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

In the Matter of	)	
	)	
Creation of Interstitial 12.5 Kilohertz Channels in the 800 MHz Band Between 809-817/854-862 MHz).	)))	WP Docket No. 15-32 RM-11572

Adopted: May 11, 2020 **Released: May 12, 2020**

By the Commission:

ORDER ON RECONSIDERATION

I. INTRODUCTION

1. On October 22, 2018, the Federal Communications Commission (Commission) released the *PLMR Report and Order*, which updated our rules to provide new spectrum capacity and eliminate unnecessary restrictions in the private land mobile radio (PLMR) services.[1] Among other things, the order created 318 new "interstitial" channels in the 800 MHz Mid-Band to alleviate increased demand for spectrum capacity from public safety and other PLMR users.[2] The order also adopted technical rules for coordinating interstitial channel applications to ensure that new stations authorized on interstitial channels would not interfere with incumbent stations on adjacent channels.

2. Following adoption of the *PLMR Report and Order*, the Land Mobile Communications Council (LMCC) filed a petition for reconsideration seeking modification and clarification of some of the technical rules for coordinating interstitial channel applications.[3] This *Order on Reconsideration* grants the petition in part and denies it in part. We allow for some 800 MHz interstitial channel applicants to streamline their applications, clarify standards for calculating interference contours that define the distances that must be maintained between interstitial and incumbent stations, and refine certain technical elements of the interstitial channel rules. These actions will aid public safety and other PLMR users by increasing access to interstitial channels nationwide while continuing to ensure that incumbent stations are protected. However, we decline to adopt certain LMCC proposals that would increase the risk of harmful interference or would constitute an unlawful delegation of the Commission's authority. We also correct minor typographical errors in the rules.

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[1] *Creation of Interstitial 12.5 Kilohertz Channels in the 800 MHz Band Between 809-817/854-862 MHz; Amendment of Part 90 of the Commission's Rules to Improve Access to Private Land Mobile Radio Spectrum; Land Mobile Communications Council Petition for Rulemaking Regarding Interim Eligibility for 800 MHz Expansion Band and Guard Band Frequencies; Petition for Rulemaking Regarding Conditional Licensing Authority Above 470 MHz*, Report and Order and Order, 33 FCC Rcd 10222 (2018) (*PLMR Report and Order*).

[2] *Id.* at paras. 9, 21, 52. The 800 MHz Mid-Band consists of the Interleaved Band (809-815/854-860 MHz, 240 channels), the Expansion Band (815-816/860-861 MHz, 40 channels), and the Guard Band (816-817/861-862 MHz, 40 channels). *Id.* at 4, para. 8.

[3] Petition for Reconsideration of the Land Mobile Communications Council, WP Docket No. 15-32 (filed December 27, 2018) (Petition). The LMCC is a nonprofit association of organizations that represent the wireless communications interests of public safety, critical infrastructure, business, industrial, transportation, private and common carriers, and manufacturers of wireless communications equipment. *See* Petition at 2.

II. BACKGROUND

3. Private radio communications systems are used by businesses, organizations, public safety agencies, and other entities to support their internal communications requirements under part 90 of the Commission's rules. Generally, particular sets of PLMR frequency assignments, or "pools," are associated with certain categories of users. In addition, with limited exceptions, frequency coordination—in which a Commission-certified frequency coordinator recommends frequencies that will most effectively meet the applicant's needs while minimizing interference to existing licensees—is required before the Commission will grant a PLMR license.[4]

4. The *PLMR Report and Order* created new opportunities for private radio licensees by adding interstitial channels in the 800 MHz Mid-Band, subject to certain protections designed to safeguard adjacent-channel incumbents from harmful interference. To ensure that interstitial channel stations will not cause such interference, the *PLMR Report and Order* requires interstitial applicants to use interference contour analysis to calculate the distance separation required between a proposed interstitial station and incumbent stations operating on adjacent channels.[5] The order requires applicants for interstitial channels to show that the area in which the proposed interstitial station could create interference (its interference contour) will not overlap the area where an adjacent channel incumbent station provides service (its coverage contour). Additionally, the interstitial channel applicant must show that the incumbent station's interference contour does not overlap the applicant's proposed coverage contour. The process by which the applicant makes these showings is conventionally referred to as "contour overlap analysis."

5. In its Petition, LMCC asks the Commission to clarify or reconsider four aspects of the contour overlap analysis required by the *PLMR Report and Order*. First, LMCC asks the Commission to clarify in its rules that applicants need not perform contour overlap analysis if the spacing between stations meets or exceeds co-channel distance separation criteria specified in the rules.[6] Second, LMCC asks the Commission to permit interstitial applicants to use the proposed station's coverage contour rather than its interference contour to predict the area in which the station is likely to cause interference.[7] Although the Commission rejected this proposal in the *PLMR Report and Order*, LMCC asks the Commission to revisit that determination.[8] Third, LMCC urges the Commission to reconsider its decision in the *PLMR Report and Order* not to allow interstitial applicants to calculate contour values based on a matrix chart that LMCC proposes to maintain and update on its website.[9] In the *PLMR Report and* Order, the Commission rejected this proposal as contrary to the Administrative Procedure Act's notice and comment requirements.[10] Finally, LMCC asks the Commission to modify a footnote in a short-spacing separation table added to the Commission's rules by the *PLMR Report and Order*.[11]

III. DISCUSSION

6. In this *Order on Reconsideration*, we modify our rules to specify that applications for interstitial channels do not need to conduct a contour analysis if the distances in the Commission's co-channel spacing rules are met or exceeded. We also update our rules to include a revised matrix

[4] *See* 47 CFR §§ 90.7 (defining frequency coordination), 90.175 (setting forth frequency coordination requirements).

