

APPENDIX A SPECTRUM USAGE PLOTS: 1300-1390 MHZ BAND

This appendix provides the spectrum usage contour plots for the 1300-1390 MHz band for the contiguous United States. The spectrum usage contour plots are provided for each 5 megahertz band segment in the 1300-1390 MHz band. The December 2015 GMF frequency assignment data was used in generating the spectrum usage contour plots.¹ The geographic usage does not include United States and Possessions frequency assignments. The time of usage for transmit or receive stations is displayed on the spectrum usage contours plots using opacity (e.g., degree of transparency). A time of usage: between 50 percent to 100 percent corresponds to an opacity of 100 percent; between 10 percent to 50 percent corresponds to an opacity of 75 percent; between 1 percent to 10 percent corresponds to an opacity of 50 percent; and less than 1 percent corresponds to an opacity of 25 percent.²

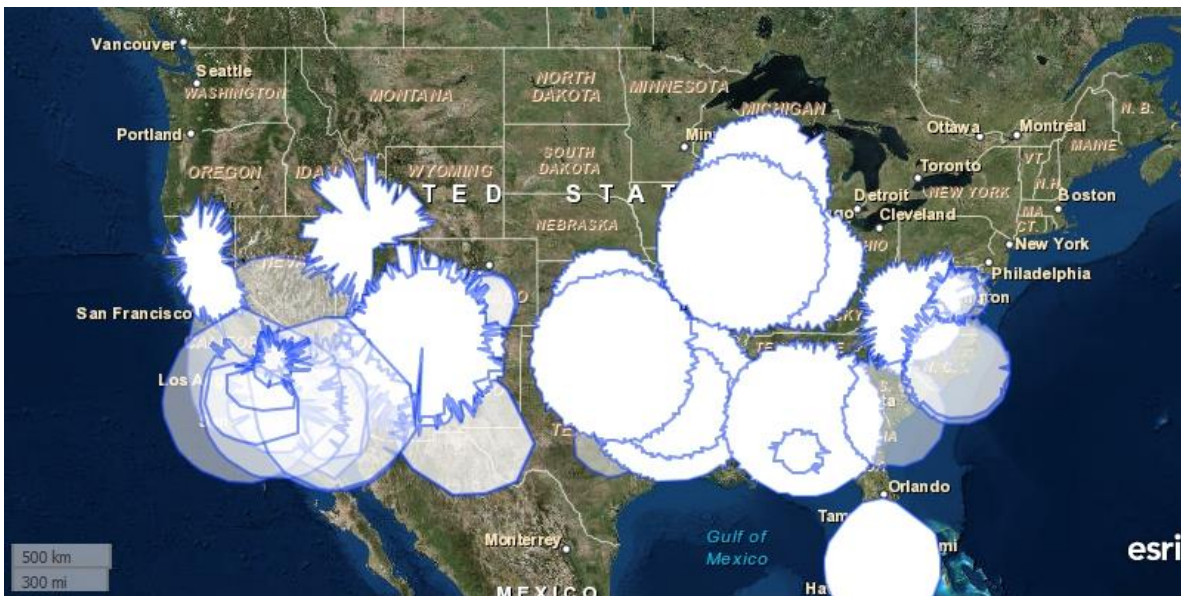


Figure A-1. 1300-1305 MHz Band Segment

¹ The Government Master File is updated on a daily basis.

² A description of the service that provides the open source satellite imagery map tile used in displaying the contours is available at http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer.

