(c) If the owner of the antenna structure cannot file FCC Form 854 because it is subject to a denial of federal benefits under the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862, the first licensee authorized to locate on the structure must register the structure using FCC Form 854, and provide a copy of the Antenna Structure Registration (FCC Form 854R) to the owner. The owner remains responsible for providing to all tenant licensees and permittees notification that the structure has been registered, consistent with § 17.4(h), and for posting the registration number as required by § 17.4(j).

6. The Title of Subpart B would be revised to read as follows:

Subpart B – Antenna Farm Areas.

7. Section 17.7 would be removed and reserved.

8. Section 17.14 would be removed and reserved.

9. Section 17.17 would be removed and reserved.

10. Section 17.21 would be amended by revising its introductory language, revising paragraph (a) and adding paragraph (c) to read as follows:

§ 17.21 Painting and lighting, when required.

Antenna structures shall be painted and lighted when:

(a) Their height exceeds any obstruction standard requiring notification to the FAA (see Section 17.4(a) of this Subpart).

(b) * * *

(c) If an antenna installation is of such a nature that its painting and lighting specifications in accordance with the FAA airspace recommendation are confusing, or endanger rather than assist airmen, or are otherwise inadequate, the Commission will specify the type of painting and lighting or other marking to be used in the individual situation.

11. Section 17.22 would be removed and reserved.

12. Section 17.23 would be revised to read as follows:

§ 17.23 Specifications for painting and lighting antenna structures.

Unless otherwise specified by the Commission, each new or altered antenna structure must conform to the FAA's painting and lighting specifications set forth in the FAA's final determination of "no hazard" and the associated FAA study for that particular structure. For purposes of this part, any specifications, standards, and general requirements set forth by the FAA in the structure's determination of "no hazard" and the associated FAA study are mandatory. Additionally, each antenna structure must be painted and lighted in accordance with any painting and lighting requirements prescribed on the antenna structure's registration, or in accordance with any other specifications provided by the Commission.

13. A new Section 17.24 would be added to read as follows:

§ 17.24 Existing structures.

No change to painting or lighting criteria or relocation of airports shall at any time impose a new restriction upon any then existing or authorized antenna structure or structures.

14. Section 17.45 would be removed and reserved.

15. Section 17.48 would be revised to read as follows:

§ 17.48 Notification of extinguishment or improper functioning of lights.

The owner of any antenna structure that requires registration of the structure with the Commission and has been assigned lighting specifications referenced in this part shall report immediately to the Federal Aviation Administration, by means acceptable to the Federal Aviation Administration, any observed or otherwise known extinguishment or improper functioning of any top steady burning light or any flashing obstruction light, regardless of its position on the antenna structure, not corrected within 30 minutes. If the lights cannot be repaired within 15 days, the owner shall notify the FAA to extend the outage date and report a return to service date. The owner will repeat this process every 15 days until the lights are repaired. Such reports shall set forth the condition of the light or lights, the circumstances which caused the failure, the probable date for restoration of service, the FCC Antenna Structure Registration Number, the height of the structure (AGL and AMSL if known) and the name, title, address, and telephone number of the person making the report. Further notification to the Federal Aviation Administration by means

acceptable to the FAA shall be given immediately upon resumption of normal operation of the light or lights.

* * * * *

16. Section 17.49 would be amended by revising its introductory language to read as follows:

§ 17.49 Recording of antenna structure light inspections in the owner record.

The owner of each antenna structure which is registered with the Commission and has been assigned lighting specifications referenced in this part must maintain a record of any observed or otherwise known extinguishment or improper functioning of a structure light. This record shall be retained for a period of two years and provided to the FCC or its agents upon request. The record shall include the following information for each such event:

* * * * *

17. Section 17.51 would be removed and reserved.

18. Section 17.56 would be removed and reserved.

19. Section 17.58 would be removed and reserved.

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[117] the Commission has prepared the present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities that might result from this Notice. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided above. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.[118] In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.[119]

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

2. Section 303(q) of the Communications Act vests in the Commission the authority to require painting and/or lighting of radio towers that may constitute a hazard to air navigation. Part 17 of the Commission's rules sets forth procedures for identifying those antenna structures that might affect air navigation, consistent with recommendations made by the Federal Aviation Administration (FAA), and for registering such structures with the Commission. The Commission requires owners of antenna structures to register with the Commission those structures that meet the registration criteria and to exercise primary responsibility for the prescribed painting and lighting. The proposed rules seek to achieve the best framework to continue to fulfill the Commission's statutory responsibility to require antenna structure owners, registrants and Commission licensees to do whatever is necessary to prevent antenna structures from being hazards or menaces to air navigation.

3. The Commission proposes to amend subsection 17.4(a) and Sections 17.21, 17.22 (redesignated as subsection 17.21(c)), and 17.23 and to delete subsection 17.17(a) of the Commission's rules regarding antenna structure registration and painting and lighting specifications. The Commission also proposes conforming edits to Sections 1.61(a)(5) and 17.1(b). These proposed changes are intended to clarify the relationship between the Commission's rules and procedures and those of the FAA and to ensure continued consistency in those rules and procedures. The Commission also asks whether to amend Section 17.17(b) (redesignated as Section 17.24) by providing that a revised FAA Circular does not impose new obligations on already-approved antenna structures.

4. In order to clarify the obligations of antenna structure owners and to conform the Commission's regulations to Commission and FAA practice, the Commission proposes adding new subsections to Section 17.4 specifying that any change in height of one foot or greater, any change in coordinates of one second or greater, or any change in marking and lighting specifications requires prior approval from the FAA and the Commission. The Commission also proposes to consider whether to specify accuracy standards or survey methods in order to ensure consistency of data.

5. The Commission proposes to delete Sections 17.7 and 17.14 of the Commission's rules, which are restatements of FAA rules, and to substitute cross-references to relevant FAA rules in Section 17.4 of the Commission's rules. This change could reduce the risk of confusion in the event the FAA

[117] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-12, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, 110 Stat. 857 (1996).

