 FR 8270, Feb. 5, 2013]

§ 27.66 Discontinuance, reduction, or impairment of service.

(a) *Involuntary act.* If the service provided by a fixed common carrier licensee, or a fixed common carrier operating on spectrum licensed to a Guard Band Manager, is involuntarily discontinued, reduced, or impaired for a period exceeding 48 hours, the licensee must promptly notify the Commission, in writing, as to the reasons for discontinuance, reduction, or impairment of service, including a statement when normal service is to be resumed. When normal service is resumed, the licensee must promptly notify the Commission.

(b) *Voluntary act by common carrier.* If a fixed common carrier licensee, or a fixed common carrier operating on spectrum licensed to a Guard Band Manager, voluntarily discontinues, reduces, or impairs service to a community or part of a community, it must obtain prior authorization as provided under § 63.71 of this chapter. An application will be granted within 31 days after filing if no objections have been received.

(c) *Voluntary act by non-common carrier.* If a fixed non-common carrier licensee, or a fixed non-common carrier operating on spectrum licensed to a Guard Band Manager, voluntarily discontinues, reduces, or impairs service to a community or part of a community, it must give written notice to the Commission within seven days.

(d) *Notifications and requests.* Notifications and requests identified in paragraphs (a) through (c) of this section should be sent to: Federal Communications Commission, Common Carrier Radio Services, 1270 Fairfield Road, Gettysburg, Pennsylvania, 17325.

[65 FR 3149, Jan. 20, 2000; 65 FR 12483, Mar. 9, 2000, as amended at 65 FR 17605, Apr. 4, 2000; 65 FR 57267, Sept. 21, 2000]

§ 27.70 Information exchange.

(a) *Prior notification.* Public safety licensees authorized to operate in the 758–775 MHz and 788–805 MHz bands may notify any licensee authorized to operate in the 746–757 or 776–787 MHz bands that they wish to receive prior notification of the activation or modification of the licensee's base or fixed stations in their area. Thereafter, the 746–757 or 776–787 MHz band licensee must

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provide the following information to the public safety licensee at least 10 business days before a new base or fixed station is activated or an existing base or fixed station is modified:

- (1) Location;
- (2) Effective radiated power;
- (3) Antenna height; and
- (4) Channels available for use.

(b) *Purpose of prior notification.* The prior coordination of base or fixed stations is for informational purposes only. Public safety licensees are not afforded the right to accept or reject the activation of a proposed base or fixed station or to unilaterally require changes in its operating parameters. The principal purposes of notification are to:

- (1) Allow a public safety licensee to advise the 746–757 or 776–787 MHz band licensee whether it believes a proposed base or fixed station will generate unacceptable interference;
- (2) Permit 746–757 and 776–787 MHz band licensees to make voluntary changes in base or fixed station parameters when a public safety licensee alerts them to possible interference; and,
- (3) Rapidly identify the source if interference is encountered when the base or fixed station is activated.

[72 FR 27712, May 16, 2007, as amended at 72 FR 48853, Aug. 24, 2007; 79 FR 599, Jan. 6, 2014]

§ 27.72 Information sharing requirements.

This section requires WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands to share information regarding the location and operation of base and fixed stations (except fixed customer premises equipment) with Satellite Digital Audio Radio Service (SDARS) licensees in the 2320–2345 MHz band. Section 25.263 of this chapter requires SDARS licensees in the 2320–2345 MHz band to share information regarding the location and operation of terrestrial repeaters with WCS licensees in the 2305–2320 MHz and 2345–2360 MHz bands. WCS licensees are encouraged to develop separate coordination agreements with SDARS licensees to facilitate efficient deployment of and coexistence between each service. To the extent the provisions of any such coordination agreement conflict with the

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requirements set forth herein, the procedures established under a coordination agreement will control. WCS licensees must maintain a copy of any coordination agreement with an SDARS licensee in their station files and disclose it to prospective assignees, transferees, or spectrum lessees and, upon request, to the Commission.

(a) *Sites and frequency selections.* WCS licensees must select base and fixed station sites and frequencies, to the extent practicable, to minimize the possibility of harmful interference to operations in the SDARS 2320–2345 MHz band.

(b) *Prior notice periods.* WCS licensees that intend to operate a base or fixed station must, before commencing such operation, provide 10 business days prior notice to all SDARS licensees. WCS licensees that intend to modify an existing station must, before commencing such modified operation, provide 5 business days prior notice to all SDARS licensees. For the purposes of this section, a business day is defined by § 1.4(e)(2) of this chapter.

(1) For modifications other than changes in location, a licensee may provide notice within 24 hours after the modified operation if the modification does not result in a predicted increase of the power flux density (PFD) at ground level by more than 1 dB since the last advance notice was given. If a demonstration is made by the SDARS licensee that such modifications may cause harmful interference to SDARS receivers, WCS licensees will be required to provide notice 5 business days in advance of additional station modifications.

(2) WCS base and fixed stations operating below 2 watts equivalent isotropically radiated power (EIRP) are exempt from the notice requirements set forth in this paragraph.

(3) WCS and SDARS licensees may enter into agreements regarding alternative notification procedures.

(c) *Contents of notice.* (1) Notification must be written (*e.g.*, certified letter, fax, or e-mail) and include the licensee's name, and the name, address, and telephone number of its coordination representative, unless the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to

provide notification by some other means. WCS licensees and SDARS licensees may establish such a mutually agreeable alternative notification mechanism without prior Commission approval, provided that they comply with all other requirements of this section.

(2) Regardless of the notification method, it must specify relevant technical details, including, at a minimum:

(i) The coordinates of the proposed base or fixed stations to an accuracy of no less than ± 1 second latitude and longitude;

(ii) The proposed operating power(s), frequency band(s), and emission(s);

(iii) The antenna center height above ground and ground elevation above mean sea level, both to an accuracy of no less than ± 1 meter;

(iv) The antenna gain pattern(s) in the azimuth and elevation planes that include the peak of the main beam; and

(v) The antenna downtilt angle(s).

(3) A WCS licensee operating base or fixed stations must maintain an accurate and up-to-date inventory of its stations, including the information set forth in § 27.72(c)(2), which shall be available upon request by the Commission.

(d) *Calculation of notice period.* Notice periods are calculated from the date of receipt by the licensee being notified. If notification is by mail, the date of receipt is evidenced by the return receipt on certified mail. If notification is by fax, the date of receipt is evidenced by the notifying party's fax transmission confirmation log. If notification is by e-mail, the date of receipt is evidenced by a return e-mail receipt. If the SDARS licensee and all potentially affected WCS licensees reach a mutual agreement to provide notification by some other means, that agreement must specify the method for determining the beginning of the notice period.

(e) *Duty to cooperate.* WCS licensees must cooperate in good faith in the selection and use of new station sites and new frequencies to reduce interference and make the most effective use of the authorized facilities. WCS licensees should provide SDARS licensees as much lead time as practicable to provide ample time to conduct analyses

and opportunity for prudent base station site selection prior to WCS licensees entering into real estate and tower leasing or purchasing agreements. WCS licensees must have sufficient operational flexibility in their network design to implement one or more technical solutions to remedy harmful interference. Licensees of stations suffering or causing harmful interference, as defined in § 27.64(d), must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the Wireless Telecommunications Bureau, in consultation with the Office of Engineering and Technology and the Space Bureau, will consider the actions taken by the parties to mitigate the risk of and remedy any alleged interference. In determining the appropriate action, the Bureau will take into account the nature and extent of the interference and act promptly to remedy the interference. The Bureau may impose restrictions on WCS licensees, including specifying the transmitter power, antenna height, or other technical or operational measures to remedy the interference, and will take into account previous measures by the licensees to mitigate the risk of interference.

[75 FR 45071, Aug. 2, 2010, as amended at 78 FR 9622, Feb. 11, 2013; 88 FR 21442, Apr. 10, 2023]

§ 27.73 WCS, AMT, and Goldstone coordination requirements.

This section requires Wireless Communications Services (WCS) licensees in the 2305–2320 MHz and 2345–2360 MHz bands, respectively, to coordinate the deployment of base and fixed stations (except fixed customer premises equipment) with the Goldstone, CA Deep Space Network (DSN) facility in the 2290–2300 MHz band and with Aeronautical Mobile Telemetry (AMT) facilities in the 2360–2395 MHz band; and to take all practicable steps necessary to minimize the risk of harmful interference to AMT and DSN facilities.

(a) WCS licensees operating base and fixed stations in the 2345–2360 MHz band must, prior to operation of such stations, achieve a mutually satisfactory coordination agreement with the AMT entity(ies) (*i.e.*, FCC licensee(s) and/or

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Federal operator(s) for any AMT receiver facility within 45 kilometers or radio line of sight, whichever distance is larger, of the intended WCS base or fixed station location. The coordinator for the assignment of flight test frequencies in the 2360–2390 MHz band, Aerospace and Flight Test Radio Coordination Council (AFTRCC) or successors of AFTRCC, will facilitate a mutually satisfactory coordination agreement between the WCS licensee(s) and AMT entity(ies) for existing AMT receiver sites. The locations of current Federal and non-Federal AMT receiver sites may be obtained from AFTRCC at Post Office Box 12822 Wichita, KS 67277–2822, (316) 946–8826, or successor frequency coordinators of AFTRCC. Such coordination agreement shall provide protection to existing AMT receiver stations consistent with International Telecommunication Union (ITU) Recommendation ITU-R M.1459, “Protection criteria for telemetry systems in the aeronautical mobile service and mitigation techniques to facilitate sharing with geostationary broadcasting-satellite and mobile-satellite services in the frequency bands 1 452–1 525 MHz and 2 310–2 360 MHz May 2000 edition,” adopted May 2000, as adjusted using generally accepted engineering practices and standards to take into account the local conditions and operating characteristics of the applicable AMT and WCS facilities. ITU-R M.1459 is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. This incorporation by reference (IBR) material is available for inspection at the FCC and at the National Archives and Records Administration (NARA). Contact the FCC through the Federal Communications Commission’s Reference Information Center, phone: (202) 418–0270. For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations.html or email fr.inspection@nara.gov. The material may be obtained from ITU, Place des Nations, 1211 Geneva 20, Switzerland; website: www.itu.int/en/publications/Pages/default.aspx.

(b) WCS licensees operating base and fixed stations in the 2305–2320 MHz

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band must, prior to operation of such stations, achieve a mutually satisfactory coordination agreement with the National Aeronautics and Space Administration (NASA) within 145 kilometers of the Goldstone, CA earth station site (35°25’33” N, 116°53’23” W).

(c) After base or fixed station operations commence, upon receipt of a complaint of harmful interference, the WCS licensee(s) receiving the complaint, no matter the distance from the NASA Goldstone, CA earth station or from an AMT site, operating in the 2305–2320 or 2345–2360 MHz bands, respectively, shall take all practicable steps to immediately eliminate the interference.

(d) *Duty to cooperate.* WCS licensees, AFTRCC, and NASA must cooperate in good faith in the coordination and deployment of new facilities. WCS licensees must also cooperate in good faith in the selection and use of new station sites and new frequencies when within radio line of site of AMT receiver facilities to reduce the risk of harmful interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference must cooperate in good faith and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the Wireless Telecommunications Bureau, in consultation with the Office of Engineering and Technology and the National Telecommunications and Information Administration may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations.

[75 FR 45072, Aug. 2, 2010, as amended at 78 FR 9622, Feb. 11, 2013; 85 FR 64407, Oct. 13, 2020; 88 FR 21442, Apr. 10, 2023]

§ 27.75 Basic interoperability requirement.

(a)(1) Mobile and portable stations that operate on any portion of frequencies in the paired 1755–1780 MHz and 2155–2180 MHz band must be capable of operating on all frequencies in the paired 1710–1780 MHz and 2110–2180 MHz band, using the same air interfaces that the equipment utilizes on any frequencies in the paired 1710–1780 MHz and 2110–2180 MHz band.

(2) Mobile and portable stations that operate on any portion of frequencies in the 600 MHz band must be capable of operating on all frequencies in the 600 MHz band using the same air interfaces that the equipment utilizes on any frequencies in the 600 MHz band.

(3) Mobile and portable stations that operate on any portion of frequencies in the 3700–3980 MHz band must be capable of operating on all frequencies in the 3700–3980 MHz band using the same air interfaces that the equipment utilizes on any frequencies in the 3700–3980 MHz band.

(4) Mobile and portable stations that operate on any portion of frequencies in the 3450–3550 MHz band must be capable of operating on all frequencies in the 3450–3550 MHz band using the same air interfaces that the equipment utilizes on any frequencies in the 3450–3550 MHz band.

(b) The basic interoperability requirement in paragraph (a) of this section does not require a licensee to use any particular industry standard. Devices may also contain functions that are not operational in U.S. Territories.

[79 FR 32413, June 4, 2014, as amended at 79 FR 48539, Aug. 15, 2014; 85 FR 22882, Apr. 23, 2020; 86 FR 17954, Apr. 7, 2021]

§ 27.77 Restriction on mobile and portable equipment in the 1695–1710 MHz and 1755–1780 MHz bands.

Mobile and portable stations in the 1695–1710 MHz and 1755–1780 MHz bands may operate only when under the control of a base station. Base stations that enable mobile or portable equipment to operate in the 1695–1710 MHz and 1755–1780 MHz band are subject to prior coordination requirements. See § 27.1134 (Protection of Federal Government operations).

[79 FR 32413, June 4, 2014]

Subpart D—Competitive Bidding Procedures for the 2305–2320 MHz and 2345–2360 MHz Bands

§ 27.201 WCS in the 2305–2320 MHz and 2345–2360 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for WCS licenses in the 2305–2320

MHz and 2345–2360 MHz bands are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[67 FR 45373, July 9, 2002]

§§ 27.202–27.208 [Reserved]

§ 27.209 Designated entities; bidding credits; unjust enrichment.

(a) Designated entities entitled to preferences in the WCS in the 2305–2320 and 2345–2360 bands auction are small businesses and very small businesses as defined in § 27.110(b). Designated entities will be eligible for bidding credits, as defined in paragraphs (b) and (c) of this section.

(b) A winning bidder that qualifies as a *small business* may use a bidding credit of 25 percent to lower the cost of its winning bid.

(c) A winning bidder that qualifies as a *very small business* may use a bidding credit of 35 percent to lower the cost of its winning bid.

[62 FR 9658, Mar. 3, 1997, as amended at 63 FR 2349, Jan. 15, 1998; 65 FR 57268, Sept. 21, 2000; 67 FR 45373, July 9, 2002]

§ 27.210 Definitions.

(a) *Scope.* The definitions in this section apply to § 27.209, unless otherwise specified in those sections.

(b) *Small and very small business.* (1) A *small business* is an entity that, together with its affiliates and controlling interests, has average annual gross revenues that are not more than \$40 million for the preceding three years.

(2) A *very small business* is an entity that, together with its affiliates and controlling interests, has average annual gross revenues that are not more than \$15 million for the preceding three years.

[67 FR 45373, July 9, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart E—Application, Licensing, and Processing Rules for WCS

§ 27.301 [Reserved]

§ 27.302 Eligibility.

(a) General. Authorizations will be granted upon proper application if:

(1) The applicant is qualified under the applicable laws and the regulations, policies and decisions issued under those laws, including § 27.12;

(2) There are frequencies available to provide satisfactory service; and

(3) The public interest, convenience or necessity would be served by a grant.

(b) Alien Ownership. A WCS authorization may not be granted to or held by an entity not meeting the requirements of section 310 of the Communications Act of 1934, as amended, 47 U.S.C. section 310 insofar as applicable to the particular service in question.

§ 27.303 Upper 700 MHz commercial and public safety coordination zone.

(a) *General.* CMRS operators are required, prior to commencing operations on fixed or base station transmitters on the 776–787 MHz band that are located within 500 meters of existing or planned public safety base station receivers, to submit a description of their proposed facility to a Commission-approved public safety coordinator.

(i) The frequency or frequencies on which the facility will operate;

(ii) Antenna location and height;

(iii) Type of emission;

(iv) Effective radiated power;

(v) A description of the area served and the operator’s name.

(2) It is the CMRS operator’s responsibility to determine whether referral is required for stations constructed in its area of license. Public safety base stations are considered “planned” when public safety operators have notified, or initiated coordination with, a Commission-approved public safety coordinator.

(b) CMRS operators must wait at least 10 business days after submission of the required description before commencing operations on the referenced facility, or implementing modifications to an existing facility.

(c) The potential for harmful interference between the CMRS and public safety facilities will be evaluated by the public safety coordinator.

(1) With regard to existing public safety facilities, the coordinator’s determination to disapprove a proposed CMRS facility (or modification) to be located within 500 meters of the public safety facilities will be presumed correct, but the CMRS operator may seek Commission review of such determinations. Pending Commission review, the CMRS operator will not activate the facility or implement proposed modifications.

(2) With regard to proposed public safety facilities, the coordinator’s determination to disapprove a proposed CMRS facility (or modification) to be located within 500 meters of the public safety facilities will be presumed correct, but the CMRS operator may seek Commission review and, pending completion of review, operate the facility during construction of the public safety facilities. If coordination or Commission review has not been completed when the public safety facilities are ready to operate, the CMRS operator must cease operations pending completion of coordination or Commission review. Such interim operation of the CMRS facility within the coordination zone (or implementation of modifications) will not be relied on by the Commission in its subsequent review and determination of measures necessary to control interference, including relocation or modification of the CMRS facility.

(d) If, in the event of harmful interference between facilities located within 500 meters proximity, the parties are unable, with the involvement of the coordinator, to resolve the problem by mutually satisfactory arrangements, the Commission may impose restrictions on the operations of any of the parties involved.

[67 FR 49245, July 30, 2002, as amended at 72 FR 48853, Aug. 24, 2007; 79 FR 599, Jan. 6, 2014]

§§ 27.304–27.307 [Reserved]

§ 27.308 Technical content of applications.

All applications required by this part shall contain all technical information

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required by the application forms or associated public notice(s). Applications other than initial applications for a WCS license must also comply with all technical requirements of the rules governing the applicable frequency band (see subparts C, D, F, and G of this part, as appropriate).

[65 FR 57268, Sept. 21, 2000]

§§ 27.310–27.320 [Reserved]

§ 27.321 Mutually exclusive applications.

(a) Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under the Commission's rules governing the Wireless Communications Services involved. The Commission uses the general procedures in this section for processing mutually exclusive applications in the Wireless Communications Services.

(b) An application will be entitled to comparative consideration with one or more conflicting applications only if the Commission determines that such comparative consideration will serve the public interest.

§§ 27.322–27.325 [Reserved]

Subpart F—Competitive Bidding Procedures for the 698–806 MHz Band

SOURCE: 65 FR 3149, Jan. 20, 2000, unless otherwise noted.

§ 27.501 746–758 MHz, 775–788 MHz, and 805–806 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[79 FR 600, Jan. 6, 2014]

§ 27.502 Designated entities.

Eligibility for small business provisions:

(a)(1) A small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$40 million for the preceding three years.

(2) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$15 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

[72 FR 63499, Nov. 9, 2007]

Subpart G—Guard Band A and B Blocks (757–758/787–788 MHz and 775–776/805–806 MHz Bands)

SOURCE: 65 FR 17605, Apr. 4, 2000, unless otherwise noted.

§ 27.601 Authority and coordination requirements.

(a) Subject to the provisions of § 27.2(b), a Guard Band licensee may allow a spectrum lessee, pursuant to a spectrum lease arrangement under part 1, subpart X of this chapter, to construct and operate stations at any available site within the licensed area and on any channel for which the Guard Band licensee is licensed, provided such stations comply with Commission Rules and coordination requirements.

(b) Subject to the provisions of § 27.2(b), a Guard Band licensee may allow a spectrum lessee, pursuant to a spectrum lease arrangement under part 1, subpart X of this chapter, to delete, move or change the operating parameters of any of the user's stations that are covered under the Guard Band licensee's authorization without prior Commission approval, provided such stations comply with Commission Rules and coordination requirements.

(c) *Frequency coordination.* (1) A Guard Band licensee, or a spectrum lessee operating at 775–776 MHz and 805–806 MHz pursuant to a spectrum lease arrangement under §§1.9030 and 1.9035 of this chapter, must notify Commission-recognized public safety frequency coordinators for the 700 MHz Public Safety band and adjacent-area Guard Band licensees within one business day after the licensee or the spectrum lessee has:

- (i) Coordinated a new station or modification of an existing station; or
- (ii) Filed an application for an individual station license with the Commission.

(2) The notification required in paragraph (c)(1) of this section must include, at a minimum—

- (i) The frequency or frequencies coordinated;
- (ii) Antenna location and height;
- (iii) Type of emission;
- (iv) Effective radiated power;
- (v) A description of the service area, date of coordination, and user name or, in the alternative, a description of the type of operation.

(3) In the event a licensee partitions its service area or disaggregates its spectrum, it is required to submit the notification required in paragraph (c)(1) of this section to other Guard Band licensees in the same geographic area.

(4) Entities coordinated by a Guard Band licensee, or a spectrum lessee operating pursuant to a spectrum lease arrangement under §§1.9030 and 1.9035 of this chapter, must wait at least 10 business days after the notification required in paragraph (c)(1) of this section before operating under the license.

(d) Where a deletion, move or change authorized under paragraph (b) of this section constitutes a discontinuance, reduction, or impairment of service under §27.66 or where discontinuance, reduction or impairment of service results from an involuntary act subject to §27.66(a), the licensee must comply with the notification and authorization requirements set forth in that section.

[72 FR 27712, May 16, 2007, as amended at 72 FR 48853, Aug. 24, 2007]

§ 27.602 Lease agreements.

Guard Band licensees may enter into spectrum leasing arrangements under part 1, subpart X of this chapter regarding the use of their licensed spectrum by spectrum lessees, subject to the following conditions:

(a) The spectrum lease agreement between the licensee and the spectrum lessee must specify in detail the operating parameters of the spectrum lessee’s system, including power, maximum antenna heights, frequencies of operation, base station location(s), area(s) of operation, and other parameters specified in Commission rules for the use of spectrum identified in §27.5(b)(1) and (b)(2).

(b) The spectrum lease agreement must require the spectrum lessee to use Commission-approved equipment where appropriate and to complete post-construction proofs of system performance prior to system activation.

[72 FR 27713, May 16, 2007]

§ 27.604 Limitation on licenses won at auction.

(a) For the first auction of licenses in Blocks A and B, as defined in §27.5, no applicant may be deemed the winning bidder of both a Block A and a Block B license in a single geographic service area.

(b) For purposes of paragraph (a) of this section, licenses will be deemed to be won by the same bidder if an entity that wins one license at the auction is an affiliate of any other entity that wins a license at the auction.

§ 27.607 Performance requirements and annual reporting requirement.

(a) Guard Band licensees are subject to the performance requirements specified in §27.14(a).

(b) Guard Band licensees are required to file an annual report providing the Commission with information about the manner in which their spectrum is being utilized. Such reports shall be filed with the Commission on a calendar year basis, no later than the March 1 following the close of each calendar year, unless another filing date is specified by Public Notice.

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(c) Guard Band licensees must, at a minimum, include the following information in their annual reports:

(1) The total number of spectrum lessees;

(2) The amount of the licensee's spectrum being used pursuant to spectrum lease agreements;

(3) The nature of the spectrum use of the licensee's customers; and,

(4) The length of term of each spectrum lease agreement, and whether the agreement is a spectrum manager lease agreement, or a *de facto* transfer lease agreement.

(d) The specific information that licensees will provide and the procedures that they will follow in submitting their annual reports will be announced in a Public Notice issued by the Wireless Telecommunications Bureau.

[72 FR 27713, May 16, 2007]

Subpart H—Competitive Bidding Procedures for the 698–746 MHz Band

SOURCE: 67 FR 5512, Feb. 6, 2002, unless otherwise noted.

