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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 90 and 96

[GN Docket No. 17-258; FCC 24-86; FR ID 240738]

Promoting Investment in the 3550-3700 MHz Band

AGENCY: Federal Communications Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: In this document the Federal Communications Commission (FCC or Commission) continues to shape development of the Citizens Broadband Radio Service operations in the 3.55-3.7 GHz band (3.5 GHz band). This Notice of Proposed Rulemaking (NPRM) provides an overview of the federal protection regime implemented by the National Telecommunications and Information Administration (NTIA), Department of Defense (DoD), and Commission staff and solicits input on proposals to update the technical and service rules. It also seeks commenters' ideas for further innovations and improvements to the 3.5 GHz band.

DATES: Interested parties may file comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**; and reply comments on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may submit comments, identified by GN Docket No. 17-258, by any of the following methods:

- Federal Communications Commission's Web Site: <http://apps.fcc.gov/ecfs/>. Follow the instructions for submitting comments.
- People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov or phone: 202-418-0530 or TTY: 202-418-0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: For additional information on this proceeding, contact Paul Powell of the Wireless Telecommunications Bureau, Mobility Division, at (202) 418-1613 Paul.Powell@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rulemaking in GN Docket No. 17-258, FCC 24-86, adopted on August 5, 2024, and released on August 16, 2024. The full text of this document is available for public inspection online at <https://www.fcc.gov/document/fcc-looks-modernize-35-ghz-citizens-broadband-radio-service-rules>.

Providing Accountability Through Transparency Act: The Providing Accountability Through Transparency Act, Public Law 118-9, requires each agency, in providing notice of a rulemaking, to post online a brief plain language summary of the proposed rule. The required summary of this Notice of Proposed Rulemaking is available at <https://www.fcc.gov/proposed-rulemakings>.

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).

- **Electronic Filers:** Comments may be filed electronically using the Internet by accessing the ECFS: <https://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 hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. **All filings must be addressed to the Secretary, Federal Communications Commission.**
- Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.

- Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.

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 or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

Ex Parte Status: The proceeding this NPRM initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules. 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 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 § 1.1206(b). In proceedings governed by §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. We find that all *ex parte* presentations made by NTIA or Department of Defense representatives relating to the development and implementation of spectrum access in the 3.5 GHz band are exempt under our exemption for presentations by federal agencies sharing jurisdiction with the Commission.

WTB and OET staff—in close collaboration with NTIA and DoD—communicate with SAS administrators and ESC operators in providing Commission staff oversight of the administration of sharing the 3.5 GHz band. We determine the ongoing communications are not subject to the permit-but-disclose requirements of the pending proceeding because the communications are not directed to the merits or outcome of the proceeding (i.e., not presentations) and instead relate to the procedural matters of WTB and OET oversight of the SASs and ESCs as delegated by the Commission. The Commission will not seek to rely on the SAS/ESC oversight conversations in the pending proceeding. If a SAS administrator or ESC operator wishes to provide feedback that is directed to the merits of this proceeding, it may do so using the comment filing procedures detailed in this section.

Old Section	New Section
90.1303	Removed
90.1305	Removed
90.1307	Removed
90.1309	Removed
90.1311	Removed
90.1312	Removed
90.1319	Removed
90.1321	Removed
90.1323	Removed
90.1331	Removed
90.1333	Removed
90.1335	Removed
90.1337	Removed
90.1338	Removed
96.11(a)(3)	Removed
96.15(b)(3)	Removed
96.15(b)(4)	96.15(b)(3)
96.21	Removed
96.53(m)	Reserved

1. With this NPRM, the Federal Communications Commission (FCC or Commission) continues to develop the Citizens Broadband Radio Service operations in the 3.55-3.7 GHz band (3.5 GHz band). This NPRM provides an overview of the federal protection regime implemented by the National Telecommunications and Information Administration (NTIA), Department of Defense (DoD), and Commission staff and solicits input on proposals to update the technical and service rules. Specifically, with regard to federal protection in the band, this NPRM proposes to modify the part 96 rules to reflect the mechanisms currently used to protect federal users in the 3.5 GHz band and seeks comment on whether we should consider rule changes to align 3.5 GHz protection methodologies with those in

adjacent bands, revisit the FCC’s Environmental Sensing Capability (ESC) approval procedures, and facilitate the continued introduction of Citizens Broadband Radio Service in areas outside of the contiguous United States (CONUS). The NPRM specifically seeks comment on whether changes to the part 96 technical and service rules are necessary to clarify information disclosure requirements, align out-of-band emissions limits with those in adjacent bands, permit higher power levels, relax Spectrum Access System (SAS) connectivity requirements, impose Time Division Duplex (TDD) coordination procedures, or update protection measures for certain Fixed Satellite Service (FSS) earth stations. The NPRM also seeks comment on whether to address issues surrounding professional installation, accommodate additional deployment of private networks and low power indoor facilities, or adopt rules to facilitate General Authorized Access (GAA) user coexistence. The Declaratory Ruling would clarify that NTIA and DoD are not considered “the general public” for purposes of the Commission’s rule governing disclosure of Citizens Broadband Radio Service Device registration information.

A. Federal Protection and Coordination

2. In this NPRM, the Commission continues efforts to provide regulatory certainty and promote innovation, investment, and continued growth of the Citizens Broadband Radio Service. Consistent with these objectives, the Commission proposes to modify the part 96 service rules to codify refinements that WTB and OET, in close coordination with NTIA and DoD staff, have implemented pursuant to delegated authority. We also explore the need for changes to the dynamic protection area (DPA)-based framework that could improve the ways in which DPA-based protections operate. Specifically, we seek comment on whether we should expand the use of a coordination portal to protect federal operations, update our rules to align protection measures with those in adjacent bands, consider modifying our ESC procedures to address potential effects on competition and the marketplace, or consider permitting Citizens Broadband Radio Service operations in offshore areas. We also note that any proposed rule changes that may impact incumbent federal operations—including the protection methodologies used to prevent harmful interference to incumbent federal users—will need to be coordinated with NTIA and DoD.

1. Dynamic Protection Areas

3. In 2018, the FCC’s WTB and OET granted a conditional waiver of certain rules governing the protection of federal operations in the 3.5 GHz band to facilitate more rapid access to the band by a wider

variety of devices without compromising federal incumbent operations. The 2018 DPA Waiver Order requires DPA-enabled SASs to protect an activated DPA from aggregate interference. DPAs are activated when DoD radar systems are using the band (as detected by ESC sensors or as scheduled through and approved by a scheduling portal), signaling that federal incumbents must be protected from other users in the band. While a DPA is “active,” the DPA-enabled SAS must manage Citizens Broadband Radio Service Device (CBSD) frequency and power assignments to ensure that the entire DPA is protected from aggregate interference within the active frequency range. This dynamic approach eliminates the need for DPA-enabled SASs to enforce Exclusion Zones in coastal regions and other geographic areas protected by DPAs. Following the 2018 DPA Waiver Order, NTIA and DoD have worked closely with WTB and OET to further refine the federal coordination process in the 3.5 GHz band.

4. *Coastal DPAs.* In a 2018 letter, NTIA recommended replacing static coastal Exclusion Zones with “coastal DPAs” to help make the 3.5 GHz band more accessible to commercial users in coastal regions. NTIA indicated that “coastal DPAs” would be located in specific geographic areas along the East, Gulf, West, Alaskan, Hawaiian, and Puerto Rican coasts to protect shipborne radar systems and may be used to protect terrestrial facilities, as well. DPA-enabled SASs have used Coastal DPAs to protect federal operations since the initiation of commercial operations in the 3.5 GHz band. We now propose to define coastal DPAs in the Commission’s rules and to require all current and future SASs to utilize them to protect federal operations. We seek comment on this proposal.

5. *Portal-Activated DPAs.* To facilitate increased participation and maximize non-federal access to 3.5 GHz spectrum near federal facilities designated for testing and training by DoD and the military services, NTIA, DoD, and WTB/OET agreed to utilize a dedicated scheduling portal to protect federal operations. The scheduling portal allows federal operators to reserve their use of specific frequency ranges in the band for developmental and operational testing and various training activities. The scheduling portal is also used to protect federal operations in some coastal areas. Employing “portal-activated” DPAs (P-DPAs) to protect test and training ranges, SAS administrators are required to communicate with the portal on a regular basis to manage federal and non-federal shared use of the band. We propose to require SASs to use an approved scheduling portal to protect P-DPAs and add a definition

of P-DPAs to the part 96 rules. We seek comment on this proposal.