[5] *PLMR Report and Order* at 10332, para. 32.

[6] Petition at 3-4.

[7] *See PLMR Report and Order* at 10235, para. 38.

[8] Petition at 6-7.

[9] *See PLMR Report and Order at* 10235, para. 37.

[10] *See id*. at 10332, para. 5.

[11] 47 CFR § 90.621(b)(4).

submitted by LMCC that uses contour values based on interference and not coverage to predict interference. However, we again reject LMCC's request that, rather than codifying the matrix in our rules, the Commission allow applicants to use a matrix posted on the LMCC website, which LMCC could periodically update to reflect new technology developments. Further, we clarify that applicants for interstitial channels should assume that incumbent stations are operating at the maximum permitted effective radiated power associated with the station's licensed antenna height when calculating the potential of the new station to cause interference to the incumbent. Finally, we correct a few clerical errors and omissions in our rule section.

A. Contour Analysis Is Not Required When Proposed Stations Meet the Distance Separation Rule for Co-Channel Stations

7. The *PLMR Report and Order* provides that interference contour analysis is the optimum methodology to determine whether a proposed 800 MHz Mid-Band interstitial channel would cause interference to, or receive interference from, an incumbent adjacent channel station.[12] The *PLMR Report and Order* also specifies that, to lessen the burden on applicants, contour analysis need not be applied to applications that meet or exceed the distances specified in the Commission's co-channel spacing rules.[13]

8. LMCC points out that the rules adopted in the *PLMR Report and Order* do not conform to the text of the order in this respect and requests that we modify the rules accordingly.[14] We agree and amend sections 90.621(b) and (d) of the Commission's rules to specify that applicants need not conduct contour analysis when the co-channel distance criteria in section 90.621(b) are met, consistent with our intent in the *PLMR Report and Order*.

B. Use of Interference Contours vs. Coverage Contours for Interference Analysis

9. In the *PLMR Report and Order*, the Commission considered—and rejected—LMCC's proposal to allow interstitial channel applicants to use coverage contours rather than interference contours when determining whether a proposed interstitial station is likely to cause interference to an adjacent channel incumbent. Because the coverage contour of any station always extends a lesser distance from the station than the interference contour, the Commission concluded that use of the applicant's coverage contour to predict interference would significantly understate potential interference to an incumbent. Accordingly, the *PLMR Report and Order* rejected LMCC's proposal.[15]

10. In its Petition, LMCC seeks reconsideration of this decision, stating that its proposed use of coverage contours to predict interference is "based on carefully considered theoretical analyses and empirical data."[16] However, LMCC has provided no theoretical analysis or empirical data in support of this assertion. LMCC also cites a case in which the Commission approved use of coverage contours for interference analysis when the proposed stations are less than 15 kilometers apart.[17] The Commission has not, however, approved use of coverage contours for coordination of stations more than 15 kilometers apart, which is typically required in coordinating land mobile radio stations,[18] and LMCC has cited no

[12] *PLMR Report and Order* at 10234, para. 35.

[13] *Id.* at 10236, para. 43.

[14] Petition at 4; *see* Attachment 2 hereto, 47 CFR § 90.621.

[15] *Id.*

[16] Petition at 5.

[17] *See Application of City College of New York, New York*, Order on Reconsideration, 79 FCC 2d 385, 386, para. 3 (1980) (stating that "if the distances involved are below 10 miles, it is necessary to use the F(50,50) curves to determine the signal strength of the undesired signal").

[18] Moreover, requiring use of interference contours will not impede coordination at shorter distances in this case. As shown in Attachment 1 hereto, interference and coverage contours for 800 MHz systems converge at 15 kilometers and thus will produce the same results from 15 kilometers to 1.5 kilometers. For coordination of stations less than

(continued….)

other authority for its proposal. Accordingly, we continue to reject LMCC's suggestion that we use coverage contours to predict interference because doing so would substantially understate the amount of interference a proposed station would cause to incumbent stations and would constrain incumbents' interference-free coverage areas.[19]

11. As an alternative proposal, LMCC has submitted a supplemental filing with a revised matrix that uses contour values consistent with employing interference contours rather than coverage contours to predict interference.[20] LMCC proposes that this matrix be incorporated into the rules if the Commission continues to require use of interference contours to coordinate interstitial channel applications.[21] Upon review, we find that the values in LMCC's revised matrix provide sufficient assurance that interstitial channels may be implemented without causing interference to, or receiving interference from, incumbent stations. We therefore include the revised matrix in the amended rules.[22]

C. The Administrative Procedure Act Precludes Giving the LMCC Authority to Modify a Commission Rule

12. In the *PLMR Report and Order*, the Commission amended the rules to require that interference contours be determined using a matrix containing the dBu levels for certain technology combinations.[23] LMCC reiterates its request, rejected in the *PLMR Report and Order*,[24] that instead of codifying the matrix in the rules, the Commission should allow applicants to use a matrix posted on the LMCC website, which LMCC could periodically update to reflect new technology developments.[25] LMCC asserts that this approach is consistent with other proceedings in which the Commission has applied LMCC's coordination protocols in evaluating various types of applications,[26] and that it would allow the coordination process to be updated without the delay inherent in a rulemaking proceeding.[27]

(Continued from previous page)
1.5 kilometers apart, free-space propagation is typically employed for interference prediction because neither contour method generates values at such short distances.