[118] *See* 5 U.S.C. § 603(a).

[119] *Id.*

were to change its criteria.

6. The Commission proposes to amend its rules governing inspection and maintenance of lighting by: 1) amending Section 17.47 to eliminate or reduce requirements to perform inspections of lighting and light monitoring systems; 2) amending Section 17.48(a) to require antenna structure owners to provide continuously active notiee to the FAA of lighting outages; and 3) deleting vague referenees to timely repair timeframes in Sections 17.48(b) and 17.56(a). The Commission proposes to consider whether to eliminate Section 17.47 in its entirety or to retain modified inspection requirements and whether to substitute more specific repair time limitations. These proposals are intended to relieve unnecessary burdens and reduce confusion while ensuring that aircraft navigation safety is best protected.

7. The Commission proposes to delete Sections 17.45, 17.51, and 17.56(b), which set forth specific requirements for exhibiting and maintaining lights, because they are unnecessary and may create ambiguity in cases of conflict with FAA specifications. This change could reduce the risk of confusion.

8. Section 17.49 requires antenna structure owners to maintain a record of observed or otherwise known extinguishments or improper functioning of structure lights. The Commission proposes to add a requirement to maintain such records for two years and provide the records to the Commission upon request in order to balance the Commission's need to determine the compliance record against the burden of record retention on antenna structure owners.

9. The Commission is considering a proposal to amend Section 17.50 to require use of the FAA's 'In Service Aviation Orange Tolerance Chart' to determine whether a structure needs to be cleaned or repainted and to specify how the chart is to be used. These changes may provide more objective standards for gauging visibility.

10. The Commission proposes to amend Section 17.2(a) of the Commission's rules to clarify both when a structure becomes, and when a structure ceases to be, an "antenna structure" under our rules. The Commission also proposes to amend Section 17.2(c) of the Commission's rules to clarify that the obligations of an "antenna structure owner" fall only on the owner of the underlying structure, and not on tenants, thus promoting clarity for all parties.

11. The Commission also proposes to consider whether the rules concerning antenna structures should be enforced against voluntarily registered structures, whether owners of antenna structures that do not require registration should be prohibited from registering their towers, and whether antenna structure owners who have voluntarily registered structures should be required to withdraw their registrations from the Commission's antenna structure database. Such action could reduce confusion by clarifying the regulatory status of these structures.

12. The Commission proposes to modify Section 17.4(g) to require that antenna structure owners display the Antenna Structure Registration (ASR) number so that it would be visible to a member of the general public who reaches the closest publicly accessible location near each point of access to the antenna structure. The Commission further proposes to delete the requirement that the ASR number be posted near the base of the antenna structure. The Commission tentatively concludes that amending the rule in this manner would clarify the obligations of antenna structure owners, promote timely remediation when lighting is observed to be malfunctioning or extinguished, and eliminate unnecessary postings.

13. Section 17.4(f) requires that antenna structure owners immediately provide copies of FCC Form 854R (antenna structure registration) to each tenant licensee and permittee. Sections 17.4(e) and 17.6(c) impose a similar requirement on the first licensee in cases where the antenna structure owner is unable to file Form 854 because it is subject to a denial of Federal benefits under the Anti-Drug Abuse Act of 1988. The Commission proposes to amend these rules to allow the alternative of providing a link

to the Commission's antenna structure registration website via paper or electronic mail.

14. The Commission proposes to delete Section 17.58, which was intended to promote compliance with procedures that are now obsolete. This change would streamline the antenna structure registration process.

B. Legal Basis

15. The legal basis for any action that may be taken pursuant to the Notice is contained in Sections 4(i), 4(j), 11, and 303(q) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i)-(j), 161, 303(q).

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

16. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by proposed rules.[120] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[121] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[122] A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration ("SBA").[123]

17. The Notice proposes rule changes that would impose requirements on a large number of entities relating to the registration of and maintenance of painting and lighting on antenna structures. Due to the number and diversity of owners of antenna structures and other responsible parties, including small entities that are Commission licensees as well as non-licensee tower companies, we classify and quantify them in the remainder of this section.

18. *Cellular Licensees*. The SBA has developed a small business size standard for small businesses in the category "Wireless Telecommunications Carriers (except satellite)."[124] Under that SBA category, a business is small if it has 1,500 or fewer employees.[125] The census category of "Cellular and Other Wireless Telecommunications" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite)". However, since currently available data was gathered when "Cellular and Other Wireless Telecommunications" was the relevant category, earlier Census Bureau data collected under the category of "Cellular and Other Wireless Telecommunications" will be used here. Census Bureau data for 2002 show that there were 1,397 firms in this category that

[120] 5 U.S.C. § 604(a)(3).

[121] 5 U.S.C. § 601(6).

[122] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[123] 15 U.S.C. § 632.

[124] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[125] *Id.*

operated for the entire year.[126] Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.[127] Thus, under this category and size standard, the majority of firms can be considered small.

19. *Broadband Personal Communications Service.* The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than $40 million in the three previous calendar years.[128] For Block F, an additional small business size standard for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[129] These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.[130] No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the C Block auctions. A total of 93 "small" and "very small" business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.[131] On March 23, 1999, the Commission reauctioned 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.[132] On January 26, 2001, the Commission completed the auction of 422 C and F PCS licenses in Auction 35.[133] Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

20. *Narrowband Personal Communications Service.* The Commission held an auction for Narrowband Personal Communications Service (PCS) licenses that commenced on July 25, 1994, and closed on July 29, 1994. A second commenced on October 26, 1994 and closed on November 8, 1994. For purposes of the first two Narrowband PCS auctions, "small businesses" were entities with average gross revenues for the prior three calendar years of $40 million or less.[134] Through these auctions, the Commission awarded a total of forty-one licenses, 11 of which were obtained by four small businesses.[135]

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

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

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

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

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

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

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

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

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

[135] *See* "Announcing the High Bidders in the Auction of Ten Nationwide Narrowband PCS Licenses, Winning Bids Total $617,006,674," *Public Notice*, PNWL 94-004 (rel. Aug. 2, 1994); "Announcing the High Bidders in the

(continued....)