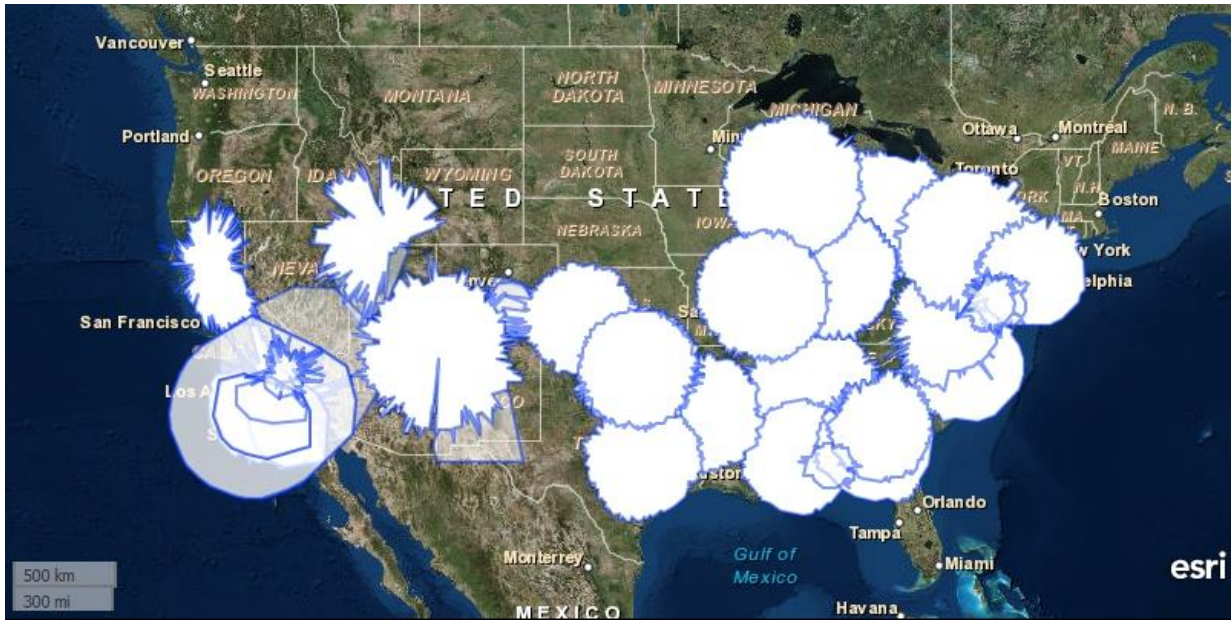


Figure A-2. 1305-1310 MHz Band Segment

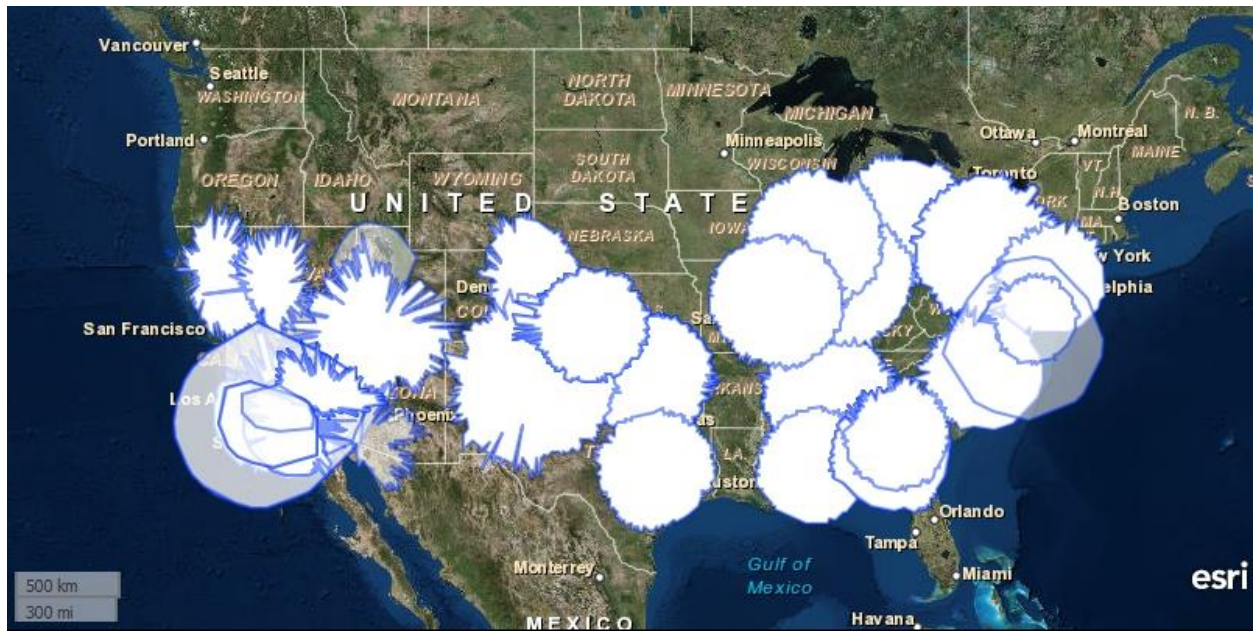


Figure A-3. 1310-1315 MHz Band Segment

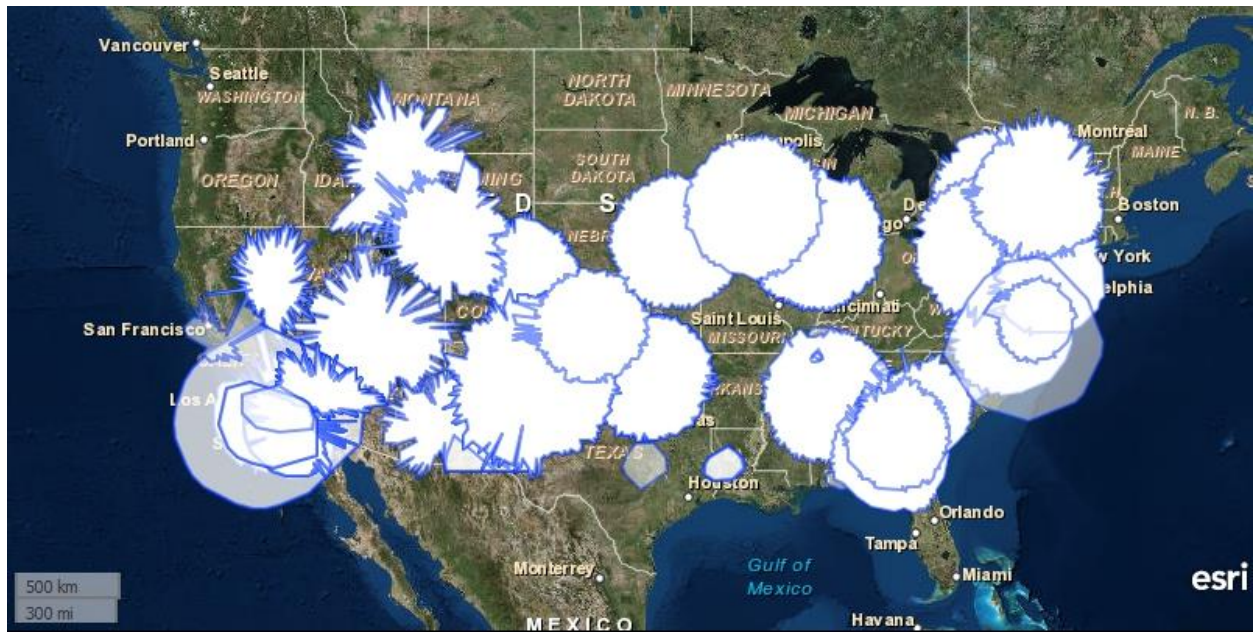


Figure A-4. 1315-1320 MHz Band Segment

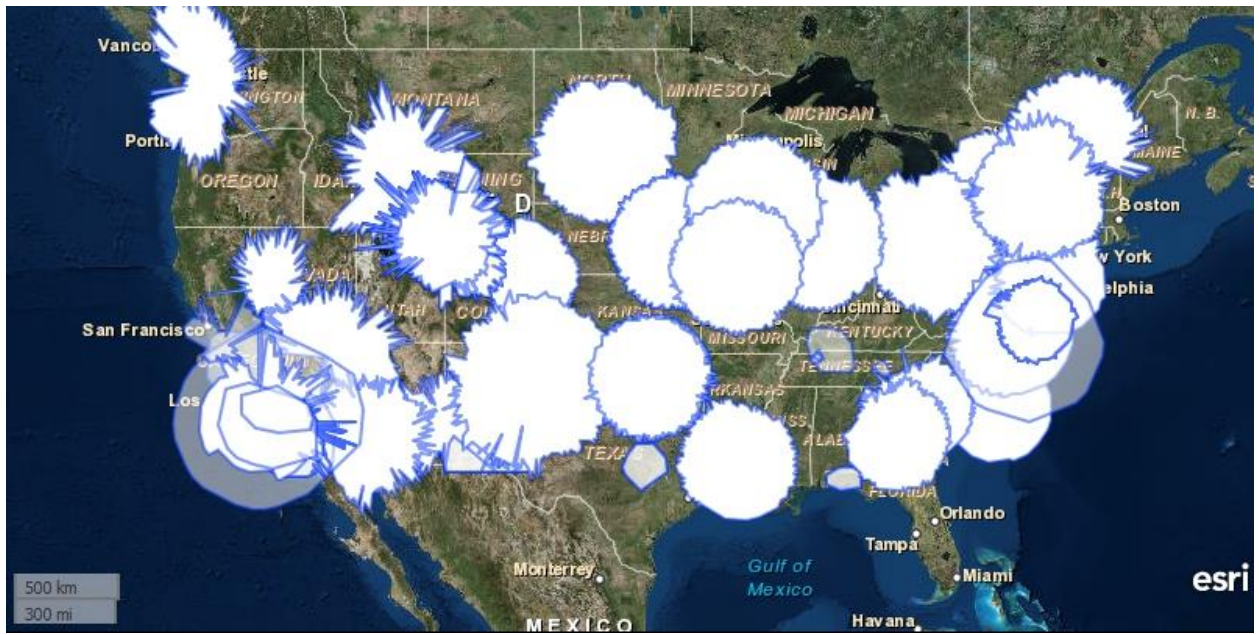


Figure A-5. 1320-1325 MHz Band Segment

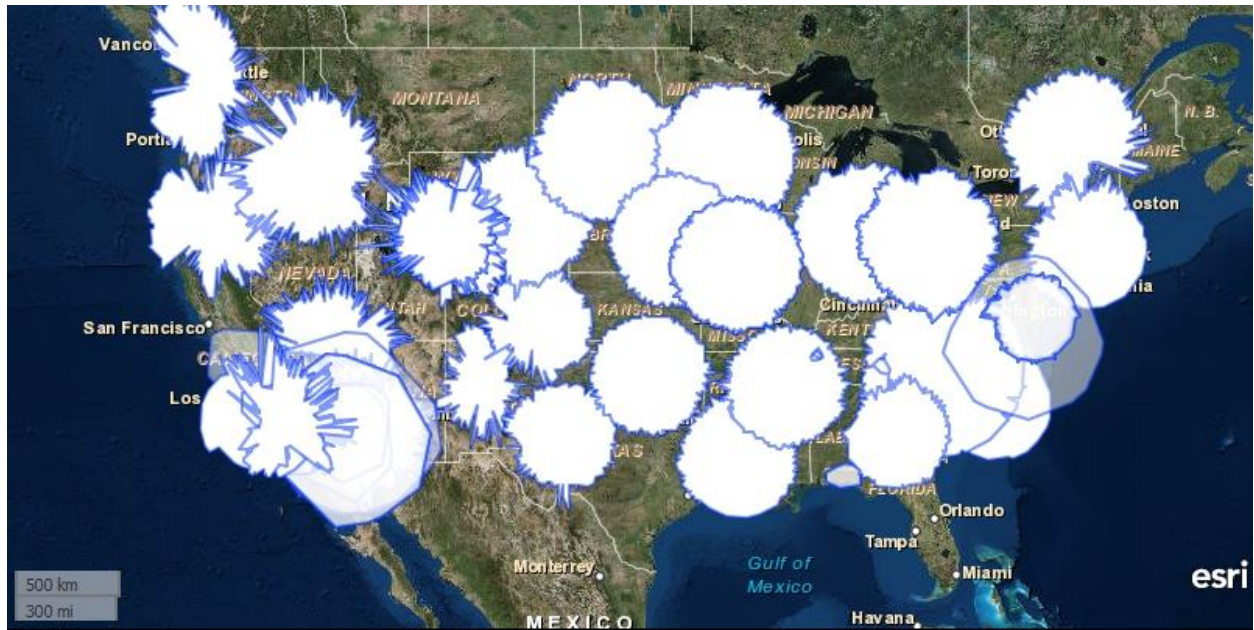


Figure A-6. 1325-1330 MHz Band Segment



Figure A-7. 1330-1335 MHz Band Segment

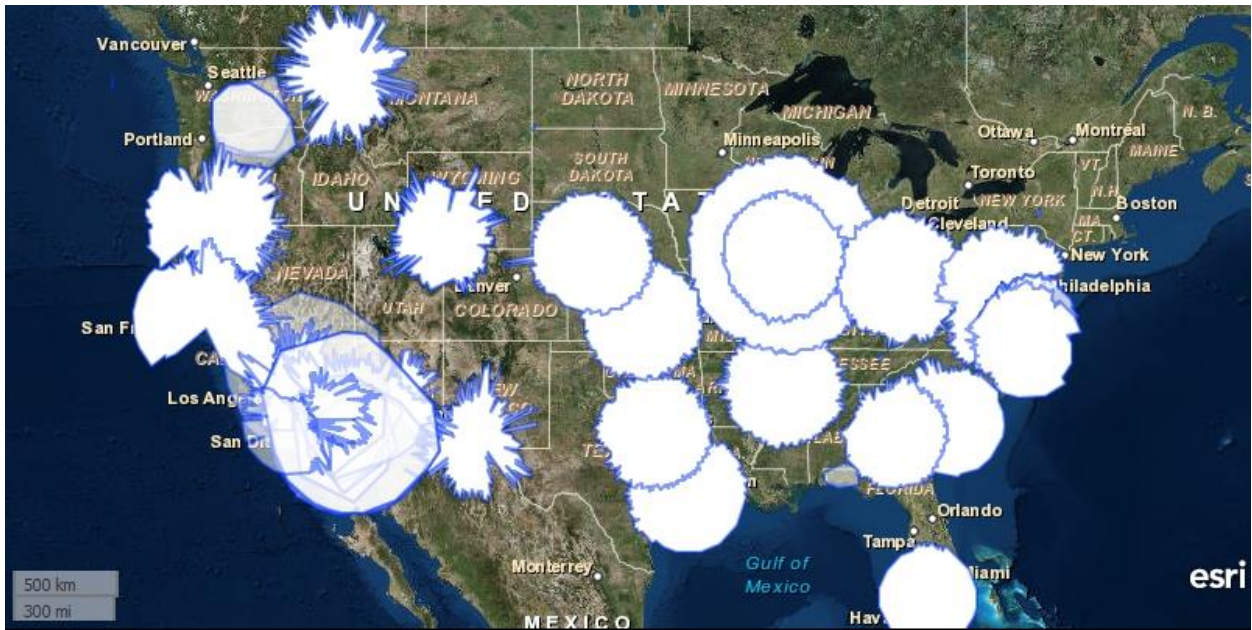


Figure A-8. 1335-1340 MHz Band Segment

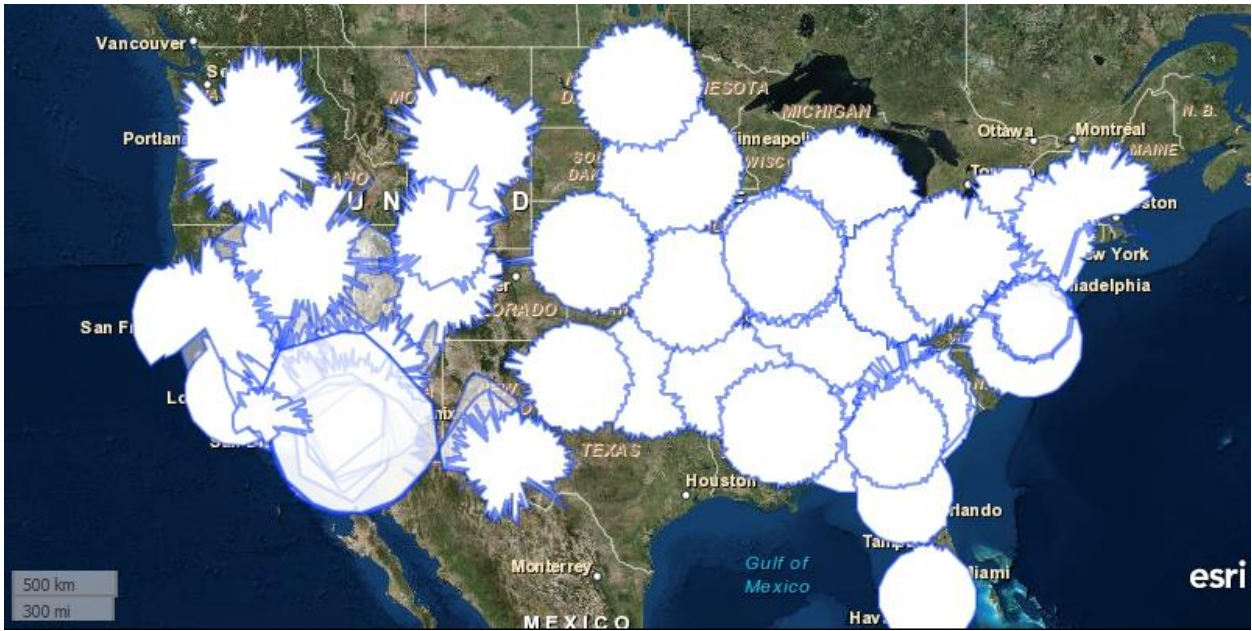


Figure A-9. 1340-1345 MHz Band Segment

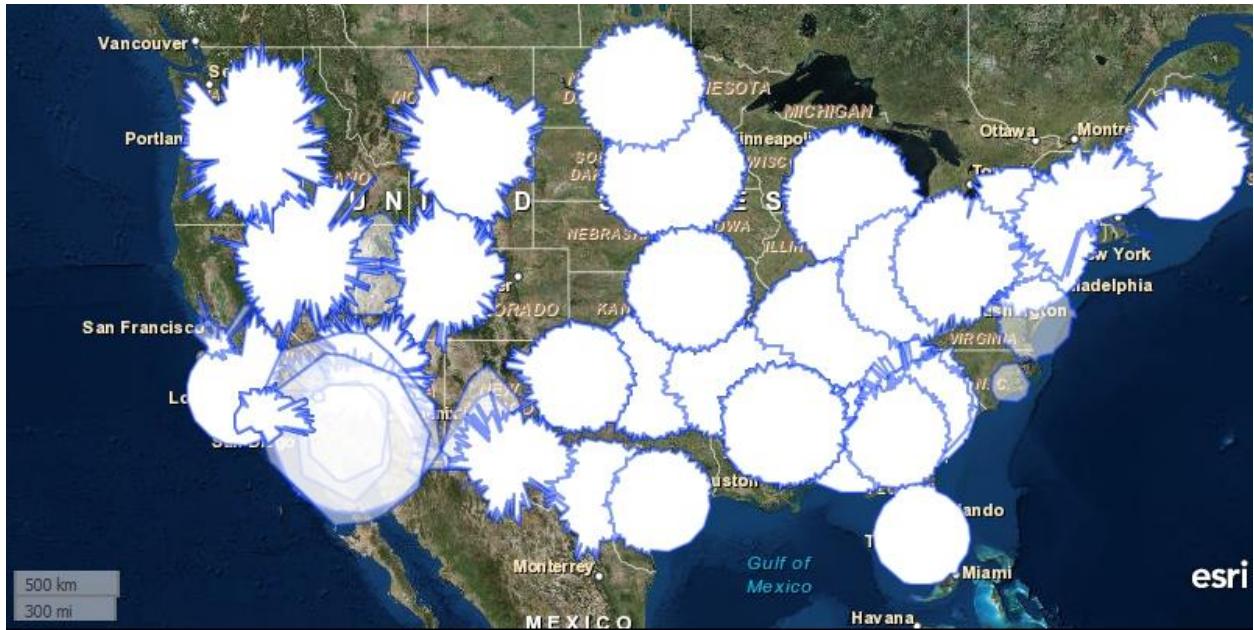


Figure A-10. 1345-1350 MHz Band Segment

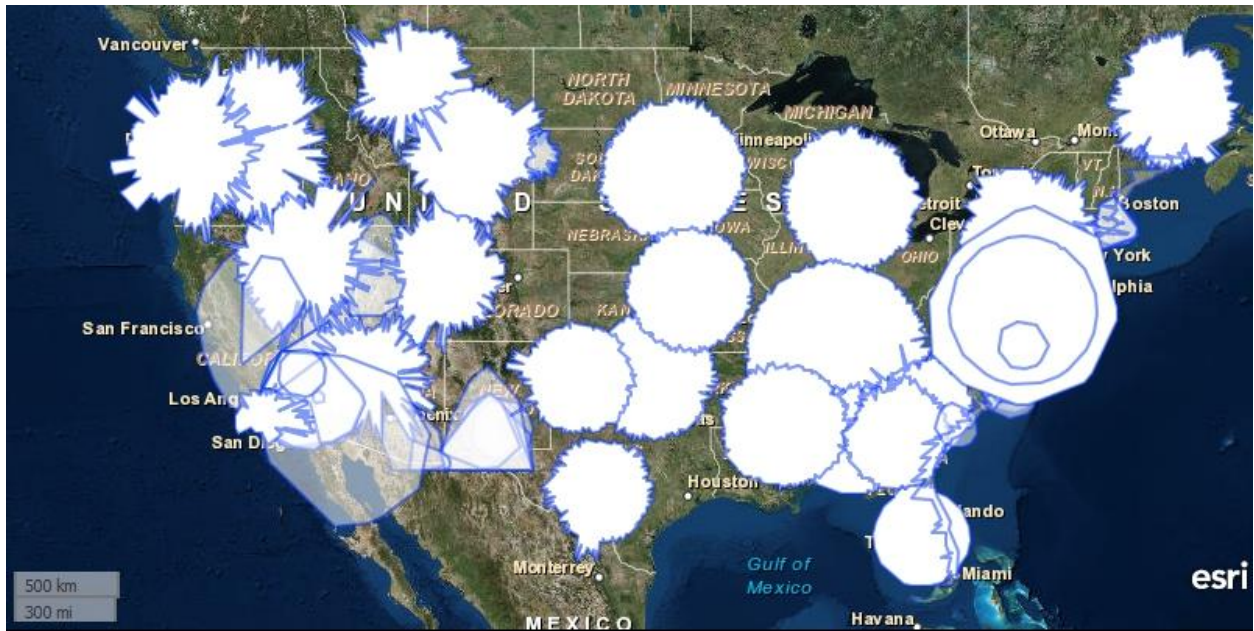


Figure A-11. 1350-1355 MHz Band Segment

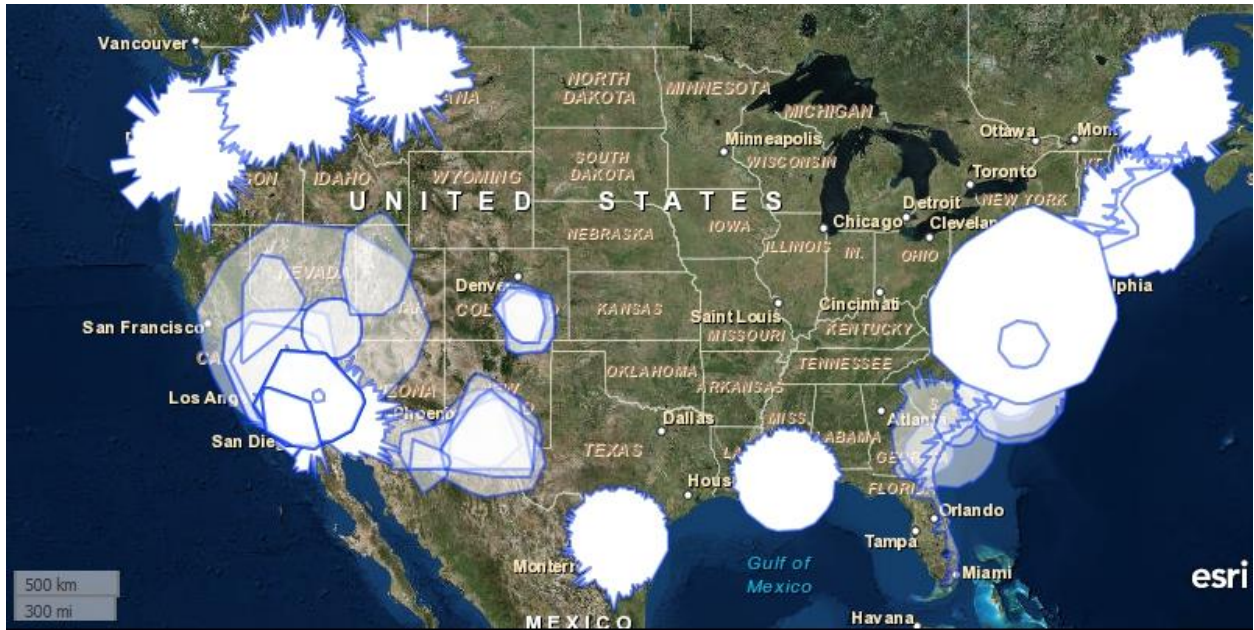


Figure A-12. 1355-1360 MHz Band Segment

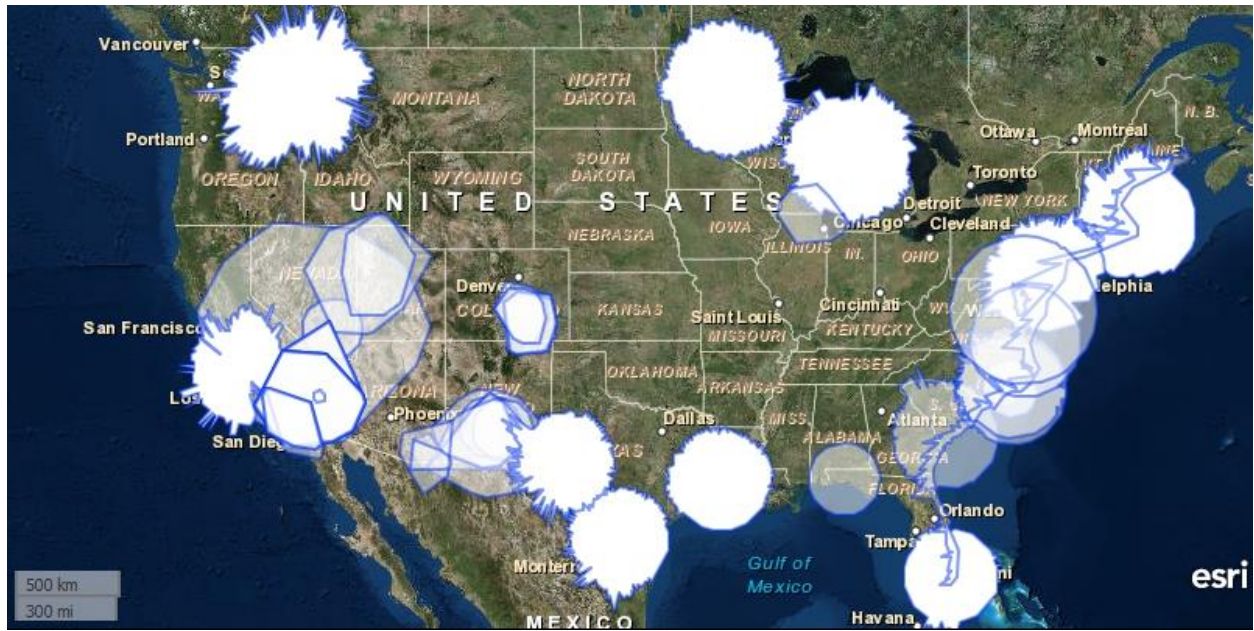


Figure A-13. 1360-1365 MHz Band Segment

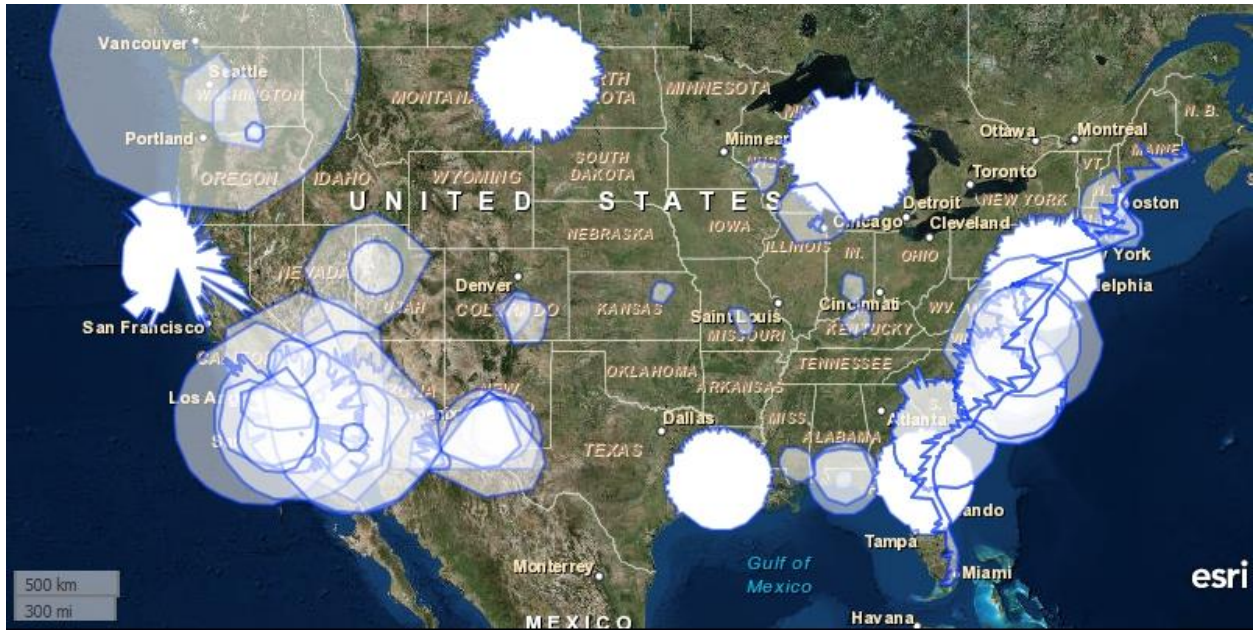


Figure A-14. 1365-1370 MHz Band Segment

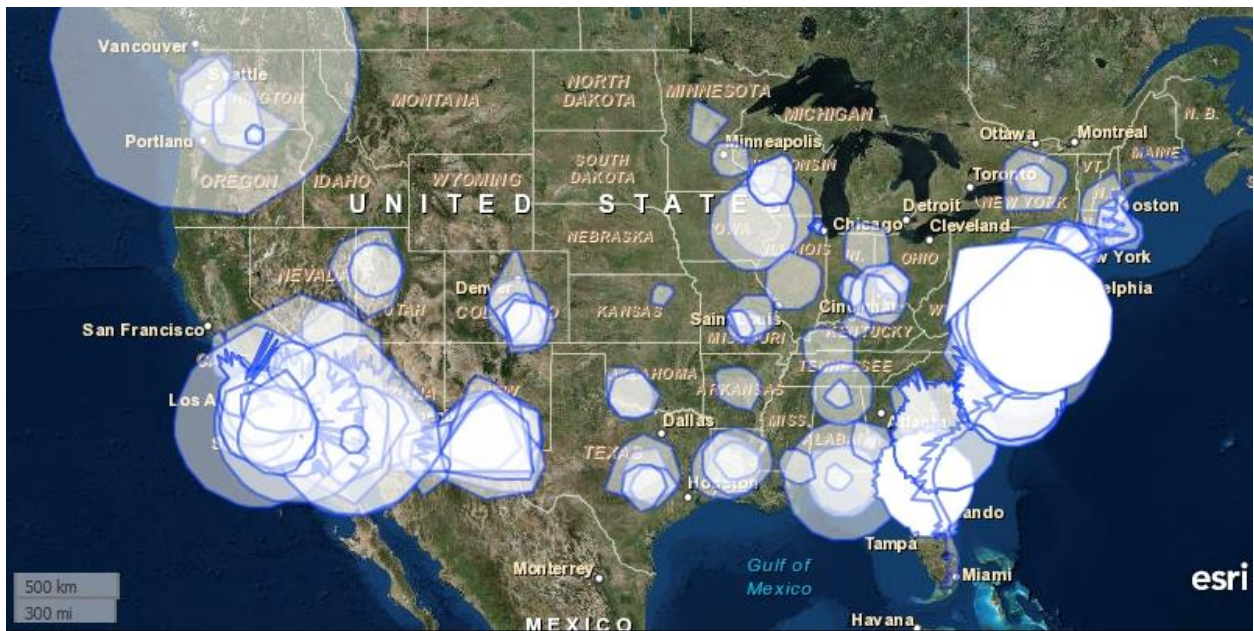


Figure A-15. 1370-1375 MHz Band Segment

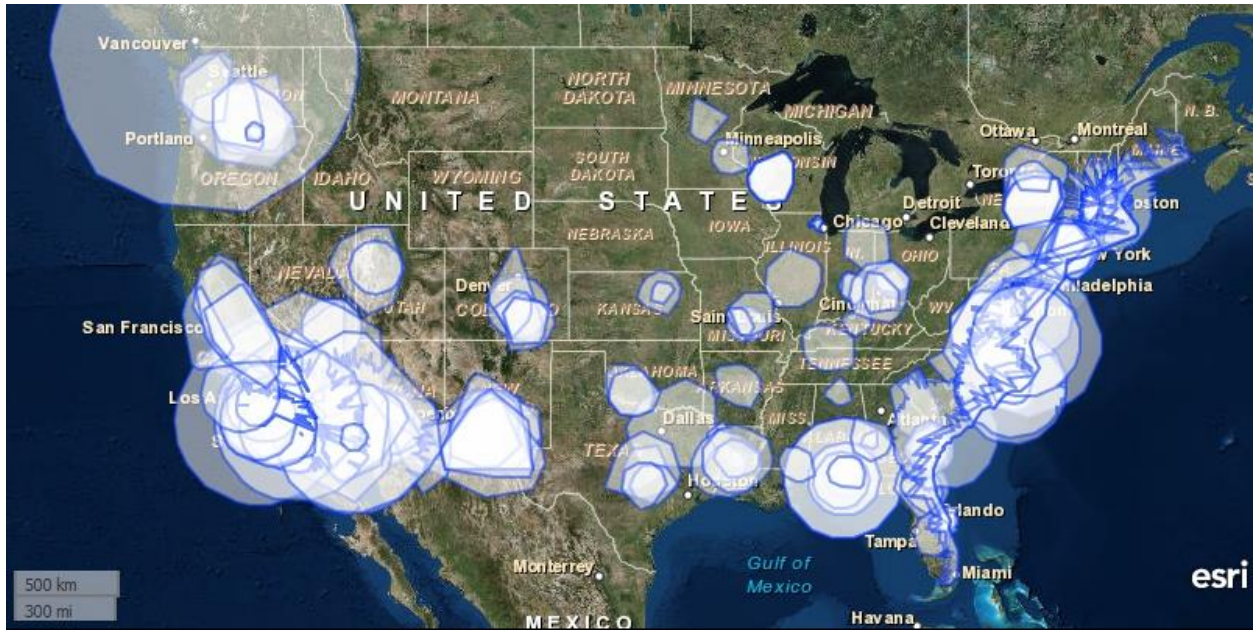


Figure A-16. 1375-1380 MHz Band Segment

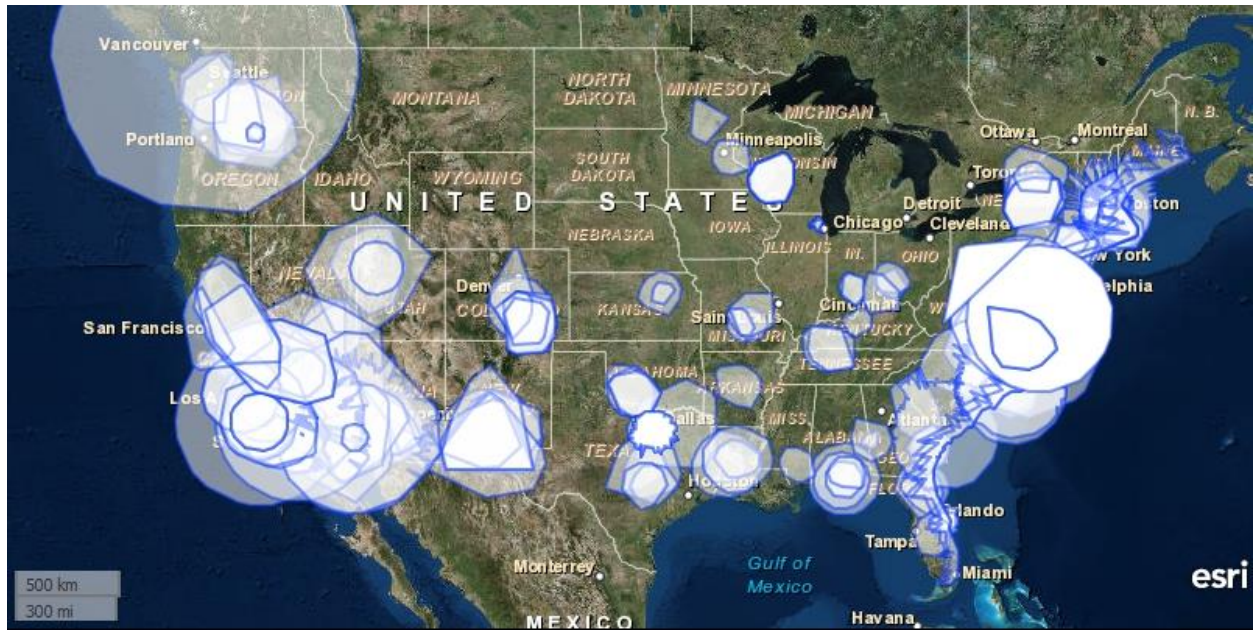


Figure A-17. 1380-1385 MHz Band Segment

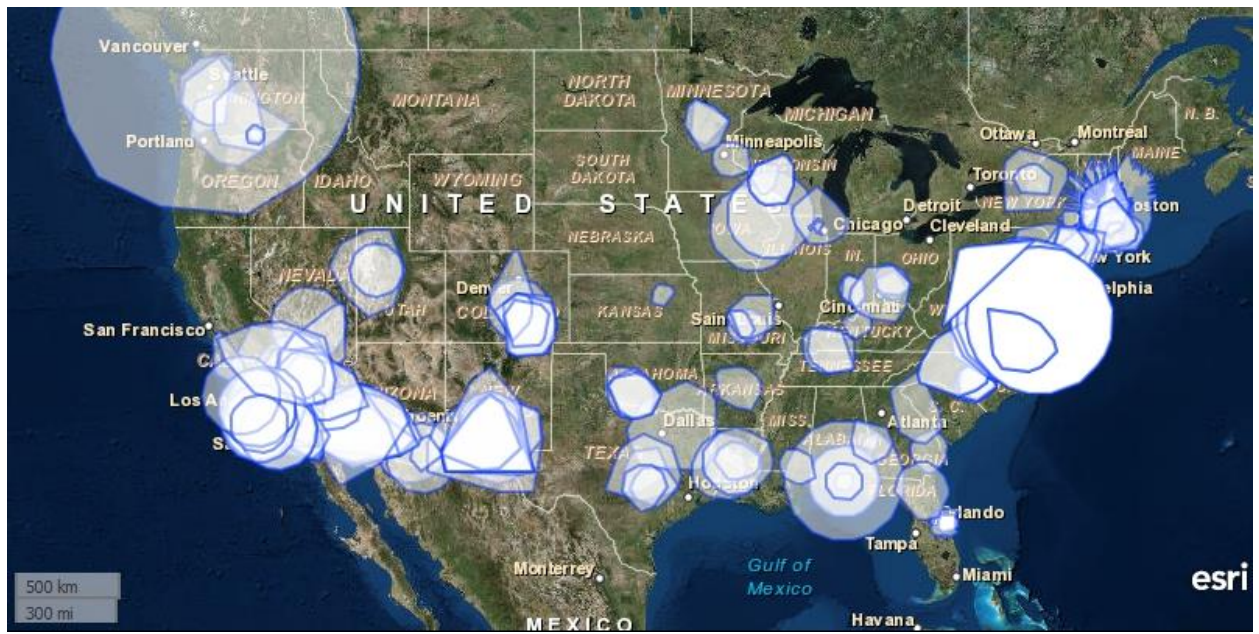


Figure A-18. 1385-1390 MHz Band Segment

APPENDIX B SPECTRUM USAGE PLOTS: 1675-1695 MHz BAND³

This appendix provides the spectrum usage contour plots for the 1675-1695 MHz band for the contiguous United States. The spectrum usage contour plots are provided for each 5 megahertz band segment in the 1675-1695 MHz band. The December 2015 GMF frequency assignment data was used in generating the spectrum usage contour plots.⁴ The time of usage for transmit or receive stations is displayed on the spectrum usage contours plots using opacity (*e.g.*, degree of transparency). A time of usage: between 50 percent to 100 percent corresponds to an opacity of 100 percent; between 10 percent to 50 percent corresponds to an opacity of 75 percent; between 1 percent to 10 percent corresponds to an opacity of 50 percent; and less than 1 percent corresponds to an opacity of 25 percent.⁵

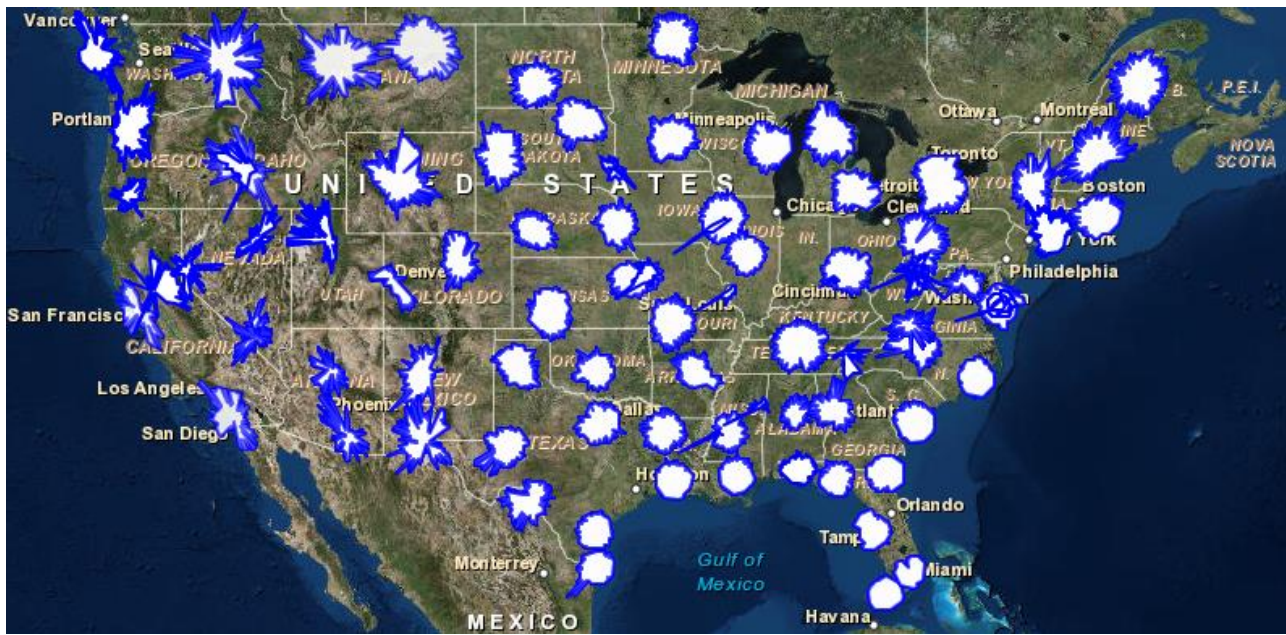


