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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1, 2, 9, and 25

[GN Docket No. 23-65, IB Docket No. 22-271; FCC 24-28; FR ID 210313]

Single Network Future: Supplemental Coverage From Space; Space Innovation

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (FCC or Commission) adopts rules to facilitate the deployment of supplemental coverage from space (SCS) in an effort to serve several important public interest goals for the Nation and expand the reach of communications services, particularly emergency services, so that connectivity and assistance is available in more remote places. In this document, to allow satellite communications on spectrum previously allocated only to terrestrial services, the Commission modifies the United States Table of Frequency Allocations to authorize bi-directional, secondary mobile-satellite service operations in certain spectrum bands that have no primary, non-flexible-use legacy incumbents, Federal or non-Federal. For these bands, we authorize SCS only where one or more terrestrial licensees—together holding all licenses on the relevant channel throughout a defined geographically independent area—lease access to their spectrum rights to a participating satellite operator, whose license reflects these frequencies and the geographically independent area in which they will offer SCS. In recognition that this new offering has the potential to bring life-saving connectivity to remote areas, the Commission also applies interim 911 call and text routing requirements to ensure that help is available to those who need it today while we work toward enabling automatic location-based routing of all emergency communications whether or not there is a terrestrial connection available.

DATES: The rules are effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, except for the amendments to §§

1.9047(d)(2) (amendatory instruction 3), 9.10(t)(3) through (5) (amendatory instruction 8), and 25.125(b)(1) and (2) and (c) (amendatory instruction 16), which are indefinitely delayed. The Federal Communications Commission will publish a document in the *Federal Register* announcing the effective date of these rule sections.

FOR FURTHER INFORMATION CONTACT: For additional information on this proceeding, contact Jon Markman of the Mobility Division, Wireless Telecommunications Bureau, at Jonathan.Markman@fcc.gov or (202) 418-7090, or Merissa Velez of the Space Bureau Satellite Programs and Policy Division, at Merissa.Velez@fcc.gov or (202) 418-0751. For information regarding the Paperwork Reduction Act of 1995 (PRA) information collection requirements contained in this document, contact Cathy Williams, Office of Managing Director, at (202) 418-2918 or Cathy.Williams@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of Commission's *Report and Order*, in GN Docket No. 23-65 and IB Docket No. 22-271; FCC 24-28, adopted and released on March 15, 2024. The full text of this document is available for public inspection online at https://docs.fcc.gov/public/attachments/FCC-24-28A1.pdf. The *Report and Order* was corrected by an erratum released on April 18, 2024. The changes made by the erratum are included in this document.

SYNOPSIS:

1. In the *Report and Order*, the Commission adopts a regulatory framework—the first of its kind in the world—to enable collaborations between satellite operators and terrestrial service providers to offer ubiquitous connectivity directly to consumer handsets using spectrum previously allocated only to terrestrial service. We anticipate that supplemental coverage from space, or SCS, will enable consumers in areas not covered by terrestrial networks to be connected using their existing devices via satellite-based communications.

2. In the *Report and Order*, to allow satellite communications on spectrum previously allocated only to terrestrial services, the Commission modifies the United States Table of

Frequency Allocations to authorize bi-directional, secondary mobile-satellite service (MSS) operations in certain spectrum bands that have no primary, non-flexible-use legacy incumbents, Federal or non-Federal. Accordingly, the list of bands that will be available for the provision of SCS (the SCS Bands) is as follows:

- 600 MHz: 614-652 MHz and 663-698 MHz;
- 700 MHz: 698-769 MHz, 775 MHz-799 MHz, and 805-806 MHz;
- 800 MHz: 824-849 MHz and 869-894 MHz;
- Broadband PCS: 1850-1915 MHz and 1930-1995 MHz; and
- AWS-H Block: 1915-1920 MHz and 1995-2000 MHz

3. For these bands, the Commission finds it in the public interest to limit SCS authorizations to the following geographically independent areas (GIAs): (1) the contiguous United States (CONUS); (2) Alaska; (3) Hawaii; (4) American Samoa; (5) Puerto Rico/U.S. Virgin Islands; and (6) Guam/Northern Mariana Islands. Given the novel technical challenges at play when introducing satellite communications to terrestrial spectrum, we believe that a GIA restriction is necessary in the initial SCS framework because it minimizes the risk of potential interference to geographically-adjacent, co-channel license areas. For these bands, the Commission authorizes SCS only where one or more terrestrial licensees—together holding all licenses on the relevant channel throughout a defined geographically independent area—lease access to their spectrum rights to a participating satellite operator, whose part 25 license reflects these frequencies and the geographically independent area in which they will offer SCS.

4. In the *Report and Order*, the Commission also adopts entry criteria that non-geostationary satellite orbit (NGSO) and geostationary satellite orbit (GSO) operators must meet in order to apply for or modify an existing part 25 license to operate satellites in the SCS Bands in the United States and its territories. Specifically, we establish an SCS framework allowing satellite operators to apply to modify a current part 25 license to include SCS where: (1) the satellite operator has one or more leasing notification(s) or application(s), or in the case of

FirstNet, a Form 601, on file with the Commission to access the spectrum allocated for MSS provision of SCS from a single terrestrial licensee or multiple licensees that hold, collectively or individually, all co-channel licenses throughout a GIA; (2) the current part 25 space station licensee or part 25 grantee of market access for NGSO or GSO satellite operation seeks modification of authority to provide SCS in the same geographic areas covered in the relevant GIA; and (3) the terrestrial devices involved in SCS qualify as "licensed by rule" earth stations under the new provisions of part 25. Similarly, satellite operators may apply for an initial part 25 license with authority to provide SCS if they meet requirements (1) and (3) above, and if in their part 25 application, those operators seek to provide SCS in the same geographic areas covered in the relevant GIA.

5. Our actions to facilitate the deployment of SCS will serve several important public interest goals for the Nation. First, the SCS framework will expand the reach of communications services, particularly emergency services, so that connectivity and assistance is available in more remote places. Second, the SCS framework will spur advancements in cutting-edge, space-based technologies that will position the United States as a global leader in this arena. And third, the SCS framework will continue our efforts to promote the innovative and efficient use of our Nation's spectrum resources in ways that foster creative collaborations among users.

6. In crafting this new framework, it is essential that we balance the desire to accelerate innovative SCS operations that will serve these critical public interest goals with the need to retain service quality of terrestrial networks, protect spectrum usage rights, and minimize the risk of harmful interference, both domestically and internationally. Accordingly, the framework we adopt in the *Report and Order* represents an initial step to encourage the development of SCS while minimizing the risks of harmful interference to existing terrestrial and satellite networks that support non-Federal and Federal users. In the future, as the marketplace for SCS develops, we plan to build on the framework we adopt in the *Report and Order*, to enable deployment of SCS in additional bands and scenarios. We will also continue to monitor the nascent SCS

marketplace to consider modifications and address proposals that do not fit neatly within our framework by waiver.

7. In addition, the Commission considered a framework for authorizing terrestrial devices to communicate with a space station in the SCS context. In the *Report and Order*, the Commission adopts a license by rule approach for terrestrial devices as earth stations communicating with a satellite network for the purposes of SCS. Specifically, so long as the terrestrial devices connecting to the SCS network are doing so pursuant to an effective part 1 leasing arrangement or agreement and are operating within the existing technical parameters of their Office of Engineering and Technology (OET) equipment authorization, the terrestrial licensee's license parameters, and applicable part 22, 24, or 27 rules, then those devices will be licensed as earth stations by rule without the need to file a part 25 earth station application for additional authority.

8. In recognizing the importance of 911 service to emergency response and disaster preparedness, we adopt interim 911 text and call routing requirements for terrestrial providers that use SCS arrangements to extend coverage areas. Specifically, we require terrestrial providers to transmit all 911 voice calls and texts to a Public Safety Answering Point (PSAP) using location-based routing or an emergency call center. Terrestrial providers must also transmit location information and the user's phone number to facilitate dispatch and callback capabilities at the receiving PSAP. We also require terrestrial providers that use SCS to file annual reports with the Commission, submit a privacy certification, and provide consumer disclosures regarding SCS 911 connectivity.

9. Under the SCS framework, satellite operators and terrestrial licensees providing SCS must comply with existing satellite and terrestrial rules to avoid harmful interference into radio astronomy and related services. The Commission also amended some of its technical rules as they apply to SCS. In addition, the new MSS allocations will remain subject to the United States' international obligations under treaties, bilaterial or multilateral agreements, the

International Radio Regulations, and other instruments of the International Telecommunication Union (ITU).

PROCEDURAL MATTERS

Paperwork Reduction Act

10. The requirements in §§ 1.9047(d)(2), 9.10(t)(3) through (5), and 25.125(b)(1) and (2) and (c) constitute new or modified collections subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. They will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies will be invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, the Commission notes that, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), the Commission previously sought, but did not receive, specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees. The Commission describes impacts that might affect small businesses, which includes more businesses with fewer than 25 employees, in the Final Regulatory Flexibility Analysis.