§ 27.701 698–746 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 698–746 MHz band are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

[67 FR 45374, July 9, 2002]

§ 27.702 Designated entities.

(a) *Eligibility for small business provisions.* (1) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$3 million for the preceding three years. This definition applies only with respect to licenses in Block C (710–716 MHz and 740–746 MHz) as specified in § 27.5(c)(1).

(2) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$15 million for the preceding three years.

(3) A small business is an entity that, together with its controlling interests

and affiliates, has average gross revenues not exceeding \$40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as an entrepreneur, as defined in this section, or a consortium of entrepreneurs may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 5512, Feb. 6, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart I—1.4 GHz Band

SOURCE: 67 FR 41855, June 20, 2002, unless otherwise noted.

§ 27.801 Scope.

This subpart sets out the regulations governing service in the paired 1392–1395 MHz and 1432–1435 MHz bands as well as the unpaired 1390–1392 MHz band (1.4 GHz band).

§ 27.802 Permissible communications.

Licensees in the paired 1392–1395 MHz and 1432–1435 MHz bands and unpaired 1390–1392 MHz band are authorized to provide fixed or mobile service, except aeronautical mobile service, subject to the technical requirements of this subpart.

§ 27.803 Coordination requirements.

(a) Licensees in the 1.4 GHz band will be issued geographic area licenses in accordance with the service areas listed in § 27.6(d) and (e).

(b) Licensees in the 1.4 GHz Service must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) That requires submission of an Environmental Assessment under part 1, § 1.1307 of this chapter;

(2) That requires international coordination;

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(3) That operates in areas listed in part 1, § 1.924 of this chapter; or

(4) That requires approval of the Frequency Advisory Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). Licensees in the 1432–1435 MHz band must receive FAS approval, prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of the Government sites listed in footnote US83 of § 2.106 of this chapter.

(c) Prior to construction of a station, a licensee in the 1.4 GHz Band must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by part 17 of this chapter.

(d) It is the licensee's responsibility to determine whether an individual station needs referral to the Commission.

(e) The application required in paragraph (b) of this chapter must be filed on the Universal Licensing System.

[67 FR 41855, June 20, 2002, as amended at 69 FR 17958, Apr. 6, 2004; 80 FR 38908, July 7, 2015]

§ 27.804 Field strength limits at WMTS facility.

For any operation in the 1392–1395 MHz band, the predicted or measured field strength—into the WMTS band at 1395–1400 MHz—shall not exceed 150 $\mu\text{V}/\text{m}$ at the location of any registered WMTS healthcare facility. When performing measurements to determine compliance with this provision, measurement instrumentation employing an average detector and a resolution bandwidth of 1 MHz may be used, provided it accurately represents the true interference potential of the equipment.

§ 27.805 Geographic partitioning and spectrum disaggregation.

An entity that acquires a portion of a 1.4 GHz band licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 1.4 GHz band licensee and is subject to the obligations and restrictions on the 1.4 GHz band license as set forth in this subpart.

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§ 27.806 1.4 GHz service licenses subject to competitive bidding.

Mutually exclusive initial applications for 1.4 GHz Band licenses in the paired 1392–1395 MHz and 1432–1435 MHz bands as well as the unpaired 1390–1392 MHz band are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

§ 27.807 Designated entities.

(a) Eligibility for small business provisions for 1.4 GHz band licenses in the paired 1392–1395 MHz and 1432–1435 MHz bands and the unpaired 1390–1392 MHz band.

(1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 41855, June 20, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart J—1670–1675 MHz Band

SOURCE: 67 FR 41856, June 20, 2002, unless otherwise noted.

§ 27.901 Scope.

This subpart sets out the regulations governing service in the 1670–1675 MHz band (1670–1675 MHz band).

§ 27.902 Permissible communications.

Licensees in the 1670–1675 MHz band are authorized to provide fixed or mobile service, except aeronautical mobile service, subject to the technical requirements of this subpart.

§ 27.903 Coordination requirements.

(a) The licensee in the 1670–1675 MHz band will be issued a geographic area license on a nationwide basis in accordance with § 27.6(f).

(b) Licensees in the 1670–1675 MHz band must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) That requires submission of an Environmental Assessment under part 1, § 1.1307 of this chapter;

(2) That requires international coordination;

(3) That operates in areas listed under part 1, § 1.924 of this chapter.

(c) The application required in paragraph (b) of this section must be filed on the Universal Licensing System.

(d) Prior to construction of a station, a licensee must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by part 17 of this chapter.

(e) It is the licensee's responsibility to determine whether an individual station requires referral to the Commission.

[67 FR 41856, June 20, 2002, as amended at 69 FR 17958, Apr. 6, 2004]

§ 27.904 Geographic partitioning and spectrum disaggregation.

An entity that acquires a portion of a 1670–1675 MHz band licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 1670–1675 MHz licensee and is subject to the obligations and restrictions on the 1670–1675 MHz license as set forth in this subpart.

§ 27.905 1670–1675 MHz service licenses subject to competitive bidding.

Mutually exclusive initial applications for the 1670–1675 MHz Band license are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this subpart.

§ 27.906 Designated entities.

(a) *Eligibility for small business provisions.* (1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$40 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

[67 FR 41856, June 20, 2002, as amended at 68 FR 43000, July 21, 2003]

Subpart K—1915–1920 MHz and 1995–2000 MHz

SOURCE: 78 FR 50257, Aug. 16, 2013, unless otherwise noted.

LICENSING AND COMPETITIVE BIDDING PROVISIONS**§ 27.1001 1915–1920 MHz and 1995–2000 MHz bands subject to competitive bidding.**

Mutually exclusive initial applications for 1915–1920 MHz and 1995–2000 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1002 Designated entities in the 1915–1920 MHz and 1995–2000 MHz bands.

Eligibility for small business provisions:

(a)(1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years.

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(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$15 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

[78 FR 50257, Aug. 16, 2013, as amended at 80 FR 56816, Sept. 18, 2015]

REIMBURSEMENT OBLIGATION OF LICENSEES AT 1915–1920 MHZ AND 1995–2000 MHZ

§ 27.1021 Reimbursement obligation of licensees at 1915–1920 MHz.

A licensee in the 1915–1920 MHz band (Lower H Block) shall, within 30 days of grant of its long-form application, reimburse 25 percent of the total relocation costs incurred by UTAM, Inc. for relocating and clearing incumbent Fixed Microwave Service (FS) licensees from the 1910–1930 MHz band on a *pro rata* shared basis with other Lower H Block licensees as set forth in paragraphs (a) through (e) of this section.

(a)(1) If Lower H Block licenses granted as a result of the first auction for this spectrum cover, collectively, at least forty (40) percent of the nation’s population, the amount owed to UTAM, Inc. by each individual Lower H Block licensee (reimbursement amount owed or RN) will be determined by dividing the gross winning bid (GWB) for each individual Lower H Block license (*i.e.*, an Economic Area (EA)) by the sum of the gross winning bids for all Lower H Block licenses for which there is a winning bid in the first auction, and then multiplying by \$12,629,857.

$$RN = (EA \text{ GWB} \div \text{Sum of GWBs}) \times \$12,629,857.00$$

(2) Except as provided in paragraphs (b) and (c) of this section, a licensee that obtains a license for a market in which no license is granted as a result of the first Lower H Block auction will

not have a reimbursement obligation to UTAM, Inc.

(b) If Lower H Block licenses granted as a result of the first auction for this spectrum cover, collectively, less than forty (40) percent of the nation’s population, then the pro rata amount that the licensee of an individual Lower H Block license must reimburse UTAM, Inc. shall be calculated by dividing the population of the individual EA by the total U.S. population, and then multiplying by \$12,629,857. In this event, the same population data, *e.g.*, 2010, used to calculate the RNs for Lower H Block licenses granted as a result of the first auction will apply to subsequent auctions of Lower H Block licenses that were not granted as a result of an earlier auction of Lower H Block licenses.

$$RN = (EA \text{ POP} \div \text{U.S. POP}) \times \$12,629,857.00$$

(c) A winning bidder of a Lower H Block license that is not granted a license for any reason will be deemed to have triggered a reimbursement obligation to UTAM, Inc. This obligation will be owed to UTAM, Inc. by the licensee acquiring the Lower H Block license through a subsequent auction. The amount owed by the licensee acquiring the Lower H Block license at such auction will be the RN calculated for the EA license based on the first auction (calculated under paragraphs (a) or (b), as applicable, of this section).

(d) For purposes of compliance with this section, licensees should determine population based on 2010 U.S. Census Data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

(e) A payment obligation owed by a Lower H Block licensee under this section shall be made within thirty (30) days of the grant of the license (*i.e.*, grant of the long form application).

§ 27.1031 Reimbursement obligation of licensees at 1995–2000 MHz.

A licensee in the 1995–2000 MHz band (Upper H Block) shall, within 30 days of grant of its long-form application, reimburse one-seventh of the eligible expenses incurred by Sprint Nextel, Inc. (Sprint) for relocating and clearing Broadcast Auxiliary Service (BAS),

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Cable Television Relay Service (CARS), and Local Television Transmission Service (LTTS) incumbents from the 1990-2025 MHz band, on a pro rata shared basis with other Upper H Block licensees as set forth in paragraphs (a) through (e) of this section.

(a)(1) If Upper H Block licenses granted as a result of the first auction for this spectrum cover, collectively, at least forty (40) percent of the nation's population, the amount owed to Sprint by the winning bidder of each individual Upper H Block license granted as a result of the first auction will be determined by dividing the gross winning bid (GWB) for each individual Upper H Block license (i.e., an Economic Area (EA)) by the sum of the gross winning bids for all Upper H Block licenses for which there is a winning bid in the first auction, and then multiplying by \$94,875,516.

RN = (EA GWB ÷ Sum of GWBs) × \$94,875,516

(2) Except as provided in paragraphs (b) and (c) of this section, a licensee that obtains a license for a market in which no license was granted as a result of the first Upper H Block auction will not have a reimbursement obligation to Sprint.

(b) If Upper H Block licenses granted as a result of the first auction for this spectrum cover, collectively, less than forty (40) percent of the nation's population, then the amount that the licensee of an individual Upper H Block license must reimburse Sprint shall be calculated by dividing the population of the individual EA by the total U.S. population, and then multiplying by \$94,875,516. In this event, the same population data, e.g., 2010, used to calculate the RNs for Upper H Block licenses granted as a result of the first auction will apply to subsequent auctions of Upper H Block licenses that were not granted as a result of an earlier auction of Upper H Block licenses.

RN = (EA POP ÷ U.S. POP) × \$94,875,516

(c) A winning bidder of an Upper H Block license that is not granted a license for any reason will be deemed to have triggered a reimbursement obligation to Sprint. This obligation will be owed to Sprint by the licensee acquiring the Upper H Block license through

a subsequent auction. The amount owed by the licensee acquiring the EA license at such auction will be based on the RN calculated for the EA license based on the first auction (calculated under paragraphs (a) or (b), as applicable, of this section).

(d) For purposes of compliance with this section, licensees should determine population based on 2010 U.S. Census Data or such other data or measurements that the Wireless Telecommunications Bureau proposes and adopts under the notice and comment process for the auction procedures.

(e) A payment obligation owed by a Upper H Block licensees under this section shall be made within thirty (30) days of the grant of the license (i.e., grant of the long form application).

§ 27.1041 Termination of cost-sharing obligations.

(a) The cost-sharing obligation adopted in this subpart for the Lower H Block and for the Upper H Block will sunset ten years after the first license is issued in the respective band.

(b) A Lower H Block licensee and an Upper H Block licensee must satisfy in full its payment obligations under this subpart K within thirty days of the grant of its long-form application. The failure to timely satisfy a payment obligation in full prior to the applicable sunset date will not terminate the debt owed or a party's right to collect the debt.

Subpart L—1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 2110–2155 MHz, 2155–2180 MHz, 2180–2200 MHz Bands

SOURCE: 69 FR 5716, Feb. 6, 2004, unless otherwise noted.

LICENSING AND COMPETITIVE BIDDING PROVISIONS

§ 27.1101 1710–1755 MHz and 2110–2155 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 1710–1755 MHz and 2110–2155 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47

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CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1102 Designated Entities in the 1710–1755 MHz and 2110–2155 MHz bands.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$15 million for the preceding three years.

(b) *Bidding credits.* (1) A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid on any of the licenses in this part.

(2) A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use a bidding credit of 25 percent, as specified in § 1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid on any of the licenses in this part.

§ 27.1103 2000–2020 MHz and 2180–2200 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 2000–2020 MHz and 2180–2200 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

[78 FR 8270, Feb. 5, 2013]

§ 27.1104 Designated Entities in the 2000–2020 MHz and 2180–2200 MHz bands.

Eligibility for small business provisions:

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling inter-

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ests, has average gross revenues not exceeding \$40 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$15 million for the preceding three years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

[78 FR 8270, Feb. 5, 2013, as amended at 80 FR 56816, Sept. 18, 2015]

§ 27.1105 1695–1710 MHz, 1755–1780 MHz and 2155–2180 MHz bands subject to competitive bidding.

Mutually exclusive initial applications for 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

[79 FR 32413, June 4, 2014]

§ 27.1106 Designated Entities in the 1695–1710 MHz, 1755–1780 MHz, and 2155–2180 MHz bands.

Eligibility for small business provisions:

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$40 million for the preceding three (3) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$15 million for the preceding three (3) years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(iii) of

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this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

[79 FR 32413, June 4, 2014, as amended at 80 FR 56816, Sept. 18, 2015]

RELOCATION OF INCUMBENTS

§ 27.1111 Relocation of fixed microwave service licensees in the 2110–2150 and 2160–2200 MHz bands.

Part 22, subpart E and part 101, subpart B of this chapter contain provisions governing the relocation of incumbent fixed microwave service licensees in the 2110–2150 MHz and 2160–2200 MHz bands.

[79 FR 32414, June 4, 2014]

PROTECTION OF INCUMBENT OPERATIONS

§ 27.1131 Protection of part 101 operations.

All AWS licensees, prior to initiating operations from any base or fixed station, must coordinate their frequency usage with co-channel and adjacent-channel incumbent, 47 CFR part 101 fixed-point-to-point microwave licensees operating in the 2110–2150 MHz and 2160–2200 MHz bands. Coordination shall be conducted in accordance with the provisions of § 24.237 of this chapter.

[79 FR 32414, June 4, 2014]

§ 27.1132 Protection of incumbent operations in the 2150–2160/62 MHz band.

All AWS licensees, prior to initiating operations from any base or fixed station in the 2110–2180 MHz band, shall follow the provisions of § 27.1255.

[79 FR 32414, June 4, 2014]

§ 27.1133 Protection of part 74 and part 78 operations.

AWS operators must protect previously licensed Broadcast Auxiliary Service (BAS) or Cable Television Radio Service (CARS) operations in the adjacent 2025–2110 MHz band. In satisfying this requirement AWS licensees must, before constructing and operating any base or fixed station, deter-

mine the location and licensee of all BAS or CARS stations authorized in their area of operation, and coordinate their planned stations with those licensees. In the event that mutually satisfactory coordination agreements cannot be reached, licensees may seek the assistance of the Commission, and the Commission may, at its discretion, impose requirements on one or both parties.

§ 27.1134 Protection of Federal Government operations.

(a) *Protection of Department of Defense operations in the 1710–1755 MHz band.* The Department of Defense (DoD) operates communications systems in the 1710–1755 MHz band at 16 protected facilities, nationwide. AWS licensees must accept any interference received from these facilities and must protect the facilities from interference. AWS licensees shall protect the facilities from interference by restricting the operation of their base and fixed stations from any locations that could potentially permit AWS mobile, fixed, and portable stations transmitting in the 1710–1755 MHz band to cause interference to government operations within the radii of operation of the 16 facilities (the radii of operation of each facility is indicated in the third column of Table 1 immediately following paragraph (a)(3) of this section). In addition, AWS licensees shall be required to coordinate any operations that could permit mobile, fixed, and portable stations to operate in the specified areas of the 16 facilities, as defined in paragraph (a)(3) of this section. Protection of these facilities in this manner shall take place under the following conditions:

(1) At the Yuma, Arizona and Cherry Point, North Carolina facilities, all operations shall be protected indefinitely.

(2) At the remaining 14 facilities, airborne and military test range operations shall be protected until such time as these systems are relocated to other spectrum, and precision guided munitions (PGM) operations shall be protected until such time as these systems are relocated to other spectrum or until PGM inventory at each facility is exhausted, whichever occurs first.

(3) AWS licensees whose transmit operations in the 1710–1755 MHz band consist of fixed or mobile operations with nominal transmit EIRP values of 100 mW or less and antenna heights of 1.6 meters above ground or less shall coordinate their services around the 16 sites at the distance specified in row a. of Table 2. AWS licensees whose transmit operations in the 1710–1755 MHz band consist of fixed or mobile operations with nominal transmit EIRP

values of 1 W or less and antenna heights of 10 meters above ground or less shall coordinate their services around the 16 sites at the distance specified in row b. of Table 2. These coordination distances shall be measured from the edge of the operational distances indicated in the third column of Table 1, and coordination with each affected DoD facility shall be accomplished through the Commander of the facility.

TABLE 1—PROTECTED DEPARTMENT OF DEFENSE FACILITIES

Location	Coordinates	Radius of operation (km)
Cherry Point, NC	34°58' N, 076°56' W	100
Yuma, AZ	32°32' N, 113°58' W	120
China Lake, CA	35°41' N, 117°41' W	120
Eglin AFB, FL	30°29' N, 086°31' W	120
Pacific Missile Test Range/Point Mugu, CA	34°07' N, 119°30' W	80
Nellis AFB, NV	36°14' N, 115°02' W	160
Hill AFB, UT	41°07' N, 111°58' W	160
Patuxent River, MD	38°17' N, 076°25' W	80
White Sands Missile Range, NM	33°00' N, 106°30' W	80
Fort Irwin, CA	35°16' N, 116°41' W	50
Fort Rucker, AL	31°13' N, 085°49' W	50
Fort Bragg, NC	35°09' N, 079°01' W	50
Fort Campbell, KY	36°41' N, 087°28' W	50
Fort Lewis, WA	47°05' N, 122°36' W	50
Fort Benning, GA	32°22' N, 084°56' W	50
Fort Stewart, GA	31°52' N, 081°37' W	50

TABLE 2—COORDINATION DISTANCES FOR THE PROTECTED DEPARTMENT OF DEFENSE FACILITIES

1710–1755 MHz transmit operations	Coordination distance (km)
a. EIRP ≤100 mW, antenna height ≤1.6 m AG	35
b. EIRP ≤1 W, antenna height ≤10 m AG	55

(b) *Protection of non-DoD operations in the 1710–1755 MHz and 1755–1761 MHz bands.* Until such time as non-DoD systems operating in the 1710–1755 MHz and 1755–1761 MHz bands are relocated to other spectrum, AWS licensees shall protect such systems by satisfying the appropriate provisions of TIA Telecommunications Systems Bulletin 10-F, “Interference Criteria for Microwave Systems,” May, 1994 (TSB 10-F).

(c) *Protection of Federal operations in the 1675–1710 MHz band—(1) 27 Protection Zones.* Within 27 Protection Zones, prior to operating a base station that enables mobile or portable stations to transmit in the 1695–1710 MHz band, licensees must successfully coordinate such base station operations with Fed-

eral Government entities operating meteorological satellite Earth-station receivers in the 1675–1710 MHz band. See 47 CFR 2.106, footnote US 88, for the 27 Protection Zones and other details.

(2) *Operation outside of 27 Protection Zones.* Non-Federal operations, for mobile and portable stations operating at a maximum EIRP of 20 dBm, are permitted outside of the protection zones without coordination. All non-Federal operations for mobile and portables operating at a maximum EIRP of greater than 20 dBm and up to 30 dBm must be coordinated nationwide. All such operations may not cause harmful interference to the Federal operations protected in 47 CFR 2.106, footnote US 88.

(3) *Interference.* If protected Federal operations receive harmful interference from AWS operations in the 1695–1710 MHz band, an AWS licensee must, upon notification, modify its operations and/or technical parameters as necessary to eliminate the interference.

(4) *Point of contact.* AWS licensees in the 1695–1710 MHz band must provide and maintain a point of contact at all times so that immediate contact can be made should interference against protected Federal sites occur.

(5) *Coordination procedures.* Federal use of the radio spectrum is generally governed by the National Telecommunications and Information Administration (NTIA) while non-Federal use is governed by the Commission. As such, any guidance or details concerning Federal/non-Federal coordination must be issued jointly by NTIA and the Commission. The Commission may jointly issue with NTIA one or more public notices with guidance or details concerning the coordination procedures for the 1695–1710 MHz band.

(6) *Requirements for licensees operating in the 1710–1755 MHz band.* AWS licensees operating fixed stations in the 1710–1755 MHz band, if notified that such stations are causing interference to radiosonde receivers operating in the Meteorological Aids Service in the 1675–1700 MHz band or a meteorological-satellite earth receiver operating in the Meteorological-Satellite Service in the 1675–1710 MHz band, shall be required to modify the stations’ location and/or technical parameters as necessary to eliminate the interference.

(d) *Recognition of NASA Goldstone facility operations in the 2110–2120 MHz band.* The National Aeronautics and Space Administration (NASA) operates the Deep Space Network (DSN) in the 2110–2120 MHz band at Goldstone, California (see Table 3). NASA will continue its operations of high power transmitters (nominal EIRP of 105.5 dBW with EIRP up to 119.5 dBW used under emergency conditions) in this band at this location. AWS licensees must accept any interference received from the Goldstone DSN facility in this band.

TABLE 3—LOCATION OF THE NASA GOLDSTONE DEEP SPACE FACILITY

Location	Coordinates	Maximum transmitter output power
Goldstone, California	35°18' N 116°54' W	500 kW

(e) *Protection of Federal operations in the 2200–2290 MHz band—(1) Default emission limits.* Except as provided in paragraph (e)(2) of this section, the following default out-of-band emissions limits shall apply for AWS-4 operations in the 2180–2200 MHz band.

(i) For these AWS-4 operations, the power of any emissions on all frequencies between 2200 and 2290 MHz shall not exceed an EIRP of –100.6 dBW/4 kHz.

(ii) No AWS-4 base station operating in the 2180–2200 MHz band shall be located less than 820 meters from a U.S. Earth Station facility operating in the 2200–2290 MHz band.

(2) *Agreements between AWS-4 operators and Federal government entities.* The out-of-band emissions limits in paragraph (e)(1) of this section may be

modified by the private contractual agreement of licensees of AWS-4 operating authority and Federal government entities operating in the 2200–2290 MHz band. Such agreement shall be transmitted to the Commission by the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce. A licensee of AWS-4 operating authority who is a party to such an agreement must maintain a copy of the agreement in its station files and disclose it, upon request, to prospective AWS-4 assignees, transferees, or spectrum lessees, to Federal operators, and to the Commission.

(f) *Protection of Federal operations in the 1755–1780 MHz band.* The Federal Government operates communications

systems in the 1755–1780 MHz band. Certain systems are expected to continue to operate in the band indefinitely. All other operations will be relocating to other frequencies or otherwise cease operations in the 1755–1780 MHz band in accordance with 47 CFR part 301. Until such a time as Federal operations in the 1755–1780 MHz bands vacate this spectrum, AWS licensees shall protect such systems and must accept any interference received from these Federal operations. See 47 CFR 2.106, footnote US 91, for details. AWS licensees must successfully coordinate proposed operations with all Federal incumbents prior to operation as follows:

(1) *Protection Zone(s)*. A protection zone is established for each Federal operation pursuant to 47 CFR 2.106, footnote US 91. Unless otherwise specified in later Commission actions, the default protection zone is nationwide. A base station which enables mobile or portable stations to transmit in the 1755–1780 MHz band may not operate within the Protection Zone(s) of a Federal operation until the licensee successfully coordinates such base station operations with Federal Government entities as follows depending on the type of Federal incumbent authorization:

(i) *Federal US&P Assignments*. Each AWS licensee must coordinate with each Federal agency that has U.S. and Possessions (US&P) authority prior to its first operations in its licensed area to reach a coordination arrangement with each US&P agency on an operator-to-operator basis. (Agencies with U.S. and Possessions (US&P) authority do not operate nationwide and may be able to share, prior to relocation, in some areas.)