Figure B-1. 1675-1680 MHz Band Segment

³ The spectrum usage contours in this appendix only display the federal receive stations. The locations of the non-federal end-users are unknown and not included in Figures B-1 through B-8.

⁴ The Government Master File is updated on a daily basis.

⁵ A description of the service that provides the open source satellite imagery map tile used in displaying the contours is available at http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer.



Figure B-2. 1680-1685 MHz Band Segment

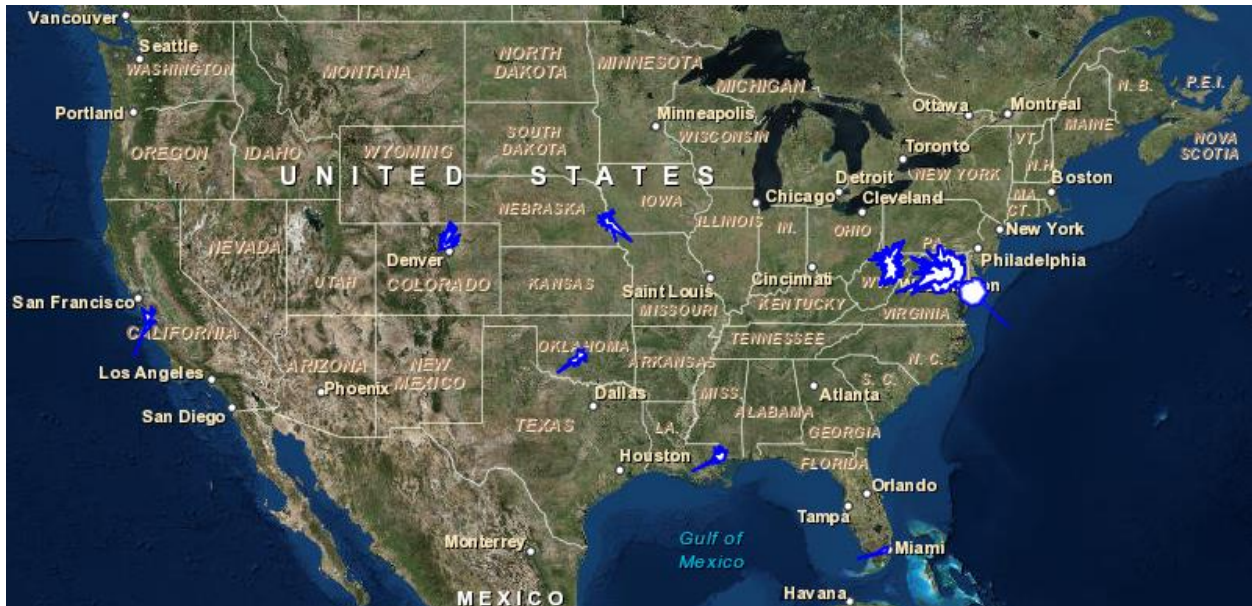


Figure B-3. 1685-1690 MHz Band Segment

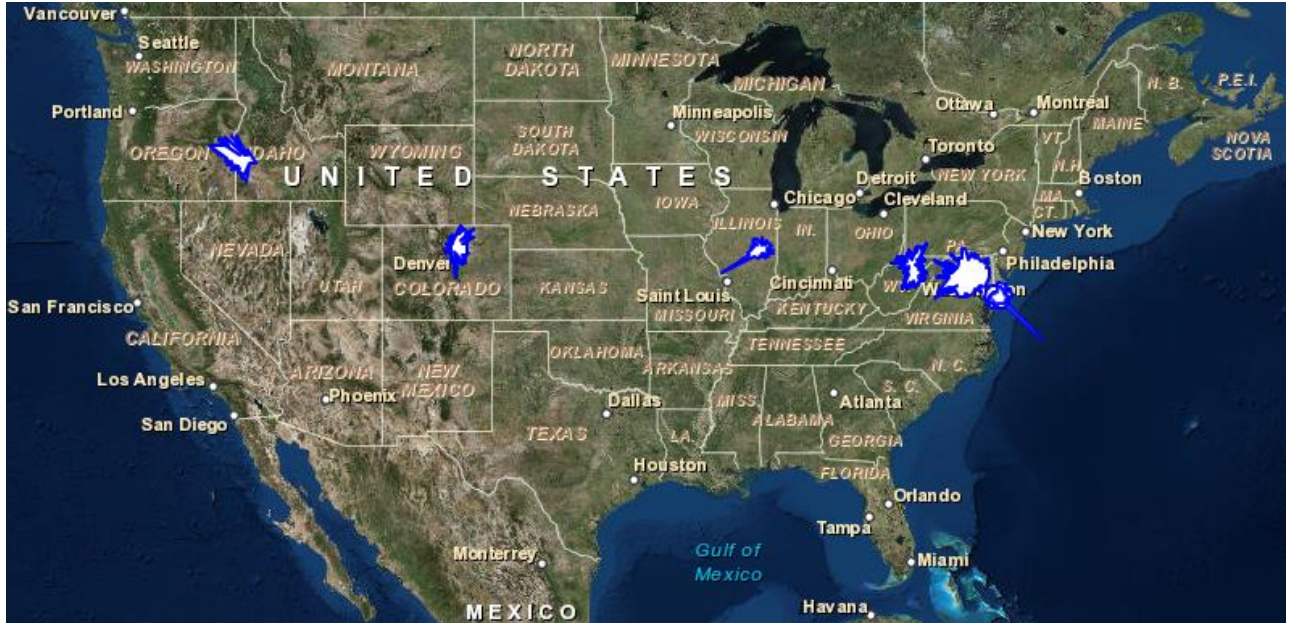


Figure B-4. 1690-1695 MHz Band Segment



Figure B-5. 1675-1680 MHz Band Segment Without Radiosonde Receive Stations



Figure B-6. 1680-1685 MHz Band Segment Without Radiosonde Receive Stations



Figure B-7. 1685-1690 MHz Band Segment Without Radiosonde Receive Stations



Figure B-8. 1690-1695 MHz Band Segment Without Radiosonde Receive Stations

APPENDIX C SPECTRUM USAGE PLOTS: 2700-2900 MHZ BAND

This appendix provides the spectrum usage contour plots for the 2700-2900 MHz band for the contiguous United States. The spectrum usage contour plots are provided for each 5 megahertz band segment in the 2700-2900 MHz band. The December 2015 GMF frequency assignment data was used in generating the spectrum usage contour plots.⁶ The geographic usage does not include United States and Possessions frequency assignments. The time of usage for transmit or receive stations is displayed on the spectrum usage contours plots using opacity (e.g., degree of transparency). A time of usage: between 50 percent to 100 percent corresponds to an opacity of 100 percent; between 10 percent to 50 percent corresponds to an opacity of 75 percent; between 1 percent to 10 percent corresponds to an opacity of 50 percent; and less than 1 percent corresponds to an opacity of 25 percent.⁷

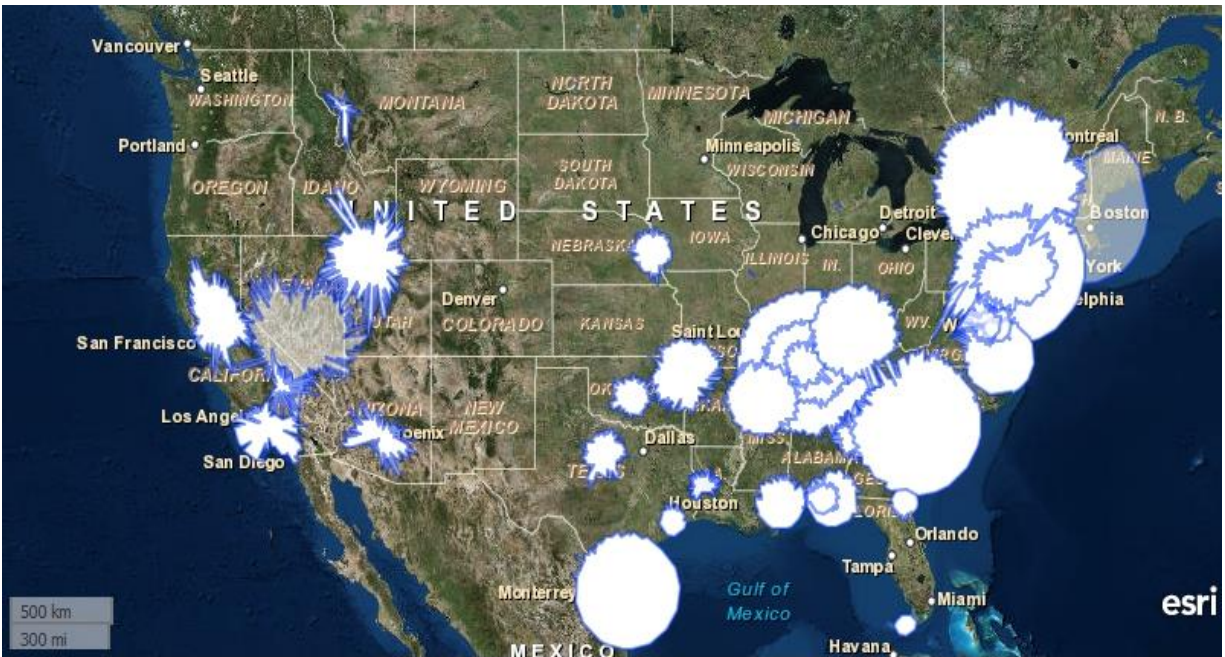


Figure C-1. 2700-2705 MHz Band Segment

⁶ The Government Master File is updated on a daily basis.

⁷ A description of the service that provides the open source satellite imagery map tile used in displaying the contours is available at http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer.

