

Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of )
Promoting Investment in the 3550-3700 MHz Band ) GN Docket No. 17-258

ORDER

Adopted: May 22, 2018

Released: May 22, 2018

By the Chief, Wireless Telecommunications Bureau and the Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. In this Order, the Wireless Telecommunications Bureau (WTB) and the Office of Engineering and Technology (OET), on their own motion, grant a conditional waiver of certain rules governing the protection of federal operations in the 3550-3700 MHz band (3.5 GHz Band) to facilitate more rapid access to the band by a wider variety of devices without compromising federal incumbent protections.

1 Specifically, we conditionally waive Sections 96.15(a)(2)-(3) and 96.15(b)(2)-(3). See 47 CFR §§ 96.15(a)(2)-(3); 96.15(b)(2)-(3) (Protection of Federal Incumbent Users). We also waive the requirements in 47 CFR §§ 96.7(a), 96.45(b), 96.53(g), and 96.57(d) to the extent necessary to allow the testing and operation of DPA-enabled SASs.

2 ESCs will consist of a network of sensors—infrastructure-based, device-based, or a combination of both—that will detect federal radars operating in and around the 3.5 GHz Band and relay information regarding those transmissions to the SAS in order to protect incumbent federal operations. See 47 CFR §§ 96.3 (Environmental Sensing Capability (ESC)), 96.15, 96.67.

3 SASs are systems that authorize and manage use of spectrum for the Citizens Broadband Radio Service. See id. §§ 96.3 (Spectrum Access System), 96.53-96.66.

4 Exclusion Zones are “geographic area[s] wherein no CBSD shall operate.” See id. § 96.3 (Exclusion Zone).

5 CBSDs are fixed stations, or network of such stations, that operate on a Priority Access or General Authorized Access basis in the Citizens Broadband Radio Service. Category A CBSDs operate at lower power levels, while Category B CBSDs operate at higher levels and may operate outdoors only. See id. §§ 96.3, 96.41, 96.43, 96.45.

6 This two-phase approach to federal incumbent protection applies to the 3550-3650 MHz portion of the band, which is allocated to federal use on a primary basis, and is the spectrum that the Department of Defense (DoD) uses to operate its shipborne radar systems in coastal areas.

areas (DPAs) that will permit DPA-enabled SASs to authorize Category B CBSDs prior to the deployment of an ESC.<sup>7</sup> The SAS Administrator must declare whether its system will be DPA-enabled as part of the final certification process.<sup>8</sup> Prior to the deployment of an ESC, a DPA-enabled SAS may authorize both Category A and Category B CBSDs and will not be required to enforce Exclusion Zones in areas protected by DPAs. Prior to the deployment of an ESC, non-DPA-enabled SASs may only authorize Category A CBSDs outside of Exclusion Zones, consistent with the current rules.<sup>9</sup>

2. SASs operating pursuant to this conditional waiver will protect federal incumbent operations in the 3.5 GHz Band using dynamic and precisely tailored protection criteria rather than static Exclusion Zones. DPAs were developed in collaboration with NTIA, which is the agency generally responsible for governing federal use of radio spectrum, and, therefore, ideally positioned to assess the interference protection needs of federal users. DPAs provide a targeted methodology that will allow SASs to authorize higher power commercial operations in this band prior to ESC deployment without increasing the risk of interference to federal incumbents. This will permit operators in the 3.5 GHz Band to operate both Category A and Category B CBSDs in a larger portion of the country more quickly than anticipated and thereby will promote efficient spectrum use and rapid commercial deployment in the band, encourage investment, and facilitate the expeditious provision of new products and services to the public while still protecting federal operations (including those used for defense purposes) against harmful interference. This conditional waiver applies solely to DPA-enabled SAS protection of federal operations and does not waive the rules governing protections for non-federal incumbents.<sup>10</sup>

## II. BACKGROUND

3. In 2015, the Commission adopted rules for commercial use of the 3.5 GHz Band.<sup>11</sup> The 2015 *First Report and Order* created a three-tiered framework to coordinate shared federal and non-federal use of the band. Incumbent users—both federal and non-federal—comprise the highest tier and receive protection from all other users, followed by Priority Access License (PAL) users (second tier),

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<sup>7</sup> DPAs are geographic areas pre-defined by the National Telecommunications and Information Administration (NTIA) which are activated when DoD radar systems are using the band, signaling that federal incumbents must be protected from other users in the band. Non-DPA-enabled SASs may only authorize Category A CBSDs outside of Exclusion Zones until the deployment of an approved ESC, pursuant to the current rules.

