

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

In the Matter of )
)
Amendment of Part 90 of the Commission’s Rules ) WP Docket No. 07-100
)

SIXTH REPORT AND ORDER AND
SEVENTH FURTHER NOTICE OF PROPOSED RULEMAKING

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By the Commission: Chairman Pai and Commissioners O’Rielly and Carr issuing separate statements;
Commissioners Rosenworcel and Starks dissenting and issuing separate statements.

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**I. INTRODUCTION**

1. Nearly two decades ago, the Commission designated 50 megahertz of spectrum at 4.9 GHz (4940-4990 MHz) for use in support of public safety.<sup>1</sup> Over the past 18 years, the Commission, working with public safety entities and associations, has endeavored to increase investment in, and maximize use of, the band.<sup>2</sup> These efforts notwithstanding, the 4.9 GHz band remains underused outside of major metropolitan areas, with stakeholders citing high equipment costs and limited availability of broadband equipment, among several barriers to its use.<sup>3</sup> Today, we begin to break down these barriers and expand access to the band by providing states the opportunity to lease 4.9 GHz band spectrum to commercial entities, critical infrastructure industry, including electric utilities, and other stakeholders.

2. Under our new framework, statewide incumbent licensees will be empowered with the authority to make decisions on how best to maximize the value and use of their spectrum based on market forces. States can continue to use the spectrum for their own public safety network operations; they can enter into one or more commercial arrangements for commercial deployment of public-safety communications services; they can lease the spectrum to a commercial service provider for deployment of mobile or fixed wireless Internet service, private land mobile radio service or critical infrastructure connectivity; or they can pursue a combination of any of these scenarios (or any other arrangement that is allowed for pursuant to the service rules for the band and our *Secondary Markets* rules). The rule changes we adopt here will reverse the effects of the 4.9 GHz band's antiquated licensing framework that have led to its underuse.

3. Prior to today, access to the 4.9 GHz band was restricted to certain entities and use of the spectrum was limited to public safety purposes. Licensees also operate pursuant to a complicated sharing framework; there is no exclusive use of the band. This Sixth Report and Order allows states<sup>4</sup> to enter into lease agreements voluntarily with other users (whether public safety or non-public safety) for access to the 4.9 GHz band in their territory. We place no restriction on the type of entity to which a state can lease or the type of services that the lessee can provide. This approach, especially when combined with the potential changes to licensing and coordination contemplated in the accompanying Seventh Further Notice, seeks to empower states to determine the best use of the 4.9 GHz band for their citizens, by enabling them to balance the needs of public safety and the benefits that can come from non-public safety use. We anticipate that this framework will facilitate more robust investment in this band across the entire country and drive down equipment costs, to the benefit of public safety and non-public safety entities seeking to deploy.

4. In the accompanying Seventh Further Notice, we propose a new state-based licensing regime for public safety operations in the 4.9 GHz band. We seek comment on a centralized structure of state oversight and coordination of public safety operations in the band, to work alongside the leasing regime we adopt today. We also seek comment on ways to maximize opportunities for leasing and otherwise encourage more robust use of this band.

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<sup>1</sup> See *4.9 GHz Band Transferred from Federal Government Use*, WT Docket No. 00-32, Second Report and Order and Further Notice of Proposed Rulemaking, 17 FCC Rcd 3955 (2002) (*Second Report and Order*).

<sup>2</sup> The Commission has also received extensive input from public safety organizations such as the Association of Public-Safety Communications Officials International (APCO) and the National Public Safety Telecommunications Council (NPSTC). See, e.g., APCO International 4.9 GHz Task Force Report, WP Docket No. 07-100 (Sept. 28, 2015); NPSTC 4.9 GHz Plan Recommendations Final Report, WP Docket No. 07-100 (Oct. 24, 2013).

<sup>3</sup> *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100, Sixth Further Notice of Proposed Rulemaking, 33 FCC Rcd 3261, 3262, para. 2 (2018) (*Sixth Further Notice*).

<sup>4</sup> For purposes of this Sixth Report and Order and Seventh Further Notice of Proposed Rulemaking, "state" has the meaning assigned to it in 47 CFR § 90.7, and includes all 50 of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, the U.S. Virgin Islands, American Samoa, and Guam.

## II. BACKGROUND

5. Under our rules, to be eligible for a 4.9 GHz license, an entity must provide public safety services as defined under our part 90 rules.<sup>5</sup> This includes state and local government entities,<sup>6</sup> as well as nongovernmental organizations (NGOs) that operate their systems solely to transmit communications essential to the provision of services having the sole or principal purpose of protecting the safety of life, health or property.<sup>7</sup> Licensees are also permitted to enter into sharing agreements with ineligible entities for use of this spectrum, but operations must be in support of public safety.<sup>8</sup> 4.9 GHz licenses authorize operation on any channel over the entire 50 megahertz of the band and are issued for the geographic area encompassing the legal jurisdiction of the licensee.<sup>9</sup> A key component of the 4.9 GHz band is that licenses are granted for shared use only and provide no exclusive rights.<sup>10</sup> As a result, licenses often overlap: there may be one or more geographic area license covering a given location and licensed on the same spectrum, as well as fixed-site licenses. For example, a common scenario might involve a statewide license held by the state police, a county-wide license held by the sheriff's department, and fixed-site licenses operating in the same area by various public safety entities. Our 4.9 GHz rules do not specify a formal coordination requirement.<sup>11</sup> Rather, licensees informally cooperate with one another to ensure that their operations do not cause interference with one another, and to resolve interference if it occurs. Public safety entities can also be licensed for fixed point-to-point and point-to-multipoint operations within their jurisdictions.<sup>12</sup>

6. Nearly all licenses in this band contain a condition, consistent with our rules,<sup>13</sup> specifying that operation is permitted only within the jurisdiction of the licensee, or that of the entity supporting the application of an NGO, regardless of the area specified on the license (which, due to legacy Universal Licensing System limitations, in some cases is depicted as larger than the relevant jurisdiction). A licensee has the authority to operate base stations and mobile units (including portables and handheld units) and/or temporary (one year or less) fixed stations anywhere within its authorized area.<sup>14</sup>

7. Licensees are also permitted to operate base stations with mobile units and temporary fixed stations outside their authorized area with the permission of the other jurisdiction in which they will operate.<sup>15</sup> Permanent fixed point-to-point and point-to-multipoint stations must be licensed individually on a site-by-site basis.<sup>16</sup> Permanent fixed stations that connect base and mobile stations that are used to

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<sup>5</sup> 47 CFR § 90.1203 (referring to 47 CFR § 90.523).

<sup>6</sup> *Id.* § 90.523(a).

<sup>7</sup> *Id.* § 90.523(b). In addition, to establish eligibility, an NGO must also secure and maintain the support for the right to operate its system from a state or local governmental entity whose mission is to oversee or provide services that have the sole or principal purpose of protecting the safety of life, health or property, and the NGO must provide a written certification of such support in any submitted application. *Id.*

<sup>8</sup> *Id.* § 90.1203(b).

<sup>9</sup> *Id.* § 90.1207(a). In the case of a nongovernmental organization, the license is issued for the legal jurisdiction of the state or local government entity supporting the nongovernmental organization. *Id.* Some licenses are issued for only part of a licensee's jurisdiction, for example, an area defined by a point and a specified radius of operation.

<sup>10</sup> *Id.* §§ 90.1207, 90.1209(a).

<sup>11</sup> *Id.* § 90.1209(b).

<sup>12</sup> Some point-to-point or point-to-multipoint systems receive primary status because of the nature of the traffic carried. *Id.* § 90.1207(d).

<sup>13</sup> 47 CFR § 90.1207.

<sup>14</sup> *Id.* § 90.1207(b).

<sup>15</sup> *Id.* § 90.1207(c).

<sup>16</sup> *Id.* § 90.1207(d).

deliver broadband, or that are part of a public safety network using spectrum designated for broadband use, are accorded “primary” status under the rules.<sup>17</sup>

8. There are 3,578 licenses currently issued in the band.<sup>18</sup> This includes 142 statewide area licenses, 1,160 countywide area licenses, and 2,276 other licenses, either for geographic area licenses or other types (such as for a group of counties, a city, or parts of one or more cities) or for fixed sites.<sup>19</sup> Most of the United States and U.S. territories are covered by at least one statewide license.<sup>20</sup> In some states, multiple state entities hold statewide licenses.<sup>21</sup> Operations, particularly fixed communications and connectivity, are used to facilitate video streaming, communications system backhaul, and data connections for advanced devices.<sup>22</sup> Emerging uses of the band include robotics and airborne operations, as well as Internet of Things uses.<sup>23</sup>

9. In March 2018, the Commission released the *Sixth Further Notice*, in which it sought comment on ways to stimulate expanded use of, and investment in, the 4.9 GHz band.<sup>24</sup> The Commission noted that “[a]lthough nearly 90,000 public safety entities are eligible under our rules to obtain licenses in the band, there were only 2,442 licenses in use in 2012 and only 3,174 licenses in use nearly six years later in 2018.”<sup>25</sup> With no more than 3.5% of potential licensees using the band, the Commission remained concerned that, as originally stated in 2012, the band has “fallen short of its potential.”<sup>26</sup> Over two years later, the 4.9 GHz band continues to be underused. There are currently only 3,578 licenses issued, and in many instances the same licensee holds multiple licenses in its jurisdiction based on the 4.9 GHz licensing structure requiring geographic area licensees to obtain individual licenses for permanent fixed sites. Accordingly, there are currently only 2,094 individual licensees,<sup>27</sup> whereas the number of eligible public safety entities as of the 2017 census is 90,075.<sup>28</sup> Various commenters agree that the 4.9 GHz band

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<sup>17</sup> *Id.*

<sup>18</sup> Federal Communications Commission, Universal Licensing System, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp> (last visited September 22, 2020).

<sup>19</sup> For example, the Southwestern NH District Fire Mutual Aid System holds a license, WQNM520, covering three counties in New Hampshire.

<sup>20</sup> The following states/territories are not covered by a statewide license: American Samoa, Georgia, Iowa, Kansas, the Northern Mariana Islands, and South Dakota.

<sup>21</sup> For example, the State of Maryland holds a statewide 4.9 GHz band license (WPYX998), as do four other agencies of the Maryland state government (Maryland State Highway Administration – WQAN291; Maryland Department of Information Technology – WPYZ305; Maryland DNR – WPYT728; Maryland MIEMSS – WQAL856).

<sup>22</sup> *Sixth Further Notice*, 33 FCC Rcd at 3263, para. 4 n.13.

<sup>23</sup> *Id.* at 3266, para 12. Aeronautical mobile operations are currently prohibited pursuant to Commission rule section 90.1205(c), 47 CFR § 90.1205(c), though some operations have been authorized through rule waiver.

<sup>24</sup> *See id.* at 3262, para. 3.

<sup>25</sup> *See id.* at para. 1 (stating that 3,174 licenses made up only 3.5% of potential licensees in the band).

<sup>26</sup> *Id.* (citing *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100, Fourth Report and Order and Fifth Further Notice of Proposed Rulemaking, 27 FCC Rcd 6577, 6584, para 16 (2012) (*Fifth Further Notice*)).

<sup>27</sup> Federal Communications Commission, *Universal Licensing System*, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp> (last visited September 22, 2020).

<sup>28</sup> *See* U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general-purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). *See also* Table 2. CG1700ORG02 Table Notes\_Local Governments by Type and State\_2017.

remains underused.<sup>29</sup> As one commenter noted, the lack of widespread use of the band “stands in stark contrast to other spectrum bands in which usage is increasing exponentially and the Commission is working at breakneck speed to provide access to support existing broadband services and provide opportunities for new services and applications.”<sup>30</sup>

10. In the *Sixth Further Notice*, the Commission sought comment on a number of proposed rule changes and several options to increase use of this spectrum.<sup>31</sup> These included allowing licensees additional flexibility to engage in spectrum leasing, as well as broadening of eligibility requirements for licensees, changes to technical rules governing the band, and proposals from NPSTC and APCO seeking revisions to the band’s coordination requirements and band plan.<sup>32</sup> The Commission received comments from across several industries, which broadly support increased use of the band while also preserving public safety access.<sup>33</sup>

11. On September 8, 2020, the Public Safety and Homeland Security Bureau and the Wireless Telecommunications Bureau (the Bureaus) issued a freeze of the 4.9 GHz band to stabilize the band while we consider changes to the rules as part of this proceeding.<sup>34</sup> Pursuant to the freeze, we will not accept applications for new or modified licenses, either geographic area licenses or individual fixed-site licenses.

### III. SIXTH REPORT AND ORDER

12. In the *Sixth Further Notice*, the Commission anticipated that “the benefits of allowing more efficient spectrum use through leasing can be realized at no cost to public safety.”<sup>35</sup> This Commission has consistently worked to ensure the efficient allocation and use of spectrum, especially critical mid-band spectrum. In this Sixth Report and Order, we revise a legacy framework and put the 4.9 GHz band, which has been underused for nearly 20 years, on a market-driven path.<sup>36</sup> Our approach will

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<sup>29</sup> See e.g., EWA Comments at 3 (“The already lengthy record in this proceeding confirms one essential fact: virtually all parties agree that more robust use of this spectrum is achievable.”); Letter from Brett Kilbourne, Vice President, Policy and General Counsel, Utilities Technology Counsel, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, Attach. at 1 (filed Dec. 21, 2018) (“...this band is currently allocated to public safety exclusively, but is only lightly used by those entities.”); Southern Company Services Comments at 14 (“...the 4.9 GHz band has been relatively lightly used because of a number of issues that the Commission identified years ago, but that have not yet been addressed.”); Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 at 2 (filed March 15, 2018) (“Like the Commission, T-Mobile recognizes that the 4.9 GHz band has been historically underutilized.”).

<sup>30</sup> Federated Wireless Comments at 3-4.

<sup>31</sup> *Sixth Further Notice*, 33 FCC Rcd at 3264-91, paras. 8-86.

<sup>32</sup> *Id.*

<sup>33</sup> The Commission received 29 comments and 13 reply comments in response to the *Sixth Further Notice*. The commenters are listed in Appendix A.

<sup>34</sup> *Public Safety and Homeland Security Bureau and Wireless Telecommunications Bureau Announce Temporary Filing Freeze on the Acceptance and Processing of Certain Part 90 Applications for the 4940-4990 MHz Band*, WP Docket No. 07-100, Public Notice, DA 20-1048 at 1 (2020) (*Freeze Public Notice*). The Freeze Public Notice also noted that any 4.9 GHz licensee could seek relief from the freeze through the Commission’s waiver provisions.

<sup>35</sup> *Sixth Further Notice*, 33 FCC Rcd at 3288, para. 79.

<sup>36</sup> In its proposal seeking rule revisions, APCO does not indicate that the 4.9 GHz band is heavily used nationwide; rather, applications include more localized use through fixed point-to-point and point-to-multipoint operations, and regulatory changes would be needed to ensure increased public safety usage. APCO Comments at 2-11. Other public safety entities fail to demonstrate that the band is heavily used, while questioning the Commission’s methodology for asserting the 4.9 GHz band is underused and commenting that regulatory changes would be needed to increase spectrum use. See, e.g., NPSTC Comments at 5-12 (citing challenges of geographic licensing construct,

(continued....)

allow public safety incumbents to retain access to the band while also providing incentives for more efficient use by empowering states to lease spectrum rights to commercial, critical infrastructure, and other users.<sup>37</sup> The rules we adopt today give public safety licensees the agency to execute leasing arrangements when appropriate and beneficial to their citizens without requiring modification or cessation of current public safety operations in the band. We find that allowing state-based leasing under the framework adopted today serves the public interest.

**A. Public Interest Benefits of Allowing 4.9 GHz Licensees to Lease Spectrum**

13. We find that allowing leased access to the shared 4.9 GHz band for non-public safety operations will increase the efficient use of this spectrum and serve the public interest. We will permit one statewide 4.9 GHz band licensee in each state to lease some or all of its spectrum rights to third parties and, when leased, we eliminate the requirement that 4.9 GHz spectrum must be used to support public safety. This light-touch approach will allow each state the flexibility to negotiate mutually agreeable arrangements with third party lessees where it makes sense to do so, which we anticipate will increase use of and investment in the band. This approach also protects against harmful interference by leveraging the existing informal coordination process in the 4.9 GHz band and ensuring that leasing will be coordinated by a single state entity that is able to work with county and local public safety entities, as well as lessees, to avoid harmful interference.

14. Commenters support varying ways of allowing non-public safety access to the band.<sup>38</sup> Commenters representing CII indicate that this spectrum is well-suited for complex operations, including smart grid applications and other communications networks upon which utilities and other CII entities rely.<sup>39</sup> Providers of fixed wireless broadband service similarly argue that the spectrum holds promise for their operations, including point-to-multipoint connections.<sup>40</sup> Equipment manufacturers<sup>41</sup> and spectrum

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but noting increases in fixed-site licensing); Public Safety Communications Council Comments at 2-3 (4.9 GHz spectrum is used to serve population centers independent of number of license issued; one licensee may obtain a license and serve other entities; certain fixed sites may be operating without authority); Letter from Chief Kenneth W. Stuebing, First Vice President, International Association of Fire Chiefs, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 2 (filed Sept. 21, 2020) (IAFC Sept. 21, 2020 *Ex Parte*); Letter from Justin Duncan, President, Missouri Emergency Medical Services Association, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 (filed Sept. 22, 2020); Letter from Dave Johnston, President, Kansas Emergency Medical Services Association, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 (filed Sept. 22, 2020).

<sup>37</sup> Given that there are currently 2,094 current licensees and 87,981 potential licensees under the legacy framework, we fail to see how the steps we take today to consolidate licensing at the state level “could result in further fragmentation of the band” as AT&T argues without support. Letter from Henry G. Hultquist, Vice President, Federal Regulatory, AT&T, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 (filed Sept. 22, 2020) (AT&T *Ex Parte*).

<sup>38</sup> See WISPA Comments at 1-4 (noting the similarities of the 4.9 GHz band to the 5 GHz bands that are used by wireless Internet service providers and supporting sharing between public safety and commercial users); see also WISPA, *WISPA Hails FCC Leasing Model to Better Utilize 4.9 GHz Band* (Sept. 23, 2020) [http://wispa.org/news\\_manager.php?page=22616](http://wispa.org/news_manager.php?page=22616) (indicating that “[t]his leasing model will streamline use of the vastly underutilized band without compromising the ability of public safety users to access the spectrum.”); Federated Wireless Comments at 1-11 (stressing the urgent need for additional mid-band spectrum and pointing to the potential of the 4.9 GHz band to host broadband and its ability to alleviate congestion on commercial networks while continuing to provide for public safety access in supporting dynamic spectrum sharing in the band); GeoLinks Comments at 1 (supporting “allowing commercial users to share the band on a secondary basis to public safety licensees.”).

<sup>39</sup> See Southern Company Comments at 5-11; Nokia Comments at 3-5.

<sup>40</sup> See California Internet, L.P. DBA GeoLinks Comments at 2; WISPA Comments at 7-8.