6. *Always Activated DPAs.* Another example of a more flexible approach is the use of “always activated” DPAs instead of static Exclusion Zones to protect eleven ground-based radar system sites operating below 3.5 GHz from experiencing harmful interference from non-federal operations in the 3.55-3.65 GHz band. To avoid delaying commercial buildout, NTIA and WTB/OET determined that “always activated” DPA protection, based on limiting the maximum aggregate received power level from the CBSDs at the location of the radar antenna, offered the best means to provide buildout flexibility while fully protecting critical federal radar systems. We propose to require SASs to protect Always Activated DPAs and to add a definition of Always Activated DPAs to the part 96 rules. We seek comment on this proposal.

7. Given the successful implementation of DPA-based protections and the resulting growth in commercial use of the 3.5 GHz band, we propose to add detailed definitions for the different types of DPAs, as well as DPA Neighborhoods, and to make enforcement of DPA-based protections mandatory for all current and future SASs. We also propose to update the part 96 rules to incorporate the DPA framework adopted in the 2018 DPA Waiver Order. In addition, we seek comment on changes to the definition of “Exclusion Zone” to account for the possibility of coordination with federal users in the remaining areas protected by such zones. We also seek comment on whether there are changes or improvements we should make to the DPA-based framework to improve the ways in which DPA-based protections operate. We welcome suggestions regarding how we can modify the DPA regime to encourage Citizens Broadband Radio Service network buildout while maintaining protections for federal incumbents.

2. DPA Coordination Portal

8. As described above, designated federal test and training facilities, as well as some coastal areas, including the territory of American Samoa, are protected by P-DPAs. If a SAS administrator intends to operate as a DPA-enabled SAS—as all currently certified SASs have done—it must use an approved scheduling portal to protect designated P-DPAs.

9. DoD recently developed an automated system called the Telecommunications Advanced

Research and Dynamic Spectrum Sharing System (TARDyS3) to replace the manual scheduling portal used to activate the P-DPAs. The TARDyS3 is a DoD calendar-based system that supports expeditious communications regarding spectrum use at test and training ranges in the 3.5 GHz band. Scheduling via TARDyS3 is designed to enable DoD users to reserve their spectrum use and communicate the use of a given Citizens Broadband Radio Service channel at a given time near the designated P-DPA.

10. Under current rules in § 96.63(n)(1), each SAS must “[o]perate[] without any connectivity to any military or other sensitive federal database or system, except as otherwise required by this part.”

Accordingly, because the TARDyS3 portal is managed by DoD and includes information on DoD operations, WTB and OET waived § 96.63(n)(1) of the Commission’s rules to permit SAS administrators to utilize the TARDyS3 portal. WTB and OET found that the waiver furthers the public interest by improving the security, reliability, and resiliency of the scheduling portal utilized by SAS administrators to protect certain designated federal facilities in the 3.5 GHz band and by permitting the use of the TARDyS3 portal to improve federal coordination in the band. Correspondingly, WTB and OET instructed the SAS administrators to begin using the TARDyS3 portal by issuing a public notice.

11. We propose to modify the part 96 rules to require that SAS administrators use a Commission-authorized scheduling portal—currently, the TARDyS3 system—to protect P-DPAs. We believe that codifying this requirement will further the public interest by formalizing the use of a secure, reliable, and resilient scheduling portal that will be utilized by SAS administrators to improve federal coordination and ensure the protection of critical federal operations against harmful interference. We seek comment on this proposal. We also seek comment on possibly expanding future use of the portal system to protect federal operations in other areas, particularly in areas outside of the CONUS with difficult terrain or unique protection needs (e.g., Alaska and Hawaii). Do commenters see any need to distinguish any such areas from those already included in the TARDyS3 system? To that end, we seek comment on whether we should consider other applications for portal-based solutions to protect federal users and securely manage harmful interference between non-federal and federal entities.

3. Alignment with 3.45 GHz Protections

12. Following the adoption of 3.5 GHz band rules, Commission adopted rules for a new 3.45 GHz Service operating between 3.45-3.55 GHz that employed a federal/non-federal sharing regime that differs

in some ways from the Citizens Broadband Radio Service spectrum sharing model. While operators in both the 3.45 GHz and 3.5 GHz bands are charged with protecting many but not all of the same federal radar systems (some of which operate across both bands), in some cases they are required to apply different protection methodologies in each band. In the 3.45 GHz Service, the Commission adopted a geographic protection model that utilizes geographic areas classified as Cooperative Planning Areas (CPAs) and Periodic Use Areas (PUAs) to protect certain federal operations against harmful interference. To afford licensees maximum flexibility in deploying networks and offering services while still protecting remaining federal operations, the Commission adopted a coordination regime. New flexible-use 3.45 GHz Service licensees are required to coordinate with DoD incumbents operating within CPAs and PUAs to facilitate shared use of the band using a coordination portal, and 3.45 GHz Service licensees were encouraged to enter into mutually acceptable operator-to-operator agreements to permit more extensive flexible use within CPAs and PUAs by agreeing to a technical approach that mitigates the interference risk to federal operations.

13. We seek comment on whether there are opportunities to revise the rules governing the 3.5 GHz band to align the protection of specific inland and port-based federal systems and facilities given the spectrum sharing framework adopted in the adjacent 3.45 GHz band. Specifically, we seek comment on whether 3.5 GHz band protection methodologies could be aligned to correspond to 3.45 GHz band protections—for the same systems and facilities—to increase commercial access to the band while maintaining necessary protection for federal incumbent users. For example, some 3.45 GHz facilities protected by CPAs or PUAs are also protected from out of band emissions from the Citizens Broadband Radio Service by Always On DPAs. In some instances, the 3.5 GHz band protections may restrict non-federal operations more than the corresponding CPA or PUA. In addition, both services use a portal-based approach to protect certain federal incumbents, some of which span the two bands. Are there opportunities to create efficiencies by modifying the protection mechanisms in the 3.5 GHz band to better align with those in the 3.45 GHz band in these, or other instances? We note that any potential changes to the protection of federal operations will need to be coordinated with NTIA and DoD. We encourage commenters to consider approaches wherein we may be able to increase commercial spectrum opportunities and facilitate more efficient use of valuable spectrum resources.

4. ESC Coordination and Availability

14. In 2018, WTB and OET established procedures for ESC operators to register their ESC sensors prior to beginning operations in a particular DPA. These ESC sensor application requirements include, at a minimum, that the ESC operator demonstrate that the coverage provided by the network of ESC sensors will comply with NTIA's published guidance and that the ESC operator must submit a detailed coverage map of the sensor network. Accordingly, WTB and OET evaluate the deployment of ESC sensors for DPA coverage. ESC sensors are not, however, evaluated for any competitive or marketplace impacts, including any potential negative effects on Citizens Broadband Radio Service users that are operating, or seeking to initiate operations, near an ESC sensor site. In addition, ESC operators are not currently required to make their services available to unaffiliated SAS administrators.

15. The Commission welcomes feedback on whether we should modify aspects of the ESC sensor approval requirements. Specifically, without altering existing DPA coverage requirements for ESC certification, should we consider modifying any of the ESC sensor approval procedures given the state of competition in the SAS/ESC marketplace? Should we direct WTB and OET to consider the competitive and deployment impacts of new ESC sensors during the ESC sensor approval process (e.g., assessment of the population within the geographic area that would be potentially affected by a sensor deployment)? If so, how should those impacts be quantified and considered? In addition, to facilitate and maintain a competitive marketplace, should ESC operators be required to make their services available to any certified SAS administrator? We encourage commenters to provide detailed feedback, including technical and cost-benefit analyses and use cases, if applicable, to support their positions.

5. OCONUS and Offshore Citizens Broadband Radio Service Deployments

16. While the Commission has issued PALs, certified SAS administrators, and authorized GAA use in Alaska, Hawaii, and several U.S territories outside of CONUS (OCONUS), in some OCONUS areas, operators have experienced unique delays and challenges specific to their geography or region. To date, Commission staff has worked in close coordination with NTIA and DoD to enable service by employing a portal based protection methodology for American Samoa, temporary portal-based solution for Hawaii, and ESC sensor deployment and coverage plans in Guam, Puerto Rico, and part of Alaska. Consistent with these efforts, we seek comment on whether there are other OCONUS areas that may benefit from an

alternate approach to federal protection, on a temporary or permanent basis. We also seek comment generally on the feasibility of implementing the Citizens Broadband Radio Service licensing framework in the 3.55-3.65 GHz band segment in OCONUS areas given the difficulty of installing ESC sensors in remote or hard-to-reach areas. How can we overcome the logistical and economic barriers to ESC development and deployment in OCONUS territories? Should we consider other means of ensuring federal protection in OCONUS areas? If so, what are the hurdles to achieving the desired outcome? Are there ways in which we can incentivize or expedite ESC deployment in OCONUS areas? Are there different approaches that might work better in different OCONUS areas? Should we modify our part 96 rules to effectuate these potential solutions and, if so, what specific changes should we make?