Final Regulatory Flexibility Analysis

11. The Regulatory Flexibility Act (RFA) requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities." Accordingly, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the possible impact of the rule changes contained in the *Report and Order* on small entities. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking* (*NPRM*) released in March 2023 in this proceeding (88 FR 21944, Mar. 16, 2023). The Commission sought written public comment on the proposals in the *NPRM* including

comments on the IRFA. No comments were filed addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

Congressional Review Act

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

FINAL REGULATORY FLEXIBILITY ANALYSIS

13. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *NPRM* released in March 2023. The Federal Communications Commission (Commission) sought written public comment on the proposals in the *NPRM*, including comment on the IRFA. No comments were filed addressing the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Report and Order

14. In the *Report and Order*, the Commission takes a major step toward harnessing the power of hybrid satellite-terrestrial networks to connect people to modern communications services. To accomplish this objective, the Commission adopts a regulatory framework to enable collaborations between satellite operators and terrestrial service providers to offer ubiquitous connectivity directly to consumer handsets using spectrum previously allocated only to terrestrial service. Supplemental coverage from space (SCS) will enable consumers in areas not covered by terrestrial infrastructure to be connected using their existing devices via satellite-based communications. The framework the Commission adopts in the *Report and Order* balances the desire to accelerate innovative SCS operations that will serve these critical public interest goals with the need to retain service quality of terrestrial networks, protect spectrum usage rights, and minimize the risk of harmful interference, both domestically and internationally. The objectives of the framework include facilitating ubiquitous wireless coverage across the Nation, expanding the availability of emergency communications to consumers and the geographic range of first

responders to provide emergency services, and promoting competition in the provision of wireless services to consumers.

15. In the *Report and Order*, to allow satellite communications on spectrum previously allocated only to terrestrial services, the Commission modifies the United States Table of Frequency Allocations (U.S. Table) to authorize bi-directional, secondary mobile-satellite service (MSS) operations in certain spectrum bands that have no primary, non-flexible-use legacy incumbents, Federal or non-Federal. For these bands, the Commission authorizes SCS only where one or more terrestrial licensees—together holding all licenses on the relevant channel throughout a defined geographically independent area (GIA)—lease access to their spectrum rights to a participating satellite operator, whose part 25 license reflects these frequencies and the GIA in which they will offer SCS. The list of bands (SCS Bands) that will be available for the provision of SCS is as follows:

- 600 MHz: 614-652 MHz and 663-698 MHz;
- 700 MHz: 698-769 MHz, 775 MHz-799 MHz, and 805-806 MHz;
- 800 MHz: 824-849 MHz and 869-894 MHz;
- Broadband PCS: 1850-1915 MHz and 1930-1995 MHz; and
- AWS-H Block: 1915-1920 MHz and 1995-2000 MHz

16. In an effort to realize the public interest benefits of SCS as soon as possible, while minimizing the risk of harmful interference, the Commission adopts the proposal to limit SCS authorizations to the following GIAs: (1) the contiguous United States (CONUS); (2) Alaska; (3) Hawaii; (4) American Samoa; (5) Puerto Rico/U.S. Virgin Islands; and (6) Guam/Northern Mariana Islands.

17. Additionally, in the *Report and Order*, the Commission adopts rules requiring a part 25 license as a necessary component of an SCS authorization that must be obtained prior to commencing SCS. The Commission also adopts entry criteria that non-geostationary satellite orbit (NGSO) and geostationary satellite orbit (GSO) operators must meet to apply for or modify

an existing part 25 license to operate satellites in SCS Bands. The Commission adopts rules to establish a license by rule approach for terrestrial devices as earth stations communicating with a satellite network for the purposes of SCS. Furthermore, the *Report and Order* authorizes SCS based on a lease arrangement or agreement between one or more terrestrial licensees and one or more satellite operators, subject to the restrictions adopted. The Commission also adopts limited amendments to the service rules governing satellite and terrestrial licensees to enable the provision of SCS.

18. Similarly, the Commission adopts certain technical rules, including requiring terrestrial device equipment authorization grantees to modify existing, or obtain new, equipment authorizations for previously certified terrestrial devices and also grants a limited waiver of certain rules. The Commission also addresses international coordination, stating that SCS will be authorized pursuant to a secondary MSS allocation in the U.S. Table. These operations may not cause harmful interference to—and shall not claim protection from—any station operating in accordance with ITU provisions, whether in the United States or internationally. Finally, the Commission clarifies that the SCS framework is limited to operations performed in the bands designated in the *Report and Order* for SCS and remains separate from the service rules for MSS systems. Consequently, the rules the Commission adopts in the *Report and Order* represent an initial step to encourage the development of SCS while minimizing the risks of harmful interference to existing terrestrial and satellite networks that support non-Federal and Federal users.

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

19. Parties that filed comments did not specifically reference the IRFA in their comments; however, some commenters, some of which include small entities, expressed concerns that the proposal in the *NPRM* in which a single terrestrial licensee must hold all co-channel licenses in a given GIA would either limit SCS to large carriers with nationwide authority over a block of

spectrum, or, at a minimum, exclude smaller or regional terrestrial operators from participation in the framework. These concerns are discussed in greater detail in section F of this FRFA.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

20. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.

21. The Chief Counsel did not file any comments in response to the proposed rules or policies in this proceeding.

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

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

23. *Small Businesses, Small Organizations, Small Government Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe, at the outset, three broad groups of small entities that could be directly affected herein. First, where there are industry specific size standards for businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration's (SBA) Office of Advocacy, in general a small business is an independent business having fewer

than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 33.2 million businesses.

24. Next, the type of small entity described as a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field." The Internal Revenue Service (IRS) uses a revenue benchmark of $50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2020, there were approximately 447,689 small exempt organizations in the U.S. reporting revenue of $50,000 or less according to the registration and tax data for exempt organizations available from the IRS.

25. Finally, the small entity described as a "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand." U.S. Census Bureau data from the 2017 Census of Governments indicate there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Of this number, there were 36,931 general purpose governments (county, municipal, and town or township) with populations of less than 50,000 and 12,040 special purpose governments—independent school districts with enrollment populations of less than 50,000. Accordingly, based on the 2017 U.S. Census of Government data, we estimate that at least 48,971 entities fall into the category of "small government jurisdictions."

26. *Satellite Telecommunications.* This industry comprises firms "primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications." Satellite telecommunications service providers include satellite and earth station operators. The SBA small business size standard for this industry classifies a business with $38.5 million or less in annual receipts as small. U.S. Census Bureau data for 2017 show that 275 firms in this industry operated for the entire year. Of

this number, 242 firms had revenue of less than $25 million. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 65 providers that reported they were engaged in the provision of satellite telecommunications services. Of these providers, the Commission estimates that approximately 42 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, a little more than half of these providers can be considered small entities.

27. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and wireless video services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 797 providers that reported they were engaged in the provision of wireless services. Of these providers, the Commission estimates that 715 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

28. *600 MHz Band*. These wireless communications services are radiocommunication services licensed in the 617-652 MHz and 663-698 MHz frequency bands that can be used for fixed and mobile flexible uses. 600 MHz Band services fall within the scope of the Wireless Telecommunications Carriers (except Satellite) industry where the SBA small business size standard classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size

standard, the Commission estimates that a majority of licensees in this industry can be considered small.

29. Based on Commission data as of November 2021, there were approximately 3,327 active licenses in the 600 MHz Band service. The Commission's small business size standards with respect to 600 MHz Band services involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For purposes of bidding credits, the Commission defined "small business" as an entity with average gross revenues not exceeding $55 million for each of the three preceding years, and a "very small business" as an entity with average gross revenues not exceeding $20 million for each of the three preceding years for the 600 MHz band auction. Pursuant to these definitions, 15 bidders claiming small business status won 290 licenses.

30. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

31. *Lower 700 MHz Band Licenses*. The lower 700 MHz band encompasses spectrum in the 698-746 MHz frequency bands. Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including frequency division duplex (FDD)- and time division duplex (TDD)-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services. Wireless Telecommunications Carriers (*except* Satellite) is the closest industry with a SBA small

business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

32. According to Commission data as of December 2021, there were approximately 2,824 active Lower 700 MHz Band licenses. The Commission's small business size standards with respect to Lower 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For auctions of Lower 700 MHz Band licenses the Commission adopted criteria for three groups of small businesses. A very small business was defined as an entity that, together with its affiliates and controlling interests, has average annual gross revenues not exceeding $15 million for the preceding three years, a small business was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding $40 million for the preceding three years, and an entrepreneur was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding $3 million for the preceding three years. In auctions for Lower 700 MHz Band licenses seventy-two winning bidders claiming a small business classification won 329 licenses, twenty-six winning bidders claiming a small business classification won 214 licenses, and three winning bidders claiming a small business classification won all five auctioned licenses.

33. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the

Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

34. *Upper 700 MHz Band Licenses*. The upper 700 MHz band encompasses spectrum in the 746-806 MHz bands. Upper 700 MHz D Block licenses are nationwide licenses associated with the 758-763 MHz and 788-793 MHz bands. Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including FDD- and TDD-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services. Wireless Telecommunications Carriers (*except* Satellite) is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

35. According to Commission data as of December 2021, there were approximately 152 active Upper 700 MHz Band licenses. The Commission's small business size standards with respect to Upper 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years, and a "very small business" 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. Pursuant to

these definitions, three winning bidders claiming very small business status won five of the twelve available licenses.

36. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

37. *Cellular Radiotelephone Service.* This service is radio service in which licensees are authorized to offer and provide cellular service for hire to the general public and was formerly titled Domestic Public Cellular Radio Telecommunications Service. Cellular Radiotelephone Service falls within the scope the Wireless Telecommunications Carriers (except Satellite) industry, where the SBA small business size standard classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

38. Based on Commission data, as of November 2021, there were approximately 1,908 active licenses in this service. The Commission's small business size standards with respect to Cellular Radiotelephone Services involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For purposes of bidding credits, the Commission has defined "small business" as an entity that either (1) together with its affiliates and controlling interests has average gross revenues of not more than $3 million for each of the three preceding

years, or (2) together with its affiliates and controlling interests has average gross revenues of not more $15 million for each of the three preceding years.

39. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

40. *Advanced Wireless Services (AWS) - (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3); 2000-2020 MHz and 2180-2200 MHz (AWS-4)).* Spectrum is made available and licensed in these bands for the provision of various wireless communications services. Wireless Telecommunications Carriers (except Satellite) is the closest industry with a SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

41. According to Commission data as December 2021, there were approximately 4,472 active AWS licenses. The Commission's small business size standards with respect to AWS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of AWS licenses, the Commission 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. Pursuant to these definitions, 57 winning bidders claiming status as small or very small businesses won 215 of 1,087 licenses. In the most recent auction of AWS licenses 15 of 37 bidders qualifying for status as small or very small businesses won licenses.

42. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

43. *All Other Telecommunications*. This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Providers of Internet services (e.g., dial-up ISPs) or voice over Internet protocol (VoIP) services, via client-supplied telecommunications connections are also included in this industry. The SBA small business size standard for this industry classifies firms with annual receipts of $35 million or less as small. U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year. Of those firms, 1,039 had revenue of less than $25 million. Based on this

data, the Commission estimates that the majority of "All Other Telecommunications" firms can be considered small.

E. Description of Projected Reporting, Recordkeeping, and other Compliance Requirements for Small Entities

44. While the Commission sought to minimize compliance burdens where practicable, the SCS framework adopted in the *Report and Order* will impose new or additional reporting, recordkeeping, and/or other compliance obligations on small entities. In addition, while it sought comment from concerned parties regarding costs related to those obligations, the record does not contain a detailed cost/benefit analysis that would allow us to quantify such related costs to small entities. The rules adopted in the *Report and Order* encompass a broad range of leasing, licensing, and technical compliance requirements that are summarized in further detail below.

45. *Part 25 License Entry Criteria*. The *Report and Order* effectuates SCS in certain flexible-use bands previously allocated solely for terrestrial use by the adoption of rules to authorize satellite-to-terrestrial (uplink and downlink) operations in these bands whereby a NGSO or GSO satellite operator may apply for a new or modify an existing part 25 authorization when that entity meets certain prerequisites, or "entry criteria." The "entry criteria" requires the satellite operator intending to modify its existing part 25 application in order to provide SCS to include a certification that provides the following information: (1) the satellite operator has one or more leasing notification(s) or application(s), or in the case of FirstNet, a Form 601, on file with the Commission to access the spectrum allocated for MSS provision of SCS from a single terrestrial licensee or multiple licensees that hold, collectively or individually, all co-channel licenses throughout a GIA; (2) the current part 25 space station licensee or part 25 grantee of market access for NGSO or GSO satellite operation seeks modification of authority to provide SCS in the same geographic areas covered in the relevant GIA; and (3) the terrestrial devices involved in SCS qualify as "licensed by rule" earth stations under the new provisions of part 25. Similarly, satellite operators may apply for an initial part 25 license with authority to provide

SCS if it shows that it meets requirements (1) and (3) above, and if in their part 25 application, those operators request to provide SCS in in the same geographic areas covered in the relevant GIA.

46. In its adopted rules, the Commission maintains its existing part 25 rules for obtaining and modifying a license and applies them to the SCS framework. Under this framework, meeting the proposed entry criteria would allow small and other entities to apply to modify its existing satellite authorization. However, all related applications—including those seeking modification, lease applications, and earth station equipment certifications—must first be granted to provide SCS. Thus, the *Report and Order*'s requirements are in addition to the existing underlying reporting, recordkeeping, and compliance requirements. We further note, however, that due to the significant costs involved in SCS development and deployment, we anticipate that few satellite operators affected by this rulemaking would qualify under the definition of "small entity."

47. *Part 1 Leasing*. In the *Report and Order*, the Commission adopts a framework authorizing SCS by amending its part 1 leasing rules to permit terrestrial licensees to lease terrestrial spectrum rights to satellite operators for the purpose of providing SCS. In order to properly comply, the adopted rules require applicants for and current licensees of the authorized SCS bands to provide the following information using the current FCC Form 608: (1) a certification that the parties are entering into the leasing arrangement for the purpose of fulfilling the part 25 entry criteria; (2) a description of which method, single or multiple terrestrial licensee, the parties are utilizing to meet the part 25 entry criteria; and (3) if the parties are utilizing the spectrum leasing arrangement under the multiple terrestrial licensee method, the parties must: (a) describe the nature of the leasing arrangement(s); and (b) demonstrate how the entirety of the GIA is covered by the lease arrangement(s). The Commission believes that this requirement will improve the level of interference protection licensees receive in the band; and will create a more predictable and transparent spectrum environment for any current and future

users of the band(s). This process also utilizes the Commission's current application approval and notification processing procedures because it will remove unnecessary delay by utilizing the procedures that are already in place. Further, in light of these limited changes to the current application procedures, the Commission does not believe that small entities will have to hire professionals to comply with the *Report and Order*.

48. *Part 25 Automatic Termination*. In the *Report and Order*, the Commission retains the current part 25 rules regarding automatic termination of station authorizations to satellite licensees seeking to provide SCS jointly with a terrestrial operator, and adds a rule whereby the termination of any lease(s) that allow for the use of specific terrestrial spectrum for SCS is a trigger for automatic termination of the part 25 license. This requirement utilizes and applies the Commission's current part 25 automatic termination process. In light of these limited changes to the current procedures, the Commission does not believe that small entities will have to hire professionals to comply with the *Report and Order*.

49. *911 Call Transmission Requirements*. In the *Report and Order*, the Commission establishes on an interim basis that terrestrial providers must transmit all SCS 911 calls and texts to a PSAP using either an emergency call center or location-based routing. Terrestrial providers must also transmit location information and the user's phone number to facilitate dispatch and callback capabilities at the receiving PSAP. This interim step will balance the need for SCS 911 voice calls and texts to be routed to the appropriate PSAP with the need for terrestrial providers to have flexibility in their implementation of SCS. Under this approach, terrestrial providers must either: (1) use information regarding the location of a device, including but not limited to device-based location information, and transmit the phone number of the device used to send the SCS 911 voice call or SCS 911 text message and available information to an appropriate PSAP; or (2) use an emergency call center, at which emergency call center personnel must determine the emergency caller's phone number and location and then transfer or otherwise direct the SCS voice call or SCS text message to an appropriate PSAP. In addition, the Commission requires

terrestrial providers that use SCS to file an SCS 911 report with the Commission on an annual basis, by October 15th of each year, that explains how their SCS deployments have supported 911 call/text routing to the geographically appropriate PSAP with sufficient location information. Terrestrial providers that utilize SCS to extend coverage must maintain records of SCS 911 voice calls and 911 text messages received under their SCS arrangements and received at their emergency centers. The Commission finds that these reporting and location-based routing requirements represent minimally burdensome requirements when weighed against the necessity of 911 service for emergency response and disaster preparedness. Further, while these recordkeeping and reporting requirements present new obligations for small entities, we note that these measures will promote the Commission's objectives regarding transparency and accountability in routing SCS voice calls and 911 text messages and provide useful data. Additionally, to advance consumer awareness of the extent to which SCS is used to provide connectivity to 911, the Commission adopts consumer disclosure requirements for terrestrial providers to inform their subscribers of the limitations when using SCS to contact 911. Finally, there is a one-time requirement that, prior to use of SCS location information to meet the Commission's 911 rules, terrestrial providers must certify that neither they nor any third party they rely on to obtain SCS location information will use that information or associated data for any non-911 purpose, except with prior express consent or as otherwise permitted or required by law. The certification also must state that terrestrial providers and any third party they rely on to obtain SCS location information will implement measures sufficient to safeguard the privacy and security of the information.

50. *Market Area Boundary Limits*. In the *Report and Order*, the Commission maintains the existing market area boundary limits in parts 22, 24, and 27 of the Commission's rules. Noting that SCS partners should be expected to coordinate regarding the technical parameters necessary to avoid co-channel interference with one another's operations. Although the introduction of SCS into spectrum licensed for terrestrial networks should have no impact to other radio systems

operating in the band within the same or nearby geographical areas, the Commission adopts a rule to limit the signal levels from SCS at and beyond the terrestrial operator's licensed area to be the same as those defined for terrestrial operation in each respective band. More specifically, the Commission maintains the existing market area boundary limits established in parts 22, 24, and 27 of the Commission's rules. These limits have also been used and shown to be feasible for operations similar to SCS. SCS can therefore only be deployed on the condition that stations using these frequencies will not cause harmful interference to, or claim protection from harmful interference caused by, an international station operating in accordance with the provisions of the Constitution, the Convention, and the Radio Regulations of the ITU.

51. The Commission recognizes that managing time varying signal levels from SCS space stations, which may be moving and utilizing multibeam transmissions, will require careful and dynamic management of power level and beams for small and other entities. Satellite operators must also account for multiple overlapping and changing satellites or beams covering the same areas, as well as leakage and interference from side beams. Therefore, the power limit for interference protection at any given point or area should be applied to aggregation of power received across all visible beams and satellites at all times as they move over any given point or area. In addition, operators may need to cease beam transmissions in zones to allow for signal degradation from the edge of SCS coverage. Given that the size of such zones depends on target services, satellite and beamforming configuration, and power management solutions which may improve over time, the Commission does not set a limit on the zone size as long as the receive power limits are met.

52. *Out of Band Emission (OOBE) Limits*. In the *Report and Order* the Commission adopted a uniform OOBE limit of -120 dBW/m2/MHz for SCS operation across the SCS Bands expressed as a terrestrial power flux-density (PFD) limit. To ensure those adjacent band devices are protected from the risk of harmful interference, we find that both OOBE limits are warranted, and given the nature of SCS, that these limits should be measured and enforced on the ground.

In setting these limits, we recognize that different factors may affect the potential for harmful interference due to the inherent difference in propagation effects when the signal is generated from a multibeam satellite constellation compared to when it is transmitted from a terrestrial base station. As a result, we therefore adopt limits that constitute a reasonable middle ground between existing terrestrial OOBE limits and satellite-based limits.