<sup>41</sup> Nokia Comments at 2-7.

consultants<sup>42</sup> also support non-public safety use of the band. Some parties contend that spectrum sharing can be achieved using dynamic access systems, similar to those used in the TV white spaces, Citizens Broadband Radio Service, or for unlicensed operations in the 6 GHz band (5950-7150 MHz).<sup>43</sup> Commenters representing 4.9 GHz public safety users urge the Commission to ensure that current and future public safety operations have continued access to this band.<sup>44</sup>

15. In the nearly two decades since, the Commission adopted restrictive leasing rules for public safety eligibles,<sup>45</sup> the utility of this spectrum for flexible use has increased dramatically, and the public safety community still has not made full use of the entire band. In addition, some countries have considered, or are considering, allocating this band for 5G;<sup>46</sup> successful international harmonization efforts could provide further advantages in the availability and price of equipment, thus potentially increasing its utility for flexible use. Given these developments, the public interest would be served by adopting a more flexible approach that permits leasing of the spectrum to non-public safety entities. We conclude, as suggested in the *Sixth Further Notice*, that “the benefits of allowing more efficient spectrum use through leasing can be realized at no cost to public safety.”<sup>47</sup> We agree with commenters that allowing a “secondary market for spectrum in this band. . . [will] augment the Commission’s efforts to intensify use of the band”<sup>48</sup> and “provide for creativity in use cases.”<sup>49</sup>

16. We determine that allowing leasing of shared 4.9 GHz spectrum by a single state government entity per state best serves the public interest by encouraging greater use of the band and allowing each state to determine the correct balance between public safety and non-public safety access, thereby avoiding disruptions to public safety operations. We expect that today’s action ultimately will decrease deployment barriers and encourage *greater* public safety use of the band, alongside non-public safety uses, by driving down the price of equipment and facilitating innovative cost-sharing arrangements between public safety licensees and non-public safety lessees.<sup>50</sup> The potential revenue streams from leasing may also increase the ability of states to invest in equipment for this band.<sup>51</sup> While we seek to maximize leasing opportunities, we find that the unique nature of this band and the realities of a shared spectrum environment necessitate more centralized control of non-public safety spectrum access. We believe that allowing leasing through a single statewide entity in each state provides the flexibility to determine the most appropriate use of its spectrum rights to meet the state’s communications needs, while

<sup>42</sup> See V-COMM Comments at 2-3.

<sup>43</sup> Federated Wireless Comments at 2-3; WISPA Reply Comments at 3-4; Letter from Michael Calabrese, Director, Wireless Future Program, New America’s Open Technology Institute, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 (filed Sept. 23, 2020) (OTI Sept 23, 2020 *Ex Parte*).

<sup>44</sup> See APCO Comments at 1-17; NPSTC Comments at 1.

<sup>45</sup> *Promoting Efficient Use of Spectrum Through the Elimination of Barriers to the development of Secondary Markets*, WT Docket No. 00-230, Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking, 19 FCC Rcd 17503, 17529-31, paras. 53-56 (2004) (*Secondary Markets Order*); 47 CFR § 1.9001 (limiting spectrum leasing to licensees holding exclusive use rights); 47 CFR § 1.9048 (limiting public safety spectrum leasing arrangements to other public safety eligibles or entities providing communications in support of public safety operations).

<sup>46</sup> Analysys Mason *5G Mid-Band Spectrum Global Update*, REF: 2020391-62, March 2020 at Annex A, A.3 and A.6 (noting that China and Hong Kong have licensed 4.9 GHz band spectrum for 5G), <https://api.ctia.org/wp-content/uploads/2020/03/5G-mid-band-spectrum-global-update-march-2020.pdf>.

<sup>47</sup> *Sixth Further Notice*, 33 FCC Rcd at 3288, para 79.

<sup>48</sup> Nokia Comments at 7 (supporting spectrum leasing for CII).

<sup>49</sup> V-COMM Comments at 8 (supporting spectrum leasing outside major metropolitan areas).

<sup>50</sup> *Id.*; Nokia Comments at 7.

<sup>51</sup> *Sixth Further Notice*, 33 FCC Rcd at 3288, para 79.

ensuring that access to this shared band is controlled and responsibly managed. This approach both promotes more efficient spectrum use and encourages greater spectrum access.

17. Some commenters raise concerns about spectrum leasing, including general concerns about Commission action forcing public safety to share the 4.9 GHz band or transferring spectrum and decreasing the availability of public safety spectrum,<sup>52</sup> leasing to non-public-safety entities,<sup>53</sup> and more specific concerns about states leasing at the expense of local public safety interests,<sup>54</sup> inadequate interference protections for public safety,<sup>55</sup> the relatively limited number of public safety licensees, and therefore potential lessors, in the band.<sup>56</sup> These commenters point to the alleged complexity and logistical concerns involved in devising a spectrum leasing system in the 4.9 GHz band.<sup>57</sup> Some commenters also suggest that public safety entities might engage in spectrum warehousing and “arbitrage,” whereby they would obtain or use their spectrum rights (received at no cost) to obtain leasing revenues.<sup>58</sup>

18. We find that these concerns do not outweigh the public interest benefits of permitting leasing pursuant to the framework we adopt today.<sup>59</sup> Although there are relatively few licensees in this band as compared to the overall number of public safety entities eligible to obtain a license, nearly all states have at least one statewide license, enabling leasing of nearly all available spectrum. And while a spectrum leasing framework involving shared spectrum may raise some complexities, so does every other proposed path to increase use of this band, and we believe that the framework we adopt today empowers states to find ways to enable public safety and non-public safety use of the band as best suits their particular needs. We emphasize that leasing is voluntary and allows state governments the flexibility to determine the appropriate use of this band in their respective jurisdictions, which may include new partnerships that could expand public safety access to the band. We expect this new flexibility will lead to new uses of 4.9 GHz spectrum and lower equipment costs for public safety. Also, the Commission is in no way redesignating or transferring 4.9 GHz spectrum for commercial use or requiring public safety to relinquish spectrum, thereby protecting existing public safety operations and investments.<sup>60</sup> We anticipate that allowing non-public safety access through state-level leasing will also ensure continued cooperation amongst stakeholders, as public safety licensees today already are accustomed to coordinating shared spectrum use in their jurisdictions. Further, as the Commission noted in the *Sixth Further Notice*, statutory concerns regarding commercial use of public safety spectrum do not apply to the 4.9 GHz band,

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<sup>52</sup> Letter from William J. Johnson, Executive Director, National Association of Police Organizations, Inc., to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 1 (filed Sept. 10, 2020); Letter from Jonathan F. Thompson, Executive Director and CEO, National Sheriffs' Association, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 1 (filed Sept. 16, 2020); Letter from Kimberly Wagner, Executive Director, Major County Sheriffs of America, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 1 (filed Sept. 22, 2020) (*MCSA Ex Parte*); Letter from Chief Jeff Johnson (Ret), PSSA, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 3 (filed Sept. 21, 2020) (*PSSA Sept. 21, 2020 Ex Parte*).

<sup>53</sup> See, e.g., APCO Comments at 16; Southern Company Services Comments at 11-12.

<sup>54</sup> See Letter from Terry Johnson, EFO, Fire Chief, City of Junction City, Kansas Fire Department, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 1 (filed Sept. 18, 2020) (*Junction City Sept. 18, 2020 Ex Parte*).

<sup>55</sup> *PSSA Sept. 21, 2020 Ex Parte* at 3; Letter from Margie Moulin, President, APCO International, et al., to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 1 (filed Sept. 21, 2020) (*APCO Sept. 21, 2020 Ex Parte*) (Commission plan for leasing “has no basis in the record”).

<sup>56</sup> WISPA Comments at 9.

<sup>57</sup> APCO Comments at 16; Federated Wireless Comments at 8.

<sup>58</sup> EWA Comments at 10.

<sup>59</sup> *Sixth Further Notice*, 33 FCC Rcd at 3287, para. 74.

<sup>60</sup> *MCSA Ex Parte* at 1.



and no commenter raised statutory concerns regarding spectrum leasing proposed in the *Sixth Further Notice*.<sup>61</sup>

19. In the original *Secondary Markets* proceeding, the Commission considered and rejected spectrum warehousing concerns as related to public safety entities, noting that leasing of unused spectrum in fact *diminishes* the risk of spectrum warehousing.<sup>62</sup> We find that the current freeze on applications for new or modified licenses should discourage speculative behavior,<sup>63</sup> and our framework, which only allows leasing by a single state entity per state, will also reduce incentives to hold or obtain licenses for purposes other than active deployment. Further, the new licensing and coordination/management regime proposed in the accompanying Seventh Further Notice would further streamline the licensing of this band and avoid incentives for licensees to engage in speculative behavior.

## **B. Leasing Opportunities for States**

### **1. Spectrum Leasing by States**

20. Under the framework we adopt today, one entity in each state (the State Lessor) will have the opportunity to lease voluntarily some or all of its 4.9 GHz band spectrum rights to third parties for fixed or mobile use, including for non-public safety operations.<sup>64</sup> Leasing by other 4.9 GHz band licensees, including by state entities other than the State Lessor, county or local entities, or nongovernmental organizations that operate in support of public safety, will not be permitted. The State Lessor and lessee(s) will have the flexibility to structure their lease arrangements, within the boundaries of our Secondary Markets rules, to protect ongoing and future public safety operations while allowing for more flexible use of the band. We recognize that State Lessors and lessees are best positioned to negotiate appropriate leasing arrangements to meet their operational needs, and the needs of their states, and we impose minimal restrictions on those agreements.<sup>65</sup>

#### **a. Allowing Leasing by State Lessors**

21. We amend part 90, subpart Y of our rules to permit the statewide licensee selected as the State Lessor to voluntarily lease 4.9 GHz band spectrum rights under our part 1 leasing rules<sup>66</sup> to any entity that is otherwise eligible to be a spectrum lessee for fixed or mobile use, including to commercial entities and others with non-public safety operations, thus opening the band to flexible new uses. The State Lessor is also free to lease to public safety entities.<sup>67</sup> Some commenters urge the Commission to provide for continued exclusive public safety community use of 4.9 GHz spectrum to be managed through the First Responders Network Authority (FirstNet);<sup>68</sup> wireless providers other than AT&T (which

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<sup>61</sup> *Id.* at 3288, para 77 (noting that the prohibition on commercial operations in public safety spectrum found in Section 337(a) of the Communications Act, 47 U.S.C. § 337(a), applies only to the 700 MHz band).

<sup>62</sup> *Secondary Markets Order*, 19 FCC Rcd at 17533, para. 55.

<sup>63</sup> *See Freeze Public Notice*.

<sup>64</sup> We note that the accompanying Seventh Further Notice of Proposed Rulemaking proposes and seeks comment on various potential rule changes which, if adopted, could alter the leasing regime for the 4.9 GHz band.

<sup>65</sup> The Commission expects that a 4.9 GHz public safety licensee engaging in leasing transactions will ensure compliance with any applicable state and local laws.

<sup>66</sup> *See* 47 CFR §§ 1.9020, 1.9030, and 1.9035 (describing obligations for and eligibility of lessees under spectrum manager, long-term *de facto* transfer, and short-term *de facto* transfer spectrum leasing arrangements).

<sup>67</sup> Because we place no additional restriction on the type of lessee operations, a public safety *lessee* of 4.9 GHz band spectrum may engage in non-public safety operations, whereas a 4.9 GHz public safety *licensee* (other than a State Lessor) may not.

<sup>68</sup> *See* Public Safety Spectrum Alliance (PSSA) Comments at 4; PSSA Sept. 21, 2020 *Ex Parte* at 1 (including list of over 600 signatories from public safety in support of PSSA position); Letter from Willis Carter, Partner, et al.,

(continued....)

operates FirstNet) urge the Commission to reject such an approach.<sup>69</sup> We decline to assign the 4.9 GHz band to FirstNet—which would deprive states (as well as public safety entities within that state) any choice in how the band is used.<sup>70</sup> We find, however, that the leasing framework we adopt today is not inconsistent with 4.9 GHz spectrum being used by FirstNet as a lessee; a State Lessor has the flexibility to enter into a variety of leasing arrangements, including leasing to commercial entities that have the option of providing services to public safety or non-public safety entities. As discussed below, the State Lessor also will no longer be subject to the public safety use restriction contained in our rules. Through today’s action, the State Lessor will be permitted to lease spectrum rights in all, or any portion, of that state. It may divide these rights on a geographic, spectral, or temporal basis, and it may also lease spectrum rights associated with its permanent fixed sites, including those with primary status under our rules.<sup>71</sup>

22. State Lessors may enter into agreements with lessees to share equipment or other deployment costs provided that they comply with all relevant license provisions. We encourage parties to also consider alternative coordination methods to prevent harmful interference between lessees and public safety licensees that allow for robust shared use of the band.<sup>72</sup> For example, parties might consider spectrum leases that rely on dynamic sharing mechanisms, which permit operational access based on automated databases that identify protected operations. In the Seventh Further Notice, we seek comment on ways the Commission can encourage and facilitate this type of sharing.

**b. Leasing Limited to States that Do Not Divert 911 Fees at this Time**

23. The Commission originally designated the 4.9 GHz band for public safety use to “ensure that agencies involved in the protection of life and property possess the communications resources needed to successfully carry out their mission.”<sup>73</sup> As the history of this proceeding well demonstrates, access to spectrum is not the sole determinant of whether public safety entities can obtain necessary communications services. Another issue that has challenged public safety entities is 911 fee diversion. The Commission is required to provide an annual report to Congress on state 911 fee collection and use that identifies which states have improperly diverted 911 fees.<sup>74</sup> While identifying states that divert 911 fees in these reports has arguably helped discourage the practice, this step alone has failed to eliminate it. In the recently adopted *Fee Diversion NOI*, we found that between 2012 and 2018, American states and jurisdictions have diverted over \$1.275 billion in fees collected for 911 and Enhanced 911 services to non-911 purposes.<sup>75</sup> As noted in the *Fee Diversion NOI*, “[t]his diversion of funding directly undermines

(Continued from previous page)

Presidential Partners Consulting, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, at 1 (filed Sept. 16, 2020).

<sup>69</sup> See Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 at 2 (filed Sept. 17, 2020) (T-Mobile Sept. 17, 2020 *Ex Parte*); Letter from William H. Johnson, Senior Vice-President, Regulatory Affairs, Verizon, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 at 1 (filed Sept. 23, 2020) (Verizon *Ex Parte*).

<sup>70</sup> Just as consumers benefit from competition and choice, we expect public safety officials to do so as well. As such, we recognize that allowing a state to bundle access to this spectrum as part of a competitive bid for public safety communications may induce them to receive more favorable bids from commercial operators and FirstNet alike.

<sup>71</sup> 47 CFR § 90.1207(d).

<sup>72</sup> PSSA Sept. 21, 2020 *Ex Parte*, at 3-4,7.

<sup>73</sup> *Second Report and Order*, 17 FCC Rcd at 3955, 3956, para. 1.

<sup>74</sup> See 47 U.S.C. § 615a-1(f)(2). The FCC Chairman submits the Annual Report to Congress on 911 Fees.

<sup>75</sup> *911 Fee Diversion New and Emerging Technologies Improvement Act of 2008*, PS Docket Nos. 20-291 and 09-14, Notice of Inquiry, FCC 20-134, at 1, para 1. (Oct 2, 2020) (*Fee Diversion NOI*).

the public safety communications system.”<sup>76</sup> The Commission seeks specific comment in the *Fee Diversion NOI* on “regulatory steps the Commission could take to discourage fee diversion, such as . . . conditioning state and local eligibility for FCC licenses, programs, or other benefits on the absence of fee diversion.”<sup>77</sup>

24. Today, we expand access to the 4.9 GHz band by affording to certain eligible states the benefit of leasing spectrum rights, which we anticipate could provide substantial additional state revenues. However, we find it in the public interest to only extend this benefit to states that use 911 fees collected from consumers for their intended purpose at this time. Specifically, we will only permit states that are not identified in the Commission’s December 2019 911 Fee Report as diverting 911 fees for non-911 purposes to lease spectrum rights to non-public safety or public safety entities.<sup>78</sup> We take this action, in conjunction with our more in depth consideration of this issue in the *Fee Diversion NOI*, as an affirmative step toward addressing this long standing problem and in recognition that states that have a history of appropriately using 911 fees are more likely to respect the rights of public safety incumbents in the 4.9 GHz band. We defer consideration to the Seventh Further Notice on whether to extend the 4.9 GHz band leasing framework to states that divert 911 fees. A state that either believes it was incorrectly identified in the 2019 Fee Report as diverting fees, or that has taken subsequent remedial action, may petition the Public Safety and Homeland Security Bureau to demonstrate, with supporting documentation, that relief is justified, and we direct the Bureau to expedite action on any such petition.

#### c. Selection of the State Lessor

25. In order to centralize leasing functions and facilitate coordination of spectrum use, we require a state seeking to benefit from our voluntary secondary markets opportunities to select a single state entity that is a statewide 4.9 GHz band licensee to act as the State Lessor. Where a state has a single statewide license,<sup>79</sup> we will treat that licensee as the default State Lessor. A default State Lessor may, in its discretion, assign its license<sup>80</sup> to another statewide entity if that entity is deemed a more appropriate State Lessor; the assignment application must include a designation letter from the governor (or his or her designee) akin to that required by section 90.529 of our rules<sup>81</sup> certifying that the assignee is the entity the state has selected to be the State Lessor.<sup>82</sup>

26. If a state has multiple statewide licenses held by state entities and voluntarily seeks to lease, the state must select one of those entities as the State Lessor. A statewide licensee not selected as State Lessor may continue to operate pursuant to its authorization but will not be permitted to lease

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<sup>76</sup> *Id.*

<sup>77</sup> *Id.* at 6, para 16.

<sup>78</sup> FCC, Eleventh Annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges at 2, para. 1 & n. 1 (2019) (Eleventh Report), <https://www.fcc.gov/files/11thannual911feereport2019pdf>. The Eleventh Report identified five states that diverted 911 fees to other purposes in calendar year 2018: Nevada, New Jersey, New York, Rhode Island, and West Virginia. Eleventh Report at 39, para. 27.

<sup>79</sup> Only statewide government agencies are considered statewide licensees and therefore eligible to be a State Lessor. Subordinate jurisdictions may hold licenses categorized in ULS as “statewide,” but these licenses, as conditioned, limit the license area to the licensee’s jurisdiction and are therefore not statewide licenses.

<sup>80</sup> A State Lessor has the right to lease spectrum, to apply for permanent fixed sites, and is not restricted to public safety operations. We therefore require a State Lessor that seeks to assign its statewide geographic area license (and thereby relinquish these rights) to also assign to its successor State Lessor each of its permanent fixed site licenses acquired as a State Lessor. We also will not permit partial assignments, partitioning, or disaggregation from a State Lessor to a successor State Lessor.

<sup>81</sup> 47 CFR § 90.529.

<sup>82</sup> OTI Sept 23, 2020 *Ex Parte* at 3 (seeking governor decision-making regarding control of 4.9 GHz spectrum).

spectrum rights. As part of any lease arrangement with a lessee, a State Lessor must submit to the Commission FCC Form 608 accompanied by evidence that it has been selected as State Lessor. Such evidence shall consist of a copy of the written agreement signed by each of the state's multiple statewide licensees indicating the selection of the State Lessor. If states with multiple statewide licensees are unable to reach such an agreement, we will accept in the alternative (as an attachment to FCC Form 608) a gubernatorial letter designating a certain state entity licensee as the State Lessor.<sup>83</sup> To reduce administrative and regulatory burdens, we find it unnecessary to mandate a Commission pre-approval process for a state entity seeking State Lessor status prior to actually engaging in lease arrangements. We anticipate that, under this market-based approach, a prospective lessee engaged in negotiations with a prospective State Lessor will seek assurances that the requisite State Lessor documentation (either a multi-licensee agreement or a gubernatorial letter) has been executed prior to submission of an FCC Form 608 seeking Commission approval of, or provide notice to the Commission of, a specific lease arrangement, as applicable. Pursuant to our state-based approach to expanding secondary markets opportunities in the 4.9 GHz band, leasing will not be permitted in those states that have no statewide licensee.<sup>84</sup>

#### d. Application of the Secondary Markets Framework to State Lessors

27. The Commission's *Secondary Markets* framework provides for a variety of leasing vehicles, any of which the State Lessor and its lessee(s) will be free to enter into depending on which best accommodates the needs of their state. This includes *de facto* transfer spectrum leasing arrangements, where the licensee retains *de jure* control of the license while *de facto control* of the leased spectrum is transferred to the spectrum lessee;<sup>85</sup> and spectrum manager leasing arrangements, where the lessee is permitted to use the spectrum, but the licensee retains both *de jure* and *de facto* control.<sup>86</sup> In determining the appropriate leasing vehicle, we expect a State Lessor to evaluate its ability as lessor to comply with state law requirements related to leasing activities. The State Lessor should only enter into lease arrangements that it is legally and organizationally equipped to implement.