<sup>8</sup> Any SAS applicants that receive conditional approval must allow their systems to be tested and analyzed by the Commission. See *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, 4067, para. 372, (2015) (*First Report and Order* or *Second FNPRM*, as applicable). If a SAS Administrator declares that it is DPA-enabled, the Commission will test this capability. If not, the Commission will test the system in accordance with the current federal protection rules.

<sup>9</sup> See *supra* note 5.

<sup>10</sup> See e.g., 47 CFR §§ 96.17, 96.21.

<sup>11</sup> See generally *First Report and Order* and *Second FNPRM*, 30 FCC Rcd 3959. In 2017, the Commission proposed limited revisions to the rules governing PALs in terms of license terms and renewability, auction methodology, secondary markets, and certain technical criteria. See *FCC Seeks Comment on Promoting Investment in the 3.5 GHz Band*, GN Docket No. 17-258, RM-11788, RM-11789, Notice of Proposed Rulemaking and Order Terminating Petitions, FCC 17-134 (Oct. 24, 2017). However, the proposed rule changes would not affect the rules subject to this conditional waiver.

and General Authorized Access (GAA) users (third tier).<sup>12</sup> PALs receive protection from GAA operations.<sup>13</sup> GAA users are licensed-by-rule and must accept interference from other Citizens Broadband Radio Service users.<sup>14</sup> The SASs are automated frequency coordinators that will coordinate operations between and among users in different tiers of users.<sup>15</sup> The service and technical rules governing the 3.5 GHz Band were adopted as the new Part 96 of the Commission's rules.<sup>16</sup>

4. In the *First Report and Order*, the Commission established a two-phase approach to protect federal incumbent users from interference from new commercial users in the 3.5 GHz Band.<sup>17</sup> Consistent with NTIA's recommendations and after extensive technical collaboration among the Department of Defense (DoD), NTIA, and the Commission,<sup>18</sup> the Commission established Exclusion Zones along the U.S. coasts and around designated ground-based radar facilities.<sup>19</sup> During "phase one," a SAS may not authorize any CBSDs within the Exclusion Zones in the 3550-3650 MHz portion of the band and, outside of the Exclusion Zones, a SAS may authorize only Category A CBSDs in that portion of the band.<sup>20</sup> After certification and deployment of one or more ESCs, SASs may operate consistent with the "phase two" protection rules. During phase two, Exclusion Zones will be converted to Protection

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<sup>12</sup> Incumbent users include federal radiolocation users, Fixed Satellite Service earth stations, and, for a finite period, certain grandfathered terrestrial wireless licensees in the 3650-3700 MHz band. See 30 FCC Rcd 3959 at 3964-3967, paras. 15-22 (detailing incumbent use of the band); *id.* at 4075-4080, paras. 400-412 (adopting protections for grandfathered terrestrial wireless operations for five years or until the end of the license term, whichever is longer). The Commission collaborated with NTIA on protections for DoD radar systems. See *id.* at 4035-4042, paras. 247-275 (discussing NTIA recommendations for incumbent protection). Non-federal incumbents must register the parameters of their operations with the Commission and/or an SAS to receive interference protection. See 47 CFR §§ 96.15, 96.17, 96.21.

<sup>13</sup> See *First Report and Order*, 30 FCC Rcd at 3962, para. 4. PALs will be assigned in up to 70 megahertz of the 3550-3650 MHz portion of the band. See *id.* at 3982, para. 67 (reserving 70 megahertz—i.e., seven ten megahertz channels—for PALs in a given license area).

<sup>14</sup> See *id.* at 4009, para 156. GAA users can operate throughout the entire 150 megahertz of the 3.5 GHz Band on any frequencies not in use by PALs. See *id.* at 4011, paras. 159-161. GAA users may use only certified, Commission-approved devices and must register with the SAS. *Id.* at 4012, para. 162.