(ii) *Other Federal Assignments*. Each AWS licensee must successfully coordinate all base station operations within a Protection Zone with the Federal incumbents. The default requirement is a nationwide coordination zone with possible revisions to the Protection Zone and other details to be announced in a Joint FCC/NTIA public notice.

(2) *Interference*. If protected Federal operations receive harmful interference from AWS operations in the 1755–1780 MHz band, an AWS licensee must, upon notification, modify its op-

erations and/or technical parameters as necessary to eliminate the interference.

(3) *Point of contact*. AWS licensees in the 1755–1780 MHz band must provide and maintain a point of contact at all times so that immediate contact can be made should interference against protected Federal operations occur.

(4) *Coordination procedures*. Federal use of the radio spectrum is generally governed by the National Telecommunications and Information Administration (NTIA) while non-Federal use is governed by the Commission. As such, any guidance or details concerning Federal/non-Federal coordination must be issued jointly by NTIA and the Commission. The Commission may jointly issue with NTIA one or more public notices with guidance or details concerning the coordination procedures for the 1755–1780 MHz band.

[69 FR 5716, Feb. 6, 2004, as amended at 73 FR 50571, Aug. 27, 2008; 78 FR 8270, Jan. 5, 2013; 79 FR 32414, June 4, 2014]

§ 27.1135 Protection of non-Federal Government Meteorological-Satellite operations.

AWS licensees operating fixed stations in the 1710–1755 MHz band, if notified that such stations are causing interference to meteorological-satellite earth receivers operating in the Meteorological-Satellite Service in the 1675–1710 MHz band, shall be required to modify the stations' location and/or technical parameters as necessary to eliminate the interference.

§ 27.1136 Protection of mobile satellite services in the 2000–2020 MHz and 2180–2200 MHz bands.

An AWS licensee of the 2000–2020 MHz and 2180–2200 MHz bands must accept any interference received from duly authorized mobile satellite service operations in these bands. Any such AWS licensees must protect mobile satellite service operations in these bands from harmful interference.

[78 FR 8270, Jan. 5, 2013]

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§ 27.1164

COST-SHARING POLICIES GOVERNING MICROWAVE RELOCATION FROM THE 2110-2150 MHZ AND 2160-2200 MHZ BANDS

SOURCE: Sections 27.1160 through 27.1174 appear at 71 FR 29835, May 24, 2006, unless otherwise noted.

§ 27.1160 Cost-sharing requirements for AWS.

Frequencies in the 2110-2150 MHz and 2160-2200 MHz bands listed in § 101.147 of this chapter have been reallocated from Fixed Microwave Services (FMS) to use by AWS (as reflected in § 2.106 of this chapter). In accordance with procedures specified in § 22.602 and §§ 101.69 through 101.82 of this chapter, AWS entities are required to relocate the existing microwave licensees in these bands if interference to the existing microwave licensee would occur. All AWS entities that benefit from the clearance of this spectrum by other AWS entities or by a voluntarily relocating microwave incumbent must contribute to such relocation costs. AWS entities may satisfy their reimbursement requirement by entering into private cost-sharing agreements or agreeing to terms other than those specified in § 27.1164. However, AWS entities are required to reimburse other AWS entities or voluntarily relocating microwave incumbents that incur relocation costs and are not parties to the alternative agreement. In addition, parties to a private cost-sharing agreement may seek reimbursement through the clearinghouse (as discussed in § 27.1162) from AWS entities or other Emerging Technologies (ET) entities, including Mobile Satellite Service (MSS) opera-

tors (for Ancillary Terrestrial Component (ATC) base stations), that are not parties to the agreement. The cost-sharing plan is in effect during all phases of microwave relocation specified in §§ 22.602 and 101.69 of this chapter. If an AWS licensee enters into a spectrum leasing arrangement (as set forth in part 1, subpart X of this chapter) and the spectrum lessee triggers a cost-sharing obligation, the licensee is the AWS entity responsible for satisfying the cost-sharing obligations under §§ 27.1160-27.1174.

[71 FR 29835, May 24, 2006, as amended at 78 FR 8270, Feb. 5, 2013]

§ 27.1162 Administration of the Cost-Sharing Plan.

The Wireless Telecommunications Bureau, under delegated authority, will select one or more entities to operate as a neutral, not-for-profit clearinghouse(s). This clearinghouse(s) will administer the cost-sharing plan by, *inter alia*, determining the cost-sharing obligation of AWS and other ET entities for the relocation of FMS incumbents from the 2110-2150 MHz and 2160-2200 MHz bands. The clearinghouse filing requirements (see §§ 27.1166(a), 27.1170) will not take effect until an administrator is selected.

§ 27.1164 The cost-sharing formula.

An AWS relocater who relocates an interfering microwave link, *i.e.*, one that is in all or part of its market area and in all or part of its frequency band or a voluntarily relocating microwave incumbent, is entitled to *pro rata* reimbursement based on the following formula:

$$R_N = \frac{C}{N} \times \frac{[120 - (T_m)]}{120}$$

(a) R_N equals the amount of reimbursement.

(b) C equals the actual cost of relocating the link(s). Actual relocation costs include, but are not limited to,

such items as: Radio terminal equipment (TX and/or RX—antenna, necessary feed lines, MUX/Modems); towers and/or modifications; back-up

power equipment; monitoring or control equipment; engineering costs (design/path survey); installation; systems testing; FCC filing costs; site acquisition and civil works; zoning costs; training; disposal of old equipment; test equipment (vendor required); spare equipment; project management; prior coordination notification under § 101.103(d) of this chapter; site lease renegotiation; required antenna upgrades for interference control; power plant upgrade (if required); electrical grounding systems; Heating Ventilation and Air Conditioning (HVAC) (if required); alternate transport equipment; and leased facilities. Increased recurring costs represent part of the actual cost of relocation and, even if the compensation to the incumbent is in the form of a commitment to pay five years of charges, the AWS or MSS/ATC relocater is entitled to seek immediate reimbursement of the lump sum amount based on present value using current interest rates, provided it has entered into a legally binding agreement to pay the charges. *C* also includes voluntarily relocating microwave incumbent's independent third party appraisal of its compensable relocation costs and incumbent transaction expenses that are directly attributable to the relocation, subject to a cap of two percent of the "hard" costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. *C* may not exceed \$250,000 per paired link, with an additional \$150,000 permitted if a new or modified tower is required.

(c) *N* equals the number of AWS and MSS/ATC entities that have triggered a cost-sharing obligation. For the AWS relocater, *N* = 1. For the next AWS entity triggering a cost-sharing obligation, *N* = 2, and so on. In the case of a voluntarily relocating microwave incumbent, *N* = 1 for the first AWS entity triggering a cost-sharing obligation. For the next AWS or MSS/ATC entity triggering a cost-sharing obligation, *N* = 2, and so on.

(d) *T_m* equals the number of months that have elapsed between the month the AWS or MSS/ATC relocater or voluntarily relocating microwave incumbent obtains reimbursement rights for

the link and the month in which an AWS entity triggers a cost-sharing obligation. An AWS or MSS/ATC relocater obtains reimbursement rights for the link on the date that it signs a relocation agreement with a microwave incumbent. A voluntarily relocating microwave incumbent obtains reimbursement rights for the link on the date that the incumbent notifies the Commission that it intends to discontinue, or has discontinued, the use of the link, pursuant to § 101.305 of the Commission's rules.

§ 27.1166 Reimbursement under the Cost-Sharing Plan.

(a) *Registration of reimbursement rights.* Claims for reimbursement under the cost-sharing plan are limited to relocation expenses incurred on or after the date when the first AWS license is issued in the relevant AWS band (start date). If a clearinghouse is not selected by that date (see § 27.1162) claims for reimbursement (see § 27.1166) and notices of operation (see § 27.1170) for activities that occurred after the start date but prior to the clearinghouse selection must be submitted to the clearinghouse within 30 calendar days of the selection date.

(1) To obtain reimbursement, an AWS relocater must submit documentation of the relocation agreement to the clearinghouse within 30 calendar days of the date a relocation agreement is signed with an incumbent. In the case of involuntary relocation, an AWS relocater must submit documentation of the relocated system within 30 calendar days after the end of the relocation.

(2) To obtain reimbursement, a voluntarily relocating microwave incumbent must submit documentation of the relocation of the link to the clearinghouse within 30 calendar days of the date that the incumbent notifies the Commission that it intends to discontinue, or has discontinued, the use of the link, pursuant to § 101.305 of the Commission's rules.

(b) *Documentation of expenses.* Once relocation occurs, the AWS relocater, or the voluntarily relocating microwave incumbent, must submit documentation itemizing the amount spent for items specifically listed in

§ 27.1164(b), as well as any reimbursable items not specifically listed in § 27.1164(b) that are directly attributable to actual relocation costs. Specifically, the AWS relocator, or the voluntarily relocating microwave incumbent must submit, in the first instance, only the uniform cost data requested by the clearinghouse along with a copy, without redaction, of either the relocation agreement, if any, or the third party appraisal described in (b)(1) of this section, if relocation was undertaken by the microwave incumbent. AWS relocators and voluntarily relocating microwave incumbents must maintain documentation of cost-related issues until the applicable sunset date and provide such documentation upon request, to the clearinghouse, the Commission, or entrants that trigger a cost-sharing obligation. If an AWS relocator pays a microwave incumbent a monetary sum to relocate its own facilities, the AWS relocator must estimate the costs associated with relocating the incumbent by itemizing the anticipated cost for items listed in § 27.1164(b). If the sum paid to the incumbent cannot be accounted for, the remaining amount is not eligible for reimbursement.

(1) *Third party appraisal.* The voluntarily relocating microwave incumbent, must also submit an independent third party appraisal of its compensable relocation costs. The appraisal should be based on the actual cost of replacing the incumbent's system with comparable facilities and should exclude the cost of any equipment upgrades or items outside the scope of § 27.1164(b).

(2) *Identification of links.* The AWS relocator or the voluntarily relocating microwave incumbent must identify the particular link associated with appropriate expenses (*i.e.*, costs may not be averaged over numerous links). Where the AWS relocator or voluntarily relocating microwave incumbent relocates both paths of a paired channel microwave link (*e.g.*, 2110–2130 MHz with 2160–2180 MHz and 2130–2150 MHz with 2180–2200 MHz), the AWS relocator or voluntarily relocating microwave incumbent must identify the expenses associated with each paired microwave link.

(c) *Full Reimbursement.* An AWS relocator who relocates a microwave link that is either fully outside its market area or its licensed frequency band may seek full reimbursement through the clearinghouse of compensable costs, up to the reimbursement cap as defined in § 27.1164(b). Such reimbursement will not be subject to depreciation under the cost-sharing formula.

(d) *Good Faith Requirement.* New entrants and incumbent licensees are expected to act in good faith in satisfying the cost-sharing obligations under §§ 27.1160 through 27.1174. The requirement to act in good faith extends to, but is not limited to, the preparation and submission of the documentation required in paragraph (b) of this section.

(e) *MSS Participation in the Clearinghouse.* MSS operators are not required to submit reimbursements to the clearinghouse for links relocated due to interference from MSS space-to-Earth downlink operations, but may elect to do so, in which case the MSS operator must identify the reimbursement claim as such and follow the applicable procedures governing reimbursement in part 27. MSS reimbursement rights and cost-sharing obligations for space-to-Earth downlink operations are governed by § 101.82 of this chapter.

(f) *Reimbursement for Self-relocating FMS links in the 2130–2150 MHz and 2180–2200 MHz bands.* Where a voluntarily relocating microwave incumbent relocates a paired microwave link with paths in the 2130–2150 MHz and 2180–2200 MHz bands, it may not seek reimbursement from MSS operators, but is entitled to reimbursement from the first AWS beneficiary for its actual costs for relocating the paired link, subject to the reimbursement cap in § 27.1164(b). This amount is subject to depreciation as specified in § 27.1164(b). An AWS licensee who is obligated to reimburse relocation costs under this rule is entitled to obtain reimbursement from other AWS beneficiaries in accordance with §§ 27.1164 and 27.1168. For purposes of applying the cost-sharing formula relative to other AWS licensees that benefit from the self-relocation, depreciation shall run from the date on which the clearinghouse issues the notice of an obligation to reimburse the

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voluntarily relocating microwave incumbent.

[71 FR 29835, May 24, 2006, as amended at 78 FR 8270, Jan. 5, 2013]

§ 27.1168 Triggering a Reimbursement Obligation.

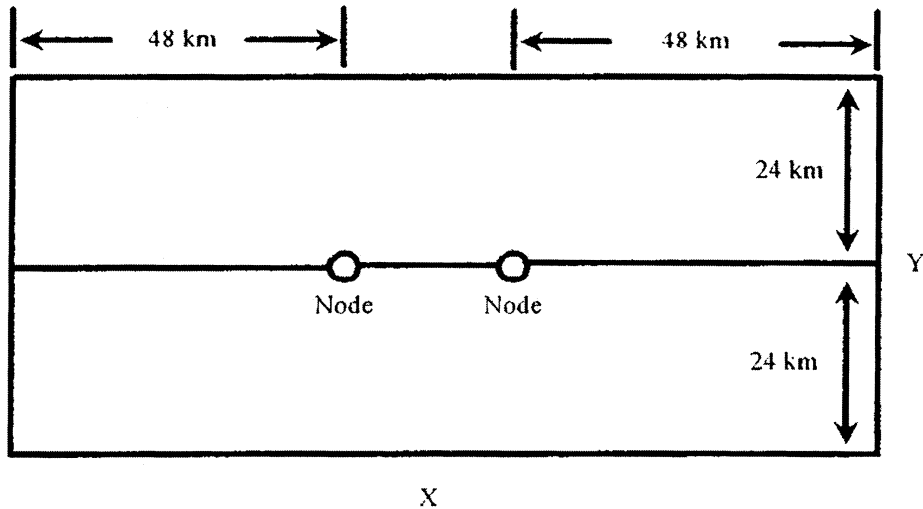
(a) The clearinghouse will apply the following test to determine when an AWS entity has triggered a cost-sharing obligation and therefore must pay an AWS relocater, MSS relocater, or a voluntarily relocating microwave incumbent in accordance with the formula detailed in § 27.1164:

(1) All or part of the relocated microwave link was initially co-channel with the licensed AWS band(s) of the AWS entity or the selected assignment of the MSS operator that seeks and obtains ATC authority (see § 25.149(a)(2)(i) of this chapter);

(2) An AWS relocater, MSS relocater or a voluntarily relocating microwave incumbent has paid the relocation costs of the microwave incumbent; and

(3) The AWS or MSS entity is operating or preparing to turn on a fixed base station at commercial power and the fixed base station is located within a rectangle (Proximity Threshold) described as follows:

(i) The length of the rectangle shall be x where x is a line extending through both nodes of the microwave link to a distance of 48 kilometers (30 miles) beyond each node. The width of the rectangle shall be y where y is a line perpendicular to x and extending for a distance of 24 kilometers (15 miles) on both sides of x . Thus, the rectangle is represented as follows:



(ii) If the application of the Proximity Threshold Test indicates that a reimbursement obligation exists, the clearinghouse will calculate the reimbursement amount in accordance with the cost-sharing formula and notify the AWS entity of the total amount of its reimbursement obligation.

(b) Once a reimbursement obligation is triggered, the AWS entity may not avoid paying its cost-sharing obliga-

tion by deconstructing or modifying its facilities.

[71 FR 29835, May 24, 2006, as amended at 78 FR 8271, Jan. 5, 2013]

§ 27.1170 Payment issues.

Prior to initiating operations for a newly constructed site or modified existing site, an AWS entity is required to file a notice containing site-specific

data with the clearinghouse. The notice regarding the new or modified site must provide a detailed description of the proposed site's spectral frequency use and geographic location, including but not limited to the applicant's name and address, the name of the transmitting base station, the geographic coordinates corresponding to that base station, the frequencies and polarizations to be added, changed or deleted, and the emission designator. If a prior coordination notice (PCN) under § 101.103(d) of this chapter is prepared, AWS entities can satisfy the site-data filing requirement by submitting a copy of their PCN to the clearinghouse. AWS entities that file either a notice or a PCN have a continuing duty to maintain the accuracy of the site-specific data on file with the clearinghouse. Utilizing the site-specific data, the clearinghouse will determine if any reimbursement obligation exists and notify the AWS entity in writing of its repayment obligation, if any. When the AWS entity receives a written copy of such obligation, it must pay directly to the relocater the amount owed within 30 calendar days.

[78 FR 8271, Jan. 5, 2013]

§ 27.1172 Dispute Resolution Under the Cost-Sharing Plan.

(a) Disputes arising out of the cost-sharing plan, such as disputes over the amount of reimbursement required, must be brought, in the first instance, to the clearinghouse for resolution. To the extent that disputes cannot be resolved by the clearinghouse, parties are encouraged to use expedited Alternative Dispute Resolution (ADR) procedures, such as binding arbitration, mediation, or other ADR techniques.

(b) *Evidentiary requirement.* Parties of interest contesting the clearinghouse's determination of specific cost-sharing obligations must provide evidentiary support to demonstrate that their calculation is reasonable and made in good faith. Specifically, these parties are expected to exercise due diligence to obtain the information necessary to prepare an independent estimate of the relocation costs in question and to file the independent estimate and supporting documentation with the clearinghouse.

§ 27.1174 Termination of cost-sharing obligations.

The cost-sharing plan will sunset for all AWS and MSS entities on the same date on which the relocation obligation for the subject AWS band (*i.e.*, 2110–2150 MHz, 2160–2175 MHz, 2175–2180 MHz, 2180–2200 MHz) in which the relocated FMS link was located terminates. AWS or MSS entrants that trigger a cost-sharing obligation prior to the sunset date must satisfy their payment obligation in full.

[78 FR 8271, Feb. 5, 2013]

COST-SHARING POLICIES GOVERNING BROADBAND RADIO SERVICE RELOCATION FROM THE 2150–2160/62 MHz BAND

SOURCE: Sections 27.1176 through 27.1190 appear at 71 FR 29835, May 24, 2006, unless otherwise noted.

§ 27.1176 Cost-sharing requirements for AWS in the 2150–2160/62 MHz band.

(a) Frequencies in the 2150–2160/62 MHz band have been reallocated from the Broadband Radio Service (BRS) to AWS. All AWS entities who benefit from another AWS entity's clearance of BRS incumbents from this spectrum, including BRS incumbents occupying the 2150–2162 MHz band on a primary basis, must contribute to such relocation costs. Only AWS entrants that relocate BRS incumbents are entitled to such reimbursement.

(b) AWS entities may satisfy their reimbursement requirement by entering into private cost-sharing agreements or agreeing to terms other than those specified in § 27.1180. However, AWS entities are required to reimburse other AWS entities that incur relocation costs and are not parties to the alternative agreement. In addition, parties to a private cost-sharing agreement may seek reimbursement through the clearinghouse (as discussed in § 27.1178) from AWS entities that are not parties to the agreement. The cost-sharing plan is in effect during all phases of BRS relocation until the end of the period specified in § 27.1190. If an AWS licensee enters into a spectrum leasing arrangement and the spectrum lessee triggers a cost-sharing obligation, the

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licensee is the AWS entity responsible for satisfying cost-sharing obligations under these rules.

§ 27.1178 Administration of the Cost-Sharing Plan.

The Wireless Telecommunications Bureau, under delegated authority, will select one or more entities to operate as a neutral, not-for-profit clearinghouse(s). This clearinghouse(s) will administer the cost-sharing plan by, *inter alia*, determining the cost-sharing obligations of AWS entities for the relocation of BRS incumbents from the 2150–2162 MHz band. The clearinghouse filing requirements (*see* §§ 27.1182(a), 27.1186) will not take effect until an administrator is selected.

§ 27.1180 The cost-sharing formula.

(a) An AWS licensee that relocates a BRS system with which it interferes is entitled to *pro rata* reimbursement based on the cost-sharing formula specified in § 27.1164, except that the depreciation factor shall be $[180 - T_m]/180$, and the variable *C* shall be applied as set forth in paragraph (b) of this section.

(b) *C* is the actual cost of relocating the system, and includes, but is not limited to, such items as: Radio terminal equipment (TX and/or RX—antenna, necessary feed lines, MUX/Modems); towers and/or modifications; back-up power equipment; monitoring or control equipment; engineering costs (design/path survey); installation; systems testing; FCC filing costs; site acquisition and civil works; zoning costs; training; disposal of old equipment; test equipment (vendor required); spare equipment; project management; site lease renegotiation; required antenna upgrades for interference control; power plant upgrade (if required); electrical grounding systems; Heating Ventilation and Air Conditioning (HVAC) (if required); alternate transport equipment; leased facilities; and end user units served by the base station that is being relocated. In addition to actual costs, *C* may include the cost of an independent third party appraisal conducted pursuant to § 27.1182(a)(3) and incumbent transaction expenses that are directly attributable to the relocation, subject

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to a cap of two percent of the “hard” costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. There is no cap on the actual costs of relocation.

(c) An AWS system shall be considered an interfering system for purposes of this rule if the AWS system is in all or part of the BRS frequency band and operates within line of sight to BRS operations under the applicable test specified in § 27.1184. An AWS relocater that relocates a BRS system with which it does not interfere is entitled to full reimbursement, as specified in § 27.1182(c).

§ 27.1182 Reimbursement under the Cost-Sharing Plan.

(a) *Registration of reimbursement rights.* (1) To obtain reimbursement, an AWS relocater must submit documentation of the relocation agreement to the clearinghouse within 30 calendar days of the date a relocation agreement is signed with an incumbent. In the case of involuntary relocation, an AWS relocater must submit documentation of the relocated system within 30 calendar days after the end of the one-year trial period.

(2) Registration of any BRS system shall include:

(i) A description of the system’s frequency use;

(ii) If the system exclusively provides one-way transmissions to subscribers, the Geographic Service Area of the system; and

(iii) If the system does not exclusively provide one-way transmission to subscribers, the system hub antenna’s geographic location and the above ground level height of the system’s receiving antenna centerline.

(3) The AWS relocater must also include with its system registration an independent third party appraisal of the compensable relocation costs. The appraisal should be based on the actual cost of replacing the incumbent’s system with comparable facilities and should exclude the cost of any equipment upgrades that are not necessary to the provision of comparable facilities. An AWS relocater may submit

registration without a third party appraisal if it consents to binding resolution by the clearinghouse of any good faith cost disputes regarding the reimbursement claim, under the following standard: The relocater shall bear the burden of proof, and be required to demonstrate by clear and convincing evidence that its request does not exceed the actual cost of relocating the relevant BRS system or systems to comparable facilities. Failure to satisfy this burden of proof will result in loss of rights to subsequent reimbursement of the disputed costs from any AWS licensee.

(b) *Documentation of expenses.* Once relocation occurs, the AWS relocater must submit documentation itemizing the amount spent for items specifically listed in § 27.1180(b), as well as any reimbursable items not specifically listed in § 27.1180(b) that are directly attributable to actual relocation costs. Specifically, the AWS relocater must submit, in the first instance, only the uniform cost data requested by the clearinghouse along with copies, without redaction, of the relocation agreement, if any, and the third party appraisal described in (a)(3), of this section, if prepared. The AWS relocater must identify the particular system associated with appropriate expenses (*i.e.*, costs may not be averaged over numerous systems). If an AWS relocater pays a BRS incumbent a monetary sum to relocate its own facilities in whole or in part, the AWS relocater must itemize the actual costs to the extent determinable, and otherwise must estimate the actual costs associated with relocating the incumbent and itemize these costs. If the sum paid to the incumbent cannot be accounted for, the remaining amount is not eligible for reimbursement. All AWS relocaters seeking reimbursement through the clearinghouse have an ongoing duty to maintain all relevant records of BRS relocation-related expenses until the sunset of cost-sharing obligations, and to provide, upon request, such documentation, including a copy of the independent appraisal if one was conducted, to the clearinghouse, the Commission, or AWS entrants that trigger a cost-sharing obligation.