28. Consistent with our *Secondary Markets* rules, State Lessors entering into spectrum lease agreements must comply with our existing part 1 leasing rules, including:

- Filing an FCC Form 608, either seeking prior Commission approval to enter into the lease (for a *de facto* transfer spectrum lease) or providing notice of the lease (for spectrum manager leases);
- Complying with the requirements associated with the chosen type of leasing agreement,<sup>87</sup> including the level of control required to be maintained by the State Lessor for either a *de facto* transfer spectrum lease or a spectrum manager lease;<sup>88</sup>

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<sup>83</sup> Once an entity has been designated as the State Lessor for a lease or other application (such as for a fixed site license), that entity must be the party to all subsequent leases, applications, or notifications which require the involvement of the State Lessor. In the event the state seeks to change the entity selected as the State Lessor through assignment, it must make this corresponding change on all pending applications or notifications, and active leases with the Commission.

<sup>84</sup> Consistent with our directive to the Bureaus to modify the freeze following the effective date of this Sixth Report and Order, states currently without a statewide licensee that are interested in pursuing 4.9 GHz band leasing opportunities may submit, after freeze modification, an application for a 4.9 GHz statewide license with the requisite designation letter regarding its status as State Lessor.

<sup>85</sup> See 47 CFR § 1.9030(a).

<sup>86</sup> See *id.* § 1.9020(a).

<sup>87</sup> Namely, the requirements found in Part 1 of our rules that apply to the specific leasing agreement (*e.g.* those of a spectrum manager lease or a *de facto* transfer leasing arrangement). See 47 CFR § 1.9001 *et seq.*

<sup>88</sup> 47 CFR § 1.9010.

- Fulfilling all obligations associated with compliance with the Communications Act and Commission rules associated with the original license;<sup>89</sup>
- Complying with our rules on assignments and transfers of control for spectrum leasing arrangements in the 4.9 GHz band;<sup>90</sup> and
- Ensuring that spectrum leasing arrangements include all required contractual provisions.<sup>91</sup>

29. We also note that certain licensees have a waiver of the prohibition on aeronautical use in the 4.9 GHz band.<sup>92</sup> If a State Lessor has been granted a waiver of the section 90.1205(c) aeronautical prohibition, that right is not transferable to a lessee. A lessee seeking to engage in aeronautical mobile operations must submit a request for waiver accompanied by a sufficient technical justification and an exhibit demonstrating the State Lessor's support for the waiver.

## 2. Rights and Responsibilities of Lessees

30. To increase flexibility and encourage more efficient use of the 4.9 GHz band, lessees of 4.9 GHz band spectrum will not be subject to the requirement that they use the spectrum in support of public safety and may engage in flexible use fixed or mobile operations.

31. Lessees will be permitted to conduct any type of operation, including commercial, CII, or those in support of public safety. Lessees of a geographic area will be permitted to construct base stations and engage in mobile operations, and to construct temporary fixed sites within the lease area as permitted by the lease agreement as if they were a 4.9 GHz band licensee.<sup>93</sup> They will not, however, have the authority to add stations/sites that are required to be individually licensed by our rules. These include permanent fixed sites<sup>94</sup> and base stations that must be individually licensed due to their location.<sup>95</sup> In the event a lessee's operations require individual site licensing under section 90.1207, the State Lessor will be required to file for a license and then lease the licensed site to the lessee.<sup>96</sup>

32. The informal coordination requirements of section 90.1209(b) will apply to lessees in the same way as licensees.<sup>97</sup> Accordingly, lessees have the obligation to cooperate with other operators in and around their area of operations in the selection and use of channels in order to reduce interference and make the most efficient use of the band in the same manner as licensees. Our rules require cooperation in the resolution of harmful interference to the mutual satisfaction of operators, including lessees, and they also preserve the authority of the Commission to impose operational restrictions to resolve interference.<sup>98</sup>

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<sup>89</sup> See 47 CFR §§ 1.9020(c)(1), 1.9030(c)(1), and 1.9035(c)(1).

<sup>90</sup> 47 CFR § 1.9020(i) and (j); 47 CFR § 1.9030(i) and (j).

<sup>91</sup> *Id.* § 1.9040.

<sup>92</sup> *Id.* § 90.1205(c); *Amendment of Part 90 of the Commission's Rules; Implement a Nationwide, Broadband Interoperable Public Safety Network in the 700 MHz Band; Service Rules for the 698-746 and 777-792 MHz Bands*, WP Docket No. 07-100, PS Docket No. 06-229, WT Docket No. 06-150, Fourth Report and Order and Fifth Further Notice of Proposed Rulemaking, 27 FCC Rcd 6577, 6600, para. 60 & n. 144 (*Fifth Further Notice*) ("The Commission has granted roughly a dozen waivers of Section 90.1205(c).").

<sup>93</sup> *Id.* § 90.1207(c).

<sup>94</sup> *Id.* § 90.1207(d).

<sup>95</sup> *Id.* § 90.1207(b).

<sup>96</sup> Under the freeze put in place on September 8, 2020, applications to license base stations under section 90.1207(b) are permitted, but applications for permanent fixed sites would require a waiver. *Freeze Public Notice* at 2.

<sup>97</sup> 47 CFR § 90.1207(b).

<sup>98</sup> *Id.* § 90.1209.

Lessees also must adjust operations to prevent, or resolve, interference to any fixed links with primary status.<sup>99</sup>

33. Lessees, like a State Lessor, will be required to comply with all relevant provisions of our *Secondary Markets* rules, including, for example, our subleasing rules if the lease agreement permits such subleasing.<sup>100</sup> They also will be required to comply with any other requirements applicable to their operations, such as those under part 9 of our rules, whereby commercial mobile radio service (CMRS) providers and other relevant entities remain responsible for compliance with 9-1-1 and Enhanced 9-1-1 obligations, if applicable.<sup>101</sup>

### 3. 4.9 GHz Incumbent Licensee Rights

34. We clarify that today's adoption of the Sixth Report and Order does not modify the rights of an incumbent 4.9 GHz band licensee other than a licensee selected to be a State Lessor. An incumbent is a 4.9 GHz licensee with an active license as reflected in ULS as of the adoption of the Freeze Public Notice, or a 4.9 GHz licensee granted an authorization pursuant to a waiver of, or modification of, the freeze. An incumbent licensee, whether a public safety agency or a nongovernmental organization, may continue to operate existing system(s) or make additional deployments pursuant to the terms of its license, consistent with our rules and the *Freeze Public Notice*.<sup>102</sup> Incumbents must work with lessees to prevent and resolve harmful interference through cooperation in the same way they do today with other 4.9 GHz licensees, and a State Lessor and its lessee(s) also must work with incumbents to prevent and resolve harmful interference.<sup>103</sup> The Commission retains the authority to impose operational conditions as needed in the event this cooperation fails to resolve interference concerns, whether between licensees, licensees and lessees, or lessees themselves.<sup>104</sup>

#### C. Elimination of the Public Safety Use Restriction for State Lessors

35. Today's action expands access to the 4.9 GHz band through a revised leasing framework. To further increase flexibility in the use of valuable spectrum and to incentivize secondary markets activity in this band, we revise our rules to eliminate the requirement that a State Lessor licensee only use its 4.9 GHz band spectrum for public safety purposes. In the *Sixth Further Notice*, the Commission sought comment on a range of potential approaches to expanding use of the band in addition to leasing. For example, if critical infrastructure industries were permitted access as 4.9 GHz licensees, the Commission sought comment on whether they should be required to provide public safety services or be able to use the spectrum for any purpose.<sup>105</sup> Noting that 4.9 GHz spectrum has been underutilized, the

<sup>99</sup> *Id.* § 90.1207(d). The Commission may impose operational restrictions as needed if voluntary cooperation does not resolve interference concerns. The Commission will consider enforcement action if operators do not comply with such restrictions.

<sup>100</sup> *See, e.g.*, 47 CFR § 1.9020(l).

<sup>101</sup> *See* 47 CFR part 9.

<sup>102</sup> For example, an incumbent licensee is permitted to add base stations within its jurisdiction. 47 CFR § 90.1207(c). Also, an incumbent licensee may continue to seek an individual station license if required pursuant to Commission rule section 90.1207(b)(1). 47 CFR § 90.1207(b)(1). In addition to new deployments within its jurisdiction pursuant to an existing geographic area license, a public safety entity may expand operations through leasing from a State Lessor. *See* APCO Sept. 21, 2020 *Ex Parte* at 2 (concerned that public safety is frozen from expanding use of the band); Letter from Gene S. Donaldson, TMC Operations Manager, State of Delaware Department of Transportation, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 (filed Sept. 23, 2020).

<sup>103</sup> *Id.* § 90.1209(b). *See* IAFC Sept. 21, 2020 *Ex Parte* at 2 (concerned that public safety incumbents be protected from new operations); APCO Sept. 21, 2020 *Ex Parte* at 1 (concerned state can lease without "... any requirements to prioritize or avoid interfering with public safety use").

<sup>104</sup> *Id.*

<sup>105</sup> *Sixth Further Notice*, 33 FCC Rcd at 3285, para 71.

Commission specifically sought comment on redesignating the 4.9 GHz band, wholly or partially, to support commercial wireless use.<sup>106</sup> The Commission asked whether the public interest would be “best served if this spectrum could be used for commercial applications, such as 5G...” and how to divide the band between public safety and commercial use if only a portion of the band were to be redesignated.<sup>107</sup> The Commission also sought comment on “any other alternatives to support commercial wireless use of the 4.9 GHz band.”<sup>108</sup>

36. We believe that modifying a State Lessor’s rights to permit non-public safety use is an alternative approach that promotes efficient spectrum use, incentivizes leasing activity, and is consistent with our action today allowing a State Lessor to lease spectrum for non-public safety purposes. Permitting a State Lessor to engage in non-public safety uses will more fully empower each state to determine the highest and best use for the 4.9 GHz band in its jurisdiction and to consider a wider range of spectrum use options that best accommodate its citizens’ communications needs, whether through its own operations or through those of third party lessees. A State Lessor will also have the flexibility to determine whether to only conduct public safety operations under its license, or not allow non-public safety use through leasing. We anticipate, however, that centralized state-based control of non-public safety use will incentivize secondary markets activity and encourage greater spectrum use, and we explore a more expanded state-based model for the 4.9 GHz band in the accompanying Seventh Further Notice. We clarify that State Lessors that opt to operate as a CMRS provider will be regulated as such and will be subject to all relevant rules applicable to that type of service, including part 9 of our rules, regarding responsibility for compliance with 9-1-1 and Enhanced 9-1-1 obligations. Further, in the event that a 4.9 GHz band licensee other than a State Lessor seeks the flexibility to engage in non-public safety operations, it will be required to lease the necessary spectrum rights from the State Lessor in its jurisdiction.

#### **D. Authority to Allow Flexible-Use and Leasing in the 4.9 GHz Band**

37. Section 301 of the Communications Act, as amended, requires grant of a license to authorize use of radio transmissions, but specifies that a grant shall not be construed to create “any right beyond the terms, conditions, and periods of the license.”<sup>109</sup> Under our current 4.9 GHz band rules, all operations in the band must be in support of public safety.<sup>110</sup> Under the new 4.9 GHz band leasing regime we adopt today, we eliminate this restriction for a State Lessor and for that entity’s lessee(s). The terms and conditions for that 4.9 GHz licensee’s authorization, based on the revised rules, will now include the right to engage in operations other than those in support of public safety and to lease to entities that are not required to conduct or support public safety operations. We find that permitting more flexible spectrum use in the underused 4.9 GHz band is consistent with our broad authority to license spectrum rights under the Communications Act and to define the terms of spectrum licenses by prescribing the circumstances in which certain uses are permitted or prohibited, both by licensees and by lessees.<sup>111</sup>

#### **E. Alternative Approaches from the Sixth Further Notice**

38. We determine that allowing spectrum leasing to non-public safety entities through negotiated agreements between a State Lessor and lessees has potential to significantly increase efficient use of the 4.9 GHz band in the near term, compared with alternative approaches upon which the

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<sup>106</sup> *Id.* at 3289, para 85.

<sup>107</sup> *Id.*

<sup>108</sup> *Id.*

<sup>109</sup> 47 U.S.C. § 301.

<sup>110</sup> 47 CFR § 90.1203(b).

<sup>111</sup> *See* 47 U.S.C. §§ 301, 303. We note that no commenters raised concerns as to our statutory authority to implement leasing in this band.

Commission sought comment. In the *Sixth Further Notice*, we sought comment not only on spectrum leasing, but also on several alternative approaches to stimulate expanded use of, and investment in, the band.<sup>112</sup> These included: (i) the expansion of licensee eligibility; (ii) a two-tiered sharing structure; (iii) a revised band plan, including reserving certain channels for aeronautical mobile and robotic use;<sup>113</sup> (iv) more formal coordination requirements and regional planning coordinator (RPC) plans;<sup>114</sup> and (v) new technical rules.<sup>115</sup> We find that the proposed alternative approaches are less likely to increase the efficient use of spectrum in the band as compared with the approach we adopt in this Sixth Report and Order. The adopted approach effectively protects public safety interests while allowing state public safety entities to control commercial access. We defer consideration of certain other proposals explored in the *Sixth Further Notice* that are not precluded by expanded leasing, including whether to permit aeronautical and robotic use, to the accompanying Seventh Further Notice.<sup>116</sup>

39. *Expanding Eligibility to CII.* We decline to expand eligibility for obtaining licenses in the band to include CII entities<sup>117</sup> or to restrict lessee eligibility to CII entities.<sup>118</sup> Limiting non-public safety use to one industry, or otherwise restricting non-public safety eligibility, would both significantly reduce opportunities to expand investment in the band.<sup>119</sup> This approach would be contrary to the Commission's longstanding policy of promoting flexible licensing to ensure the most efficient use of spectrum.<sup>120</sup> Such a limitation also would be contrary to our statutory mandates to promote economic opportunity and competition, and the efficient and intensive use of electromagnetic spectrum.<sup>121</sup> We

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<sup>112</sup> *Sixth Further Notice*, 33 FCC Rcd at 3264-91, paras. 8-86.

<sup>113</sup> *Id.* at 3264-70, paras. 8-24. *See also* Letter from Suzanne Lemieux, Manager, Operations Security & Emergency Response Policy, American Petroleum Institute, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100, (filed Sept. 18, 2020) (seeking allocation of 20 to 30 megahertz for drones and robotics to enable specialized communication systems for the benefit of both the public and numerous industries).

<sup>114</sup> *Sixth Further Notice*, 33 FCC Rcd at 3270-72, paras. 25-31.

<sup>115</sup> *Id.* at 3276-82, paras. 45-60.

<sup>116</sup> The Dynamic Spectrum Alliance recommends that the Commission seek comment “on relocating one or both of the Intelligent Transportation Systems (‘ITS’) technologies contemplated for the upper portion of the 5.9 GHz band to a portion (20 megahertz or more) of the 4.9 GHz public safety band.” Letter from Martha Suarez, Dynamic Spectrum Alliance, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 at 2-3 (filed June 10, 2020). The Open Technology Institute supports relocating the “cellular vehicle safety signaling (C-V2X) from the unused 5.9 GHz band to the 4.9 GHz band....” OTI Sept. 23, 2020 *Ex Parte* at 3. We do not address these requests as we find them beyond the scope of this proceeding.

<sup>117</sup> Federated Wireless Comments at 7-8; WISPA Reply Comments at 2-5.

<sup>118</sup> Alarm Industry Communications Committee Comments at 3-4; EWA Comments at 3-7.

<sup>119</sup> WISPA Reply Comments at 6-7 (“The allocation of spectrum to a specific industry runs directly counter to the Commission’s general policy favoring flexible use of spectrum, and extending eligibility only to CII would not be sufficient to create the economies of scale and equipment ecosystem necessary to spur innovation and the introduction of lower-cost equipment.”); BART Reply Comments at 4 (“However, this ADR band/Remaining band proposal that non-public safety entities be authorized to use the entire band on a ‘co-primary’ basis, with a reserved specific use of up to 20 MHz of spectrum for drones and other commercial purposes unrelated to public safety, should be rejected by the Commission.”).

<sup>120</sup> *See, e.g., Use of Spectrum Bands Above 24 GHz*, GN Docket No. 14-177, Notice of Proposed Rulemaking, 30 FCC Rcd 11878 (2015) (citing to *Amendment of Part 27 of the Commission’s Rules to Govern the Operation of Wireless Communication Services in the 2.3 GHz Band, Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, Report and Order and Second Report and Order, WT Docket No. 07-293, 25 FCC Rcd 11710, 11723, para. 28 (2010) (noting “the Commission’s long-standing policies” of “allowing flexible spectrum use by licensees.”).

<sup>121</sup> 47 U.S.C. § 309(j)(3)(A).



agree with commenters who contend that CII has a demonstrated need for increased access to reliable broadband services to promote smart grid technologies and fast, secure communications networks,<sup>122</sup> and we address this need by removing the requirement that 4.9 GHz spectrum must be used for public safety support operations as it applies to lessees. We fully encourage CII and other non-public safety and commercial entities to pursue 4.9 GHz secondary market opportunities through the framework we establish today.

40. *Redesignation of the Band.* The Commission sought comment in the *Sixth Further Notice* on whether to redesignate the 4.9 GHz band, wholly or partially, for commercial use, on a licensed or unlicensed basis.<sup>123</sup> We decline to adopt this change because it would provide less protection for public safety use than would our decision to provide for expanded spectrum access through the secondary market while retaining public safety operations in the band. Given the interest in this band by both commercial and non-commercial users, we believe that our leasing framework achieves the right balance between commercial and non-commercial access; with minimal disruption to existing public safety operations in the band; it permits states, working in coordination with their public safety entities, to determine in the first instance the amount of spectrum needed for those public safety operations. While several commenters note the continued need for spectrum to support public safety operations,<sup>124</sup> most commenters recognize the need to allow non-public safety operations in the band to maximize use of this spectrum. At the same time, commenters overwhelmingly oppose giving non-public safety entities access by redesignating the band for commercial use.<sup>125</sup>

41. *Two-tiered Sharing on a Secondary Basis.* The *Sixth Further Notice* sought comment on two-tiered sharing as an alternative approach for increasing use of the 4.9 GHz band.<sup>126</sup> Under two-tiered sharing, “Tier 1 would consist of primary licensees in the band (including all incumbent users), while Tier 2 would allow other non-public safety users to access the band on a secondary basis, with safeguards to ensure priority and interference protection for Tier 1 operations.”<sup>127</sup> The majority of commenters, citing technical barriers to adequately protecting public safety operations, oppose two-tiered sharing.<sup>128</sup> Commenters that support two-tiered sharing stated that it would “encourage a more robust market for equipment and greater innovation, while protecting primary public safety users from harmful interference.”<sup>129</sup> We find, however, that a state-based leasing framework we adopt today more effectively achieves the twin goals of making valuable mid-band spectrum available for flexible use and continuing to support public safety operations. Although we adopt leasing in the 4.9 GHz band rather than two-

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<sup>122</sup> See AAR Reply Comments at 4; PDV Reply Comments at 2; EWA Reply Comments at 4 (“...the band can and should support a broader range of activities to maximize its utilization.”); *Review of the Commission’s Rules Governing the 896-901/935-940 MHz Band*, Report and Order, Order of Proposed Modification, and Orders, paras. 20-26, WT Docket No. 17-200, FCC 20-67 (rel. May 14, 2020).