[19] LMCC's proposal is opposed by one commenter, Iota Communications, Inc. (Iota), on the grounds that it could "block an incumbent from expanding or changing its service contour once the new application is granted." Iota Communications, Inc. Opposition to the Petition for Reconsideration Filed by LMCC in the Above Referenced Proceeding, Feb. 7, 2019. Because we decline to adopt LMCC's proposal based on its potential to lead to increased interference, Iota's objection is moot and not further addressed herein.

[20] Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from David B. Smith, President, LMCC, March 21, 2019.

[21] *Id.*

[22] Whereas the *PLMR Report and Order* contained the matrix with the derating factors only in the body of the text of the order and not in the rules, we now include it for convenient reference in both Attachment 2 to this order and in the rules that will appear in the Code of Federal Regulations.

[23] See *PLMR Report and Order* at 10228 Appendix B (Final Rules).

[24] *See PLMR Report and Order* at 10235, para. 37.

[25] Petition at 5-6; *id.* at 8 (asking the Commission to revise the last sentence of section 90.621(d)(2) to provide that "[t]he incumbent's interference contour is determined using the dBu level listed in the appropriate table on the Land Mobile Communications Council (LMCC) website: http://lmcc.org/policy-advocacy/consensus-filings").

[26] *Id.* at 8.

[27] *Id.* at 5-6 ("[i]ncluding the matrix in the rules would require a rulemaking proceeding each time equipment changes were made, thereby delaying the time at which such equipment could be used by applicants whose proposed systems require a contour analysis"); *id.* at 9 (stating that incorporating the interference contour matrix into the rules "would make [it] difficult to update in a timely fashion in response to experience or changes in technology and equipment" and that "the PLMR community would be unnecessarily handicapped by having to wait for adoption of a rule change in the coordination process").

13. Consistent with our determination in the *PLMR Report and Order*,[28] we find that the LMCC proposal is precluded by the notice and comment provisions of the Administrative Procedure Act and would be an inappropriate sub-delegation of Commission rulemaking authority to LMCC.[29] As the history of this proceeding demonstrates, controversy arose over the appropriate methodology for assessing potential interference—controversy that was properly resolved under the notice and comment provisions of the APA. Under LMCC's proposal, however, the Commission would delegate to LMCC the unilateral authority to modify a key element of the Commission's rules. Because the Commission has adopted rules in this case specifying the coordination method to be used for interstitial applications, LMCC's proposal differs from instances in which the Commission has adopted rules allowing applicants to predict interference using "generally accepted" propagation models.[30] Here, the Commission has promulgated rules requiring that a specific methodology be used—not "generally accepted" methodology—and we may not grant authority to an external party to amend our specific rules.

D. When Calculating the Coverage Contour of an Incumbent Station, Applicants Must Assume that the Incumbent Station Operates at Maximum Effective Radiated Power

14. Footnote 3 to the short-spacing separation table contained at the end of section 90.621(b)(4) of the Commission's rules states, *inter alia*, that when PLMR applicants calculate contour overlap, they must assume that co-channel incumbent stations are operating at the maximum permitted effective radiated power associated with the station's licensed antenna height.[31] Requiring applicants to assume that an incumbent co-channel station is operating at maximum effective radiated power provides flexibility for incumbents operating at less than the maximum to increase their effective radiated power, and hence their coverage area, in the future without causing or incurring harmful interference relative to nearby co-channel licensees.

15. LMCC asks that we modify the footnote to expressly require interstitial applicants to make the same assumption with respect to adjacent channel incumbent stations.[32] We agree with LMCC that applicants for interstitial channels should make the same assumption with respect to adjacent channel incumbents when calculating the potential of the new station to cause interference to the incumbent.

16. LMCC also proposes that when calculating the potential for a proposed station to *receive* interference from an adjacent channel incumbent (referred to as "reciprocal analysis"), it should be assumed that the proposed station will operate at maximum effective radiated power for its proposed antenna height.[33] We do not agree with this element of LMCC's proposal, which could artificially constrain the availability of interstitial channels even where applicants propose to operate at less than

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[28] *PLMR Report and Order* at 10235, para. 37.

[29] *See* 5 U.S.C. § 553(b)(B) (notice-and-comment procedures); *U.S. Telecom Ass'n v. FCC*, 359 F.3d 554, 556 (D.C. Cir. 2004) (holding that "while federal agency officials may subdelegate their decision-making authority to subordinates absent evidence of contrary congressional intent, they may not subdelegate to outside entities—private or sovereign—absent affirmative evidence of authority to do so"); *cf.* 1 CFR § 1.51.1(f) (stating that future amendments or revisions to standards incorporated by reference by the Commission are not allowed); *see also* Administrative Conference of the United States, Adoption of Recommendations, 77 Fed. Reg. 2257, 2257-59 (Jan. 17, 2012); Emily S. Bremer, Incorporation by Reference in an Open-Government Age, 36 Harv. J.L. & Pub. Pol'y 131, 184 (2013) (noting that when a more recent revision of material incorporated by reference becomes available "the agency must conduct a rulemaking to update its regulation to reflect the change").

[30] *Replacement of Part 90*, Order on Reconsideration, 11 FCC Rcd 17676, 17713 para. 95 (1996). (prediction of interference "based upon generally-accepted terrain-based propagation models").

[31] 47 CFR § 90.621(b)(4).

[32] Petition at 7.

[33] Petition at 7 (table).

maximum power. We conclude that for purposes of reciprocal analysis, the proposed station's coverage contour should be based on its proposed effective radiated power, not on a hypothetical contour that would be realized if the proposed station operated at maximum power, while adjacent channel incumbents are assumed to operate at the maximum effective radiated power for the licensed antenna height.