<sup>15</sup> The three-tier access framework adopted in the *First Report and Order* is generally consistent with proposals in the Commission's 2014 Further Notice of Proposed Rulemaking. See generally *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Further Notice of Proposed Rulemaking, 29 FCC Rcd 4273 (2014) (3.5 GHz FNPRM). See also *Commission Seeks Comment on Licensing Models and Technical Requirements in the 3550-3650 MHz Band*, GN Docket No. 12-354, Public Notice, 28 FCC Rcd 15300 (2013); *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Notice of Proposed Rulemaking, 27 FCC Rcd 15594 (2012).

<sup>16</sup> See generally *First Report and Order*, 30 FCC Rcd 3959; *3.5 GHz FNPRM*, 29 FCC Rcd 4273. See also 47 CFR §§ 96.1 *et seq.* While the Commission adopted a complete set of rules and policies for the establishment of the Citizens Broadband Radio Service, it also determined that a few focused issues required further record development, and simultaneously released the *Second FNPRM*. The Commission resolved these issues in its *Second Report and Order*. At the same time, the Commission addressed multiple petitions for reconsideration of the *First Report and Order* in a simultaneously released *Order on Reconsideration*. See generally *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, GN Docket No. 12-354, Order on Reconsideration and Second Report and Order, 31 FCC Rcd 5011 (2016) (*Order on Reconsideration* or *Second Report and Order*, as applicable).

<sup>17</sup> See *First Report and Order*, 30 FCC Rcd at 4038-4040, paras. 258-268.

<sup>18</sup> See Letter from Paige R. Atkins, Associate Administrator, Office of Spectrum Management, NTIA, to Julius P. Knapp, Chief, OET, FCC in GN Docket No. 12-354 (filed March 24, 2015).

<sup>19</sup> See *id.*

<sup>20</sup> See *First Report and Order*, 30 FCC Rcd at 4038-39, para. 260.

Zones.<sup>21</sup> The SAS may then authorize Category A and Category B CBSDs in the 3550-3650 MHz portion of the band nationwide, including within Protection Zones (which include major coastal cities), except when the ESC detects and reports federal use in a given area to the SAS.<sup>22</sup>

5. Consistent with the Commission's instructions,<sup>23</sup> WTB and OET have worked collaboratively with NTIA, DoD, and industry stakeholders—including prospective SAS Administrators and ESC operators—to develop an appropriate technical approach to implement the two-phase protection model. On May 17, 2018, NTIA submitted a letter describing a protection methodology based on DPAs and recommending that the Commission allow SASs the option to use DPA-based protections instead of Exclusion Zones, including the coastal exclusion zones.<sup>24</sup> NTIA describes DPAs as pre-defined protection areas—extending from the coastline out into the ocean or enclosing a protected terrestrial radar facility—which may be activated or deactivated as necessary to protect DoD radar systems.<sup>25</sup> DPAs would be located in specific areas along the East, Gulf, West, Alaskan, Hawaiian and Puerto Rican coasts in order to protect shipborne radar systems and may be used to protect terrestrial facilities as well.<sup>26</sup> After an ESC detects the presence of federal radar, the ESC will indicate to the SAS that the DPA is active.<sup>27</sup> While a DPA is active, the SAS must manage CBSD frequency and power assignments to ensure that the entire DPA is protected from aggregate interference (within the detected frequency range).<sup>28</sup> If the ESC does not detect the presence of federal radar transmissions for a pre-defined period of time (e.g., 2 hours), the SAS will deactivate the DPA.<sup>29</sup>

6. Prior to the authorization of an ESC, a DPA-enabled SAS will set all DPAs to active status, allowing the SAS to authorize Category A and Category B CBSDs in areas of the country that are not covered by DPA protections (i.e., non-coastal areas) while simultaneously protecting federal incumbents. We expect that ESC sensors will be authorized and deployed on a rolling basis (i.e., sensors may be deployed region-by-region rather than nationwide), and SASs may then deactivate any DPAs covered by authorized and deployed ESC sensors when no federal radar transmissions are present. As NTIA explains, “DPAs are the implementation of dynamic protection zones. ESCs used in conjunction with DPAs promise to allow CBSDs to be deployed in the current static exclusion zones and enable higher power commercial operations in the 3.5 GHz Band. If properly executed, DPAs will facilitate the phased deployment of CBSDs while protecting federal radars from aggregate interference.”<sup>30</sup>

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<sup>21</sup> See 47 CFR §§ 96.3 (Exclusion Zone; Protection Zone), 96.15, 96.67.