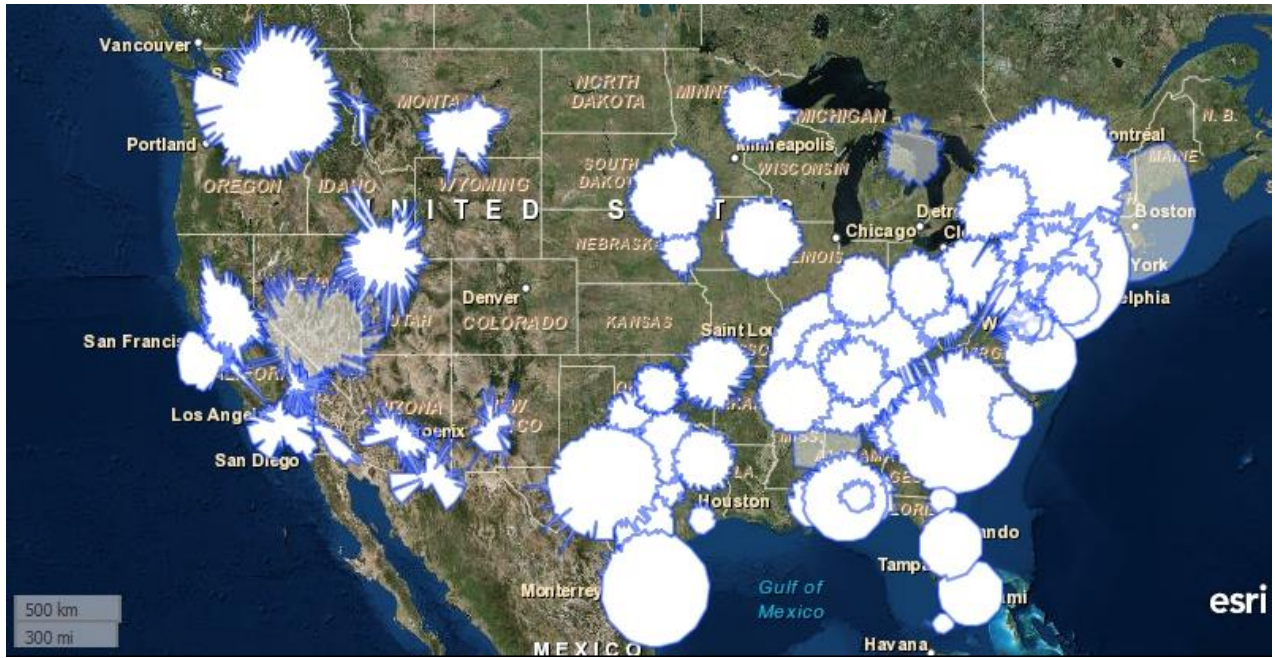


Figure C-2. 2705-2710 MHz Band Segment

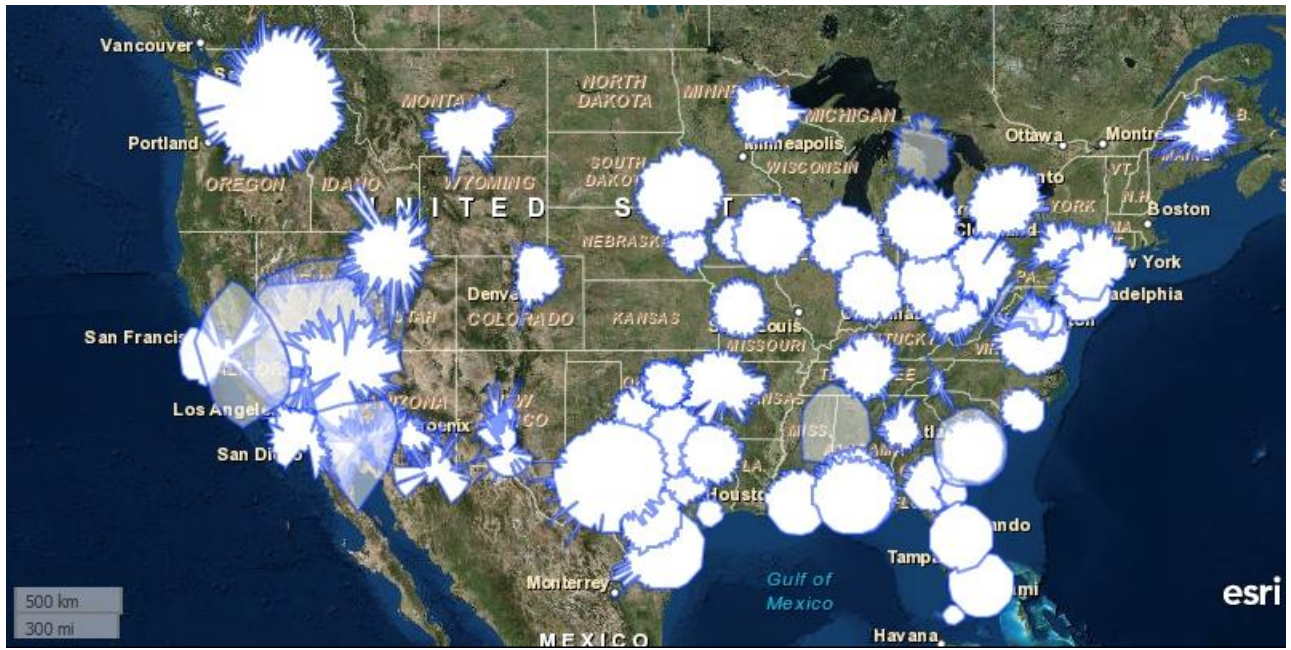


Figure C-3. 2710-2715 MHz Band Segment

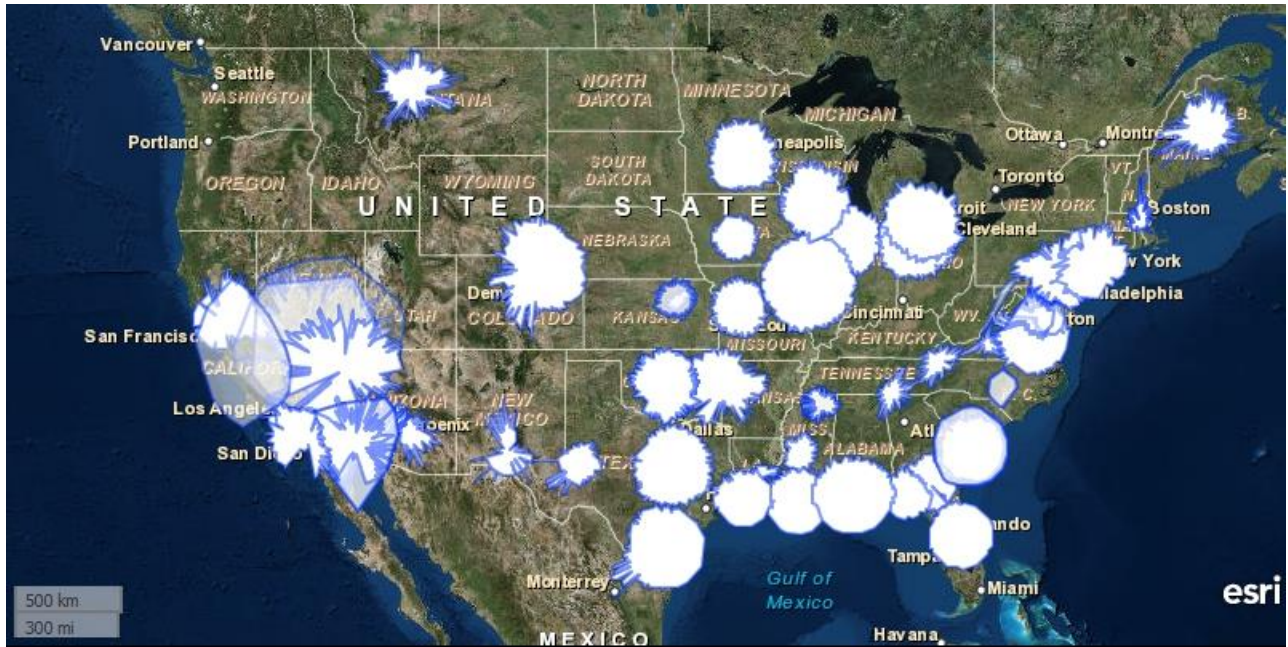


Figure C-4. 2715-2720 MHz Band Segment

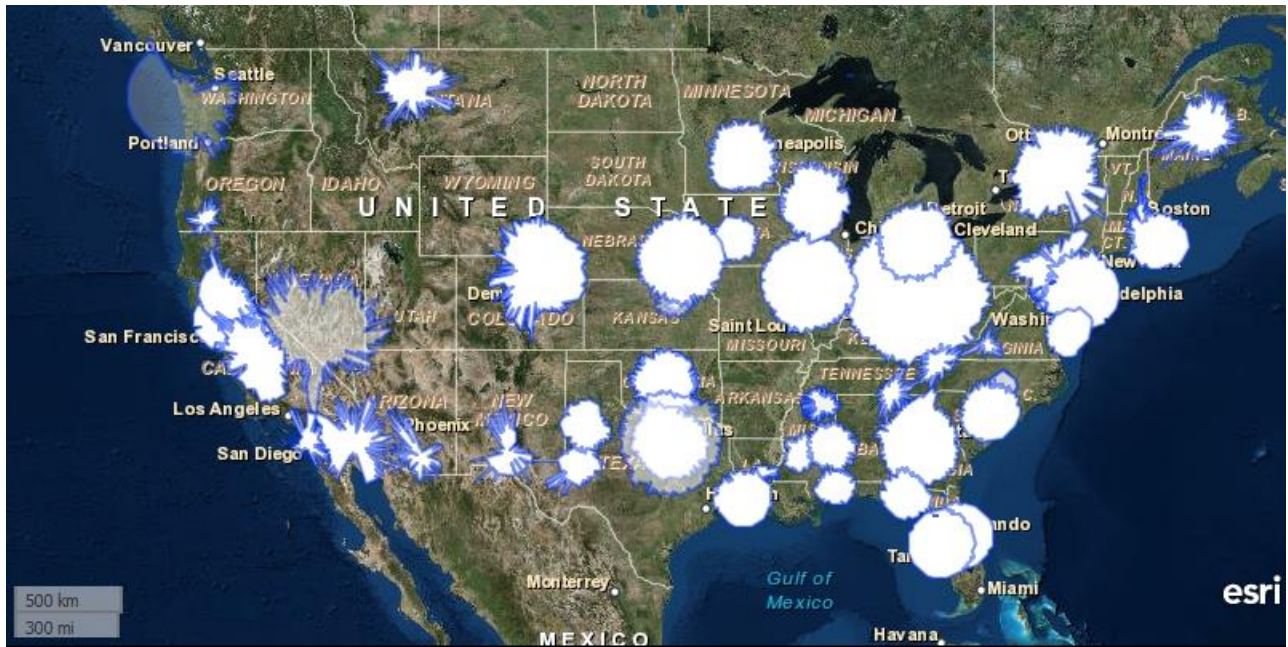


Figure C-5. 2720-2725 MHz Band Segment

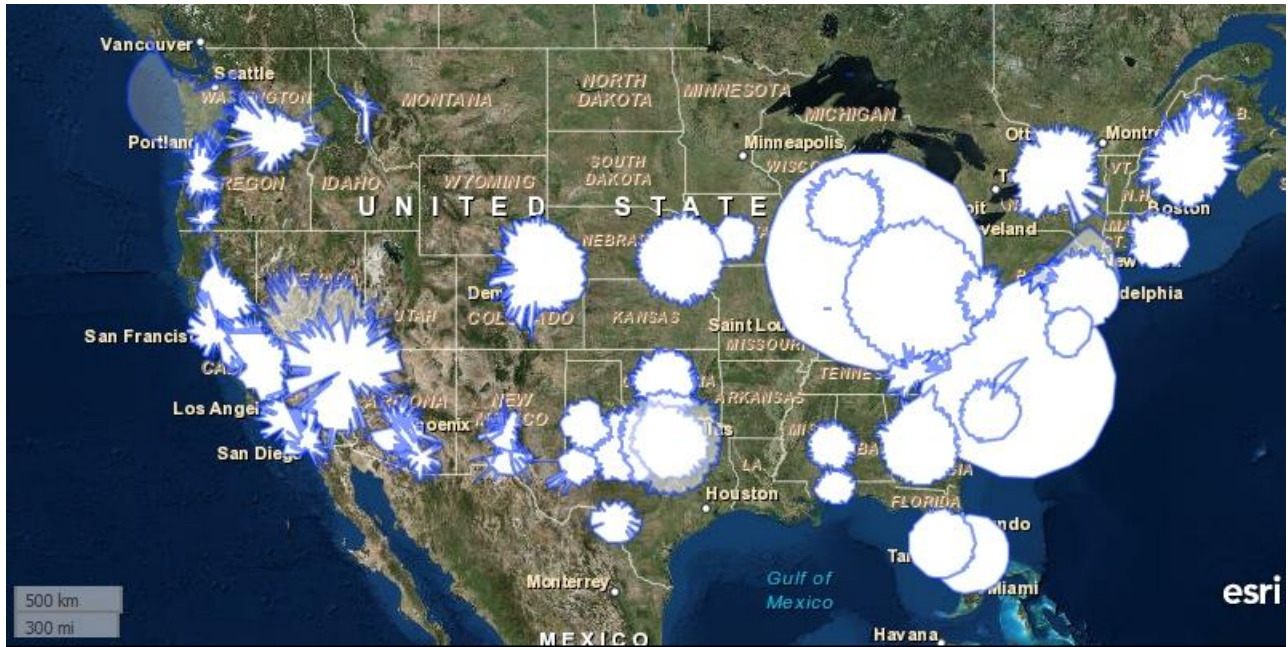


Figure C-6. 2725-2730 MHz Band Segment

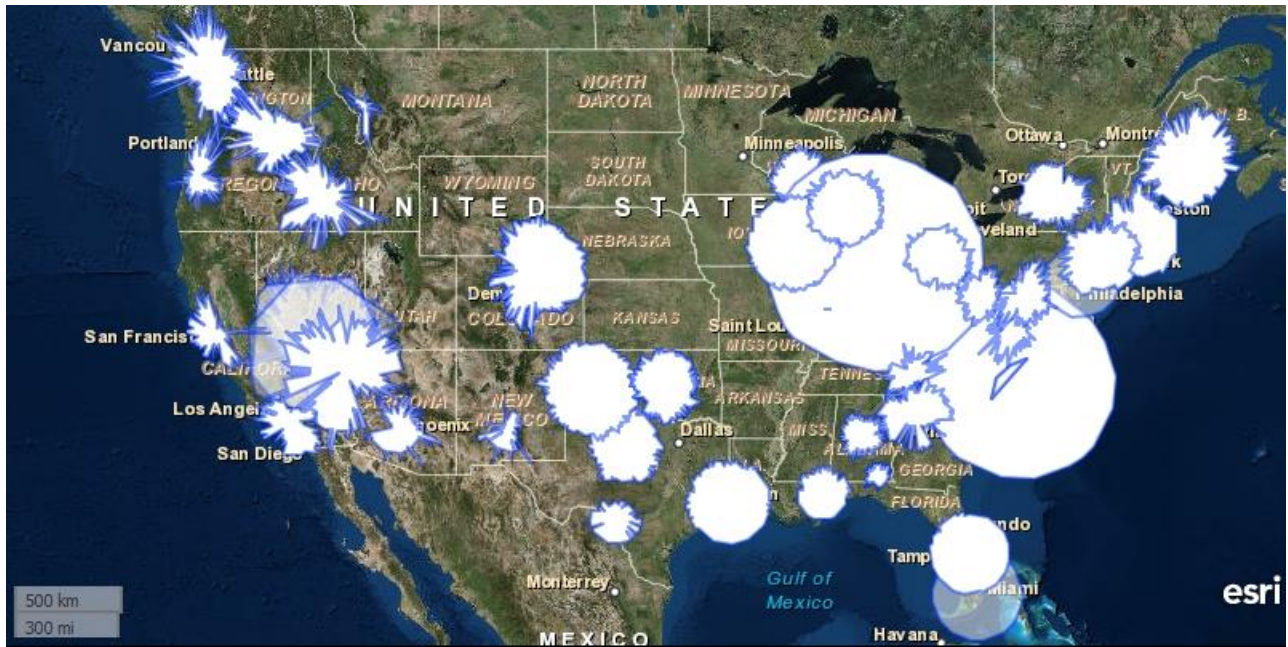


Figure C-7. 2730-2735 MHz Band Segment

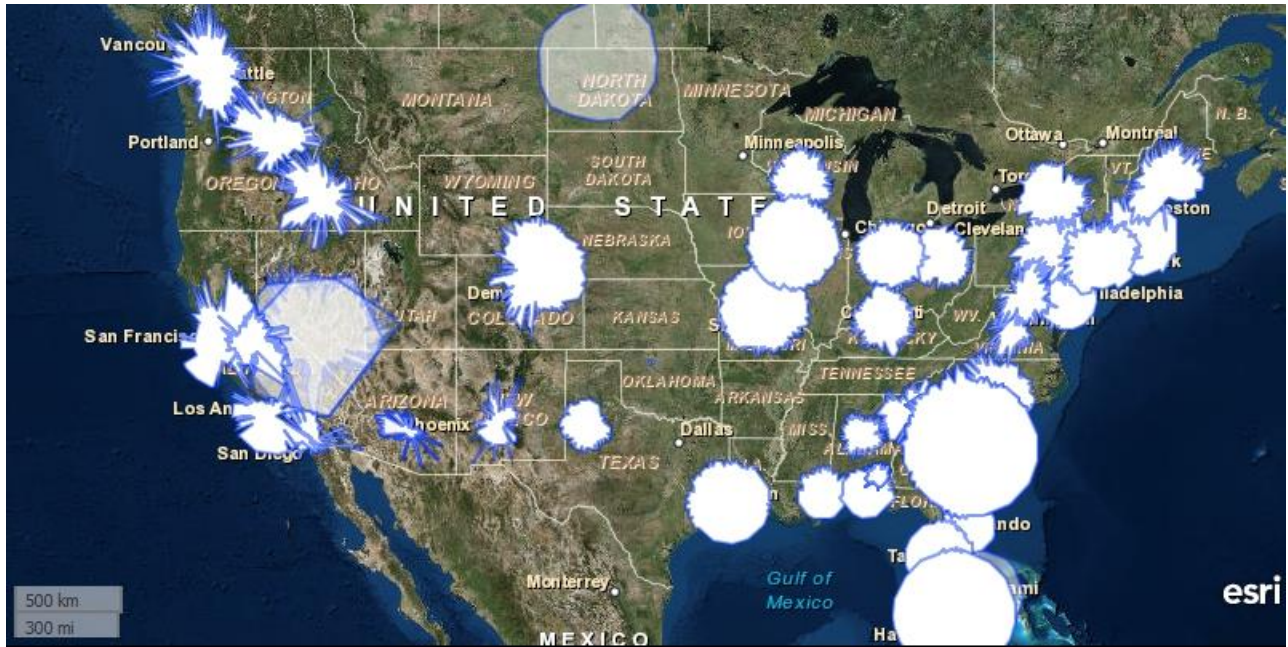


Figure C-8. 2735-2740 MHz Band Segment

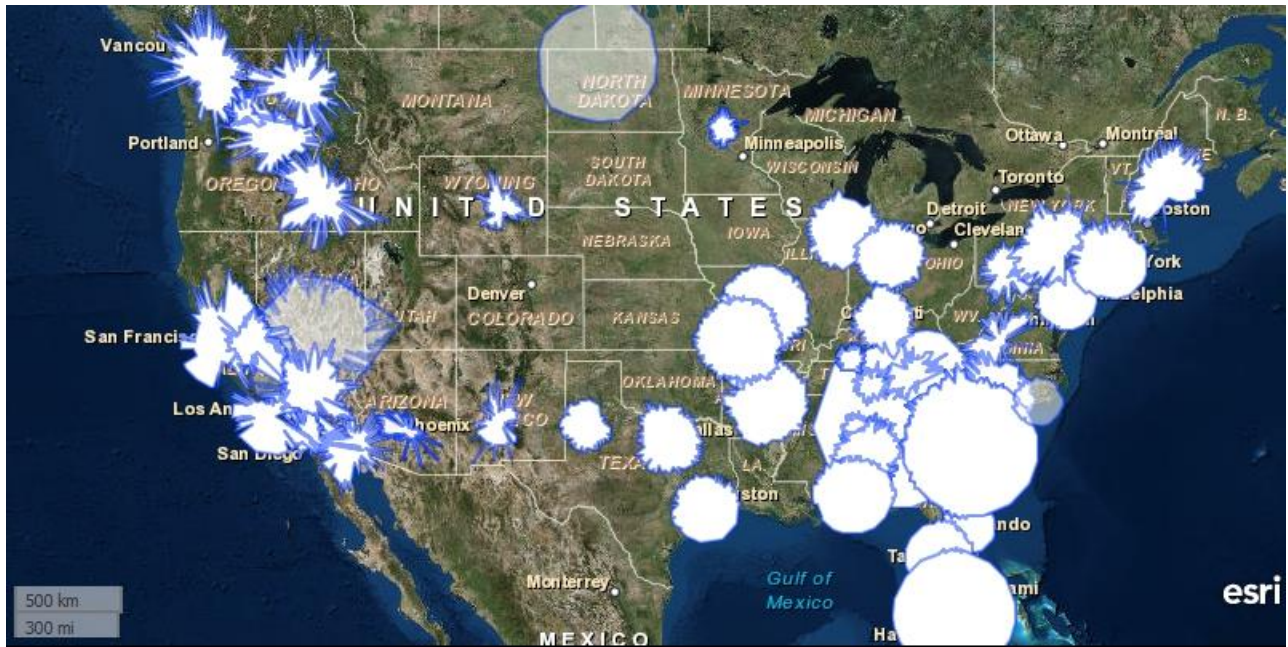


Figure C-9. 2740-2745 MHz Band Segment

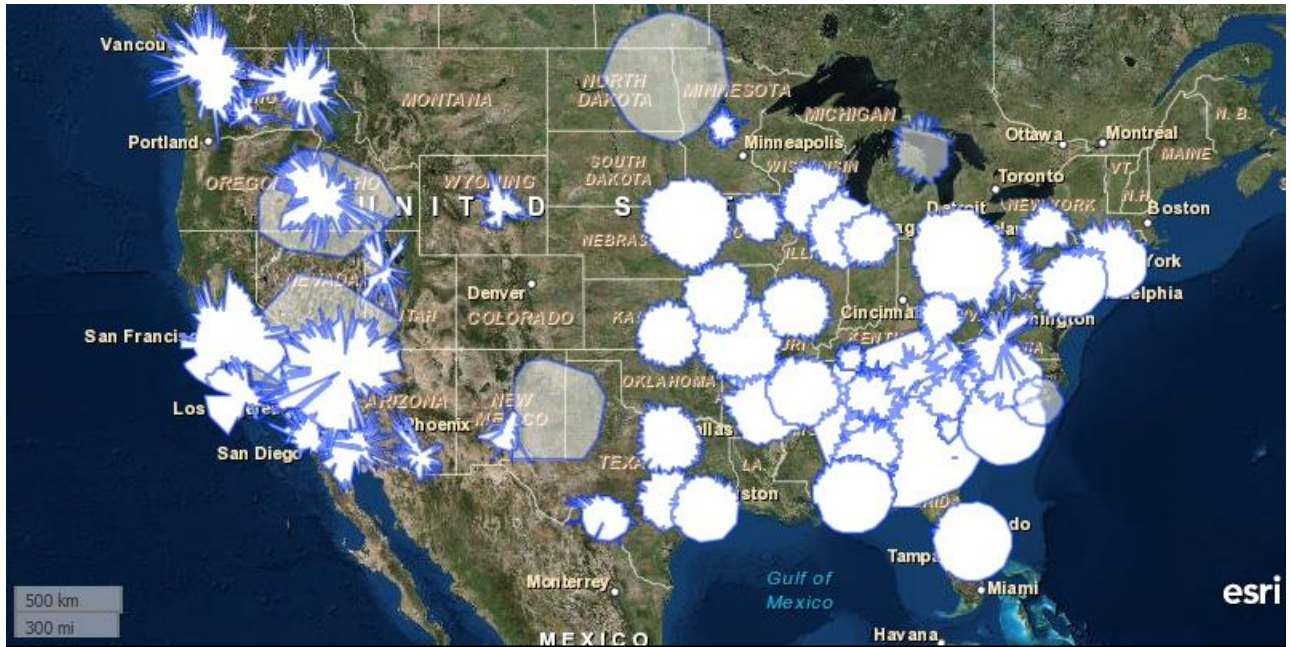


Figure C-10. 2745-2750 MHz Band Segment

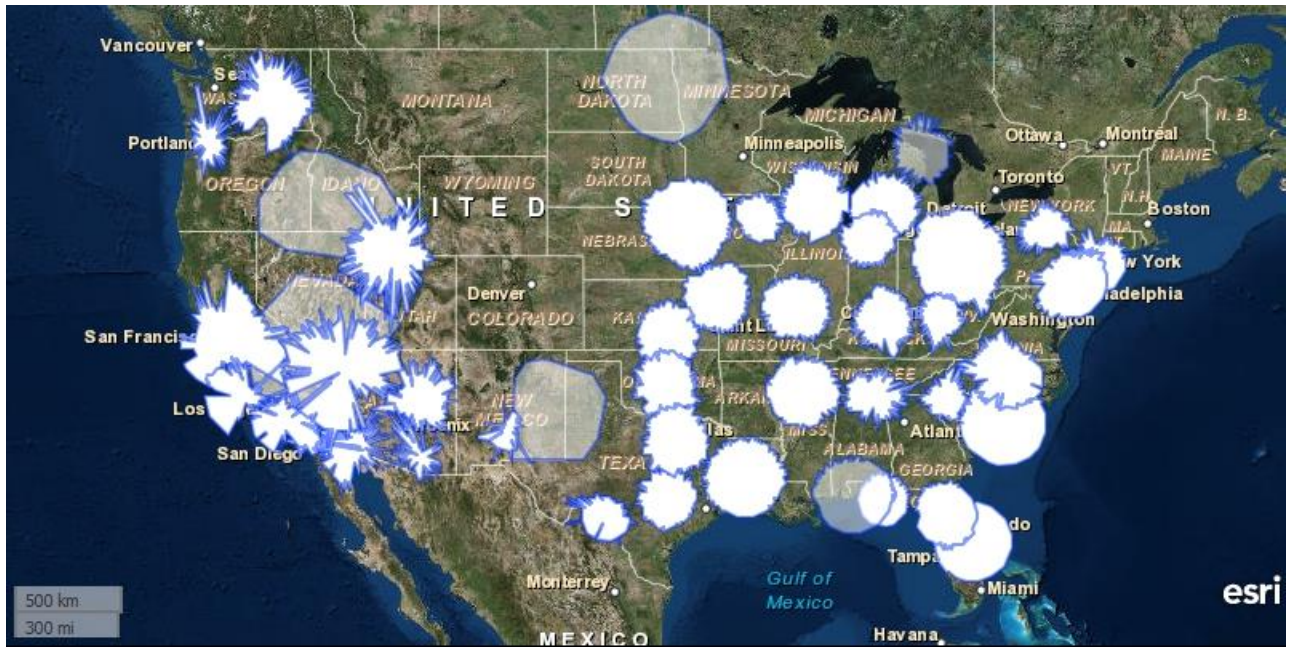


Figure C-11. 2750-2755 MHz Band Segment

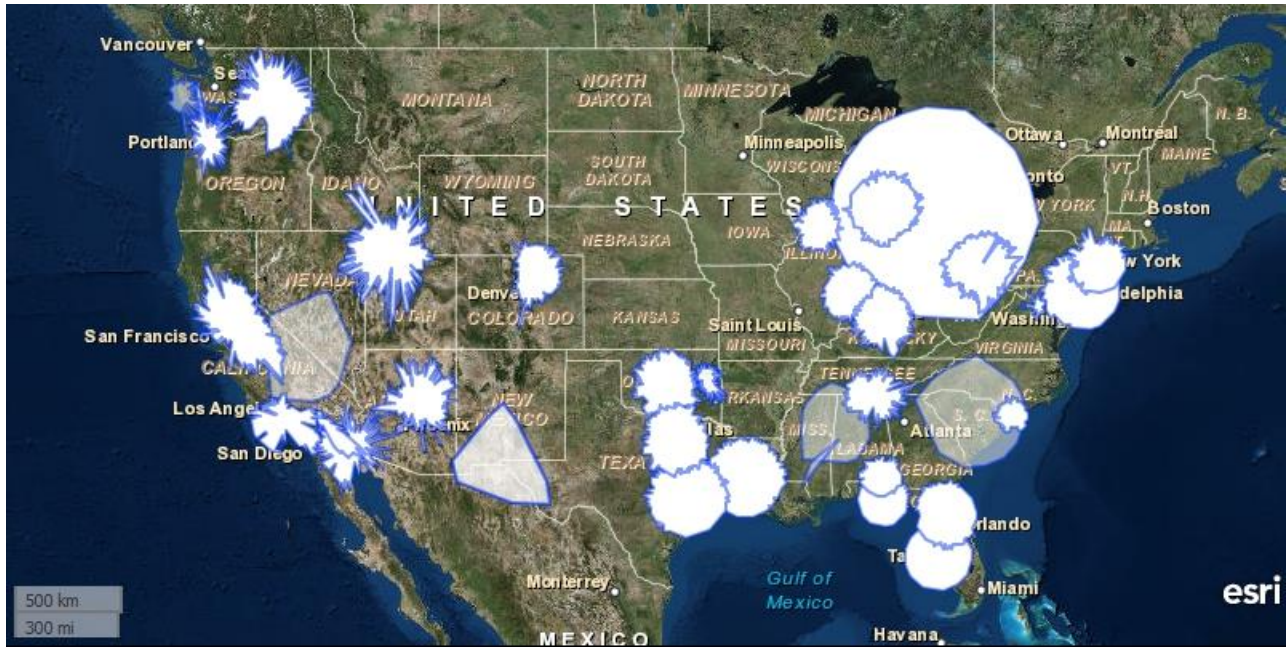


Figure C-12. 2755-2760 MHz Band Segment

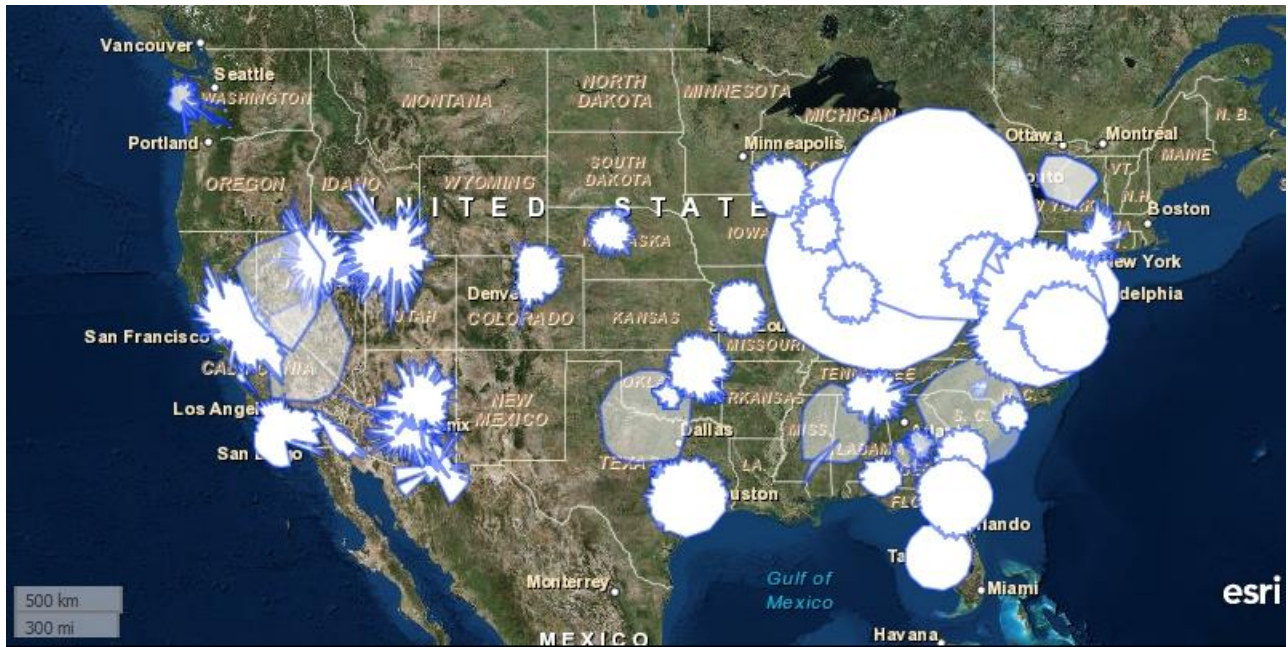


Figure C-13. 2760-2765 MHz Band Segment



Figure C-14. 2765-2770 MHz Band Segment

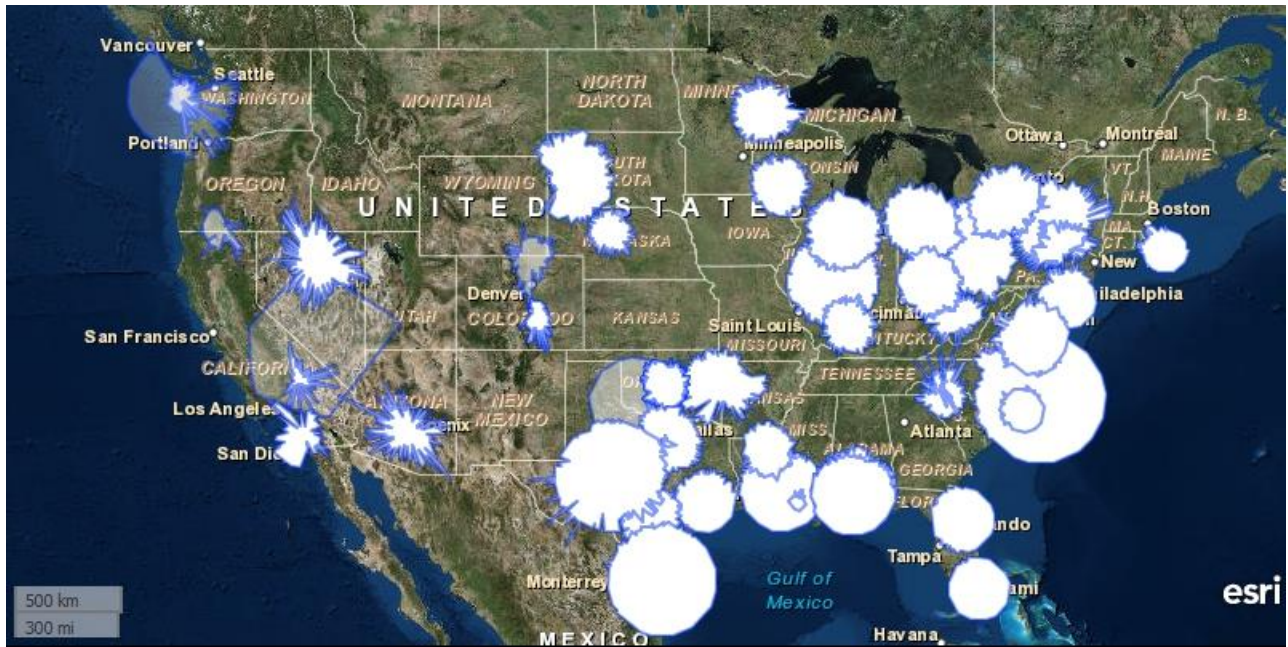


Figure C-15. 2770-2775 MHz Band Segment

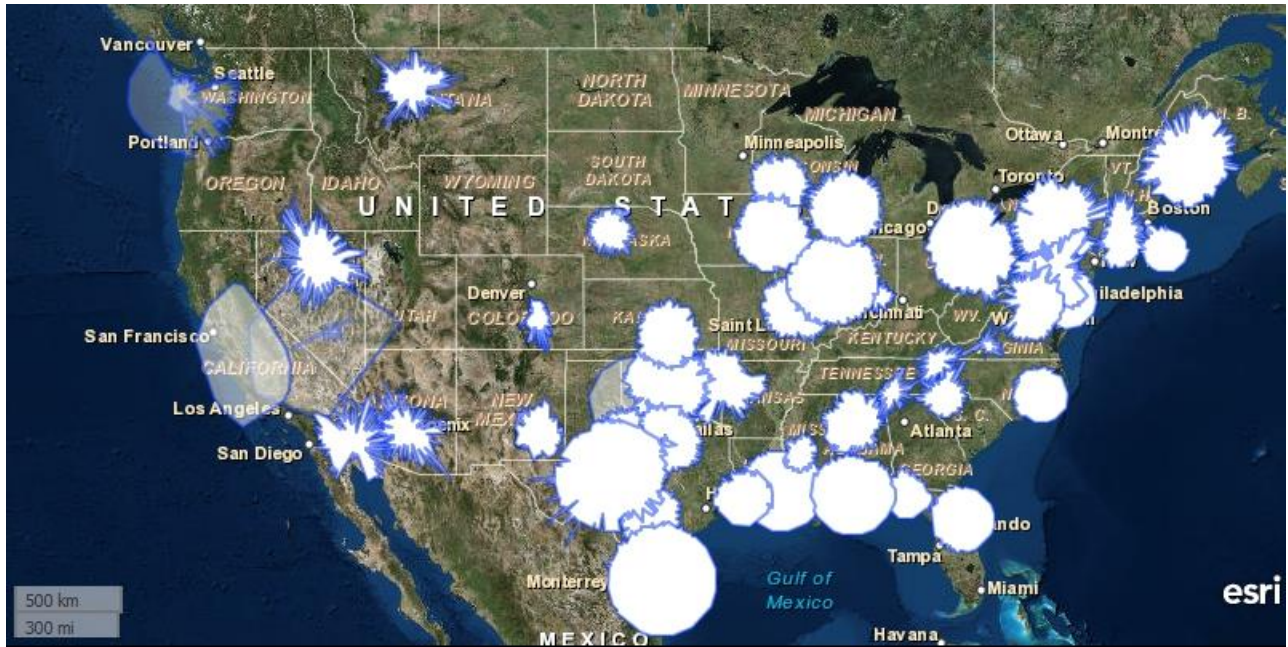


Figure C-16. 2775-2780 MHz Band Segment

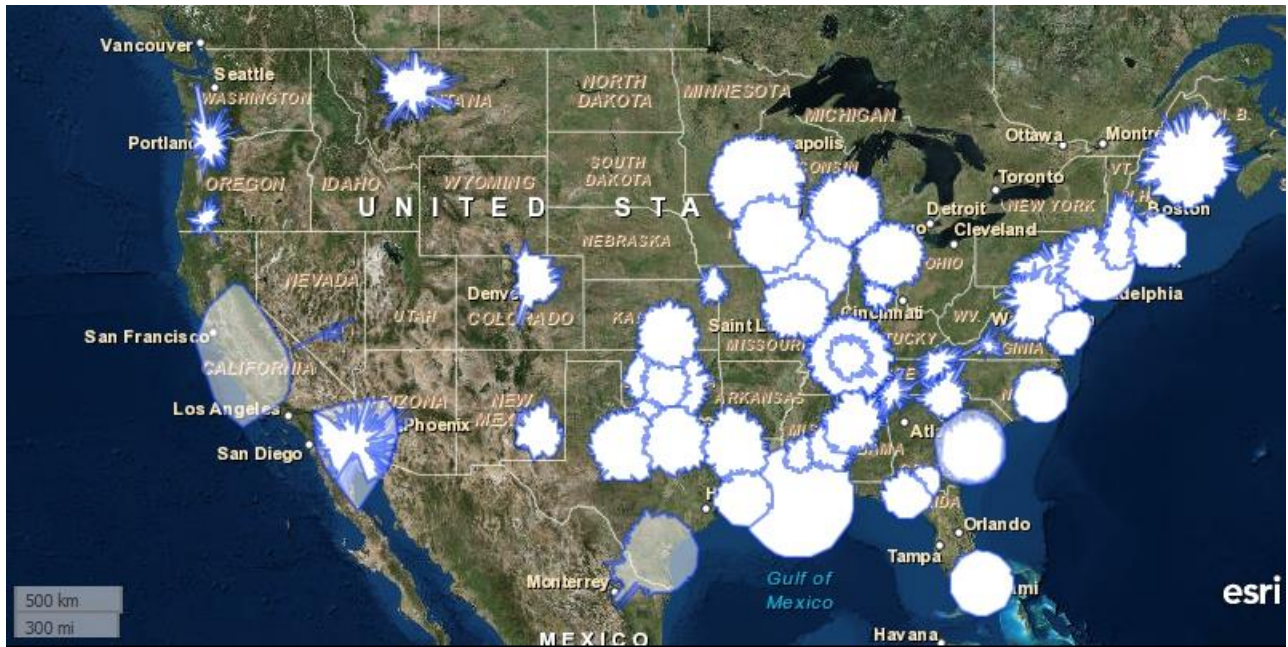


Figure C-17. 2780-2785 MHz Band Segment

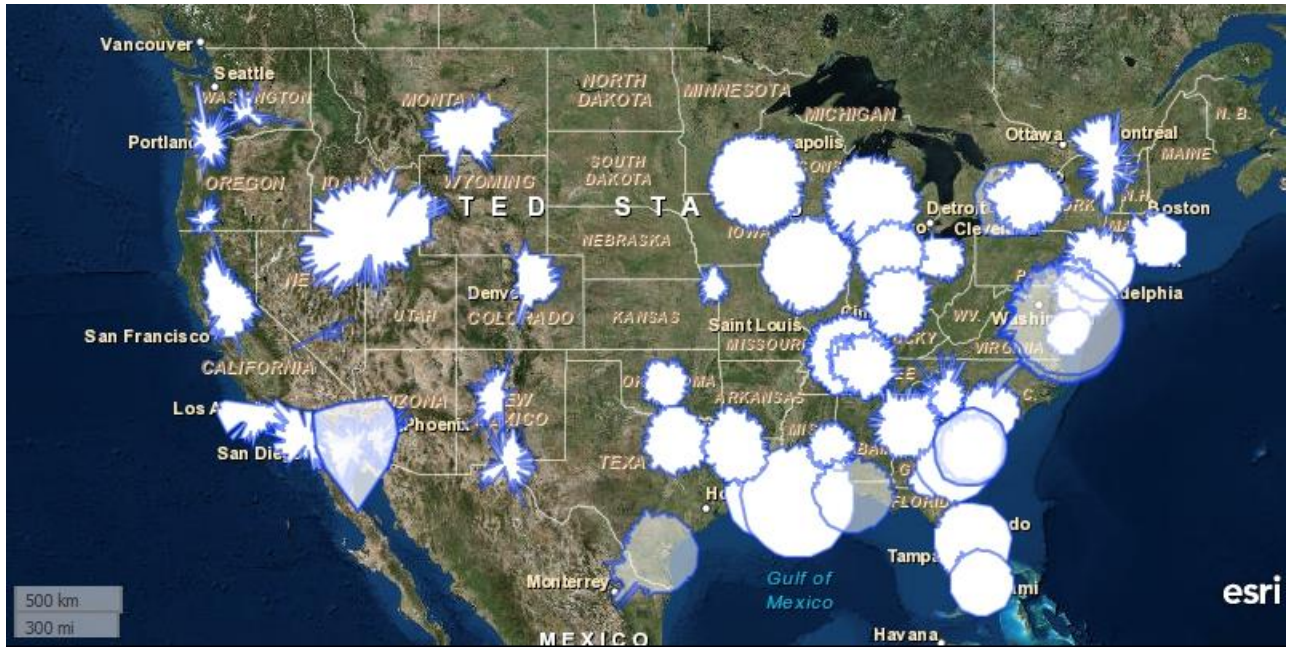


Figure C-18. 2785-2790 MHz Band Segment

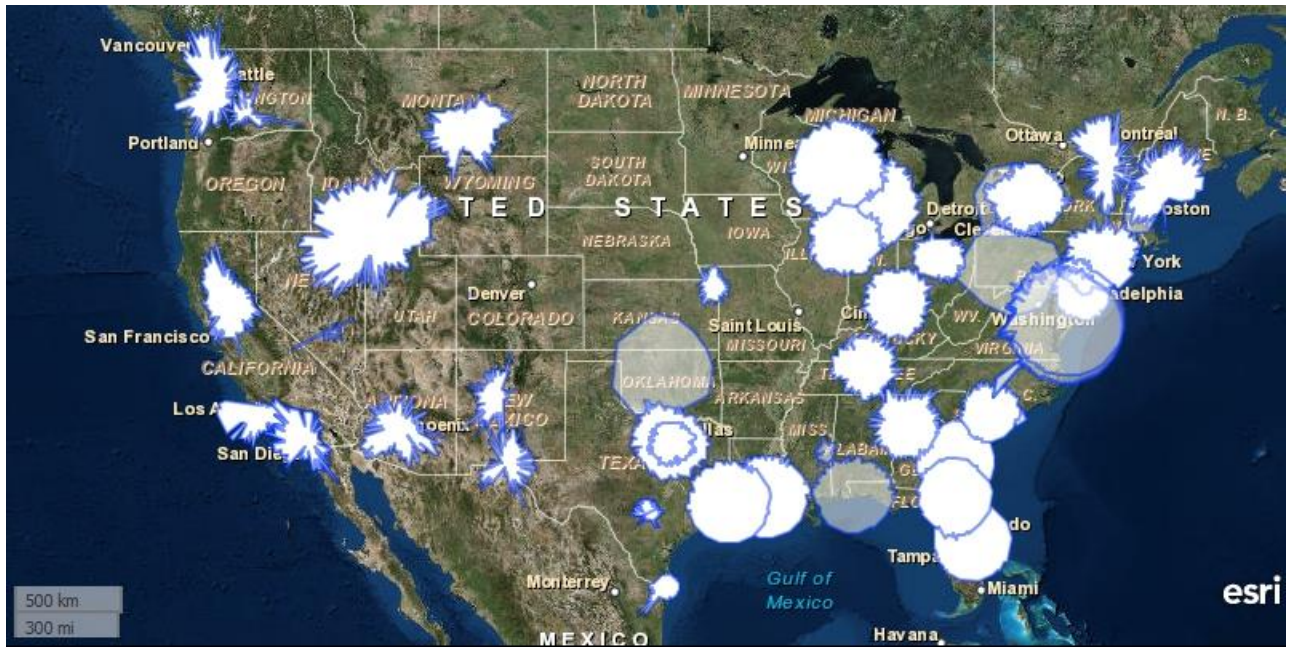


Figure C-19. 2790-2795 MHz Band Segment