<sup>123</sup> *Sixth Further Notice*, 33 FCC Rcd at 3290, para. 85.

<sup>124</sup> BART Reply Comments at 2; NPSTC Reply Comments at 5; Region 20 Reply Comments at 3; Jeff Perigo Reply Comments at 1; AAR Reply Comments at 8; UTC *et al.* Reply Comments at 3; AICC Reply Comments at 3; WIPSA Reply Comments at 6.

<sup>125</sup> See Public Safety Communications Council at 2; BART Reply Comments at 2; NPSTC Reply Comments at 5; Region 20 Reply Comments at 2; Jeff Perigo Reply Comments at 1; AAR Reply Comments at 8; UTC *et al.* Reply Comments at 9; AICC Reply Comments at 3; WIPSA Reply Comments at 6. Only one commenter supported allowing unlicensed use of this band. See generally Wi-Fi Alliance Comments.

<sup>126</sup> *Sixth Further Notice*, 33 FCC Rcd at 3289, para. 82.

<sup>127</sup> *Id.*

<sup>128</sup> NPSTC Reply Comments at 11; BART Reply Comments at 8-9; Denver, San Bernardino, and GWTCA Reply Comments at 6; UTC *et al.* Reply Comments at 7-8.

<sup>129</sup> WIPSA Reply at 2.

tiered sharing, we seek comment in the accompanying Seventh Further Notice on future use of dynamic sharing in this band and how such systems can further promote the adopted leasing regime.

42. *Coordination and Regional Planning.* In the *Sixth Further Notice*, the Commission proposed to require certified frequency coordination for licensing in the 4.9 GHz band.<sup>130</sup> The Commission also sought comment on expanding the data contained in the Universal Licensing System to include more information than site licensing in order to facilitate this coordination.<sup>131</sup> In addition, the Commission also sought comment on ways to increase the flexibility of Regional Planning Committees in facilitating use of the 4.9 GHz band.<sup>132</sup>

43. The frequency coordination proposal described in the *Sixth Further Notice* is no longer relevant under the new leasing regime, which will allow licensees to continue to coordinate amongst themselves, and with new lessees, to ensure the most efficient use of the band and to mitigate harmful interference. We note that, while the record supports these proposals generally, stakeholders did not address the specific need for reliance on frequency coordinators, increased data, or Regional Planning Committees under a leasing framework.<sup>133</sup>

44. Given the secondary market approach we adopt today, we decline to mandate use of frequency coordinators in the 4.9 GHz band application process, modify the rules regarding regional plans, or otherwise require additional filings with the Commission regarding the type and quantity of 4.9 GHz band deployments. We do, however, seek comment in the accompanying Seventh Further Notice on ways to encourage cross-jurisdictional coordination of 4.9 GHz band spectrum leasing, particularly in the context of the model for a State Band Manager to coordinate public safety operations alongside lessee operations on which we seek comment. As part of this proposal, we also seek comment on alternate means of maintaining easily accessible records of deployments as the nature of licensing in the 4.9 GHz band evolves.

45. *Technical Rule Changes.* In the *Sixth Further Notice*, the Commission proposed or sought comment on a series of changes to our technical rules intended to facilitate sharing between public safety licensees, including: (1) modifying the channelization plan and bandwidth aggregation rules; (2) designating particular channels for aeronautical mobile and robotic use; (3) adopting technical standards for equipment; (4) rules governing the use of point-to-multipoint systems; and (5) power limits and polarization requirements on point-to-point systems.<sup>134</sup> Commenters disagreed on these technical changes. Some commenters noted that the potential changes conflicted in certain cases, and commenters differed on which changes offered the most promise for preventing interference and promoting greater use of the band.<sup>135</sup> We decline to adopt these changes, as they have the potential to limit licensee and lessee flexibility in designing leasing arrangements best suited for their operations, and they could undermine

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<sup>130</sup> *Sixth Further Notice*, 33 FCC Rcd at 3271, para. 27; *id.* at para. 28 (“We propose that, subject to qualification criteria, Public Safety Pool frequency coordinators which the Commission has certified to coordinate in other Part 90 spectrum bands should be eligible to coordinate applications in the 4.9 GHz band.”).

<sup>131</sup> *Id.* at 3272-75, paras. 31-38.

<sup>132</sup> *Id.* at 3275-77, paras. 39-44.

<sup>133</sup> BART Reply Comments at 3; Denver, San Bernardino and GWTC Reply Comments at 6; Region 20 Reply Comments at 5; UTC *et al.* Reply Comments at 16; EWA Reply Comments at 7; Region 20 Reply Comments at 6.

<sup>134</sup> See *Sixth Further Notice*, 33 FCC Rcd at 3264-65, paras. 9-10 (proposing modifications to the channelization plan and aggregation rules) and 3276-82, paras. 45-60 (proposing to foster the creation of technical standards to spur equipment development, as well as adopt power limits and provide for point-to-point and point-to-multipoint operations).

<sup>135</sup> Compare, e.g., NPSTC Comments at 12-22 (supporting band plan proposals), with APCO Comments at 7-10 (opposing changes to the band plan as restricting flexibility in system design) and New York City Reply Comments at 8 (calling the band plan proposal “inconsistent with current wireless broadband technological trends”).

the benefits of the state-based leasing regime for both public safety and non-public safety users of the band. We also find that these rule changes would not sufficiently increase use of the 4.9 GHz band or further our goal of encouraging robust secondary market activity. As stated, the leasing regime we adopt today provides states the flexibility, within the current technical rules, to reach voluntary agreements that will not only expand access to the band, but also provide for mutually adequate protections for State Lessors and their lessee(s).

46. *Public Safety Priority.* In the *Sixth Further Notice*, the Commission sought comment on how best to ensure that, if so desired, public safety entities would retain priority access to 4.9 GHz spectrum in a commercial leasing framework.<sup>136</sup> The Commission also sought comment on whether non-public safety entities that lease spectrum capacity should have primary status because they entered into agreements with specific public safety licensees.<sup>137</sup> We received no specific comments addressing this issue in the context of the leasing framework we adopt today, though one commenter expresses concern regarding a State Lessor making determinations as to the scope of public safety priority access.<sup>138</sup> Through today's action, we increase a state's flexibility to determine the scope of any operational needs, and we therefore decline to mandate public safety priority access to the band or provide primary status to non-public safety lessees. The leasing regime we adopt relies on coordination among licensees and lessees and permits each state to determine the extent to which priority access is a critical component of its vision for the band's use in its state; we empower each State Lessor to decide whether to include public safety priority provisions in any lease arrangement based on its judgment regarding the best use of the 4.9 GHz band. States will act on behalf of their subordinate public safety entities and may choose to require priority access protections, enforceable through contractual lease provisions, or they may determine that such priority is unnecessary for their state. State Lessors that are unable to come to satisfactory terms on this issue may decline to lease, without unnecessary Commission involvement.

#### F. Bureau Modification of Application Freeze

47. Pursuant to the Bureaus' September 8, 2020 freeze, no new or modified applications for 4.9 GHz band licenses are currently being accepted or processed.<sup>139</sup> This includes applications to license permanent fixed sites (i.e., those in place for one year or longer).<sup>140</sup> In order to facilitate effective use of the band—both by public safety licensees and by non-public safety lessees—pending resolution of the issues raised below in the accompanying Seventh Further Notice, we direct the Bureaus to make modifications to the freeze by Public Notice, following the effective date of this Sixth Report and Order, to permit the acceptance and processing of certain applications. Specifically, we direct the Bureaus to modify the current freeze to permit the filing of applications for a statewide license from a single entity per state in a state that does not have a statewide licensee at the time of the freeze, provided that entity is also designated by the state as the State Lessor.<sup>141</sup> Further, in order to not complicate the landscape of this band and reduce the flexibility that states have in determining the highest and best use of the spectrum, we direct the Bureaus to modify the current freeze to accept and process applications for permanent fixed site licenses only if filed by a State Lessor.<sup>142</sup> If a public safety licensee other than a State Lessor seeks

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<sup>136</sup> *Sixth Further Notice*, 33 FCC Rcd at 3287, para. 76.

<sup>137</sup> *Id.*

<sup>138</sup> PSSA Sept. 21, 2020 *Ex Parte* at 5, 7; PSSA Comments at 1.

<sup>139</sup> *See Freeze Public Notice* at 1.

<sup>140</sup> 47 CFR § 90.1207.

<sup>141</sup> A state entity seeking a statewide license must include with its application evidence that the entity has been designated by the governor (or his or her designee) as the sole state entity authorized to hold a statewide license as State Lessor.

<sup>142</sup> A state for which there is only one statewide licensee is not required to file additional documentation regarding that entity's status as State Lessor with a filing for a permanent fixed site. For a state with more than one statewide  
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authority to construct and operate a new permanent fixed site, it may lease from a State Lessor provided that the State Lessor has a license for that facility.

#### IV. SEVENTH FURTHER NOTICE OF PROPOSED RULEMAKING

48. In this Seventh Further Notice of Proposed Rulemaking, we propose to license the 4.9 GHz band at the state level going forward, while grandfathering 4.9 GHz licenses that were in effect at the time of the *Freeze Public Notice* and those granted pursuant to a waiver of, or modification of, the freeze. We seek comment on enabling state governments to manage voluntarily 4.9 GHz operations and coordination within their states, so that each state can determine the appropriate use of the band given its unique situation.<sup>143</sup> We anticipate that transitioning to a voluntary state band manager model would allow state governments to coordinate new public safety deployments in the band, alongside non-public safety operations deployed through lease arrangements, through the state entity selected to be the State Lessor. We also seek comment on actions that we can take to further encourage robust use of the 4.9 GHz band and to implement the new leasing framework adopted in the accompanying Sixth Report and Order.

##### A. Revised 4.9 GHz Licensing and Grandfathering Incumbent Licenses

49. *State-Based Licensing.* Under the *Freeze Public Notice*, the Bureaus will not accept 4.9 GHz applications or issue new or modified licenses absent grant of a waiver.<sup>144</sup> In anticipation of a proposed transition to state-based management of 4.9 GHz public safety operations going forward, we propose to amend our 4.9 GHz licensing rules to limit future licensing to state entities seeking a statewide license in states without an existing statewide licensee. Under this approach, the Commission would not accept new or modified applications for a license authorizing operations of any kind (geographic area or permanent fixed site operations) in the 4.9 GHz band below the state level. License applications would only be accepted and processed if they are filed by a state governmental entity for a statewide license in a state with no statewide licensee, or if they meet other limited exceptions.<sup>145</sup> We seek comment on this approach, which we anticipate will maximize opportunities for states to voluntarily facilitate more efficient 4.9 GHz band operations.

50. *Grandfathering Incumbent Licenses.* We seek to ensure continued access for important incumbent 4.9 GHz band public safety operations under any revised 4.9 GHz band licensing structure. We therefore propose to grandfather licensees authorized as of the date of the *Freeze Public Notice* and any 4.9 GHz licensees granted an authorization pursuant to a waiver of, or modification of, the freeze. We seek comment on whether this is the appropriate scope of any grandfathering. Specifically, we propose that grandfathered geographic area licensees would be able to obtain renewal of existing licenses. They would also be permitted to add base stations, mobile units, and temporary fixed sites within their

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licensee, any application for a permanent fixed site must include the required documentation demonstrating its selection as State Lessor.

<sup>143</sup> PSSA Sept. 21, 2020 *Ex Parte* at 5, 7 (seeking cross-jurisdictional coordination to maintain interoperability); IAFC Sept. 21, 2020 *Ex Parte* at 1.

<sup>144</sup> *Freeze Public Notice* at 2.

<sup>145</sup> Consistent with the exceptions to the *Freeze Public Notice*, exceptions could include: (1) applications to renew existing licenses without modification; (2) applications that seek to modify existing licenses by deleting frequencies or fixed sites; (3) applications that seek to modify existing licenses by changing technical parameters in a manner that does not expand the station's spectral or geographic coverage, such as decreases in bandwidth, power level, or antenna height; (4) applications to assign or transfer licenses; (5) notifications of construction for permanent fixed site licenses or consummation of assignments or transfers; (6) requests for extensions of time to construct or consummate previously granted assignment or transfer applications; (7) applications to cancel licenses; (8) applications for special temporary authority for short-term operations; and (9) applications from geographic area licensees that require individual licensing under rule section 90.1207(b) (47 CFR § 90.1207(b)). See *Freeze Public Notice* at 2.

authorized license area, up to the limits of their jurisdiction—all of which they can do under our rules without Commission approval. Incumbent fixed point-to-point and fixed point-to-multipoint system licensees would also be permitted to obtain renewal and continue operations under existing technical parameters, but would not be permitted to modify their licenses in any way to increase their spectral or geographic coverage or obtain a license for a new fixed system.<sup>146</sup> We seek comment on this approach and on potential alternatives. If we grandfather licenses as proposed, should we apply this treatment to all incumbent 4.9 GHz band operations or only to some specific class of licenses? Should nongovernmental operations receive the same protections as those of public safety agencies? If we grandfather fixed site licenses, should we also grandfather the “primary” status certain fixed links enjoy under section 90.1207(d) of our rules? How would removing primary status affect current and future public safety operations in the 4.9 GHz band? If we grandfather these licenses as proposed, to what extent should licensees be permitted to modify those licenses as their deployment needs change? Commenters should describe the costs and benefits of any approach they support.

## B. State Management of 4.9 GHz Operations

51. In the accompanying Sixth Report and Order, we adopt a leasing framework in which state governments, acting through a single state entity holding a statewide 4.9 GHz band license (the State Lessor) will have the authority to lease 4.9 GHz band access to public safety and to non-public safety entities. The State Lessor also will be authorized to engage in non-public safety use of the band on behalf of the state government and, upon issuance of the Bureau’s freeze modification public notice, will be permitted to add permanent fixed sites to its network. In this Seventh Further Notice of Proposed Rulemaking, we seek comment on enabling state governments to exercise similar centralized control over 4.9 GHz band public safety operations in their jurisdictions. Under this voluntary model, a state government would have the option to oversee *all* 4.9 GHz band operations in the state: non-public safety and/or public safety operations through its role as State Lessor, and public safety operations through its role as a State Band Manager.

### 1. State Band Manager Model

52. *Commission Use of Band Manager Model.* In 2000, the Commission created a new class of licensee known as “guard band managers” in the 700 MHz band.<sup>147</sup> A guard band manager was defined as a “commercial licensee . . . that functions solely as a spectrum broker by subdividing its licensed spectrum and making it available to system operators or directly to end users for fixed or mobile communications consistent with Commission Rules.”<sup>148</sup> In establishing this “new class of commercial licensee . . . engaged in the business of leasing spectrum for value to third parties on a for-profit basis,” the Commission issued authorizations to licensees for the purpose of overseeing and coordinating, through private contractual lease agreements, the operations of third parties, rather than for their own use.<sup>149</sup> The Guard Band Manager was responsible for coordinating the use of frequencies among its

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<sup>146</sup> We seek comment below on the future of individually licensed fixed sites under a construct where states voluntarily select a State Band Manager to coordinate public safety operations within a state.

<sup>147</sup> See *Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules*, WT Docket No. 99-168, Second Report and Order, 15 FCC Rcd 5299 (2000) (*Guard Band Manager Report and Order*).

<sup>148</sup> See former rule section 27.4, 47 CFR § 27.4.

<sup>149</sup> *Guard Band Manager Report and Order*, 15 FCC Rcd at 5300, para. 2. In the Guard Band proceeding, the Commission recognized that a Guard Band Manager may be affiliated with organizations that operate wireless systems and have use for the spectrum for their own internal use or for the provision of commercial or private radio services. *Id.* at 5325, para. 59. However, to ensure a useful test of the Band Manager concept and to obtain the full benefits of the new licensing approach, a core feature of which is leasing spectrum to third parties through private agreements, the Commission required Guard Band Managers to lease the predominant amount of their spectrum to non-affiliates. *Id.*

customers to minimize interference and for resolving interference conflicts among its customers and, in the first instance, among its customers and neighboring users of spectrum licensed to other Guard Band Managers or other licensees.<sup>150</sup> The Commission found that Guard Band Manager licensing represented an “innovative spectrum management approach that should enable parties to more readily acquire spectrum for varied uses, while streamlining the Commission’s spectrum management responsibilities.”<sup>151</sup> The Commission further expected Guard Band Managers not to engage in unjust or unreasonable discrimination among spectrum users and to honor all reasonable requests by potential users for access to the licensed spectrum, while recognizing that a Guard Band Manager may have valid business reasons for denying a potential user’s request for spectrum.<sup>152</sup>

53. Notwithstanding that the Commission ultimately moved away from relying on Guard Band Managers in the 700 MHz band,<sup>153</sup> this model points to the Commission’s authority to rely on band managers to provide and manage spectrum access where appropriate and with necessary restrictions in place. Further, we believe that the band manager concept can inform our approach to future access and coordination of operations in the 4.9 GHz band given its specific characteristics, including shared spectrum use by public safety licensees with overlapping jurisdictions and extensive licensee coordination of operations (rather than extensive Commission regulation of technical parameters) to prevent harmful interference. Additionally, unlike 700 MHz Guard Band Managers, a state that takes on a band manager role would likely already be part of the 4.9 GHz ecosystem, increasing the opportunities for efficiencies and fostering an environment that brings order to overcome the current challenges of the 4.9 GHz coordination landscape. We seek comment on this assumption.

54. *4.9 GHz State Band Manager.* Under this approach, a state entity would have the opportunity to oversee and coordinate use of the 4.9 GHz band by public safety entities. Specifically, we seek comment on allowing each state to select voluntarily a statewide entity,<sup>154</sup> whether the State Lessor or another statewide licensee, as State Band Manager with authority to manage access to, and public safety operations within, the 4.9 GHz band. A public safety entity seeking new access to the 4.9 GHz band or a licensee seeking to expand operations beyond its grandfathered license parameters would be authorized to operate (if agreed to) under a State Band Manager’s license, tantamount to a “customer” of a Guard Band Manager in the former 700 MHz paradigm. A State Band Manager also would coordinate operations to prevent harmful interference amongst and between public safety and non-public safety entities. We seek comment on this approach, including its potential costs and benefits.

55. We expect that empowering each state to choose to transition to a State Band Manager model would streamline and facilitate more efficient spectrum use by consolidating oversight with the state government.<sup>155</sup> We seek comment on this assumption. A State Band Manager model could replace

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<sup>150</sup> *Id.* at 5313, para. 28.

<sup>151</sup> *Id.* at 5313, para. 30.