Commenters should support their alternative proposals with corresponding cost/benefit analyses, including any underlying data and assumptions associated with such proposals.

17. We also seek comment on whether Citizens Broadband Radio Service operations should be permitted in offshore areas (e.g., the Gulf of Mexico) in the 3.65-3.7 GHz band segment. We note that the Commission did not directly address potential offshore operations, including those in the Gulf of Mexico, in the 3.65-3.7 GHz band in its earlier orders. However, the 3.65-3.7 GHz band was used extensively by part 90 licensees, including some offshore deployments on oil rigs and other facilities, before the Citizens Broadband Radio Service transition was complete. What are the costs and benefits associated with permitting offshore Citizens Broadband Radio Service operations in the 3.65-3.7 GHz band? Could offshore operations in the 3.65-3.7 GHz band have adverse impacts on ESC sensors along the coastline and, if so, how could such interference be mitigated? How would CBSDs located offshore maintain connectivity with a SAS as required by the Commission's rules? Commenters should provide details regarding the potential operational impacts, costs, benefits, and resource considerations for new offshore service entrants and discuss any potential impact such operations may have on incumbent users in the area.

B. CBSD Information

18. Consistent with the Commission's rules, Priority Access Licensees and GAA users are required to register all CBSDs with, and be authorized by, a SAS prior to initial service transmission. In addition to the CBSD registration and authorization requirements, Commission rules require CBSDs to provide

received signal strength and other measured parameters to the SAS administrators upon request.

Commission rules also restrict the CBSD information that SASs can disclose to the public. We welcome feedback on whether to make changes to the Commission's rules governing the breadth and scope of CBSD information provided to SASs and CBSD information availability.

19. *CBSD Measured Interference Metric Information.* The Commission requires CBSDs to provide measured interference metric information when a SAS administrator requests the data. We seek comment on how this works in practice. In the 2015 3.5 GHz First Report and Order, the Commission indicated that any such requirements may be set by a multistakeholder group. Are these issues effectively addressed in the standards set within WINNForum? Would different information or a broader set of information about the Citizens Broadband Radio Service radiofrequency environment support improvements in the 3.5 GHz band? In particular, we would be interested to understand if additional real world data about Citizens Broadband Radio Service operations would enable the SAS administrators to more effectively manage spectrum access within the band or if additional data could be beneficial to Priority Access Licensees, GAA users, the FCC, or NTIA and DoD. Do currently certified CBSDs have the capability to measure additional data about the PAL and GAA radiofrequency environment? In particular, the Commission is interested in whether CBSDs' measurement of additional data would require a hardware change or software upgrade and the costs of adding any such a capability to already certified CBSDs.

20. *CBSD Information Availability.* Initially, the SAS administrators were required to make CBSD registration information available to the general public and to "obfuscate the identities of the licensees providing the information for any public disclosures" to protect against public disclosure of confidential business information that could compromise personal privacy or affect competitive interests. The Commission subsequently modified the CBSD information disclosure requirement to provide that SAS administrators may not disclose "specific CBSD registration information to the general public except where such disclosure is authorized by the registrant" and SAS administrators are only required to "make available to the general public aggregated spectrum usage data for any geographic area." When the Commission revised the public disclosure requirement, it noted that the success of the 3.5 GHz band's shared spectrum model requires providing prospective users with enough information to accurately assess

the overall spectrum environment in an area to make investment and deployment decisions. Given the rapid and ongoing growth of commercial deployments in the band—along with stakeholder interest in increased transparency—current and future Citizens Broadband Radio Service users might benefit from more granular information on CBSD deployments to effectively plan their networks. Accordingly, we seek comment on whether the existing information disclosure rules provide sufficient data for current and future Citizens Broadband Radio Service users to plan their network deployments and make informed decisions regarding investments in the band.

21. Specifically, we seek comment on whether we should consider modifying our disclosure rules to reinstate the original information disclosure requirements or whether we should implement an alternative approach. Commenters are encouraged to indicate whether current permissible disclosure of aggregated spectrum usage data for a geographic area, including total available spectrum and the maximum available contiguous spectrum, provides sufficient information to determine whether a market they have singled out for consideration warrants CBSD deployment and capital investment. Commenters seeking changes to the disclosure rules should explain why the use of aggregate heat maps, showing the total amount of occupied and available spectrum in a given area of interest, has been insufficient to meet their needs.

22. Commenters seeking alternative disclosure rules, including a reversion to the original information disclosure requirements, should explain how their approach would balance existing operator interest in protecting sensitive network information with the legitimate information needs of prospective service providers and the general public. Specifically, proponents of alternative disclosure approaches should outline how their proposals would safeguard sensitive business or network operations data while yielding enough spectrum use data to assist parties interested in obtaining access to the band on a GAA basis or engaging with Priority Access Licensees for secondary market transactions.

23. In addition, as described in the Declaratory Ruling that accompanies this NPRM, we clarify that NTIA and DoD are not considered “the general public” with regard to the CBSD information disclosure rule. To supplement the Declaratory Ruling and further clarify this point in part 96, we propose to modify § 96.55 of the Commission’s rules to require SAS administrators to provide CBSD registration data to NTIA and DoD upon request. We seek comment on this proposal.

C. Out of Band Emissions Limits

24. We seek comment on whether we should align the Citizens Broadband Radio Service base station OOB limits with OOB limits adopted in the 3.7 GHz Service, which is adjacent to the upper edge of the 3.5 GHz band. In the Citizens Broadband Radio Service, the following OOB limits apply: (1) -13 dBm/MHz from 0 to 10 megahertz from the SAS assigned channel edge; (2) -25 dBm/MHz beyond 10 megahertz from the SAS assigned channel edge down to 3.53 GHz and up to 3.72 GHz; and (3) -40 dBm/MHz below 3.53 GHz and above 3.72 GHz. In the adjacent 3.7 GHz Band Service, the Commission subsequently adopted a less restrictive OOB limit for base station and mobile operations of -13 dBm/MHz that is consistent with limits for many other mobile wireless services. Declining to adopt more stringent emission limits both within and outside the 3.7 GHz band, the Commission stated that doing so would hinder the full potential of 5G deployment in the band. As for the mobile OOB limit, the Commission indicated that the effect on Citizens Broadband Radio Service operations below the 3.7 GHz band edge would be minimal and that the limit would permit mobile devices to operate across the variety of spectrum bands currently available for mobile broadband services.

25. The Commission seeks comment as to whether we should relax the Citizens Broadband Radio Service OOB limits at the upper edge of the 3.5 GHz band and, if so, what new OOB limit would be appropriate. Notably, recent requests for waivers of the OOB limits in the 3 GHz services underscore the challenge that the divergent OOB cutoffs in the 3 GHz bands potentially pose to equipment manufacturers seeking to introduce multi-band radio equipment that can operate across these adjacent bands. We seek comment on whether we should consider relaxing the OOB limits for operations within the Citizens Broadband Radio Service band. Would relaxing the 3.5 GHz band OOB limits both within and outside the band to comport with the adjacent 3.7 GHz Service OOB limits (*i.e.*, replacing the current OOB limits with a -13 dBm/MHz OOB limit from 3.55-3.7 GHz) help to facilitate broader deployment of multi-band 5G radio equipment? Alternatively, would some other changes to the OOB limits (*e.g.*, removing the -40 dBm/MHz limit above 3720 MHz while leaving the other limits unchanged) be more effective? Would such changes increase the possibility of harmful interference to adjacent band operations—or operations in nearby channels in the 3.5 GHz band—and, if so, how could such interference be mitigated? Would such changes privilege one type of user or network deployment over another? Commenters are encouraged to provide detailed cost-benefit and technical analyses to support

their arguments.

D. Base Station (CBSD) and End User Device (UE) Power Levels

26. In adopting the rules governing CBSD and End User Device (UE) power levels in the Citizens Broadband Radio Service, the Commission strove to balance the public interest objectives of providing greater flexibility to operators against the need to ensure efficient use of the spectrum to create a flexible regime suitable for a wide variety of use cases.

