



**6712-01**

**FEDERAL COMMUNICATIONS COMMISSION**

**47 CFR Part 90**

**[WP Docket No. 15-32, RM-11572; FCC 20-62; FRS 16797]**

**Creation of Interstitial 12.5 Kiloherz Channels in the 800 MHz Band Between 809-817/854-862 MHz**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** In this document, the Commission grants in part and denies in part a petition for reconsideration seeking modification and clarification of certain technical rules adopted in a 2018 Report and Order for coordinating interstitial channels in the 809-817/854-862 MHz band (800 MHz Mid-Band). In particular, the document allows some applicants for interstitial applications to streamline their applications, clarifies standards for calculating interference contours that define the distances that must be maintained between interstitial and incumbent stations and refines certain technical elements of the interstitial channel rules.

**DATES:** Effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**FOR FURTHER INFORMATION CONTACT:** Brian Marenco, Policy and Licensing Division, Public Safety and Homeland Security Bureau, (202) 418-0838.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's Order on Reconsideration, FCC 20-62, adopted on May 11, 2020 and released on May 12, 2020. The complete text of this document is available for inspection and copying

during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW, Room CY-A257, Washington, DC 20554. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [FCC504@fcc.gov](mailto:FCC504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY). The complete text of the order also is available on the Commission's Web site at <http://www.fcc.gov>.

### **Synopsis**

1. On October 22, 2018 (83 FR 61072 (Nov. 27, 2018)), the Commission released a Report and Order which created 318 new “interstitial” channels in the 800 MHz Mid-Band to alleviate increased demand for spectrum capacity from public safety and other Private Land Mobile Radio (PLMR) users. Following adoption of the Report and Order, the Land Mobile Communications Council (LMCC) filed a petition for reconsideration on December 27, 2018 seeking modification and clarification of some of the technical rules for coordinating interstitial channel applications.

2. 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. 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. Although the Commission rejected this proposal in the Report and Order, LMCC asks the Commission to revisit that determination. Third, LMCC urges the

Commission to reconsider its decision in the 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. Finally, LMCC asks the Commission to modify a footnote in a short-spacing separation table added to the Commission's rules by the Report and Order.

3. In its Order on Reconsideration, the Commission modifies its 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. It also updates its rules to include a revised matrix that uses contour values based on interference and not coverage to predict interference. The Commission once again rejects LMCC's request to allow applicants to use a matrix posted on the LMCC website rather than one codified in the Commission's rules. Further, the Commission clarifies 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, the Commission corrects a few clerical errors and omissions in its rules.

## **PROCEDURAL MATTERS**

### **A. Final Regulatory Flexibility Analysis**

4. 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." A Final Regulatory

Flexibility Certification on the economic impact of the rule changes adopted in the order is set forth in Appendix A of the Order on Reconsideration.

**B. Paperwork Reduction Act of 1995 Analysis**

5. The Order on Reconsideration contains no new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. 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.

**C. Congressional Review Act**

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

**FINAL REGULATORY FLEXIBILITY CERTIFICATION**

7. The Regulatory Flexibility Act of 1980, as amended (RFA), 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.” 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 concerns” 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 Small Business Administration (SBA).

8. An Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Notices of Proposed Rulemaking (NPRMs) released in these proceedings. The Commission sought written public comment on the proposals in the NPRMs, 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, which is subject to review in the Order on Reconsideration.

9. In the Order on Reconsideration, the Commission clarified 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. It also corrected duplicate channel listings in the rules, supplied channels that were inadvertently omitted and deleted channels that should not have been included. In so doing the Commission reduced 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.

10. The Commission 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.

11. The Commission therefore certifies 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. 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.

#### **ORDERING CLAUSES**

12. 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, § 1.429 of the Commission's rules, 47 CFR 1.429, and 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**.

13. **IT IS FURTHER ORDERED**, pursuant to § 1.103 of the Commission's rules, 47 CFR 1.103, that the amendments to the Commission's rules as set forth hereof **ARE ADOPTED**, effective 30 days after date of publication in the *Federal Register*.

14. **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.

**List of Subjects in 47 CFR Part 90**

Radio.

Federal Communications Commission.

**Marlene Dortch,**  
*Secretary.*

## Final Rules

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 90 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. Amend § 90.617 by revising 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<br>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 |

\* \* \* \* \*

3. Amend § 90.619 by revising paragraph (a)(5) introductory text and paragraph

(a)(5)(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 to this paragraph (a)(5).

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.

\* \* \* \* \*

4. Amend § 90.621 by revising paragraphs (b) introductory text, (d) introductory text, and (d)(1) through (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 paragraph (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 in paragraphs (d)(1) through (4), unless the co-channel distance separation criteria in paragraph (b) of this section 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 in paragraph (d)(3) of this section. 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 in paragraph (d)(1) of this section, 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 in paragraph (d)(3) of this section. 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 4 or Table 5 to this paragraph (d)(3). Table 4 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 5 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 4 to Paragraph (d)(3) – Interference Contour Level for Fixed Station Operating on 12.5 kilohertz Bandwidth Channel**

| Interference Contour<br>(12.5 kilohertz into 25 kilohertz<br>channel) | 12.5 kilohertz Bandwidth Technology of 12.5 kilohertz<br>Bandwidth<br>Channel |  |   |                    |                               |
|---|---|--|---|--------------------|-------------------------------|
|   | Transmitter Emission  |  |   |                    |                               |
| 25 kilohertz Technology on<br>25 kilohertz Bandwidth Channel          | 11K3F3E<br>or less  | 8K10F1E<br>8K10F1D<br>8K70D1W<br>9K80D7W | 7K60FXE<br>7K60FXD<br>7K60F7E<br>7K60F7D<br>7K60F7W<br>8K30F1E<br>8K30F1D | 4K00F1E<br>4K00F1D | 11K0F7E<br>11K0F7D<br>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,<br>21K7D7D or<br>21K0D1W | Receiver | 28 | 25 | 28 | NA | 20 |
|-----------------------------------|----------|----|----|----|----|----|

**Table 5 to Paragraph (d)(3) – Interference Contour Level for Fixed Station Operating on 25 kilohertz Bandwidth Channel**

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

|  |             |                                      |    |    |    |    |
|--|-------------|--------------------------------------|----|----|----|----|
| 7K60FXE,<br>7K60FXD, 7K60F7E,<br>7K60F7D,<br>7K60F7W,<br>8K30F1E or<br>8K30F1D | Transmitter | 65                                   | 75 | 75 | NA | 60 |
| 4K00F1E or<br>4K00F1D  | Transmitter | NA                                   | NA | NA | NA | NA |
| 11K0F7E,<br>11K0F7D or<br>11K0F7W  | Transmitter | 70                                   | NA | NA | NA | NA |
| Section 90.221<br>Technology on 25<br>kilohertz Bandwidth<br>Channels          |             |                                      |    |    |    |    |
| Transmitter<br>Emission  |             | Interference Contour [dBu F (50,10)] |    |    |    |    |
| 22K0D7E,22K0D7D,<br>22K0D7W,<br>22K0DXW or<br>22K0G1W                          | Transmitter | 25                                   | 28 | 25 | 32 | 23 |
| 21K0D1E,<br>21K0D1D or<br>21K0D1W  | Transmitter | 25                                   | 28 | 25 | NA | 23 |
| 21K7D7E,<br>21K7D7D or<br>21K0D1W  | Transmitter | 23                                   | 25 | 23 | NA | 20 |

\* \* \* \* \*

[FR Doc. 2020-12007 Filed: 7/9/2020 8:45 am; Publication Date: 7/10/2020]