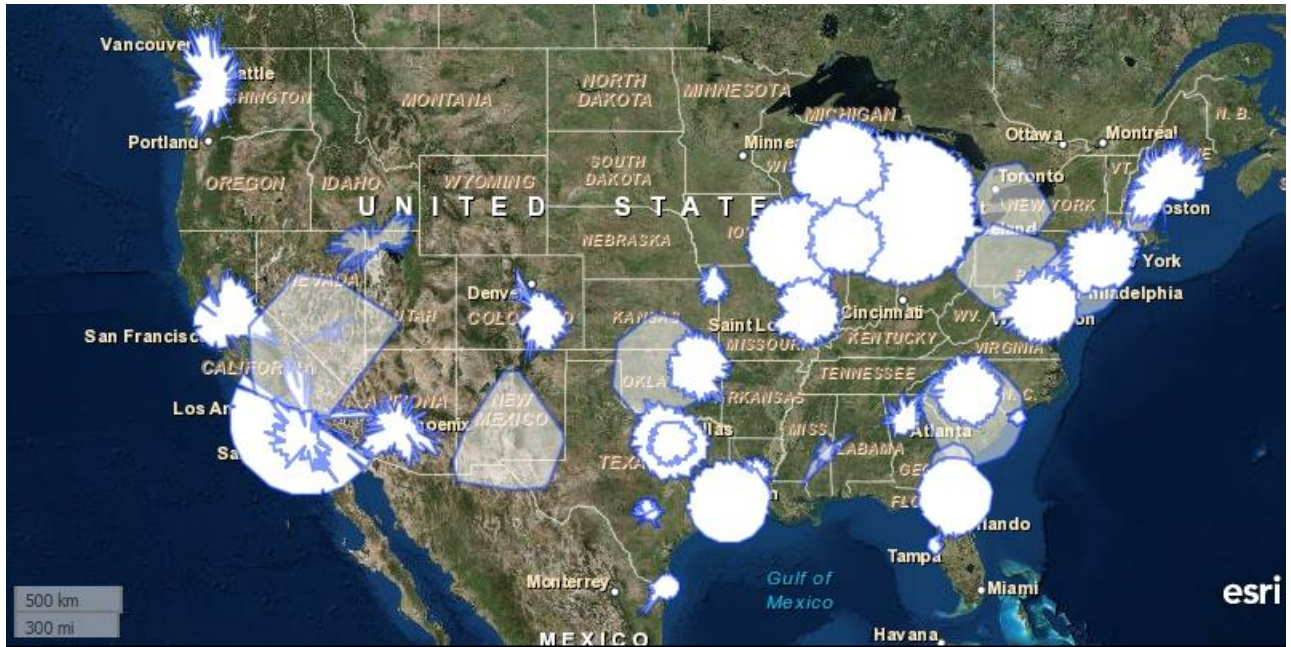


Figure C-20. 2795-2800 MHz Band Segment

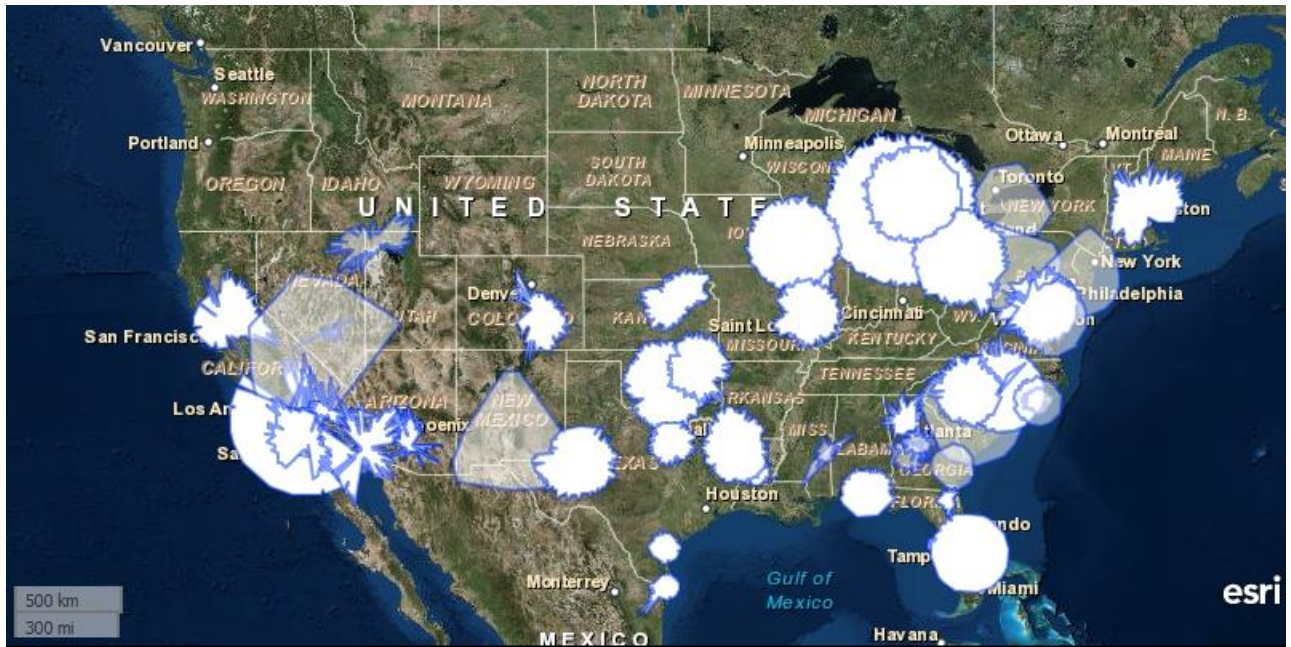


Figure C-21. 2800-2805 MHz Band Segment

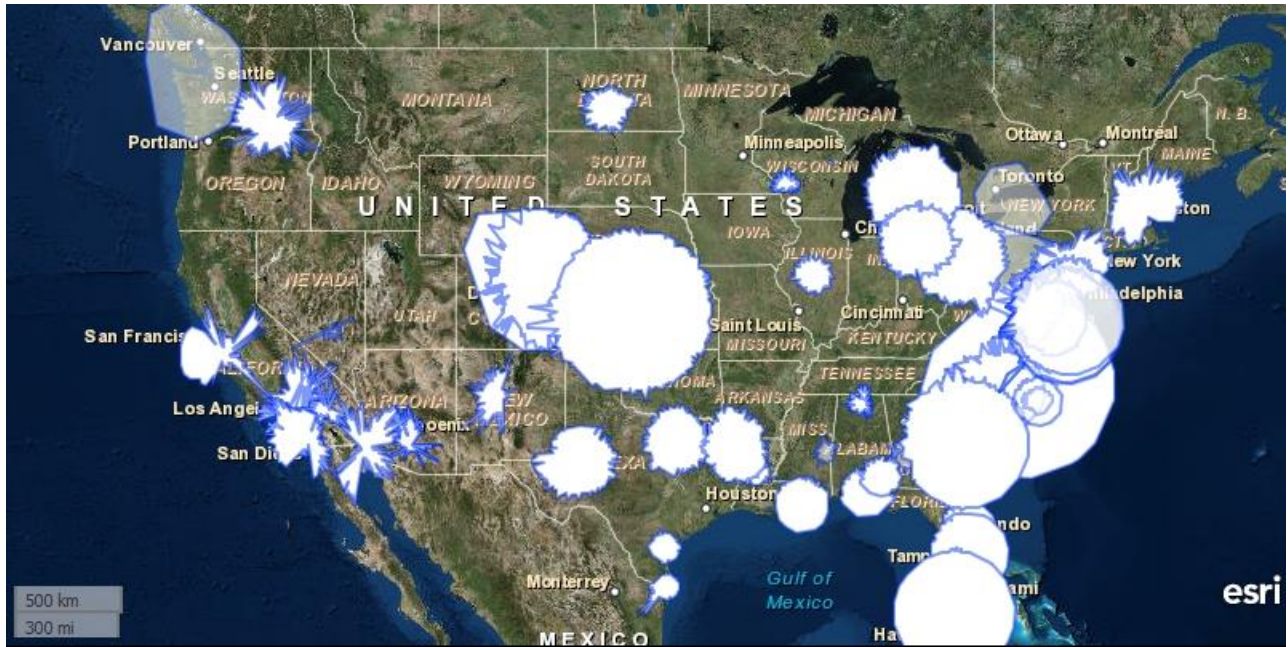


Figure C-22. 2805-2810 MHz Band Segment

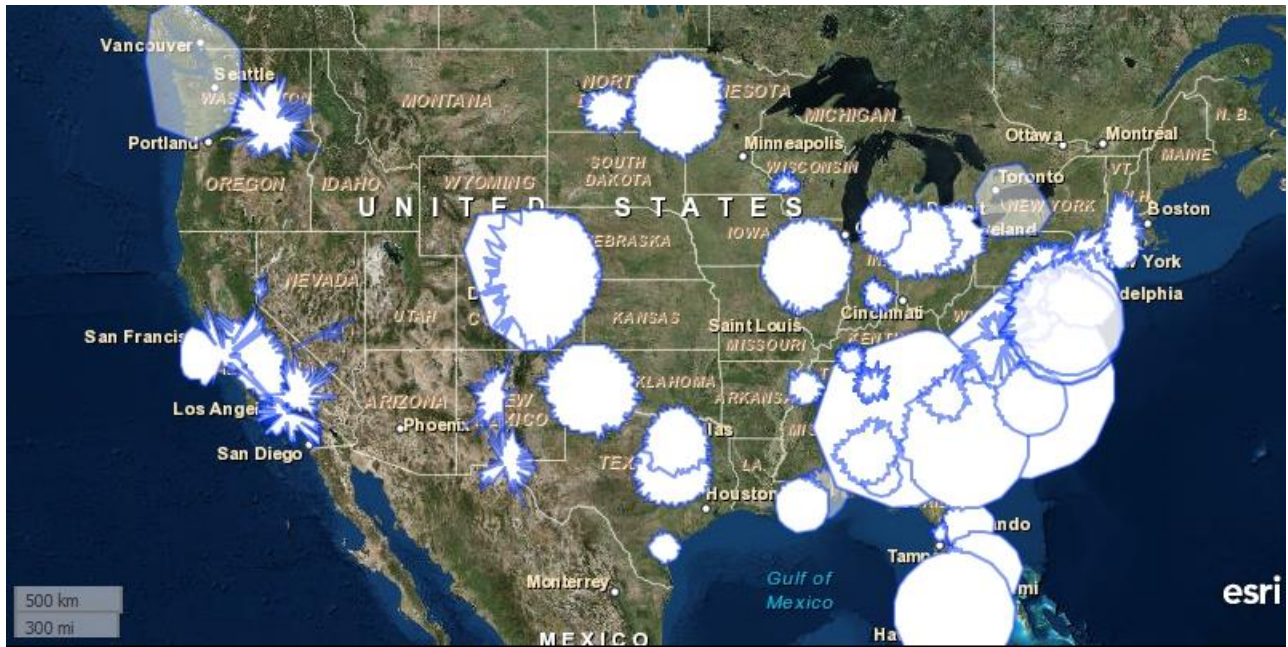


Figure C-23. 2810-2815 MHz Band Segment

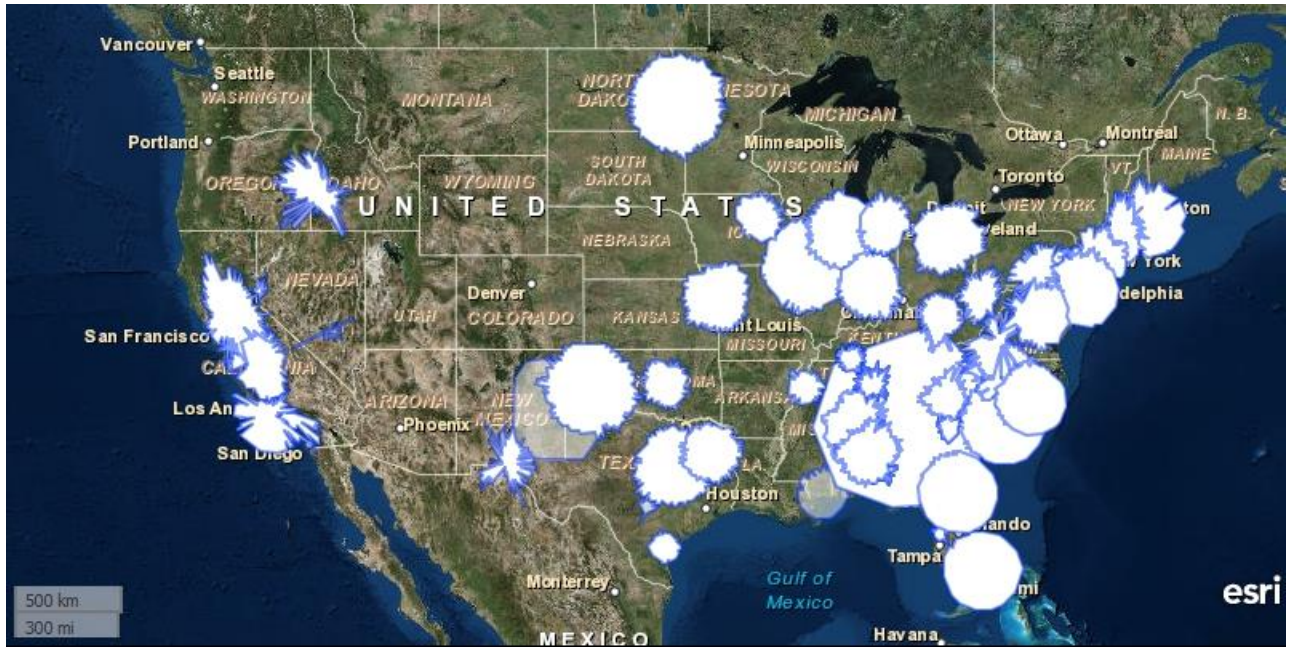


Figure C-24. 2815-2820 MHz Band Segment

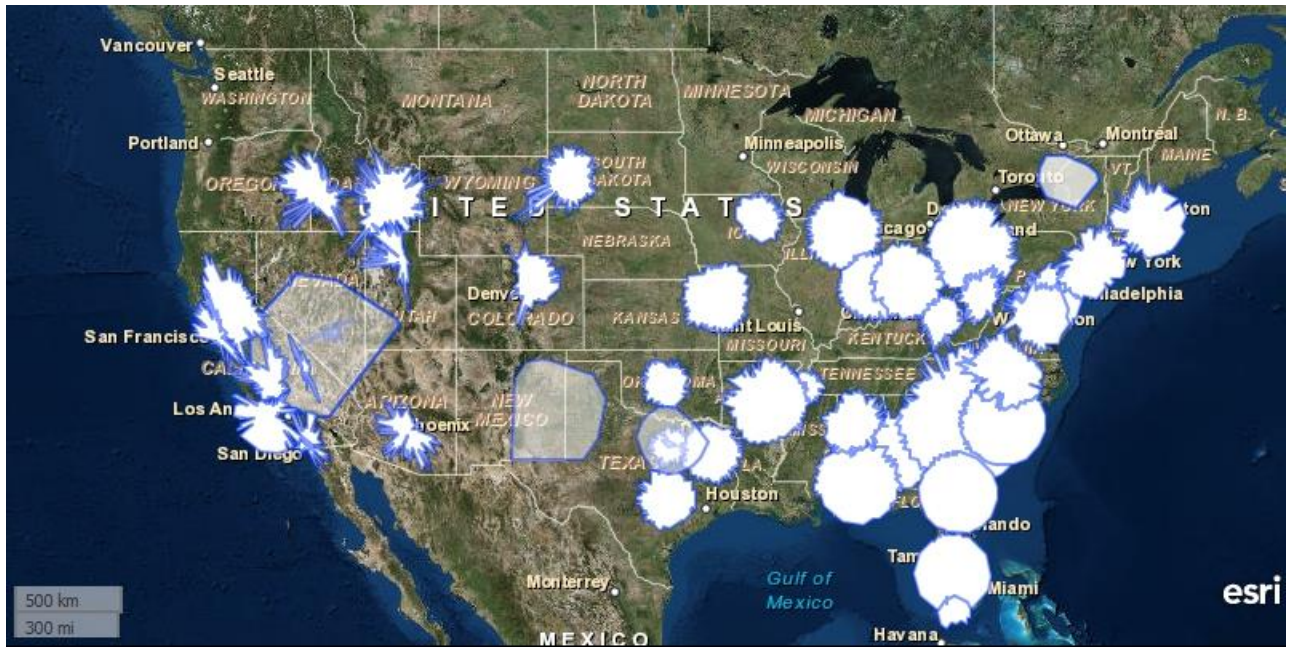


Figure C-25. 2820-2825 MHz Band Segment

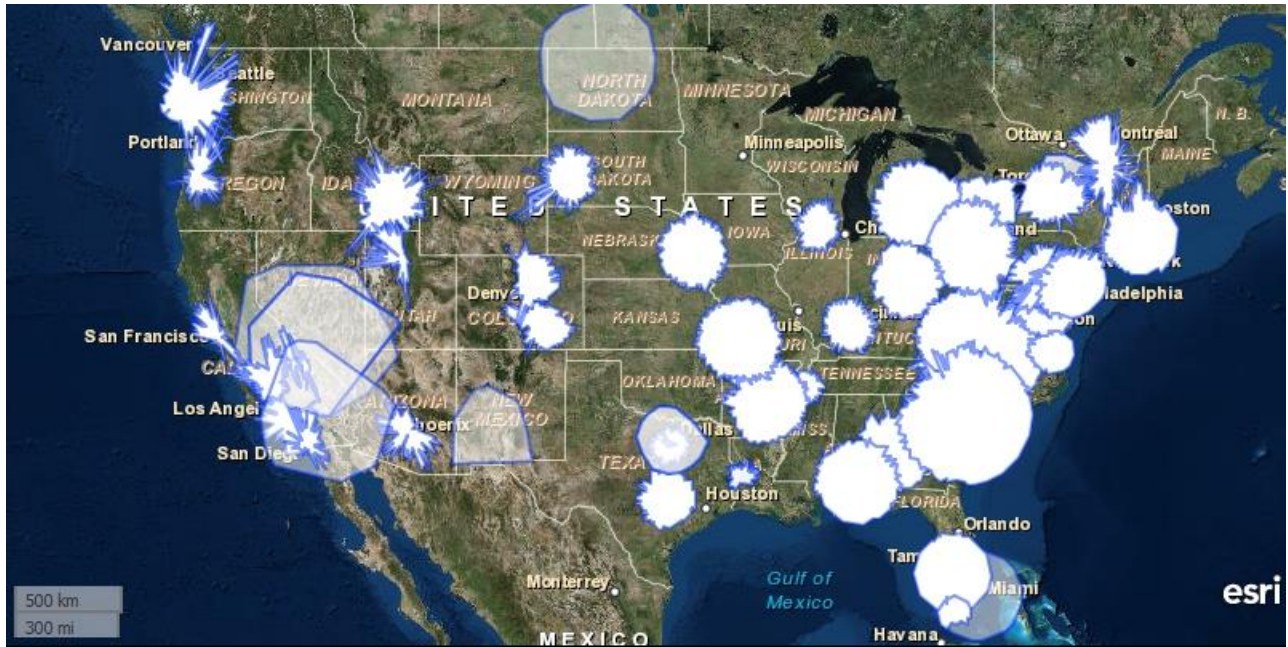


Figure C-26. 2825-2830 MHz Band Segment

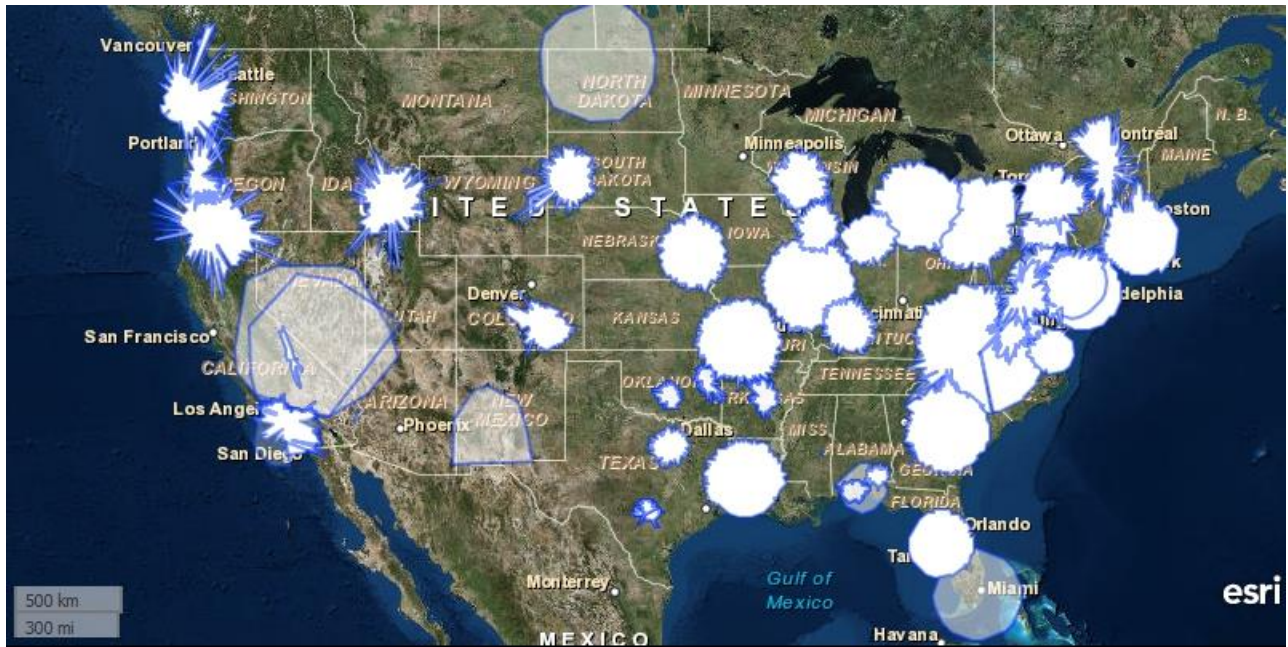


Figure C-27. 2830-2835 MHz Band Segment

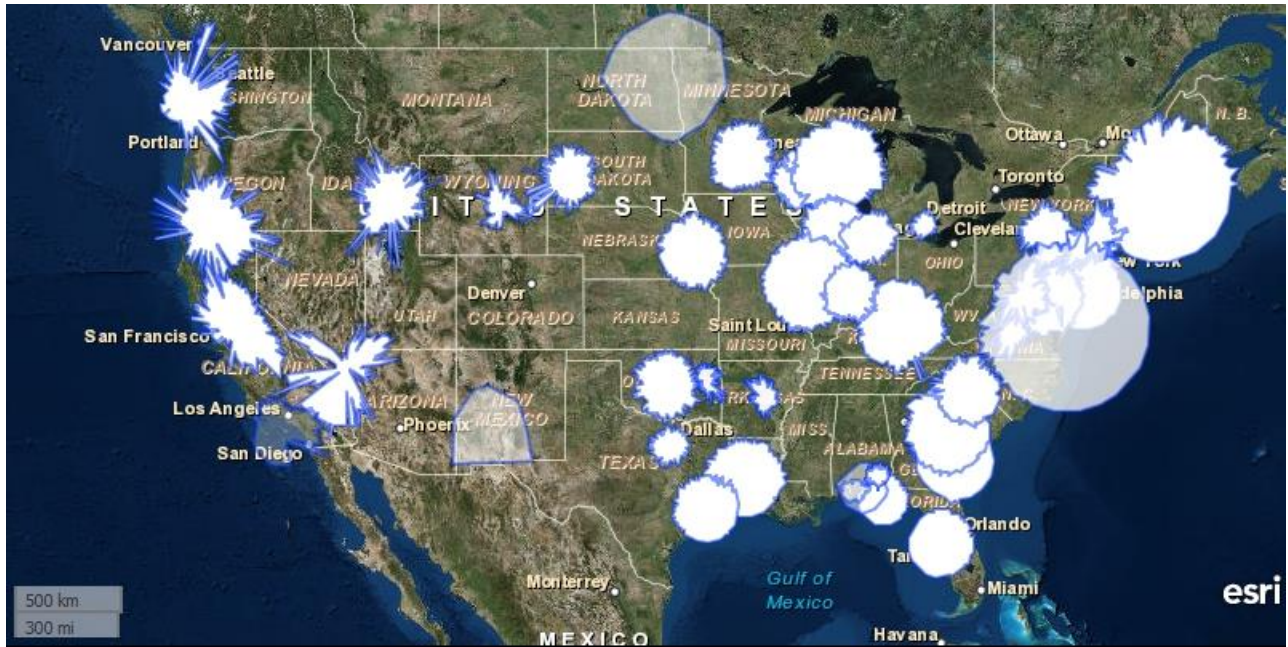


Figure C-28. 2835-2840 MHz Band Segment

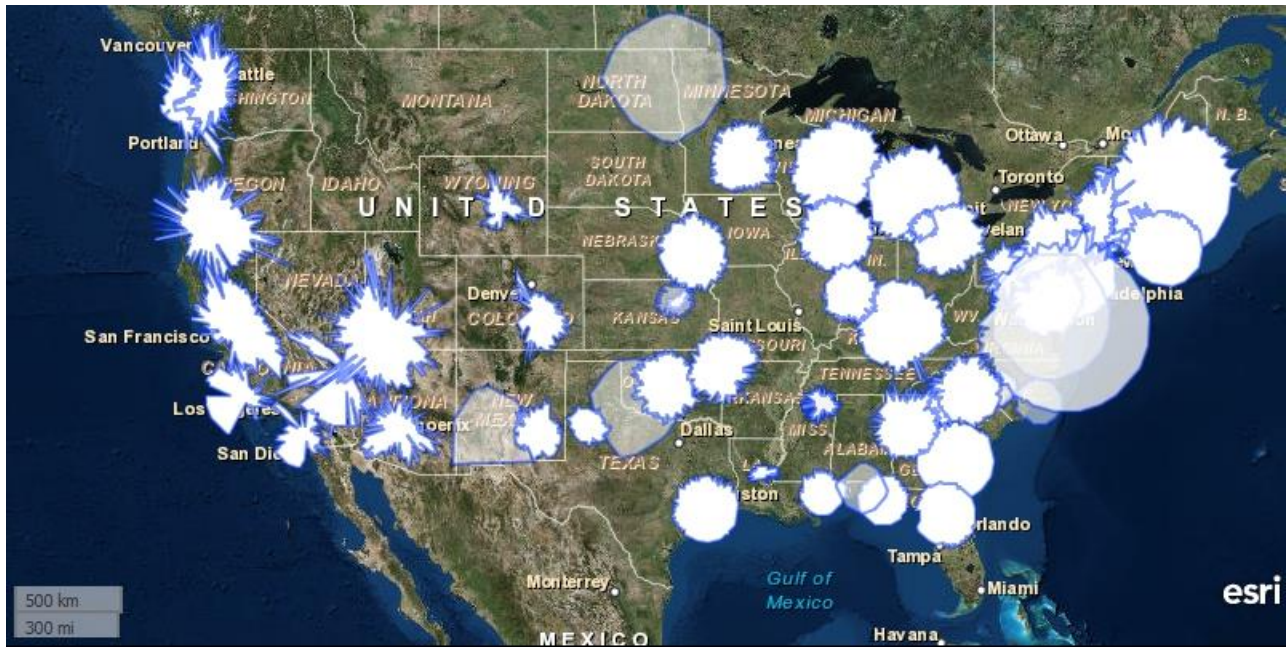


Figure C-29. 2840-2845 MHz Band Segment

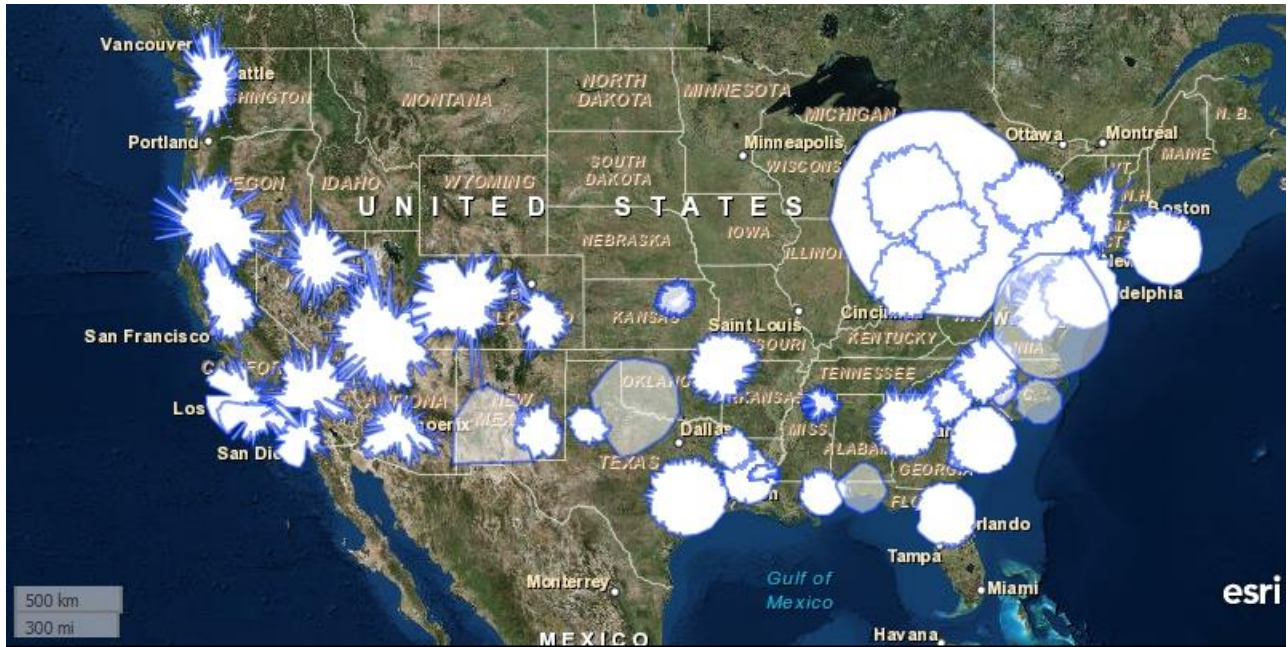


Figure C-30. 2845-2850 MHz Band Segment

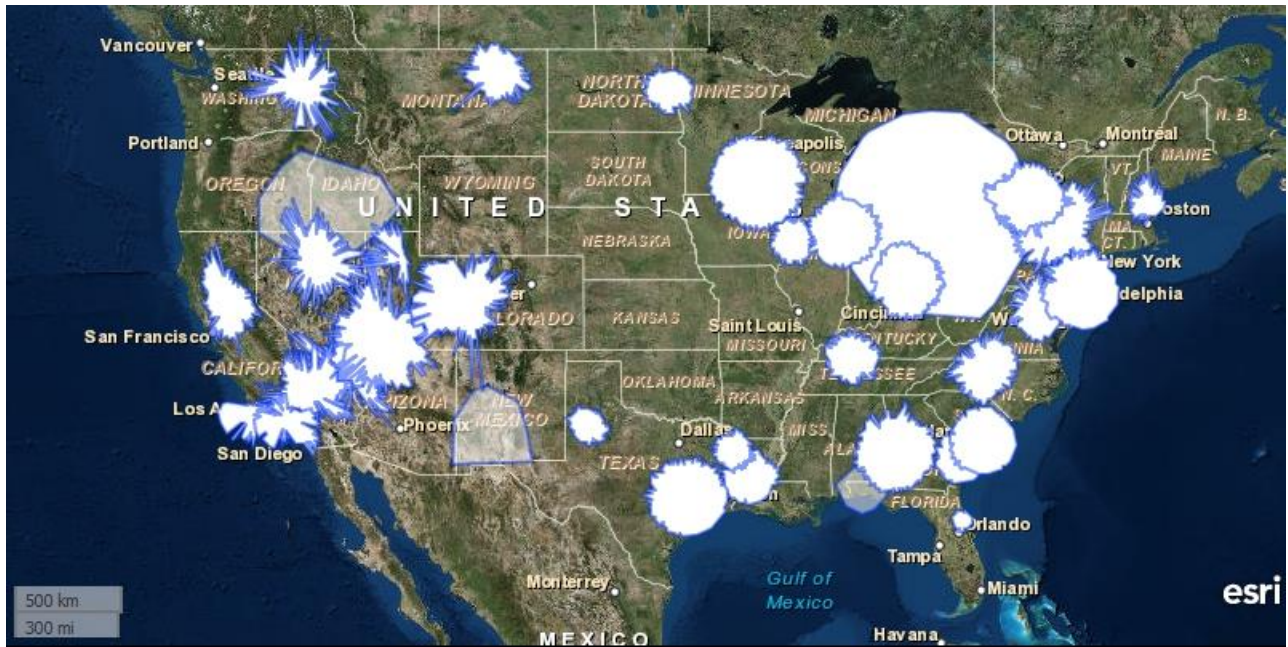


Figure C-31. 2850-2855 MHz Band Segment

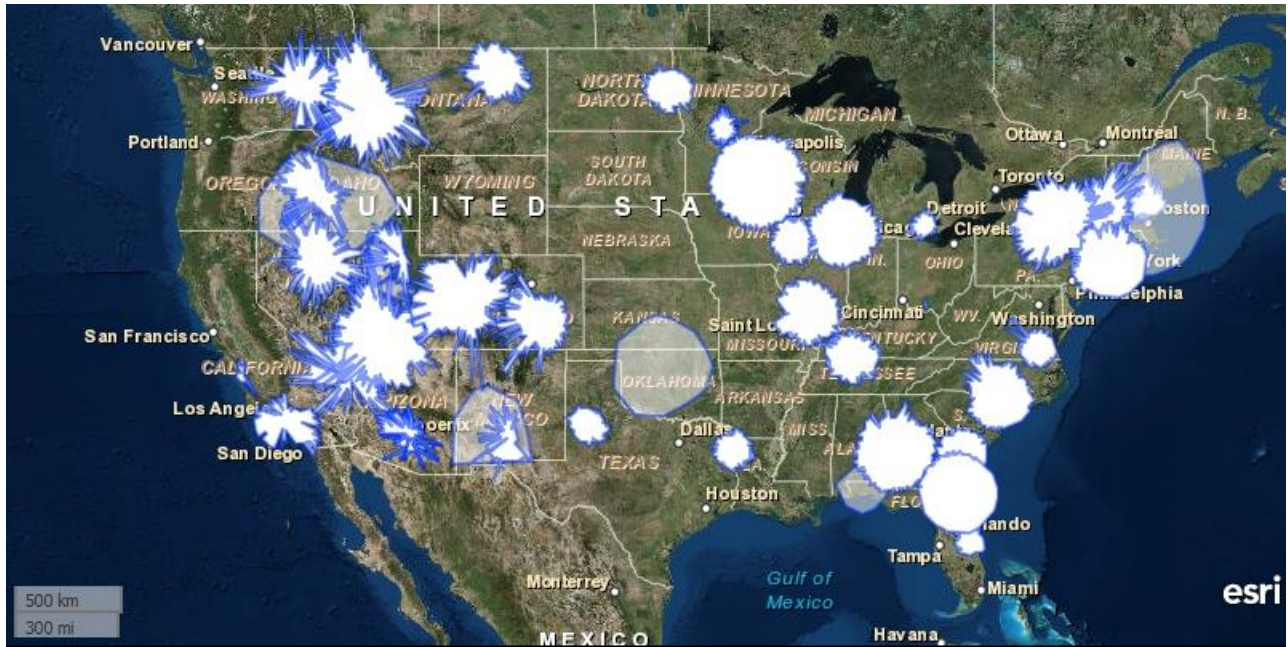


Figure C-32. 2855-2860 MHz Band Segment



Figure C-33. 2860-2865 MHz Band Segment



Figure C-34. 2865-2870 MHz Band Segment

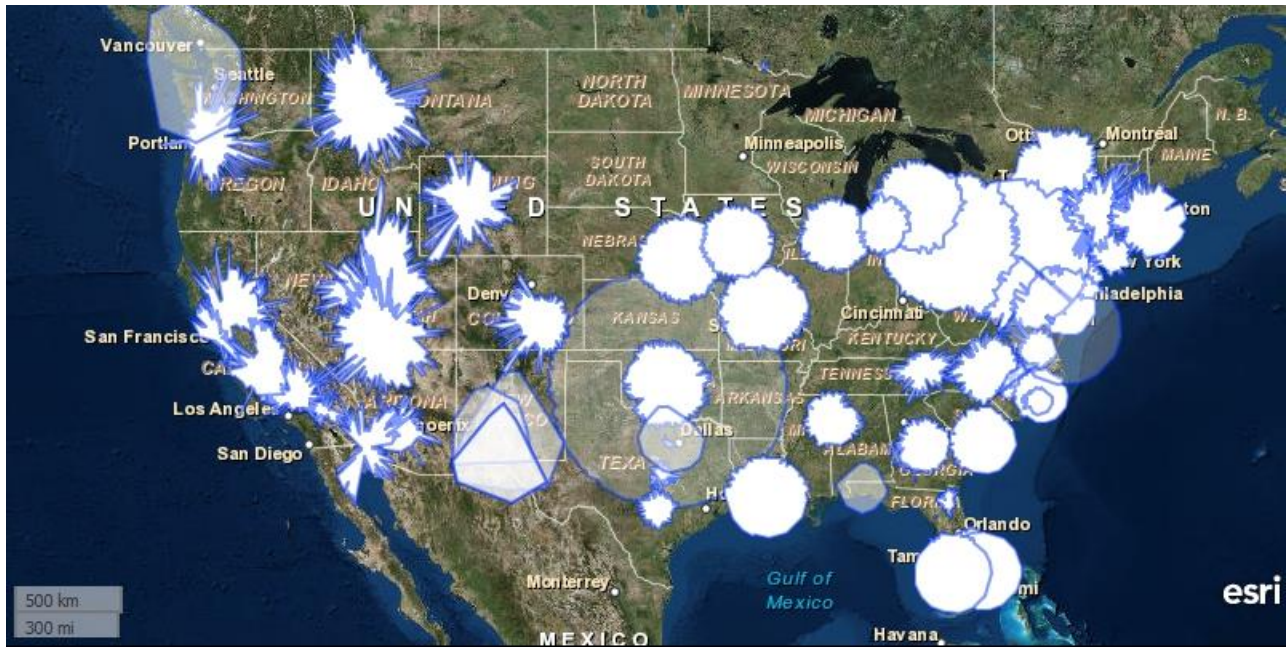


Figure C-35. 2870-2875 MHz Band Segment

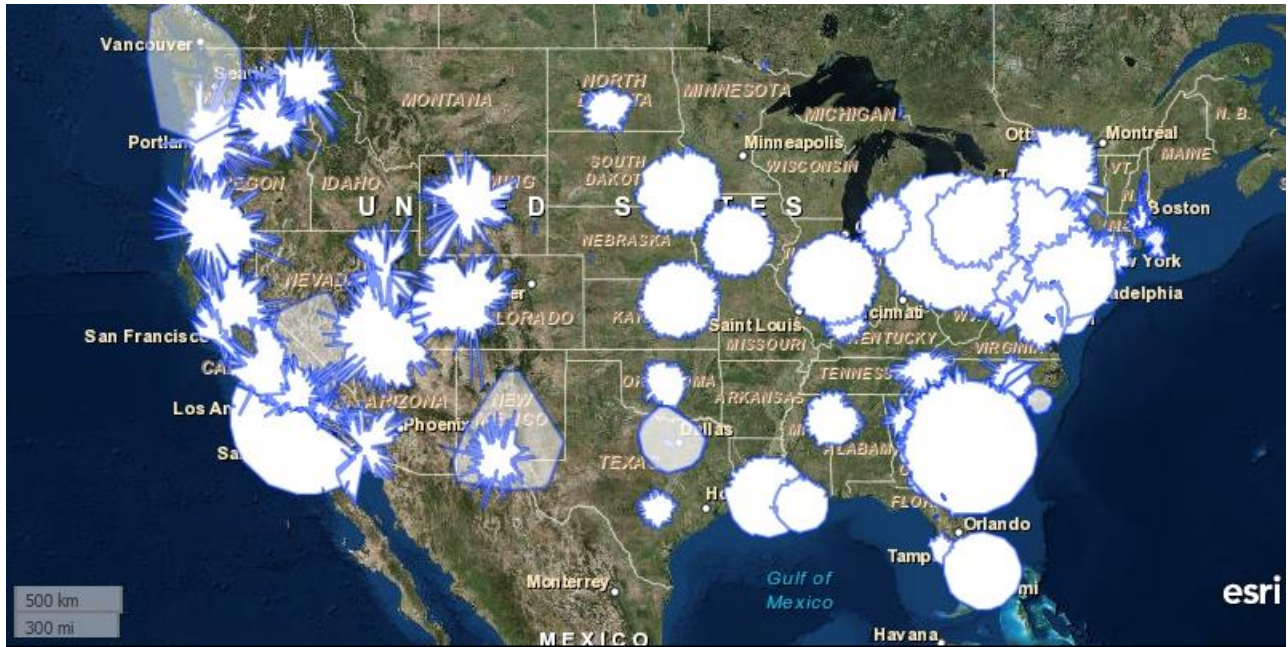


Figure C-36. 2875-2880 MHz Band Segment

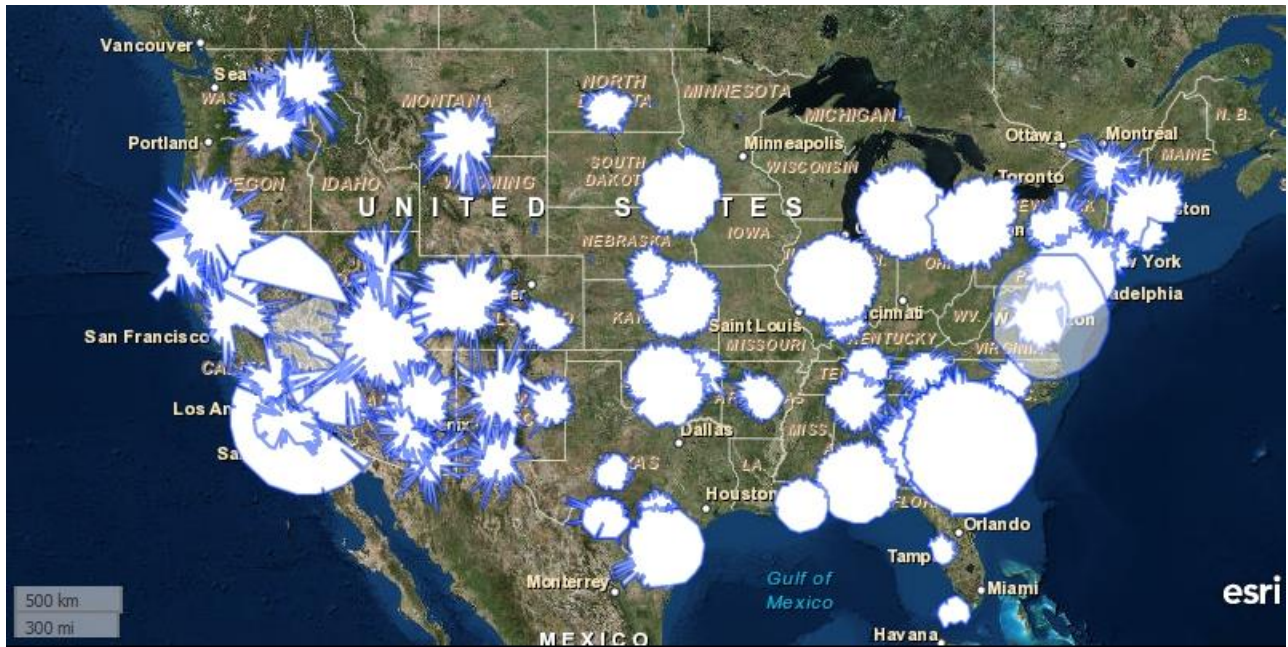


Figure C-37. 2880-2885 MHz Band Segment

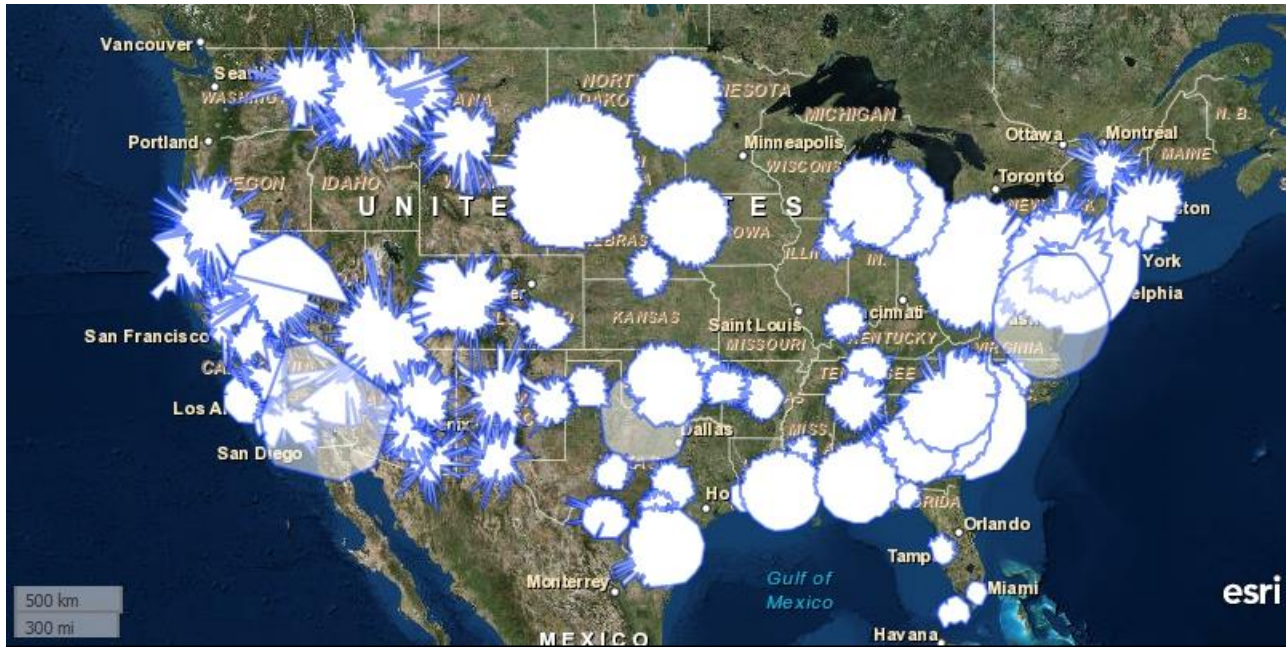