<sup>22</sup> See *id.* at § 96.15; See *First Report and Order*, 30 FCC Rcd at 4039, para. 261-262.

<sup>23</sup> See *First Report and Order*, 30 FCC Rcd at 4067, para. 369; see 47 CFR §§ 0.241(j), 0.331(f).

<sup>24</sup> See Letter from Paige R. Atkins, Assoc. Admin., Office of Spectrum Mgt., NTIA, to Julius P. Knapp, Chief, OET, FCC, and Donald Stockdale, Chief, WTB, FCC, (May 17, 2018) at 6-7 (2018 NTIA Letter).

<sup>25</sup> *Id.* at 2-3. NTIA used the following guidelines in defining the coastal DPAs: (1) DPAs shall be large enough to ensure DoD's Operational Security (OPSEC) geolocation inaccuracy requirement of 65 nautical miles is satisfied; (2) DPAs shall be centered around key naval ports/shipyards; (3) DPAs for key naval ports/shipyards shall start at the coastline; (4) DPAs not corresponding to key ports/shipyards shall start 10 kilometers from the coastline; (5) DPA width and depth may vary based on local terrain profiles and other factors; and (6) DPAs shall not overlap. *Id.* at 3.

<sup>26</sup> NTIA depicts the DPAs in Attachment A of the 2018 NTIA Letter and the specific coordinates for the DPAs are available at <https://www.ntia.doc.gov/fcc-filing/2015/ntia-letter-fcc-commercial-operations-3550-3650-mhz-band>.

<sup>27</sup> 2018 NTIA Letter at 3.

<sup>28</sup> NTIA defines the specific DPA protection criteria, including how a SAS shall calculate aggregate received CBSD interference, in its letter. *Id.* at 3-4.

<sup>29</sup> See *id.* at 4.

<sup>30</sup> 2018 NTIA Letter at 2 (*internal citation removed*).

### III. DISCUSSION

7. Pursuant to Sections 1.3 and 1.925 of the Commission's rules,<sup>31</sup> we conditionally waive, on our own motion, Sections 96.15(a)(2)-(3) and 96.15(b)(2)-(3) and to the extent necessary, associated rule sections governing the implementation and enforcement of these rules for DPA-enabled SASs (i.e., Sections 96.7(a), 96.45(b), 96.53(g), and 96.57(d)).<sup>32</sup> This conditional waiver will allow: (1) all DPA-enabled SASs to authorize both Category A and Category B CBSDs in the 3.5 GHz Band prior to ESC deployment and certification; and (2) DPA-enabled SASs to be tested for the ability to protect DPAs rather than Exclusion Zones (in areas where NTIA has published DPAs). This is a limited waiver of the rules that only applies to SASs that are DPA-enabled. Any SAS that is not DPA-enabled will be required to comply with the existing rules, including the enforcement of all Exclusion Zones and restrictions on Category B CBSD operations in the 3550-3650 MHz band.<sup>33</sup>

8. Pursuant to Section 1.925(b)(3) of its rules, the Commission may waive rules if “(i) [t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest;” or “(ii) in light of unique or unusual circumstances, the application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest.”<sup>34</sup> Although a waiver need only satisfy either Section 1.925(b)(3)(i) or (ii), for the reasons set forth herein, we find that a waiver is justified in this case under either prong of the waiver standard.

9. The DPA methodology described by NTIA in its May 17, 2018 letter, would allow DPA-enabled SASs to authorize operation of Category A and Category B CBSDs—regardless of whether an ESC is certified and operational—across the entire band (in geographic areas where they would not cause interference to activated DPAs) and would eliminate the need for DPA-enabled SASs to enforce Exclusion Zones in coastal regions and other geographic areas protected by DPAs.<sup>35</sup> As NTIA explains in its letter, SASs must protect federal incumbents in activated DPAs from aggregate interference from all authorized and deployed CBSDs.<sup>36</sup> Prior to ESC approval and ESC sensor deployment, a DPA-enabled SAS would, effectively, treat all DPAs as “active” (i.e., it would assume the presence of a federal radar system) at all times throughout the entire 3550-3650 MHz band. By setting all DPAs as active until ESC sensors are deployed, DPA-enabled SASs would not be permitted to authorize CBSDs in areas where CBSD operations could cause interference to federal systems within any DPA.