E. Correcting Clerical Errors in the Rules

17. The *PLMR Report and Order* contained a few inadvertent errors and omissions in the rules section, which we correct here. These corrections are solely designed to accurately reflect the selection of channel numbers specified by the text of the order. We correct those errors and omissions without seeking notice and comment pursuant to section 553(b)(3)(B) of the Administrative Procedure Act,[34] which states that an agency for good cause may dispense with rulemaking if it finds that notice and comment are "impracticable, unnecessary, or contrary to the public interest."[35] Here, notice and comment are unnecessary because making the corrections in the rules to reflect the text of the order does not have a detrimental effect on the parties regulated by the interstitial channel rules and does not alter the regulatory framework established by the *PLMR Report and Order*.[36] Moreover, the public interest would not be served by seeking notice and comment on the corrections because the misstatement or omission of channel numbers in the rules is plainly wrong and contrary to the text of the order. Seeking comment on whether the obvious errors should be corrected or not would be a waste of Commission resources and would unnecessarily delay applicants' access to interstitial channels that the Commission has determined are in the public interest given the spectrum-shortage in the 800 MHz mid-band.

18. Having found notice and comment unnecessary and contrary to the public interest, we make the following corrections to the rules:

- Table 2A in section 90.617(b)(1) omits channels 402 and 402a but contains duplicate channels 403 and 403A. In addition, Table 2B in section 90.617(b)(2) omits channels 296 and 296a but contains duplicate channels 295 and 295a. We correct both tables by inserting the missing channels and deleting the duplicate channels.[37]
- The Commission explained in footnote 109 of the *PLMR Report and Order* that it would not make interstitial channels from the Public Safety Pool available that overlap the Expansion Band since the Expansion Band was established to create spectral separation between public safety systems and high-density cellular architecture systems in the band.[38] The rules in the *PLMR Report and Order*, however, inadvertently added two interstitial channels (channels 370a and 390a)

[34] 47 U.S.C. §553(b)(3)(B).

[35] *Id.*

[36] *See Nat'l Helium Corp. v. Fed. Energy Admin.*, 569 F.2d 1137, 1146 (Temp. Emer. Ct. App. 1977).

[37] *See* 47 CFR §§ 90.617(b)(1)-(2), *infra* Attachment 2.

[38] *PLMR Report and Order* at 10250, para. 48 n.109.

that would overlap the Expansion Band in the Southeast region.[39] We correct the rules by removing the two channels from the relevant tables.[40]

- The rules in the *PLMR Report and Order* did not update Table A3 and sub-paragraph (ii) in section 90.619(a)(5) to indicate that the Public Safety Pool in the Sharing Zone with Mexico includes interstitial channel 315a. We correct Table A3 and the text of sub-paragraph (ii) by listing the channel range for the Public Safety Pool as including channels 231 to 315a.[41]

IV. PROCEDURAL MATTERS

19. *Final Regulatory Flexibility Certification*—The Regulatory Flexibility Act of 1980, as amended (RFA),[42] 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." A Final Regulatory Flexibility Certification on the economic impact of the rule changes contained in the *Order on Reconsideration* is set forth in Appendix A.

20. *Paperwork Reduction Act Analysis*—This *Order on Reconsideration* contains no new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.

21. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of the *Order* on *Reconsideration* to the Chief Counsel for Advocacy of the Small Business Administration.

22. *Congressional Review Act*—The Commission will send a copy of this *Order on Reconsideration* to Congress and the Government Accountability Office pursuant to the Congressional Review Act.[43]

V. ORDERING CLAUSES

23. Accordingly, **IT IS ORDERED**, pursuant to the authority contained in sections 4(i), 303(g), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(g), 303(r), 405, section 1.429 of the Commission's rules, 47 CFR § 1.429, and section 553(b)(3)(B) of the Administrative Procedure Act, 5 U.S.C. § 553(b)(3)(B) that the Petition for Reconsideration filed December 27, 2018, by the Land Mobile Communications Council **IS GRANTED** to the extent discussed herein and in all other respects **IS DENIED**.

24. **IT IS FURTHER ORDERED**, pursuant to section 1.103 of the Commission's rules, 47 CFR § 1.103, that the amendments to the Commission's rules as set forth in Attachment 2 hereof **ARE**

[39] Channel 370a (812/857.500 MHz) would overlap the Expansion Band in the Southeast region which extends from 812/857.500 MHz to 813/858.500 MHz while channel 390a (813/858.000 MHz) would overlap the Expansion Band in the Atlanta Market which extends from 813/858.000 MHz to 813/858.500 MHz. *See Improving Public Safety Communications in the 800 MHz Band et al.*, Report and Order, Fifth Report and Order, Fourth Order on Reconsideration, and Order, 19 FCC Rcd 14969, 15058, para. 166 (2004) (establishing an Expansion Band for the Southeast region); *Improving Public Safety Communications in the 800 MHz Band et al., Order on Reconsideration,* 20 FCC Rcd 16015,16035-36, paras. 46-49 (2005) (establishing an Expansion Band for the Atlanta market).

[40] *See* 47 CFR §§ 90.617(a)(2)-(3), *infra,* Attachment 2.

[41] *See* 47 CFR §§ 90.619(a)(5), Table A3 and (ii), *infra,* Attachment 2.

[42] 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Public L. No. 104-121, Title II, 110 Stat. 857 (1996).

[43] *Id.*

ADOPTED, effective thirty days from the date of publication of this *Order on Reconsideration* in the Federal Register.