Figure C-38. 2885-2890 MHz Band Segment

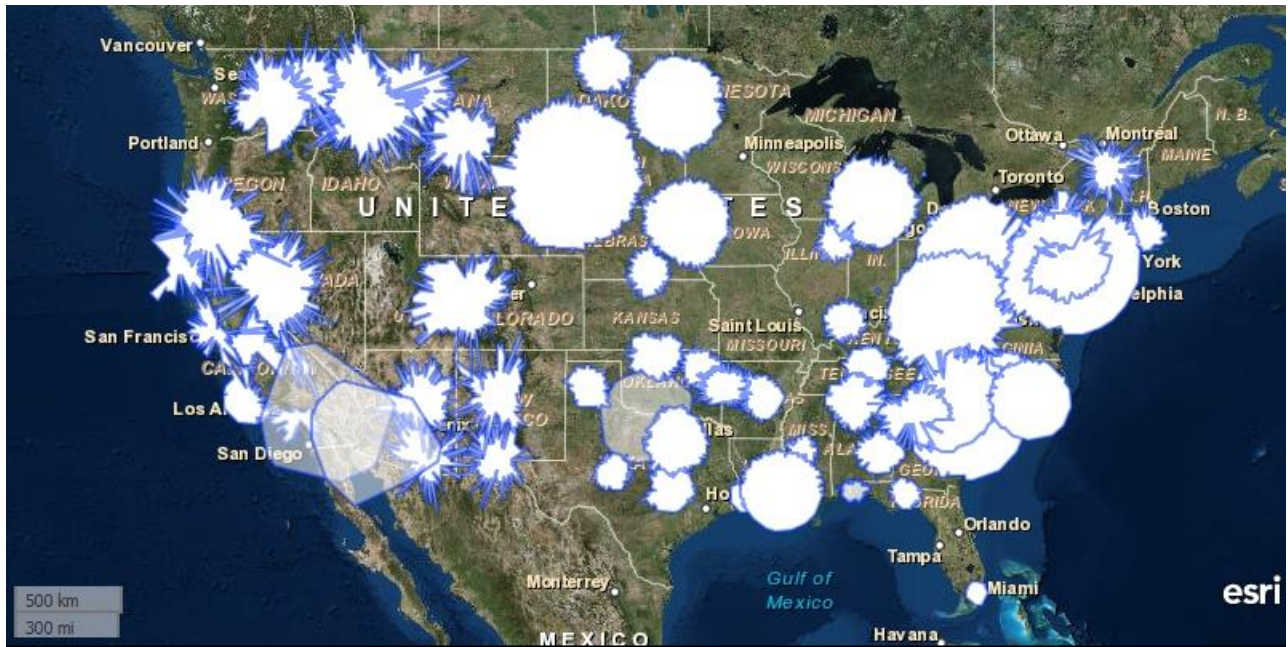


Figure C-39. 2890-2895 MHz Band Segment

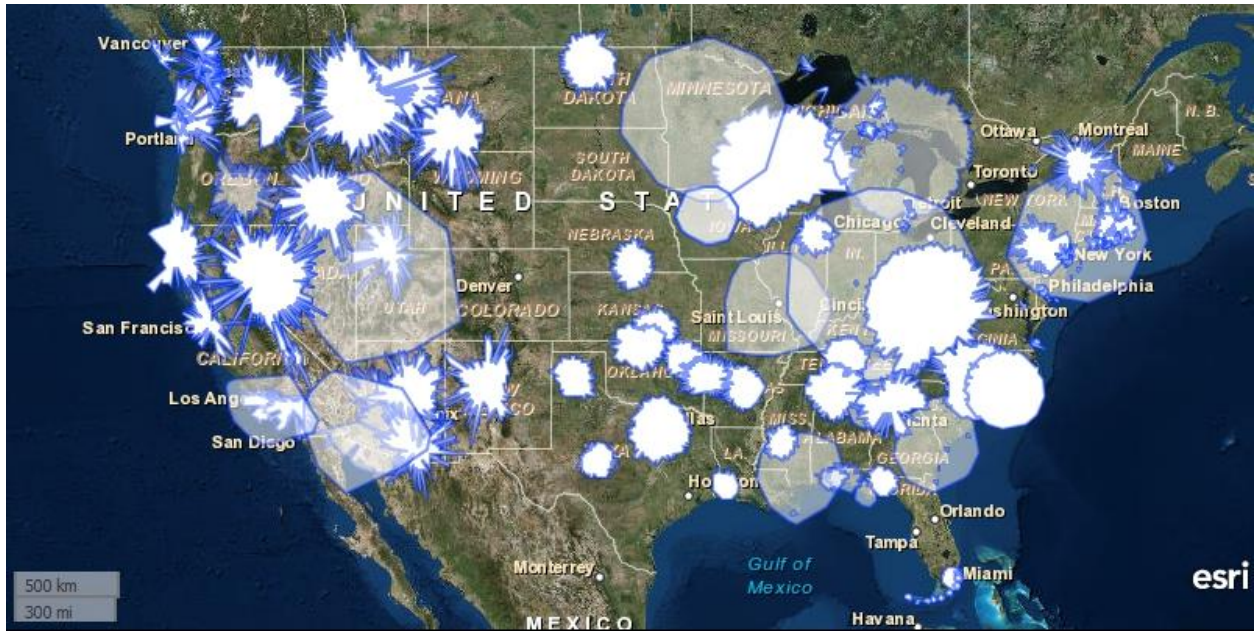


Figure C-40. 2895-2900 MHz Band Segment

APPENDIX D SPECTRUM USAGE PLOTS: 2900-3100 MHZ BAND

This appendix provides the spectrum usage contour plots for the 2900-3100 MHz band for the contiguous United States. The spectrum usage contour plots are provided for each 5 megahertz band segment in the 2900-3100 MHz band. The December 2015 GMF frequency assignment data was used in generating the spectrum usage contour plots.⁸ The geographic usage does not include United States and Possessions frequency assignments. The time of usage for transmit or receive stations is displayed on the spectrum usage contours plots using opacity (e.g., degree of transparency). A time of usage: between 50 percent to 100 percent corresponds to an opacity of 100 percent; between 10 percent to 50 percent corresponds to an opacity of 75 percent; between 1 percent to 10 percent corresponds to an opacity of 50 percent; and less than 1 percent corresponds to an opacity of 25 percent.⁹

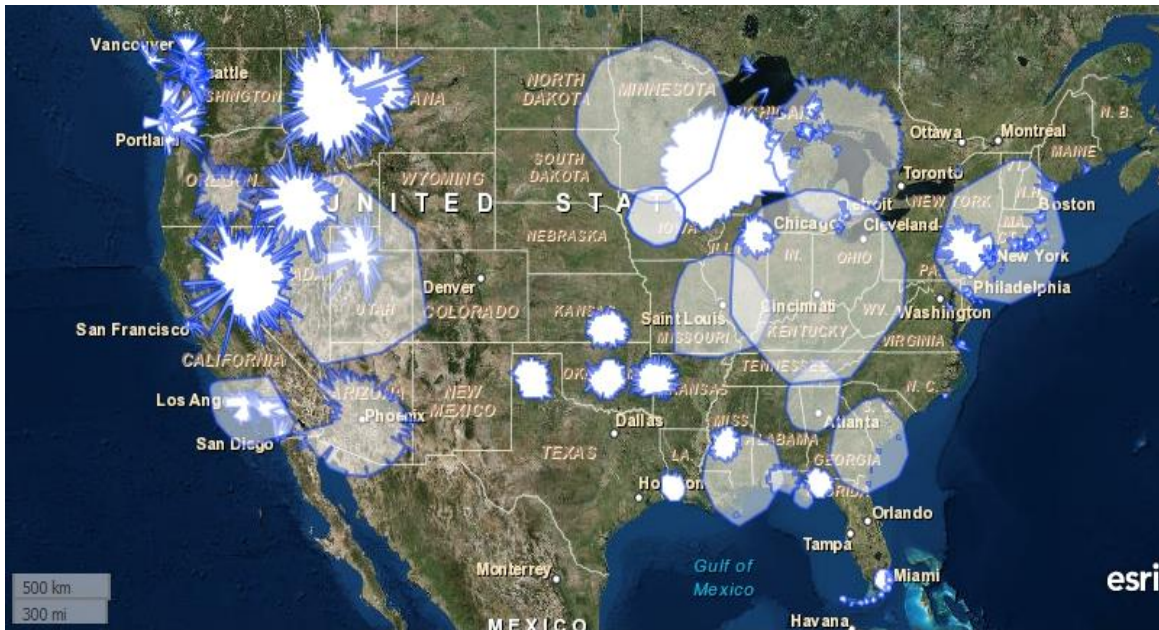


Figure D-1. 2900-2905 MHz Band Segment

⁸ The Government Master File is updated on a daily basis.

⁹ A description of the service that provides the open source satellite imagery map tile used in displaying the contours is available at http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer.