(c) *Full reimbursement.* An AWS relocater who relocates a BRS system that is either:

(1) Wholly outside its frequency band; or

(2) Not within line of sight of the relocater's transmitting base station may seek full reimbursement through the clearinghouse of compensable costs. Such reimbursement will not be subject to depreciation under the cost-sharing formula.

(d) *Good Faith Requirement.* New entrants and incumbent licensees are expected to act in good faith in satisfying the cost-sharing obligations under §§ 27.1176 through 27.1190. The requirement to act in good faith extends to, but is not limited to, the preparation and submission of the documentation required in paragraph (b) of this section.

§ 27.1184 Triggering a reimbursement obligation.

(a) The clearinghouse will apply the following test to determine when an AWS entity has triggered a cost-sharing obligation and therefore must pay an AWS relocater of a BRS system in accordance with the formula detailed in § 27.1180:

(1) All or part of the relocated BRS system was initially co-channel with the licensed AWS band(s) of the AWS entity;

(2) An AWS relocater has paid the relocation costs of the BRS incumbent; and

(3) The other AWS entity has turned on or is preparing to turn on a fixed base station at commercial power and the incumbent BRS system would have been within the line of sight of the AWS entity's fixed base station, defined as follows.

(i) For a BRS system using the 2150–2160/62 MHz band exclusively to provide one-way transmissions to subscribers, the clearinghouse will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee's geographic service area (GSA), based on the following criteria: use of 9.1 meters (30 feet) for the receiving antenna height, use of the actual transmitting antenna height and terrain elevation, and assumption of 4/3 Earth radius propagation conditions.

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Terrain elevation data must be obtained from the U.S. Geological Survey (USGS) 3-second database. All coordinates used in carrying out the required analysis shall be based upon use of NAD-83.

(ii) For all other BRS systems using the 2150-2160/62 MHz band, the clearinghouse will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee's receive station hub using the method prescribed in "Methods for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems. MM Docket 97-217," in Amendment of 47 CFR parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, MM Docket No. 97-217, *Report and Order on Further Reconsideration and Further Notice of Proposed Rule-making*, 15 FCC Rcd 14566 at 14610, Appendix D.

(b) If the application of the trigger test described in paragraphs (a)(3)(i) and (ii) of this section, indicates that a reimbursement obligation exists, the clearinghouse will calculate the reimbursement amount in accordance with the cost-sharing formula and notify the subsequent AWS entity of the total amount of its reimbursement obligation.

(c) Once a reimbursement obligation is triggered, the AWS entity may not avoid paying its cost-sharing obligation by deconstructing or modifying its facilities.

§ 27.1186 Payment issues.

Payment of cost-sharing obligations for the relocation of BRS systems in the 2150-60/62 MHz band is subject to the rules set forth in § 27.1170. If an AWS licensee is initiating operations for a newly constructed site or modified existing site in licensed bands overlapping the 2150-2160/62 MHz band, the AWS licensee must file with the clearinghouse, in addition to the site-specific data required by § 27.1170, the above ground level height of the transmitting antenna centerline. AWS entities have a continuing duty to main-

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tain the accuracy of the site-specific data on file with the clearinghouse.

[71 FR 29835, May 24, 2006, as amended at 72 FR 41939, Aug. 1, 2007]

§ 27.1188 Dispute resolution under the Cost-Sharing Plan.

(a) Disputes arising out of the cost-sharing plan, such as disputes over the amount of reimbursement required, must be brought, in the first instance, to the clearinghouse for resolution. To the extent that disputes cannot be resolved by the clearinghouse, parties are encouraged to use expedited Alternative Dispute Resolution (ADR) procedures, such as binding arbitration, mediation, or other ADR techniques.

(b) *Evidentiary requirement.* Parties of interest contesting the clearinghouse's determination of specific cost-sharing obligations must provide evidentiary support to demonstrate that their calculation is reasonable and made in good faith. Specifically, these parties are expected to exercise due diligence to obtain the information necessary to prepare an independent estimate of the relocation costs in question and to file the independent estimate and supporting documentation with the clearinghouse.

§ 27.1190 Termination of cost-sharing obligations.

The plan for cost-sharing in connection with BRS relocation will sunset for all AWS entities fifteen years after the relocation sunset period for BRS relocation commences, *i.e.*, fifteen years after the first AWS licenses are issued in any part of the 2150-2162 MHz band. AWS entrants that trigger a cost-sharing obligation prior to the sunset date must satisfy their payment obligation in full.

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SOURCE: 69 FR 72034, Dec. 10, 2004, unless otherwise noted.

§ 27.1200 Change to BRS and EBS.

(a) As of January 10, 2005, licensees assigned to the Multipoint Distribution Service (MDS) and the Multichannel

Multipoint Distribution Service (MMDS) shall be reassigned to the Broadband Radio Service (BRS) and licensees in the Instructional Television Fixed Service (ITFS) shall be reassigned to the Educational Broadband Service (EBS).

§ 27.1201 [Reserved]

§ 27.1202 Cable/BRS cross-ownership.

(a) Initial or modified authorizations for BRS stations may not be granted to a cable operator if a portion of the BRS station's protected services area is within the portion of the franchise area actually served by the cable operator's cable system and the cable operator will be using the BRS station as a multichannel video programming distributor (as defined in §76.64(d) of this chapter). No cable operator may acquire such authorization either directly, or indirectly through an affiliate owned, operated, or controlled by or under common control with a cable operator if the cable operator will use the BRS station as a multichannel video programming distributor.

(b) No licensee of a station in this service may lease transmission time or capacity to a cable operator either directly, or indirectly through an affiliate owned, operated, controlled by, or under common control with a cable operator, if a portion of the BRS station's protected services area is within the portion of the franchise area actually served by the cable operator's cable system the cable operator will use the BRS station as a multichannel video programming distributor.

(c) Applications for new stations, station modifications, assignments or transfers of control by cable operators of BRS stations shall include a showing that no portion of the GSA of the BRS station is within the portion of the franchise area actually served by the cable operator's cable system, or of any entity indirectly affiliated, owned, operated, controlled by, or under common control with the cable operator. Alternatively, the cable operator may certify that it will not use the BRS station to distribute multichannel video programming.

(d) In applying the provisions of this section, ownership and other interests

in BRS licensees or cable television systems will be attributed to their holders and deemed cognizable pursuant to the following criteria:

(1) Except as otherwise provided herein, partnership and direct ownership interests and any voting stock interest amounting to 5% or more of the outstanding voting stock of a corporate BRS licensee or cable television system will be cognizable;

(2) Investment companies, as defined in 15 U.S.C. 80a-3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have a cognizable interest only if they hold 20% or more of the outstanding voting stock of a corporate BRS licensee or cable television system, or if any of the officers or directors of the BRS licensee or cable television system are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(3) Attribution of ownership interests in a BRS licensee or cable television system that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50%, it shall not be included for purposes of this multiplication. For purposes of paragraph (d)(9) of this section, attribution of ownership interests in a BRS licensee or cable television system that are held indirectly by any party through one or more intervening organizations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, and the ownership percentage for any link in

the chain that exceeds 50% shall be included for purposes of this multiplication. For example, except for purposes of paragraph (d)(9) of this section, if A owns 10% of company X, which owns 60% of company Y, which owns 25% of “Licensee,” then X’s interest in “Licensee” would be 25% (the same as Y’s interest because X’s interest in Y exceeds 50%), and A’s interest in “Licensee” would be 2.5% (0.1×0.25). Under the 5% attribution benchmark, X’s interest in “Licensee” would be cognizable, while A’s interest would not be cognizable. For purposes of paragraph (d)(9) of this section, X’s interest in “Licensee” would be 15% (0.6×0.25) and A’s interest in “Licensee” would be 1.5% ($0.1 \times 0.6 \times 0.25$). Neither interest would be attributed under paragraph (d)(9) of this section.

(4) Voting stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust. An otherwise qualified trust will be ineffective to insulate the grantor or beneficiary from attribution with the trust’s assets unless all voting stock interests held by the grantor or beneficiary in the relevant BRS licensee or cable television system are subject to said trust.

(5) Subject to paragraph (d)(9) of this section, holders of non-voting stock shall not be attributed an interest in the issuing entity. Subject to paragraph (d)(9) of this section, holders of debt and instruments such as warrants, convertible debentures, options or other non-voting interests with rights of conversion to voting interests shall not be attributed unless and until conversion is effected.

(6)(i) A limited partnership interest shall be attributed to a limited partner unless that partner is not materially involved, directly or indirectly, in the management or operation of the BRS or cable television activities of the partnership and the licensee or system

so certifies. An interest in a Limited Liability Company (“LLC”) or Registered Limited Liability Partnership (“RLLP”) shall be attributed to the interest holder unless that interest holder is not materially involved, directly or indirectly, in the management or operation of the BRS or cable television activities of the partnership and the licensee or system so certifies.

(ii) For a licensee or system that is a limited partnership to make the certification set forth in paragraph (d)(6)(i) of this section, it must verify that the partnership agreement or certificate of limited partnership, with respect to the particular limited partner exempt from attribution, establishes that the exempt limited partner has no material involvement, directly or indirectly, in the management or operation of the BRS or cable television activities of the partnership. For a licensee or system that is an LLC or RLLP to make the certification set forth in paragraph (d)(6)(i) of this section, it must verify that the organizational document, with respect to the particular interest holder exempt from attribution, establishes that the exempt interest holder has no material involvement, directly or indirectly, in the management or operation of the BRS or cable television activities of the LLC or RLLP. Irrespective of the terms of the certificate of limited partnership or partnership agreement, or other organizational document in the case of an LLC or RLLP, however, no such certification shall be made if the individual or entity making the certification has actual knowledge of any material involvement of the limited partners, or other interest holders in the case of an LLC or RLLP, in the management or operation of the BRS or cable television businesses of the partnership or LLC or RLLP.

(iii) In the case of an LLC or RLLP, the licensee or system seeking installation shall certify, in addition, that the relevant state statute authorizing LLCs permits an LLC member to insulate itself as required by our criteria.

(7) Officers and directors of a BRS licensee or cable television system are considered to have a cognizable interest in the entity with which they are so associated. If any such entity engages

in businesses in addition to its primary business of BRS or cable television service, it may request the Commission to waive attribution for any officer or director whose duties and responsibilities are wholly unrelated to its primary business. The officers and directors of a parent company of a BRS licensee or cable television system, with an attributable interest in any such subsidiary entity, shall be deemed to have a cognizable interest in the subsidiary unless the duties and responsibilities of the officer or director involved are wholly unrelated to the BRS licensee or cable television system subsidiary, and a statement properly documenting this fact is submitted to the Commission. The officers and directors of a sister corporation of a BRS licensee or cable television system shall not be attributed with ownership of these entities by virtue of such status.

(8) Discrete ownership interests will be aggregated in determining whether or not an interest is cognizable under this section. An individual or entity will be deemed to have a cognizable investment if:

(i) The sum of the interests held by or through "passive investors" is equal to or exceeds 20 percent; or

(ii) The sum of the interests other than those held by or through "passive investors" is equal to or exceeds 5 percent; or

(iii) The sum of the interests computed under paragraph (d)(8)(i) of this section plus the sum of the interests computed under paragraph (d)(8)(ii) of this section equal to or exceeds 20 percent.

(9) Notwithstanding paragraphs (d)(5) and (d)(6) of this section, the holder of an equity or debt interest or interests in a BRS licensee or cable television system subject to the BRS/cable cross-ownership rule ("interest holder") shall have that interest attributed if:

(i) The equity (including all stockholdings, whether voting or nonvoting, common or preferred) and debt interest or interests, in the aggregate, exceed 33 percent of the total asset value (all equity plus all debt) of that BRS licensee or cable television system; and

(ii) The interest holder also holds an interest in a BRS licensee or cable television system that is attributable

under this section (other than this paragraph) and which operates in any portion of the franchise area served by that cable operator's cable system.

(10) The term "area served by a cable system" means any area actually passed by the cable operator's cable system and which can be connected for a standard connection fee.

(11) As used in this section "cable operator" shall have the same definition as in §76.5 of this chapter.

(e) The Commission will entertain requests to waive the restrictions in paragraph (a) of this section where necessary to ensure that all significant portions of the franchise area are able to obtain multichannel video service.

(f) The provisions of paragraphs (a) through (e) of this section will not apply to one BRS channel used to provide locally-produced programming to cable headends. Locally-produced programming is programming produced in or near the cable operator's franchise area and not broadcast on a television station available within that franchise area. A cable operator will be permitted one BRS channel for this purpose, and no more than one BRS channel may be used by a cable television company or its affiliate or lessor pursuant to this paragraph. The licensee for a cable operator providing local programming pursuant to a lease must include in a notice filed with the Wireless Telecommunications Bureau a cover letter explicitly identifying itself or its lessees as a local cable operator and stating that the lease was executed to facilitate the provision of local programming. The first application or the first lease notification in an area filed with the Commission will be entitled to the exemption. The limitations on one BRS channel per party and per area include any cable/BRS operations or cable/EBS operations. The cable operator must demonstrate in its BRS application that the proposed local programming will be provided within one year from the date its application is granted. Local programming service pursuant to a lease must be provided within one year of the date of the lease or one year of grant of the licensee's application for the leased channel, whichever is later. If a BRS license for

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these purposes is granted and the programming is subsequently discontinued, the license will be automatically forfeited the day after local programming service is discontinued.

(g) Applications filed by cable television companies, or affiliates, for BRS channels prior to February 8, 1990, will not be subject to the prohibitions of this section. Applications filed on February 8, 1990, or thereafter will be returned. Lease arrangements between cable and BRS entities for which a lease or a firm agreement was signed prior to February 8, 1990, will also not be subject to the prohibitions of this section. Leases between cable television companies, or affiliates, and BRS station licensees, conditional licensees, or applicants executed on February 8, 1990, or thereafter, are invalid.

(1) Applications filed by cable operators, or affiliates, for BRS channels prior to February 8, 1990, will not be subject to the prohibitions of this section. Except as provided in paragraph (g)(2) of this section, applications filed on February 8, 1990, or thereafter will be returned. Lease arrangements between cable and BRS entities for which a lease or a firm agreement was signed prior to February 8, 1990, will also not be subject to the prohibitions of this section. Except as provided in paragraph (g)(2) of this section, leases between cable operators, or affiliates, and BRS/EBS station licensees, conditional licensees, or applicants executed on or before February 8, 1990, or thereafter are invalid.

(2) Applications filed by cable operators, or affiliates for BRS channels after February 8, 1990, and prior to October 5, 1992, will not be subject to the prohibition of this section, if, pursuant to the then existing overbuild or rural exceptions, the applications were allowed under the then existing cable/BRS cross-ownership prohibitions. Lease arrangements between cable operators and BRS entities for which a lease or firm agreement was signed after February 8, 1990, and prior to October 5, 1992, will not be subject to the prohibitions of this section, if, pursuant to the then existing rural and overbuild exceptions, the lease arrangements were allowed.

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(3) The limitations on cable television ownership in this section do not apply to any cable operator in any franchise area in which a cable operator is subject to effective competition as determined under section 623(1) of the Communications Act.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006]

§ 27.1203 [Reserved]

§ 27.1204 EBS Tribal priority filing window.

(a) The Commission will specify by public notice a window filing period for applications for new EBS stations on rural Tribal Lands. EBS applications for new facilities will be accepted only during this window. Applications submitted prior to the window opening date identified in the public notice will be returned as premature. Applications submitted after the deadline will be dismissed with prejudice as untimely.

(b) Applicants in the Tribal priority filing window must demonstrate that they are eligible to file in that window. To be considered eligible for the Tribal priority window, an applicant must be:

(1) A federally recognized American Indian Tribe or Alaska Native Village; or an entity that is owned and controlled by a federally-recognized Tribe or a consortium of federally-recognized Tribes;

(2) Requesting a license on Tribal Land, which is defined to be any federally recognized Indian Tribe's reservation, pueblo or colony, including former reservations in Oklahoma, Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688) and Indian Allotments, see §54.400(e) of this chapter, as well as Hawaiian Home Lands—areas held in trust for native Hawaiians by the State of Hawaii, pursuant to the Hawaiian Homes Commission Act, 1920, July 9, 1921, 42 Stat 108, *et seq.*, as amended; and any lands designated prior to July 10, 2019, as Tribal Lands pursuant to the designation process contained in §54.412 of this chapter;

(3) Requesting a GSA in a rural area, which is defined to be lands that are not part of an urbanized area or urban

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cluster area with a population equal to or greater than 50,000; and

(4) Have a local presence on the Tribal Land for which they are applying.

(c) Following the close of the Tribal priority window, the Commission will issue a public notice of acceptance for filing of applications submitted pursuant to paragraph (b) of this section that meet technical and legal requirements and that are not in conflict with any other application filed during the window. Petitions to deny such applications may be filed within 30 days of such public notice. A copy of any petition to deny must be served on the applicant.

(d) If applications are filed in the Tribal priority window that are mutually exclusive, the Commission will use competitive bidding to resolve the mutual exclusivity. Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under Commission rules in this chapter.

(e) For non-mutually exclusive applications, the applications will be processed in accordance with procedures to be specified by the Wireless Telecommunications Bureau.

[84 FR 57365, Oct. 25, 2019, as amended at 85 FR 1284, Jan. 10, 2020]

§ 27.1205 EBS renewal standard.

In applying the renewal standard contained in § 1.949 of this chapter to EBS, for licenses initially issued after October 25, 2019, the applicable safe harbors are the buildout standards contained in § 27.14(u). For licenses initially issued before October 25, 2019, the applicable safe harbors are the buildout standards contained in § 27.14(o); provided, however, that the educational use safe harbor contained in § 27.14(o)(2) may only be used by a licensee that meets the eligibility requirements to hold an EBS license pursuant to the provisions of § 27.1201(a) contained in the edition of 47 CFR parts 20 through 39, revised as of October 1, 2017.

[84 FR 57365, Oct. 25, 2019]

§ 27.1206 Geographic service area.

(a) BRS:

(1) For BRS incumbent licenses granted before September 15, 1995, the geographic service area (GSA) is the area that is bounded by a circle having a 35 mile radius and centered at the station's reference coordinates, which was the previous PSA entitled to incumbent licensees prior to January 10, 2005, and is bounded by the chord(s) drawn between intersection points of the licensee's previous 35 mile PSA and those of respective adjacent market, co-channel licensees;

(2) For BRS BTA authorization holders, the GSA for a channel is the BTA, subject to the exclusion of overlapping, co-channel incumbent GSAs created on January 10, 2005.

(3) If an incumbent BRS license is cancelled or is forfeited, the GSA area of the incumbent station shall dissolve and the right to operate in that area automatically reverts to the GSA licensee that held the corresponding BTA.

(b) EBS:

(1) *Existing EBS licensees.* (i) The GSA of EBS licenses on the E and F channel groups is defined in § 27.1216. EBS licensees on the E and F channel groups are prohibited from expanding their GSAs.

(ii) For incumbent EBS licenses not in the E and F channel groups in effect as of October 25, 2019, the geographic service area (GSA) is the area that is bounded by a circle having a 35 mile radius and centered at the station's reference coordinates, which was the previous PSA entitled to incumbent licensees prior to January 10, 2005, and is bounded by the chord(s) drawn between intersection points of the licensee's previous 35 mile PSA and those of respective adjacent market, co-channel licensees.

(2) *New initial EBS licenses.* (i) For EBS licenses issued in the Tribal Priority Window, the GSA consists of the rural Tribal Land (as defined in § 27.1204(b)(3)) specified in the application.

(ii) For all other new initial licenses issued after April 27, 2020, the GSA is the county for which the license is issued, subject to the exclusion of overlapping, co-channel incumbent GSAs.

[84 FR 57365, Oct. 25, 2019]

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§ 27.1207 Service areas and authorizations.

(a) Initial authorizations for BRS granted after January 1, 2008, shall be blanket licenses for all BRS frequencies identified in § 27.5(i)(2). Except for incumbent BRS licenses, BRS service areas are the 1992 version of Basic Trading Areas (BTAs) defined by Rand McNally, or additional service areas similar to BTAs adopted by the Commission. The market area for each license will be listed on the license authorization. The following are additional BRS service areas in places where Rand McNally has not defined BTAs: American Samoa; Guam; Gulf of Mexico Zone A; Gulf of Mexico Zone B; Gulf of Mexico Zone C; Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The boundaries of Gulf of Mexico Zone A are from an area twelve nautical miles from the shoreline at mean high tide on the north and east, to the limit of the Outer Continental Shelf to the south, and to longitude 91°00' to the west. The boundaries of Gulf of Mexico Zone B are from an area twelve nautical miles from the shoreline at mean high tide on the north, to the limit of the Outer Continental Shelf to the south, to longitude 91°00' to the east, and to longitude 94°00' to the west. The boundaries of Gulf of Mexico Zone C are from an area twelve nautical miles from the shoreline at mean high tide on the north and west, to longitude 94°00' to the east, and to a line 281 kilometers from the reference point at Linares, N.L., Mexico on the southwest. The Mayaguez/Aguadilla-Ponce, PR, service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincón, Sabana Grande, Salinas, San German, Santa Isabel, Villalba and Yauco. The San Juan service area consists of all other municipios in Puerto Rico.

(b) For EBS initial licenses issued after October 25, 2019, except for licenses issued in the Tribal Priority

Window, the GSA is the county for which the license is issued, subject to the exclusion of overlapping, co-channel incumbent GSAs. For purposes of this subpart, counties are defined using the United States Census Bureau's data reflecting county legal boundaries and names valid through January 1, 2017. Except for licenses issued in the Tribal Priority Window, there shall be three initial authorizations issued in each county: One authorization for channels A1, A2, A3, B1, B2, B3, C1, C2, and C3; the second authorization for channels D1, D2, D3, JA1, JA2, JA3, JB1, JB2, JB3, JC1, JC2, JC3, JD1, JD2, JD3, A4, B4, C4, D4, and G4; the third authorization for channels G1, G2, G3, KG1, KG2, and KG3.

[84 FR 57366, Oct. 25, 2019]

§ 27.1208 Geographic area licensing.

(a) All BRS and EBS licenses are geographic area licenses. Blanket licenses cover all mobile and response stations. Pursuant to that geographic area license, incumbent licensees may modify their systems provided the modified system complies with the applicable rules in this chapter. The blanket license covers all fixed stations anywhere within the authorized service area, except a station must be individually licensed if:

(1) International agreements require coordination;

(2) Submission of an Environmental Assessment is required under § 1.1307 of this chapter; and

(3) The station would affect the radio quiet zones under § 1.924 of this chapter.

(b) Any antenna structure that requires notification to the Federal Aviation Administration (FAA) must be registered with the Commission prior to construction under § 17.4 of this chapter.

[84 FR 57366, Oct. 25, 2019]

§ 27.1209 Reversion and overlay rights.

(a) The frequencies associated with BRS incumbent authorizations that have cancelled automatically or otherwise recovered by the Commission automatically revert to the applicable BRS BTA licensee.

(b) The frequencies associated with EBS incumbent authorizations with a

geographic service area that have cancelled automatically or otherwise recovered by the Commission automatically revert to a co-channel EBS county-based licensee, except that if the area in question is Tribal Land as defined in § 27.1204(b)(3) and is contiguous to the GSA of a co-channel authorization issued in the Tribal Priority Window, the area consisting of Tribal Land reverts to the co-channel license issued in the Tribal Priority Window.