To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.[136] A "small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $40 million.[137] A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $15 million.[138] The SBA has approved these small business size standards.[139] A third auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (MTA and nationwide) licenses.[140] Three of these claimed status as a small or very small entity and won 311 licenses.

21. *Specialized Mobile Radio*. The Commission awards "small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than $15 million in each of the three previous calendar years.[141] The Commission awards "very small entity" bidding credits to firms that had revenues of no more than $3 million in each of the three previous calendar years.[142] The SBA has approved these small business size standards for the 900 MHz Service.[143] The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the $15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the $15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band.[144] A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 licenses. One bidder claiming small business status won five licenses.[145]

22. The auction of the 1,050 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 2000. Eleven bidders that won

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Auction of 30 Regional Narrowband PCS Licenses; Winning Bids Total $490,901,787," *Public Notice*, PNWL 94-27 (rel. Nov. 9, 1994).

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

[137] *Id.*

[138] *Id.*

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

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

[141] 47 C.F.R. § 90.814(b)(1).

[142] *Id.*

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

[144] *See* "Correction to Public Notice DA 96-586 'FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas,'" *Public Notice*, 18 FCC Rcd 18367 (WTB 1996).

[145] *See* "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

108 geographic area licenses for the General Category channels in the 800 MHz SMR band qualified as small businesses under the $15 million size standard. In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were sold. Of the 22 winning bidders, 19 claimed "small business" status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small business.

23. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than $3 million or $15 million (the special small business size standards), or have no more than 1,500 employees (the generic SBA standard for wireless entities, discussed, *supra*). One firm has over $15 million in revenues. The Commission assumes, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities.

24. *Advanced* Wireless *Services*. The *Report and Order* adopting service rules for Advanced Wireless Services (AWS) in the 1710-1755 and 2110-2155 MHz bands[146] affected applicants who wish to provide service in the 1710-1755 MHz and 2110-2155 MHz bands. As discussed in the *AWS-1 Service Rules Order*, we do not know precisely the type of service that a licensee in these bands might seek to provide. [147] Nonetheless, we anticipate that the services that will be deployed in these bands may have capital requirements comparable to those in the broadband Personal Communications Service (PCS), and that the licensees in these bands will be presented with issues and costs similar to those presented to broadband PCS licensees. Further, at the time the broadband PCS service was established, it was similarly anticipated that it would facilitate the introduction of a new generation of service. Therefore, the *AWS-1 Service Rules Order* adopted the same small business size standards that the Commission adopted for the broadband PCS service. In particular, the Order defined a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding $40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding $15 million. The Order also provided small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent. In the auction held August 9 through September 18, 2006, 55% of the winning bidders were small businesses (57 of 104).[148]

25. *Rural Radiotelephone Service*. The Commission uses the SBA small business size standard applicable to Wireless Telecommunication Carriers (except satellite), *i.e.*, an entity employing no more than 1,500 persons.[149] There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

26. *Wireless Communications Services*. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses in the 2305-2320 MHz and 2345-2360 MHz bands. The

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

[147] *See id*, at ¶ 144.

[148] *See* News Release "Statements of FCC Chairman and Commissioners Before the Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, U.S. House of Representatives", Chairman Martin's Written Statement, Exhibit 3, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-281580A2.pdf, (4/15/2008).

[149] 13 C.F.R. § 121.201, NAICS code 517210.

Commission defined "small business" for the wireless communications services (WCS) auction as an entity with average gross revenues of $40 million or less for each of the three preceding years, and a "very small business" as an entity with average gross revenues of $15 million or less for each of the three preceding years.[150] The SBA has approved these definitions.[151] The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

27. *220 MHz Radio Service – Phase I Licensees*. The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz Band. The Commission has not developed a definition of small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, the Commission applies the small business size standard under the SBA rules applicable to "Cellular and Other Wireless Telecommunications" companies. Note that the census category of "Cellular and Other Wireless Telecommunications" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite)". This category provides that a small business is a wireless company employing no more than 1,500 persons.[152] However, since currently available data was gathered when "Cellular and Other Wireless Telecommunications" was the relevant category, earlier Census Bureau data collected under the category of "Cellular and Other Wireless Telecommunications" will be used here. Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.[153] Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.[154] Therefore, the majority of firms can be considered small.

28. *220 MHz Radio Service – Phase II Licensees*. The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is subject to spectrum auctions. In the *220 MHz Third Report and Order*, the Commission adopted a small business size standard for defining "small" and "very small" businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[155] This small business standard indicates that a "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years.[156] A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed $3 million for the preceding three years.[157] The SBA has approved these small size standards.[158] Auctions of Phase II

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

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

[152] 13 C.F.R. § 121.201, NAICS code 517210.

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

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

[155] Amendment of Part 90 of the Commission's Rules to Provide For the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, *Third Report and Order*, 12 FCC Rcd 10943, 11068-70 ¶¶ 291-295 (1997).

[156] *Id.* at 11068 ¶ 291.

[157] *Id.*

licenses commenced on September 15, 1998, and closed on October 22, 1998.[159] In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold.[160] Thirty-nine small businesses won 373 licenses in the first 220 MHz auction. A second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.[161] A third auction included four licenses: 2 BEA licenses and 2 EAG licenses in the 220 MHz Service. No small or very small business won any of these licenses.[162]

29. *700 MHz Guard Bands Licenses.* In the *700 MHz Guard Bands Order*, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[163] A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[164] Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years.[165] SBA approval of these definitions is not required.[166] An auction of 52 Major Economic Area (MEA) licenses for each of two spectrum blocks commenced on September 6, 2000, and closed on September 21, 2000.[167] Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of remaining 700 MHz Guard Bands licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.[168] Subsequently, in the *700 MHz Second Report and Order*, the Commission reorganized the licenses pursuant to an agreement among most of the licensees, resulting in a spectral relocation of the first set of paired spectrum block licenses, and an elimination of the second set of paired spectrum block licenses

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[158] *See* Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

[159] *See generally* "220 MHz Service Auction Closes," *Public Notice*, 14 FCC Rcd 605 (WTB 1998).