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<sup>31</sup> The Commission may waive any provision of its rules on its own motion or on petition if good cause therefor is shown. See 47 CFR § 1.3. The Commission may waive specific requirements of the rules on its own motion or upon request. See *id.* at § 1.925(a). The Commission may exercise its discretion to waive a rule where the particular facts make strict compliance inconsistent with the public interest. See *In the Matter of Schools and Libraries Universal Support Mechanism*, Order, CC Docket No. 02-6, WC Docket Nos. 02-60, 11-42, 2017 WL 4511103, para. 2 (WCB Oct. 2017); *In the Matter of National Railroad Passenger Corporation (d/b/a Amtrak)*, Order, WT Docket No. 11-27, 30 FCC Rcd 2038, 2041, para. 10 (2015). See also *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

<sup>32</sup> See *supra* note 1.

<sup>33</sup> See 47 CFR § 96.17.

<sup>34</sup> See *id.* at § 1.925(b)(3).

<sup>35</sup> Some inland radar locations will continue to be protected by Exclusion Zones, including the Nellis Air Force Base Exclusion Zone noted in the 2018 NTIA Letter at 4-5. NTIA also added the National Radio Astronomy Observatory (NRAO) quiet zone site located at Green Bank, Pocahontas County, West Virginia and the Naval Radio Research Observatory (NRRO) quiet zone site at Sugar Grove, Pendleton County, West Virginia, as a protected inland Exclusion Zones. 2018 NTIA Letter at 5. NTIA also noted that those conducting 3.5 GHz Band CBSD operations in Puerto Rico are required to notify the Arecibo Observatory Spectrum Manager. NTIA may designate additional—or modify existing—Exclusion Zones to protect inland radars from Category A and Category B CBSDs in addition to or in lieu of DPA-based protections.

<sup>36</sup> See *id.* at 2.

10. DPA-enabled SASs, however, would be permitted to authorize CBSDs—including Category B CBSDs—in areas that would not cause interference to federal operations within any activated DPAs. By setting all DPAs as “active” until ESC sensors are deployed, this waiver will allow DPA-enabled SASs to effectively coordinate high-powered CBSDs in inland parts of the country without causing harmful interference to federal operations.

11. Like the two-phase process established in the rules, deployment of approved ESCs will allow the SAS to provide targeted protection of federal incumbents. After ESCs are certified and ESC sensors are deployed to monitor a given DPA for radar activity, that DPA may be deactivated (when no federal radar transmissions are detected). DPAs may remain in “inactive” status until the ESC reports the presence of a federal radar transmission within the DPA (i.e., the ESC will report the presence of federal radar transmissions on a DPA basis without providing additional information on the geo-location of the transmission), at which point the SAS will activate the DPA.<sup>37</sup> After ESC sensors are deployed for a given DPA, nearby CBSD operations will only be limited when there are actual radar transmissions detected within the DPA. Thus, this waiver will facilitate phased ESC deployments and progressive buildout of coastal network facilities.

12. We find that a conditional waiver would further the underlying purpose of the rule and would not frustrate it, and that granting this waiver would serve the public interest.<sup>38</sup> The underlying purpose of Section 96.15 of the Commission’s rules—and the other rules subject to this waiver order—is to ensure that federal radar systems are protected from CBSD emissions while promoting rapid and robust commercial deployment in the band.<sup>39</sup> Consistent with NTIA’s earlier recommendations, the Commission’s rules currently prevent the operation of any Category B CBSD in the 3550-3650 MHz band before the deployment of an approved ESC, even in inland areas where commercial operations would not pose a significant risk of interference to federal radar systems.<sup>40</sup> In its recent letter, NTIA recommends that the Commission allow SASs the option to implement the DPA-based approach rather than using coastal Exclusion Zones in the 3.5 GHz Band with DPAs “in order to increase access and flexibility for commercial users while protecting critical federal shipborne radar systems.”<sup>41</sup> NTIA also leaves open the possibility of using DPAs to protect inland federal radar sites in the future. As stated previously, in developing the rules governing protection of federal radar systems, the Commission relied extensively on the approach developed in collaboration with NTIA, the agency generally responsible for governing federal use of radio spectrum, and we do the same here.<sup>42</sup>

13. Consistent with Section 96.15 of the Commission’s rules,<sup>43</sup> NTIA has also designated the Table Mountain Radio Receiving Zone in Boulder County, Colorado, as a DPA-protected inland site for purposes of protecting this federal incumbent site from interference by Citizens Broadband Radio Service

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<sup>37</sup> See *supra* para. 5.