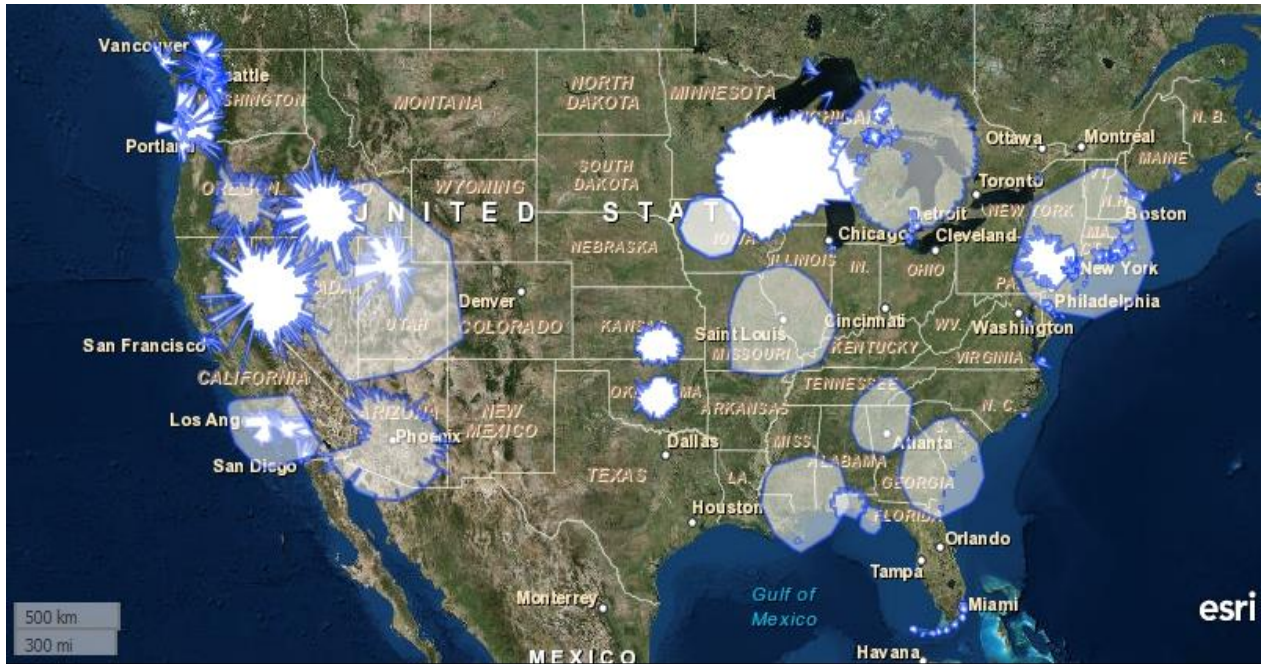


Figure D-2. 2905-2910 MHz Band Segment

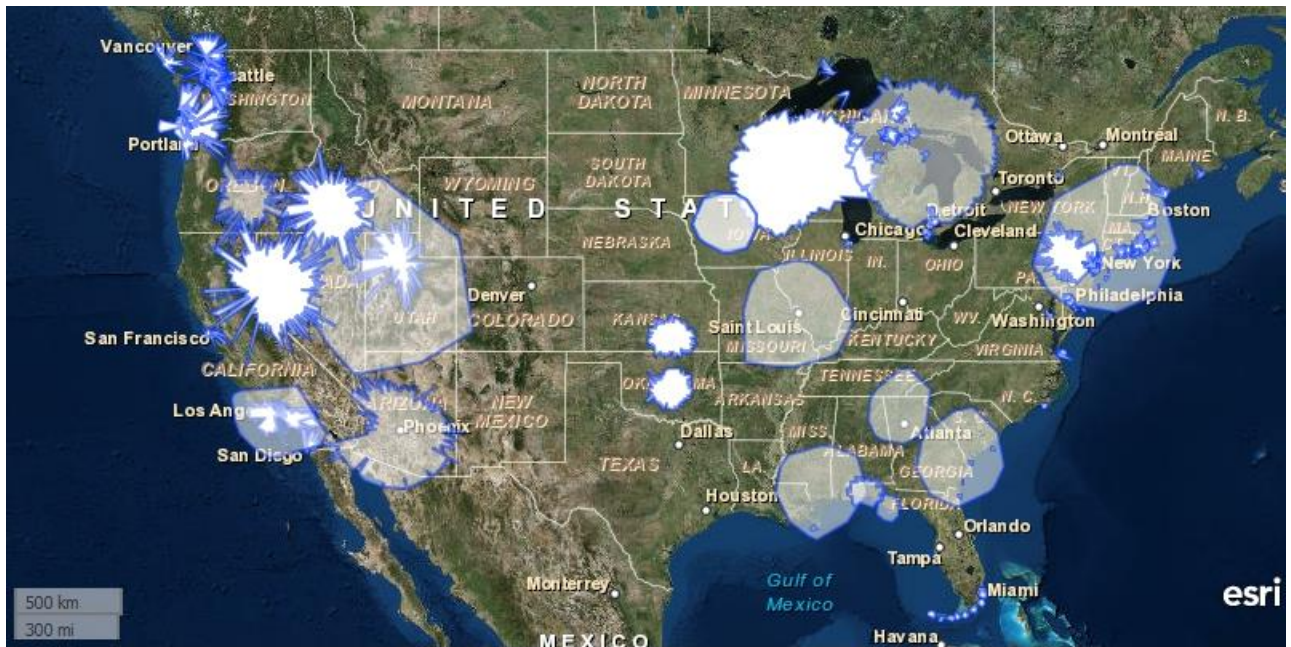


Figure D-3. 2910-2915 MHz Band Segment

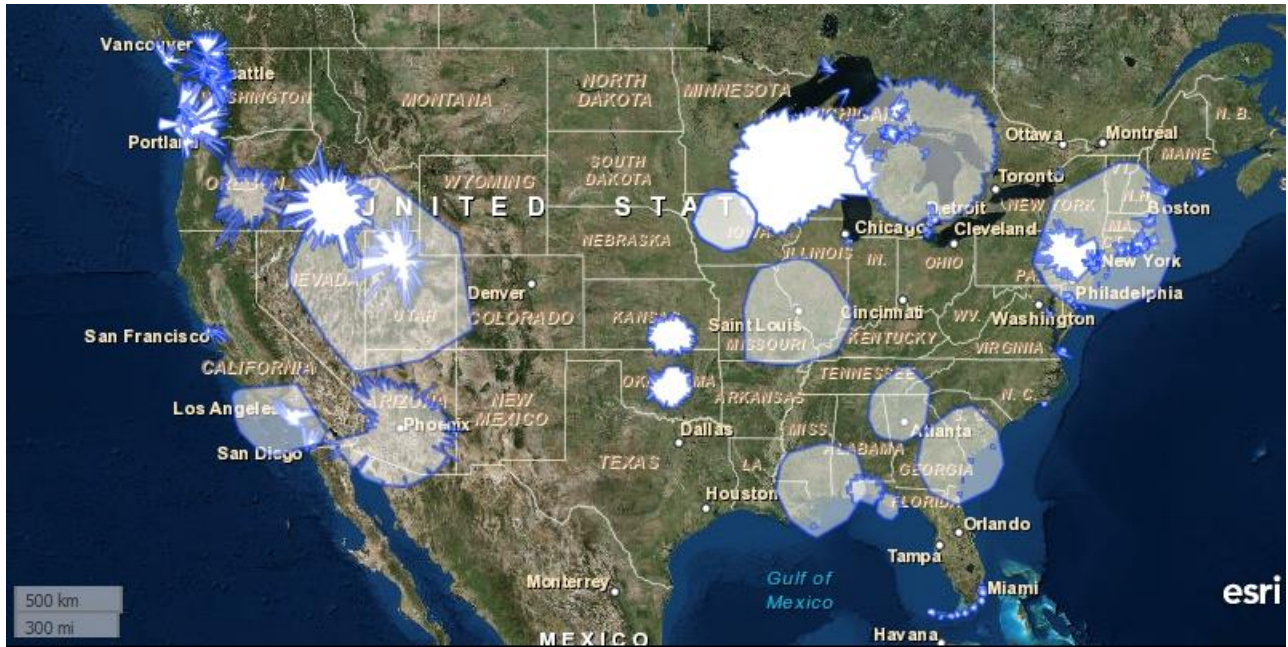


Figure D-4. 215-2920 MHz Band Segment

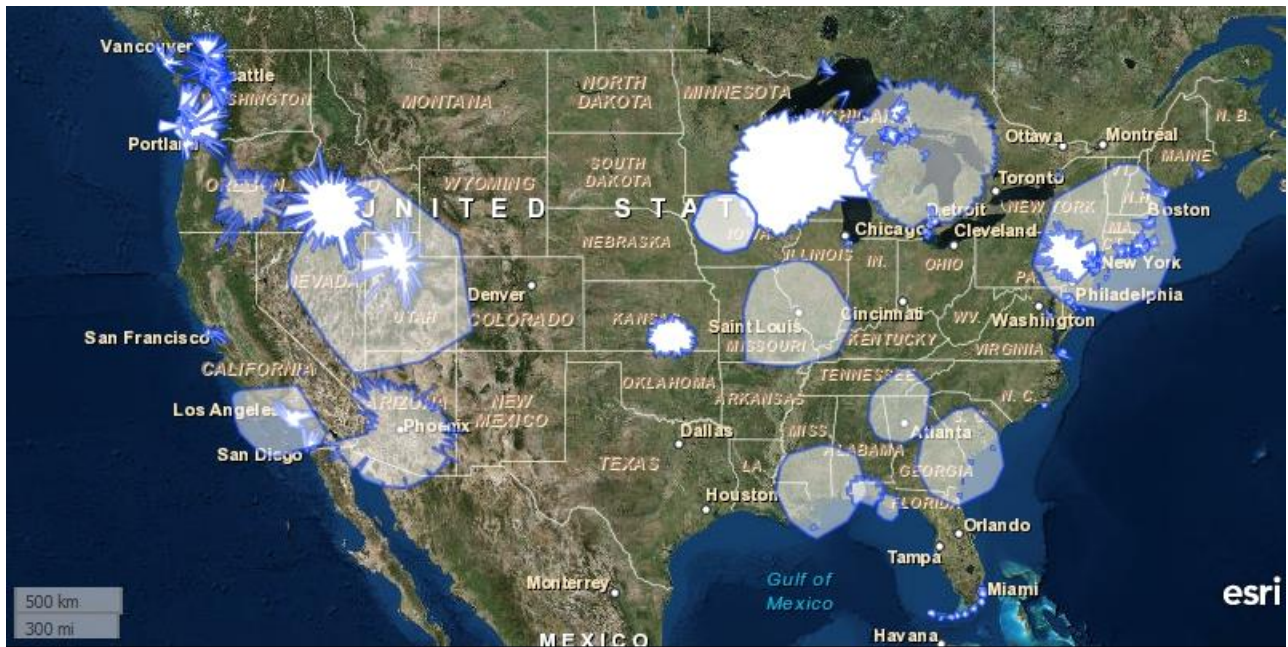


Figure D-5. 2920-2925 MHz Band Segment

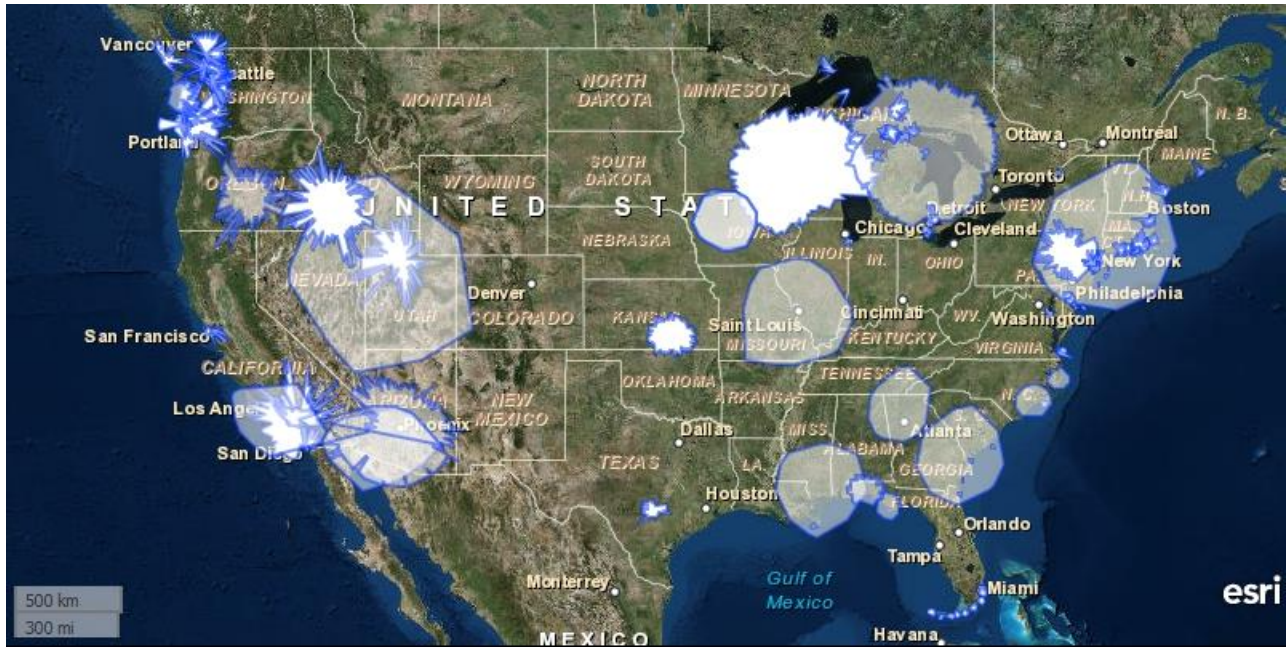


Figure D-6. 2925-2930 MHz Band Segment

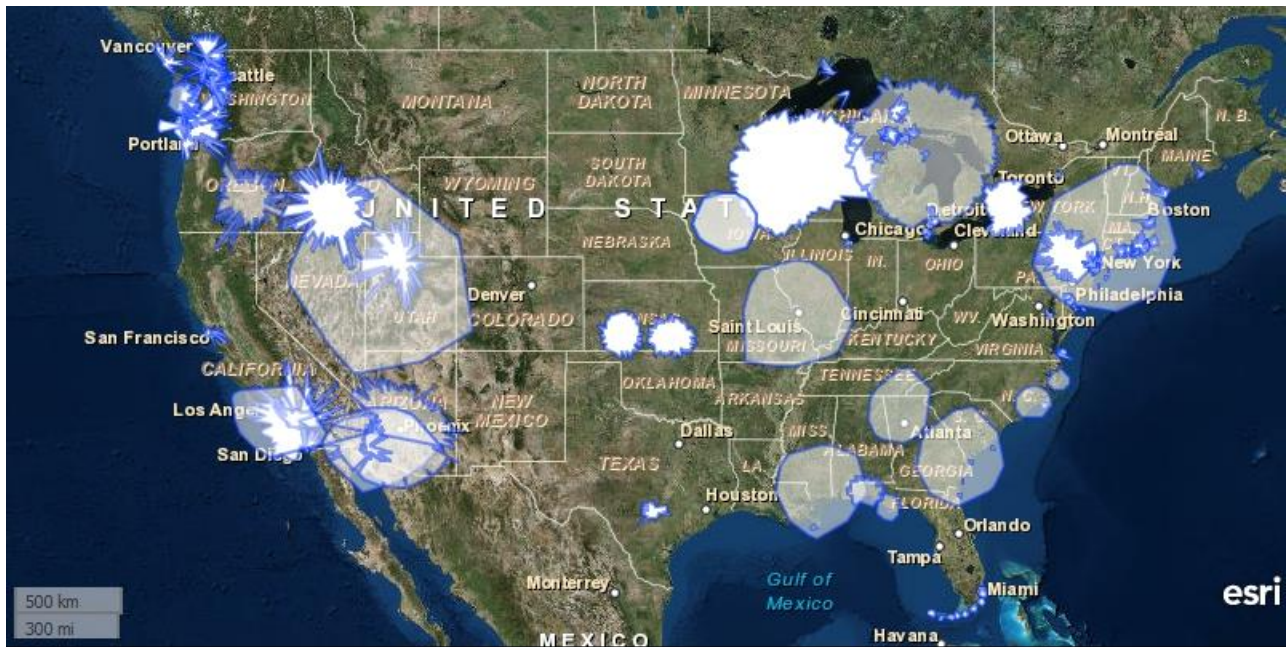


Figure D-7. 2930-2935 MHz Band Segment

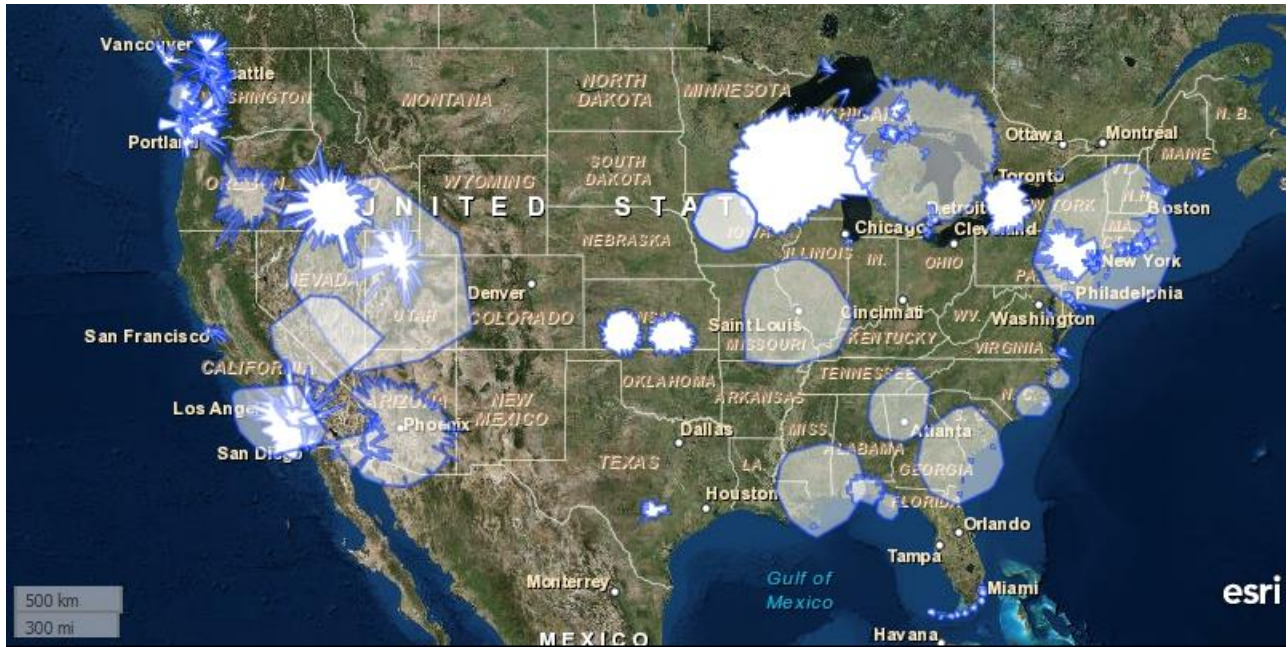


Figure D-8. 235-240 MHz Band Segment

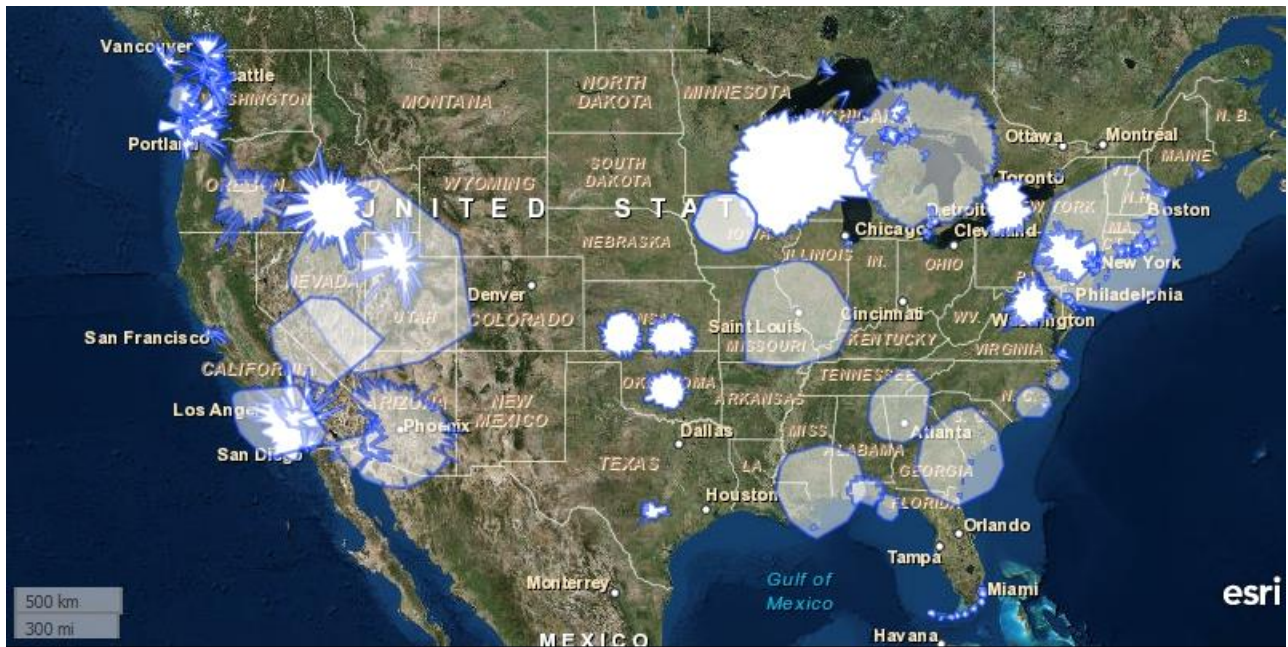


Figure D-9. 240-245 MHz Band Segment

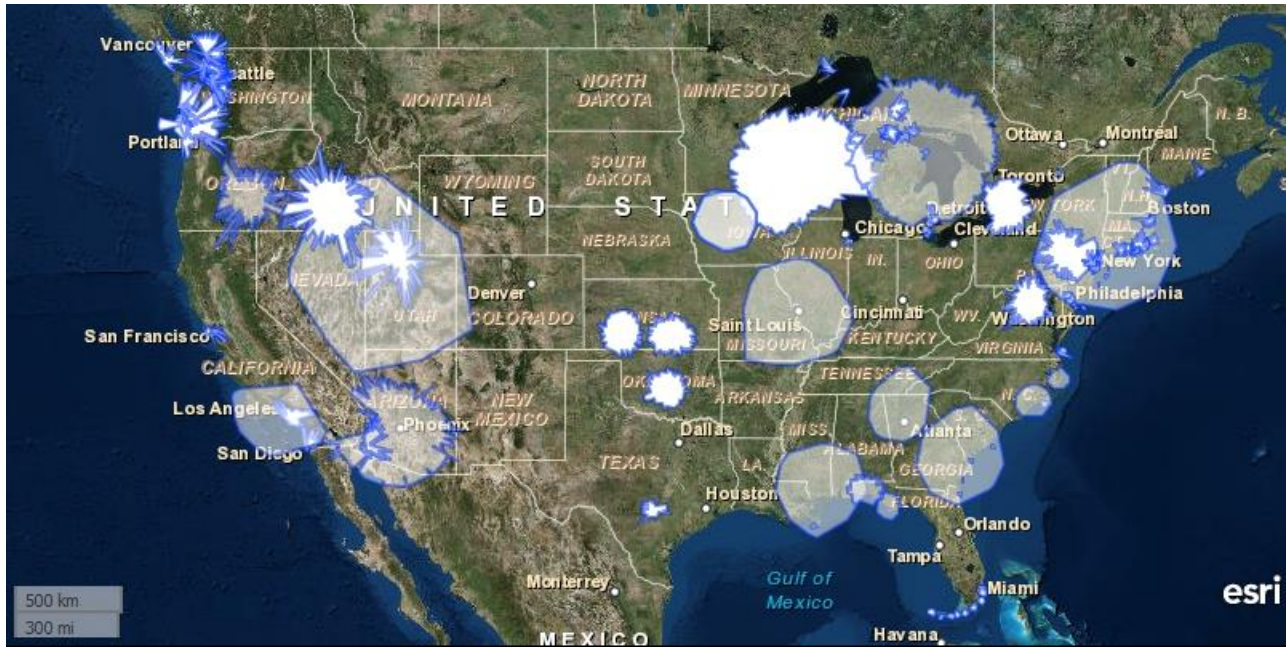


Figure D-10. 2945-2940 MHz Band Segment

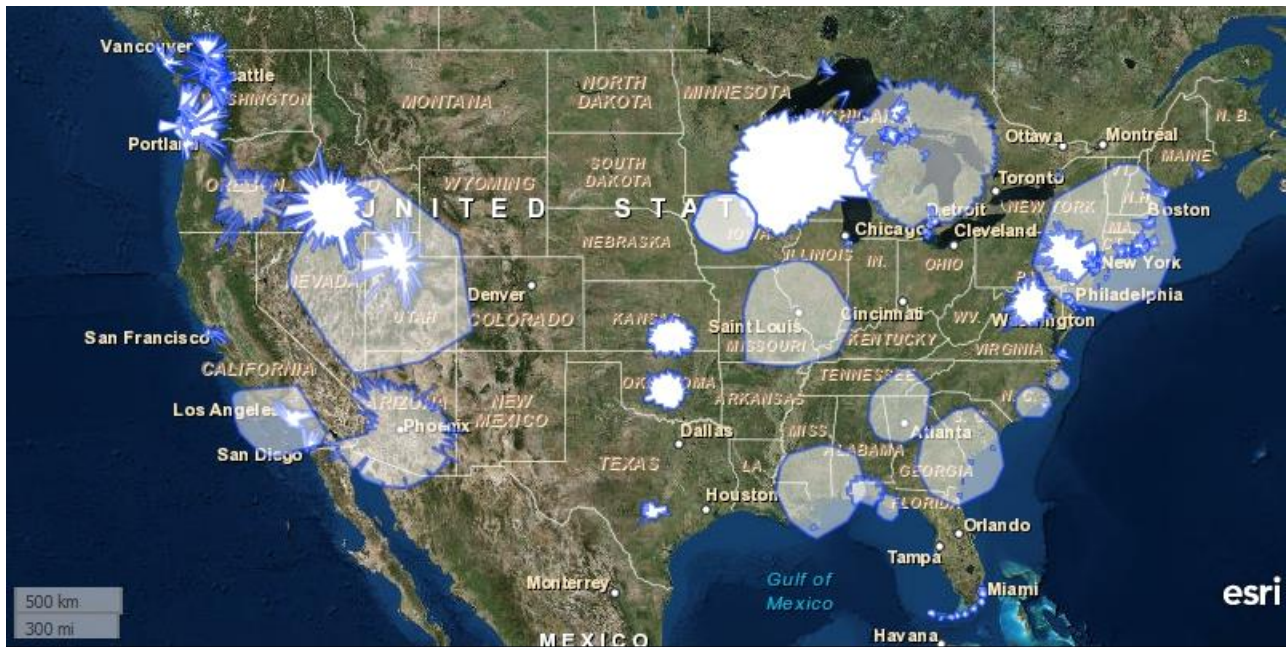


Figure D-11. 2950-2955 MHz Band Segment

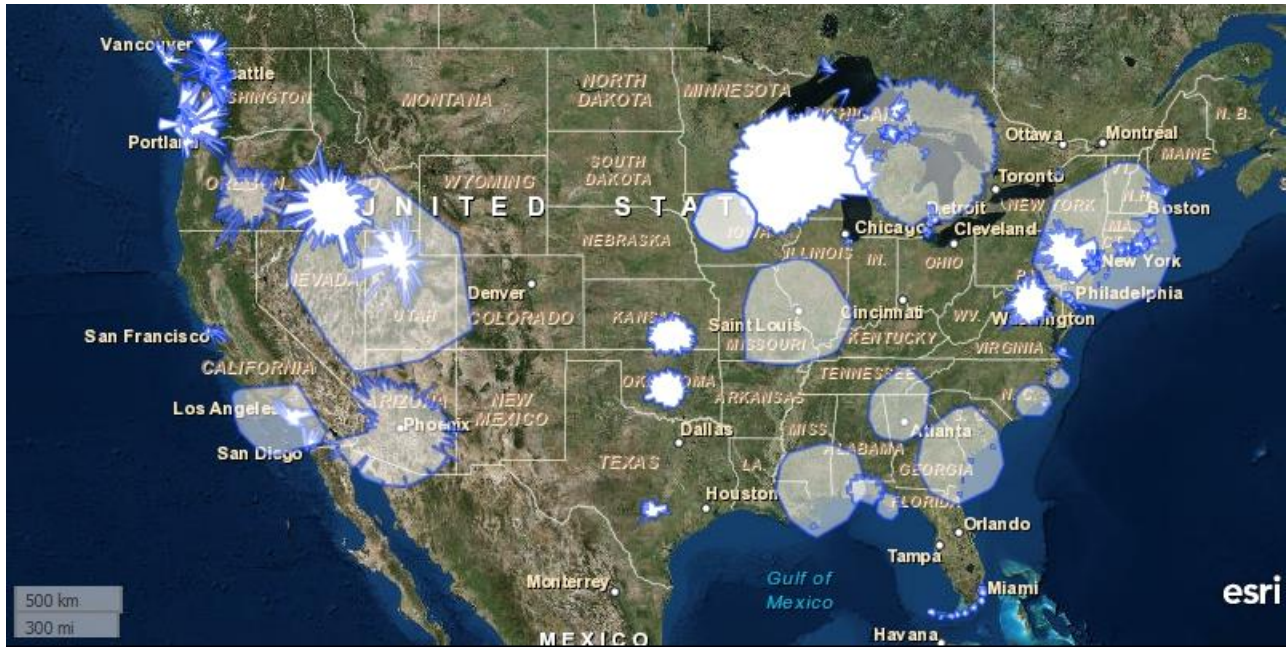


Figure D-12. 2955-2960 MHz Band Segment

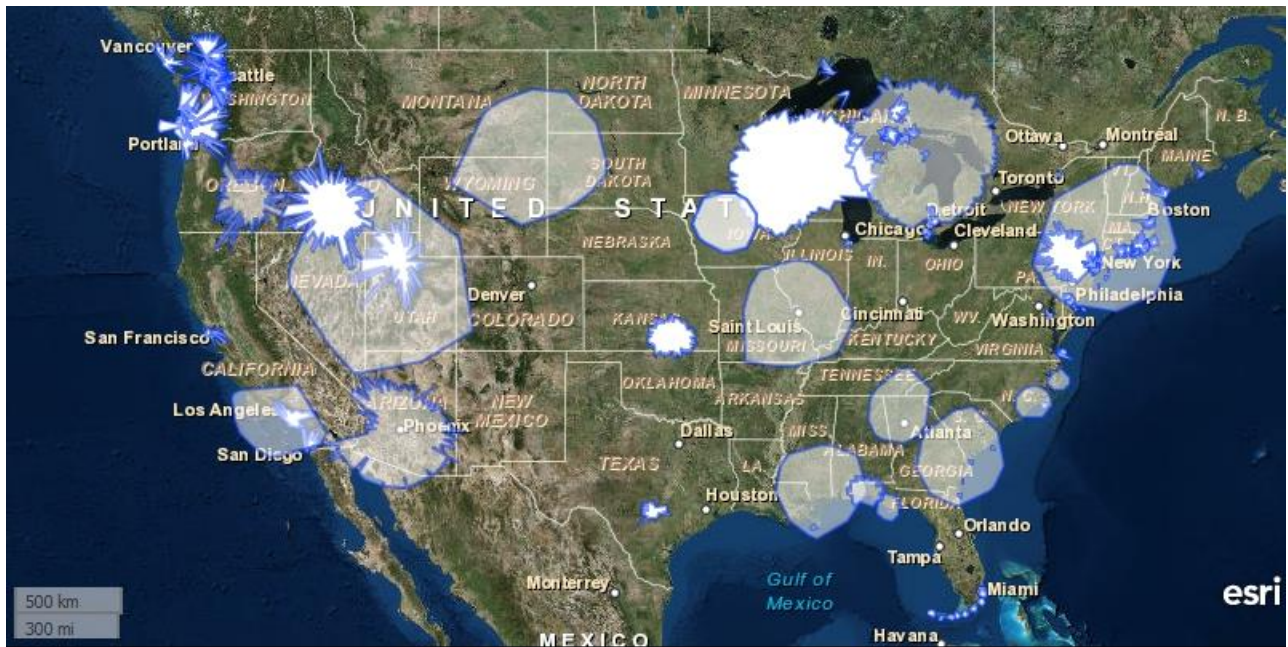


Figure D-13. 2960-2965 MHz Band Segment

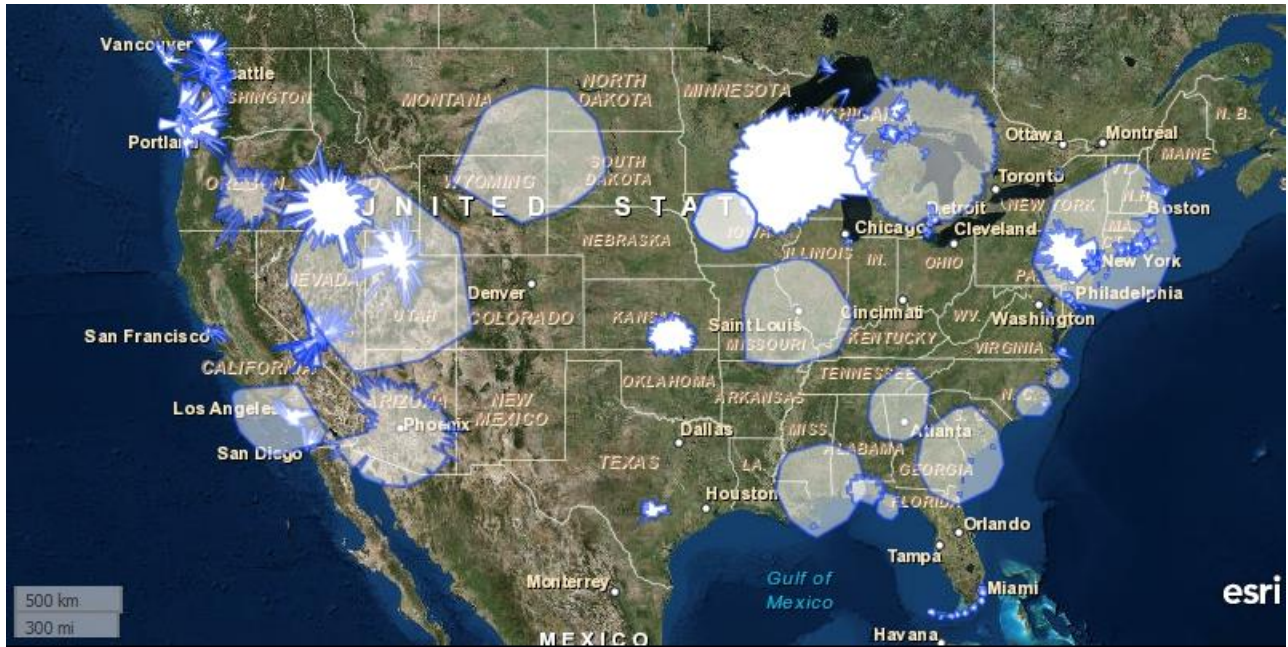


Figure D-14. 2965-2970 MHz Band Segment

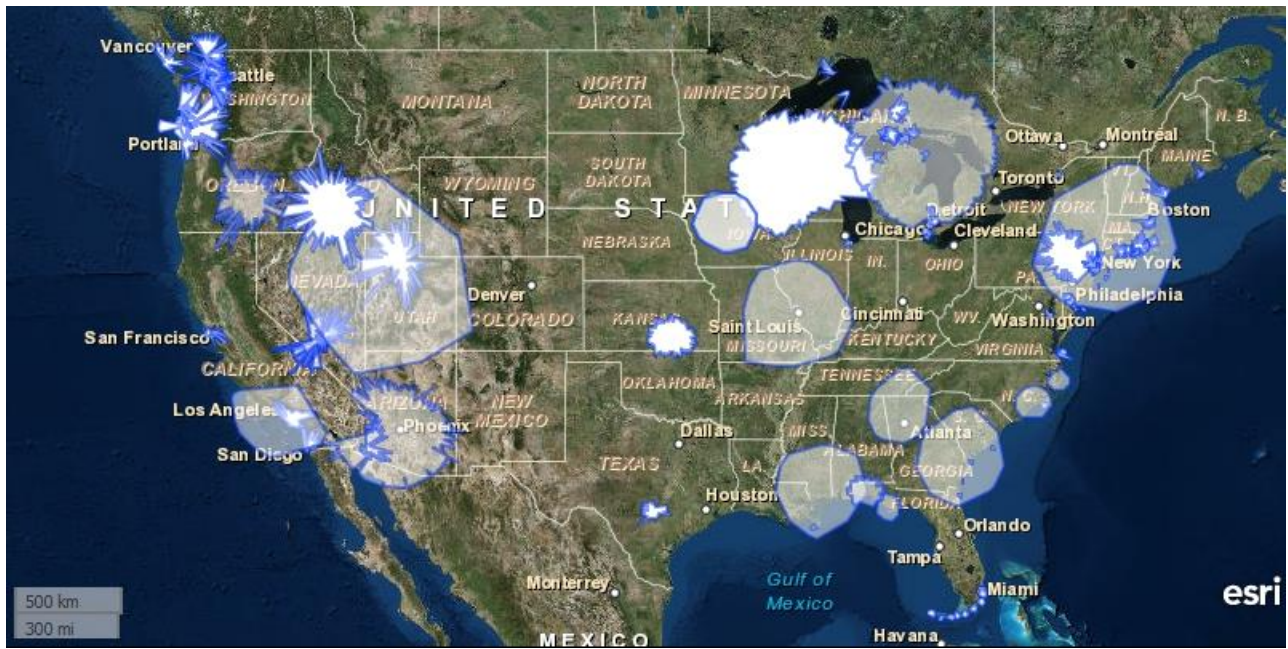