[160] *See* "FCC Announces It is Prepared to Grant 654 Phase II 220 MHz Licenses After Final Payment is Made," *Public Notice*, 14 FCC Rcd 1085 (WTB 1999).

[161] *See* "Phase II 220 MHz Service Spectrum Auction Closes," *Public Notice*, 14 FCC Rcd 11218 (WTB 1999).

[162] *See* "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

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

[164] *Id.* at 5343 ¶ 108.

[165] *Id.*

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

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

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

(many of which were already vacant, reclaimed by the Commission from Nextel).[169] A single licensee that did not participate in the agreement was grandfathered in the initial spectral location for its two licenses in the second set of paired spectrum blocks.[170] Accordingly, at this time there are 54 licenses in the 700 MHz Guard Bands.

30. *700 MHz Band Commercial Licenses.* There is 80 megahertz of non-Guard Band spectrum in the 700 MHz Band that is designated for commercial use: 698-757, 758-763, 776-787, and 788-793 MHz Bands. With one exception, the Commission adopted criteria for defining two groups of small businesses for purposes of determining their eligibility for bidding credits at auction. These two categories are: (1) "small business," which is defined as an entity with attributed average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years; and (2) "very small business," which is defined as an entity with attributed average annual gross revenues that do not exceed $15 million for the preceding three years.[171] In Block C of the Lower 700 MHz Band (710-716 MHz and 740-746 MHz), which was licensed on the basis of 734 Cellular Market Areas, the Commission adopted a third criterion for determining eligibility for bidding credits: an "entrepreneur," which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.[172] The SBA has approved these small size standards.[173]

31. An auction of 740 licenses for Blocks C (710-716 MHz and 740-746 MHz) and D (716-722 MHz) of the Lower 700 MHz Band commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business, or entrepreneur status and won a total of 329 licenses.[174] A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: five EAG licenses and 251 CMA licenses.[175] Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.[176]

32. The remaining 62 megahertz of commercial spectrum was auctioned on January 24 through March 18, 2008. As explained above, bidding credits for all of these licenses were available to "small businesses" and "very small businesses." Auction 73 concluded with 1090 provisionally winning bids covering 1091 licenses and totaling $19,592,420,000. The provisionally winning bids for the A, B, C, and E Block licenses exceeded the aggregate reserve prices for those blocks. The provisionally winning bid for the D Block license, however, did not meet the applicable reserve price and thus did not become a

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

[170] *Id.*

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

[172] *Id.* at 1088.

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

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

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

[176] *Id.*

winning bid. Approximately 55 small businesses had winning bids.[177] Currently, the 10 remaining megahertz assoeiated with the D block have not yet been assigned.[178]

33. *Private and Common Carrier Paging*. The SBA had developed a small business size standard for wireless firms within the broad economic census category of "Paging[179]". However, the census category "Paging" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite)."[180] Under that SBA category, a business is small if it has 1,500 or fewer employees.[181] However, since currently available data was gathered when "Paging" was the relevant category, earlier Census Bureau data collected under the category of "Paging "will be used here. Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.[182] Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.[183] Thus, under this category, the majority of firms can be considered small.

34. In the *Paging Third Report and Order*, the Commission developed a small business size standard for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[184] A "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.[185] The SBA has approved these small business size standards.[186] An auction of Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000.[187] Of the 2,499 licenses auctioned, 985 were sold.[188] Fifty-seven companies claiming small business status won 440 licenses.[189] An auction of MEA and Economic Area (EA) licenses commenced on October 30, 2001, and closed on December 5, 2001. Of the 15,514 licenses auctioned, 5,323 were sold.[190] 132

[177] *See* "Auction of 700 MHz Band Licenses Closes," *Public Notice*, 23 FCC Rcd 4572 (WTB 2008).

[178] *See* fcc.gov website at http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73.

[179] 13 C.F.R. § 121.201, NAICS code 517211.

[180] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[181] *Id.*

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

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

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

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

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

[187] *Id.* at 10085, para. 98.

[188] *See* "929 and 931 MHz Paging Auction Closes," *Public Notice*, 15 FCC Rcd 4858 (WTB 2000).

[189] *See id.*

[190] *See* "Lower and Upper Paging Band Auction Closes," *Public Notice*, 16 FCC Rcd 21821 (WTB 2002).

companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs, commenced on May 13, 2003, and closed on May 28, 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses.[191] Currently, there are approximately 24,000 Private Paging site-specific licenses and 74,000 Common Carrier Paging licenses. According to the Commission's *Trends in Telephone Service,* 375 such carriers reported that they were engaged in the provision of either paging or "messaging service."[192] Of these, the Commission estimates that 370 are small, under the SBA-approved small business size standard.[193] The Commission estimates that the majority of private and common carrier paging providers would qualify as small entities under the SBA definition.

35. *Air-Ground Radiotelephone Service*. The Commission uses the SBA definition of small business size applicable to Wireless Telecommunications Carriers (except satellite), *i.e.*, an entity employing no more than 1,500 persons.[194] There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA small business size standard.

36. *Aviation and Marine Radio Services*. Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category Wireless Telecommunications Carriers (except satellite), which is 1,500 or fewer employees.[195] Most applicants for recreational licenses are individuals. Approximately 47,750 ship station licensees, who hold approximately 56,250 ship station licenses, and approximately 27,700 aircraft station licensees, who hold approximately 32,000 aircraft station licenses, operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 75,450 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $15 million. In addition, a "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed $3 million.[196] There are approximately 6,100 Marine Coast Service licenses, held by approximately 3,600 licensees, and the Commission estimates that almost all of them qualify as "small" businesses under the above special small business size standards.