53. The existing OOBE limits for base stations vary across different radio services, and these services are governed by different parts of the Commission's rules (e.g., parts 22, 24, 27). Although different OOBE limits apply across individual SCS Bands, we believe adopting a uniform PFD limit for supplemental satellite coverage across the various bands is reasonable and provides a simple requirement for satellite operator compliance. To provide a uniform limit across the various SCS Bands, the Commission considers some balancing of these effects for PFD limits that are normalized to both "per MHz" and "per square meter"—i.e., dBW/m2/MHz. We also specify that this PFD limit will apply at 1.5 meters above ground level, a height frequently associated with handset usage that has been used by the Commission when developing interference protection criteria for other wireless services. We believe that this limit represents an equitable—and technologically feasible—balance between the positions expressed in the record and will effectively protect adjacent band operations across the SCS Bands. Further, given that the Commission is breaking new ground in permitting satellite operations to not only operate in bands allocated for terrestrial systems, but permitting them to be fully integrated into those systems, we believe that it is in the public interest to require that those satellites protect terrestrial systems commensurate with the protections they are afforded from terrestrial-only systems. While the out-of-band PFD limits the Commission adopted may require more stringent attenuation than the emission limits specified in § 25.202(f) for satellite operation,

the Commission believes that these stricter limits are both necessary and technologically feasible for small and other satellite operators providing SCS.

54. *Equipment Authorization for SCS*. The adopted rules in the *Report and Order* also require terrestrial device equipment authorization grantees to modify existing, or obtain new, equipment authorizations for previously certified terrestrial devices to reflect those devices' approval to operate under a part 25 MSS allocation and applicable SCS rules. New applicants should include a request for part 25 on future certification applications for equipment that is capable of operation in an SCS mode. This requirement does introduce a new administrative burden for equipment authorization grantees and applicants, especially as it relates to already certified equipment. The Commission's existing procedures through the permissive change process which enable electrical or mechanical changes to certified equipment when those changes do not affect the characteristics required to be reported to the Commission do not apply here where the only change being made to the certification is adding authorization for part 25. Under the Commission's existing rules, "a change other than a permissive change" requires a grantee to file a new application for certification accompanied by the information specified in part 2 of the Commission's rules. The Commission believes there is good reason to provide grantees a way to effectuate the necessary changes to their equipment authorization grants under the Commission's rules that also minimizes the administrative burdens associated with a new equipment certification application by waiving relevant rule provisions to provide a simplified process for existing grantees to modify their certifications to reflect part 25 authorization for SCS.

55. In granting a limited waiver of its rules, the Commission aims to minimize the burden on small and other equipment certification holders, while ensuring tracking and accountability for devices capable of SCS, and compliance with its prohibition on the authorization of covered equipment. Similarly, for new equipment authorizations, terrestrial devices need only show compliance with the terrestrial technical rules for the rule parts under which they will operate; no

additional tests are needed for part 25 SCS capability. Thus, seeking to have the part 25 SCS designation on the equipment certification only requires the applicant to request such a designation pursuant to the SCS rules.

56. *International Coordination*. In the *Report and Order*, the adopted rules require that SCS operations that may occur in bands not allocated for such services in the International Table must be consistent with ITU Radio Regulation No. 4.4 and finds that it would serve the public interest to include express conditions in the SCS licenses to ensure that the Commission's obligations are met as the ITU notifying administration for U.S. licensed space station operations. In these cases, the Commission will require additional assurances from SCS licensees that while operating outside of the United States, pursuant to an authorization from another country, the satellite operations will not cause harmful interference into a nearby country. Prior to conducting any communications with earth stations outside the United States, a satellite operator licensed to provide SCS, or applicant for a license to provide SCS, must certify to Space Bureau and the Office of International Affairs (OIA) that it has obtained all necessary authorizations from the relevant country prior to initiation of communications with earth stations in that country. The certification must include steps that were taken to address harmful interference concerns and that these SCS operations will not result in harmful interference to operations that are in conformity with the ITU Radio Regulations in neighboring or nearby countries. The certification must also be accompanied by a demonstration specifying the measures that the U.S. licensee or applicant will take to eliminate any harmful interference immediately, in the event that it is notified of harmful interference resulting from such SCS operations. These requirements are consistent with existing Commission rules, thereby limiting the compliance burden for small and other entities.

F. Steps Taken to Minimize the Significant Economic Impact on Small Entities and

Significant Alternatives Considered

57. The RFA requires an agency to provide, "a description of the steps the agency has taken to minimize the significant economic impact on small entities . . . including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

58. As discussed above, the *Report and Order* adopts an SCS framework that allows, through a collaboration between a terrestrial mobile service provider and satellite operator, transmissions directly from satellites to terrestrial devices on spectrum that was previously allocated and licensed exclusively on a terrestrial basis. In the discussion of the issues, the initial *NPRM* sought comment on, the Commission raised alternatives and sought input such as a cost and benefit analyses from small and other entities. By requesting such information, the Commission gave small entities the opportunity to broaden the scope of the Commission's understanding of impacts which may not be readily apparent, and offer alternatives not already considered that could minimize the economic impact on small entities.

59. *Waiver-Based Approach*. The Commission declines to adopt a waiver-based approach to enable SCS, opting instead to enable SCS on a variety of bands in all parts of the United States through generally-applicable rules. Some commenters argued for a waiver-based approach instead, but the Commission believes a generally-applicable rules approach allows the Commission to better serve the public by allowing it to more carefully consider the entire landscape of an issue as well as make more comprehensive policy decisions. However, because there are particular SCS implementations that do not perfectly align with this framework, in order to not discourage or delay other innovative solutions for SCS, the Commission will continue to consider on a case-by-case basis filings for waiver or special temporary authority (STA) made by interested parties for SCS. Permitting case-by-case filings for waiver or STA

will allow more flexibility for smaller entities who do not have the resources that larger entities have to participate in providing SCS.

60. *Geographically Independent Area (GIA)*. In the initial *NPRM*, the Commission proposed to limit the provision of SCS "to instances where a single terrestrial licensee holds all co-channel licenses in the relevant band throughout one of the six GIAs." In the *Report and Order*, the Commission adopted the proposal to limit SCS authorizations to the following GIAs: (1) CONUS; (2) Alaska; (3) Hawaii; (4) American Samoa; (5) Puerto Rico/U.S. Virgin Islands; and (6) Guam/Northern Mariana Islands. The Commission adopted its original proposal to limit SCS to GIAs at this time, and acknowledges that this decision does not foreclose the ability for parties with proposals for providing SCS that do not satisfy the framework from applying to the Commission and demonstrating that they will not cause harmful interference. Some commenters, some of which include small entities, suggested this proposal would limit SCS to large carriers with nationwide authority over a block of spectrum, or otherwise exclude smaller or regional terrestrial operators from participation in the framework. Because of these concerns, the Commission has taken the step of expanding its entry criteria so that multiple terrestrial service providers may work with a satellite operator to provide SCS, as long as together those service providers hold all the licenses in the relevant channel throughout a GIA. These more expansive entry criteria help provide an opportunity for broader deployment of SCS both spectrally and geographically and allows additional licensees to participate, while still minimizing the risk of harmful interference.

61. *Part 25 License Entry Criteria*. In the *Report and Order*, the Commission adopted rules to authorize satellite-to-terrestrial (uplink and downlink) operations in certain bands whereby a NGSO or GSO satellite operator may apply for a new or modify an existing part 25 authorization where that entity meets certain prerequisites, or "entry criteria." This approach will significantly expand and enhance secondary markets in a manner that aligns with the Commission's public interest objectives in order to permit spectrum to flow more freely among users and uses in

response to economic demand. The Commission believes that by allowing spectrum to be utilized in this way, it will encourage small entities to become more involved in this process and collaborate with larger providers.

62. Furthermore, in the *Report and Order*, the Commission declined to require part 25 blanket earth station licensing because the comments in the record reflected that blanket licensing would be unnecessarily burdensome to small and other entities. In the initial *NPRM*, the Commission proposed that a terrestrial licensee seeking to collaborate with a satellite operator to offer SCS must apply for and obtain a blanket earth station license for all of its subscribers' terrestrial devices that will be transmitting to space stations for SCS operations. The Commission sought comment on this approach as well as any other approaches that would be consistent with statutory and international obligations. However, commenters raised significant concerns regarding blanket licensing, and, thus, the Commission instead adopts a license by rule approach for terrestrial devices as earth stations communicating with a satellite network for the purposes of SCS. By not requiring providers to apply for and obtain a blanket earth station license, the Commission removes a barrier that was potentially unnecessarily burdensome, in particular for small entities with limited resources.

63. *Part 1 Leasing*. The Commission adopts a framework authorizing SCS by amending its part 1 leasing rules to permit terrestrial licensees to lease terrestrial spectrum rights to satellite operators for the purpose of providing SCS. These requirements are consistent with existing Commission part 1 leasing rules, and the Commission will require applicants for and current licensees of the authorized SCS bands to provide the necessary information using current FCC Form 608. This process will benefit small entities by saving time and resources, as it utilizes the Commission's current application approval and notification processing procedures, and it will remove unnecessary delay by utilizing the procedures that are already in place. Additionally, the Commission considered, but declined, to adopt an approach where a lease was not initially required. Some commenters advocated for the adoption of a "two-step" licensing model in

response to the *NPRM*, which would have involved a deployment grant that would not have required a lease initially. However, the Commission believes that a two-step part 25 licensing process would require a duplicative and inefficient use of staff resources that could create a significant economic burden to small entities.