25. **IT IS FURTHER ORDERED** that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this *Order on Reconsideration*, including the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

26. **IT IS FURTHER ORDERED** that this *Order on Reconsideration*, **IS ADOPTED**.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Regulatory Flexibility Certification

1. The Regulatory Flexibility Act of 1980, as amended (RFA),[1] requires that a regulatory flexibility analysis be prepared for notice-and-comment rulemaking proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."[2] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[3] In addition, the term "small business" has the same meaning as the term "small business concerns" under the Small Business Act.[4] 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 Small Business Administration (SBA).[5]

2. An Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notices of Proposed Rulemaking* (*Notices*) released in these proceedings.[6] The Commission sought written public comment on the proposals in the *Notices*, including comment on the IRFAs. No comments were filed addressing the IRFAs. A Final Regulatory Flexibility Analysis (FRFA) was incorporated in the *PLMR Report and Order* released in October 2018,[7] which is subject to review in the Order on Reconsideration.

3. In the Order on Reconsideration we clarify that Mid-Band applicants need not conduct contour analyses if their spacing to co- or adjacent- channel stations exceeds the minimum co-channel spacing criteria in the Commission's rules. We also correct duplicate channel listings in the rules, supply channels that were inadvertently omitted and delete channels that should not have been included. In so doing we reduce burdens for potential applicants who otherwise would have to perform unneeded contour analyses and could have been required to amend their applications had they relied on inaccurate information in the rules.

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[1] The RFA, *see* 5 U.S.C. §§ 601–612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] 5 U.S.C. § 605(b).

[3] 5 U.S.C. § 601(6).

[4] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[5] 15 U.S.C. § 632.

[6] *Creation of Interstitial 12.5 Kilohertz Channels in the 800 MHz Band Between 809-817/854-862 MHz*, Notice of Proposed Rulemaking, 30 FCC Rcd 1663, 1682-87 (2015) (*800 MHz Interstitial NPRM*); *Amendment of Part 90 of the Commission's Rules to Improve Access to Private Land Mobile Radio Spectrum; Land Mobile Communications Council Petition for Rulemaking Regarding Interim Eligibility for 800 MHz Expansion Band and Guard Band Frequencies; Petition for Rulemaking Regarding Conditional Licensing Authority Above 470 MHz*, Notice of Proposed Rulemaking, 31 FCC Rcd 9431 (2016) (*PLMR Access NPRM*).

[7] *Creation of Interstitial 12.5 Kilohertz Channels in the 800 MHz Band Between 809-817/854-862 MHz; Amendment of Part 90 of the Commission's Rules to Improve Access to Private Land Mobile Radio Spectrum; Land Mobile Communications Council Petition for Rulemaking Regarding Interim Eligibility for 800 MHz Expansion Band and Guard Band Frequencies; Petition for Rulemaking Regarding Conditional Licensing Authority Above 470 MHz*, Report and Order and Order, FCC 18-143 (Oct. 22, 2018) (*PLMR Report and Order*).

4. We have determined that the impact on the entities affected by the rule change will be not significant. The effect is to allow those entities, including small entities, greater understanding of the essentials of filing an application for Mid-Band channels and avoidance of unnecessary effort associated with provision of contour analyses. The reduction in paperwork, application processing time, and regulatory delays will be beneficial to small businesses as well as to all affected entities.

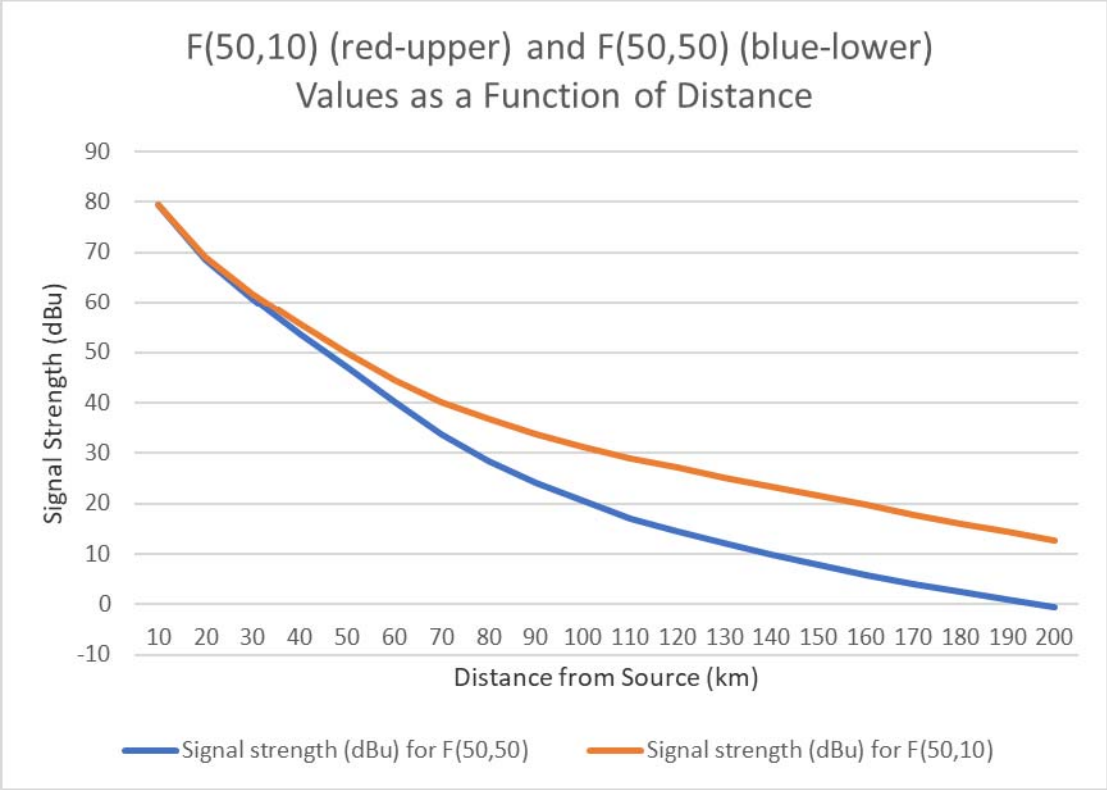
5. We therefore certify that the requirements of the Order on Reconsideration will not have a significant economic impact on a substantial number of small entities. The Commission will send a copy of the Order on Reconsideration including a copy of this Final Regulatory Flexibility Certification, in a report to Congress pursuant to the Congressional Review Act.[8] In addition, the Order on Reconsideration and this final certification will be sent to the Chief Counsel for Advocacy of the SBA, and will be published in the Federal Register.[9]