<sup>38</sup> See 47 CFR § 1.925(b)(3)(i).

<sup>39</sup> See *First Report and Order*, 30 FCC Rcd at 4038, para. 258 (“We believe this approach properly balances the need to protect current and future federal operations in the band with the need to make the band available for commercial use in the near future.”).

<sup>40</sup> See *id.* at 4038-39, paras. 258-263; 47 CFR § 96.15(b)(3). See *supra* para. 4.

<sup>41</sup> 2018 NTIA Letter at 6.

<sup>42</sup> See *First Report and Order*, 30 FCC Rcd at 4038, para. 258.

<sup>43</sup> 47 CFR § 96.15(a)(1), (a)(3), and (b)(1).

operations.<sup>44</sup> We note that NTIA has designated this site for protection, and we will require DPA-enabled SAS Administrators to implement the protection criteria described in NTIA's letter as a condition of this waiver order. As automated frequency coordinators responsible for coordinating operations in the 3.5 GHz band between and among incumbents and other tiers of users, SASs are the most effective way to ensure that CBSD frequency and power assignments are effectively coordinated to prevent harmful interference to the quiet zones designated in Section 1.924 of the Commission's rules.<sup>45</sup>

14. We agree with NTIA that DPAs provide a more dynamic, tailored means of protecting federal operations while maximizing the availability of the 3.5 GHz Band for new commercial wireless services. Regardless of whether a DPA is continuously active, as it would be prior to the deployment of ESC sensors, or is activated and deactivated based on information communicated by the ESC, the result is the same—the DPA-enabled SAS will not authorize CBSD operations in areas where they could cause interference to federal incumbents. Thus, under this approach, DPA-enabled SASs will be fully capable of protecting federal incumbent operations, while facilitating more rapid market access for a wider variety of commercial deployments. This fulfills the underlying purpose of the rules addressed in this waiver order.

15. We also find that a conditional waiver of the rules for DPA-enabled SASs is in the public interest because such a waiver will enable and incentivize rapid deployment of networks and efficient use of the spectrum, thereby promoting commercial service and investment in the 3.5 GHz Band. Category A and Category B CBSDs will both play important roles in the deployment of viable commercial services in the 3.5 GHz Band.<sup>46</sup> Category B devices are higher-powered and operate outdoors, and thereby are essential to the provision of service over longer distances, which is especially important in rural and under-served areas.<sup>47</sup> Further, operators will also use higher-powered devices in conjunction with Category A CBSDs to lower their network costs by reducing the need for additional cell sites and backhaul facilities.<sup>48</sup> Thus, allowing DPA-enabled SASs to authorize both Category A and Category B CBSDs in the 3550-3650 MHz portion of the band prior to the deployment of an approved ESC will provide operators with additional flexibility to engineer their networks efficiently in a manner that is targeted to their specific service objectives. This will likely result in the more rapid provision of a wider range of products and services to a variety of consumers.

16. As described above, DPA-enabled SASs can effectively protect incumbent federal operations. DPA-based protections are a more flexible, dynamic alternative to Exclusion Zones that will

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<sup>44</sup> 2018 NTIA Letter at 5. *See also* Letter from Paige R. Atkins, Assoc. Admin., Office of Spectrum Mgt., NTIA, to Julius P. Knapp, Chief, OET, FCC, and Donald Stockdale, Chief, WTB, FCC (Apr. 19, 2018) (NTIA Table Mountain Letter). In the letter, NTIA asserts that the only practical and effective way to ensure protection of the Table Mountain quiet zone would be to ensure that operation of CBSDs complies with the field strength limits specified in Section 1.924(b)(1) of the Commission's rules "either by (1) the SAS acting as a substitute for the traditional licensee or applicant and coordinating the frequency, bandwidth and power of CBSDs on behalf of the CBSDs, or (2) the SAS withholding permission to transmit for any CBSD that could place a signal over Table Mountain in excess of the field strength limit in the bandwidth of service specified in Section 1.924(b)(1) of the FCC's rules without evidence of prior coordination with the Table Mountain Radio Frequency Coordinator." *Id.* at 2.