(c) The frequencies associated with EBS authorizations issued in the Tribal Priority Window with a geographic service area that have cancelled automatically or otherwise recovered by the Commission automatically revert to a co-channel EBS county-based authorization.

[84 FR 57366, Oct. 25, 2019]

§ 27.1210 Remote control operation.

Licensed BRS/EBS stations may be operated by remote control without further authority.

§ 27.1211 Unattended operation.

Unattended operation of licensed BRS/EBS stations is permitted without further authority. An unattended relay station may be employed to receive and retransmit signals of another station provided that the transmitter is equipped with circuits which permit it to radiate only when the signal intended to be retransmitted is present at the receiver input terminals.

§ 27.1212 License term.

(a) BRS/EBS licenses shall be issued for a period of 10 years beginning with the date of grant.

(b) An initial BTA authorization shall be issued for a period of ten years from the date the Commission declared bidding closed in the MDS auction.

§ 27.1213 Designated entity provisions for BRS in Commission auctions commencing prior to January 1, 2004.

(a) *Eligibility for small business provisions.* For purposes of Commission auctions commencing prior to January 1, 2004 for BRS licenses, a small business is an entity that together with its affiliates has average annual gross reve-

nues that are not more than \$40 million for the preceding three calendar years.

(b) *Designated entities.* As specified in this section, designated entities that are winning bidders in Commission auctions commencing prior to January 1, 2004 for BTA service areas are eligible for special incentives in the auction process. See 47 CFR 1.2110.

(c) *Installment payments.* Small businesses and small business consortia may elect to pay the full amount of their winning bids in Commission auctions commencing prior to January 1, 2004 for BTA service areas in installments over a ten (10) year period running from the date that their BTA authorizations are issued.

(1) Upon issuance of a BTA authorization to a winning bidder in a Commission auction commencing prior to January 1, 2004 that is eligible for installment payments, the Commission will notify such eligible BTA authorization holder of the terms of its installment payment plan. For BRS, such installment payment plans will:

(i) Impose interest based on the rate of ten (10) year U.S. Treasury obligations at the time of issuance of the BTA authorization, plus two and one half (2.5) percent;

(ii) Allow installment payments for a ten (10) year period running from the date that the BTA authorization is issued;

(iii) Begin with interest-only payments for the first two (2) years; and

(iv) Amortize principal and interest over the remaining years of the ten (10) year period running from the date that the BTA authorization is issued.

(2) *Conditions and obligations.* See § 1.2110(g)(4) of this chapter.

(3) *Unjust enrichment.* If an eligible BTA authorization holder that utilizes installment financing under this subsection seeks to partition, pursuant to applicable rules, a portion of its BTA containing one-third or more of the population of the area within its control in the licensed BTA to an entity not meeting the eligibility standards for installment payments, the holder must make full payment of the remaining unpaid principal and any unpaid interest accrued through the date of partition as a condition of approval.

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(d) *Reduced upfront payments.* For purposes of Commission auctions commencing prior to January 1, 2004 for BRS licenses, a prospective bidder that qualifies as a small business, or as a small business consortia, is eligible for a twenty-five (25) percent reduction in the amount of the upfront payment otherwise required. To be eligible to bid on a particular BTA, a small business will be required to submit an upfront payment equal to seventy-five (75) percent of the upfront payment amount specified for that BTA in the public notice listing the upfront payment amounts corresponding to each BTA service area being auctioned.

(e) *Bidding credits.* For purposes of Commission auctions commencing prior to January 1, 2004 for BRS licenses, a winning bidder that qualifies as a small business, or as a small business consortia, may use a bidding credit of fifteen (15) percent to lower the cost of its winning bid on any of the BTA authorizations awarded in the Commission BRS auctions commencing prior to January 1, 2004.

(f) Short-form application certification; Long-form application or statement of intention disclosure. A BRS applicant in a Commission auction commencing prior to January 1, 2004 claiming designated entity status shall certify on its short-form application that it is eligible for the incentives claimed. A designated entity that is a winning bidder for a BTA service area(s) shall, in addition to information otherwise required, file an exhibit to either its initial long-form application for a BRS station license, or to its statement of intention with regard to the BTA, which discloses the gross revenues for each of the past three years of the winning bidder and its affiliates. This exhibit shall describe how the winning bidder claiming status as a designated entity satisfies the designated entity eligibility requirements, and must list and summarize all agreements that affect designated entity status, such as partnership agreements, shareholder agreements, management agreements and other agreements, including oral agreements, which establish that the designated entity will have both de facto and de jure

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control of the entity. See 47 CFR 1.2110(i).

(g) *Records maintenance.* All holders of BTA authorizations acquired in a Commission auction commencing prior to January 1, 2004 that claim designated entity status shall maintain, at their principal place of business or with their designated agent, an updated documentary file of ownership and revenue information necessary to establish their status. Holders of BTA authorizations or their successors in interest shall maintain such files for a ten (10) year period running from the date that their BTA authorizations are issued. The files must be made available to the Commission upon request.

[69 FR 72034, Dec. 10, 2004, as amended at 71 FR 35190, June 19, 2006]

§ 27.1214 EBS grandfathered leases.

All leases of current EBS spectrum entered into prior to January 10, 2005 and in compliance with leasing rules contained in 47 CFR part 74, revised as of October 1, 2004, may continue in force and effect, notwithstanding any inconsistency between such leases and the rules applicable to spectrum leasing arrangements set forth in this chapter. Such leases entered into pursuant to the rules formerly contained in 47 CFR part 74 may be renewed and assigned in accordance with the terms of such lease. All spectrum leasing arrangements leases entered into after January 10, 2005, under the rules set forth in part 1 of this chapter and this part, must comply with the rules in those parts.

[84 FR 57366, Oct. 25, 2019]

§ 27.1215 BRS grandfathered leases.

(a) All leases of current BRS spectrum entered into prior to January 10, 2005 and in compliance with rules formerly contained in part 21 of this chapter may continue in force and effect, notwithstanding any inconsistency between such leases and the rules applicable to spectrum leasing arrangements set forth in this chapter. Such leases entered into pursuant to the former part 21 of this chapter may be renewed and assigned in accordance

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with the terms of such lease. All spectrum leasing arrangements entered into after January 10, 2005, pursuant to the rules set forth in part 1 and part 27 of this chapter must comply with the rules in those parts.

§ 27.1216 Grandfathered E and F group EBS licenses.

(a) Except as noted in paragraph (b) of this section, grandfathered EBS licensees authorized to operate E and F group co-channel licenses are granted a geographic service area (GSA) on July 19, 2006. The GSA is the area bounded by a circle having a 35 mile radius and centered at the station's reference coordinates, and is bounded by the chord(s) drawn between intersection points of that circle and those of respective adjacent market, co-channel licensees.

(b) If there is more than 50 percent overlap between the calculated GSA of a grandfathered EBS license and the protected service area of a co-channel BRS license, the licensees shall not be immediately granted a geographic service area. Instead, the grandfathered EBS license and the co-channel BRS licensee must negotiate in good faith to reach a solution that accommodates the communication needs of both licensees. If the co-channel licensees reach a mutually agreeable solution on or before October 17, 2006, then the GSA of each co-channel license shall be as determined pursuant to the agreement of the parties. If a mutually agreeable solution between co-channel licensees is not reached on or before October 17, 2006, then each co-channel licensee shall receive a GSA determined pursuant to paragraph (a) of this section and § 27.1206(a).

[71 FR 35191, June 16, 2006]

§ 27.1217 Competitive bidding procedures for the Broadband Radio Service and the Educational Broadband Service.

Mutually exclusive initial applications for BRS and EBS licenses are subject to competitive bidding. For BRS auctions, the designated entity provisions of § 27.1218 apply. For EBS auctions, the designated entity provisions of § 27.1219 apply. The general competitive bidding procedures set

forth in part 1, subpart Q, of this chapter apply unless otherwise provided in this subpart.

[84 FR 57366, Oct. 25, 2019]

§ 27.1218 Broadband Radio Service designated entity provisions.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that, together with all attributed parties, has average gross revenues that are not more than \$40 million for the preceding three years.

(2) A very small business is an entity that, together with all attributed parties, has average gross revenues that are not more than \$15 million for the preceding three years.

(3) An entrepreneur is an entity that, together with all attributed parties, has average gross revenues that are not more than \$3 million for the preceding three years.

(b) *Bidding credits.* (1) A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses, may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(iii) of this chapter, to lower the cost of its winning bid on any of the licenses in this subpart.

(2) A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses, may use a bidding credit of 25 percent, as specified in § 1.2110(f)(2)(ii) of this chapter, to lower the cost of its winning bid on any of the licenses in this subpart.

(3) A winning bidder that qualifies as an entrepreneur, as defined in this section, or a consortium of entrepreneurs, may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(i) of this chapter, to lower the cost of its winning bid on any of the licenses in this subpart.

[73 FR 26041, May 8, 2008]

§ 27.1219 Educational Broadband Service designated entity provisions.

(a) *Eligibility for small business provisions.* (1) A small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than

\$55 million for the preceding five (5) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$20 million for the preceding five (5) years.

(b) *Bidding credits.* A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses may use a bidding credit of 15 percent, as specified in § 1.2110(f)(2)(i)(C) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use a bidding credit of 25 percent, as specified in § 1.2110(f)(2)(i)(B) of this chapter.

(c) *Rural service provider credit.* A rural service provider, as defined in § 1.2110(f)(4) of this chapter, who has not claimed a small business bidding credit may use a bidding credit of 15 percent bidding credit, as specified in § 1.2110(f)(4)(i) of this chapter.

[84 FR 57366, Oct. 25, 2019; 84 FR 64209, Nov. 21, 2019]

TECHNICAL STANDARDS

§ 27.1220 Transmission standards.

The width of a channel in the LBS and UBS is 5.5 MHz, with the exception of BRS channels 1 and 2 which are 6.0 MHz. The width of all channels in the MBS is 6 MHz. However, the licensee may subchannelize its authorized bandwidth, provided that digital modulation is employed and the aggregate power does not exceed the authorized power for the channel. The licensee may also, jointly with other licensees, transmit utilizing bandwidth in excess of its authorized bandwidth, provided that digital modulation is employed, all power spectral density requirements set forth in this part are met and the out-of-band emissions restrictions set forth in § 27.53 are met at the edges of the channels employed.

§ 27.1221 Interference protection.

(a) Interference protection will be afforded to BRS and EBS on a station-by-station basis based on the heights of the stations in the LBS and UBS and

also on height benchmarking, although the heights of antennas utilized are not restricted.

(b) *Height benchmarking.* Height benchmarking is defined for pairs of base stations, one in each of two proximate geographic service areas (GSAs). The height benchmark, which is defined in meters (hb_m) for a particular base station relative to a base station in another GSA, is equal to the distance, in kilometers, from the base station along a radial to the nearest point on the GSA boundary of the other base station squared (D_{km}^2) and then divided by 17. That is, $hb_m = D_{km}^2/17$. A base station antenna will be considered to be within its applicable height benchmark relative to another base station if the height in meters of its centerline of radiation above average elevation (HAAE) calculated along the straight line between the two base stations in accordance with § 24.53(b) and (c) of this chapter does not exceed the height benchmark (hb_m). A base station antenna will be considered to exceed its applicable height benchmark relative to another base station if the HAAE of its centerline of radiation calculated along the straight line between the two base stations in accordance with § 24.53(b) and (c) of this chapter exceeds the height benchmark (hb_m).

(c) *Protection for receiving antennas not exceeding the height benchmark.* Absent agreement between the two licensees to the contrary, if a transmitting antenna of one BRS/EBS licensee's base station exceeds its applicable height benchmark and such licensee is notified by another BRS/EBS licensee that it is generating an undesired signal level in excess of -107 dBm/5.5 megahertz at the receiver of a co-channel base station that is within its applicable height benchmark, then the licensee of the base station that exceeds its applicable height benchmark shall either limit the undesired signal at the receiver of the protected base station to -107 dBm/5.5 megahertz or less or reduce the height of its transmission antenna to no more than the height benchmark. If the interfering base station has been modified to increase the EIRP transmitted in the direction of the protected base station, it shall be deemed to have commenced operations

on the date of such modification. Such corrective action shall be completed no later than:

(i) 24 hours after receiving such notification, if the base station that exceeds its height benchmark commenced operations after the station that is within its applicable height benchmark; or

(ii) 90 days after receiving such notification, if the base station that exceeds its height benchmark commenced operations prior to the station that is within its applicable height benchmark. For purposes of this section, if the interfering base station has been modified to increase the EIRP transmitted in the direction of the victim base station, it shall be deemed to have commenced operations on the date of such modification.

(d) *No Protection from a transmitting antenna not exceeding the height benchmark.* The licensee of a base station transmitting antenna less than or equal to its applicable height benchmark shall not be required pursuant to paragraph (c) of this section to limit that antennas undesired signal level to $-107\text{dBm}/5.5$ megahertz or less at the receiver of any co-channel base station.

(e) *No protection for a receiving-antenna exceeding the height benchmark.* The licensee of a base station receive antenna that exceeds its applicable height benchmark shall not be entitled pursuant to paragraph (c) of this section to insist that any co-channel base station limit its undesired signal level to $-107\text{dBm}/5.5$ megahertz or less at the receiver.

(f) *Information exchange.* A BRS/EBS licensee shall provide the geographic coordinates, the height above ground level of the center of radiation for each transmit and receive antenna, and the date transmissions commenced for each of the base stations in its GSA within 30 days of receipt of a request from a co-channel BRS/EBS licensee with an operational base station located in a proximate GSA. Information shared pursuant to this section shall not be disclosed to other parties except as required to ensure compliance with this section.

[69 FR 72034, Dec. 10, 2004, as amended at 70 FR 1190, Jan. 6, 2005; 71 FR 35191, June 19, 2006; 73 FR 26041, May 8, 2008]

§ 27.1222 Operations in the 2568–2572 and 2614–2618 bands.

All operations in the 2568–2572 and 2614–2618 MHz bands shall be secondary to adjacent-channel operations. Stations operating in the 2568–2572 and 2614–2618 MHz must not cause interference to licensees in operation in the LBS, MBS, and UBS and must accept any interference from any station operating in the LBS, MBS, and UBS in compliance with the rules established in this subpart. Stations operating in the 2568–2572 and 2614–2618 bands may cause interference to stations in operation in the LBS, MBS, and UBS if the affected licensees consent to such interference.

RELOCATION PROCEDURES FOR THE 2150–2160/62 MHz BAND

SOURCE: Sections 27.1250 through 27.1255 appear at 71 FR 29840, May 24, 2006, unless otherwise noted.

§ 27.1250 Transition of the 2150–2160/62 MHz band from the Broadband Radio Service to the Advanced Wireless Service.

The 2150–2160/62 MHz band has been allocated for use by the Advanced Wireless Service (AWS). The rules in this section provide for a transition period during which AWS licensees may relocate existing Broadband Radio Service (BRS) licensees using these frequencies to their assigned frequencies in the 2496–2690 MHz band or other media.

(a) AWS licensees and BRS licensees shall engage in mandatory negotiations for the purpose of agreeing to terms under which the BRS licensees would:

(1) Relocate their operations to other frequency bands or other media; or alternatively

(2) Accept a sharing arrangement with the AWS licensee that may result in an otherwise impermissible level of interference to the BRS operations.

(b) If no agreement is reached during the mandatory negotiation period, an AWS licensee may initiate involuntary relocation procedures. Under involuntary relocation, the incumbent is required to relocate, provided that the AWS licensee meets the conditions of § 27.1252.

(c) Relocation of BRS licensees by AWS licensees will be subject to a three-year mandatory negotiation period. BRS licensees may suspend the running of the three-year negotiation period for up to one year if the BRS licensee cannot be relocated to comparable facilities at the time the AWS licensee seeks entry into the band.

§ 27.1251 Mandatory negotiations.

(a) Once mandatory negotiations have begun, a BRS licensee may not refuse to negotiate and all parties are required to negotiate in good faith. Good faith requires each party to provide information to the other that is reasonably necessary to facilitate the relocation process. The BRS licensee is required to cooperate with an AWS licensee's request to provide access to the facilities to be relocated, other than the BRS customer location, so that an independent third party can examine the BRS system and prepare an appraisal of the costs to relocate the incumbent. In evaluating claims that a party has not negotiated in good faith, the FCC will consider, *inter alia*, the following factors:

(1) Whether the AWS licensee has made a bona fide offer to relocate the BRS licensee to comparable facilities in accordance with § 27.1252(b);

(2) If the BRS licensee has demanded a premium, the type of premium requested (*e.g.*, whether the premium is directly related to relocation, such as analog-to-digital conversions, versus other types of premiums), and whether the value of the premium as compared to the cost of providing comparable facilities is disproportionate (*i.e.*, whether there is a lack of proportion or relation between the two);

(3) What steps the parties have taken to determine the actual cost of relocation to comparable facilities;

(4) Whether either party has withheld information requested by the other party that is necessary to estimate relocation costs or to facilitate the relocation process.

(b) Any party alleging a violation of our good faith requirement must attach an independent estimate of the relocation costs in question to any documentation filed with the Commission in support of its claim. An independent

cost estimate must include a specification for the comparable facility and a statement of the costs associated with providing that facility to the incumbent licensee.

(c) Mandatory negotiations will commence for each BRS licensee when the AWS licensee informs the BRS licensee in writing of its desire to negotiate. Mandatory negotiations will be conducted with the goal of providing the BRS licensee with comparable facilities, defined as facilities possessing the following characteristics:

(1) *Throughput*. Communications throughput is the amount of information transferred within a system in a given amount of time. System is defined as a base station and all end user units served by that base station. If analog facilities are being replaced with analog, comparable facilities may provide a comparable number of channels. If digital facilities are being replaced with digital, comparable facilities provide equivalent data loading bits per second (bps).

(2) *Reliability*. System reliability is the degree to which information is transferred accurately within a system. Comparable facilities provide reliability equal to the overall reliability of the BRS system. For digital systems, reliability is measured by the percent of time the bit error rate (BER) exceeds a desired value, and for analog or digital video transmission, it is measured by whether the end-to-end transmission delay is within the required delay bound. If an analog system is replaced with a digital system, only the resulting frequency response, harmonic distortion, signal-to-noise ratio and its reliability will be considered in determining comparable reliability.

(3) *Operating Costs*. Operating costs are the cost to operate and maintain the BRS system. AWS licensees would compensate BRS licensees for any increased recurring costs associated with the replacement facilities (*e.g.*, additional rental payments, and increased utility fees) for five years after relocation. AWS licensees could satisfy this obligation by making a lump-sum payment based on present value using current interest rates. Additionally, the maintenance costs to the BRS licensee

would be equivalent to the replaced system in order for the replacement system to be comparable.

(d) AWS licensees are responsible for the relocation costs of end user units served by the BRS base station that is being relocated. If a lessee is operating under a BRS license, the BRS licensee may rely on the throughput, reliability, and operating costs of facilities in use by a lessee in negotiating comparable facilities and may include the lessee in negotiations.

§ 27.1252 Involuntary relocation procedures.

(a) If no agreement is reached during the mandatory negotiation period, an AWS licensee may initiate involuntary relocation procedures under the Commission's rules. AWS licensees are obligated to pay to relocate BRS systems to which the AWS system poses an interference problem. Under involuntary relocation, the BRS licensee is required to relocate, provided that the AWS licensee:

(1) Guarantees payment of relocation costs, including all engineering, equipment, site and FCC fees, as well as any legitimate and prudent transaction expenses incurred by the BRS licensee that are directly attributable to an involuntary relocation, subject to a cap of two percent of the "hard" costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. There is no cap on the actual costs of relocation. AWS licensees are not required to pay BRS licensees for internal resources devoted to the relocation process. AWS licensees are not required to pay for transaction costs incurred by BRS licensees during the mandatory period once the involuntary period is initiated, or for fees that cannot be legitimately tied to the provision of comparable facilities; and

(2) Completes all activities necessary for implementing the replacement facilities, including engineering and cost analysis of the relocation procedure and, if radio facilities are used, identifying and obtaining, on the incumbents' behalf, new microwave frequencies and frequency coordination.

(b) *Comparable facilities.* The replacement system provided to an incumbent during an involuntary relocation must be at least equivalent to the existing BRS system with respect to the following three factors:

(1) *Throughput.* Communications throughput is the amount of information transferred within a system in a given amount of time. System is defined as a base station and all end user units served by that base station. If analog facilities are being replaced with analog, the AWS licensee is required to provide the BRS licensee with a comparable number of channels. If digital facilities are being replaced with digital, the AWS licensee must provide the BRS licensee with equivalent data loading bits per second (bps). AWS licensees must provide BRS licensees with enough throughput to satisfy the BRS licensee's system use at the time of relocation, not match the total capacity of the BRS system.

(2) *Reliability.* System reliability is the degree to which information is transferred accurately within a system. AWS licensees must provide BRS licensees with reliability equal to the overall reliability of their system. For digital data systems, reliability is measured by the percent of time the bit error rate (BER) exceeds a desired value, and for analog or digital video transmissions, it is measured by whether the end-to-end transmission delay is within the required delay bound.

(3) *Operating costs.* Operating costs are the cost to operate and maintain the BRS system. AWS licensees must compensate BRS licensees for any increased recurring costs associated with the replacement facilities (e.g., additional rental payments, increased utility fees) for five years after relocation. AWS licensees may satisfy this obligation by making a lump-sum payment based on present value using current interest rates. Additionally, the maintenance costs to the BRS licensee must be equivalent to the replaced system in order for the replacement system to be considered comparable.

(c) AWS licensees are responsible for the relocation costs of end user units served by the BRS base station that is being relocated. If a lessee is operating

under a BRS license, the AWS licensee shall on the throughput, reliability, and operating costs of facilities in use by a lessee at the time of relocation in determining comparable facilities for involuntary relocation purposes.

(d) *Twelve-month trial period.* If, within one year after the relocation to new facilities, the BRS licensee demonstrates that the new facilities are not comparable to the former facilities, the AWS licensee must remedy the defects or pay to relocate the BRS licensee to one of the following: Its former or equivalent 2 GHz channels, another comparable frequency band, a land-line system, or any other facility that satisfies the requirements specified in paragraph (b) of this section. This trial period commences on the date that the BRS licensee begins full operation of the replacement system. If the BRS licensee has retained its 2 GHz authorization during the trial period, it must return the license to the Commission at the end of the twelve months.

§ 27.1253 Sunset provisions.

(a) BRS licensees will maintain primary status in the 2150–2160/62 MHz band unless and until an AWS licensee requires use of the spectrum. AWS licensees are not required to pay relocation costs after the relocation rules sunset (*i.e.* fifteen years from the date the first AWS license is issued in the band). Once the relocation rules sunset, an AWS licensee may require the incumbent to cease operations, provided that the AWS licensee intends to turn on a system within interference range of the incumbent, as determined by § 27.1255. AWS licensee notification to the affected BRS licensee must be in writing and must provide the incumbent with no less than six months to vacate the spectrum. After the six-month notice period has expired, the BRS licensee must turn its license back into the Commission, unless the parties have entered into an agreement which allows the BRS licensee to continue to operate on a mutually agreed upon basis.

(b) If the parties cannot agree on a schedule or an alternative arrangement, requests for extension will be accepted and reviewed on a case-by-case

basis. The Commission will grant such extensions only if the incumbent can demonstrate that:

(1) It cannot relocate within the six-month period (*e.g.*, because no alternative spectrum or other reasonable option is available); and

(2) The public interest would be harmed if the incumbent is forced to terminate operations.

§ 27.1254 Eligibility.

(a) BRS licensees with primary status in the 2150–2162 MHz band as of June 23, 2006, will be eligible for relocation insofar as they have facilities that are constructed and in use as of this date.