64. *Part 25 Automatic Termination*. The Commission retains the current part 25 rules regarding automatic termination of station authorizations to satellite licensees seeking to provide SCS jointly with a terrestrial operator and adds a rule whereby the termination of any lease(s) that allow for the use of specific terrestrial spectrum for SCS is a trigger for automatic termination of the part 25 license. The new rule that triggers the current part 25 automatic termination requirement is consistent with the current automatic termination rules. By retaining the current part 25 rules regarding automatic termination, small and other entities will not have to become acquainted with a new set of rules, thus reducing their compliance burden.

65. *911 Call Transmission Requirements*. The Commission establishes on an interim basis that terrestrial providers must transmit all SCS 911 calls and texts to a PSAP using either an emergency call center or location-based routing. Terrestrial providers must also transmit location information and the user's phone number to facilitate dispatch and callback capabilities at the receiving PSAP. This interim step will balance the need for SCS 911 voice calls and texts to be routed to the appropriate PSAP with the need for entities to have flexibility in their implementation of SCS. The Commission implements this interim step because some terrestrial 911 requirements may not be feasible at this time and, thus, balanced feasibility with the vital importance of 911 services. In connection with this interim requirement, terrestrial providers that use SCS to extend coverage must maintain records of SCS 911 voice calls and text messages received on their network and emergency call centers. In addition, the adopted rules require terrestrial providers to file an SCS 911 report with the Commission on an annual basis, which will provide critical information regarding SCS 911 connectivity to the Commission while accomplishing it in a manner that does not create a severe burden for entities required to file.

The Commission concluded that extending and adapting the existing MSS 911 reporting and location-based routing requirements are minimally burdensome. While these requirements do present new obligations for small entities, these measures will promote transparency and accountability in routing SCS voice calls and provide useful data. In addition, the concurrently adopted *Further Notice of Proposed Rulemaking*, published elsewhere in this issue of the **Federal Register**, will also provide an ample record in which the Commission may consider any additional concerns regarding SCS 911-related issues.

66. The *Report and Order* also establishes disclosure requirements for terrestrial providers to inform their subscribers of the limitations resulting from the use of SCS to contact 911. This disclosure requirement is consistent with the disclosure requirement the Commission adopted for interconnected Voice Over Internet Protocol (VoIP) service providers, demonstrating that it will be familiar to entities and not cause a significant economic impact. While this is a new requirement for providers, it will provide vital information to consumers about the limitations of SCS when contacting 911. The Commission also adopts a rule requiring terrestrial providers to file with the Commission a one-time certification regarding safeguarding the privacy and security of SCS location information. These obligations are consistent with the Commission's existing rules that apply to z-axis and dispatchable location data, as well as location information used for location-based routing; therefore, it will be familiar to terrestrial providers and not create an additional costly burden on small entities.

67. *Market Area Boundary Limits*. The Commission maintains the existing market area boundary limits in parts 22, 24, and 27 of the Commission's rules, noting that SCS partners should be expected to coordinate regarding the technical parameters necessary to avoid co-channel interference with one another's operations. Although the existing market area boundary limits remain, the Commission states that certain limits may be necessary and applicable to the boundaries of the GIA, including at international borders or boundaries extending into water. Therefore, the Commission adopts a rule to limit the signal levels from SCS at and beyond the

terrestrial operator's licensed area to be the same as those defined for terrestrial operation in each respective band.

68. *Out of Band Emission (OOBE) Limits*. The Commission adopts a uniform OOBE limit for SCS operation across the SCS Bands expressed as a terrestrial PFD limit. The Commission declined to apply the existing OOBE limits for base stations; instead, after the perspective of commenters who expressed mixed views on which OOBE limits to apply, the Commission adopts a uniform PFD limit for SCS, which provides an equitable—and technologically feasible—compromise between the positions expressed in the record and will also effectively protect adjacent band operations across the SCS Bands. Further, by adopting a uniform OOBE limit for SCS operations, entities will not have to become knowledgeable about several different limitations, which will save much needed time and resources for small entities. We note that even though the out-of-band PFD limits adopted may require more stringent attenuation than the emission limits specified in § 25.202(f) for satellite operation, the Commission believes these stricter limits are both necessary and technologically feasible for satellite operators providing SCS.

69. *Equipment Authorization for SCS*. In the *Report and Order*, the Commission requires terrestrial device equipment authorization grantees to modify existing, or obtain new, equipment authorizations for previously certified terrestrial devices to reflect those devices' approval to operate under a part 25 MSS allocation and applicable SCS rules. This requirement does introduce a new administrative burden for equipment authorization grantees and applicants, especially as it relates to already certified equipment. The Commission's existing procedures through the permissive change process which enable electrical or mechanical changes to certified equipment when those changes do not affect the characteristics required to be reported to the Commission do not apply here where the only change being made to the certification is adding authorization for part 25. Under the Commission's existing rules, "a change other than a permissive change" requires a grantee to file a new application for certification accompanied by

the information specified in part 2 of the Commission's rules. While the Commission believes there is good reason to provide grantees a way to effectuate the necessary changes to their equipment authorization grants under the Commission's rules that also minimizes the administrative burdens associated with a new equipment certification application. The Commission therefore waives relevant provisions to provide a simplified process for existing grantees to modify their certifications to reflect part 25 authorization for SCS. In providing this limited waiver to existing rules, the Commission aims to minimize the burden on equipment certification holders, while ensuring tracking and accountability for devices capable of SCS, and compliance with our prohibition on the authorization of covered equipment. Similarly, for new equipment authorizations, terrestrial devices need only show compliance with the terrestrial technical rules for the rule parts under which they will operate; no additional tests are needed for part 25 SCS capability.

70. *International Coordination*. In the *Report and Order*, the Commission requires that SCS operations in bands not allocated for such services in the International Table must be consistent with ITU Radio Regulation No. 4.4 and finds it would serve the public interest to include express conditions in the SCS licenses to ensure that the Commission's obligations are met as the ITU notifying administration for U.S. licensed space station operations. In these cases, the Commission will require additional assurances from SCS licensees that while operating outside the United States, pursuant to an authorization from another country, the satellite operations will not cause harmful interference. Prior to conducting any communications with earth stations outside the United States, a satellite operator licensed to provide SCS, or applicant for a license to provide SCS, must certify to the Space Bureau and OIA that it has obtained all necessary authorizations from the relevant country prior to initiation of communications with earth stations in that country.

71. *ECIP Program*. The initial *NPRM* sought comment on eligibility for the Enhanced Competition Incentive Program (ECIP), which the Commission established in July 2022 to

facilitate new opportunities for small carriers and Tribal nations to increase access to spectrum, while incorporating provisions to ensure against program waste, fraud and abuse. Given that the framework is primarily intended to facilitate provision of SCS to existing consumer handsets, and ECIP was adopted with requirements tailored specifically towards provision of service through terrestrial base stations, the Commission considered whether to make SCS participants, necessarily engaged in leasing arrangements, eligible for ECIP benefits which could reduce the economic impacts for small carriers and Tribal nations. In the *Report and Order*, the Commission declines to extend ECIP benefits to stakeholders that presently intend to enter into leasing arrangements for the provision of SCS. The Commission highlights that the provisions of SCS do not align with the goals or entry criteria of the ECIP program and believes it is in the public interest to allow the SCS marketplace and the ECIP program to further develop before determining whether it is appropriate for these two new Commission efforts to support one another.

G. Report to Congress

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

ORDERING CLAUSES

73. Accordingly, IT IS ORDERED that, pursuant to the authority found in sections 1, 4(i), 157, 301, 303, 307, 308, 309, and 310 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 157, 301, 303, 307, 308, 309, and 310, that the *Report and Order* and *Further Notice of Proposed Rulemaking* IS HEREBY ADOPTED.

74. IT IS FURTHER ORDERED that the *Report and Order* SHALL BE EFFECTIVE 30 days after publication in the *Federal Register*, with the exception of revisions to §§ 1.9047(d)(2),

9.10(t)(3) through (5), and 25.125(b)(1) and (2) and (c) of the Commission's rules, 47 CFR 1.9047(d)(2), 9.10(t)(3) through (5), and 25.125(b)(1) and (2) and (c), which may contain new or modified information collection requirements and will not be effective until after the Office of Management and Budget completes any review the Wireless Telecommunications Bureau and the Space Bureau determine is required under the Paperwork Reduction Act and provide an effective date by subsequent Public Notice.

75. IT IS FURTHER ORDERED that, pursuant to section 4(i) of the Communications Act, as amended, 47 U.S.C. 154(i), and § 1.3 of the Commission's rules, 47 CFR 1.3, the following rules are waived, effective immediately upon adoption of the *Report and Order* and extending until the date that is six months following the effective date announced in the Public Notice issued pursuant to paragraph 268 in the *Report and Order*, to the limited extent and as described herein: §§ 2.1043(c) and 2.911(c) and (e) of the Commission's rules, 47 CFR 2.1043(c) and 2.911(c) and (e). This temporary waiver is granted only for the purpose of adding a part 25 designation to equipment certifications granted on or before the 60th day after a summary of the *Report and Order* is published in the *Federal Register*.

76. IT IS FURTHER ORDERED that the Commission's Office of the Secretary, SHALL SEND a copy of the *Report and Order* and *Further Notice of Proposed Rulemaking*, including the Final Regulatory Flexibility Analysis and the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

77. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of the *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

List of Subjects

47 CFR Part 1

Practice and procedure, Reporting and recordkeeping requirements, Telecommunications, Wireless radio services.

47 CFR Part 2

Communications, Satellites, Telecommunications.

47 CFR Part 9

Communications common carriers, Communications equipment, Radio.

47 CFR Part 25

Administrative practice and procedure, Satellites.

Federal Communications Commission.

Marlene Dortch,
Secretary.

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 1, 2, 9, and 25 as follows:

PART 1 – PRACTICE AND PROCEDURE

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

AUTHORITY: 47 U.S.C. chs. 2, 5, 9, 13; 28 U.S.C. 2461 note; 47 U.S.C. 1754, unless otherwise noted.

2. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, add § 1.9047 to read as follows:

§ 1.9047 Special provisions relating to spectrum leasing arrangements involving terrestrial spectrum rights for supplemental coverage from space.

(a) *Supplemental coverage from space.* For purposes of this section, *supplemental coverage from space (SCS)* has the same meaning as in § 25.103 of this chapter.

(b) *Geographically independent area (GIA).* For purposes of this section, *geographically independent area (GIA)* has the same meaning as in § 25.103 of this chapter.

(c) *Part 25 SCS Entry Criteria.* For purposes of this section, part 25 SCS Entry Criteria refers to the requirements outlined in § 25.125(a) and (b) of this chapter.

(d) *Scope.* Under this section, a licensee may enter into a spectrum manager (*see* § 1.9020) or *de facto* transfer (*see* §§ 1.9030 and 1.9035) leasing or subleasing arrangement with a spectrum lessee in only the bands identified in § 2.106(d)(33)(i) of this chapter for the purpose of meeting the part 25 SCS Entry Criteria.

(1) The licensee seeking to engage in spectrum leasing under this section may do so under the following parameters:

(i) A single licensee that holds all co-channel licenses on the relevant band in a GIA may enter into a leasing arrangement with one or more satellite operators.

(ii) If there are multiple co-channel licensees that collectively hold all co-channel licenses in a particular band throughout one of six GIAs, the licensees may enter into spectrum leasing arrangements only under one of the following conditions:

(A) One licensee holding a license in the GIA must enter into an individual spectrum leasing arrangement with each of the other co-channel licensees in that GIA. The licensee may then enter into a leasing arrangement with one satellite operator; or

(B) One satellite operator may enter into individual leasing arrangements with each of the relevant co-channel licensees that together hold all co-channel licenses on the relevant band in the GIA.

(2) [Reserved]

(e) *FirstNet.* In order for the First Responder Network Authority (FirstNet), as defined in 47 U.S.C. 1424, to fulfill the part 25 SCS Entry Criteria, FirstNet must file an FCC Form 601 in the Universal Licensing System (ULS) that:

(1) Describes the manner in which FirstNet has conveyed to its satellite partner an authorization to utilize the 758-769/788-799 MHz band or portions of the band;

(2) Identifies and describes the geographic area(s) and nature of the proposed SCS operations; and

(3) Demonstrates how, under the agreement, the rights and responsibilities of the satellite operator partner are substantively the same as those of a lessee under this part.

(f) *Subleasing.* Notwithstanding the provisions of §§ 1.9020(l) and 1.9030(k), an SCS spectrum lessee may sublease spectrum usage rights subject to the following condition.

(1) Satellite operators may not enter into a spectrum subleasing arrangement where there are multiple terrestrial licensees jointly leasing their co-channel rights in a given GIA pursuant to paragraph (d)(1)(ii) of this section.

(2) [Reserved]

(g) *Construction/performance requirements.* Notwithstanding the provisions of §§ 1.9020(d)(5)(i) and 1.9030(d)(5)(i), a licensee may not attribute to itself the build-out or performance activities of its SCS spectrum lessee(s) for purposes of complying with any applicable performance or build-out requirement.

3. Delayed indefinitely, further amend § 1.9047 by adding paragraph (d)(2) to read as follows:

§ 1.9047 Special provisions relating to spectrum leasing arrangements involving terrestrial spectrum rights for supplemental coverage from space.

* * * * *

(d) * * *

(2) The spectrum lessee or sublessee seeking to engage in spectrum leasing under this section must provide within the FCC Form 608:

(i) A certification that the parties are entering into the leasing arrangement for the purpose of fulfilling the part 25 Entry Criteria;

(ii) A description of which method, single or multiple terrestrial licensee, the parties are utilizing to meet the part 25 Entry Criteria; and

(iii) If the parties are utilizing the spectrum leasing arrangement outlined in paragraph (d)(1)(ii) of this section, the parties must:

(A) Describe the nature of the leasing arrangement(s); and

(B) Demonstrate how the entirety of the GIA is covered by the lease arrangement(s).

* * * * *

PART 2 – FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

4. The authority citation for part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

5. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 2.106 by:

a. Revising pages 30, 36, 37, and 38 in paragraph (a); and

b. Adding paragraph (d)(33)(i) and reserved paragraph (d)(33)(ii).

The revisions and additions read as follows:

§ 2.106 Table of Frequency Allocations.

(a) * * *

5.149 5.291A 5.294 5.296 5.300 5.304 5.306 5.312	614-698 BROADCASTING Fixed Mobile 5.293 5.308 5.308A 5.309		614-890	614-698 FIXED MOBILE Mobile-satellite NG33A NG5 NG14 NG33 NG115 NG149	RF Devices (15) Satellite Communications (25) Wireless Communications (27) LPTV, TV Translator/Booster (74G Low Power Auxiliary (74H)
694-790 MOBILE except aeronautical mobile 5.312A 5.317A BROADCASTING	698-806 MOBILE 5.317A BROADCASTING Fixed			698-758 FIXED MOBILE BROADCASTING Mobile-satellite NG33A NG159	Satellite Communications (25) Wireless Communications (27) LPTV and TV Translator (74G)
				758-775 FIXED MOBILE Mobile-satellite NG33A NG34 NG159	Satellite Communications (25) Public Safety Land Mobile (90R)
				775-788 FIXED MOBILE BROADCASTING Mobile-satellite NG33A NG159	Satellite Communications (25) Wireless Communications (27) LPTV and TV Translator (74G)
5.300 5.311A 5.312				788-805 FIXED MOBILE Mobile-satellite NG33A NG34 NG159	Satellite Communications (25) Public Safety Land Mobile (90R)
790-862 FIXED MOBILE except aeronautical mobile 5.316B 5.317A BROADCASTING				805-806 FIXED MOBILE BROADCASTING Mobile-satellite NG33A NG159	Satellite Communications (25) Wireless Communications (27) LPTV and TV Translator (74G)
	5.293 5.309				
	806-890 FIXED MOBILE 5.317A BROADCASTING			806-809 LAND MOBILE	Public Safety Land Mobile (90S)
				809-849 FIXED LAND MOBILE Mobile-satellite NG33A	Public Mobile (22) Satellite Communications (25) Private Land Mobile (90)
				849-851 AERONAUTICAL MOBILE	Public Mobile (22)
				851-854 LAND MOBILE	Public Safety Land Mobile (90S)
5.312 5.319				854-894 FIXED LAND MOBILE Mobile-satellite NG33A	Public Mobile (22) Satellite Communications (25) Private Land Mobile (90)
862-890 FIXED MOBILE except aeronautical mobile 5.317A BROADCASTING 5.322					
5.319 5.323	5.317 5.318	5.149 5.305 5.306 5.307 5.320		US116 US268	

1700-1710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341		1700-1710 FIXED METEOROLOGICAL-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile 5.289 5.341 5.384	5.341	5.341 US88	
1710-1930 FIXED MOBILE 5.384A 5.388A 5.388B 5.149 5.341 5.385 5.386 5.387 5.388			1710-1761 5.341 US91 US378 US385 1761-1780 SPACE OPERATION (Earth-to-space) G42 US91	1710-1780 FIXED MOBILE 5.341 US91 US378 US385	
			1780-1850 FIXED MOBILE SPACE OPERATION (Earth-to-space) G42	1780-1850	
1930-1970 FIXED MOBILE 5.388A 5.388B 5.388	1930-1970 FIXED MOBILE 5.388A 5.388B Mobile-satellite (Earth-to-space) 5.388	1930-1970 FIXED MOBILE 5.388A 5.388B 5.388	1850-2025	1850-2000 FIXED MOBILE Mobile-satellite NG33A	RF Devices (15) Personal Communications (24) Satellite Communications (25 Wireless Communications (27) Fixed Microwave (101)
1970-1980 FIXED MOBILE 5.388A 5.388B 5.388					
1980-2010 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A 5.389B 5.389F				2000-2020 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space)	Satellite Communications (25) Wireless Communications (27)
2010-2025 FIXED MOBILE 5.388A 5.388B 5.388	2010-2025 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.388 5.389C 5.389E	2010-2025 FIXED MOBILE 5.388A 5.388B 5.388		2020-2025 FIXED MOBILE	
2025-2110 SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space) 5.392			2025-2110 SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 5.392 US90 US92 US222 US346 US347	2025-2110 FIXED NG118 MOBILE 5.391 5.392 US90 US92 US222 US346 US347	TV Auxiliary Broadcasting (74F) Cable TV Relay (78) Local TV Transmission (101J)

International Table			United States Table		FCC Rule Part(s)
Region 1 Table	Region 2 Table	Region 3 Table	Federal Table	Non-Federal Table	
2110-2120 FIXED MOBILE 5.388A 5.388B SPACE RESEARCH (deep space) (Earth-to-space) 5.388			2110-2120 US252	2110-2120 FIXED MOBILE US252	Public Mobile (22) Wireless Communications (27) Fixed Microwave (101)
2120-2170 FIXED MOBILE 5.388A 5.388B 5.388	2120-2160 FIXED MOBILE 5.388A 5.388B Mobile-satellite (space-to-Earth) 5.388 2160-2170 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.388 5.389C 5.389E	2120-2170 FIXED MOBILE 5.388A 5.388B 5.388	2120-2200	2120-2180 FIXED MOBILE NG41	
2170-2200 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A 5.389F				2180-2200 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth)	Satellite Communications (25) Wireless Communications (27)
2200-2290 SPACE OPERATION (space-to-Earth) (space-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392			2200-2290 SPACE OPERATION (space-to-Earth) (space-to-space) US96 EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) FIXED (line-of-sight only) MOBILE (line-of-sight only including aeronautical telemetry, but excluding flight testing of manned aircraft) 5.391 SPACE RESEARCH (space-to-Earth) (space-to-space) 5.392 US303	2200-2290 US96 US303	
2290-2300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)			2290-2300 FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth)	2290-2300 SPACE RESEARCH (deep space) (space-to-Earth)	
2300-2450 FIXED MOBILE 5.384A Amateur Radiolocation	2300-2450 FIXED MOBILE 5.384A RADIOLOCATION Amateur		2300-2305 G122	2300-2305 Amateur	Amateur Radio (97)
			2305-2310 US97 G122	2305-2310 FIXED MOBILE except aeronautical mobile RADIOLOCATION Amateur US97	Wireless Communications (27) Amateur Radio (97)