37. *Fixed Microwave Services*. Fixed microwave services include common carrier,[197] private

[191] *See* "Lower and Upper Paging Bands Auction Closes," *Public Notice*, 18 FCC Rcd 11154 (WTB 2003).

[192] *See Trends in Telephone Service,* Industry Analysis Division, Wireline Competition Bureau, Table 5.3 (Number of Telecommunications Service Providers by Size of Business) (June 2005).

[193] 13 C.F.R. § 121.201, NAICS code 517210.

[194] *Id.*

[195] *Id.*

[196] *Amendment of the Commission's Rules Concerning Maritime Communications*, PR Docket No. 92-257, Third Report and Order and Memorandum Opinion and Order, 13 FCC Rcd 19853 (1998).

[197] *See* 47 C.F.R. §§ 101 *et seq.* (formerly, Part 21 of the Commission's Rules) for common carrier fixed microwave services (except Multipoint Distribution Service).

operational-fixed,[198] and broadcast auxiliary radio services.[199] At present, there are approximately 31,428 common carrier fixed licensees and 79,732 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not created a size standard for a small business specifically with respect to fixed microwave services. For purposes of this analysis, the Commission uses the SBA small business size standard for the category "Wireless Telecommunications Carriers (except satellite)", which provides that a small business is a wireless company employing no more than 1,500 persons.[200] The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are up to 31,428 common carrier fixed licensees and up to 79,732 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies adopted herein. We note, however, that the common carrier microwave fixed licensee category includes some large entities.

38. *Offshore Radiotelephone Service*. This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico.[201] There is presently one lieensee in this service. The Commission uses the SBA definition applicable to Wireless Telecommunications Carriers (except satellite), *i.e.*, an entity employing no more than 1,500 persons.[202] The Commission is unable to estimate at this time the number of licensees that would qualify as small entities under the SBA definition. The Commission assumes, for purposes of this analysis, that the licensee is a small entity, as that term is defined by the SBA.

39. *39 GHz Service*. The Commission created a special small business size standard for 39 GHz licenses – an entity that has average gross revenues of $40 million or less in the three previous calendar years.[203] An additional size standard for "very small business" is: an entity that, together with affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[204] The SBA has approved these small business size standards.[205] The auction of the 2,173 39 GHz licenses began on April 12, 2000 and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses. Consequently, the Commission estimates that 18 or fewer 39 GHz licensees are small entities that may be affected by the rules and polices adopted herein.

[198] Persons eligible under parts 80 and 90 of the Commission's Rules can use Private Operational-Fixed Microwave services. *See* 47 C.F.R. Parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial, or safety operations.

[199] Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission's rules. *See* 47 C.F.R. Part 74. This service is available to licensees of broadcast stations and to broadcast and cable network entities. Broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile television pickups, which relay signals from a remote location back to the studio.

[200] 13 C.F.R. § 121.201, NAICS code 517210.

[201] This service is governed by Subpart I of Part 22 of the Commission's rules. *See* 47 C.F.R. §§ 22.1001-22.1037.

[202] 13 C.F.R. § 121.201, NAICS code 517210.

[203] *See Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, ET Docket No. 95-183, Report and Order, 63 Fed. Reg. 6079 (Feb. 6, 1998).

[204] *Id.*

[205] *See* Letter to Kathleen O'Brien Ham, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Feb. 4, 1998).

40. *Broadband Radio Service and Educational Broadband Service*. The Broadband Radio Service ("BRS"), formerly known as the Multipoint Distribution Service ("MDS"),[206] and the Educational Broadband Service ("EBS"), formerly known as the Instructional Television Fixed Service ("ITFS"),[207] use 2 GHz band frequencies to transmit video programming and provide broadband services to residential subscribers.[208] These services, collectively referred to as "wireless cable," were originally designed for the delivery of multichannel video programming, similar to that of traditional cable systems, but over the past several years licensees have focused their operations instead on providing two-way high-speed Internet access services.[209] We estimate that the number of wireless cable subscribers is approximately 100,000, as of March 2005. The SBA small business size standard for the broad census category of Cable and Other Program Distribution, which consists of such entities generating $13.5 million or less in annual receipts, appears applicable to MDS and ITFS.[210] Note that the census category of "Cable and Other Program Distribution" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite). This category provides that a small business is a wireless company employing no more than 1,500 persons.[211] However, since currently available data was gathered when "Cable and Other Program Distribution" was the relevant category, earlier Census Bureau data collected under the category of "Cable and Other Program Distribution" will be used here Other standards also apply, as described.

41. The Commission has defined small MDS (now BRS) entities in the context of Commission license auctions. In the 1996 MDS auction,[212] the Commission defined a small business as an entity that had annual average gross revenues of less than $40 million in the previous three calendar years.[213] This definition of a small entity in the context of MDS auctions has been approved by the SBA.[214] In the MDS auction, 67 bidders won 493 licenses. Of the 67 auction winners, 61 claimed status as a small business. At this time, the Commission estimates that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are hundreds of MDS licensees and wireless cable operators that did not receive their licenses as a result of the MDS auction and that fall under the former SBA small business size standard for Cable and Other

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

[207] *See* 47 C.F.R. Part 74, subpart I; *MDS/ITFS Order*, 19 FCC Rcd 14165 (2004).

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

[209] *Id.*

[210] 13 C.F.R. § 121.201, NAICS code 515210.

[211] 13 C.F.R. § 121.201, NAICS code 517210.

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

[213] 47 C.F.R. § 21.961(b)(1).

[214] *See ITFS Order*, 10 FCC Rcd at 9589.