(b) *Future licensing and modifications.* After June 23, 2006, all major modifications to existing BRS systems in use in the 2150–2160/62 MHz band will be authorized on a secondary basis to AWS systems, unless the incumbent affirmatively justifies primary status and the incumbent BRS licensee establishes that the modification would not add to the relocation costs of AWS licensees. Major modifications include the following:

(1) Additions of new transmit sites or base stations made after June 23, 2006;

(2) Changes to existing facilities made after June 23, 2006, that would increase the size or coverage of the service area, or interference potential, and that would also increase the throughput of an existing system (*e.g.*, sector splits in the antenna system). Modifications to fully utilize the existing throughput of existing facilities (*e.g.*, to add customers) will not be considered major modifications even if such changes increase the size or coverage of the service area, or interference potential.

§ 27.1255 Relocation criteria for Broadband Radio Service licensees in the 2150–2160/62 MHz band.

(a) An AWS licensee in the 2150–2160/62 MHz band, prior to initiating operations from any base or fixed station that is co-channel to the 2150–2160/62 MHz band, must relocate any incumbent BRS system that is within the line of sight of the AWS licensee's base or fixed station. For purposes of this section, a determination of whether an

AWS facility is within the line of sight of a BRS system will be made as follows:

(1) For a BRS system using the 2150–2160/62 MHz band exclusively to provide one-way transmissions to subscribers, the AWS licensee will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee’s geographic service area (GSA), based on the following criteria: use of 9.1 meters (30 feet) for the receiving antenna height, use of the actual transmitting antenna height and terrain elevation, and assumption of 4/3 Earth radius propagation conditions. Terrain elevation data must be obtained from the U.S. Geological Survey (USGS) 3-second database. All coordinates used in carrying out the required analysis shall be based upon use of NAD-83.

(2) For all other BRS systems using the 2150–2160/62 MHz band, the AWS licensee will determine whether there is an unobstructed signal path (line of sight) to the incumbent licensee’s receive station hub using the method prescribed in “Methods for Predicting Interference from Response Station Transmitters and to Response Station Hubs and for Supplying Data on Response Station Systems. MM Docket 97–217,” in Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licenses to Engage in Fixed Two-Way Transmissions, MM Docket No. 97–217, *Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 14566 at 14610, Appendix D.

(b) Any AWS licensee in the 2110–2180 MHz band that causes actual and demonstrable interference to a BRS licensee in the 2150–2160/62 MHz band must take steps to eliminate the harmful interference, up to and including relocation of the BRS licensee, regardless of whether it would be required to do so under paragraph (a), of this section.

Subpart N—600 MHz Band

SOURCE: 79 FR 48539, Aug. 15, 2014, unless otherwise noted.

COMPETITIVE BIDDING PROVISIONS

§ 27.1300 600 MHz band subject to competitive bidding.

As required by section 6403(c) of the Spectrum Act, applications for 600 MHz band initial licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q will apply unless otherwise provided in this subpart.

§ 27.1301 Designated entities in the 600 MHz band.

(a) *Small business.* (1) A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$55 million for the preceding three (3) years.

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$20 million for the preceding three (3) years.

(b) *Eligible rural service provider.* For purposes of this section, an eligible rural service provider is an entity that meets the criteria specified in § 1.2110(f)(4) of this chapter.

(c) *Bidding credits.* (1) A winning bidder that qualifies as a small business as defined in this section or a consortium of small businesses may use the bidding credit specified in § 1.2110(f)(2)(i)(C) of this chapter. A winning bidder that qualifies as a very small business as defined in this section or a consortium of very small businesses may use the bidding credit specified in § 1.2110(f)(2)(i)(B) of this chapter.

(2) An entity that qualifies as eligible rural service provider or a consortium of rural service providers may use the bidding credit specified in § 1.2110(f)(4) of this chapter.

[80 FR 56817, Sept. 18, 2015]

PROTECTION OF OTHER SERVICES

§ 27.1310 Protection of Broadcast Television Service in the 600 MHz band from wireless operations.

(a) Licensees authorized to operate wireless services in the 600 MHz band must cause no harmful interference to

public reception of the signals of broadcast television stations transmitting co-channel or on an adjacent channel.

(1) Such wireless operations must comply with the D/U ratios in Table 5 in OET Bulletin No. 74, Methodology for Predicting Inter-Service Interference to Broadcast Television from Mobile Wireless Broadband Services in the UHF Band ([DATE]) (“*OET Bulletin No. 74*”). Copies of this document are available on the FCC’s website. See <https://www.fcc.gov/general/oet-bulletins-line>.

(2) If a 600 MHz band licensee causes harmful interference within the noise-limited contour or protected contour of a broadcast television station that is operating co-channel or on an adjacent channel, the 600 MHz band licensee must eliminate the harmful interference.

(b) A licensee authorized to operate wireless services in the 600 MHz downlink band:

(1) Is not permitted to deploy wireless base stations within the noise-limited contour or protected contour of a broadcast television station licensed on a co-channel or adjacent channel in the 600 MHz downlink band;

(2) Is required to perform an interference study using the methodology in *OET Bulletin No. 74* before deploying or operating wireless base stations within the culling distances specified in Tables 7–12 of *OET Bulletin No. 74* from the noise-limited contour or protected contour of such a broadcast television station;

(3) Is required to perform an interference study using the methodology in *OET Bulletin No. 74* when modifying a base station within the culling distances in Tables 7–12 of *OET Bulletin 74* that results in an increase in energy in the direction of co-channel or adjacent channel broadcast television station’s contours;

(4) Is required to maintain records of the latest *OET Bulletin No. 74* study for each base station and make them available for inspection to the Commission and, upon a claim of harmful interference, to the requesting broadcasting television station.

(c) A licensee authorized to operate wireless services in the 600 MHz uplink

band must limit its service area so that mobile and portable devices do not transmit:

(1) Co-channel or adjacent channel to a broadcast television station within that station’s noise-limited contour or protected contour;

(2) Co-channel to a broadcast television station within five kilometers of that station’s noise-limited contour or protected contour; and

(3) Adjacent channel to a broadcast television station within 500 meters of that station’s noise-limited contour or protected contour.

(d) For purposes of this section, the following definitions apply:

(1) Broadcast television station is defined pursuant to § 73.3700(a)(1) of this chapter;

(2) Noise-limited contour is defined to be the full power station’s noise-limited contour pursuant to § 73.622(e);

(3) Protected contour is defined to be a Class A television station’s protected contour as specified in section 73.6010;

(4) Co-channel operations in the 600 MHz band are defined as operations of broadcast television stations and wireless services where their assigned channels or frequencies spectrally overlap;

(5) Adjacent channel operations are defined as operations of broadcast television stations and wireless services where their assigned channels or frequencies spectrally abut each other or are separated by up to 5 MHz.

[80 FR 71743, Nov. 17, 2015, as amended at 85 FR 64407, Oct. 13, 2020]

COORDINATION/NOTIFICATION REQUIREMENTS

§ 27.1320 Notification to white space database administrators.

To receive interference protection, 600 MHz licensees shall notify one of the white space database administrators of the areas where they have commenced operation pursuant to §§ 15.713(j)(10) and 15.715(n) of this chapter.

[80 FR 73085, Nov. 23, 2015]

§ 27.1321 Requirements for operation of base and fixed stations in the 600 MHz downlink band in close proximity to Radio Astronomy Observatories.

(a) Licensees must make reasonable efforts to protect the radio astronomy observatory at Green Bank, WV, Arecibo, PR, and those identified in § 15.712(h)(3) of this chapter as part of the Very Long Baseline Array (VLBA) from interference.

(b) 600 MHz band base and fixed stations in the 600 MHz downlink band within 25 kilometers of VLBA observatories are subject to coordination with the National Science Foundation (NSF) prior to commencing operations. The appropriate NSF contact point to initiate coordination is: Division of Astronomical Sciences, Electromagnetic Spectrum Management Unit, 2415 Eisenhower Avenue, Alexandria, VA 22314; Email: *esm@nsf.gov*.

(c) Any licensee that intends to operate base and fixed stations in the 600 MHz downlink band in locations near the Radio Astronomy Observatory site located in Green Bank, Pocahontas County, West Virginia, or near the Arecibo Observatory in Puerto Rico, must comply with the provisions in § 1.924 of this chapter.

[79 FR 48538, Aug. 15, 2014. Redesignated at 81 FR 4975, Jan. 29, 2016; 85 FR 38740, June 26, 2020]

**Subpart O—3.7 GHz Service
(3700–3980 MHz)**

SOURCE: 85 FR 22882, Apr. 23, 2020, unless otherwise noted.

§ 27.1401 Licenses in the 3.7 GHz Service are subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 3.7 GHz Service are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q, will apply unless otherwise provided in this subpart.

§ 27.1402 Designated entities in the 3.7 GHz Service.

(a) *Eligibility for small business provisions*—(1) *Definitions*—(i) *Small business*. A small business is an entity that, to-

gether with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$55 million for the preceding five (5) years.

(ii) *Very small business*. A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$20 million for the preceding five (5) years.

(2) *Bidding credits*. A winning bidder that qualifies as a small business, as defined in this section, or a consortium of such small businesses as provided in § 1.2110(c)(6) of this chapter, may use a bidding credit of 15 percent, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of such very small businesses as provided in § 1.2110(c)(6) of this chapter, may use a bidding credit of 25 percent, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter.

(b) *Eligibility for rural service provider bidding credit*. A rural service provider, as defined in § 1.2110(f)(4)(i) of this chapter, that has not claimed a small business bidding credit may use the bidding credit of 15 percent specified in § 1.2110(f)(4) of this chapter.

§ 27.1411 Transition of the 3700–3980 MHz band to the 3.7 GHz Service.

(a) *Transition of the 3700–3798 MHz Band*. The 3700–3980 MHz band is being transitioned in the lower 48 contiguous states and the District of Columbia from geostationary satellite orbit (GSO) fixed-satellite service (space-to-Earth) and fixed service operations to the 3.7 GHz Service.

(b) *Definitions*—(1) *Incumbent space station operator*. An incumbent space station operator is defined as a space station operator authorized to provide C-band service to any part of the contiguous United States pursuant to an FCC-issued license or grant of market access as of June 21, 2018.

(2) *Eligible space station operator*. For purposes of determining eligibility to receive reimbursement for relocation costs incurred as a result of the transition of FSS operations to the 4000–4200

MHz band, an eligible space station operators may receive reimbursement for relocation costs incurred as a result of the transition of FSS operations to the 4000–4200 MHz band. An eligible space station operator is defined as an incumbent space station operator that has demonstrated as of February 1, 2020, that it has an existing relationship to provide service via C-band satellite transmission to one or more incumbent earth stations in the contiguous United States. Such existing relationships may be directly with the incumbent earth station, or indirectly through content distributors or other entities, so long as the relationship requires the provision of C-band satellite services to one or more specific incumbent earth stations in the contiguous United States.

(3) *Incumbent earth station.* An incumbent earth station for this subpart is defined as an earth station that is entitled to interference protection pursuant to § 25.138(c) of this chapter. An incumbent earth station must transition above 4000 MHz pursuant to this subpart. An incumbent earth station will be able to continue receiving uninterrupted service both during and after the transition.

(4) *Earth station migration.* Earth station migration includes any necessary changes that allow the uninterrupted reception of service by an incumbent earth station on new frequencies in the upper portion of the band, including, but not limited to retuning and re-pointing antennas, “dual illumination” during which the same programming is simultaneously downlinked over the original and new frequencies, and the installation of new equipment or software at earth station uplink and/or downlink locations for customers identified for technology upgrades necessary to facilitate the repack, such as compression technology or modulation.

(5) *Earth station filtering.* A passband filter must be installed at the site of each incumbent earth station at the same time or after it has been migrated to new frequencies to block signals from adjacent channels and to prevent harmful interference from licensees in the 3.7 GHz Service. Earth station filtering can occur either simultaneously with, or after, the earth sta-

tion migration, or can occur at any point after the earth station migration so long as all affected earth stations in a given Partial Economic Area and surrounding areas are filtered prior to a licensee in the 3.7 GHz Service commencing operations.

(6) *Contiguous United States (CONUS).* For the purposes of the rules established in this subpart, contiguous United States consists of the contiguous 48 states and the District of Columbia as defined by Partial Economic Areas Nos. 1–41, 43–211, 213–263, 265–297, 299–359, and 361–411, which includes areas within 12 nautical miles of the U.S. Gulf coastline (*see* § 27.6(m)). In this context, the rest of the United States includes the Honolulu, Anchorage, Kodiak, Fairbanks, Juneau, Puerto Rico, Guam-Northern Mariana Islands, U.S. Virgin Islands, American Samoa, and the Gulf of Mexico PEAs.

(7) *Relocation Payment Clearinghouse.* A Relocation Payment Clearinghouse is a neutral, independent third-party to administer the cost management for the transition of the 3700–4000 MHz band from the Fixed Satellite Service and Fixed Service to the 3.7 GHz Service.

(8) *Relocation Coordinator.* A Relocation Coordinator is a third party that will ensure that all incumbent space station operators are relocating in a timely matter, and that is selected consistent with § 27.1413. The Relocation Coordinator will have technical experience in understanding and working on earth stations and will manage the migration and filtering of incumbent earth stations of eligible space station operators that decline accelerated relocation payment.

§ 27.1412 Transition Plan.

(a) *Relocation deadlines.* Eligible space station operators are responsible for all necessary actions to clear their transponders from the 3700–4000 MHz band (*e.g.*, launching new satellites, reprogramming transponders, exchanging customers) and to migrate the existing services of incumbent earth stations in CONUS to the 4000–4200 MHz band (unless the incumbent earth station opts out of the formal relocation process, per paragraph (e) of this section), as of December 5, 2025. Eligible space station

operators that fail to do so will be in violation of the conditions of their license authorization and potentially subject to forfeitures and other sanctions.

(b) *Accelerated relocation deadlines.* An eligible space station operator shall qualify for accelerated relocation payments by completing an early transition of the band to the 3.7 GHz Service.

(1) *Phase I deadline.* An eligible space station operator shall receive an accelerated relocation payment if it clears its transponders from the 3700–3820 MHz band and migrates all associated incumbent earth stations in CONUS above 3820 MHz no later than December 5, 2021 (Phase I deadline). To satisfy the Phase I deadline, an eligible space station operator must also provide passband filters to block signals from the 3700–3820 MHz band on all associated incumbent earth stations in PEAs 1–4, 6–10, 12–19, 21–41, and 43–50 no later than December 5, 2021 (see §27.6(m)). If an eligible space station operator receives an accelerated relocation payment for meeting this deadline, it must also satisfy the second early clearing deadline of December 5, 2023.

(2) *Phase II deadline.* An eligible space station operator shall receive an accelerated relocation payment if it clears its transponders from the 3700–4000 MHz band and migrates incumbent earth stations in CONUS above 4000 MHz no later than December 5, 2023 (Phase II deadline). To satisfy the Phase II deadline, an eligible space station operator must also provide passband filters on all associated incumbent earth stations in CONUS no later than December 5, 2023.

(3) *Transition delays.* An eligible space station operator shall not be held responsible for circumstances beyond their control related to earth station migration or filtering.

(i) An eligible space station operator must submit a notice of any incumbent earth station transition delays to the Wireless Telecommunications Bureau within 7 days of discovering an inability to accomplish the assigned earth station transition task. Such a request must include supporting documentation to allow for resolution as soon as practicable and must be submitted be-

fore the accelerated relocation deadlines.

(ii) [Reserved]

(4) *Responsibility for meeting accelerated relocation deadlines.* An eligible space station operator's satisfaction of the accelerated relocation deadlines shall be determined on an individual basis.

(c) *Accelerated relocation election.* An eligible space station operator may elect to receive accelerated relocation payments to transition the 3700–4000 MHz band to the 3.7 GHz Service according to the Phase I and Phase II deadlines via a written commitment by filing an accelerated relocation election in GN Docket No. 18–122 no later than May 29, 2020.

(1) The Wireless Telecommunications Bureau will prescribe the precise form of such election via Public Notice no later than May 12, 2020.

(2) Each eligible space station operator that that makes an accelerated relocation election will be required, as part of its filing of this accelerated relocation election, to commit to paying the administrative costs of the Clearinghouse until the Commission awards licenses to the winning bidders in the auction, at which time those administrative costs will be repaid to those space station operators.

(d) *Transition Plan.* Eligible space station operators must file with the Commission in GN Docket No. 18–122 no later than June 12, 2020, a Transition Plan that describes the actions that must be taken to clear transponders on space stations and to migrate and filter earth stations. Eligible space station operators must make any necessary updates or resolve any deficiencies in their individual Transition Plans by August 14, 2020.

(1) The Transition Plan must detail the eligible space station operator's individual timeline and necessary actions for clearing its transponders from the 3700–4000 MHz band, including:

(i) All existing space stations with operations that will need to be transitioned to operations above 4000 MHz;

(ii) The number of new satellites, if any, that the space station operator

will need to launch in order to maintain sufficient capacity post-transition, including detailed descriptions of why such new satellites are necessary;

(iii) The specific grooming plan for migrating existing services above 4000 MHz, including the pre- and post-transition frequencies that each customer will occupy;

(iv) Any necessary technology upgrades or other solutions, such as video compression or modulation, that the space station operator intends to implement;

(v) The number and location of incumbent earth station antennas currently receiving the space station operator's transmissions that will need to be transitioned above 4000 MHz;

(vi) An estimate of the number and location of incumbent earth station antennas that will require retuning and/or repointing in order to receive content on new transponder frequencies post-transition; and

(vii) The specific timeline by which the space station operator will implement the actions described in its plan including any commitments to satisfy an early clearing.

(2) To the extent that incumbent earth stations are not accounted for in eligible space station operators' Transition Plans, the Relocation Coordinator must prepare an Earth Station Transition Plan for such incumbent earth stations and may require each associated space station operator to file the information needed for such a plan with the Relocation Coordinator.

(i) Where space station operators do not elect to clear by the accelerated relocation deadlines and therefore are not responsible for earth station relocation, the Earth Station Transition Plan must provide timelines that ensure all earth station relocation is completed no later than the relocation deadline.

(ii) The Relocation Coordinator will describe and recommend the respective responsibility of each party for earth station migration and filtering obligations in the Earth Station Transition Plan and assist incumbent earth stations in transitioning including, for example, by installing filters or hiring a third party to install such filters to the extent necessary.

(e) *Incumbent earth station opt-out.* An incumbent earth station within the contiguous United States may opt out of the formal relocation process and accept a lump sum payment equal to the estimated reasonable transition costs of earth station migration and filtering, as determined by the Wireless Telecommunications Bureau, in lieu of actual relocation costs. Such an incumbent earth station is responsible for coordinating with the relevant space station operator as necessary and performing all relocation actions on its own, including switching to alternative transmission mechanisms such as fiber, and it will not receive further reimbursement for any costs exceeding the lump sum payment. An incumbent earth station electing to opt out must inform the appropriate space station operator(s) and the Relocation Coordinator that earth station migration and filtering will not be necessary for the relevant earth station site and must coordinate with operators to avoid any disruption of video and radio programming.

(f) *Space station status reports.* On a quarterly basis, beginning December 31, 2020: Each eligible space station operator must provide a status report of its clearing efforts. Eligible space station operators may file joint status reports.

(g) *Certification of accelerated relocation.* Each eligible space station operator must file a timely certification that it has completed the necessary clearing actions to satisfy each accelerated relocation deadline. The certification must be filed once the eligible space station operator completes its obligations but no later than the applicable accelerated relocation deadline. The Wireless Telecommunication Bureau will prescribe the form of such certification.

(1) The Bureau, Clearinghouse, and relevant stakeholders will have the opportunity to review the certification of accelerated relocation and identify potential deficiencies. The Wireless Telecommunications Bureau will prescribe the form of any challenges by relevant stakeholders as to the validity of the certification and will establish the process for how such challenges will impact the incremental decreases in

the accelerated relocation payment as set forth in § 27.1422(d).

(2) If credible challenges as to the space station operator's satisfaction of the relevant deadline are made, the Bureau will issue a public notice identifying such challenges and will render a final decision as to the validity of the certification no later than 60 days from its filing. Absent notice from the Bureau of any such deficiencies within 30 days of the filing of the certification, the certification of accelerated relocation will be deemed validated.

(h) *Delegated authority.* The Wireless Telecommunications Bureau is delegated the role of providing clarifications or interpretations to eligible space station operators of the Commission's orders for all aspects of the transition.

§ 27.1413 Relocation Coordinator.

(a) *Search committee.* If eligible space station operators elect to receive accelerated relocation payments no later than May 29, 2020, so that a supermajority (80%) of accelerated relocation payments are accepted, each such electing eligible space station operator shall be eligible to appoint one member to a search committee that will seek proposals for a third-party with technical experience in understanding and working on earth stations to serve as a Relocation Coordinator and to manage the migration and filtering of incumbent earth stations of eligible space station operators that decline accelerated relocation payment.

(1) The search committee should proceed by consensus; however, if a vote on selection of a Relocation Coordinator is required, it shall be by a supermajority (80%).

(i) The search committee shall notify the Commission of its choice of Relocation Coordinator.

(ii) The Wireless Telecommunications Bureau shall issue a Public Notice inviting comment on whether the entity selected satisfies the criteria established in paragraph (b) of this section and issue a final order announcing whether the criteria has been satisfied;

(iii) Should the Wireless Telecommunications Bureau be unable to find the criteria have been satisfied, the selection process will start over

and the search committee will submit a new proposed entity.

(2) If eligible space station operators select a Relocation Coordinator, they shall be responsible for paying its costs.

(3) In the event that the search committee fails to select a Relocation Coordinator and to notify the Commission by July 31, 2020, or in the case that at least 80% of accelerated relocation payments are not accepted (and thus accelerated relocation is not triggered):

(i) The search committee will be dissolved without further action by the Commission.

(ii) The Commission will initiate a procurement of a Relocation Coordinator to facilitate the transition. Specifically, the Office of the Managing Director will initiate the procurement, and the Wireless Telecommunications Bureau will take all other necessary actions to meet the accelerated relocation deadlines (to the extent applicable to any given operator) and the relocation deadline.

(iii) In the case that the Wireless Telecommunications Bureau selects the Relocation Coordinator, overlay licensees will, collectively, pay for the services of the Relocation Coordinator and staff. The Relocation Coordinator shall submit its own reasonable costs to the Relocation Clearinghouse, who will then collect payments from overlay licensees. It shall also provide additional financial information as requested by the Bureau to satisfy the Commission's oversight responsibilities and/or agency specific/government-wide reporting obligations.

(b) *Relocation Coordinator criteria.* The Relocation Coordinator must be able to demonstrate that it has the requisite expertise to perform the duties required, which will include:

(1) Coordinating the schedule for clearing the band;

(2) Performing engineering analysis, as necessary to determine necessary earth station migration actions;

(3) Assigning obligations, as necessary, for earth station migrations and filtering;

(4) Coordinating with overlay licensees throughout the transition process;

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(5) Assessing the completion of the transition in each PEA and determining overlay licensees' ability to commence operations; and

(6) Mediating scheduling disputes.

(c) *Relocation Coordinator duties.* The Relocation Coordinator shall:

(1) Establish a timeline and take actions necessary to migrate and filter incumbent earth stations to ensure uninterrupted service during and following the transition.

(2) Review the Transition Plans filed by all eligible space station operators and recommend any changes to those plans to the Commission to the extent needed to ensure a timely transition.

(3) To the extent that incumbent earth stations are not accounted for in eligible space station operators' Transition Plans, the Relocation Coordinator must include those incumbent earth stations in an Earth Station Transition Plan.

(i) May require each associated space station operator to file the information needed for such a plan with the Relocation Coordinator.

(ii) Will describe and recommend the respective responsibility of each party for earth station migration obligations in the Earth Station Transition Plan and assist incumbent earth stations in transitioning including, for example, by installing filters or hiring a third party to install such filters to the extent necessary.

(4) Coordinate its operations with overlay licensees.

(5) Be responsible for receiving notice from earth station operators or other satellite customers of any disputes related to comparability of facilities, workmanship, or preservation of service during the transition and shall subsequently notify the Wireless Telecommunications Bureau of the dispute and provide recommendations for resolution.