27. We seek comment on whether to add one or more classes of higher power CBSDs to the Citizens Broadband Radio Service. If so, how should these classes be defined and what should the maximum permissible power levels be for each new class of CBSDs? We also seek comment on the potential effects that introducing higher power devices might have on the sharing environment both in and adjacent to the 3.5 GHz band. Specifically, would higher power levels affect spectrum availability near incumbent operations—including federal operations and FSS earth stations—and, if so, would some types of operations be more affected than others? Would higher power levels lead to increased geographic distance between base stations operated by different licensees? If so, could the increased distance potentially limit the number of simultaneous users in the band, making it less efficient in terms of number of users per megahertz? Would an increase in power lead to in-band or adjacent band coexistence issues between commercial wireless operators and, if so, would some types of deployments be affected more than others? If higher power devices are permitted, should we require the SASs to make any changes to their operations to ensure the equitable division of power levels and channel assignments between different users and types of operations?

28. Commenters that support the addition of new higher power CBSD classes are encouraged to provide detailed technical analyses of any changes to incumbent protection criteria—including possible increases in the size of DPA neighborhoods and any corresponding increase in burdens on SAS administrators—that such changes might entail. Commenters should also provide technical and cost-benefit analyses on any potential impacts to commercial wireless operators in and adjacent to the 3.5 GHz band. Such analyses should explicitly address the impact of higher power CBSDs on the wide variety of Citizens Broadband Radio Service operations that have already been deployed in the 3.5 GHz band in reliance on the current rules. We also note that any changes to federal incumbent protection criteria—

including any proposed changes to DPAs or DPA neighborhood distances—will need to be coordinated with NTIA and DoD.

29. Stakeholders in the 3.5 GHz band have also expressed an interest in aligning UE power levels with 3GPP standards. For example, both DISH and CCA propose increasing Citizens Broadband Radio Service UE power limits to allow operations at 26 dBm (instead of 23 dBm) which is in line with the 3GPP High Power UEs (HPUEs) definition. We seek comment on aligning UE power levels in the Citizens Broadband Radio Service with 3GPP standards. We also seek comment on the costs and benefits of allowing higher power End User devices to operate in the 3.5 GHz band. Given that UEs are not directly controlled by SASs, we seek comment on what the potential impact of introducing higher power UEs will be on incumbent operators and other Citizens Broadband Radio service users. Commenters supporting increased UE power levels should describe, in detail, how harmful interference from higher power UEs should be prevented. Specifically, commenters should indicate what protection measures should be put in place to prevent higher power UEs from causing harmful interference to incumbents and Priority Access Licensees in the band. We note that any proposed changes that may impact federal operations will have to be coordinated with NTIA and DoD.

E. SAS Connectivity and/or Outages

30. Fundamental to the Citizens Broadband Radio Service is the requirement that certified SASs must register and authorize all CBSDs. Notably, to facilitate timely and accurate coordination, the part 96 rules require CBSDs to maintain SAS connectivity so they can update the SAS of a change in status and comply with SAS instructions within seconds of a triggering event. Each CBSD must register with, and receive authorization from, a SAS prior to its initial service transmission and must update the SAS within 60 seconds of any changes in its registration information, including the device's specific location. A CBSD must also receive and comply with any incoming commands from its associated SAS regarding any changes to power limits and frequency assignments within 60 seconds of receiving them, i.e., a CBSD must cease transmission, move to another frequency, or change its power level within 60 seconds as instructed by a SAS. These SAS connectivity and communications requirements help to ensure that higher tier operations—including federal operations—are continuously protected from harmful interference and that operations within the same tier can be effectively coordinated.

31. Since commercial services were first introduced in the band, the Commission has granted relief via conditional waiver to the National Football League (NFL) from specific SAS connectivity and communications rules and has worked with NTIA to implement broader relief from SAS signaling requirements in geographic areas and portions of the spectrum band that are outside of the scope of current federal operations. The NFL's waiver allows it to continue operating its GAA-based, coach-to-coach communications systems without connectivity to a SAS in the event of a localized internet outage in an NFL stadium during football game, provided a SAS had authorized the operations. This waiver and subsequent extensions imposed additional technical requirements (including ISP redundancy), and assigned detailed reporting requirements to the NFL.

32. In addition, WTB and OET, working in close collaboration with NTIA, permitted the SAS administrators to extend the CBSD reauthorization period from 300 seconds to 24 hours in geographic areas and portions of the spectrum band that are outside of the scope of current federal operations to provide a more stable and predictable spectrum environment for Citizens Broadband Radio Service users while ensuring an interference-free environment for critical federal operations. This approach will also ensure that SAS administrators will be able to timely respond to instructions from the President of the United States, or another designated Federal Government entity, issued pursuant to 47 U.S.C. 606.

33. In light of these developments, the Commission seeks comment on whether there are other specific circumstances that may warrant less restrictive application of SAS connectivity requirements. Specifically, we seek comment on what, if any, circumstances or deployment types may warrant an alternate approach to SAS connectivity. If we were to provide some degree of situational flexibility, what changes to our SAS connectivity requirements should we consider? Should Citizens Broadband Radio Service users be required to renew access to any alternative approach periodically and, if so, what period would be appropriate? Should we provide more general, time limited relief to Citizens Broadband Radio Service operators in the event of a SAS outage or other connectivity issue?

34. The Commission also welcomes feedback on what factors to take into account in determining whether to relax SAS connectivity in specific circumstances. For example, should we consider different SAS connectivity requirements for spectrum usage that is both geographically and temporally confined (e.g., where the potential for interference is tempered by terrain attenuation or involves spectrum uses that

are short in duration)? Along those lines, should we provide greater flexibility for low powered Category A CBSDs or should we provide flexibility to all CBSDs in circumstances where transmissions are less likely to cause harmful interference? If the latter, what would those circumstances be?

35. The Commission seeks comment on how federal operators and other incumbent users would be protected if we adopt more flexible SAS connectivity rules for some situations. If we modify our SAS connectivity requirements to reflect specific uses or circumstances, how should we implement such changes to ensure that incumbent federal operations, and other higher tier operators in the band, are protected? Would such changes increase the likelihood that higher tier users, including federal incumbents, would be subject to harmful interference? How, specifically, could interference issues be avoided or mitigated? Commenters that support changes to the current SAS connectivity rules should describe the underlying costs and benefits of their proposals and are encouraged to provide detailed information, including technical analyses, that show how any interference issues between and among 3.5 GHz band users would be avoided or mitigated. We note that any proposed changes that may impact federal operations will have to be coordinated with NTIA and DoD.

F. Time Division Duplex (TDD) Synchronization (in-band and adjacent band)

36. In the *3.45 GHz Second Report and Order*, the Commission allocated the 3.45 GHz band on an unpaired basis to promote a consistent spectral environment with adjacent 3.5 GHz and 3.7 GHz bands, both of which are also unpaired in the United States. Recognizing the benefits to all operators that come from TDD synchronization both within and across bands, the Commission found that the record indicated that TDD synchronization, where feasible, may assist in avoiding harmful interference between the 3.45 GHz Service and Citizens Broadband Radio Service operations. To minimize the potential for causing or receiving harmful interference while maintaining deployment flexibility and efficiency, the Commission encouraged intra-band synchronization where possible and required 3.45 GHz Service licensees to negotiate in good faith with requesting Citizens Broadband Radio Service operators to enable TDD synchronization across the two adjacent services.

37. While the *3.45 GHz Second Report and Order* required negotiations concerning the information to be provided to be conducted in good faith, with the goal of enabling TDD synchronization between the relevant systems, it did not impose an obligation on the 3.45 GHz Service licensee to make any

corresponding changes to its operations or proposed operations, stating that parties are free to negotiate changes to either or both networks as part of their efforts. The Commission declined at the time to require TDD synchronization between networks operating in the adjacent 3.45 GHz and 3.5 GHz bands. The Commission was concerned that mandating TDD synchronization could undermine operator flexibility in determining the best use of this spectrum, especially as use cases and technologies change over time. The Commission now seeks comment on whether to impose out-of-band TDD coordination procedures on Citizens Broadband Radio Service licensees to make sure data sharing occurs on a bilateral basis between 3.45 GHz Service and Citizens Broadband Radio Service users seeking to provide service in the same or adjacent geographic areas. We also seek comment on whether Citizens Broadband Radio Service operators should have an obligation to make any corresponding changes to their operations to facilitate TDD synchronization or if we should simply permit parties to negotiate changes to their respective networks.

38. The Commission declined to impose similar TDD synchronization measures on 3.7 GHz Service licensees; consequently there is no negotiation or coordination required between 3.7 GHz Service operators and Citizens Broadband Radio Service users. Similarly, the part 96 rules do not impose any obligation on Citizens Broadband Radio Service licensees to share TDD synchronization information upon request with adjacent band operators in either the 3.45 GHz or the 3.7 GHz Services. Given the changed circumstances in the adjacent band since the last time that the part 96 rules were examined, we seek comment on whether to impose out-of-band coordination requirements on Citizens Broadband Radio Service operators to encourage TDD synchronization with the adjacent 3.7 GHz band.