<sup>45</sup> On April 20, 2018, the Commission transmitted a letter to NTIA confirming that through the SAS certification process, it will require that SASs effectively coordinate CBSDs around Table Mountain in a manner consistent with the obligations in Section 1.924 of the Commission's rules as described in the NTIA Table Mountain Letter. *See* Letter from Julius P. Knapp, Chief, OET, FCC, and Donald Stockdale, Chief, WTB, FCC to Paige R. Atkins, Assoc. Admin., Office of Spectrum Mgt., NTIA (Apr. 20, 2018).

<sup>46</sup> *See First Report and Order*, 30 FCC Rcd at 4024, para. 205.

<sup>47</sup> *See id.* at 4025, para. 209.

<sup>48</sup> Verizon Petition for Reconsideration at 3-4 (Verizon discusses the importance of higher-powered devices as part of network deployment in the context of seeking reconsideration of the rules governing power limits).

not introduce additional risk to federal operations. Requiring an SAS to demonstrate the ability to protect both Exclusion Zones and DPAs in a given area would be unnecessary and duplicative and would not serve the underlying purpose of the rules.<sup>49</sup> Therefore, during testing, a SAS may either demonstrate either that it is DPA-enabled or that it is compliant with the full set of phase one federal incumbent protection procedures set forth in the *First Report and Order* and Section 96.15 of the Commission's rules.<sup>50</sup> WTB and OET will designate whether a given SAS is DPA-enabled as part of the SAS certification and approval process.

17. As an alternative and independent rationale for our decision, we find that, under the second prong of Section 1.925,<sup>51</sup> the application of the existing rules in question<sup>52</sup> would be inequitable, unduly burdensome, and contrary to the public interest in this case. Since certified DPA-enabled SASs would be able to protect federal incumbent operations in the band while still allowing the operation of all types of CBSDs, it would be unduly burdensome, and unnecessary, to prevent the authorization of Category B CBSDs prior to the deployment of an approved ESC or to limit Category A CBSD deployments to areas outside of Exclusion Zones in the 3550-3650 MHz portion of the band. Consequently, it would be unduly burdensome and unnecessary to require DPA-enabled SASs to demonstrate that they are capable of enforcing Exclusion Zones in areas protected by DPAs since this capability will not be used by DPA-enabled SASs in those geographic areas. As described above, both types of CBSD are essential elements of planned network deployments in the band. Specifically, Category B CBSDs will allow operators to improve wireless coverage, lowering network costs, and more effectively serve consumers, especially in rural and underserved areas. It would be inequitable and contrary to the public interest to unnecessarily delay such benefits.

#### IV. ORDERING CLAUSES

18. Accordingly, IT IS ORDERED, pursuant to Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Sections 1.3 and 1.925 of the Commission's rules, 47 CFR §§ 1.3, 1.925, we waive 47 CFR §§ 96.7(a); 96.15(a)(2)-(3); 96.15(b)(2)-(3); 96.45(b); 96.53(g); and 96.57(d): (1) allow DPA-enabled SASs to authorize both Category A and Category B CBSDs in the 3.5 GHz Band prior to ESC deployment and certification, to the extent described herein; and (2) allow DPA-enabled SASs to be certified without being tested for compliance with phase one Exclusion Zone requirements in areas protected by DPAs to the extent described herein.

19. IT IS FURTHER ORDERED that the waiver of 47 CFR §§ Sections 96.7(a); 96.15(a)(2)-(3); 96.15(b)(2)-(3); 96.45(b); 96.53(g); and 96.57(d) is EFFECTIVE IMMEDIATELY UPON RELEASE of this Order.

20. This action is taken under delegated authority pursuant to Sections 0.241, 0.131, 0.31, and 0.331 of the Commission's rules, 47 CFR §§ 0.241, 0.31, 0.131, 0.331.

#### FEDERAL COMMUNICATIONS COMMISSION

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<sup>49</sup> See *supra* note 1.

<sup>50</sup> See *First Report and Order*, 30 FCC Red at 4038-4039, paras. 258-260; 47 CFR § 96.15.

<sup>51</sup> See 47 CFR § 1.925(b)(3)(ii).

<sup>52</sup> See *supra* note 1.

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