(6) Must make real time disclosures of the content and timing of and the parties to communications, if any, from or to applicants to participate in the competitive bidding, as defined by § 1.2105(c)(5)(i) of this chapter whenever the prohibition in § 1.2105(c) of this chapter applies to competitive bidding for licenses in the 3.7 GHz Service.

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(7) Incumbent space station operators must cooperate in good faith with the Relocation Coordinator throughout the transition.

(d) *Status reports.* On a quarterly basis, beginning December 31, 2020, the Relocation Coordinator must provide a report on the overall status of clearing efforts.

(e) *Document requests.* The Wireless Telecommunications Bureau, in consultation with the Office of Managing Director, may request any documentation from the Relocation Coordinator necessary to provide guidance or carry out oversight.

§ 27.1414 Relocation Payment Clearinghouse.

A Relocation Payment Clearinghouse shall be selected and serve to administer the cost-related aspects of the transition in a fair, transparent manner, pursuant to Commission rules and oversight, to mitigate financial disputes among stakeholders, and to collect and distribute payments in a timely manner for the transition of the 3700–4000 MHz band to the 3.7 GHz Service.

(a) *Selection process.* (1) A search committee will select the Relocation Payment Clearinghouse. The search committee shall consist of member appointed by each of following nine entities: ACA Connects, Intelsat, SES, Eutelsat S.A., National Association Broadcasters, National Cable Television Association, CTIA, Competitive Carriers Association, and WISPA.

(2) The search committee shall convene no later than June 22, 2020 and shall notify the Commission of the detailed selection criteria for the position of Relocation Payment Clearinghouse no later than June 1, 2020. Such criteria must be consistent with the qualifications, roles, and duties of the Relocation Payment Clearinghouse specified in this subpart. The Wireless Telecommunications Bureau (Bureau) is directed, on delegated authority, to issue a Public Notice notifying the public that the search committee has published criteria, outlining submission requirements, and providing the closing dates for the selection of the Relocation Payment Clearinghouse and source (*i.e.*, web page).

(3) The search committee should proceed by consensus; however, if a vote on selection of a Relocation Payment Clearinghouse is required, it shall be by a majority.

(4) In the event that the search committee fails to select a Relocation Payment Clearinghouse and to notify the Commission by July 31, 2020, the search committee will be dissolved without further action by the Commission. In the event that the search committee fails to select a Clearinghouse and to notify the Commission by July 31, 2020, two of the nine members of the search committee will be dropped therefrom by lot, and the remaining seven members of the search committee shall select a Clearinghouse by majority vote by August 14, 2020.

(5) During the course of the Relocation Payment Clearinghouse's tenure, the Commission will take such measures as are necessary to ensure timely compliance, including, should it become necessary, issuing subsequent public notices to select new Relocation Payment Clearinghouses(s).

(b) *Selection criteria.* (1) The Relocation Payment Clearinghouse must be a neutral, independent entity with no conflicts of interest (organizational or personal) on the part of the organization or its officers, directors, employees, contractors, or significant subcontractors.

(i) Organizational conflicts of interest means that because of other activities or relationships with other entities, the Relocation Payment Clearinghouse, its contractors, or significant subcontractors are unable or potentially unable to render impartial services, assistance or advice; the Relocation Payment Clearinghouse's objectivity in performing its function is or might be otherwise impaired; or the Relocation Payment Clearinghouse might gain an unfair competitive advantage.

(ii) Personal conflict of interest means a situation in which an employee, officer, or director of the Relocation Payment Clearinghouse, the Relocation Payment Clearinghouse's contractors or significant subcontractors has a financial interest, personal activity, or relationship that could impair that person's ability to act impartially

and in the best interest of the transition when performing their assigned role, or is engaged in self-dealing.

(2) The Relocation Payment Clearinghouse must be able to demonstrate that it has the requisite expertise to perform the duties required, which will include collecting and distributing relocation and accelerated relocation payments, auditing incoming and outgoing estimates, mitigating cost disputes among parties, and generally acting as clearinghouse.

(3) The search committee should ensure that the Relocation Payment Clearinghouse meets relevant best practices and standards in its operation to ensure an effective and efficient transition. First, the Relocation Payment Clearinghouse should be required, in administering the transition, to:

(i) Engage in strategic planning and adopt goals and metrics to evaluate its performance;

(ii) Adopt internal controls for its operations;

(iii) Utilize enterprise risk management practices; and

(iv) Use best practices to protect against improper payments and to prevent fraud, waste and abuse in its handling of funds. The Relocation Payment Clearinghouse must be required to create written procedures for its operations, using the Government Accountability Office's Green Book to serve as a guide in satisfying such requirements.

(4) The search committee must also ensure that the Relocation Payment Clearinghouse adopts robust privacy and data security best practices in its operations, given that it will receive and process information critical to ensuring a successful and expeditious transition.

(i) When the prohibition in § 1.2105(c) of this chapter applies to competitive bidding for licenses in the 3.7 GHz service, the Relocation Payment Clearinghouse must make real time disclosures of the content and timing of and the parties to communications, if any, from or to applicants to participate in the competitive bidding, as defined by § 1.2105(c)(5)(i) of this chapter.

(ii) The Relocation Payment Clearinghouse should also comply with, on

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an ongoing basis, all applicable laws and Federal Government guidance on privacy and information security requirements such as relevant provisions in the Federal Information Security Management Act, National Institute of Standards and Technology publications, and Office of Management and Budget guidance.

(iii) The Relocation Payment Clearinghouse must hire a third-party firm to independently audit and verify, on an annual basis, the Relocation Payment Clearinghouse's compliance with privacy and information security requirements and to provide recommendations based on any audit findings; to correct any negative audit findings and adopt any additional practices suggested by the auditor; and to report the results to the Bureau.

(c) *Reports and information.* (1) The Relocation Payment Clearinghouse must provide quarterly reports that detail the status of reimbursement funds available for clearing obligations, the relocation and accelerated relocation payments issued, the amounts collected from overlay licensees, and any certifications filed by incumbents. The reports must account for all funds spent to transition the 3.7 GHz Service Band, including the Relocation Payment Clearinghouse's own expenses, *e.g.*, salaries and fees paid to law firms, accounting firms, and other consultants. The report shall include descriptions of any disputes and the manner in which they were resolved.

(2) The Relocation Payment Clearinghouse shall provide to the Office of the Managing Director and the Wireless Telecommunications Bureau, by March 1 of each year, an audited statement of funds expended to date, including salaries and expenses of the Clearinghouse.

(3) The Relocation Clearing House shall provide to the Wireless Telecommunications Bureau additional information upon request.

§ 27.1415 Documentation of expenses.

Parties seeking reimbursement of compensable relocation costs must document their actual expenses and the Relocation Payment Clearinghouse, or a third-party on behalf of the Relocation Payment Clearinghouse,

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may conduct audits of entities that receive reimbursements. Entities receiving reimbursements must make available all relevant documentation upon request from the Relocation Payment Clearinghouse or its contractor.

§ 27.1416 Reimbursable costs.

(a) *Determining reimbursable costs.* The Relocation Payment Clearinghouse shall review reimbursement requests to determine whether they are reasonable and to ensure they comply with the requirements adopted in this sub-part. The Relocation Payment Clearinghouse shall give parties the opportunity to supplement any reimbursement claims that the Relocation Payment Clearinghouse deems deficient. Reimbursement submissions that fall within the estimated range of costs in the cost category schedule issued by the Wireless Telecommunications Bureau shall be presumed reasonable. If the Relocation Payment Clearinghouse determines that the amount sought for reimbursement is unreasonable, it shall notify the party of the amount it deems eligible for reimbursement. The Wireless Telecommunications Bureau shall make further determinations related to reimbursable costs, as necessary, throughout the transition process.

(b) *Payment procedures.* Following a determination of the reimbursable amount, the Relocation Payment Clearinghouse shall incorporate approved claims into invoices, which it shall issue to each licensee indicating the amount to be paid. The Relocation Payment Clearinghouse shall pay approved claims within 30 days of invoice submission. The Relocation Payment Clearinghouse shall also include its own reasonable costs in the invoices.

§ 27.1417 Reimbursement fund.

The Relocation Payment Clearinghouse will establish and administer an account that will fund the costs for the transition of this band to the 3.7 GHz Service after an auction for the 3.7 GHz Service concludes. Licensees in the 3.7 GHz Service shall pay their *pro rata* share of six months' worth of estimated transition costs into a reimbursement fund, administered by the Relocation Payment Clearinghouse,

shortly after the auction and then every six months until the transition is complete. The Relocation Payment Clearinghouse shall draw from the reimbursement fund to pay approved, invoiced claims, consistent with §27.1418. If the reimbursement fund does not have sufficient funds to pay approved claims before a six-month replenishment, the Relocation Payment Clearinghouse shall provide 3.7 GHz Service licensees with 30 days' notice of the additional *pro rata* shares they must contribute. At the end of the transition, the Relocation Payment Clearinghouse shall refund any unused amounts to 3.7 GHz Service licensees according to their *pro rata* shares.

§27.1418 Payment obligations.

(a) Each eligible space station operator is responsible for the payment of its own satellite transition costs until the auction winners have been announced.

(b) Licensees in the 3.7 GHz Service shall pay their *pro rata* share of:

(1) The reasonable costs of the Relocation Payment Clearinghouse and, in the event the Wireless Telecommunications Bureau selects the Relocation Coordinator, the services of the Relocation Coordinator and its staff;

(2) The actual relocation costs, provided that they are not unreasonable, for eligible space station operators and incumbent fixed service licensees; the actual transition costs, provided they are not unreasonable, associated with the necessary migration and filtering of incumbent earth stations;

(3) Any lump sum payments, if elected by incumbent earth station operators in lieu of actual relocation costs; and

(4) Specified accelerated relocation payments for space station operators that clear on an accelerated timeframe. Licensees in the 3.7 GHz Service shall be responsible for the full costs of space station transition, the Relocation Payment Clearinghouse, and, if selected and established by the Wireless Telecommunications Bureau, the Relocation Coordinator, based on their *pro rata* share of the total auction bids of each licensee's gross winning bids in the auction overall; they shall be responsible for incumbent earth station

and incumbent fixed service transition costs in a Partial Economic Area based on their *pro rata* share of the total gross bids for that Partial Economic Area.

(c) Following the auction, and every six months until the close of the transition, licensees in the 3.7 GHz Service shall submit their portion of estimated transition costs to a reimbursement fund, and the Relocation Payment Clearinghouse will reimburse parties incurring transition costs. If actual costs exceed estimated costs, the Relocation Payment Clearinghouse shall perform a true-up for additional funds from 3.7 GHz Service licensees.

(d) If 3.7 GHz band license is relinquished to the Commission prior to all relocation cost reimbursements and accelerated relocation payments being paid, the remaining payments will be distributed among other similarly situated 3.7 GHz band licensees. If a new license is issued for the previously relinquished rights prior to final payments becoming due, the new 3.7 GHz band licensee will be responsible for the same *pro rata* share of relocation costs and accelerated relocation payments as the initial 3.7 GHz band license. If a 3.7 GHz band licensee sells its rights on the secondary market, the new 3.7 GHz band licensee will be obligated to fulfill all payment obligations associated with the license.

§27.1419 Lump sum payment for earth station opt out.

The Wireless Telecommunications Bureau shall announce a lump sum that will be available per each incumbent earth station that elects to opt out from the formal relocation process, per §27.1412(e), as well as the process for electing lump sum payments. Incumbent earth station owners must make the lump sum payment election no later than 30 days after the Bureau announces the lump sum payment amounts, and must indicate whether each incumbent earth station for which it elects the lump sum payment will be transitioned to the upper 200 megahertz in order to maintain C-band services or will discontinue C-band services.

§ 27.1420 Cost-sharing formula.

(a) For space station transition and Relocation Payment Clearinghouse costs, and in the event the Wireless Telecommunications Bureau selects a Relocation Coordinator pursuant to § 27.1413(a), Relocation Coordinator costs, the *pro rata* share of each flexible-use licensee will be the sum of the

final clock phase prices (P) for the set of all license blocks that a bidder wins divided by the total final clock phase prices for all N license blocks sold in the auction. To determine a licensee's reimbursement obligation (RO), that *pro rata* share would then be multiplied by the total eligible reimbursement costs (RC). Mathematically, this is represented as:

$$RO = \left(\frac{\sum_{i \in I} P_i}{\sum_{j=1}^N P_j} \right) \times RC$$

(b) For incumbent earth stations and fixed service incumbent licensee transition costs, a flexible-use licensee's *pro rata* share will be determined on a PEA-specific basis, based on the final clock phase prices for the license blocks it won in each PEA. To calculate the *pro rata* share for incumbent earth station transition costs in a given PEA, the same formula identified in § 27.1412(a) will be used, except I is the set of licenses a bidder won in the PEA, N is the total blocks sold in the PEA and RC is the PEA-specific earth station and fixed service relocation costs.

(c) For the Phase I accelerated relocation payments, the *pro rata* share of each flexible use licensee of the 3.7 to 3.8 MHz in the 46 PEAs that are cleared by December 5, 2021, will be the sum of the final clock phase prices (P) that the licensee won divided by the total final clock phase prices for all M license blocks sold in those 46 PEAs. To determine a licensee's RO the *pro rata* share would then be multiplied by the total accelerated relocation payment due for Phase I, $A1$. Mathematically, this is represented as:

$$RO = \left(\frac{\sum_{i \in I} P_i}{\sum_{j=1}^M P_j} \right) \times A1$$

(d) For Phase II accelerated relocation payments, the *pro rata* share of each flexible use licensee will be the sum of the final clock phase prices (P) that the licensee won in the entire auction, divided by the total final clock phase prices for all N license blocks

sold in the auction. To determine a licensee's RO the *pro rata* share would then be multiplied by the total accelerated relocation payment due for Phase II, $A2$. Mathematically, this is represented as:

$$RO = \left(\frac{\sum_{i \in I} P_i}{\sum_{j=1}^N P_j} \right) \times A2$$

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§ 27.1421 Disputes over costs and cost-sharing.

(a) Parties disputing a cost estimate, cost invoice, or payment or cost-sharing obligation must file an objection with the Relocation Payment Clearinghouse.

(b) The Relocation Payment Clearinghouse may mediate any disputes regarding cost estimates or payments that may arise in the course of band reconfiguration; or refer the disputant parties to alternative dispute resolution fora.

(1) Any dispute submitted to the Relocation Payment Clearinghouse, or other mediator, shall be decided within 30 days after the Relocation Payment Clearinghouse has received a submission by one party and a response from the other party.

(2) Thereafter, any party may seek expedited non-binding arbitration, which must be completed within 30 days of the recommended decision or advice of the Relocation Payment Clearinghouse or other mediator.

(3) The parties will share the cost of this arbitration if it is before the Relocation Payment Clearinghouse.

(c) Should any issues still remain unresolved, they may be referred to the Bureau within ten days of recommended decision or advice of the Relocation Payment Clearinghouse or other mediator and any decision of the Relocation Payment Clearinghouse can be appealed to the Chief of the Bureau.

(1) When referring an unresolved matter, the Relocation Payment Clearinghouse shall forward the entire record on any disputed issues, including such dispositions thereof that the Relocation Payment Clearinghouse has considered.

(2) Upon receipt of such record and advice, the Bureau will decide the disputed issues based on the record submitted. The Bureau is directed to resolve such disputed issues or designate them for an evidentiary hearing before an Administrative Law Judge. If the Bureau decides an issue, any party to the dispute wishing to appeal the decision may do so by filing with the Commission, within ten days of the effective date of the initial decision, a Petition for *de novo* review; whereupon the matter will be set for an evidentiary hearing before an Administrative Law Judge.

(3) Parties seeking *de novo* review of a decision by the Bureau are advised that, in the course of the evidentiary hearing, the Commission may require complete documentation relevant to any disputed matters; and, where necessary, and at the presiding judge's discretion, require expert engineering, economic or other reports or testimony. Parties may therefore wish to consider possibly less burdensome and expensive resolution of their disputes through means of alternative dispute resolution.

§ 27.1422 Accelerated relocation payment.

(a) Eligible space station operators that meet the applicable early-clearing benchmark(s), as confirmed in their Certification of Accelerated Relocation set-forth in §27.1412(g), will be eligible for their respective accelerated relocation payment.

(b) The Relocation Payment Clearinghouse will distribute the accelerated relocation payments accordingly:

TABLE 1 TO PARAGRAPH (b)—ACCELERATED RELOCATION PAYMENT BY OPERATOR

	Payment	Phase I payment	Phase II payment
Intelsat	\$4,865,366,000	\$1,197,842,000	\$3,667,524,000
SES	3,968,133,000	976,945,000	2,991,188,000
Eutelsat	506,978,000	124,817,000	382,161,000
Telesat	344,400,000	84,790,000	259,610,000
Star One	15,124,000	3,723,000	11,401,000
Totals	9,700,001,000	2,388,117,000	7,311,884,000

(c) The Relocation Payment Clearinghouse shall promptly notify 3.7 GHz Service licensees following validation of the certification of accelerated relocations as set forth in Section 27.1412(g). 3.7 GHz Service licensees shall pay the accelerated relocation payments to the Clearinghouse within 60 days of the notice that eligible space station operators have met their respective accelerated clearing benchmark. The Clearinghouse shall disburse accelerated relocation payments to relevant space station operators within seven days of receiving the payment from overlay licensees.

(d) For eligible space station operators that fail to meet either the Phase I or Phase II benchmarks as of the relevant accelerated relocation deadline, the accelerated relocation payment will be reduced according to the following schedule of declining accelerated relocation payments for the six months following the relevant deadline:

TABLE 2 TO PARAGRAPH (d)

Date of completion	Incremental reduction (percent)	Accelerated relocation payment (percent)
By Deadline	100
1–30 Days Late	5	95
31–60 Days Late	5	90
61–90 Days Late	10	80
91–120 Days Late	10	70
121–150 Days Late	20	50
151–180 Days Late	20	30
181+ Days Late	30	0

§ 27.1423 Protection of incumbent operations.

(a) To protect incumbent earth stations from out-of-band emissions from fixed stations, base stations and mobiles, the power flux density (PFD) of any emissions within the 4000–4200 MHz band must not exceed $-124 \text{ dBW/m}^2/\text{MHz}$ as measured at the earth station antenna.

(b) To protect incumbent earth stations from blocking, the power flux density (PFD) of any emissions within the 3700–3980 MHz band must not exceed $-16 \text{ dBW/m}^2/\text{MHz}$ as measured at the earth station antenna.

(c) All 3.7 GHz Service licensees, prior to initiating operations from any base or fixed station, must coordinate cochannel frequency usage with all in-

cumbent Telemetry, Tracking, and Command (TT&C) earth stations within a 70 km radius. The licensee must ensure that the aggregated power from its operations meets an interference to noise ratio (I/N) of -6 dB to the TT&C earth station receiver. A base station's operation will be defined as cochannel when any of the 3.7 GHz Service licensee's authorized frequencies are separated from the center frequency of the TT&C earth station by less than 150% of the maximum emission bandwidth in use by the TT&C earth station.

(d) All 3.7 GHz Service licensees operating on an adjacent channel to an incumbent TT&C earth station must ensure that the aggregated power from its operations meets an interference to noise ratio (I/N) of -6 dB to the TT&C earth station receiver.

(e) To protect incumbent TT&C earth stations from blocking, the power flux density (PFD) of any emissions within the 3700–3980 MHz band must not exceed $-16 \text{ dBW/m}^2/\text{MHz}$ as measured at the TT&C earth station antenna.

§ 27.1424 Agreements between 3.7 GHz Service licensees and C-Band earth station operators.

The PFD limits in § 27.1423 may be modified by the private agreement of licensees of 3.7 GHz Service and entities operating earth stations in the 4000–4200 MHz band or TT&C operations in the 3700–3980 MHz band. A licensee of the 3.7 GHz Service who is a party to such an agreement must maintain a copy of the agreement in its station files and disclose it, upon request, to prospective license assignees, transferees, or spectrum lessees, and to the Commission.

Subpart P—Regulations Governing Licensing and Use of 900 MHz Broadband Service in the 897.5–900.5 MHz and 936.5–939.5 MHz Bands

SOURCE: 85 FR 43134, July 16, 2020, unless otherwise noted.

§ 27.1500 Scope.

This subpart sets out the regulations governing the licensing and operations

of 900 MHz broadband systems operating in the 897.5–900.5/936.5–939.5 MHz band. It includes eligibility requirements and operational and technical standards for stations licensed in this band. It also supplements the rules regarding application procedures contained in part 1, subpart F of this chapter. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflict, the provisions of this subpart shall govern with respect to licensing and operation in this frequency band.

§ 27.1501 Definitions.

Terms used in this subpart shall have the following meanings:

900 MHz broadband. The 900 MHz broadband systems in the 897.5–900.5/936.5–939.5 MHz band licensed by the Commission pursuant to the provisions of this subpart.

900 MHz broadband licensee. An entity that holds a 900 MHz broadband license issued pursuant to this subpart.

900 MHz broadband segment. The segment of realigned 900 MHz spectrum (i.e., the 897.5–900.5/936.5–939.5 MHz band) licensed by the Commission pursuant to the provisions of this subpart.

900 MHz narrowband segment. The segments of realigned 900 MHz spectrum (i.e., the 896–897.5/935–936.5 MHz and 900.5–901/939.5–940 MHz bands (Paired channels 1–119 and 361–399)) designated for narrowband operations and licensed pursuant to 47 CFR part 90, subpart S.

Complex system. A covered incumbent's system that consists of 45 or more functionally integrated sites.

County. For purposes of this part, counties shall be defined using the United States Census Bureau's data reflecting county legal boundaries and names valid through January 1, 2017.

Covered incumbent. Any 900 MHz site-based licensee in the broadband segment that is required under § 90.621(b) to be protected by a broadband licensee with a base station at any location within the county, or any 900 MHz geographic-based SMR licensee in the broadband segment whose license area completely or partially overlaps the county.

Eligibility Certification. A filing made to the Commission as part of the pro-

spective broadband licensee's application for a 900 MHz broadband license that demonstrates satisfaction of the eligibility restrictions.

License area. The geographic component of a 900 MHz broadband license. A license area consists of one county.

Power spectral density (PSD). The power of an emission in the frequency domain, such as in terms of ERP or EIRP, stated per unit bandwidth, e.g., watts/MHz.

Site-channel. A channel licensed at a particular location.

Transition plan. A filing made to the Commission as part of the prospective broadband licensee's application for a 900 MHz broadband license that includes a plan for transitioning the band in the particular county.

Transitioned market. See section 90.7 of part 90 of this chapter.

§ 27.1502 Permanent discontinuance of 900 MHz broadband licenses.

A 900 MHz broadband licensee that permanently discontinues service as defined in § 1.953 must notify the Commission of the discontinuance within 10 days by filing FCC Form 601 requesting license cancellation. An authorization will automatically terminate, without specific Commission action, if service is permanently discontinued as defined in this chapter, even if a licensee fails to file the required form requesting license cancellation.

§ 27.1503 Broadband license eligibility and application requirements.

(a) *Eligibility.* For an applicant to be eligible for a broadband license in a county, it must:

(1) Hold the licenses for more than 50% of the total amount of licensed 900 MHz SMR (site-based or geographically licensed) and B/ILT (site-based) spectrum for the relevant county including credit for spectrum included in an application to acquire or relocate covered incumbents filed with the Commission on or after March 14, 2019;

(2) Hold spectrum in the broadband segment or reach an agreement to clear through acquisition or relocation, including credit for spectrum included in an application to acquire or relocate covered incumbents filed with the Commission on or after March 14, 2019,

or demonstrate how it will provide interference protection to, covered incumbent licensees collectively holding licenses in the broadband segment for at least 90% of the site-channels in the county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county. To provide interference protection, an applicant may:

(i) Protect site-based covered incumbent(s) through compliance with minimum spacing criteria set forth in § 90.621(b) of this chapter;

(ii) Protect site-based covered incumbent(s) through new or existing letters of concurrence agreeing to lesser base station separations as set forth in § 90.621(b); and/or

(iii) Protect geographically based covered incumbent(s) through a private contractual agreement.