39. We also welcome feedback generally on the potential benefits and drawbacks of imposing in-band TDD coordination procedures on Citizens Broadband Radio Service licensees given the tiered licensing structure in the 3.5 GHz band. Could an in-band TDD synchronization requirement decrease the potential for harmful interference between operators in the Citizens Broadband Radio Service? Could TDD synchronization be equitably applied across the myriad use cases supported by the Citizens Broadband Radio Service, including GAA deployments? Could such requirements be managed at the SAS level and, if so, how would they be enforced? Would TDD synchronization improve the SASs' ability to coordinate between and among Citizens Broadband Radio Service users in the band? Would

such requirements improve spectrum availability for synchronized operators? Would imposing TDD requirements impose new burdens on operators in the band? We encourage commenters to support their proposals with detailed cost benefit analyses and technical submissions.

G. FSS Protection

40. In developing the part 96 rules, the Commission adopted various measures to protect incumbent FSS earth stations, including the establishment of an annual registration requirement to protect qualified in-band FSS earth stations as well as adjacent 3.7-4.2 GHz band FSS earth stations used for satellite telemetry, tracking, and control (TT&C). For SASs to adequately protect FSS incumbents, the Commission stated that SASs must be able to access detailed information regarding the technical and operational characteristics of each FSS earth station seeking protection and, if any of these characteristics change, the FSS earth station licensee requesting protection must update the relevant registration in the 3.5 GHz FSS database. To initiate this protection framework, the Commission required that FSS earth stations be registered and renewed annually.

41. Under the current rules, in the 3.7-4.2 GHz band only FSS earth stations used for TT&C are eligible for protection and some of those sites have been consolidated or taken off-line as part of the 3.7 GHz transition process. Moreover, while grandfathered FSS operators in the 3.5 GHz band retain incumbent status for active FSS earth stations, some of these earth stations may have been taken offline as a result of the 3.7 GHz transition process. Given these developments in the 3.7-4.2 GHz band, we seek comment on whether we should consider changes to § 96.17 and § 96.21 of the Commission's rules, which were adopted to protect incumbent FSS operations in and adjacent to the 3.5 GHz band. Specifically, we seek comment on whether we should limit protection of TT&C sites in the 3.7-4.2 GHz band to those facilities that were specifically identified in the *3.7 GHz Report and Order* and subsequent satellite operator submissions. We also seek comment more generally on whether we should modify section 96.17 of the Commission's rules to require FSS operators to provide additional technical or operational parameters as part of their annual registration submission to ensure that SASs have the most up-to-date and accurate information necessary to protect registered in-band and adjacent band FSS earth stations against harmful interference from Citizens Broadband Radio Service users operating in the 3.5 GHz band. What additional information would be useful?

42. We propose to clarify the Commission’s rules to state that SASs no longer have to apply the protection criteria in 47 CFR part 90, subpart Z, to protect FSS earth stations in the 3.65-3.7 GHz band now that the transition window for Grandfathered Wireless Broadband Licensees has closed. Specifically, we propose to delete § 96.21 now that incumbent Grandfathered Wireless Broadband Licensees in the 3.65-3.7 GHz band have completed their transition from part 90 to part 96 of the Commission’s rules. Rather, the protection criteria set forth in § 96.17 for FSS earth stations in the 3.6-3.65 GHz band will apply to all grandfathered FSS earth stations in the 3.65-3.7 GHz band going forward. We seek comment on this proposal.

H. Grandfathered Wireless Broadband Licensees

43. In establishing service rules for the Citizens Broadband Radio Service, the Commission adopted a transition period for certain part 90 incumbent Grandfathered Wireless Broadband Licensees in the 3.65-3.7 GHz band to upgrade their equipment to comply with the part 96 rules. Recognizing the challenges associated with the regulatory transition and the significant investment, the Commission provided additional protections and a “reasonable transition period” for these Grandfathered Wireless Broadband Licensees. Under the transition framework, Grandfathered Wireless Broadband Licensees were given at least five years to transition their operations to the Citizens Broadband Radio Service, or to discontinue operations in the 3.65-3.7 GHz band. January 8, 2023 was the latest possible transition deadline for Grandfathered Wireless Broadband Licensees to either complete their transition to the Citizens Broadband Radio Service or discontinue operations in the band. If a Grandfathered Wireless Broadband Licensee failed to transition its sites to part 96 operations by that date then the licensee’s sites are no longer authorized (unless a waiver or extension of the deadline had been granted).

44. We therefore propose to sunset the rules set forth in part 90, subpart Z that apply to wireless broadband services in the 3.65-3.7 GHz band and the corresponding rules protecting part 90 licenses from Citizens Broadband Radio Service operations. We tentatively conclude these rules are no longer needed as the transition period for the last Grandfathered Wireless Broadband Licensee’s license ended on January 8, 2023. We seek comment on this proposal.

I. Other Issues

1. Certified Professional Installation

45. We seek comment on the efficacy of the current professional installation regime and whether any rule changes are needed to ensure that CBSDs are installed and maintained correctly. Do the current rules sufficiently ensure that CBSD locations and configurations are reported accurately? If not, what improvements could be made to better address the need for accurate CBSD information in this band? We also seek comment on whether some devices that are classified as Category B devices under the rules (*e.g.*, outdoor Category A devices installed over 6 meters high, devices used solely as customer premise equipment, etc.) could be safely installed and operated without a CPI. If so, what safeguards should be required to ensure that such devices do not cause harmful interference to incumbent operators and other Citizens Broadband Radio Service users? Commenters are encouraged to provide specific feedback and to consider the costs and benefits for various use cases and network deployments.

2. Private Networks and Low Power Indoor Facilities

46. In the *3.5 GHz FNPRM*, the Commission sought comment on whether it would be in the public interest to allow critical users—such as hospitals, public safety organizations, and local governments—to receive interference protection, akin to Priority Access licensees, within a limited portion of the GAA pool for indoor use within their own buildings. The *3.5 GHz FNPRM* proposed that such Contained Access Users would be required to accept interference from GAA transmissions originating outside of their buildings and to undertake reasonable efforts to safeguard against harmful interference from those transmissions. After reviewing the record, the Commission declined to adopt the Contained Access Facility (CAF) proposal in the *3.5 GHz First Report and Order*. At the time, the Commission indicated that the potential need for such protection was outweighed by the additional costs and burdens of implementing this special priority within GAA use, but left the door open for further consideration.

47. Since 2015, the market for low power indoor operations has continued to develop, and the Commission has taken steps to authorize such operations with fewer restrictions than the Commission applied to outdoor deployments in the same spectrum bands. Notably, in the *6 GHz Report and Order*, the Commission authorized unlicensed low-power indoor access points across the entire 6 GHz band, stating that they would be ideal for connecting devices in homes and businesses such as smartphones, tablet devices, laptops, and Internet-of-things (IoT) devices to the Internet. Similarly, in the *5.9 GHz*

First Report and Order, the Commission adopted rules allowing unlicensed indoor operations across the entire 5.850-5.895 GHz portion of the 5.9 GHz band by setting specific power and technical limits to protect ITS service and federal radar operations from harmful interference. Adopting the same equipment-related hardware requirements as the 6 GHz band, the Commission permitted an exception to accommodate devices such as Wi-Fi extenders and mesh networking equipment that work in conjunction with an indoor access point and share the same propagation path, and thus the same power requirements, but stated that these devices could only be used within a single structure and not connect separate buildings or structures.

48. In addition, 3GPP implemented new 5G New Radio (5G NR) standards, some of which included new and enhanced features related to non-public networks. Industry stakeholders and analysts have also touted the expected rise of new opportunities in private networks in the 3.5 GHz band and elsewhere. The combination of the Commission's recent work on indoor deployments, developments in the standards process, and growing industry interest in private wireless networks, may support a reassessment of how the part 96 rules treat low power indoor operations, and private networks more generally, in the Citizens Broadband Radio Service. To that end, we seek comment on whether there are steps we can take to facilitate additional use of the 3.5 GHz band for low power indoor operations, including private networks. Specifically, should we allow operators to reserve some amount of GAA spectrum for private, low-power indoor operations—akin to the CAF approach—and, if so, what parameters should be established to ensure equitable access to spectrum resources and safeguard other operators from harmful interference? What specific use cases would benefit from this type of reservation model? Should eligibility be reserved for certain categories of users (e.g., public safety organizations, medical care facilities, etc.) or should it be more generally available? We also seek comment on whether we should adopt equipment-related hardware requirements and operational parameters similar to those adopted for indoor services in the 5.9 GHz and 6 GHz bands given that users in those bands are, in some cases, deploying low-power devices similar to Category A CBSDs and, if we did so, whether we would need to make any adjustments for 3.5 GHz band operations?