Program Distribution.[215] Information available to us indicates that there are approximately 850 of these licensees and operators that do not generate revenue in excess of $13.5 million annually. Therefore, we estimate that there are approximately 850 of these small entity MDS (or BRS) providers, as defined by the SBA and the Commission's auction rules.

42. Educational institutions are included in this analysis as small entities; however, the Commission has not created a specific small business size standard for ITFS (now EBS).[216] We estimate that there are currently 2,452 EBS licenses, held by 1,524 EBS licensees, and all but 100 of the licenses are held by educational institutions. Thus, we estimate that at least 1,424 EBS licensees are small entities.

43. *Local Multipoint Distribution Service.* Local Multipoint Distribution Service (LMDS) is a fixed broadband point-to-multipoint microwave service that provides for two-way video telecommunications.[217] The auction of the 986 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998 and closed on March 25, 1998. The Commission established a small business size standard for LMDS licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years.[218] An additional small business size standard for "very small business" was added as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[219] The SBA has approved these small business size standards in the context of LMDS auctions.[220] There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 40 winning bidders.

44. *218-219 MHz Service.* The first auction of 218-219 MHz (previously referred to as the Interactive and Video Data Service or IVDS) spectrum resulted in 178 entities winning licenses for 594 Metropolitan Statistical Areas ("MSAs").[221] Of the 594 licenses, 567 were won by 167 entities qualifying as small businesses. For that auction, the Commission defined a small business as an entity that, together with its affiliates, has no more than a $6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than $2 million in annual profits each year for the previous two years.[222] In the *218-219 MHz Report and Order and Memorandum Opinion and Order*, we defined a small business as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not exceeding $15 million for the preceding

[215] Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard for "Cable and Other Program Distribution" (annual receipts of $13.5 million or less). *See* 13 C.F.R. § 121.201, NAICS code 515210.

[216] In addition, the term "small entity" under SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on EBS licensees.

[217] *See Local Multipoint Distribution Service*, Second Report and Order, 12 FCC Rcd 12545 (1997).

[218] *Id.*

[219] *See id.*

[220] *See* Letter to Dan Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Jan. 6, 1998).

[221] *See "Interactive Video and Data Service (IVDS) Applications Accepted for Filing,"* Public Notice, 9 FCC Rcd 6227 (1994).

[222] [222] *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Fourth Report and Order, 9 FCC Rcd 2330 (1994).59 Fed. Reg. 24947 (May 13, 1994).

three years.[223] A very small business is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not exceeding $3 million for the preceding three years.[224] The SBA has approved of these definitions.[225] A subsequent auction is not yet scheduled. Given the success of small businesses in the previous auction, and the prevalence of small businesses in the subscription television services and message communications industries, we assume for purposes of this analysis that in future auctions, many, and perhaps most, of the licenses may be awarded to small businesses.

45. *24 GHz – Incumbent Licensees*. This analysis may affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The applicable SBA small business size standard was formerly that of "Cellular and Other Wireless Telecommunications" companies. Note that the census category of "Cellular and Other Wireless Telecommunications" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite)." This category provides that a small business is a wireless company employing no more than 1,500 persons.[226] However, since currently available data was gathered when "Cellular and Other Wireless Telecommunications" was the relevant category, earlier Census Bureau data collected under the category of "Cellular and Other Wireless Telecommunications" will be used here. We believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent[227] and TRW, Inc. It is our understanding that Teligent and its related companies have fewer than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

46. *24 GHz – Future Licensees*. With respect to new applicants in the 24 GHz band, the small business size standard for "small business" is an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not in excess of $15 million.[228] "Very small business" in the 24 GHz band is an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding $3 million for the preceding three years.[229] The SBA has approved these small business size standards.[230] These size standards will apply to the future auction, if held.

47. *Private Land Mobile Radio*. Private Land Mobile Radio ("PLMR") systems serve an

[223][223] *Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service*, WT Docket No. 98-169, Report and Order and Memorandum Opinion and Order, 15 FCC Rcd 1497 (64 Fed. Reg. 59656 (Nov. 3, 1999).

[224] *Id.*[224] *Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service*, WT Docket No. 98-169, Report and Order and Memorandum Opinion and Order, 64 Fed. Reg. 59656 (Nov. 3, 1999).

[225] *See* Letter from Aida Alvarez, Administrator, SBA, to Daniel Phythyon, Chief, WTB, FCC (Jan. 6, 1998) ("Alvarez to Phythyon Letter 1998").

[226] 13 C.F.R. § 121.201, NAICS code 517210.

[227] Teligent acquired the DEMS licenses of FirstMark, the only licensee other than TRW in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

[228] *Amendments to Parts 1,2, 87 and 101 of the Commission's Rules to License Fixed Services at 24 GHz*, Report and Order, 15 FCC Rcd 16934, 16967 (2000); *see also* 47 C.F.R. § 101.538(a)(2).

[229] *Amendments to Parts 1,2, 87 and 101 of the Commission's Rules to License Fixed Services at 24 GHz*, Report and Order, 15 FCC Rcd 16934, 16967 (2000); *see also* 47 C.F.R. § 101.538(a)(1).

[230] *See* Letter to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Gary M. Jackson, Assistant Administrator, SBA (July 28, 2000).

essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. The SBA has not developed a definition of small entity specifically applicable to PLMR licensees due to the vast array of PLMR users. Therefore, solely for purposes of citing to currently available data, we will use a superseded SBA definition applicable to Cellular and Other Wireless Telecommunications. Note that the census category of "Cellular and Other Wireless Telecommunications" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite)." This category provides that a small business is a wireless company employing no more than 1,500 persons.[231] However, since currently available data was gathered when "Cellular and Other Wireless Telecommunications" was the relevant category, earlier Census Bureau data collected under the category of "Cellular and Other Wireless Telecommunications" will be used here.