(3) If any site of a complex system is located within the county and/or within 70 miles of the county boundary, an applicant must either hold the license for that site or reach an agreement to acquire, relocate, or protect it in order to demonstrate eligibility.

(4) The applicant may use its current 900 MHz holdings in the narrowband segment to relocate covered incumbents. Spectrum used for the purpose of relocating incumbent(s) may not exceed the incumbent's current spectrum holdings in the relevant county, unless additional channels are necessary to achieve equivalent coverage and/or capacity.

(b) *Application.* (1) Applications must be filed in accordance with part 1, subpart F of this chapter.

(2) An applicant for a 900 MHz broadband license must submit with its application an Eligibility Certification that:

(i) Lists the licenses the applicant holds in the 900 MHz band to demonstrate that it holds the licenses for more than 50% of the total licensed 900 MHz spectrum, whether SMR or B/ILT, for the relevant county including credit for spectrum included in an application to acquire or relocate any covered incumbents filed on or after March 14, 2019;

(ii) A statement that it has filed a Transition Plan detailing how it holds

spectrum in the broadband segment and/or has reached an agreement to clear through acquisition or relocation (including credit for spectrum included in an application to acquire or relocate covered incumbents filed with the Commission on or after March 14, 2019), or demonstrate how it will provide interference protection to, covered incumbent licensees collectively holding licenses in the broadband segment for at least 90% of the site-channels in the county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county.

(3) An applicant for a 900 MHz broadband license must submit with its application a Transition Plan that provides:

(i) A showing of one or more of the following:

(A) Agreement by covered incumbents to relocate from the broadband segment;

(B) Protection of site-based covered incumbents through compliance with minimum spacing criteria;

(C) Protection of site-based covered incumbents through new or existing letters of concurrence agreeing to lesser base station separations;

(D) Protection of geographically-based covered incumbents through private contractual agreements; and/or

(E) Evidence that it holds licenses for the site-channels and/or geographically licensed channels.

(ii) Descriptions of the agreements between the prospective broadband licensee and all covered incumbents collectively holding licenses for at least 90% of site-channels within the county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county.

(iii) Descriptions in detail of all information and actions necessary to accomplish the realignment, as follows:

(A) The applications that the parties to the agreements will file for spectrum in the narrowband segment in order to relocate or repack licensees;

(B) A description of how the applicant will provide interference protection to, and/or acquire or relocate from

the broadband segment covered incumbents collectively holding licenses for at least 90% of site-channels within 70 miles of the county and within 70 miles of the county boundary and/or evidence that it holds licenses for the site-channels and/or geographically licensed channels.

(C) Any rule waivers or other actions necessary to implement an agreement with a covered incumbent; and

(D) Such additional information as may be required.

(iv) A certification from an FCC-certified frequency coordinator that the Transition Plan's representations can be implemented consistent with Commission rules. The certification must establish that the relocations proposed therein take into consideration all relevant covered incumbents and are consistent with the existing part 90 interference protection criteria if the covered incumbent is site-based, and include any private contractual agreements between the prospective broadband licensee and a geographically-licensed covered incumbent.

(4) Applicants seeking to transition multiple counties may simultaneously file a single Transition Plan with each of its county-based applications.

(c) *Anti-windfall provisions.* (1) The applicant must return to the Commission all of its licensed 900 MHz SMR and B/ILT spectrum, up to six megahertz, for the county in which it seeks a broadband license. The applicant will be required to file, within 15 days of filing its broadband license application, an application(s) to cancel all of its 900 MHz SMR and B/ILT spectrum, up to six megahertz, conditioned upon Commission grant of its application.

(2) If the applicant relinquishes less than six megahertz of spectrum in accordance with paragraph (c)(1) of this section, then the applicant must remit an anti-windfall payment prior to the grant of the 900 MHz broadband license. Payment must be made through a monetary payment to the U.S. Treasury.

§ 27.1504 Mandatory relocation.

(a) Subject to paragraph (b) of this section, broadband licensees may require mandatory relocation from the broadband segment covered incumbents' remaining site-channels in a

given county and within 70 miles of the county boundary, and geographically licensed channels where the license area completely or partially overlaps the county, that were not covered by § 27.1503(a)(2).

(b) Complex systems are exempt from mandatory relocation. To qualify as exempt from mandatory relocation, a complex system must have at least one site (of its 45 or more functionally integrated sites) located within the county license area or within 70 miles of the county boundary.

(c) A broadband licensee seeking to relocate a covered incumbent pursuant to this section is required to pay all reasonable relocation costs, including providing the relocated covered incumbent with comparable facilities. To be comparable, the replacement system provided to a covered incumbent during a mandatory relocation must be at least equivalent to the existing 900 MHz system with respect to the following four factors:

- (1) System;
- (2) Capacity;
- (3) Quality of service; and
- (4) Operating costs.

(d) Having met the 90% success threshold, a 900 MHz broadband licensee seeking to trigger the mandatory relocation process shall serve notice on applicable covered incumbent(s).

(e) Following the service of notice, a 900 MHz broadband licensee may request information from the covered incumbent reasonably required to craft its offer of comparable facilities.

(f) We expect all parties to negotiate with the utmost "good faith" in the negotiation process. Factors relevant to a "good-faith" determination include:

- (1) Whether the party responsible for paying the cost of band reconfiguration has made a *bona fide* offer to relocate the incumbent to comparable facilities;
- (2) The steps the parties have taken to determine the actual cost of relocation to comparable facilities; and
- (3) Whether either party has unreasonably withheld information, essential to the accurate estimation of relocation costs and procedures, requested by the other party.

(g) A party seeking Commission resolution of a dispute must submit in writing to the Chief, Wireless Telecommunications Bureau:

(1) The name, address, telephone number, and email address of the 900 MHz broadband licensee or covered incumbent making the allegation;

(2) The name of the 900 MHz broadband licensee or covered incumbent about which the allegation is made;

(3) A complete statement of the facts supporting the broadband licensee's or incumbent's claim; and

(4) The specific relief sought.

(h) If an incumbent fails to negotiate in good faith, its facilities may be mandatorily relocated, and its license modified accordingly by the Commission pursuant to section 316 of the Act. If the Wireless Telecommunications Bureau finds bad faith on the part of the broadband licensee, the broadband licensee may lose the right to relocate the incumbent or the Wireless Telecommunications Bureau may refer the matter to the Enforcement Bureau for action (which could include a range of sanctions, such as imposition of forfeitures).

§ 27.1505 Performance requirements.

(a) 900 MHz broadband licensees shall demonstrate compliance with performance requirements by filing a construction notification with the Commission, within 15 days of the expiration of the applicable benchmark, in accordance with the provisions set forth in § 1.946(d) of this chapter.

(1) The licensee must certify whether it has met the applicable performance requirements. The licensee must file a description and certification of the areas for which it is providing service. The construction notifications must include electronic coverage maps and supporting technical documentation regarding the type of service it is providing for each licensed area within its service territory and the type of technology used to provide such service, and certify the accuracy of such documentation. Supporting documentation must include the assumptions used to create the coverage maps, including the propagation model and the signal

strength necessary to provide reliable service with the licensee's technology.

(2) To demonstrate compliance with the population coverage requirement, licensees shall use the most recently available decennial U.S. Census Bureau data at the time of measurement and shall base their measurements of population served on areas no larger than the Census Tract level. The population within a specific Census Tract (or other acceptable identifier) will be deemed served by the licensee only if it provides reliable signal coverage to and offers service within the specific Census Tract (or other acceptable identifier). To the extent the Census Tract (or other acceptable identifier) extends beyond the boundaries of a license area, a licensee with authorizations for such areas may include only the population within the Census Tract (or other acceptable identifier) towards meeting the performance requirement of a single, individual license.

(b) A 900 MHz broadband licensee must meet either a population coverage requirement or geographic coverage as follows:

(1) *Population metric.* (i) A 900 MHz broadband licensee shall provide reliable signal coverage and offer broadband service to at least 45% of the population in its license area within six years of license grant.

(ii) A 900 MHz broadband licensee shall provide reliable signal coverage and offer broadband service to at least 80% of the population in its license area within 12 years of license grant.

(2) *Geographic coverage.* Alternatively, a 900 MHz broadband licensee may:

(i) Demonstrate it provides reliable signal coverage and offers broadband service covering at least 25% of the geographic license area within six years of license grant.

(ii) Demonstrate it provides reliable signal coverage and offers broadband service covering at least 50% of the geographic license area within twelve years of license grant.

(c) *Penalties.* (1) If a 900 MHz broadband licensee fails to meet the first performance benchmark, we require the licensee to meet the final performance benchmark two years sooner (*i.e.*, at 10 years into the license

term) and reduce the license term from 15 years to 13 years.

(2) If a 900 MHz broadband licensee fails to meet the final performance benchmark, its authorization for that license area will terminate automatically without Commission action.

(d) *License renewal.* After satisfying the 12-year, final performance benchmark, a licensee must continue to provide coverage and offer broadband service at or above that level for the remaining three years of the 15-year license term in order to warrant license renewal.

§ 27.1506 Frequencies.

The 897.5–900.5 MHz and 936.5–939.5 MHz band segments are available for licensing with an authorized bandwidth up to 3 megahertz paired channels. The 897.5–900.5 MHz segment must only be used for uplink transmissions. The 936.5–939.5 MHz segments must only be used for downlink transmissions.

§ 27.1507 Effective radiated power limits for 900 MHz broadband systems.

(a) *Maximum ERP.* The power limits specified in this section are applicable to operations in areas more than 110 km (68.4 miles) from the U.S./Mexico border and 140 km (87 miles) from the U.S./Canada border.

(1) *General limit.* (i) The ERP for base and repeater stations must not exceed 400 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 400 watts/megahertz ERP in accordance with Table 1 of this section.

(ii) Provided that they also comply with paragraphs (b) and (c) of this section, licensees are permitted to operate base and repeater stations with up to a maximum ERP of 1000 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 1000 watts/megahertz ERP in accordance with Table 2 of this section.

(2) *Rural areas.* For systems that are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census:

(i) The ERP for base and repeater stations must not exceed 800 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 800 watts/megahertz ERP in accordance with Table 3 of this section.

(ii) Provided that they also comply with paragraphs (b) and (c) of this section, base and repeater stations may operate with up to a maximum ERP of 2000 watts/megahertz power spectral density (PSD) per sector and an antenna height of 304 m height above average terrain (HAAT), except that antenna heights greater than 304 m HAAT are permitted if power levels are reduced below 2000 watts/megahertz ERP in accordance with Table 4 of this section.

(3) *Mobile, control and auxiliary test stations.* Mobile, control and auxiliary test stations must not exceed 10 watts ERP.

(4) *Portable stations.* Portable stations must not exceed 3 watts ERP.

(b) *Power flux density (PFD).* Each 900 MHz broadband base or repeater station that exceeds the ERP limit of paragraph (a)(1)(i) or (a)(2)(i) of this section must be designed and deployed so as not to exceed a modeled PFD of 3000 microwatts/m²/MHz over at least 98% of the area within 1 km of the base or repeater station antenna, at 1.6 meters above ground level. To ensure compliance with this requirement, the licensee must perform predictive modeling of the PFD values within at least 1 km of each base or repeater station antenna prior to commencing such operations and, thereafter, prior to making any site modifications that may increase the PFD levels around the base or repeater station. The modeling must take into consideration terrain and other local conditions and must use good engineering practices for the 900 MHz band.

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(c) *Power measurement.* Measurement of 900 MHz broadband base transmitter and repeater ERP must be made using an average power measurement technique. Power measurements for base transmitters and repeaters must be made in accordance with either of the following:

(1) A Commission-approved average power technique (see FCC Laboratory’s Knowledge Database); or

(2) For purposes of this section, peak transmit power must be measured over an interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(d) *PAR limit.* The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

(e) *Height-power limit.* As specified in paragraph (a) of this section, the following tables specify the maximum base station power for antenna heights above average terrain (HAAT) that exceed 304 meters.

TABLE 1 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 400 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1372 (4500)	26
Above 1220 (4000) To 1372 (4500)	28
Above 1067 (3500) To 1220 (4000)	30
Above 915 (3000) To 1067 (3500)	40
Above 763 (2500) To 915 (3000)	56
Above 610 (2000) To 763 (2500)	80
Above 458 (1500) To 610 (2000)	140
Above 305 (1000) To 458 (1500)	240
Up to 305 (1000)	400

TABLE 2 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 1000 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

TABLE 3 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 800 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1372 (4500)	52
Above 1220 (4000) To 1372 (4500)	56
Above 1067 (3500) To 1220 (4000)	60
Above 915 (3000) To 1067 (3500)	80
Above 763 (2500) To 915 (3000)	112
Above 610 (2000) To 763 (2500)	160
Above 458 (1500) To 610 (2000)	280
Above 305 (1000) To 458 (1500)	480
Up to 305 (1000)	800

TABLE 4 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 2000 WATTS/MEGAHERTZ

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140

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TABLE 4 TO § 27.1507—PERMISSIBLE POWER AND ANTENNA HEIGHTS FOR BASE STATIONS AND REPEATERS PERMITTED TO TRANSMIT WITH UP TO 2000 WATTS/MEGAHERTZ—Continued

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts/megahertz)
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

§ 27.1508 Field strength limit.

The predicted or measured median field strength must not exceed 40 dBµV/m at any given point along the geographic license boundary, unless the affected licensee agrees to a different field strength. This value applies to both the initially offered service areas and to partitioned service areas.

§ 27.1509 Emission limits.

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) in watts by at least the following amounts:

- (a) For 900 MHz broadband operations in 897.5–900.5 MHz band by at least 43 + 10 log (P) dB.
- (b) For 900 MHz broadband operations in the 936.5–939.5 MHz band, by at least 50 + 10 log (P) dB.

(c) Compliance with the provisions of paragraphs (a) and (b) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the licensee's band, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center fre-

quency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(d) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

(e) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

§ 27.1510 Unacceptable interference to narrowband 900 MHz licensees from 900 MHz broadband licensees.

See 47 CFR 90.672.

Subpart Q—3.45 GHz Service (3450–3550 MHz)

SOURCE: 86 FR 17954, Apr. 7, 2021, unless otherwise noted.

§ 27.1600 3450–3550 MHz band subject to competitive bidding.

Mutually exclusive initial applications for 3450–3550 MHz band licenses are subject to competitive bidding. The general competitive bidding procedures set forth in 47 CFR part 1, subpart Q, will apply unless otherwise provided in this subpart.

§ 27.1601 Designated entities in the 3450–3550 MHz band.

(a) *Eligibility for small business provisions—(1) Definitions—(i) Small business.* A small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$55 million for the preceding five (5) years.

(ii) *Very small business.* A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$20 million for the preceding five (5) years.

(2) *Bidding credits.* A winning bidder that qualifies as a small business, as defined in this section, or a consortium of small businesses as provided in § 1.2110(c)(6) of this chapter, may use the bidding credit of 15 percent, as specified in § 1.2110(f)(2)(i)(C) of this

chapter, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses as provided in § 1.2110(c)(6) of this chapter, may use the bidding credit of 25 percent, as specified in § 1.2110(f)(2)(i)(B) of this chapter, subject to the cap specified in § 1.2110(f)(2)(ii) of this chapter.

(b) *Eligibility for rural service provider bidding credit.* A rural service provider, as defined in § 1.2110(f)(4)(i) of this chapter, that has not claimed a small business bidding credit, or a consortium of rural service providers as provided in § 1.2110(c)(6) of this chapter, may use the bidding credit of 15 percent specified in § 1.2110(f)(4) of this chapter.

§ 27.1602 Incumbent Federal operations.

Regarding incumbent Federal operations in the 3450–3550 MHz band, 3.45 GHz Service licensees must comply with footnote US431B of the Table of Frequency Allocations in 47 CFR 2.106.

§ 27.1603 Coordination procedures.

(a) *Coordination requirement.* Prior to operation of any 3.45 GHz Service license in a Cooperative Planning Area or Periodic Use Area, a 3.45 GHz Service licensee must successfully coordinate such operation with any Federal incumbents in the Cooperative Planning Area or Periodic Use Area. The coordination procedures contained in this section shall apply unless the 3.45 GHz Service licensee and the Federal incumbent(s) have reached a mutually acceptable operator-to-operator coordination agreement that provides otherwise.

(b) *Informal discussions.* Before a 3.45 GHz Service licensee submits a formal coordination request, it may share and discuss draft proposals with Federal incumbent coordination staff. These discussions are voluntary, informal, and non-binding and can begin at any time.

(c) *Formal coordination.* The 3.45 GHz Service licensee shall initiate coordination by formally requesting access to operate within a Cooperative Planning Area and/or Periodic Use Area directly

through the Department of Defense's online portal.

(d) *Initiation, timing, and affirmative concurrence.* A 3.45 GHz Service licensee must initiate a formal coordination request through the online portal provided by the Department of Defense. Unless otherwise agreed between a 3.45 GHz Service licensee and the relevant Federal incumbent(s), no formal coordination requests may be submitted until nine (9) months after the date of the auction closing Public Notice. 3.45 GHz Service licensees may request informal discussions (through the point of contact identified in the applicable Transition Plan) during this nine-month time period. Unless otherwise agreed to in writing, the requirement to reach a coordination arrangement is satisfied only by obtaining the affirmative concurrence of the relevant Federal incumbent(s) via the portal. The requirement of this paragraph (d) is not satisfied by omission.

(e) *Submission information.* To submit a formal coordination request, the 3.45 GHz Service licensee must include information about the technical characteristics for the 3.45 GHz Service base stations and associated mobile units relevant to operation within the Cooperative Planning Area and/or Periodic Use Area. This information should be provided in accordance with the instructions provided in the portal user's guide provided by the Department of Defense. 3.45 GHz Service licensees must prioritize their deployments in the Cooperative Planning Area for each Federal incumbent when submitting a formal coordination request. If a 3.45 GHz Service licensee is seeking to coordinate with multiple systems or multiple locations of operation controlled by one Federal incumbent, the licensee must specify the order in which it prefers the Federal incumbent process the request (*i.e.*, the order of systems or geographic locations).

(f) *Coordination analysis.* If a 3.45 GHz Service licensee has questions about the result of a coordination request, it may contact the Federal incumbent to propose network design modifications to help address issues raised by the Federal incumbent. Once the 3.45 GHz Service licensee has revised its network design, it must resubmit a formal

coordination request, and the 3.45 GHz Service formal coordination process begins again.

(g) *Interference resolution process.* In instances of identified harmful interference occurring between a Federal and non-Federal operator not otherwise addressed by the coordination procedures or operator-to-operator agreements, the 3.45 GHz Service licensee shall first attempt to resolve the interference directly. If that effort is unsuccessful, the 3.45 GHz Service licensee, if adversely affected may escalate the matter to the Commission.

§ 27.1604 Reimbursement of relocation expenses of non-Federal radiolocation incumbents.

(a) *Relocation reimbursement contribution.* Each entity granted an initial license (not a renewal) in the 3.45 GHz Service (Licensee) must pay a *pro rata* portion to reimburse the costs incurred by authorized non-Federal, secondary radiolocation licensees for relocating from the 3.3–3.55 GHz band. These costs include the cost of a clearinghouse’s administration of the reimbursement, which the radiolocation licensees will pay initially and include in their reimbursable costs.

(b) *Pro rata share.* A Licensee’s *pro rata* share of relocation costs will be determined by dividing the total actual costs of such relocation, as approved by the clearinghouse selected pursuant to § 27.1605, by the total number of 3.45 GHz Service licenses granted, multiplied by the number of such licenses the Licensee will hold.

(c) *Timing of payment.* A Licensee’s relocation reimbursement contribution share must be paid to the clearinghouse by the date(s) and subject to procedures specified by public notice.

§ 27.1605 Reimbursement clearinghouse.

(a) The clearinghouse ultimately selected shall determine the reimbursement obligations of each Licensee pursuant to § 27.1604.

(1) The clearinghouse must be a must be a neutral, independent entity with no conflicts of interest (as defined in § 27.1414(b), on the part of the organization or its officers, directors, employ-

ees, contractors, or significant subcontractors.

(2) The clearinghouse must be able to demonstrate that it has the requisite expertise to perform the duties required, which will include collecting and distributing reimbursement payments, auditing incoming and outgoing estimates, mitigating cost disputes among parties, and generally acting as a clearinghouse.

(3) The clearinghouse must comply with, on an ongoing basis, all applicable laws and Federal Government guidance on privacy and information security requirements such as relevant provisions in the Federal Information Security Management Act, National Institute of Standards and Technology publications, and Office of Management and Budget guidance.

(4) The clearinghouse must provide quarterly reports to the Wireless Telecommunications Bureau that detail the status of reimbursement funds available, the payments issued, the amounts collected from licensees, and any information filed by incumbents. The reports must account for all funds spent, including the clearinghouse’s own expenses. The report shall include descriptions of any disputes and the manner in which they were resolved.

(b) Non-Federal secondary radiolocation licensees in the 3.3–3.55 GHz band that seek reimbursement of their expenses for relocating operations authorized under their licenses and existing as of February 22, 2019, must submit invoices or other appropriate documentation of such expenses to the clearinghouse no later than a date to be specified by public notice.

(c) Expenses must be reasonably related to the relocation from the 3.3–3.55 GHz band to the 2.9–3.0 GHz band, may be future expenses or expenses already incurred—including the clearinghouse’s costs, and no expenses for other purposes will be subject to reimbursement. Ineligible expenses include, but are not limited to, those related to upgrades or improvements. The clearinghouse shall have the authority to determine whether particular expenses are eligible for reimbursement.

(d) The Wireless Telecommunications Bureau is responsible for resolving any disputes arising from decisions by the

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clearinghouse and shall specify by public notice when the clearinghouse's responsibilities have terminated.

§ 27.1606 Aggregation of 3450–3550 MHz band licenses.

(a) 3.45 GHz Service licensees may aggregate up to 40 megahertz of 3450–3550 MHz band licenses across both license categories in any service area at any given time for four years after the close of the auction. After four years post-auction, no such aggregation limit on 3450–3550 MHz licenses shall apply.

(b) The criteria in § 20.22(b) of this chapter will apply in order to attribute partial ownership and other interests for the purpose of applying the aggregation limit in paragraph (a) of this section.

§ 27.1607 Information sharing for time division duplex synchronization.

(a) 3.45 GHz Service licensees must provide information to requesting Citizens Broadband Radio Service (part 96 of this chapter) operators to enable time division duplex (TDD) synchronization. Negotiations over the information must be conducted in good faith, with the goal of enabling synchronization between the relevant systems.

(1) A Citizens Broadband Radio Service operator, whether a Priority Access Licensee or a General Authorized Access user (§ 96.1(b) of this chapter), may request information from a 3.45 GHz Service licensee to enable cross-service TDD synchronization if it provides service, or intends to provide service, in the same or adjacent geographic area as a 3.45 GHz Service licensee.

(2) Upon request by an eligible Citizens Broadband Radio Service operator, the 3.45 GHz Service licensee must provide sufficient technical information to allow the Citizens Broadband Radio Service operator to synchronize its system with the 3.45 GHz band system. The 3.45 GHz Service licensee must keep this information current if its network operations change.

(b) 3.45 GHz Service licensees are under no obligation to make any changes to their operations or proposed operations to enable TDD synchronization.

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PART 30—UPPER MICROWAVE FLEXIBLE USE SERVICE

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AUTHORITY: 47 U.S.C. 151, 152, 153, 154, 301, 303, 304, 307, 309, 310, 316, 332, 1302, unless otherwise noted.

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