49. In addition, some network operators may be interested in using 3.5 GHz spectrum to operate drones within the confines of their indoor facilities. Such airborne operations are prohibited by the

current service rules. Given that building attenuation is a key factor in minimizing potentially harmful interference from indoor access points to incumbent receivers, should the Commission expressly allow the operation of drones connected to various low-power access points within a single structure or building? Would such operations be possible without causing harmful interference to higher tier operations? How would SAS administrators coordinate indoor drone operations? Would such operations benefit from some amount of reserved GAA spectrum (akin to the CAF model)?

50. Finally, we seek comment on whether a GAA spectrum reservation system—or other methods—could be used to facilitate and support the growing interest in private networks more generally. For instance, could a CAF-like GAA spectrum reservation system be used to support some outdoor private networks in geographically contained areas (e.g., corporate campuses or manufacturing facilities)? What effects would such a system have on spectrum access for other Citizens Broadband Radio Service users and the overall spectrum environment in the band? Are there other technical or policy approaches that we should consider to support deployment of private networks in the 3.5 GHz band? We ask that commenters submit detailed technical and/or economic analysis to support their positions, including assessments of the overall impact on spectrum availability and the potential effects on both incumbent operators and other Citizens Broadband Radio Service users.

3. GAA User Coexistence

51. To ensure flexibility for the development of the 3.5 GHz band, the Commission encouraged private industry to develop and implement the parameters of GAA coexistence. Section 96.35 of the Commission's rules sets forth the terms by which GAA users can access and use spectrum in the band. The rules require GAA users operating Category B CBSDs to make every effort to cooperate in the selection and use of available frequencies provided by a SAS to minimize the potential for interference and make the most effective use of the authorized facilities. GAA users must also make every effort to ensure that their CBSDs operate at a location, and with technical parameters, that will minimize the potential to cause and receive interference among CBSDs. Operators of CBSDs suffering from or causing harmful interference are expected to cooperate and resolve interference problems through technological solutions or by other mutually satisfactory arrangements. As GAA use has rapidly increased in the past four years, the potential for conflict among and between GAA users has increased as well.

52. We note that it is Commission policy to “be proactive in supporting ‘good neighbor’ policies that promote more efficient and effective co-existence among spectrum users.” Accordingly, we seek comment on whether we should adopt rules to ensure equitable treatment of different GAA operators. Specifically, we seek comment on whether there are new rules, or clarifications of current rules, that could foster coexistence and preempt disputes among GAA users in a manner that will also advance GAA spectrum use and continued deployment of the Citizens Broadband Radio Service. Alternately, would the development of specific coexistence criteria be better left to multistakeholder groups? What would be the costs and benefits of any such rule changes and what impact would they have on existing and future GAA deployments? What role should the SASs play in monitoring GAA users’ compliance with any such new rules? How could such rules be equitably enforced by the Commission? Commenters are encouraged to provide specific proposals, along with supporting technical and cost-benefit analyses, to support their proposals.

53. *Conforming Changes.* We take this opportunity to propose non-substantive edits to three rule sections we are otherwise revising, §§ 96.15, 96.17, and 96.30, to conform to the current stylistic requirements of the Office of the Federal Register.

54. *Digital Equity and Inclusion.* Finally, the Commission, as part of its continuing effort to advance digital equity for all, including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations and benefits (if any) that may be associated with the proposals and issues discussed herein. Specifically, we seek comment on how our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well the scope of the Commission’s relevant legal authority.

IV. DECLARATORY RULING

55. In addition to seeking comment on proposed changes to our rules in the NPRM, we also adopt a Declaratory Ruling to clarify § 96.55(a) of our rules. Section 96.55(a)(3) provides that “SAS Administrators shall not disclose specific CBSD registration information to the general public except where such disclosure is authorized by the registrant.” Through this Declaratory Ruling, we confirm that NTIA and DoD are not considered “the general public” for purposes of this information disclosure

provision.

56. We recognize that NTIA and DoD possess equitable interests as government agencies that manage and hold co-primary spectrum rights in the 3.5 GHz band. We also note that NTIA and DoD have been critical partners in every phase of this proceeding and they are actively engaged in ongoing efforts to refine federal protection criteria and apply technical solutions to maximize commercial access to the 3.5 GHz spectrum and facilitate CBSD deployments in the band. To date, the part 96 information disclosure rule does not specify explicitly that NTIA and DoD are not considered “the general public.” By adopting this clarification, we ensure that NTIA and DoD can access CBSD registration information if either government agency requests such information from any SAS. On our own motion, we confirm that NTIA and DoD are not considered “the general public” under § 96.55(a).

57. The Regulatory Flexibility Act of 1980, as amended (RFA), requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.” Accordingly, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning potential rule and policy changes contained in the NPRM. The IRFA is contained in Appendix B of the NPRM.

Initial Regulatory Flexibility Analysis

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

58. In the NPRM, the Commission proposes to make specific adjustments to the regulatory framework of the Citizens Broadband Radio Service spectrum sharing model in order to better protect federal operations and to maximize the amount of spectrum available for commercial broadband. Additionally, the NPRM seeks to improve the technical and service rules for the 3.5 GHz band to reflect changes in the operational environment for both Priority Access License (PAL) licensees and Citizens Broadband Radio Service licensees by soliciting and obtaining feedback from Citizens Broadband Radio Service users, equipment manufacturers, prospective operators, and other stakeholders. Through comments, the Commission seeks to identify how we can best support the Commission’s goals of achieving continued growth in the Citizens Broadband Radio Service, fostering innovation, and building

on the novel three-tiered sharing regime that was created to facilitate real-time spectrum sharing in the band.

59. As discussed above, the NPRM is a continuation of the Commission's efforts since the *3.5 GHz First Report and Order* was adopted to work with our federal partners and industry stakeholders towards developing and implementing refinements to improve and expand spectrum access in the 3.5 GHz band. The NPRM proposes specific adjustments to the regulatory framework of the Citizens Broadband Radio Service to better protect federal operations and to maximize the amount of spectrum available for commercial broadband. To facilitate these goals, the NPRM seeks comment on a variety of matters such as making improvements to the part 96 rules that protect federal incumbent users in the 3.5 GHz band, modifying technical rules to optimize the potential uses of the band for the next generation of wireless services, while minimizing the impact on adjacent band incumbents consistent with the public interest; improving operating rules and regulatory issues, and measures to ensure professional installation and facilitate General Authorized Access (GAA) user coexistence in the band. Beyond federal protection measures, the NPRM also seeks comment on whether changes to the part 96 technical and service rules are necessary to clarify our information disclosure requirements, align out of band emissions (OOBE) limits with those in adjacent bands, permit higher power levels; relax Spectrum Access Systems (SAS) connectivity requirements, impose Time Division Duplex (TDD) coordination procedures, update protection measures for certain grandfathered incumbent licensees, address issues surrounding professional installation, accommodate private networks and low power indoor facilities, or adopt guidelines to encourage GAA user coexistence.

B. Legal Basis

60. The proposed action is authorized pursuant to sections 1, 2, 4(i), 4(j), 301, 302a(a), 303, and 307(e) of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i), 154(j), 301, 302a(a), 303, and 307(e).

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

61. 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, if adopted. The RFA generally

defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A small business concern is one that: (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.

62. *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, at the outset, three broad groups of small entities that could be directly affected herein. First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration’s (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 33.2 million businesses.

63. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.” The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2022, there were approximately 530,109 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.

64. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.” U.S. Census Bureau data from the 2022 Census of Governments indicate there were 90,837 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Of this number, there were 36,845 general purpose governments (county, municipal, and town or township) with populations of less than 50,000 and 11,879 special purpose governments (independent school districts) with enrollment populations of less than 50,000. Accordingly, based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 entities fall into the category of “small governmental jurisdictions.”

65. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless Internet access, and wireless video services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 594 providers that reported they were engaged in the provision of wireless services. Of these providers, the Commission estimates that 511 providers have 1,500 or fewer employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

66. *Radio Frequency Equipment Manufacturers (RF Manufacturers)*. There are several analogous industries with an SBA small business size standard that are applicable to RF Manufacturers. These industries are Fixed Microwave Services, Other Communications Equipment Manufacturing, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. A description of 7

67. *Fixed Microwave Services*. Fixed microwave services include common carrier, private-operational fixed, and broadcast auxiliary radio services. They also include the Upper Microwave Flexible Use Service (UMFUS), Millimeter Wave Service (70/80/90 GHz), Local Multipoint Distribution Service (LMDS), the Digital Electronic Message Service (DEMS), 24 GHz Service, Multiple Address Systems (MAS), and Multichannel Video Distribution and Data Service (MVDDS), where in some bands licensees can choose between common carrier and non-common carrier status. Wireless Telecommunications Carriers (*except Satellite*) is the closest industry with an SBA small business size standard applicable to these services. The SBA small size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

68. The Commission's small business size standards with respect to fixed microwave services involve

eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in fixed microwave services. When bidding credits are adopted for the auction of licenses in fixed microwave services frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in Part 101 of the Commission's rules for the specific fixed microwave services frequency bands.

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

70. *Other Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment). Examples of such manufacturing include fire detection and alarm systems manufacturing, Intercom systems and equipment manufacturing, and signals (e.g., highway, pedestrian, railway, traffic) manufacturing. The SBA small business size standard for this industry classifies firms having 750 or fewer employees as small. For this industry, U.S. Census Bureau data for 2017 shows that 321 firms operated for the entire year. Of that number, 310 firms operated with fewer than 250 employees. Based on this data, we conclude that the majority of Other Communications Equipment Manufacturers are small.

71. *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. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

The SBA small business size standard for this industry classifies firms having 1,250 employees or less as small. U.S. Census Bureau data for 2017 show that there were 656 firms in this industry that operated for the entire year. Of this number, 624 had fewer than 250 employees. 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

72. The Commission expects the rules proposed in the NPRM will impose new and/or additional reporting or recordkeeping and/or other compliance obligations on small entities as well as other applicants and licensees, if adopted. We also note that in addition to the proposed rule changes discussed above, there will likely be other new compliance obligations that emerge based on feedback received through comments. The reporting, recordkeeping and other compliance obligations proposed for small entities and other licensees are described below.

73. In order to comply with the proposed rules, should they be adopted, small entities and other licensees would be subject to certain technical rules established to maximize the flexible use of the 3.5 GHz band spectrum while minimizing the impact on adjacent band incumbents, an approach that is consistent with the public interest. In addition to aligning the technical rules for this band with those adopted in the 3.7 GHz band, we propose and seek comment on technical rules regarding power limits, out-of-band emissions limits, antenna height limits, service area boundary limits, international coordination requirements, and any other technical rules that will most effectively meet our objectives of optimizing use of the band without causing harmful interference to new, non-federal licensees and federal incumbents operating in adjacent bands.

74. Small entities may be required to hire attorneys, engineers, consultants, or other professionals to comply with the proposed rules in the NPRM, if adopted. In particular, for small entities that are not existing operators and do not have existing staffing dedicated to regulatory compliance, engineering and legal expertise may be necessary to make the requisite filings and to demonstrate compliance with the proposed performance obligations. At this time, while the Commission cannot quantify the cost of compliance with the proposed rule changes, we note that several of the proposed changes are consistent with and mirror existing policies and requirements used for other part 27 flexible use licenses. Therefore,

small entities with existing licenses in other bands may already be familiar with such policies and requirements and have the processes and procedures in place to facilitate compliance resulting in minimal incremental costs for compliance should similar requirements be adopted for 3.5 GHz band spectrum. We also note that for most of the proposals and requests for comments in the NPRM, the Commission also requests a cost and benefit analysis. The Commission expects that the information it receives in comments will help it to identify and evaluate all relevant matters associated with the proposed reallocation and the relocation of public safety operations out of the band, including compliance costs and other burdens on small entities.

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

75. The RFA requires an agency to describe any significant alternatives that could minimize impacts to small entities 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 clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.” In the NPRM, the Commission has taken steps to minimize the economic burden on small entities that may occur if some of the proposed rule changes are adopted, and has also considered significant alternatives throughout the development of our proposals in the NPRM.

76. *CBSD Information Availability.* Given the rapid and ongoing growth of commercial deployments in the band—along with stakeholder interest in increased transparency, in the NPRM we considered whether the existing information disclosure rules provide sufficient data for current and future Citizens Broadband Radio Service users to plan their network deployments and to make informed decisions regarding investments in the band. Specifically, we considered whether the best approach would be to modify our disclosure rules to reinstate the original information for disclosure requirements, or whether implementing an alternative approach would be the more prudent course of action. In the NPRM, we seek comment on this matter, and request that commenters seeking alternative disclosure rules, including

a reversion to the original information disclosure requirements, should explain how their approach would balance existing operator interest in protecting sensitive network information with the legitimate information needs of prospective service providers.

77. *Technical Rules.* In the NPRM, the Commission also considers whether there are opportunities to revise the rules governing the 3.5 GHz band to align the protection of specific federal systems and facilities given the spectrum sharing framework adopted in the adjacent 3.45 GHz band. Specifically, we considers whether 3.5 GHz protection methodologies could be aligned with 3.45 GHz protections—for the same systems and facilities—to increase commercial access to the band while maintaining necessary protection for federal incumbent users. The NPRM focuses its inquiry on whether there are opportunities to create efficiencies by modifying the protection mechanisms in the 3.5 GHz band to better align with those in the 3.45 GHz band.

78. *Certified Professional Installation.* Noting the importance of accurate location reporting by professional installers to SASs, particularly in terms of its impact on the ability of SASs to properly manage spectrum use in the band, the Commission strongly encouraged the SAS and Citizens Broadband Radio Service user community, through multistakeholder fora or industry associations, to develop programs for accrediting professional installers who will receive training in the relevant part 96 rules and associated technical best practices. The WTB and the OET issued a public notice detailing what SASs must demonstrate in their Initial Commercial Deployment (ICD) proposals, including a description of “Professional Installation” as “[t]he process that a certified professional installer (CPI) would follow to register CBSDs/DPs during ICD and an explanation regarding how that professional installation will ensure the SAS can accurately locate devices in compliance with part 96.” The NPRM seeks comment on the efficacy of the current professional installation regime and whether any rule changes are needed to ensure that CBSDs are properly installed and maintained correctly. Commenters are encouraged to provide specific feedback and to consider the costs and benefits for various use cases and network deployments.

79. *Guidelines for GAA user coexistence.* In the NPRM, the Commission also considered whether to adopt rules to ensure equitable treatment of different GAA operators. Specifically, we considered whether there are new rules, or clarifications of current rules, that could foster coexistence and preempt

disputes among GAA users in a manner that will also advance GAA spectrum use and continued deployment of the Citizens Broadband Radio Service. The NPRM asks what the costs and benefits are of any such rule changes as well as what impact they would have on existing and future GAA deployments. The NPRM also asks how such rules could be equitably enforced by the Commission. Commenters are encouraged to provide specific proposals, along with supporting technical and cost-benefit analyses, to support their proposals.

80. Further, the Commission considered different proposals and potential questions that might emerge from those proposals in order to help identify whether small entities face any special or unique issues with respect to buildout requirements and other requirements that would require certain alternatives, such as through different accommodations or by incorporating additional time for small entities to comply. The Commission also seeks comment on modifications that could be made to the Commission's rules regarding administrative processes in order to reduce the economic impacts of the proposed rule changes on small entities. By specifically targeting comments from small entities the Commission hopes to obtain the requisite data to allow it to evaluate the most cost-effective approach to minimize the economic impact for such entities, while achieving its statutory objectives.

81. Additionally, to assist with the Commission's evaluation of the economic impact on small entities that may result from the actions and alternatives that have been proposed in this proceeding, the NPRM seeks alternative proposals and requests additional information on the potential costs of such alternatives to licensees. The Commission expects to consider more fully the economic impact on small entities following its review of comments filed in response to the NPRM, including costs and benefits information. Alternative proposals and approaches from commenters could help the Commission further minimize the economic impact on small entities. The Commission's evaluation of the comments filed in this proceeding 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 from the final rules that are ultimately adopted.

Procedural Matters

Paperwork Reduction Act

This NPRM may contain new or modified information collection(s) subject to the Paperwork Reduction Act of 1995. If the Commission adopts any new or modified information collection requirements, they will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, the Commission seeks specific comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.

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

None.

List of Subjects

47 CFR Part 90

Private Land Mobile Radio Service, Telecommunications.

47 CFR Part 96

Citizens Broadband Radio Service, Telecommunications.

Federal Communications Commission.

Katura Jackson,

Federal Register Liaison Officer.