<sup>152</sup> For example, it might be reasonable for a Guard Band Manager to deny a request for spectrum that, if granted, would preclude it from entering into an agreement with another user needing coverage of a wider geographic area for a longer period of time. *Id.* at 5327, para. 64.

<sup>153</sup> In 2007, the Commission revised its rules to replace the model and make 700 MHz Guard Band Managers subject to the Secondary Markets framework for leasing exclusive spectrum rights, while removing the Guard Band Manager use restrictions to provide increased flexibility and retaining the responsibility for coordinating with adjacent band public safety users. *See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8064, 8123, para. 156 (2007).

<sup>154</sup> As stated in the Sixth Report and Order, in the event a state has only one statewide licensee, that entity would be the State Lessor by default.

<sup>155</sup> PSSA Sept. 21, 2020 *Ex Parte* at 2 (expressing concern that states lack expertise to engage in spectrum management activities); IAFC Sept. 21, 2020 *Ex Parte* at 1 (expressing concern that states do not have expertise in  
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the existing informal coordination model that is the basis for shared use of the 4.9 GHz band, while also avoiding the need for substantial regulatory oversight of licensee technical parameters. Under this model, public safety entities (and nongovernmental organizations operating in support of public safety) that seek to deploy in the 4.9 GHz band would work with a State Band Manager to coordinate and plan this deployment based on the policies and procedures it determines are best for its situation, rather than based on individual licensing and interference resolution rules issued by the Commission. We seek comment on this overall approach, including the associated costs and benefits.

56. *Rights and Responsibilities of a State Band Manager.* We anticipate that a State Band Manager would, at a minimum, coordinate operations among grandfathered public safety licensees and 4.9 GHz lessees.<sup>156</sup> Accordingly, we seek comment on whether we should require a State Band Manager to also be a State Lessor. What are the costs and benefits of adopting such an approach? We also seek comment on what additional responsibilities and rights should be assigned to a State Band Manager. For example, as prospective 4.9 GHz public safety users would be authorized to operate through a State Band Manager's license, what flexibility should we provide regarding its consideration of requests for spectrum access for new or modified public safety operations in the band? Should we adopt the approach applicable to 700 MHz Guard Band Managers that created an expectation that all reasonable requests by potential users for access to the licensed spectrum would be honored, while recognizing that there may be valid reasons for denying a potential user's request for spectrum? Should we establish other criteria or guidelines for a State Band Manager to use in determining whether to grant requests for expanded or new public safety operations—e.g., from counties or municipalities within the state? Should a State Band Manager have authority to deny public safety access or prioritize some operations (such as non-public safety operations conducted pursuant to a lease) over others? How much discretion should it have in making these determinations? Should we impose requirements on a State Band Manager to treat its own operations as it would those of other entities under its jurisdiction? What should be the limits of a State Band Manager's authority to grant public safety access to nongovernmental organizations operating in support of public safety?

57. *Commission Oversight.* We also seek comment on the role the Commission should play in overseeing a State Band Manager's decisions. Should we adopt the 700 MHz Guard Band Manager approach and rely on a State Band Manager to be primarily responsible for resolving interference disputes, at least in the first instance, thereby minimizing Commission involvement? Alternatively, should that authority remain solely with the Commission? To what extent should the Commission impose rules governing the coordination among different operations, either formal or informal, other than through a State Band Manager and a State Lessor? In addition, to what extent should the Commission assess the success of the voluntary leasing framework adopted in the Sixth Report and Order? Should we monitor leasing activities or take further steps to facilitate widespread leasing and, if so, in what form and to what extent?<sup>157</sup>

58. *Implementation of a State Band Manager Model.* We seek comment on the extent to which states are equipped to take on this management and coordination role. Do states have an entity

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auctioning and sub-licensing spectrum and that new users on the network may interfere with the operations of existing incumbent public safety agencies).

<sup>156</sup> T-Mobile requests that the Commission seek comment on whether to permit, but not require, public safety licensees to sell spectrum rights to non-public safety entities. T-Mobile Sept. 17, 2020 *Ex Parte* at 2. We decline to expand the scope of our inquiry beyond leasing and State Band manager coordination of public safety spectrum to include possible sale of spectrum to non-public safety entities.

<sup>157</sup> Letter from Mark E. Crosby, President and CEO, Enterprise Wireless Alliance, to Marlene H. Dortch, Secretary, FCC, WP Docket No. 07-100 at 1-2 (filed September 22, 2020) (supporting Commission oversight to ensure spectrum use through leasing, including time frames for State Lessor selection and leasing activities and buildout requirements).

already capable of undertaking this role, or will further expertise be required? Are there legal issues involved in granting a state entity this authority over other state and local entities, such as applicable state laws? We believe that a State Band Manager should be a state entity and a 4.9 GHz band licensee, but we seek comment on the extent to which we should combine the role of State Band Manager with that of a State Lessor. Should we grant states the authority to determine if they should be the same or separate entities? Or should this be a Commission determination? How should a state select its State Band Manager if that entity will be different from a State Lessor? In the accompanying Sixth Report and Order, we established a process for an existing statewide licensee to select a different entity to be the State Lessor and for the Commission to authorize that assignment. We seek comment on whether to apply the same or a similar process to allow for states to select a different entity to be a State Band Manager. We also seek comment on various potential approaches to incentivizing state participation in a State Band Manager construct. Specifically, should we establish a voluntary construct for state government participation, or should we require that any State Lessor benefiting from our flexible leasing approach also become a State Band Manager? Should we require a state with statewide 4.9 GHz licensee(s) to select a State Band Manager? In the alternative, in lieu of a State Band Manager model, should we instead rely solely on a State Lessor entering into secondary markets transactions to accommodate the needs of existing and future 4.9 GHz public safety users? We request that commenters be specific in providing the associated costs and benefits of each of these potential approaches. How can the Commission work with equipment manufacturers, licensees, and lessees to incentivize equipment development and reduce the cost of deploying in this band for both public safety and non-public safety entities? How could State Band Managers work most effectively with those entities? Are there any additional measures the Commission should take to promote greater use of the band in support of public safety services?<sup>158</sup>

59. *New Individual Deployment Licensing.* We seek comment on the future of fixed site licensing in the 4.9 GHz band under a potential State Band Manager framework. The state government, through a State Band Manager and/or a State Lessor, would be in a position to coordinate the needs of lessees and public safety entities to build sites, whether base stations servicing mobile devices or fixed sites for point-to-point or point-to-multipoint systems. This approach potentially eliminates the need for the Commission to license permanent fixed sites individually. We recognize the continuing need for the Commission to exercise its authority and require individual licensing of certain facilities, even under a State Band Manager model (e.g., coordination required by international agreement, environmental assessment required, or where a station impacts a quiet zone).<sup>159</sup> We seek comment on the impact of a State Band Manager model and on the scope of appropriate rules for any continued Commission licensing of 4.9 GHz band fixed site deployments. We also seek comment on whether to continue to afford “primary” status to certain fixed links under a State Band Manager model.<sup>160</sup> Would there be a need to continue to grant such status to some sites under a State Band Manager model? Should it be solely within a State Band Managers’ discretion as to whether and how to prioritize the status of fixed sites within its jurisdiction?

60. We also seek comment on the interplay of a State Band Manager framework and grandfathering the 4.9 GHz licenses that are in effect at the time of the *Freeze Public Notice* or that are granted through waiver of, or modification of, the freeze. For example, is there any need to grandfather other statewide licenses if a statewide entity will be acting as a State Band Manager? How should our rules define that status if we adopt a State Band Manager approach? We anticipate that allowing a State Band Manager to determine the status of all fixed links in its jurisdiction without Commission

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<sup>158</sup> PSSA Comments at 1.

<sup>159</sup> See 47 CFR § 90.1207(b).

<sup>160</sup> Pursuant to 47 CFR § 90.1207(d), fixed links that are used in the provision of broadband service are accorded primary status relative to other 4.9 GHz band deployments and receive increased interference protection.



involvement may be the most efficient way to maximize flexibility in determining the best use of the band in its jurisdiction. We seek comment on this approach, including the associated costs and benefits.

## 2. Maximizing Efficiencies to Coordinate 4.9 GHz Operations

61. *4.9 GHz Licensing Data.* In the *Sixth Further Notice*, the Commission sought comment on a proposal to expand the 4.9 GHz deployment data in the Universal Licensing System to include locations and other technical parameters of base stations deployed through geographic area licenses.<sup>161</sup> Although we did not adopt this proposal in the accompanying Sixth Report and Order, we seek further comment on the need to more comprehensively reflect 4.9 GHz band deployments beyond fixed sites given our new leasing framework and our proposed State Band Manager framework. To what extent should the Commission have a continued role in maintaining data on deployments, as opposed to State Band Managers? To the extent we delegate such data management duties to the State Band Managers, should we require the more expansive data collection and maintenance that the Commission was considering? If the Commission should continue to have a role, what should that role be, and what is the most efficient method to effectuate it?

62. *Sharing Arrangements for Public Safety.* Under our current rules, 4.9 GHz licensees are permitted to enter into sharing arrangements for the use of spectrum with entities that do not meet the eligibility requirements for a license.<sup>162</sup> Entities sharing with a 4.9 GHz licensee, however, must use the spectrum in support of public safety services.<sup>163</sup> We seek comment on whether to eliminate the current rules providing for such sharing, given our adoption of rules providing for increased flexibility in leasing and the proposed adoption of a State Band Manager construct. For example, a nongovernmental entity seeking to deploy in the 4.9 GHz band, either in support of public safety or for its own operational needs, is now permitted to enter into a leasing arrangement with a State Lessor. In the alternative, should we permit a non-public safety entity seeking to support public safety to simply work with a State Band Manager to obtain the necessary access, or to enter into a sharing agreement with another 4.9 GHz band licensee? If a State Band Manager model were not adopted, what is the appropriate method for accommodating this sharing in a revised, and substantially more limited, licensing environment (aside from leasing)?

63. We also seek comment on eliminating our similar current rule allowing operation outside a licensee's jurisdiction with the permission of that jurisdiction.<sup>164</sup> We expect that such operations would be conducted instead under the authority of a State Band Manager in the event we adopt such an approach. What are the specific costs and benefits of no longer permitting by rule these types of operations?

64. *Interference Protection and Resolution.* The existing structure of informal coordination in the 4.9 GHz band relies on licensees cooperating amongst themselves to resolve any interference concerns that may arise from their operations.<sup>165</sup> As use of the band increases through leasing activity and as a variety of potentially disparate technologies and network architectures are introduced into a shared band, will coordination be possible in the absence of more clearly-defined technical rules and interference resolution procedures? Or will a State Band Manager structure be sufficient to prevent or resolve any instances of harmful interference?

65. We seek comment on whether any additional steps are necessary to reduce the likelihood of harmful interference between shared users of the 4.9 GHz band, particularly where we anticipate new

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<sup>161</sup> *Sixth Further Notice*, 33 FCC Rcd at 3272-75, paras. 31-38.

<sup>162</sup> 47 CFR § 90.1203(b).

<sup>163</sup> *Id.*

<sup>164</sup> *Id.* § 90.1207(c).

<sup>165</sup> *Id.* § 90.1209(b).

and different types of deployments generated by a robust secondary market. Should we adopt additional rules standardizing different types of operations to avoid harmful interference? If so, what type of rules would be appropriate? Should we leave standardization to a State Band Manager or impose some requirements by rule? To what extent should the Commission facilitate interference resolution between lessees and public safety operations, as opposed to leaving these decisions to the state governmental entities charged with coordinating the band? If there is no State Band Manager, what should the resolution process be? We also encourage licensees and lessees to work together to develop best practices for preventing harmful interference and seek comment on how the Commission can encourage these efforts.

66. *Absence of a State Band Manager/State Lessor.* We also seek comment on how to structure our rules for states without a State Band Manager under this framework, either because we determine that states should have the right to decline this role or because there is no statewide licensee eligible for it. In the event a state without a State Band Manager has a State Lessor, public safety entities seeking to gain access to the 4.9 GHz band will be able to do so through leasing arrangements with the State Lessor. We seek comment on whether there are any other implications for public safety access to the 4.9 GHz band in that scenario, and whether there are additional changes we should make to our rules to accommodate public safety use in that event. Also, we recognize that currently there are a few states/territories with no existing 4.9 GHz statewide licensee,<sup>166</sup> and we seek comment on how to provide for future public safety use beyond grandfathered operations if this remains unchanged. How should local or nongovernmental entities, or state entities not seeking status as a State Lessor or State Band Manager, obtain 4.9 GHz band access in the absence of a statewide licensee that has voluntarily assumed either of those roles? How can we best encourage states without a statewide license to obtain one, either for purposes of public safety use and/or to facilitate leasing to commercial entities, critical infrastructure or other users? Are there barriers to such licensing, either logistical or in state law?

### C. Supporting and Encouraging Greater 4.9 GHz Band Usage

67. *Encouraging Collaboration Across Jurisdictions.* In the *Sixth Further Notice*, the Commission sought comment on ways to increase the flexibility of regional planning committees in facilitating use of the 4.9 GHz band.<sup>167</sup> Although we decline to adopt any specific changes related to regional planning committees in the accompanying Sixth Report and Order, we seek comment more broadly on whether and how to encourage cross-jurisdictional cooperation, whether directly among State Lessors of different states or through regional planning committees.<sup>168</sup> Are there ways State Lessors (or State Band Managers) could leverage regional planning committees to standardize spectrum availability over larger geographic areas to facilitate spectrum access through secondary markets? Should we modify section 90.1211 of our rules to provide for a different role for regional planning committees in this process?<sup>169</sup> How would this cross-jurisdictional cooperation interact with a State Band Manager framework?

68. *States that Divert 911 Fees.* In the Sixth Report and Order, we create leasing opportunities for the vast majority of states, contingent upon their having not been identified in the Commission's December 2019 911 Fee Report as a state that diverts 911 fees for non-911 purposes. We now seek comment on how to address 911-fee-diverting states. Should we require such states to stop diversion before they are permitted to benefit from the leasing framework, including the ability to create a

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<sup>166</sup> States/territories without any statewide license are: American Samoa, Georgia, Iowa, Kansas, the Northern Mariana Islands, and South Dakota.

<sup>167</sup> *Sixth Further Notice*, 33 FCC Rcd at 3275-77, paras. 39-44.

<sup>168</sup> PSSA Sept. 21, 2020 *Ex Parte* at 5, 7 (seeking cross-jurisdictional coordination to maintain interoperability); IAFC Sept. 21, 2020 *Ex Parte* at 1-2.

<sup>169</sup> 47 CFR § 90.1211.

State Lessor, or extend the leasing framework to such states? Would extending the framework to such states increase innovation and enable access to rural WISPs, electric utilities, and 5G wireless operators that may be able to put this too-fallow spectrum to use? Or would such an extension inappropriately reward states that continue to hurt public safety by diverting 911 fees to non-911 purposes? Should we limit our proposal in this Seventh Further Notice to allow states to create a State Band Manager only to states that do not divert 911 fees? Should we create an exception for states seeking to establish a State Lessor solely for the purpose of leasing to public safety entities? How would these approaches impact future public safety, commercial, and critical infrastructure access to spectrum in the band and operations? We seek comment on the costs and benefits of adopting any of the above approaches to addressing this important public safety issue.

69. We also seek comment on how to address states that start or stop diverting 911 fees. First, we recognize in the Sixth Report and Order that states may stop diverting 911 fees and allow them to petition the Commission to access the 4.9 GHz leasing framework based on documented proof of such a change. Should we continue that process going forward, or should we automatically allow a state that is no longer identified as a fee diverter in a future report to start leasing? To access the leasing framework, is it sufficient for a state to show that it has stopped diverting 911 fees, or must it replenish the diverted funds as well (specifically those that triggered the designation as a fee-diverting state)? Second, how should we treat states that are identified as diverters in a subsequent Commission annual 911 fee report to Congress? Should we prohibit such states from signing new leases until they establish they no longer divert 911 fees? Should we require them to cease diverting 911 fees within some period of time or else face termination of their leasing rights? If so, how long should they have to correct the error? Three months? One year? Three years? In the event a state begins diverting 911 fees, how do we ensure that any lessees are held harmless and can continue to access the spectrum they have leased? Does the Commission have authority to prohibit a lessee from making any payments to use the spectrum during a period in which a state is identified as a fee diverter? Third, should there be a new mechanism for states to challenge the Commission's inclusion of a state a fee-diverter in annual fee reports, or is the ability to petition the Commission envisioned by today's Sixth Report and Order sufficient for these purposes?

70. Finally, should we create alternative means of accessing unused spectrum in the 4.9 GHz band for serial diverters? Specifically, if the Commission's annual 911 fee report identifies a state as a diverter for three years in a row, should the Commission itself establish a band manager to oversee operations in the states? If so, should we do so through a request for proposal process? Or should we conduct an overlay auction in such states to allow a commercial operator full access to the 50-megahertz band (while protecting incumbent public safety uses)? In short, how can the Commission maximize use of 4.9 GHz band spectrum while further discouraging 911 fee diversion?

71. *Dynamic Spectrum Sharing.* We seek comment on whether a dynamic spectrum access system in the 4.9 GHz band would make it easier for a State Lessor to implement the spectrum leasing structure adopted in the accompanying Sixth Report and Order. If so, which type of spectrum access systems would be most useful in this band? Would a State Lessor be more likely to engage in spectrum leasing if it could rely on dynamic spectrum sharing to ensure continued spectrum availability to suit the needs of public safety entities? How would such dynamic spectrum sharing arrangements work within a State Band Manager framework? As sharing between public safety and non-public safety operations increases, are there particular public safety operations that require protection above and beyond those currently found in the Commission's rules?

72. The Commission has adopted rules facilitating dynamic spectrum access in several spectrum bands, including the TV white spaces,<sup>170</sup> the Citizens Broadband Radio Service,<sup>171</sup> and the 6

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<sup>170</sup> The TV white space database allows for unlicensed access to unused spectrum in the TV bands. Licensed TV band operations are protected through an automated system that authorizes operations only on unused spectrum ("white spaces") throughout the unlicensed device's coverage area. See generally 47 CFR Part 15, subpart H. See also *Incentive Auction R&O and Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band*, 600 (continued....)

GHz band.<sup>172</sup> In those bands, the Commission enabled a range of different dynamic spectrum access solutions that could be implemented in the 4.9 GHz band.<sup>173</sup> Could any of these different models help facilitate coordination of leasing and future public safety operations in this band? Commenters should discuss the costs and benefits of any proposed sharing regime, as well as the logistics of its implementation. What other rule changes or Commission actions would be required to foster dynamic spectrum access? If the Commission were to implement such a system, should it be mandatory or voluntary? How should it differ from existing dynamic spectrum access systems?

73. *Aeronautical Mobile Operations.* In both the *Fifth Further Notice* and *Sixth Further Notice*, the Commission sought comment on whether to authorize aeronautical mobile operations in the 4.9 GHz band,<sup>174</sup> which are currently prohibited by our rules.<sup>175</sup> The Commission, however, has granted numerous waivers of the section 90.1205(c) prohibition on aeronautical use.<sup>176</sup> Although we decline in the accompanying Sixth Report and Order to adopt any changes related to the band plan with respect to aeronautical mobile operations, we seek comment today on whether we should amend our rules to permit these operations given our new leasing framework. Commenters generally support our proposals related to aeronautical mobile operations,<sup>177</sup> and we seek comment on the interplay of these operations and our new leasing framework, as well as a State Band Manager framework. If we permit aeronautical mobile operations in the band, should we permit transmissions by unmanned aerial systems or only manned aircraft? What are the costs and benefits of permitting aeronautical mobile operations in the 4.9 GHz band? Would such operations be likely to increase the potential for harmful interference to public safety operations, or to new non-public safety operations deployed in the band through leasing? Should the Commission make these decisions by rule or allow State Band Managers the flexibility to make these decisions?