[8] *See* 5 U.S.C. § 801(a)(1)(A).

[9] *See* 5 U.S.C. § 605(b).

ATTACHMENT 1

ILLUSTRATION OF F(50,50) AND F(50,10) LEVELS AS A FUNCTION OF DISTANCE



As illustrated in the above chart, application of the F(50,10) curves to determine interference yields higher values of potential interference for distances greater than approximately 20 kilometers than application of the F(50,50) curves. The difference between the two methods increases as a function of distance such that, e.g., at a distance of 80 kilometers, the F(50,10) value is 8.3 dB higher than the F(50,50) value and at 200 kilometers the F(50,10) value is 13 dB higher than the F(50,50) value. The differences are attributable to the fact that (a) the F(50,10) curves reflect that atmospheric refraction can cause interfering signals to propagate beyond the horizon and (b) the F(50,10) curves predict interference at 50 percent of locations, 10 percent of the time; whereas the F(50,50) curves, predict coverage to the horizon at 50 percent of locations 50 percent of the time.

ATTACHMENT 2 – FINAL RULES

PART 90—PRIVATE LAND MOBILE RADIO SERVICES

The authority citation for Part 90 continues to read as follows:

AUTHORITY: Sections 4(i), 161, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7).

Section 90.617 is revised by amending Table 1A in paragraph (a)(2), Table 1B in paragraph (a)(3), Table 2A in paragraph (b)(1) and Table 2B in paragraph (b)(2) to read as follows:

§ 90.617 Frequencies in the 809.750-824/854.750-869 MHz, and 896-901/935-940 MHz bands available for trunked, conventional or cellular system use in non-border areas.

* * * * *

(a) * * *

(2) * * *

Table 1A—Public Safety Pool 806-813.5/851-858.5 MHz Band Channels for Counties in Southeastern U.S.
[138 Channels]

Group No.	Channel Nos.
261	261–313–324–335–353
261a	261a–313a–324a–335a–353a
262	262–314–325–336–354
262a	262a–314a–325a–336a–354a
265	265–285–315–333–351
265a	265a–285a–315a–333a–351a
266	266–286–316–334–352
266a	266a–286a–316a–334a–352a
269	269–289–311–322–357
269a	269a–289a–311a–322a–357a
270	270–290–312–323–355
270a	270a–290a–312a–323a–355a
271	271–328–348–358–368
271a	271a–328a–348a–358a–368a
279	279–299–317–339–359
279a	279a–299a–317a–339a–359a
280	280–300–318–340–360

280a	280a–300a–318a–340a–360a
309	309–319–329–349–369
309a	309a–319a–329a–349a–369a
310	310–320–330–350–370
310a	310a–320a–330a–350a
321	321–331–341–361–372
321a	321a–331a–341a–361a
Single Channels	326, 327, 332, 337, 338, 342, 343, 344, 345, 356 326a, 327a, 332a, 337a, 338a, 342a, 343a, 344a, 345a, 356a

(3) * * *

Table 1B—Public Safety Pool 806–813.5/851–858.5 MHz Band Channels for Atlanta, GA
[138 Channels]

Group No.	Channel Nos.
261	261–313–324–335–353
261a	261a–313a–324a–335a–353a
262	262–314–325–336–354
262a	262a–314a–325a–336a–354a
269	269–289–311–322–357
269a	269a–289a–311a–322a–357a
270	270–290–312–323–355
270a	270a–290a–312a–323a–355a
279	279–299–319–339–359
279a	279a–299a–319a–339a–359a
280	280–300–320–340–360
280a	280a–300a–320a–340a–360a
285	285–315–333–351–379
285a	285a–315a–333a–351a–379a
286	286–316–334–352–380
286a	286a–316a–334a–352a–380a
309	309–329–349–369–389
309a	309a–329a–349a–369a–389a
310	310–330–350–370–390
310a	310a–330a–350a–370a
321	321–331–341–361–381
321a	321a–331a–341a–361a–381a
328	328–348–358–368–388
328a	328a–348a–358a–368a–388a
Single Channels	317, 318, 326, 327, 332, 337, 338, 356, 371, 372 317a, 318a, 326a, 327a, 332a, 337a, 338a, 356a, 371a

(b) * * *

(1) * * *

Table 2A—Business/Industrial/Land Transportation Pool 806–813.5/851–858.5 MHz Band for Channels in Southeastern U.S.
[137 Channels]