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR parts 90 and 96 as follows:

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 § 90.1301 to read as follows:

§ 90.1301 Scope.

Wireless operations in the 3650-3700 MHz band are part of the Citizens Broadband Radio Service, as set forth in part 96 of this chapter.

§§ 90.1303 through 90.1338 [Removed]

3. Remove §§ 90.1303 through 90.1338.

PART 96—CITIZENS BROADBAND RADIO SERVICE

4. The authority citation for part 96 continues to read as follows:

Authority: 47 U.S.C. 154(i), 303, and 307.

5. Amend § 96.3 as follows:

- a. Add, in alphabetical order, the definitions of “Dynamic Protection Area”, “Dynamic Protection Area Neighborhoods”, and “Scheduling Portal”;
- b. Revise the definition of “Exclusion Zone” and “Incumbent user”; and
- c. Remove the definitions of “Grandfathered wireless broadband licensee”, “Grandfathered wireless protection zone”, and “Protection zone”.

§ 96.3 Definitions.

* * * * *

Dynamic Protection Area (DPA). DPAs are geographic protection areas, extending from the coastline into the ocean or enclosing a protected federal facility, which may be activated or deactivated as necessary to protect Department of Defense (DOD) radar systems. DPAs are activated when DoD radar systems are using the band—as communicated to a Spectrum Access System (SAS) by either an Environmental Sensing Capability (ESC) or Scheduling Portal—signaling that federal incumbents in the DPA must be protected from Citizens Broadband Radio Service operations within the active frequency range.

(1) Coastal DPAs are geographic protection areas located along the Coastline to protect shipborne radar systems and designated port facilities. Coastal DPAs are activated consistent with information received by an SAS from an ESC.

(2) Portal-Activated DPAs (P-DPAs) are geographic protection areas located around designated federal facilities or coastal areas that utilize a dedicated Scheduling Portal to schedule federal operations in the 3.5 GHz band. P-DPAs are activated consistent with information received by an SAS from a Scheduling Portal.

(3) Always Activated DPAs are geographic protection areas that are always considered to be in active use by federal operators. These DPAs protect a limited number of federal radar systems by limiting the maximum aggregate received power level from the CBSDs at the location of the protected radar antenna aperture.

Dynamic Protection Area (DPA) Neighborhoods. A DPA neighborhood is the area in which registered CBSDs may cause interference to incumbent operations in activated DPAs. The SAS may direct CBSDs within DPA Neighborhoods to cease operations, reduce transmit power, or relocate to a non-interfering frequency when the associated DPA is activated.

* * * * *

Exclusion Zone. A geographic area wherein no CBSD shall operate without the express consent of NTIA. Exclusion Zones shall be enforced and maintained by the SASs.

* * * * *

Incumbent user. A federal entity authorized to operate on a primary basis in accordance with the table of frequency allocations, or a fixed satellite service operator.

* * * * *

Scheduling portal. A calendar-based system, authorized by the Commission, that supports the scheduling and communication of federal spectrum use within designated P-DPAs to SASs.

* * * * *

§ 96.7 [Amended]

6. Amend § 96.7 by removing paragraph (c).

§ 96.11 [Amended]

7. Amend § 96.11 by removing paragraph (a)(3).

§ 96.13 [Amended]

8. Amend § 96.13 by removing “Grandfathered Wireless Broadband Licensees and” from paragraph (b).

9. Amend § 96.15 as follows:

- a. Revise paragraphs (a)(2), (a)(3), (a)(5), and (a)(6);
- b. Revise paragraph (b)(2);
- c. Remove paragraph (b)(3);
- d. Redesignate paragraph (b)(4) as paragraph (b)(3); and
- e. Revise newly redesignated paragraph (b)(3).

The revisions read as follows:

§ 96.15 Protection of federal incumbent users.

(a) * * *

(2) The SAS shall only authorize the use of CBSDs consistent with information on federal frequency use as provided in this section.

(3) The SAS shall protect federal incumbent sites using DPAs—including Coastal DPAs, P-DPAs, and Always Activated DPAs—and Exclusion Zones. A DPA may be activated when DoD radar systems are active within the DPA. The SAS shall protect each activated DPA from aggregate CBSD interference within the active frequency range.

(i) The specific coordinates and protection requirements for all DPAs, DPA Neighborhoods, and Exclusion Zones are maintained by NTIA and are publicly available at: <https://www.ntia.doc.gov/fcc-filing/2015/ntia-letter-fcc-commercial-operations-3550-3650-mhz-band>.

(ii) NTIA shall notify the Commission in writing if and when the list of DPA-protected federal radiolocation sites and Exclusion Zones is to be updated or the methodology used to protect specific sites is to be changed.

(iii) The SAS must treat Coastal DPAs as activated prior to approved ESC sensor deployment and if ESC sensors lose contact with the SAS.

* * * * *

(5) The Commission will, as necessary, add or modify DPAs and Exclusion Zones to protect current and future federal Incumbent Users and will notify the public prior to implementation.

(6) The Commission may temporarily extend or modify DPAs and Exclusion Zones to protect temporary operations by federal Incumbent Users and will notify the public prior to implementation. Federal Incumbent Users will coordinate with the Commission prior to the beginning of any non-emergency operation requiring additional protection. Such modifications will be communicated to the SAS along with the expiration date and time of any modification.

(b) * * *

(2) Exclusion Zones shall be maintained for an 80 km radius around the federal radiolocation sites listed in § 2.106(c)(109) of this chapter.

(3) If the President of the United States (or another designated Federal Government entity) issues instructions to discontinue use of CBSDs pursuant to 47 U.S.C. 606, SAS Administrators must instruct CBSDs to cease operations as soon as technically possible.

10. Amend § 96.17 by revising paragraph (a)(1) to read as follows:

§ 96.17 Protection of existing fixed satellite service (FSS) earth stations in the 3600-3700 MHz Band and 3700-4200 MHz Band.

(a) * * *

(1) FSS earth stations in the 3650–3700 MHz band will be afforded protection consistent with this section.

* * * * *

§ 96.21 [Removed]

11. Remove § 96.21.

12. Amend § 96.30 by revising paragraph (a)(2) to read as follows:

§ 96.30 Designated entities in the Citizens Broadband Radio Service.

(a) * * *

(1) * * *

(2) A very small business is an entity that, together with its affiliates, its controlling interests, and the affiliates of its controlling interests, has average gross revenues not exceeding \$20 million for the preceding three years.

* * * * *

§ 96.39 [Amended]

13. Amend § 96.39 by removing the sentence “Equipment deployed by Grandfathered Wireless Broadband Licensees during their license term will be exempt from this requirement” from paragraph (b).

14. Amend § 96.53 as follows:

- a. Revise paragraphs (e) and (f);
- b. Remove the phrase “and 96.21” from paragraphs (g) and (h);
- c. Remove and reserve paragraph (m); and
- d. Add paragraph (p).

The revisions and addition read as follows:

§ 96.53 Spectrum access system purposes and functionality.

* * * * *

(e) To retain information on, and enforce, DPAs and Exclusion Zones in accordance with §§ 96.15 and 96.17.

(f) To communicate with the ESC to obtain information about federal Incumbent User transmissions within Coastal DPAs and instruct CBSDs operating within the associated DPA Neighborhoods to move to another frequency range or cease transmissions to prevent interference to federal Incumbent Users within activated Coastal DPAs.

* * * * *

(m) [Reserved]

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(p) To use a Scheduling Portal to obtain information about federal Incumbent User transmissions within P-DPAs and instruct CBSDs operating within the associated DPA Neighborhoods to move to another frequency range or cease transmissions to prevent interference to federal Incumbent Users within activated P-DPAs.

15. Amend § 96.55 by removing the phrase “and Protection Zones” from paragraph (a) introductory text and adding paragraph (a)(5)

§ 96.55 Information gathering and retention.

(a) * * *

(5) Upon request, SAS Administrators must make CBSD registration information available to NTIA and DoD for any designated geographic area, frequency range, or time period.

* * * * *

16. Amend § 96.57 by revising paragraph (d) as follows:

§ 96.57 Registration, authentication, and authorization of Citizens Broadband Radio Service Devices.

* * * * *

(d) A SAS must not authorize operation of CBSDs within Exclusion Zones, DPAs, or DPA Neighborhoods except as set forth in § 96.15.

* * * * *

17. Amend § 96.67 by revising paragraph (d) to read as follows:

§ 96.67 Environmental sensing capability.

* * * * *

(d) ESC equipment shall be deployed in the vicinity of Coastal DPAs to accurately detect federal Incumbent User transmissions.

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