(Continued from previous page) \_\_\_\_\_

*MHz Guard Bands and Duplex Gap, and Channel 37*, ET Docket No. 14-65, GN Docket No. 12-268, Report and Order, 30 FCC Rcd 9551 (2015).

<sup>171</sup> The Citizens Broadband Radio Service involves a three-tiered structure of different access rights along with spectrum use sensing capabilities to allow incumbent radar systems, licensed services, and licensed-by-rule services to coexist in the band. See generally *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 (2015) (*3.5 GHz Order*).

<sup>172</sup> The 6 GHz band's automated frequency control system allows unlicensed access to the band outdoors and at high power while protecting incumbent services through a database of incumbent operations that unlicensed devices must query to determine available channels for their coverage area. See *Unlicensed Use of the 6 GHz Band*, ET Docket No. 18-295, Report and Order and Further Notice of Proposed Rulemaking, FCC 20-51 (Apr. 24, 2020).

<sup>173</sup> OTI Sept. 23, 2020 *Ex Parte* at 3.

<sup>174</sup> *Sixth Further Notice*, 33 FCC Rcd at 3266-70, paras. 12-24; *Amendment of Part 90 of the Commission's Rules; Implement a Nationwide, Broadband Interoperable Public Safety Network in the 700 MHz Band; Service Rules for the 698-746 and 777-792 MHz Bands*, WP Docket No. 07-100, PS Docket No. 06-229, WT Docket No. 06-150, Fourth Report and Order and Fifth Further Notice of Proposed Rulemaking, 27 FCC Rcd 6577, 6600, para. 60 & n. 144 (*Fifth Further Notice*).

<sup>175</sup> 47 CFR § 90.1205(c).

<sup>176</sup> *Fifth Further Notice*, 27 FCC Rcd at 6600, para. 60 & n.144 (stating that the Commission had "granted roughly a dozen waivers of Section 90.1205(c)").

<sup>177</sup> Region 20 Reply Comments at 9 ("We support the option of using spectrum in 4.9 GHz for aircraft use"); *Id.* at 10 (supporting the 4.9 GHz band for robot use); UTC et al. Reply Comments at 6-7.

## V. PROCEDURAL MATTERS

74. *Regulatory Flexibility Act.*—The Regulatory Flexibility Act of 1980, as amended (RFA)<sup>178</sup> 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.”<sup>179</sup> Accordingly, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the potential impact of the rule and policy changes adopted in the Sixth Report and Order on small entities. The FRFA is set forth in Appendix D.

75. The Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of rule and policy change proposals in the Seventh Further Notice on small entities. The IRFA is set forth in Appendix E.

76. *Paperwork Reduction Act.*—The Sixth Report and Order contains new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It 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 and modified information collection requirements contained in the proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002,<sup>180</sup> we previously sought specific comment on how we might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”<sup>181</sup> We have described impacts that might affect small businesses, which includes most businesses with fewer than 25 employees, in the Final Regulatory Flexibility Analysis (FRFA), attached as Appendix D.

77. The Seventh Further Notice may result in new or revised information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. § 3506(c)(4), the Commission seeks specific comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

78. *Congressional Review Act.*—The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs, that this rule is non-major under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of the Sixth Report and Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. § 801(a)(1)(A).

79. *Ex Parte Presentations.*—The proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.<sup>182</sup> Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the

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<sup>178</sup> 5 U.S.C. § 603. The RFA, 5 U.S.C. § 601 et seq., has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996). The SBREFA was enacted as Title II of the Contract with America Advancement Act of 1996 (CWAAA).

<sup>179</sup> 5 U.S.C. § 605(b).

<sup>180</sup> Pub. L. No. 107-198.

<sup>181</sup> 44 U.S.C. § 3506(c)(4).

<sup>182</sup> 47 CFR § 1.1200 et seq.

presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

80. *Comment Filing Procedures.* —Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998). **Commenters should refer to WP Docket No. 07-100 when filing in response to this Seventh Further Notice of Proposed Rulemaking.**

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/ecfs/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
  - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.
  - Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19. See FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020). <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>
  - During the time the Commission's building is closed to the general public and until further notice, if more than one docket or rulemaking number appears in the caption of a proceeding, paper filers need not submit two additional copies for each additional docket or rulemaking number; an original and one copy are sufficient.

81. *People with Disabilities.* —To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the FCC's Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

82. *Additional Information.* —For additional information on this proceeding, contact Jon Markman of the Wireless Telecommunications Bureau, Mobility Division, at 202-418-7090 or

[Jonathan.Markman@fcc.gov](mailto:Jonathan.Markman@fcc.gov) or Thomas Eng of the Public Safety and Homeland Security Bureau at 202-418-0019 or [Thomas.Eng@fcc.gov](mailto:Thomas.Eng@fcc.gov).

## VI. ORDERING CLAUSES

83. Accordingly, **IT IS ORDERED** that, pursuant to the authority found in sections 4(i), 302, 303(b), 303(f), 303(g), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 302a, 303(b), 303(f), 303(g), 303(r), and 405, this *Sixth Report and Order and Seventh Further Notice of Proposed Rulemaking* **IS HEREBY ADOPTED**.

84. **IT IS FURTHER ORDERED** that the rules and requirements adopted herein WILL BECOME EFFECTIVE thirty (30) days after publication in the Federal Register, with the exception of section 90.1217. Section 90.1217 contains new or modified information collection requirements that require review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act. The Commission directs the Wireless Telecommunications Bureau to announce the effective date of those information collections in a document published in the Federal Register after the Commission receives OMB approval, and directs the Wireless Telecommunications Bureau to cause section 90.1217 to be revised accordingly.

85. **IT IS FURTHER ORDERED** that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this *Sixth Report and Order and Seventh 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.

86. **IT IS FURTHER ORDERED** that the Commission **SHALL SEND** a copy of this *Sixth 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).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

**APPENDIX A****List of Commenters****(WP Docket No. 07-100)**

Alarm Industry Communications Committee  
American Association of State Highway and Transportation Officials  
American Petroleum Institute and Energy Telecommunications and Electrical Association  
Association of Public Safety Communications Officials (APCO)  
California Internet, LP  
City of Chattanooga and Tennessee Valley Regional Communications System  
City of New York  
Committee on Radio Frequencies of the National Academy of Sciences  
Enterprise Wireless Alliance (EWA)  
Federated Wireless  
Flathead Emergency Communications Center  
Florida Region 9 Regional Planning Committee  
Grundy County Emergency Telephone System Board  
Lake County Sheriff's Office  
Lauderdale County Emergency Management Communication District  
National Regional Planning Council  
National Public Safety Telecommunications Council (NPSTC)  
Nokia  
Public Safety Communications Council  
Region 21 700 MHz Regional Planning Committee  
Regional Transportation District (Serving the Denver Metropolitan Area)  
San Francisco Bay Area Regional Interoperable Communications Systems Authority  
San Francisco Bay Area Rapid Transit District  
Southern Company Services  
State of Maryland  
Utilities Technology Council, Edison Electric Institute, National Rural Electric Cooperative Association, GridWise Alliance  
V-COMM  
Wi-Fi Alliance  
Wireless Internet Service Providers Association (WISPA)



**Reply Comments**  
**(WP Docket No. 07-100)**

Alarm Industry Communications Committee  
Association of American Railroads  
California Internet, LP  
City and County of Denver, San Bernardino County, Government Wireless Technology and  
Communications Association  
EWA  
Los Angeles County, California  
NPSTC  
pdvWireless  
Region 20 700 MHz Regional Planning Committee  
San Francisco Bay Area Rapid Transit District  
Tennessee Homeland Security District 7  
Utilities Technology Council, Edison Electric Institute, National Rural Electric Cooperative  
Association, GridWise Alliance  
WISPA

**APPENDIX B****Final Rules**

The Federal Communications Commission amends 47 CFR parts 1 and 90 to read 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, unless otherwise noted.

2. Revise § 1.9001 to read as follows:

**§ 1.9001 Purpose and scope.**

(a) The purpose of this subpart is to implement policies and rules pertaining to spectrum leasing arrangements between licensees in the services identified in this subpart and spectrum lessees. This subpart also implements policies for private commons arrangements. The policies and rules in this subpart also implicate other Commission rule parts, including parts 1, 2, 20, 22, 24, 25, 27, 30, 80, 90, 95, and 101 of title 47, chapter I of the Code of Federal Regulations.

(b) Except as provided in paragraph (c) of this section, licensees holding exclusive use rights are permitted to engage in spectrum leasing whether their operations are characterized as commercial, common carrier, private, or non-common carrier.

(c) A State Lessor licensee (as defined in § 90.1217 of this chapter) in the shared 4940-4990 MHz band (see part 90, subpart Y, of this chapter) is permitted to lease some or all of the spectrum rights under its license, except that a state identified as diverting 911 fees in the Commission's December 2019 911 Fee Report sent to Congress pursuant to 47 U.S.C. 615a-1(f)(2) shall not be permitted to lease 4.9 GHz spectrum.

3. Amend § 1.9005 by adding paragraph (oo) to read as follows:

**§ 1.9005 Included services.**

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(oo) The 4940-4990 MHz band (part 90 of this chapter).

4. Revise § 1.9048 to read as follows:

**§ 1.9048 Special provisions relating to spectrum leasing arrangements involving licensees in the Public Safety Radio Services.**

(a) Licensees in the Public Safety Radio Services (see part 90, subpart B, and § 90.311(a)(1)(i) of this chapter) may enter into spectrum leasing arrangements with other public safety entities eligible for such a license authorization as well as with entities providing communications in support of public safety operations (see § 90.523(b) of this chapter).

(b) In addition to spectrum leasing arrangements permitted under paragraph (a) of this section, a State Lessor (as defined in § 90.1217 of this chapter) in the 4940-4990 MHz band (see part 90, subpart Y, of this chapter) may enter into spectrum leasing arrangements with any entity eligible under this part to be a spectrum lessee, except that a state identified as diverting 911 fees in the Commission's December 2019 911 Fee Report sent to Congress pursuant to 47 U.S.C. 615a-1(f)(2) shall not be permitted to lease 4.9 GHz spectrum.

**PART 90 – PRIVATE LAND MOBILE RADIO SERVICES**

5. The authority citation for part 90 continues to read as follows:

AUTHORITY: 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7), 1401-1473.

6. Revise § 90.1203 to read as follows:

§ 90.1203 Eligibility.

(a) Entities providing public safety services (as defined in § 90.523) are eligible to hold a Commission license for systems operating in the 4940-4990 MHz band. All of the requirements and conditions set forth in § 90.523 also govern authorizations in the 4940-4990 MHz band.

(b) 4.9 GHz band licensees may enter into sharing agreements or other arrangements for use of the spectrum with entities that do not meet the eligibility requirements in this section. However, all applications in the band are limited to operations in support of public safety, except as provided in paragraph (c) of this section.

(c) Operations conducted pursuant to a license held by a State Lessor (as defined in § 90.1217), whether conducted by the State Lessor or its lessee(s), are not limited to operations in support of public safety. For purposes of subpart X of part 1 of this chapter, such lessees shall be deemed eligible and qualified as a licensee, notwithstanding paragraph (a) of this section.

7. Add § 90.1217 to read as follows:

§ 90.1217 State Lessor.

(a) The State Lessor shall have the authority to lease some or all of its 4.9 GHz band spectrum usage rights, including geographic areas licenses or permanent fixed sites individually licensed under § 90.1207, pursuant to subpart X of part 1 of this chapter, to any entity eligible to be a spectrum licensee under subpart X of part 1.

(b) In each state (as defined in § 90.7) one state entity holding a statewide license may be selected as a State Lessor.

(1) In states where there is only one state entity holding a statewide license, that licensee will be deemed the State Lessor.

(2) In states where there are multiple state entities holding a statewide license, one must be selected as the State Lessor if seeking to lease 4.9 GHz band spectrum use rights. This selection must be demonstrated through the inclusion of a letter, signed by all state entities holding a statewide license in that state, affirming the selection of a State Lessor for that state, in any application to the Commission that requires demonstration of State Lessor Status, including FCC Form 608. If states with multiple state entities holding a statewide license are unable to reach an agreement affirming a State Lessor selection, the Commission will accept in the alternative a letter, signed by the elected chief executive (Governor) of that state, or his or her designee, affirming the selection of a State Lessor for that state.

(c) The State Lessor may assign its license to another state entity eligible for a statewide license.

(1) Any assignment application must be accompanied by a letter, signed by the elected chief executive (Governor) of that state, or his or her designee, affirming the selection of the assignee as the State Lessor for that state.

(2) Any assignment of the State Lessor's license must include all permanent fixed site authorizations obtained while a State Lessor. A licensee selected as the State Lessor may only assign its entire license and may not partition or disaggregate its license.

**APPENDIX C****Proposed Rules****PART 90 – PRIVATE LAND MOBILE RADIO SERVICES**

1. The authority citation for part 90 continues to read as follows:

AUTHORITY: 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7), 1401-1473

2. Revise § 90.1203 to read as follows:

§ 90.1203 Licensing.

(a) Except as provided in paragraphs (c) and (d) of this section, no new licenses will be issued for the 4940-4990 MHz band. Licenses issued prior to the effective date of these rules are subject to renewal but may not be modified in any way to increase a licensee's spectral or geographic coverage.

(b) Operations conducted pursuant to a license held by a State Lessor (as defined in § 90.1217), whether conducted by the State Lessor or its lessee(s), are not limited to operations in support of public safety. All other operations in this band are limited to those in support of public safety.

(c) Where there is no statewide license in a state, a state entity may apply for a license covering the entire state, provided it includes with Form 601 a letter, signed by the elected chief executive (Governor) for that state, or his or her designee, affirming that the entity is to act as the State Lessor for that state.

(d) The following applications may also be submitted by entities holding a license under this subpart:

- (1) applications to renew existing licenses without modification;
- (2) applications that seek to modify existing licenses by deleting frequencies or fixed sites;
- (3) applications that seek to modify existing licenses by changing technical parameters in a manner that does not expand the station's spectral or geographic coverage, such as decreases in bandwidth, power level, or antenna height;
- (4) applications to assign or transfer;
- (5) notifications of construction for permanent fixed site licenses or consummation of assignments or transfers;
- (6) requests for extensions of time to construct or consummate previously granted assignment or transfer applications;
- (7) applications to cancel licenses;
- (8) applications for special temporary authority for short-term operations; and
- (9) applications from geographic area licensees that require individual licensing under § 90.1207(b).

## APPENDIX D

## Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Sixth Further Notice of Proposed Rulemaking (Sixth FNPRM)* in March 2018.<sup>2</sup> The Commission sought written public comment on the proposals in the *Sixth FNPRM*, including comments on the IRFA. No comments were filed addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.<sup>3</sup>

**A. Need for, and Objectives of, the Final Rules**

2. The *Sixth Report & Order* continues the Commission efforts to expand access to mid-band spectrum by opening the band for flexible use via the secondary market while continuing to ensure access for public safety operations. The history of this band indicates that public safety operations do not require exclusive access to the entire 50 megahertz of spectrum and can safely share this band with other operations. The actions we take today allow one statewide licensee of the 4.9 GHz (4940-4990 MHz) band in each state (the State Lessor) to lease some or all of their spectrum rights to third parties that are otherwise eligible to be a spectrum lessee for fixed or mobile use, including to commercial entities, and eliminates the requirement that, when leased or used by the State Lessor, the spectrum must be used to support public safety. We only permit states that are not identified in the Commission's December 2019 911 Fee Report as diverting 911 fees for non-911 purposes to lease spectrum rights to non-public safety or public safety entities.<sup>4</sup> We anticipate that unrestricted secondary market transactions and non-public safety use will encourage greater development of equipment for this band, driving down costs and making it easier for public safety and non-public safety entities alike to deploy operations. Furthermore, making available mid-band spectrum for commercial use is critical in ensuring U.S. leadership in 5G and in helping to close the digital divide.

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

3. There were no comments filed that specifically addressed the proposed rules and policies presented in the IRFA.

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

4. 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.<sup>5</sup>

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

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

<sup>2</sup> *Sixth Further Notice of Proposed Rulemaking*, 33 FCC Rcd 3261, Appendix C, Paras. 1-26.

<sup>3</sup> See 5 U.S.C. § 604.

<sup>4</sup> FCC, Eleventh Annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges at 2, para. 1 & n. 1 (2019) (Eleventh Report), <https://www.fcc.gov/files/11thannual911feereport2019pdf>. The Eleventh Report identified five states that diverted 911 fees to other purposes in calendar year 2018: Nevada, New Jersey, New York, Rhode Island, and West Virginia. Eleventh Report at 39, para. 27.

<sup>5</sup> See 5 U.S.C. § 604 (a)(3).

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

6. 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.<sup>6</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>7</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>8</sup> A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>9</sup>

7. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.<sup>10</sup> First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA’s Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.<sup>11</sup> These types of small businesses represent 99.9% of all businesses in the United States which translates to 30.7 million businesses.<sup>12</sup>

8. 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.”<sup>13</sup> 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.<sup>14</sup> Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.<sup>15</sup>

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<sup>6</sup> See 5 U.S.C. § 604(a)(4).

<sup>7</sup> 5 U.S.C. § 601(6).

<sup>8</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>9</sup> 15 U.S.C. § 632.

<sup>10</sup> See 5 U.S.C. § 601(3)-(6).

<sup>11</sup> See SBA, Office of Advocacy, “What’s New With Small Business?”, <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf> (Sept 2019).

<sup>12</sup> *Id.*

<sup>13</sup> 5 U.S.C. § 601(4).

<sup>14</sup> The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), “Who must file,” <https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

<sup>15</sup> See Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and  
(continued....)

9. 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.”<sup>16</sup> U.S. Census Bureau data from the 2017 Census of Governments<sup>17</sup> indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.<sup>18</sup> Of this number there were 36,931 general purpose governments (county<sup>19</sup>, municipal and town or township<sup>20</sup>) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts<sup>21</sup> with enrollment populations of less than 50,000.<sup>22</sup> Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”<sup>23</sup>

10. *Private Land Mobile Radio Licensees.* Private land mobile radio (PLMR) systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. Companies of all sizes operating in all U.S. business categories use these radios. Because of the vast array of PLMR users, the Commission has not developed a small business size standard specifically applicable to PLMR users. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone

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Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

<sup>16</sup> 5 U.S.C. § 601(5).

<sup>17</sup> See 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with “2” and “7”. See also Census of Governments, <https://www.census.gov/programs-surveys/cog/about.html>.

<sup>18</sup> See U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general-purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also Table 2. CG1700ORG02 Table Notes\_Local Governments by Type and State\_2017.

<sup>19</sup> See U.S. Census Bureau, 2017 Census of Governments - Organization, Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

<sup>20</sup> See U.S. Census Bureau, 2017 Census of Governments - Organization, Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

<sup>21</sup> See U.S. Census Bureau, 2017 Census of Governments - Organization, Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. See also Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes\_Special Purpose Local Governments by State\_Census Years 1942 to 2017.

<sup>22</sup> While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

<sup>23</sup> This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

communications.<sup>24</sup> The appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees.<sup>25</sup> For this industry, U.S. Census Bureau data for 2012 shows that there were 967 firms that operated for the entire year.<sup>26</sup> Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.<sup>27</sup> Thus under this category and the associated size standard, the Commission estimates that the majority of PLMR licensees are small entities.