	Channel Nos.
Single Channels	263, 264, 267, 268, 272, 273, 274, 275, 276, 277, 278, 281, 282, 283, 284, 287, 288, 291, 292, 293, 294, 295, 296, 297, 298, 301, 302, 303, 304, 305, 306, 307, 308, 346, 347, 362, 363, 364, 365, 366, 367, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410 263a, 264a, 267a, 268a, 272a, 273a, 274a, 275a, 276a, 277a, 278a, 281a, 282a, 283a, 284a, 287a, 288a, 291a, 292a, 293a, 294a, 295a, 296a, 297a, 298a, 301a, 302a, 303a, 304a, 305a, 306a, 307a, 308a, 346a, 347a, 362a, 363a, 364a, 365a, 366a, 367a, 379a, 380a, 381a, 382a, 383a, 384a, 385a, 386a, 387a, 388a, 389a, 390a, 391a, 392a, 393a, 394a, 399a, 400a, 401a, 402a, 403a, 404a, 405a, 406a, 407a, 408a, 409a

(2) * * *

Table 2B—Business/Industrial/Land Transportation Pool 806–813.5/851–858.5 MHz Band for Channels in Atlanta, GA
[137 Channels]

	Channel Nos.
Single Channels	263, 264, 265, 266, 267, 268, 271, 272, 273, 274, 275, 276, 277, 278, 281, 282, 283, 284, 287, 288, 291, 292, 293, 294, 295, 296, 297, 298, 301, 302, 303, 304, 305, 306, 307, 308, 342, 343, 344, 345, 346, 347, 362, 363, 364, 365, 366, 367, 382, 383, 384, 385, 386, 387, 391, 392, 393, 394, 399, 400, 401, 402, 403, 404, 405, 406, 407, 409, 410 263a, 264a, 265a, 266a, 267a, 268a, 271a, 272a, 273a, 274a, 275a, 276a, 277a, 278a, 281a, 282a, 283a, 284a, 287a, 288a, 291a, 292a, 293a, 294a, 295a, 296a, 297a, 298a, 301a, 302a, 303a, 304a, 305a, 306a, 307a, 308a, 342a, 343a, 344a, 345a, 346a, 347a, 362a, 363a, 364a, 365a, 366a, 367a, 382a, 383a, 384a, 385a, 386a, 387a, 391a, 392a, 393a, 394a, 399a, 400a, 401a, 402a, 403a, 404a, 405a, 406a, 407a, 409a

* * * * *

Section 90.619(a)(5) is revised by amending Table A3 and the text to sub-paragraph (ii) to read as follows:

§ 90.619 Operations within the U.S./Mexico and U.S./Canada border areas.

(a) * * *

(5) Channels in the Sharing Zone are available for licensing as indicated in Table A3 below.

TABLE A3—ELIGIBILITY REQUIREMENTS FOR CHANNELS IN SHARING ZONE

Channels	Eligibility requirements
1-230	Report and Order in Gen. Docket No. 87-112.
231-315a	Public Safety Pool.
316-550	General Category.
551-830	Special Mobilized Radio for 800 MHz High Density Cellular.

* * * * *

(ii) Channels 231-315a are available to applicants eligible in the Public Safety Category which consists of licensees eligible in the Public Safety Pool of subpart B of this part. 800 MHz high density cellular systems as defined in §90.7 are prohibited on these channels.

* * * * *

Section 90.621 is revised by amending the introductory text of paragraphs (b) and (d) and the text of paragraphs (d)(1) through (d)(3) to read as follows:

§ 90.621 Selection and assignment of frequencies.

(b) Stations authorized on frequencies listed in this subpart, except for those stations authorized pursuant to paragraph (g) of this section and EA-based and MTA-based SMR systems, will be assigned co-channel frequencies solely on the basis of distance between fixed stations. In addition, contour overlap as detailed in paragraph (d) of this section will be the basis for geographic separation between fixed stations operating on adjacent-channel frequencies in the 809-817 MHz/854-862 MHz sub-band, except where such fixed stations meet the distance separation criteria set out in this section (b).

* * * * *

(d) Geographic separation between fixed stations operating on adjacent channels in the 809-817/854-862 MHz Mid-Band segment must be based on lack of contour overlap as detailed below, unless the co-channel distance separation criteria in Section 90.621(b) of the Commission's rules are met.

(1) *Forward contour analysis*. An applicant seeking to license a fixed station on a channel in the 809-817 MHz/854-862 MHz band segment will only be granted if the applicant's proposed interference contour creates no overlap with the 40 dBu F(50,50) contour of an incumbent operating a fixed station on an upper- or lower-adjacent channel. The applicant's interference contour is determined using the dBu level listed in the appropriate table below. For this analysis the applicant shall plot the interference contour of its proposed fixed station at its proposed ERP but assume that any adjacent-channel incumbent licensee is operating at the maximum permitted ERP for the licensed antenna height.

(2) *Reciprocal contour analysis*. In addition to the contour analysis described above, any applicant seeking to license a fixed station on a channel in the 809-817 MHz/854-862 MHz band segment must also pass a reciprocal contour analysis. Under the reciprocal analysis, the interference contour, F(50,10) of an incumbent operating a fixed station on an upper- or lower-adjacent channel must create no contour overlap with the proposed 40 dBu F(50,50) contour of the applicant's fixed station. The incumbent's interference contour is determined using the dBu level listed in the appropriate table below. For this analysis the applicant shall plot the coverage contour of its fixed station, F(50,50), at its proposed ERP and antenna height above average terrain but plot the interference contour, F(50,10), of any adjacent-channel incumbent licensee at its maximum permitted ERP for the licensed antenna height.