48. The Commission is unable at this time to estimate the number of small businesses which could be impacted by the rules. The Commission's 1994 Annual Report on PLMRs[232] indicates that at the end of fiscal year 1994 there were 1,087,267 licensees operating 12,481,989 transmitters in the PLMR bands below 512 MHz. Because any entity engaged in a commercial activity is eligible to hold a PLMR license, the revised rules in this context could potentially impact every small business in the United States.

49. *Public Safety Radio Services*. Public Safety radio services include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services. There are a total of approximately 44,083 licensees within these services. Governmental entities[233] as well as private businesses comprise the licensees for these services. All governmental entities with populations of less than 50,000 fall within the definition of a small entity.[234]

50. *Location and Monitoring Service ("LMS")*. Multilateration LMS systems use non-voice radio techniques to determine the location and status of mobile radio units. For purposes of auctioning LMS licenses, the Commission has defined "small business" as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not to exceed $15 million.[235] A "very small business" is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not to exceed $3 million.[236] These definitions have been approved by the SBA.[237] An auction for LMS licenses commenced on February 23, 1999 and closed on March 5, 1999. Of the 528 licenses auctioned, 289 licenses were sold to four small businesses. We conclude that the number of LMS licensees affected by this *Report and Order* includes these four entities. We cannot accurately predict the number of remaining licenses that could be awarded to small entities in future LMS auctions. In addition, there are numerous site-by-site non-multilateration licensees, and the Commission does not know how many of these providers have annual revenues of no more than $15 million. The Commission assumes, for purposes of this analysis, that all of

[231] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[232] Federal Communications Commission, 60th Annual Report, Fiscal Year 1994, at paragraph 116.

[233] 47 C.F.R. § 1.1162.

[234] 5 U.S.C. § 601(5).

[235] Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd 15182 ¶ 20 (1998); *see also* 47 C.F.R. § 90.1103.

[236] *Id.*

[237] *See* Letter to Letter to Thomas J. Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration (Feb. 22, 1999).

these licenses are held by small entities, as that small business size standard is established by the SBA.

51. *Multiple Address Systems*. Entities using Multiple Address Systems (MAS) spectrum, in general, fall into two categories: (1) those using the spectrum for profit-based uses, and (2) those using the spectrum for private internal uses. With respect to the first category, the Commission defines "small entity" for MAS licensees as an entity that has average gross revenues of less than $15 million in the three previous calendar years.[238] "Very small business" is defined as an entity that, together with its affiliates, has average gross revenues of not more than $3 million for the preceding three calendar years.[239] The SBA has approved of these definitions.[240] The majority of these entities will most likely be licensed in bands where the Commission has implemented a geographic area licensing approach that would require the use of competitive bidding procedures to resolve mutually exclusive applications. The Commission's licensing database indicates that, as of April 16, 2010, there were a total of 11,653 site-based MAS station authorizations. Of these, 58 authorizations were associated with common carrier service. In addition, the Commission's licensing database indicates that, as of April 16, 2010, there were a total of 3,330 EA market area MAS authorizations.

52. With respect to the second category, which consists of entities that use, or seek to use, MAS spectrum to accommodate their own internal communications needs, MAS serves an essential role in a range of industrial, safety, business, and land transportation activities. MAS radios are used by companies of all sizes, operating in virtually all U.S. business categories, and by all types of public safety entities. For the majority of private internal users, the definitions developed by the SBA would be more appropriate than the Commission's definition. The applicable definition of small entity in this instance appears to be the "Wireless Telecommunications Carriers (except satellite)" definition under the SBA rules.[241] Under that SBA category, a business is small if it has 1,500 or fewer employees.[242] The Commission's licensing database indicates that, as of April 16, 2010, of the 11,653 total MAS station authorizations, 10,773 authorizations were for private radio service.

53. *Television Broadcasting*. The proposed rules and policies apply to television broadcast licensees and potential licensees of television service. The SBA defines a television broadcast station as a small business if such station has no more than $14 million in annual receipts.[243] Business concerns included in this industry are those "primarily engaged in broadcasting images together with sound."[244]

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[238] *See* Amendment of the Commission's Rules Regarding Multiple Address Systems, *Report and Order*, 15 FCC Rcd 11956, 12008 ¶ 123 (2000).

[239] *Id.*

[240] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated June 4, 1999.

[241] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[242] *Id.*

[243] *See* 13 C.F.R. § 121.201, NAICS Code 515120.

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

The Commission has estimated the number of licensed commercial television stations to be 1,392.[245] According to Commission staff review of the BIA/Kelsey, MAPro Television Database ("BIA") as of April 7, 2010, about 1,015 of an estimated 1,380 commercial television stations[246] (or about 74 percent) have revenues of $14 million or less and thus qualify as small entities under the SBA definition. The Commission has estimated the number of licensed non-commercial educational (NCE) television stations to be 390.[247] We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[248] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. The Commission does not compile and otherwise does not have access to information on the revenue of NCE stations that would permit it to determine how many such stations would qualify as small entities.

54. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television station is dominant in its field of operation. Accordingly, the estimates of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

55. *Class A TV, LPTV, and TV translator stations*. The rules and policies proposed in this Notice include licensees of Class A TV stations, low power television (LPTV) stations, and TV translator stations, as well as potential licensees in these television services. The same SBA definition that applies to television broadcast licensees would apply to these stations. The SBA defines a television broadcast station as a small business if such station has no more than $14 million in annual receipts.[249] Currently, there are approximately 537 licensed Class A stations, 2,386 licensed LPTV stations, and 4,359 licensed TV translators.[250] Given the nature of these services, we will presume that all of these licensees qualify as small entities under the SBA definition. We note, however, that under the SBA's definition, revenue of affiliates that are not LPTV stations should be aggregated with the LPTV station revenues in determining whether a concern is small. Our estimate may thus overstate the number of small entities since the revenue figure on which it is based does not include or aggregate revenues from non-LPTV affiliated companies. We do not have data on revenues of TV translator or TV booster stations, but virtually all of these entities are also likely to have revenues of less than $14 million and thus may be categorized as small, except to the extent that revenues of affiliated non-translator or booster entities should be considered.