		2310-2320 Fixed Mobile US100 Radiolocation G2 US97 US327	2310-2320 FIXED MOBILE BROADCASTING-SATELLITE RADIOLOCATION US97 US100 US327	Wireless Communications (27)
		2320-2345 Fixed Radiolocation G2 US327	2320-2345 BROADCASTING-SATELLITE US327	Satellite Communications (25)
		2345-2360 Fixed Mobile US100 Radiolocation G2 US327	2345-2360 FIXED MOBILE US100 BROADCASTING-SATELLITE RADIOLOCATION US327	Wireless Communications (27)
		2360-2390 MOBILE US276 RADIOLOCATION G2 G120 Fixed US101	2360-2390 MOBILE US276 US101	Aviation (87) Personal Radio (95)
		2390-2395 MOBILE US276 US101	2390-2395 AMATEUR MOBILE US276 US101	Aviation (87) Personal Radio (95) Amateur Radio (97)
		2395-2400 US101 G122	2395-2400 AMATEUR US101	Personal Radio (95) Amateur Radio (97)
		2400-2417 5.150 G122	2400-2417 AMATEUR 5.150 5.282	RF Devices (15) ISM Equipment (18) Amateur Radio (97)
5.150 5.282 5.395	5.150 5.282 5.393 5.394	2417-2450 Radiolocation G2 5.150	2417-2450 Amateur 5.150 5.282	
2450-2483.5 FIXED MOBILE Radiolocation 5.150	2450-2483.5 FIXED MOBILE RADIOLOCATION 5.150	2450-2483.5 5.150 US41	2450-2483.5 FIXED MOBILE Radiolocation 5.150 US41	RF Devices (15) ISM Equipment (18) TV Auxiliary Broadcasting (74F) Private Land Mobile (90) Fixed Microwave (101)

* * * * *

(d) * * *

(33) * * *

(i) NG33A The secondary MSS operations in the bands 614-652 MHz and 663-769 MHz, 775-799 MHz, and 805-806 MHz, 824-849 MHz and 869-894 MHz, and 1850-1920 MHz and 1930-2000 MHz are limited to supplemental coverage from space (SCS) and are subject to the Commission's SCS rules in part 25 of this chapter.

(ii) [Reserved]

* * * * *

PART 9 – 911 REQUIREMENTS

6. The authority citation for part 9 continues to read as follows:

Authority: 47 U.S.C. 151–154, 152(a), 155(c), 157, 160, 201, 202, 208, 210, 214, 218, 219, 222, 225, 251(e), 255, 301, 302, 303, 307, 308, 309, 310, 316, 319, 332, 403, 405, 605, 610, 615, 615 note, 615a, 615b, 615c, 615a–1, 616, 620, 621, 623, 623 note, 721, and 1471, and Section 902 of Title IX, Division FF, Pub. L. 116–260, 134 Stat. 1182, unless otherwise noted.

7. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 9.10 by revising paragraph (a) introductory text and adding paragraph (t) to read as follows:

§ 9.10 911 Service.

(a) *Scope of section*. Except as described in paragraph (r) of this section, the following requirements of paragraphs (a) through (t) of this section are only applicable to CMRS providers, excluding mobile satellite service (MSS) operators, to the extent that they:

* * * * *

(t) *Interim 911 requirements for supplemental coverage from space*—(1) *Supplemental coverage from space.* For purposes of this paragraph (t), *supplemental coverage from space (SCS)* has the same meaning as in part 25, subpart A, of this chapter; *SCS 911 calls* are 911 calls (as defined in

§ 9.3) that are carried over satellite facilities pursuant to a CMRS provider's SCS arrangement; and an *SCS 911 text message* is a 911 text message (as defined in paragraph (q)(9) of this section) that is carried over satellite facilities pursuant to a CMRS provider's SCS arrangement.

(2) *Call Transmission requirements*. For purposes of delivering SCS 911 voice calls and SCS 911 text messages, CMRS providers must either:

(i) Use information regarding the location of a device, including but not limited to device-based location information, to route SCS 911 voice calls and SCS 911 text messages to an appropriate PSAP and transmit the phone number of the device used to send the SCS 911 voice call or SCS 911 text message and available location information to an appropriate PSAP; or

(ii) Use an emergency call center, at which emergency call center personnel must determine the emergency caller's phone number and location and then transfer or otherwise direct the 911 caller to an appropriate PSAP.

8. Delayed indefinitely, further amend § 9.10 by adding paragraphs (t)(3) through (5) to read as follows:

§ 9.10 911 Service.

* * * * *

(t) * * *

(3) *Reporting*. Each CMRS provider that utilizes SCS arrangements to expand its coverage areas for providing service to its end-user subscribers must maintain records of all SCS 911 voice calls and SCS 911 text messages received on its network and received at its emergency call center. By October 15 of each year, each CMRS provider that utilizes SCS arrangements to expand its coverage areas for providing service to its end-user subscribers must submit a report to the Commission regarding SCS 911 voice calls and 911 text messages, and its emergency call center data, current as of September 30 of that year. CMRS providers that utilize SCS arrangements to expand their coverage areas for

providing service to their end-user subscribers must submit this certification in the Commission's Electronic Comment Filing System. These reports must include, at a minimum, the following:

(i) The name and address of the CMRS provider, the address of that CMRS provider's emergency call center, and the contact information of the emergency call center;

(ii) The aggregate number of SCS 911 voice calls and SCS 911 text messages received by the network of the CMRS provider that provides SCS service to its end-user subscribers during each month during the relevant reporting period;

(iii) The aggregate number of SCS 911 voice calls and SCS 911 text messages received by the emergency call center each month during the relevant reporting period;

(iv) The aggregate number of SCS 911 voice calls and SCS 911 text messages received by the emergency call center each month during the relevant reporting period that required forwarding to a PSAP and how many did not require forwarding to a PSAP;

(v) The aggregate number of SCS 911 voice calls that were routed using location information that met the timeliness and accuracy thresholds defined in paragraphs (s)(3)(i)(A) and (B) of this section;

(vi) The aggregate number of SCS 911 voice calls and SCS 911 text messages that were routed using location information that did not meet the timeliness and accuracy thresholds defined in paragraphs (s)(3)(i)(A) and (B) of this section; and

(vii) An explanation of how the SCS deployment, including network architecture, systems, and procedures, will support routing SCS 911 voice calls and SCS 911 text messages to the geographically appropriate PSAP with sufficient location information in compliance with paragraph (t)(2) of this section.

(4) *Certification*. CMRS providers that utilize SCS arrangements to expand their coverage areas for providing service to their end-user subscribers must certify on a one-time basis that neither they nor any third party they rely on to obtain location information or

associated data used for compliance with paragraph (t)(2)(i) or (ii) of this section will use such location information or associated data for any non-911 purpose, except with prior express consent or as otherwise permitted or required by law. The certification must state that the CMRS provider and any third parties it relies on to obtain location information or associated data used for compliance with paragraph (t)(2)(i) or (ii) have implemented measures sufficient to safeguard the privacy and security of such location information or associated data. CMRS providers that utilize SCS arrangements to expand their coverage areas for providing service to their end-user subscribers must submit this one-time certification in the Commission's Electronic Comment Filing System on the due date of the first report made under paragraph (t)(3) of this section.

(5) *Subscriber notification.* Each CMRS provider that utilizes SCS arrangements to expand its coverage areas for providing service to its end-user subscribers shall specifically advise every subscriber, both new and existing, in writing prominently and in plain language, of the circumstances under which 911 service for all SCS 911 calls, or SCS 911 text messages may not be available via SCS or may be in some way limited by comparison to traditional enhanced 911 service.

PART 25 - SATELLITE COMMUNICATIONS

9. The authority citation for part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 310, 319, 332, 605, and 721, unless otherwise noted.

10. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.103 by adding definitions for "Geographically independent area (GIA)", "SCS earth stations", and "Supplemental coverage from space (SCS)"

in alphabetical order to read as follows:

§ 25.103 Definitions.

* * * * *

Geographically independent area (GIA). Any of the following six areas:

(1) CONUS;

(2) Alaska;

(3) Hawaii;

(4) American Samoa;

(5) Puerto Rico/U.S. Virgin Islands; and

(6) Guam/Northern Mariana Islands.

* * * * *

SCS earth stations. Any earth station used for the provision of supplemental coverage from space consistent with § 25.115(q).

* * * * *

Supplemental coverage from space (SCS). The provision of coverage to terrestrial wireless subscribers through an arrangement or agreement (see § 1.9047 of this chapter) between one or more NGSO or GSO operator(s) and one or more terrestrial wireless licensee(s), involving transmissions between space stations and SCS earth stations. NGSO and GSO operators and terrestrial wireless service licensees seeking to provide SCS must be authorized in compliance with § 25.125.

* * * * *

11. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.109 by adding paragraph (f) to read as follows:

§ 25.109 Cross-reference.

* * * * *

(f) Space and SCS earth stations providing SCS are subject to technical rules in parts 2, 22, 24, and 27 of this chapter where applicable.

12. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.114 by adding paragraph (a)(4) to read as follows:

§ 25.114 Applications for space station authorizations.