(3) *Contour Matrix*. Interference contour levels for the contour analysis described in paragraphs (d)(1) and (2) of this section are determined using Table 1 or Table 2 below. Table 1 is used to determine the interference contour F(50,10) level of a fixed station operating on a 12.5 kilohertz bandwidth channel while Table 2 is used to determine the interference contour F(50,10) level of a fixed station operating on a 25 kilohertz bandwidth channel. The dBu level of the interference contour is determined by cross-referencing the modulation type of the station operating on the 25 kilohertz bandwidth channel with the modulation type of the station operating on the 12.5 kilohertz bandwidth channel.

Table 1 – Interference Contour Level for Fixed Station Operating on 12.5 kilohertz Bandwidth Channel

Interference Contour (12.5 kilohertz into 25 kilohertz channel)		12.5 kilohertz Bandwidth Technology of 12.5 kilohertz Bandwidth Channel				
		Transmitter Emission				
25 kilohertz Technology on 25 kilohertz Bandwidth Channel		11K3F3E or less	8K10F1E 8K10F1D 8K70D1W 9K80D7W	7K60FXE 7K60FXD 7K60F7E 7K60F7D 7K60F7W 8K30F1E 8K30F1D	4K00F1E 4K00F1D	11K0F7E 11K0F7D 11K0F7W
		Transmitter	Transmitter	Transmitter	Transmitter	Transmitter
Transmitter Emission		Interference Contour [dBu F (50,10)]				
16K0F3E or 20K0F3E	Receiver	28	25	28	NA	23
10K0F1E or 10K0F1D	Receiver	40	36	40	NA	28
12K5F9W	Receiver	40	36	40	NA	32
16K0F1E or 16K0F1D	Receiver	70	65	65	NA	NA
18K3D7W or 17K7D7D	Receiver	28	25	28	NA	20
12.5 kilohertz Bandwidth Technology on 25 kilohertz Bandwidth Channel						
Transmitter Emission		Interference Contour [dBu F (50,10)]				
11K3F3E or less	Receiver	65	65	65	NA	70
8K10F1E, 8K10F1D, 8K70D1W, 9K80D7W, 9K80D1E or 9K80D1D	Receiver	NA	75	75	NA	NA
7K60FXE, 7K60FXD, 7K60F7E, 7K60F7D, 7K60F7W, 8K30F1E or 8K30F1D	Receiver	NA	75	75	NA	NA
4K00F1E or 4K00F1D	Receiver	NA	NA	NA	NA	NA
11K0F7E, 11K0F7D or 11K0F7W	Receiver	60	55	60	NA	NA
Section 90.221 Technology on 25 kilohertz Bandwidth Channels						
Transmitter Emission		Interference Contour [dBu F (50,10)]				

22K0D7E, 22K0D7D, 22K0D7W, 22K0DXW or 22K0G1W	Receiver	28	25	28	45	20
21K0D1E, 21K0D1D or 21K0D1W	Receiver	28	25	28	NA	20
21K7D7E, 21K7D7D or 21K0D1W	Receiver	28	25	28	NA	20

Table 2 – Interference Contour Level for Fixed Station Operating on 25 kilohertz Bandwidth Channel

Interference Contour (25 kilohertz into 12.5 kilohertz channel)		12.5 kilohertz Bandwidth Technology of 12.5 kilohertz Bandwidth Channel				
		Transmitter Emission				
25 kilohertz Technology on 25 kilohertz Bandwidth Channel		11K3F3E or less	8K10F1E 8K10F1D 8K70D1W 9K80D7W	7K60FXE 7K60FXD 7K60F7E 7K60F7D 7K60F7W 8K30F1E 8K30F1D	4K00F1E 4K00F1D	11K0F7E 11K0F7D 11K0F7W
		Receiver	Receiver	Receiver	Receiver	Receiver
Transmitter Emission		Interference Contour [dBu F (50, 10)]				
16K0F3E or 20K0F3E	Transmitter	40	50	45	NA	36
10K0F1E or 10K0F1D	Transmitter	50	50	50	NA	50
12K5F9W	Transmitter	40	50	45	NA	36
16K0F1E or 16K0F1D	Transmitter	36	40	40	NA	36
18K3D7W or 17K7D7D	Transmitter	25	45	32	NA	23
12.5 kilohertz Bandwidth Technology on 25 kilohertz Bandwidth Channel						
Transmitter Emission		Interference Contour [dBu F (50,10)]				
11K3F3E or less	Transmitter	65	NA	75	NA	60
8K10F1E, 8K10F1D, 8K70D1W, 9K80D7W, 9K80D1E or 9K80D1D	Transmitter	65	75	70	NA	55
7K60FXE, 7K60FXD, 7K60F7E, 7K60F7D, 7K60F7W, 8K30F1E or 8K30F1D	Transmitter	65	75	75	NA	60
4K00F1E or 4K00F1D	Transmitter	NA	NA	NA	NA	NA
11K0F7E, 11K0F7D or 11K0F7W	Transmitter	70	NA	NA	NA	NA
Section 90.221 Technology on 25 kilohertz Bandwidth Channels						
Transmitter Emission		Interference Contour [dBu F (50,10)]				
22K0D7E,22K0D7D, 22K0D7W, 22K0DXW or 22K0G1W	Transmitter	25	28	25	32	23

21K0D1E, 21K0D1D or 21K0D1W	Transmitter	25	28	25	NA	23
21K7D7E, 21K7D7D or 21K0D1W	Transmitter	23	25	23	NA	20

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