56. *Radio Broadcasting*. The proposed rules and policies could apply to radio broadcast licensees, and potential licensees of radio service. The SBA defines a radio broadcast station as a small

[245] *See* News Release, "Broadcast Station Totals as of December 31, 2009," 2010 WL 676084 (F.C.C.)(dated Feb. 26, 2010) ("*Broadcast Station Totals*"); also available at http://www.fcc.gov/mb/.

[246] We recognize that this total differs slightly from that contained in *Broadcast Station Totals*, *supra* note 446; however, we are using BIA's estimate for purposes of this revenue comparison.

[247] *See Broadcast Station Totals*, *supra* note 239.

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

[249] *See* 13 C.F.R. § 121.201, NAICS Code 515120.

[250] *See Broadcast Station Totals*, *supra* note 239.

business if such station has no more than $7 million in annual receipts.[251] Business concerns included in this industry are those primarily engaged in broadcasting aural programs by radio to the public.[252] According to Commission staff review of the BIA/Kelsey Master Access Radio Analyzer Database on April 7, 2010, about 10,900 of 11,200 commercial radio stations (or about 97 percent) have revenues of $7 million or less and thus qualify as small entities under the SBA definition. We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[253] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not inelude or aggregate revenues from affiliated companies.

57. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific radio station is dominant in its field of operation. Accordingly, the estimates of small businesses to which rules may apply do not exclude any radio station from the definition of a small business on this basis and therefore may be over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

58. *FM translator stations and low power FM stations*. The proposed rules and policies could affect licensees of FM translator and booster stations and low power FM (LPFM) stations, as well as potential licensees in these radio services. The same SBA definition that applies to radio broadcast licensees would apply to these stations. The SBA defines a radio broadcast station as a small business if such station has no more than $7 million in annual receipts.[254] Currently, there are approximately 6,155 licensed FM translator and booster stations and 864 licensed LPFM stations.[255] Given the nature of these services, we will presume that all of these licensees qualify as small entities under the SBA definition.

59. *Cable Television Systems*. The proposed rules and policies could affect cable television systems. Cable television systems fall within the SBA standard for Wired Telecommunication Carriers, and in this category a business is small if it has 1500 or fewer employees.[256] This category includes, among others, cable operators, direct broadcast satellite services, fixed-satellite services, home satellite dish services, multipoint distribution services, multichannel multipoint distribution service, Instructional Television Fixed Service, local multipoint distribution service, satellite master antenna television systems, and open video systems.[257] Since currently available data was gathered when "Cable and Other Program Distribution" was the relevant category, earlier Census Bureau data collected under the category of "Cable and Other Program Distribution" will be used here. According to Census Bureau data, there are 1,311 total cable and other pay television service firms that operate throughout the year of which 1,180

[251] *See* 13 C.F.R. § 121.201, NAICS Code 515112.

[252] *Id.*

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

[254] *See* 13 C.F.R. § 121.201, NAICS Code 515112.

[255] *See News Release*, "Broadcast Station Totals as of December 31, 2009" (rel. Feb. 26, 2010) (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296538A1.pdf269784A1.doc).

[256] 13 C.F.R. § 121.201 (NAICS Code 517110). This NAICS Code applies to all services listed in this paragraph.

[257] Those MVPDs relying primarily or exclusively on satellite transmission could also be considered to fall under the "Satellite Telecommunications" category. 13 C.F.R. § 121.201 (NAICS Code 517410).

have less than $10 million in revenue.[258] Consequently, the Commission estimates that the majority of providers in this service category are small businesses that may be affected by the rules and policies adopted herein. We address below each service individually to provide a more precise estimate of small entities.

60. *Cable System Operators (Rate Regulation Standard).* The Commission has developed its own small business size standards for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers nationwide.[259] As of 2008, out of 814[260] cable operators all but 10, that is 804, qualify as small cable companies under this standard.[261] In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.[262] Current Commission records show 6000 cable systems. Of these 726 have 20,000 subscribers or more, based on the same records. We estimate that there are 5,000 small systems based upon this standard.

61. *Cable System Operators (Telecom Act Standard).* The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000."[263] There are approximately 63.7 million cable subscribers in the United States today.[264] Accordingly, an operator serving fewer than 637,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed $250 million in the aggregate.[265] Based on available data, we find that the number of cable operators serving 637,000 subscribers or less is also 804.[266] We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed $250 million.[267] Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed $250,000,000, we are unable at

[258] Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, 1997 Economic Census, Subject Series - Establishment and Firm Size, Information Sector 51, Table 4 at 50 (2000). The amount of $10 million was used to estimate the number of small business firms because the relevant Census categories stopped at $9,999,999 and began at $10,000,000. No category for $1412.5 million existed. Thus, the number is as accurate as it is possible to calculate with the available information.

[259] 47 C.F.R. § § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of $100 million or less in annual revenues. The Commission developed this definition based on its determination that a small cable system operator is one with annual revenues of $100 million or less. *See* Implementation of Sections of the 1992 Cable Act: Rate Regulation, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

[260] Cable MSO Ownership, A Geographical Analysis, 2009 Edition, 14-31, SNL Kagan (June 2009).

[261] *Id.* at 12.

[262] 47 C.F.R. § 76.901(c).

[263] 47 U.S.C. § § 543(m)(2); *see* 47 C.F.R. § 76.901(f) & nn. 1-3.).

[264] *See* Cable TV Investor: Deals & Finance, No. 655, SNL Kagan, March 31, 2009, at 6.

[265] 47 C.F.R. § § 76.901(f); *see* Public Notice, FCC Announces New Subscriber Count for the Definition of Small Cable Operator, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

[266] Cable MSO Ownership at 12.

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