(a) * * *

(4) For an application filed pursuant to the SCS procedure in § 25.125, the filing must be submitted on FCC Form 312, Main Form and Schedule S, with attached exhibits as required by paragraph (d) of this section, and must constitute a comprehensive proposal.

* * * * *

13. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.115 by adding paragraph (q) to read as follows:

§ 25.115 Applications for earth station authorizations.

* * * * *

(q) *SCS earth stations.* An applicant seeking to use SCS earth stations to provide SCS must comply with § 25.125.

(1) A satellite operator licensed under § 25.125 to provide SCS is permitted to communicate with all terrestrial wireless licensee(s)-associated SCS earth stations that have been approved for such use under part 2 of this chapter.

(i) Such earth stations must show compliance with this part and at least one of either part 22, 24, or 27 of this chapter to provide SCS within the technical parameters and provisions associated with the device certification.

(ii) The device certification must show compliance with the licensed parameters of the terrestrial wireless license(s) and at least one of either part 22, 24, or 27 of this chapter, as applicable.

(2) An earth station may be used for the provision of SCS when:

(i) The satellite operator licensed under § 25.125 is a party to a valid and approved spectrum leasing arrangement or agreement pursuant to § 1.9047 of this chapter with at least one terrestrial wireless licensee(s) licensed under one of either part 22, 24, or 27 of this chapter; and

(ii) That terrestrial wireless licensee(s) has met and operates within all conditions associated with the relevant terrestrial wireless license(s).

(3) A satellite operator authorized to provide SCS under § 25.125 is authorized under paragraph (q)(1) of this section to communicate with SCS earth stations for any period during which each of the following apply:

(i) The service is provided during the valid duration of any spectrum leasing arrangement or agreement pursuant to § 1.9047 of this chapter between the terrestrial wireless licensee(s) and satellite operator;

(ii) The devices to which service is provided are certified under part 2 of this chapter; and

(iii) The terrestrial wireless licensee(s) is a valid licensee(s) under part 22, 24, or 27 of this chapter.

(4) A satellite operator with SCS authorization via a market access grant can avail itself of the provisions of this paragraph (q) but, in addition to the parameters established in paragraphs (q)(1) and (2) of this section, must also comply with any additional parameters included in the satellite operator's space station market access grant.

(5) A satellite operator operating in conformance with the parameters established in this part does not need a separate earth station authorization for the provision of SCS under this part.

14. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE**

FEDERAL REGISTER], amend § 25.117 by adding paragraph (j) to read as follows:

§ 25.117 Modification of station license.

* * * * *

(j) An application for modification of a space station authorization to provide SCS must comply with § 25.125.

15. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, add § 25.125 to read as follows:

§ 25.125 Applications for supplemental coverage from space (SCS).

(a) *SCS entry criteria.* This section applies only to applicants seeking to provide SCS. An applicant for SCS space station authorization must hold either an existing NGSO or GSO license or grant of U.S. market access under this part, or must be seeking a NGSO or GSO license or grant of U.S. market access under this part, and must have a lease arrangement(s) or agreement pursuant to § 1.9047 of this chapter with one or more terrestrial wireless licensee(s) that hold, collectively or individually, all co-channel licenses throughout a GIA in a band identified in § 2.106(d)(33)(i) of this chapter. Applicants for SCS space stations must comply with the requirements set forth in paragraph (b) of this section.

(b) *SCS space station application requirements.* An applicant seeking a space station authorization to provide SCS must either submit an application requesting modification of a current NGSO or GSO license or grant of U.S. market access under this part, or an application seeking a new NGSO or GSO license or grant of U.S. market access under this part.

(1) - (2) [Reserved]

(3) Applications to modify an authorization under this part to provide SCS and applications seeking to provide SCS in the bands identified in § 2.106(d)(33)(i) of this chapter will not be subject to the processing round procedures or first-come, first-served procedures in §§ 25.137, 25.157, and 25.158.

(c) [Reserved]

(d) *Effective date and continued operation of SCS authorization.* SCS authorization will be deemed effective in the Commission's records and for purposes of the application of the rules set forth in this section after each of the following requirements is satisfied:

(1) Grant of:

(i) A modification application under this part or request for modification of a grant of market access; or

(ii) An application to launch and operate or market access;

(2) Approval of a leasing arrangement(s) or agreement(s) under part 1 of this chapter (*see* § 1.9047 of this chapter); and

(3) Grant of a valid SCS earth station equipment certification under part 2 of this chapter.

(e) *SCS earth station equipment certification requirements*. Applicants for certification for SCS earth stations for use with a satellite system must meet all requirements for equipment certification and equipment test data necessary to demonstrate compliance with pertinent standards under part 22, 24, or 27 of this chapter as applicable.

16. Delayed indefinitely, further amend § 25.125 by adding paragraphs (b)(1) and (2) and (c) to read as follows:

§ 25.125 Applications for supplemental coverage from space (SCS).

* * * * *

(b) * * *

(1) The application must include a certification that:

(i) A lease notification(s) or application(s), pursuant to § 1.9047 of this chapter, where a single terrestrial wireless licensee holds or multiple co-channel licensees collectively hold all co-channel licenses within the relevant GIA in the bands identified in § 2.106(d)(33)(i) of this chapter, or as it pertains to FirstNet, an agreement, is on file with the Commission;

(ii) The current space station licensee under this part or grantee of market access for NGSO or GSO satellite operation under this part seeks modification of authority to provide SCS in the same geographic areas covered in the relevant GIA, or the applicant for a space station license under this part or grant of market access for NGSO or GSO satellite operation under this part seeks to provide SCS in the same geographic areas covered in the relevant GIA; and

(iii) SCS earth stations will qualify as "licensed by rule" earth stations under § 25.115(q).

(2) The application must include a comprehensive proposal for the prospective SCS system on FCC Form 312, Main Form and Schedule S, as described in § 25.114, together with the certification described in paragraph (b)(1) of this section and include a list of the file and identification numbers associated with the relevant leasing notification(s) under part 1 of this chapter, application(s), and FCC Form 601(s), with a brief description of the coverage areas that will be served, domestically and internationally.

* * * * *

(c) *Equipment authorization for SCS earth stations.* Each SCS earth station used to provide SCS under this section must meet the equipment authorization requirements under paragraph (e) of this section and all equipment authorization requirements for all intended uses of the device pursuant to the procedures specified in part 2 of this chapter and the requirements of at least one of part 22, 24, or 27 of this chapter.

* * * * *

17. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.137 by revising paragraphs (b) and (f) to read as follows:

§ 25.137 Requests for U.S. market access through non-U.S.-licensed space stations.

* * * * *

(b) Any request pursuant to paragraph (a) of this section must be filed electronically through the International Communications Filing System and must include an exhibit providing legal and

technical information for the non-U.S.-licensed space station of the kind that § 25.114, § 25.122, § 25.123, or § 25.125 would require in a license application for that space station, including but not limited to information required to complete Schedule S. An applicant may satisfy the requirement in this paragraph (b) by cross-referencing a pending application containing the requisite information or by citing a prior grant of authority to communicate via the space station in question in the same frequency bands to provide the same type of service.

* * * * *

(f) A non-U.S.-licensed space station operator that has been granted access to the United States market pursuant to a declaratory ruling may modify its U.S. operations under the procedures set forth in §§ 25.117(d), (h), and (j) and 25.118(e).

* * * * *

18. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.161 by adding paragraph (e) to read as follows:

§ 25.161 Automatic termination of station authorization.

* * * * *

(e) The failure to provide any SCS on all or some of the SCS authorized frequencies for more than 90 days. In this instance, the authorization will be terminated in whole or in part with respect to the relevant frequencies on which SCS has not been operational for more than 90 days in the United States, unless specific authority is requested.

19. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.202 by adding paragraph (k) read as follows:

§ 25.202 Frequencies, frequency tolerance, and emission limits.

* * * * *

(k) Space station downlinks operating as SCS under the provisions of § 25.125 and § 2.106(d)(33)(i) of this chapter are subject to the following rules.

(1) *Out of band emission limits.* Notwithstanding the emission limitations of paragraph (f) of this section, the aggregation of all space station downlink emissions outside a licensee's

SCS frequency band(s) of operation shall not exceed a power flux density of -120 dBW/m^2/MHz at 1.5 meters above ground level.

(2) *Interference caused by out of band emissions.* If any emission from a transmitter operating in the SCS service results in harmful interference to users of another radio service, the FCC may require a greater attenuation of the emission than specified in this section.

20. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.204 by revising the section heading and adding paragraph (g) to read as follows:

§ 25.204 Power and out-of-band emission limits for earth stations.

* * * * *

(g) SCS earth stations providing SCS pursuant to §§ 25.125 and 25.115 shall comply with the power requirements and out-of-band emission limits corresponding to devices operating in part 22, 24, or 27 of this chapter (e.g., § 22.913, § 24.232, or § 27.50), as required for their operating frequencies.

21. Effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, amend § 25.208 by revising the section heading and adding paragraph (w) to read as follows:

§ 25.208 Power flux-density and in-band field strength limits.

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(w) The aggregate field strength at the earth's surface produced by all visible beams and satellites within each satellite constellation providing SCS service as they move over any given point or area in bands authorized by NG33A in the United States Table of Frequency Allocations and § 25.125 must meet:

(1) 40 dBμV/m for the 600 MHz, 700 MHz, and 800 MHz bands; and

(2) 47 dBμV/m for the AWS and PCS bands; and

(3) Licensees must comply with all applicable provisions and requirements of treaties and other international agreements between the United States Government and the governments of other countries, including Canada and Mexico. Absent specific international agreements regarding SCS, licensees must comply with the limited provided in paragraphs (w)(1) and (2) of this section.

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