11. According to the Commission's records, a total of approximately 269,953 licenses comprise PLMR users.<sup>28</sup> Of this number, there are a total of 3,578 PLMR licenses in the 4.9 GHz band.<sup>29</sup> The Commission does not require PLMR licensees to disclose information about number of employees, and does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. The Commission however believes that a substantial number of PLMR licensees may be small entities despite the lack of specific information.

12. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment.<sup>30</sup> Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.<sup>31</sup> The SBA has established a size standard for this industry of 1,250 employees or less.<sup>32</sup> U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year.<sup>33</sup> Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments

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<sup>24</sup> See U.S. Census Bureau, *2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (except Satellite)"*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

<sup>25</sup> See 13 CFR § 121.201, NAICS Code 517312 (formerly 517210).

<sup>26</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ5, Information: Subject Series: *Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012>.

<sup>27</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA standard.

<sup>28</sup> This figure was derived from Commission licensing records as of June 22, 2020. Licensing numbers change on a daily basis. This does not indicate the number of licensees, as licensees may hold multiple licenses. There is no information currently available about the number of PLMR licensees that have fewer than 1,500 employees.

<sup>29</sup> Based on an FCC Universal Licensing System search of September 22, 2020. Federal Communications Commission, Universal Licensing System, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp> (last visited September 22, 2020).

<sup>30</sup> See U.S. Census Bureau, *2017 NAICS Definition, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing"*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=334220&search=2017>.

<sup>31</sup> *Id.*

<sup>32</sup> See 13 CFR § 121.201, NAICS Code 334220.

<sup>33</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334220, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.



operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.<sup>34</sup> Based on this data, we conclude that a majority of manufacturers in this industry are small.

13. *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.<sup>35</sup> The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.<sup>36</sup> For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.<sup>37</sup> Of this total, 955 firms employed fewer than 1,000 employees and 12 firms employed 1000 employees or more.<sup>38</sup> Thus under this category and the associated size standard, the Commission estimates that the majority of Wireless Telecommunications Carriers (except Satellite) are small entities.

14. The Commission's own data—available in its Universal Licensing System—indicate that, as of August 31, 2018 there are 265 Cellular licensees that will be affected by our actions.<sup>39</sup> The Commission does not know how many of these licensees are small, as the Commission does not collect that information for these types of entities. Similarly, according to internally developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.<sup>40</sup> Of this total, an estimated 261 have 1,500 or fewer employees, and 152 have more than 1,500 employees.<sup>41</sup> Thus, using available data, we estimate that the majority of wireless firms can be considered small.

15. *Frequency Coordinators*. Neither the Commission nor the SBA has developed a small business size standard specifically applicable to spectrum frequency coordinators.<sup>42</sup> The closest applicable SBA category is Business Associations which comprises establishments primarily engaged in

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<sup>34</sup>*Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>35</sup> See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (except Satellite)”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

<sup>36</sup> See 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

<sup>37</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012>.

<sup>38</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>39</sup> See Federal Communications Commission, *Universal Licensing System*, <http://wireless.fcc.gov/uls> (last visited August 30, 2018). For the purposes of this FRFA consistent with Commission practice for wireless services, the Commission estimates the number of licensees based on the number of unique FCC Registration Numbers.

<sup>40</sup> See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, Trends in Telephone Service at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-301823A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf).

<sup>41</sup> See *id.*

<sup>42</sup> The Commission's records indicate that there are currently 13 frequency coordinators that would be affected by this rulemaking. See <https://www.fcc.gov/wireless/wireless-services/industrial-business/industrial-business-licensing#block-menu-block-4>.

promoting the business interests of their members.<sup>43</sup> The SBA has developed a small business size standard for “Business Associations,” which consists of all such firms with gross annual receipts of \$8 million or less.<sup>44</sup> For this category, U.S. Census Bureau data for 2012 shows that there were 14,996 firms that operated for the entire year.<sup>45</sup> Of these firms, a total of 14,229 had gross annual receipts of less than \$5 million and 396 firms had gross annual receipts of \$5 million to \$9,999,999.<sup>46</sup>

16. There are 13 entities certified to perform frequency coordination functions under Part 90 of the Commission’s rules.<sup>47</sup> According to U. S. Census Bureau data approximately 95% of business associations have gross annual receipts of \$8 million or less and would be classified as small entities. The Business Associations category is very broad however and does not include specific figures for firms that are engaged in frequency coordination. Thus, the Commission is unable to ascertain exactly how many of the frequency coordinators are classified as small entities under the SBA size standard.<sup>48</sup> Therefore, for purposes of this FRFA under the associated SBA size standard, the Commission estimates that a majority of the 13 FCC-certified frequency coordinators are small.

#### **E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

17. The new leasing opportunities created in the *Sixth Report & Order* will result in reporting, recordkeeping and compliance obligations for State Lessor licensees and lessees of 4.9 GHz band spectrum who elect to enter leasing arrangements for this spectrum. More specifically, a 4.9 GHz band State Lessor entering into leases will be required to file an FCC Form 608, either seeking prior Commission approval to enter into the lease for a *de facto* transfer spectrum lease or providing notice of the lease for spectrum manager leases. These requirements are consistent with existing Commission *Secondary Market* rules. Where a state has multiple statewide licenses held by state entities and voluntarily seeks to lease, the state must select one of the licensees as the State Lessor. As part of any lease arrangement with a lessee, a State Lessor must submit to the Commission FCC Form 608 accompanied by evidence that it has been selected as State Lessor. Such evidence shall consist of a copy of the written agreement signed by each of the state’s multiple statewide licensees indicating the selection of the State Lessor. If states with multiple statewide licensees are unable to reach such an agreement, we will accept in the alternative (as an attachment to FCC Form 608) a gubernatorial letter designating a certain state entity licensee as the State Lessor.

18. State Lessors will be required to comply with our *Secondary Markets* rules, in particular our existing part 1 leasing rules associated with entering into spectrum lease agreements which includes

<sup>43</sup> See U.S. Census Bureau, *2017 NAICS Definitions, “813910 Business Associations”*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=813910&search=2017%20NAICS%20Search>.

<sup>44</sup> See 13 CFR § 121.201, NAICS Code 813910.

<sup>45</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1281SSSZ4, *Other Services (Except Public Administration): Subject Series - Estab and Firm Size: Receipts/Revenue Size of Firms for the U.S.: 2012*, NAICS Code 813910, <https://data.census.gov/cedsci/table?text=EC1281SSSZ4&tid=ECNSIZE2012.EC1281SSSZ4&hidePreview=false&vintage=2012>.

<sup>46</sup> *Id.* Available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that have receipts of \$8 million or less. The data provided accounts for firms with receipts of less than \$5 million or between \$5 million and \$9,999,999.

<sup>47</sup> See <https://www.fcc.gov/general/public-safety-frequency-coordinators>; and <https://www.fcc.gov/wireless/wireless-services/industrial-business/industrial-business-licensing>; See also, e.g., Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket 92-235, *Second Report and Order*, 12 FCC Rcd 14307, 14353 (1997).

<sup>48</sup> 13 CFR § 121.201, NAICS Code 813910.

fulfilling all obligations associated with compliance with the Communications Act and Commission rules associated with the original license; complying with our rules on assignments and transfers of control for spectrum leasing arrangements in the 4.9 GHz band; and ensuring that spectrum leasing arrangements meet all requirements as to contractual provisions. Similarly, lessees will be required to comply with all relevant provisions of our *Secondary Markets* rules, including, for example, our subleasing rules if the lease agreement permits such subleasing. Lessees will also be required to comply with any other requirements applicable to their operations, such as those under part 9 of our rules, whereby commercial mobile radio service (CMRS) providers and other relevant entities remain responsible for compliance with 9-1-1 and Enhanced 9-1-1 obligations, if applicable. Additionally, lessees will be subject to compliance with the informal coordination requirements of section 90.1209(b) in the same way as licensees.

19. The Commission does not believe the rules adopted in the *Sixth Report & Order* will require small entities to hire attorneys, engineers, consultants, or other professionals in order to comply with the rule changes. Similarly, although the Commission cannot quantify the cost of compliance with the rule changes discussed herein, we do not believe that the costs and/or administrative requirements associated with any of the adopted rule changes will unduly burden small entities. Our actions to permit leasing of 4.9 GHz band spectrum by a statewide licensee is the fastest and most efficient way to drive interest and investment in the band. Moreover, we expect the absence of restrictions on lessee eligibility will open the band to new commercial and other non-public safety operation uses. We anticipate that allowing spectrum leasing opportunities in this band will ultimately decrease deployment barriers—such as high equipment costs—for both public safety licensees as well as new lessees in the 4.9 GHz band.

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

20. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”<sup>49</sup>

21. The rules the Commission adopts should benefit small entities by giving them more options for gaining access to valuable wireless spectrum and increasing economic opportunity. Our actions to open the 4.9 GHz band to the secondary market to permit leasing by a statewide licensee and not to limit lessee eligibility will allow participating small entities to avoid operational costs that may have otherwise ensued had we not taken this approach. Moreover, our actions may drive down the costs of compatible equipment and facilitate innovative cost-sharing arrangements between public safety licensees and non-public safety lessees both of which would benefit and minimize the economic impact for participating small entities. Similarly, small entities stand to benefit from our finding that limiting non-public safety use to one industry, or otherwise restricting non-public safety eligibility, would limit opportunities to grow significantly investment in the 4.9 GHz band. This determination is consistent with the Commission’s longstanding policy of allowing flexible licensing to ensure the most efficient use of spectrum and our statutory mandates to promote economic opportunity and competition, and the efficient and intensive use of electromagnetic spectrum.

22. In the *Sixth Further Notice*, the Commission put forth a number of other proposals for consideration to stimulate expanded use of and investment in the 4.9 GHz band including: (i) a revised band plan, that included reserving certain channel for aeronautical mobile and robotic use; (ii) more formal coordination requirements; (iii) additional information collection and registration of the use of the

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<sup>49</sup> 5 U.S.C. § 604(a)(6).

band, that included new deployment reports and construction deadlines; (iv) new technical rules; and (v) additional regional planning. Given our decision to first permit broader use of the band through leasing, at this time we opted not to adopt any of these proposals and thereby minimize any additional economic impact on small entities that may have resulted from additional compliance requirements.

**G. Report to Congress**

23. The Commission will send a copy of the *Sixth Report & Order*, including this FRFA, in a report to Congress pursuant to the Congressional Review Act.<sup>50</sup> In addition, the Commission will send a copy of the *Sixth Report & Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Sixth Report & Order*, and FRFA (or summaries thereof) will also be published in the *Federal Register*.<sup>51</sup>

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<sup>50</sup> See 5 U.S.C. § 801(a)(1)(A).

<sup>51</sup> See 5 U.S.C. § 604(b).

## APPENDIX E

## Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act (RFA) of 1980, as amended, the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *Seventh Further Notice of Proposed Rulemaking (Seventh FNPRM)*.<sup>1</sup> Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments as specified in the *Seventh FNPRM*. The Commission will send a copy of the *Seventh FNPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).<sup>2</sup> In addition, the *Seventh FNPRM* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>3</sup>

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

2. In the *Seventh FNPRM*, we propose to modify the licensing regime for the 4.9 GHz band to adopt licensing at the state level going forward to allow only state entities in states without a statewide licensee in the 4.9 GHz band to receive a new license. States with an existing statewide licensee will not see any new licensing, and local entities will not be permitted to obtain licenses. We seek comment on this proposal. We also propose to grandfather existing public safety licenses as of the date of the *Freeze Public Notice* and licensees granted pursuant to a waiver of, or modification of, the freeze,<sup>4</sup> in order to protect incumbent public safety operations and will prohibit expansion of spectral rights by local entities other than through agreement with statewide licensees. We seek comment on the appropriate scope and application of grandfathering if we adopted this proposal.

3. In the *Seventh FNPRM*, we also seek comment on a new State Band Manager model for coordination of public safety entity access to the 4.9 GHz band similar to the band manager model the Commission adopted in the 700 MHz band. Under this framework, the state government will be responsible for coordinating all 4.9 GHz band operations, whether through leasing (through the State Lessor role) or by public safety (through the State Band Manager role) in each state, as well as assisting in cross-jurisdictional cooperation to avoid harmful interference. This model will also ensure that each state determines the balance of public safety and non-public safety use that is best for its own situation. We seek comment on the role of the Commission in oversight of the decisions of the state government as part of its role as State Band Manager. We also seek comment on the extent to which states are equipped to take on such a management and coordination and the costs and benefits of this approach. Further, we seek comment on the future of individual site licensing under this model, and on the continued use of primary status for some sites in the band. In addition, we seek comment on the future of the band where no statewide licensee exists, or where the state chooses not to take on the role of State Band Manager or State Lessor. We also seek comment on whether and how we should permit access to the leasing framework for states that start or stop diverting 911 fees, including whether to have an exception for leasing solely to public safety entities, and if there should be a new mechanism for a state to challenge the Commission's designation of the state as a fee-diverter in annual fee reports.

4. Finally, we seek comment on the implementation of this approach and any changes which can facilitate the transition to this model. Given our new leasing framework and a State Band Manager framework on which we seek comment, we seek comment on a proposal raised in the *Sixth Further*

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

<sup>2</sup> See 5 U.S.C. § 603(a).

<sup>3</sup> See *Id.*

<sup>4</sup> *Freeze Public Notice* at 1.

*Notice* to expand the data included in our Universal Licensing System to more comprehensively reflect 4.9 GHz band deployments beyond fixed site licenses, to include locations and other technical parameters of base station deployed through geographic area licenses. We also seek comment on whether and how to encourage cross-jurisdictional cooperation, whether directly between State Lessors of different states or through regional planning committees and inquire whether to modify section 90.1211 of our rules to provide for a different role for regional planning committees in this process. Within the scope dynamic spectrum sharing, we ask whether we should implement rules similar to those governing the use of dynamic spectrum access systems in other spectrum bands (i.e. Citizens Broadband Radio Service and 6 GHz band), in the 4.9 GHz band to make the spectrum leases we authorize in the *Sixth Report and Order* and a new State Band Manager model we propose in the *Seventh FNPRM* easier to implement. Further, with respect to aeronautical mobile operations, we seek comment on whether we should amend our rules to permit these operations, given our new leasing approach and a proposed State Band Manager framework.

**B. Legal Basis**

5. The *proposed* action is authorized pursuant to Sections 1, 4(i), 4(j), 4(o), 301, 303(b), 303(g), 303(r), 316, 332, and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 154(j), 154(o), 301, 303(b), 303(g), 303(r), 316, 332, and 403.

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

6. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.<sup>5</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>6</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>7</sup> 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.<sup>8</sup>

7. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small *entities* that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.<sup>9</sup> First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA’s Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.<sup>10</sup> These types of small businesses represent 99.9% of all businesses in the United States which translates to 30.7 million businesses.<sup>11</sup>

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<sup>5</sup> 5 U.S.C. § 603(b)(3).

<sup>6</sup> 5 U.S.C. § 601(6).

<sup>7</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

<sup>8</sup> 15 U.S.C. § 632.

<sup>9</sup> See 5 U.S.C. § 601(3)-(6).

<sup>10</sup> See SBA, Office of Advocacy, “What’s New With Small Business?”, <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf> (Sept 2019).

<sup>11</sup> *Id.*

8. 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.”<sup>12</sup> 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.<sup>13</sup> Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.<sup>14</sup>

9. 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.”<sup>15</sup> U.S. Census Bureau data from the 2017 Census of Governments<sup>16</sup> indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.<sup>17</sup> Of this number there were 36,931 general purpose governments (county<sup>18</sup>, municipal and town or township<sup>19</sup>) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts<sup>20</sup> with enrollment

<sup>12</sup> 5 U.S.C. § 601(4).

<sup>13</sup> The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. *See* Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), “Who must file,”

<https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

<sup>14</sup> *See* Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-ao-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

<sup>15</sup> 5 U.S.C. § 601(5).

<sup>16</sup> *See* 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with “2” and “7”. *See also* Census of Governments, <https://www.census.gov/programs-surveys/cog/about.html>.

<sup>17</sup> *See* U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). *See also* Table 2. CG1700ORG02 Table Notes\_Local Governments by Type and State\_2017.

<sup>18</sup> *See* U.S. Census Bureau, 2017 Census of Governments - Organization, Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

<sup>19</sup> *See* U.S. Census Bureau, 2017 Census of Governments - Organization, Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

<sup>20</sup> *See* U.S. Census Bureau, 2017 Census of Governments - Organization, Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. *See also* Table 4. Special-Purpose Local Governments by

(continued....)

populations of less than 50,000.<sup>21</sup> Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”<sup>22</sup>

10. *Private Land Mobile Radio Licensees.* Private land mobile radio (PLMR) systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. Companies of all sizes operating in all U.S. business categories use these radios. Because of the vast array of PLMR users, the Commission has not developed a small business size standard specifically applicable to PLMR users. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications.<sup>23</sup> The appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees.<sup>24</sup> For this industry, U.S. Census Bureau data for 2012 shows that there were 967 firms that operated for the entire year.<sup>25</sup> Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.<sup>26</sup> Thus under this category and the associated size standard, the Commission estimates that the majority of PLMR licensees are small entities.

11. According to the Commission’s records, a total of approximately 269,953 licenses comprise PLMR users.<sup>27</sup> Of this number there are a total of 3,565 PLMR licenses in the 4.9 GHz band.<sup>28</sup> The Commission does not require PLMR licensees to disclose information about number of employees, and does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. The Commission however believes that a substantial number of PLMR licensees may be small entities despite the lack of specific information.

12. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and

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State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes Special Purpose Local Governments by State Census Years 1942 to 2017.

<sup>21</sup> While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

<sup>22</sup> This total is derived from the sum of the number of general-purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

<sup>23</sup> See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (except Satellite)”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

<sup>24</sup> See 13 CFR § 121.201, NAICS Code 517312 (formerly 517210).

<sup>25</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID EC1251SSSZ5, *Information: Subject Series, Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210”, <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012>.

<sup>26</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>27</sup> This figure was derived from Commission licensing records as of June 22, 2020. Licensing numbers change on a daily basis. This does not indicate the number of licensees, as licensees may hold multiple licenses. There is no information currently available about the number of PLMR licensees that have fewer than 1,500 employees.

<sup>28</sup> Based on an FCC Universal Licensing System search of June 5, 2020. Search parameters: Radio Service = PA – Public Safety 4940-4990 MHz Band; Authorization Type = Regular; Status = Active.



television broadcast and wireless communications equipment.<sup>29</sup> Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.<sup>30</sup> The SBA has established a size standard for this industry of 1,250 employees or less.<sup>31</sup> U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year.<sup>32</sup> Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.<sup>33</sup> Based on this data, we conclude that a majority of manufacturers in this industry are small.

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

13. The proposals in the *Seventh FNPRM* may impose new or additional reporting or recordkeeping and/or other compliance obligations on small entities, if adopted. The Commission seeks comment on information collections related to the implementation of a State Band Manager model, and what entity that information should be submitted to. To the extent the Commission adopts a State Band Manager model similar to the Guard Band Manager model it adopted for the 700 MHz band, implementation of this model could include reporting by a State Band Manager on the policies and procedures (including recordkeeping and reporting requirements by small entities and other lessees in its jurisdiction) adopted to facilitate and manage shared use by non-public safety entities as well as annual reporting on information about the manner in which the spectrum is being utilized, including but not limited to the number and type of non-public safety entities operating in the band, the amount of spectrum being used by non-public safety entities pursuant to lease agreements with unaffiliated third parties, and the length of the term of such lease agreements.

14. At this time, the Commission cannot quantify the cost of compliance for small entities if the proposals and other matters under consideration in the *Seventh FNPRM* are adopted, and is not in a position to determine whether small entities will be required to hire attorneys, engineers, consultants, or other professionals to meet any compliance obligations. We expect the information we receive in comments to help the Commission identify and evaluate relevant matters for small entities, including compliance costs and other burdens that may result from the proposals and matters raised in the *Seventh FNPRM*.

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

15. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among *others*): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the

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<sup>29</sup> See U.S. Census Bureau, *2017 NAICS Definition*, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=334220&search=2017..>

<sup>30</sup> *Id.*

<sup>31</sup> See 13 CFR § 121.201, NAICS Code 334220.

<sup>32</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334220, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.

<sup>33</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”<sup>34</sup>

16. The Commission’s reliance on policies and frameworks utilized in other spectrum bands as the basis of proposals and inquires in *Seventh FNPRM* potentially provides regulatory policies and frameworks that small entities are operationally familiar with and may therefore minimize any substantial economic impact if similar requirements are adopted in this proceeding. To assist in the Commission’s evaluation of the economic impact on small entities as a result of the actions that have been proposed in this proceeding, and the options and alternatives for such entities, the Commission has raised questions and sought comment on these matters in the *Seventh FNPRM*. As part of the inquiry, the Commission has specifically requested that commenters include costs and benefit analysis data in their comments. The Commission is hopeful that the comments it receives will specifically address matters impacting small entities and include data and analyses relating to these matters. Further, while the Commission believes the rules that are eventually adopted in this proceeding should benefit small entities, whether public safety or non-public safety, by giving them more options for gaining access to valuable wireless spectrum, the Commission expects to more fully consider the economic impact and alternatives for small entities following the review of comments filed in response to the *Seventh FNPRM*. The Commission’s evaluation of such comments will shape the final conclusions it reaches, the final alternatives it considers, and the actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities.

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

17. None.

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<sup>34</sup> 5 U.S.C. § 604(a)(6).

**STATEMENT OF  
CHAIRMAN AJIT PAI**

Re: *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100

In 2015, a report from a Task Force of the Association of Public-Safety Communications Officials noted, “[t]he 4.9 GHz band represents a valuable, though currently underutilized, resource.” This situation came to pass because of significant problems with the regulatory framework for the band. The Commission’s rules siloed this spectrum, which led to a limited amount of niche, expensive equipment available for use in the band. The story of the 4.9 GHz band became one of spectrum haves—primarily in large cities such as New York City, Los Angeles, and Seattle—and have nots—namely, the 96.5% of potential licensees that have not obtained licenses for 4.9 GHz spectrum, particularly the smaller and rural jurisdictions that cannot afford to deploy in the band.

Half a decade later, this unacceptable state of affairs persists. The 4.9 GHz band remains valuable spectrum—and it remains underused and in regulatory limbo. To maximize the value of this public resource for the American people, today we revise our rules by empowering eligible states to put the 4.9 GHz band to its highest and best uses. We will harness the power of our *Secondary Markets* framework to create leasing opportunities for statewide entities in states that do not divert 911 fees for non-911 purposes. Under our new approach, we will allow a single state government entity to lease covered spectrum in this band while maintaining and protecting incumbent public safety licensees’ operations. We recognize the simple truth that what works for New York City may not make sense in rural West Virginia; therefore, we give lessors the right to choose what is best for citizens of their state: They can enter into leases with public safety and non-public safety entities alike. If an eligible state wants to lease its spectrum to FirstNet for use in its Nationwide Public Safety Broadband Network, it can do so. If it wants to lease the spectrum to a commercial entity to use for deploying a dedicated public safety broadband network, it can do that. If the state wants to lease spectrum in less densely populated areas to a wireless Internet service provider, an electric utility, or another critical infrastructure industry (or a mix of all three) and retain the spectrum in more densely populated areas, it can do that too.

This last point bears emphasizing. Utilities and critical infrastructure industry entities have argued that opening this band to them would not only help them fulfill their public service obligations but also help to develop a broader equipment ecosystem that will help current public safety licensees and address one of the primary problems facing the band. Moreover, some of the equipment WISPs use today to provide fixed wireless service in the U-NII bands may be easily tunable to 4.9 GHz band frequencies, allowing these providers to quickly deploy inexpensive, commercial-off-the-shelf equipment to rural and unserved areas to help bridge the digital divide. In fact, some public safety entities have indicated that they already use unlicensed equipment operating in the neighboring 5 GHz band because that equipment is so much less expensive than current 4.9 GHz band equipment.

The approach we adopt today may not be perfect. But it’s better than any of the alternatives that have been proposed. And one thing we know for sure is that regulatory inertia is not the best option. The 4.9 GHz band is well-suited to meet the nation’s growing demand for mid-band spectrum, and this Commission will not stand idly by and let this spectrum continue to largely lie fallow. Leasing arrangements will create significant opportunities for commercial access while protecting incumbent public safety operations and generating substantial potential revenues that states can use to strengthen public safety services. Our flexible, forward-thinking framework represents the most viable path for making this public resource an actual resource for the public. And I’m pleased that this approach is supported by forward-thinking groups that believe this spectrum should be put to its highest and best use—groups that span the political spectrum like New America’s Open Technology Institute, the Taxpayer Protection Alliance, the Washington Policy Center, and the Pelican Center for Technology and Innovation.

My thanks to the staff who worked on this item. From the Wireless Telecommunications Bureau: Lloyd Coward, Nellie Foosaner, Jessica Greffenius, Jonathan Markman, Charles Mathias, Roger Noel, Dana Shaffer, Donald Stockdale, and Becky Tangren; from the Public Safety and Homeland Security Bureau: Thomas Eng, Lisa Fowlkes, David Furth, Renee Roland, Tracy Simmons, and Michael Wilhelm; from the Enforcement Bureau: Shannon Lipp, Jeremy Marcus, Adam Suppes, Raphael Sznajder, and Ashley Tyson; from the Office of Economics and Analytics: Jonathan Campbell, Patrick DeGraba, Alex Espinoza, Paul Lafontaine, Catherine Mataves, Giulia McHenry, Michelle Schaefer, and Emily Talaga; from the Office of General Counsel: Deborah Broderson, David Horowitz, Doug Klein, and Bill Richardson; and from the Office of Communications Business Opportunities: Chana Wilkerson.

**STATEMENT OF  
COMMISSIONER MICHAEL O'RIELLY**

Re: *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100

The underlying premise of the item before us is incredibly sound. The 4.9 GHz band is vastly underutilized — and not just by a little bit. Seeking to produce greater efficiency and increase the uses of 50 megahertz of spectrum, at a time when the premium for spectrum is at an all-time high, shouldn't be controversial. And, this scarcity is precisely why the Commission must take action as soon as possible, not only on this band and the 3.1-3.55 GHz frequencies considered today, but also on the 5.9 GHz band.

While I certainly respect and support our public safety officials and truly appreciate all that they do to protect our communities, no Commission should let spectrum essentially lay fallow based on the notion that someday the allocation just might, possibly be widely used for its intended purposes. The messages of “we intend to use it if certain conditions are met” or “it'll be needed someday” are no longer credible or sufficient. For years, I have discussed the 4.9 GHz band and its relationship to the Spectrum Act of 2012, T-Band, and 9-1-1 fee diversion. Finally, Congress and the Commission are aligned in attempting to resolve some of these residual issues through their respective processes.

My first action when this item was circulated was to request a reversal of course and seek full commercialization of the band, while protecting existing incumbent systems. That is consistent with my approach to the NPRM and is driven by the fact that every expert admits that the U.S. must free more spectrum to meet the demand for future commercial wireless services. While this spectrum may not be an ideal 5G band on its own, it has been identified by the wireless industry as a very good candidate for that purpose if the Commission takes certain actions. Sadly, my request didn't win the day with my colleagues.

Compelled to pivot, I have tried to live within the rather, let's say, interesting approach taken in this item. I do have some concerns that this will just create another EBS-like mess, kicking the proverbial can and forcing a future Commission to revisit this whole structure. It is not entirely clear how or whether it will work at all, as proposed. There is also the distinct possibility that this item won't necessarily solve anything, but instead may even prolong uncertainty.

I am able to support the item, however, because, at the very least, it moves away from the status quo towards somewhat improved usage and commercialization of the band. Moreover, the modified version excludes states that are diverting 9-1-1 fees to other purposes from reaping any benefits from this spectrum largesse — such as New Jersey, New York, Rhode Island, and certain counties in Nevada. These states have proven themselves untrustworthy when it comes to managing precious consumer-paid fees. A bit later on today's agenda, we will consider an NOI that will hopefully result in the Commission dealing with this issue holistically someday. But here, we can immediately lock in a righteous policy change that ensures current diverters will pay a price for their maleficence, while seeking comment on a broader approach, including how to treat diverting states in the future. The leasing fees and other benefits contained in this item may be, in fact, modest compared to the diverted dollars, helping to explain the lengths to which some states will go to continue this practice. But the current item will take a tangible step — probably my last — to rectify the injustice of fee diversion.

In the end, we will just have to wait and see if any of the item's structure gains traction or survives future policymakers' second guessing. Having extensive experience on these matters, I'm a bit skeptical that will be the case.

For the reasons discussed above, I approve, and I thank the Chairman for working with me to ensure wrongdoing states aren't unjustly enriched.

**STATEMENT OF  
COMMISSIONER BRENDAN CARR**

Re: *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100

For nearly two decades, the FCC has designated this 50 MHz swath of spectrum for public safety use. And yet after all this time, by our count, only about two percent of eligible public safety entities have become licensees. There are many causes for this underinvestment; availability and cost of equipment, scale, and an inefficient sharing regime are just a few.

The status quo isn't working. So today we set out to fix these problems for the benefit of states and public safety officials alike. We do so by empowering local leaders—not those of us sitting here in Washington—to determine the highest and best use of this spectrum based on those elected officials' own assessments of local needs. They can keep using this spectrum for public safety (and do so more efficiently due to the new rules we put in place), or they can lease these airwaves and use the revenue to fund public safety or other mission critical initiatives. They have the choice, and I trust them to make the right call for their communities.

The men and women who protect us, who put out fires, race to us in ambulances, and answer our emergency calls, have taken the brunt of this pandemic more than most. They don't get to socially distance. Their help is needed more right now, yet they are given less. If there ever were a time for our agency to give public safety a hand, to get rid of some old rules, to open a path for funding, now would be that time. So we take that step today and empower our country's local leaders to determine how best to use this spectrum.

I thank the Wireless Telecommunications Bureau and the Public Safety and Homeland Security Bureau for their work on this item. It has my support.

**DISSENTING STATEMENT OF  
COMMISSIONER JESSICA ROSENWORCEL**

Re: *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100

This decision is unfortunate. It is not the right way forward for the 4.9 GHz band. It is a slapdash effort to try to foster use of this spectrum by giving states the right to divert public safety communications in exchange for revenue. This approach has virtually no support in the record. However, it does have opposition from a wide range of stakeholders from wireless carriers to public safety officials.

What makes such a diverse crew unite in opposition? Well, it takes a little background to understand. At its core, this proceeding involving the 4.9 GHz band features an all-too-frequent dilemma in modern spectrum policy. We have airwaves that are the subject of older allocation and arguments about underutilization. At the same time, we have newcomers looking for new ways to put them into operation.

So it is here, where for nearly two decades, 90,000 public safety entities have been eligible to obtain licenses in the 4.9 GHz band. However, relatively few have done so. That's because there is a limited vendor ecosystem supporting this band, so it is hard to acquire equipment and costly to deploy it. As a result, for the past few years the Federal Communications Commission has sought comment on how to help public safety make use of these airwaves and what more can be done to encourage a robust market for equipment.

So far, so good. But now fast forward to the present. In this decision we abandon this course and decide that these airwaves no longer need to support public safety. We clear the way to kick first responders off this spectrum and then cede this agency's authority over the band to state licensees who will be empowered to lease these airwaves to third parties to generate revenue. This adds up to a reduction in public safety communications with a more fragmented market for equipment and a 5G future with a whole bunch of the same problems we had with leases in the 2.5 GHz band that—remember—we went to great efforts to dismantle in the not-too-distant past.

What a mess. It doesn't have to be this way. There's a reason so many entities have come together to oppose this reorganization of the 4.9 GHz band. If you're keeping score, that includes: the Public Safety Spectrum Alliance, the Public Safety Broadband Technology Association, APCO International, the International Association of Chiefs of Police, the Major Cities Chiefs Association, the Major County Sheriffs of America, the Metropolitan Fire Chiefs Association, the National Association of Emergency Medical Technicians, the National Association of State EMS Officials, the National Public Safety Telecommunications Council, the National Sheriff's Association, and the Western Fire Chiefs Association, among others.

They are on to something. Today's effort to remake the 4.9 GHz band misses the mark. In fact, there are three things fundamentally wrong with the leasing framework the agency adopts today.

First, today's decision threatens to do long-term damage to public safety communications. That's a shame because it's never been more apparent how much communications matters for first responders. Right now, they are on call for assistance for a devastating pandemic, raging wildfires, seasonal hurricanes, and more. By breaking up this band into a patchwork of state leases, we will further fragment the equipment market, raise costs, and decrease the likelihood of interoperable communications. That's not good. For two decades—since 9/11—it has been government policy to increase opportunities for interoperability for first responders. That's because on that fateful day when emergency personnel from all over came together to help they couldn't communicate with one another because each jurisdiction had its own communications protocols. We have had twenty years of work to remedy this problem. It is unfortunate that today's decision not only reverses this trend—it could set us back.

Second, today's decision borrows stale leasing policies from the past that make it harder for reform in the future. The nearby 2.5 GHz band offers a cautionary tale. Nearly six decades ago, the FCC allocated the 2.5 GHz band for educational use. But many licensees had difficulty making full use of their spectrum. So over time the FCC permitted educational licensees to lease excess capacity for commercial use. Sound familiar? Over time, more than 90 percent of the available spectrum was leased for commercial use. Many licensees began using this spectrum as proxy for revenue instead of a resource for education. The original public purpose behind the allocation was lost. There's no reason to think states won't do the same here and override public safety investments made at county and local levels in the process. And there's no reason to think that the same policies that failed to fix the 2.5 GHz band will magically fix the 4.9 GHz band.

Third, today's decision will not encourage new investment in the band. This approach will only fragment these airwaves on a state-by-state basis. There will be no consistent and reliable information about what spectrum is available where or how it is being used—making it difficult for wireless service providers to plan or invest in deployments.

Taken together, these problems demonstrate that this framework is not an especially thoughtful solution for optimizing the 4.9 GHz band. This is regrettable. I dissent.



**DISSENTING STATEMENT OF  
COMMISSIONER GEOFFREY STARKS**

Re: *Amendment of Part 90 of the Commission's Rules*, WP Docket No. 07-100

Our public safety organizations face some of the most difficult circumstances in living memory. Millions of Americans have taken to the streets to protest for justice. Throughout California and the Pacific Northwest, crews are battling devastating wildfires. The tropical storms and hurricanes this season have ravaged certain regions of the United States. And the COVID-19 pandemic has claimed more than 200,000 lives so far this year, with 3 months still to go.

That's the context for today's decision. At a time when our public safety organizations are stretched to the limit and their communications needs are increasing, the Commission is adopting with no notice and comment an approach that is not only unwanted but runs contrary to years of public safety spectrum policy.

For nearly 20 years, the Commission has struggled to make efficient use of the 4.9 GHz band. At first glance, the band looks like a prime candidate for reallocation because of its apparent underutilization and mid-band location. But according to the National Public Safety Telecommunications Council, the band contains almost 4,000 incumbent fixed public safety sites and over 2,000 geographic licenses, each of which entitles the licensee to use the full 50 megahertz of 4.9 GHz spectrum throughout its entire jurisdiction.<sup>1</sup> In addition, while 4.9 GHz may be "mid-band" spectrum, it's far from a prime candidate for 5G in the United States. Indeed, the countries that are most actively using the 4.9 GHz band for 5G are Russia and China, and the major telecom equipment manufacturer of 4.9 GHz equipment is Huawei. We shouldn't be surprised that, in contrast to our other mid-band spectrum proceedings, we've received far less interest from commercial wireless users and providers.

Moreover, today's decision pursues an approach that comes out of the blue. Since this proceeding first began, the FCC has considered many different options to increase spectrum usage in the 4.9 GHz band while protecting critical public safety operations. It's black letter law that agencies must provide adequate notice and an opportunity to comment before adopting a rule.<sup>2</sup> But at no point have we ever proposed effectively delegating the Commission's spectrum authority over the band to state governments. I therefore already had serious concerns about whether the draft order circulated three weeks ago satisfied the Administrative Procedures Act.

If the original draft put us on the edge of a precipice, the current one drives us off the cliff. The final Report and Order now disqualifies states from participating in the State Lessor model if they engage in "911 fee diversion," a concept that another item on today's agenda frames for debate. This proceeding has never sought comment on that issue or anything like it, and there is no way that commenting parties, and the governments, public safety organizations and citizens that will be adversely impacted, would have reasonably known to comment on the idea.<sup>3</sup> This approach is facially deficient as a matter of administrative law.

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<sup>1</sup> Comments of the National Public Safety Telecommunications Council, WP Docket No. 07-100 at 8 (filed July 6, 2018).

<sup>2</sup> See *Long Island Care at Home, Ltd. v. Coke*, 551 U.S. 158, 174 (2007) ("The Administrative Procedure Act requires an agency conducting notice-and-comment rulemaking to publish in its notice of proposed rulemaking 'either the terms or substance of the proposed rule or a description of the subjects and issues involved.' ... The Courts of Appeals have generally interpreted this to mean that the final rule the agency adopts must be 'a 'logical outgrowth' of the rule proposed.' The object, in short, is one of fair notice.") (internal citations omitted).

<sup>3</sup> See, e.g., *Time Warner Cable Inc. v. FCC*, 729 F.3d 137, 170 (2d Cir. 2013) ("[A rulemaking] must describe the range of alternatives being considered with reasonable specificity. Otherwise, interested parties will not know what (continued....)

Beyond serious procedural flaws, this decision is likely to have serious policy consequences. By pushing management of the 4.9 GHz band to the states, the majority risks creating dozens of inconsistent approaches to this valuable spectrum resource. States have vastly different interests and levels of spectrum expertise, and will undoubtedly take different approaches to issues like interoperability, security, and interference protection. As a result, public safety usage of the 4.9 GHz band may actually become less efficient, secure, and reliable—even as commercial interest remains meager at best.

I recognize that the 4.9 GHz band presents a difficult challenge. But I wish that we had withdrawn this item to work on fully addressing the public safety community’s concerns. This isn’t the moment to take chances with critical public safety spectrum. I dissent.

(Continued from previous page) \_\_\_\_\_  
to comment on, and notice will not lead to better-informed agency decisionmaking. Indeed, unfairness results unless persons are sufficiently alerted to likely alternatives so that they know whether their interests are at stake.”) (citations and internal quotation marks omitted); *Omnipoint Corp. v. FCC*, 78 F.3d 620, 631 (D.C. Cir. 1996) (quoting *Conn. Light & Power Co. v. Nuclear Regulatory Comm’n*, 673 F.2d 525, 533 (D.C. Cir. 1982)) (“[A] final rule is not a logical outgrowth of a proposed rule ‘when the changes are so major that the original notice did not adequately frame the subjects for discussion.’”).