Figure D-15. 2970-2975 MHz Band Segment

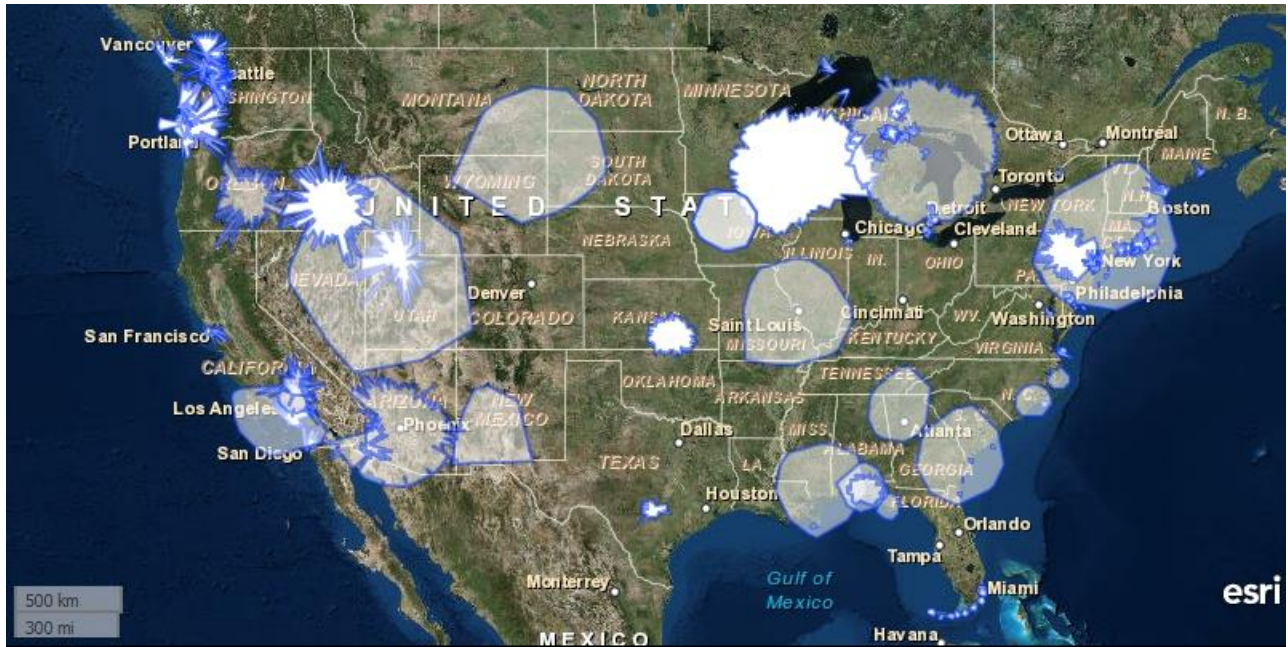


Figure D-16. 2975-2980 MHz Band Segment

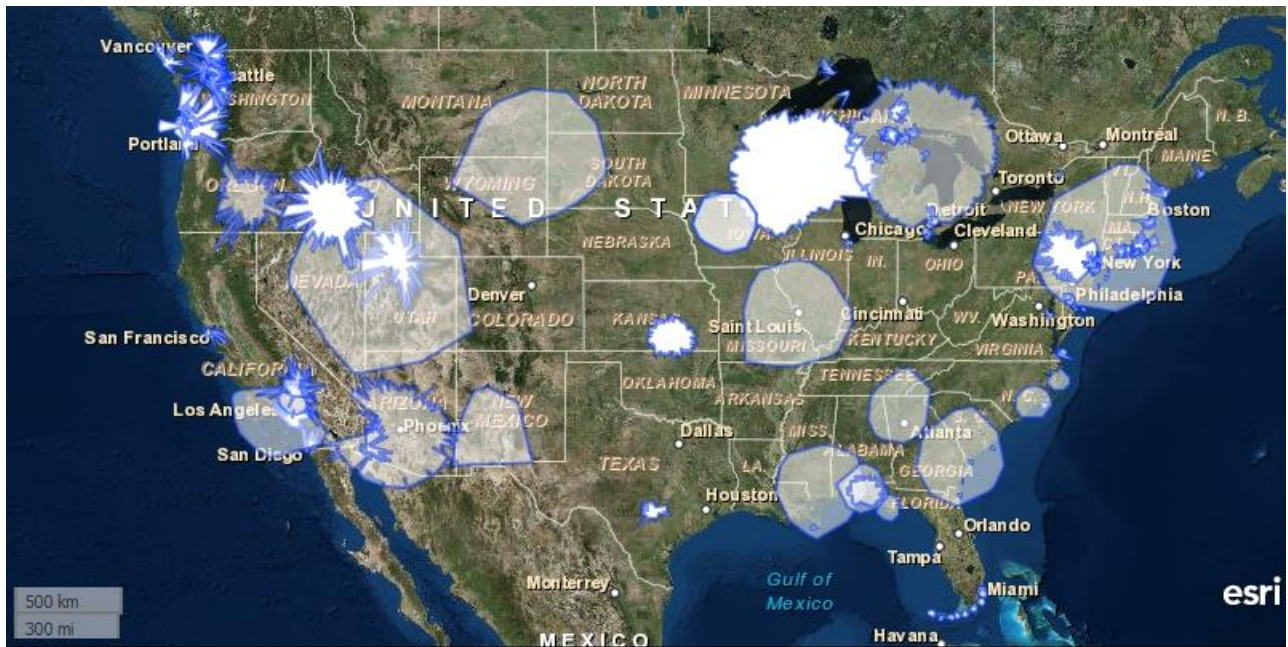


Figure D-17. 2980-2985 MHz Band Segment

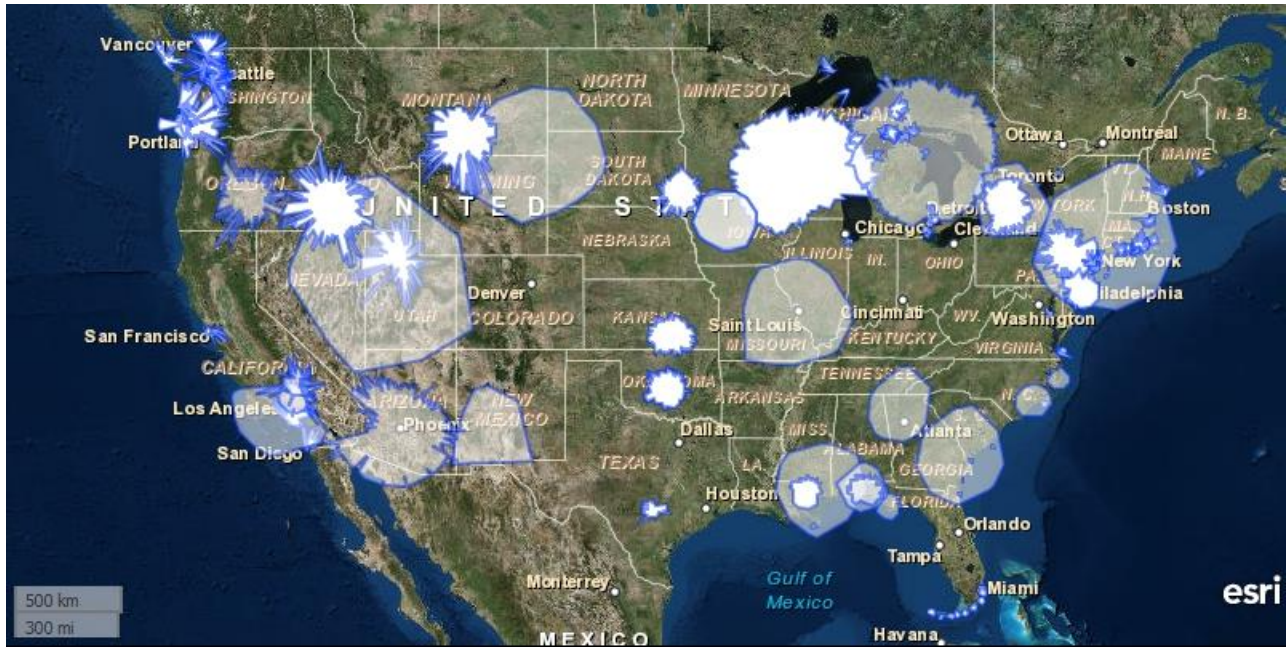


Figure D-18. 2985-2990 MHz Band Segment

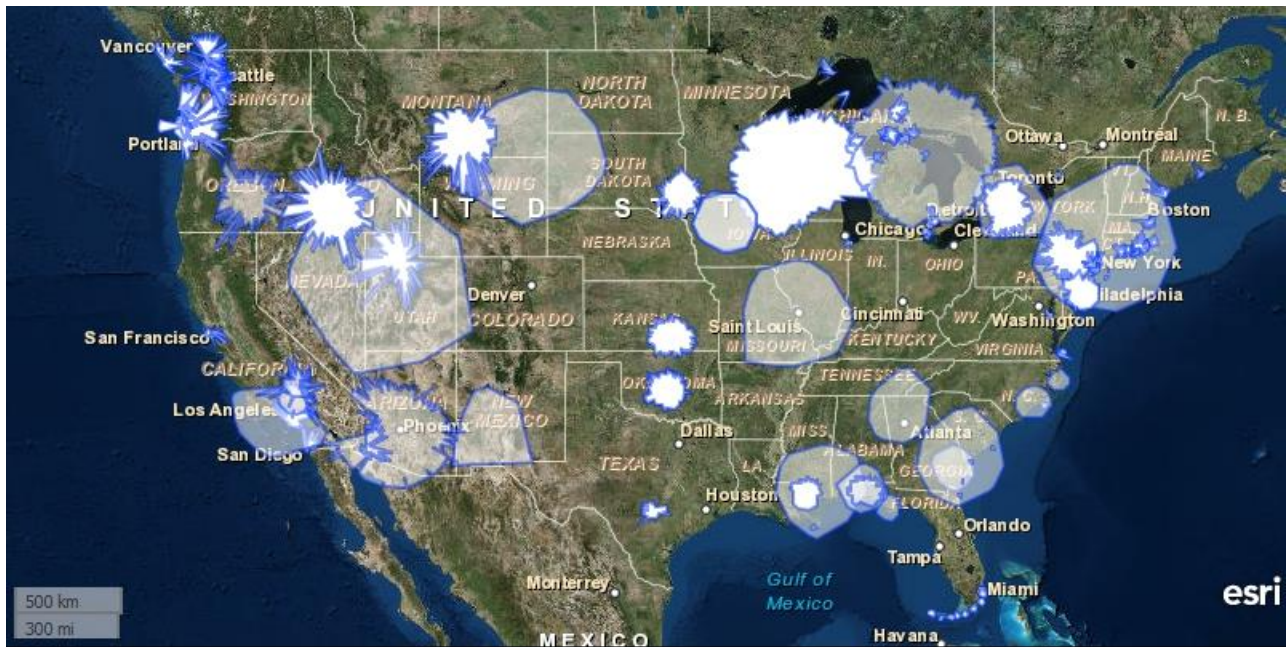


Figure D-19. 2990-2995 MHz Band Segment

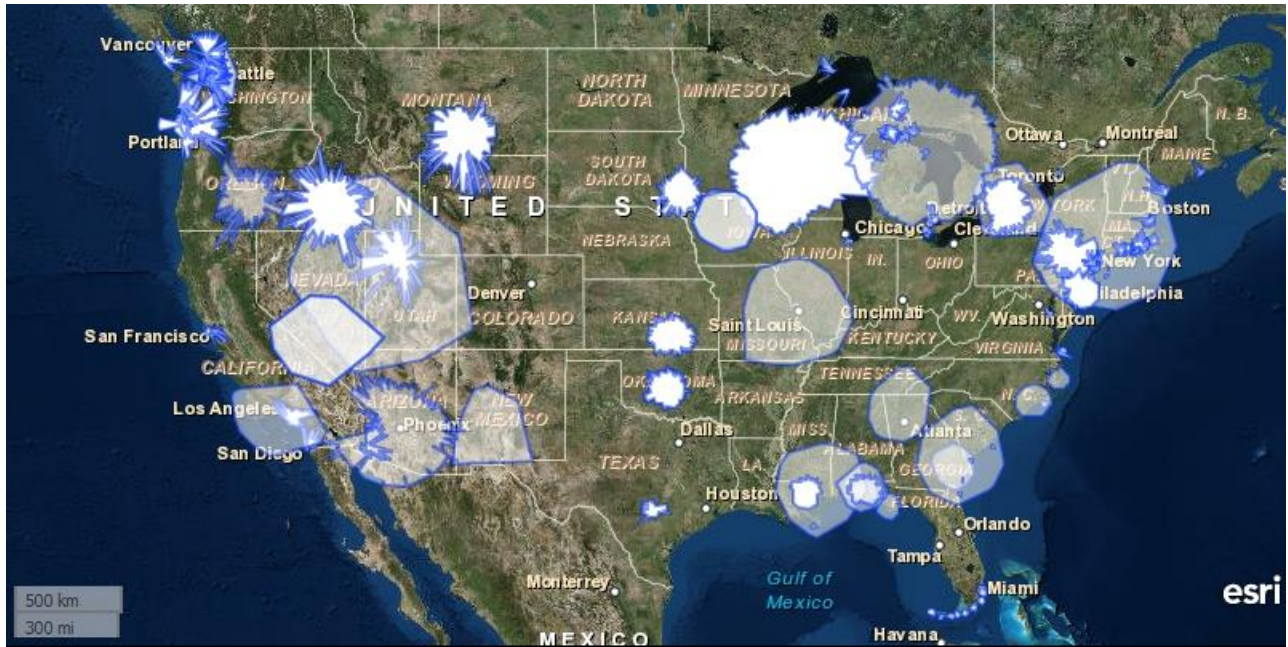


Figure D-20. 295-3000 MHz Band Segment

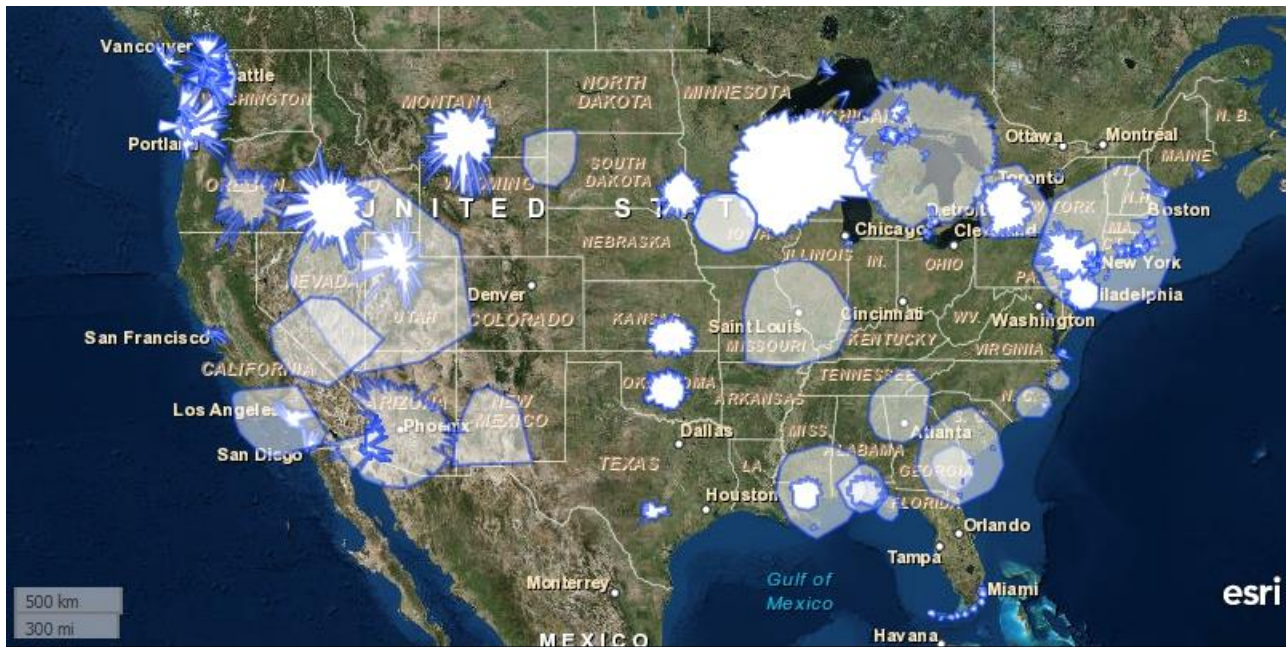


Figure D-21. 3000-3005 MHz Band Segment

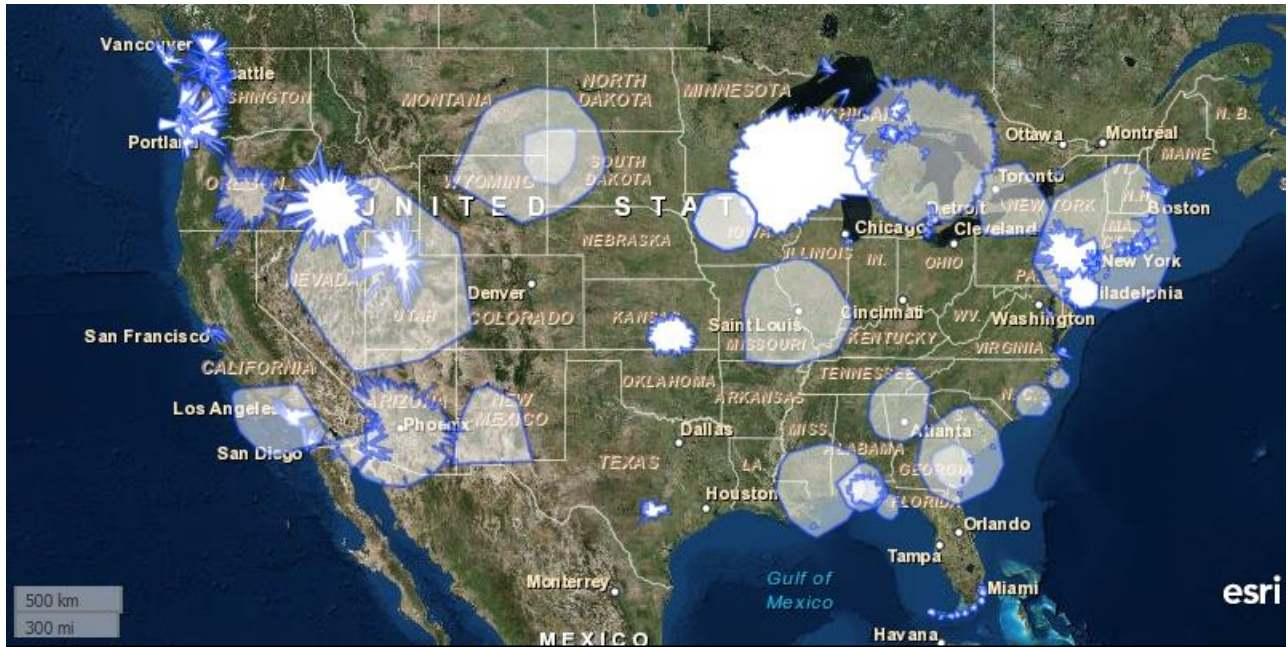


Figure D-22. 3005-3010 MHz Band Segment

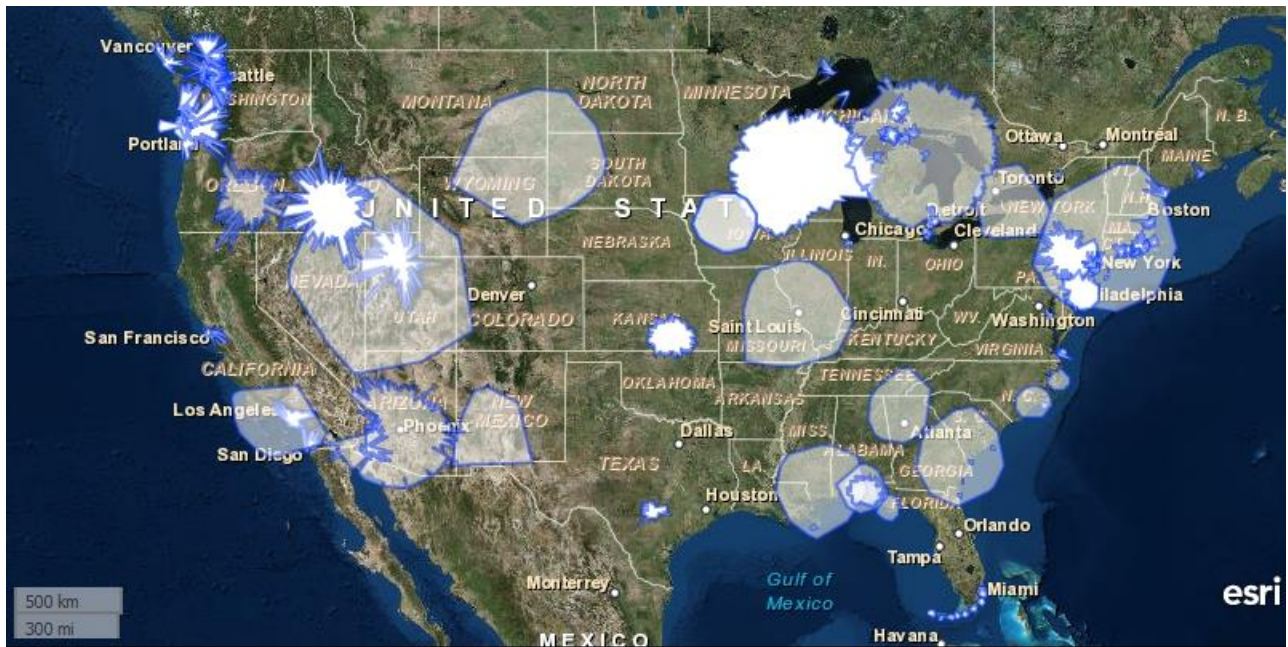


Figure D-23. 3010-3015 MHz Band Segment

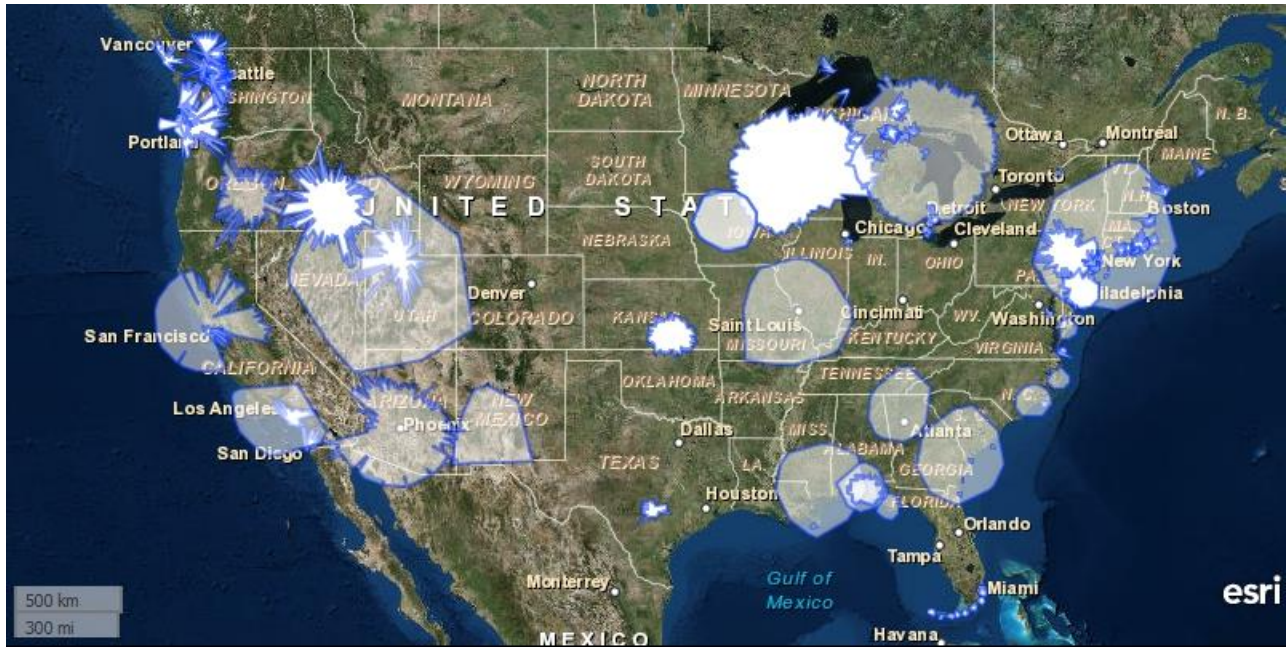


Figure D-24. 3015-3020 MHz Band Segment

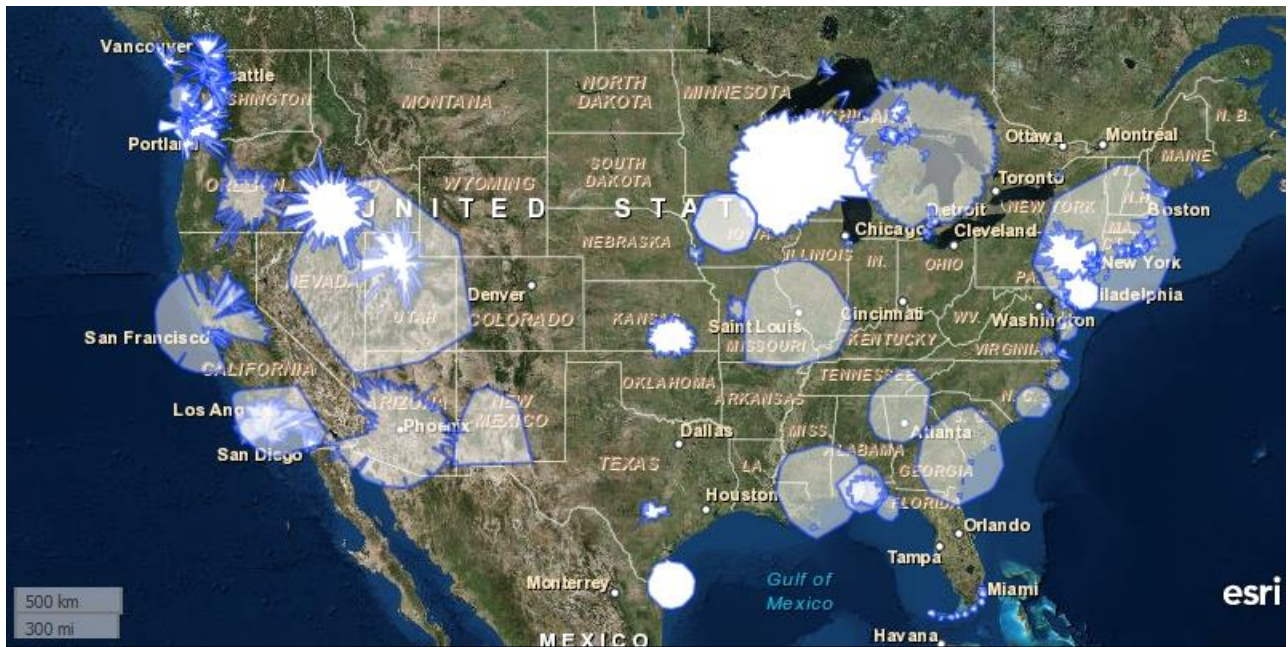


Figure D-25. 3020-3025 MHz Band Segment

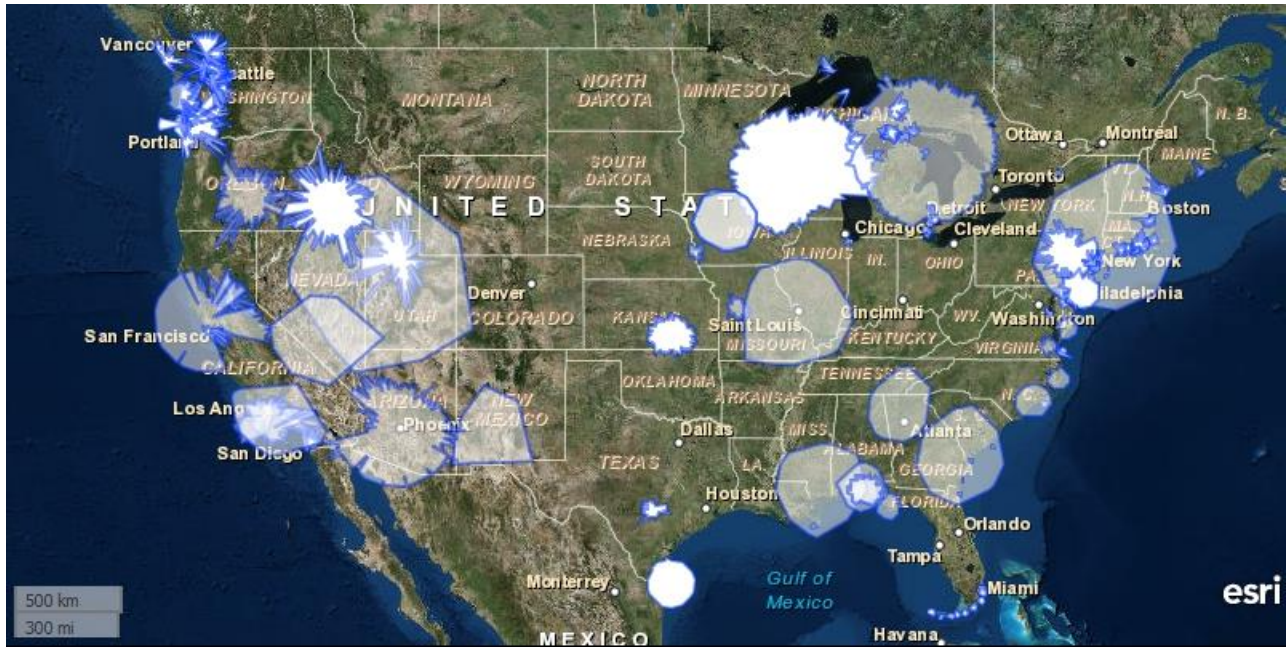


Figure D-26. 3025-3030 MHz Band Segment

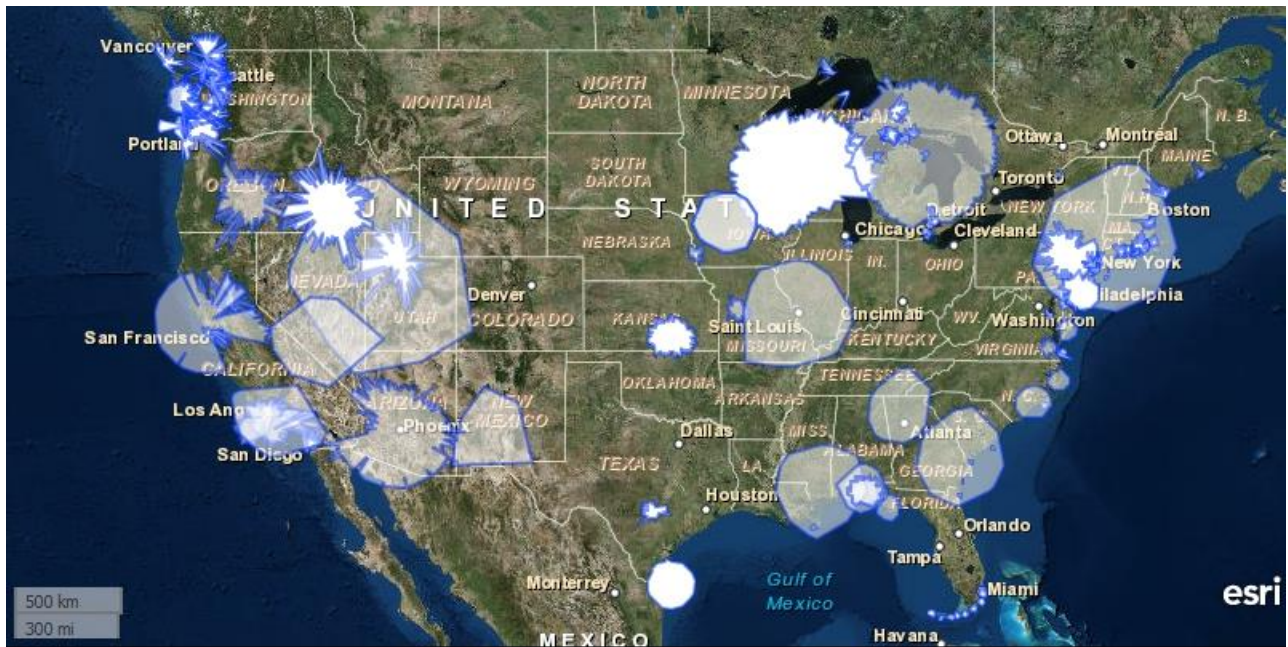


Figure D-27. 3030-3035 MHz Band Segment

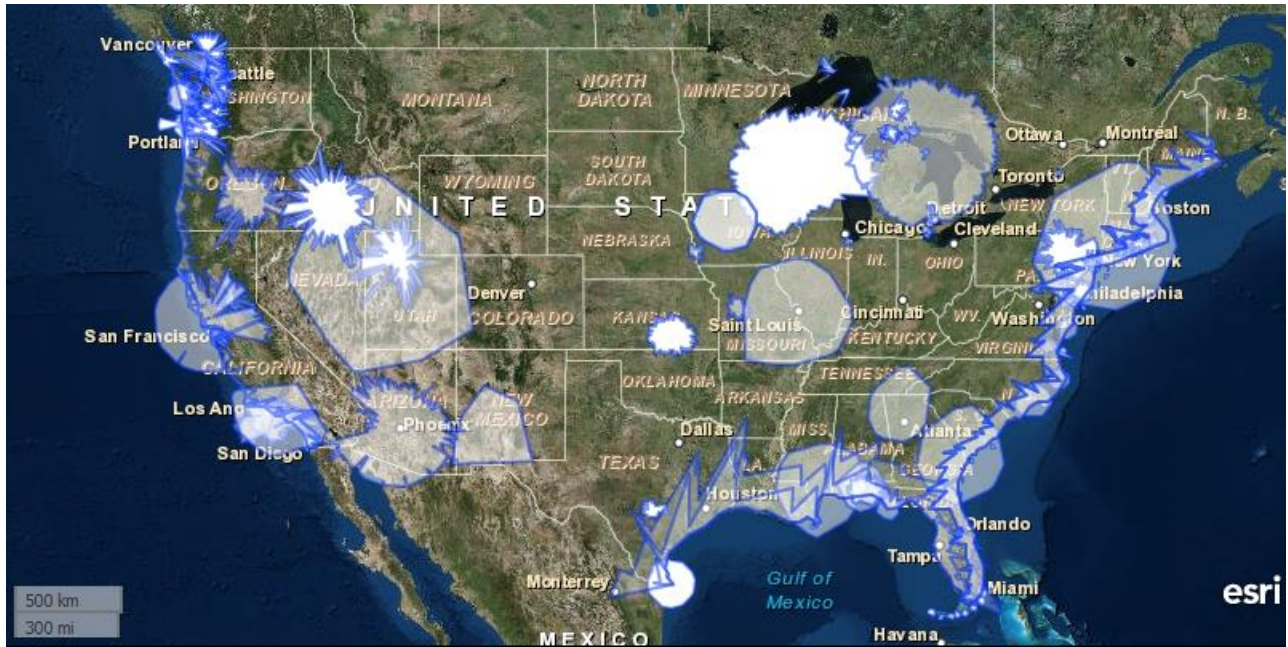


Figure D-28. 3035-3040 MHz Band Segment

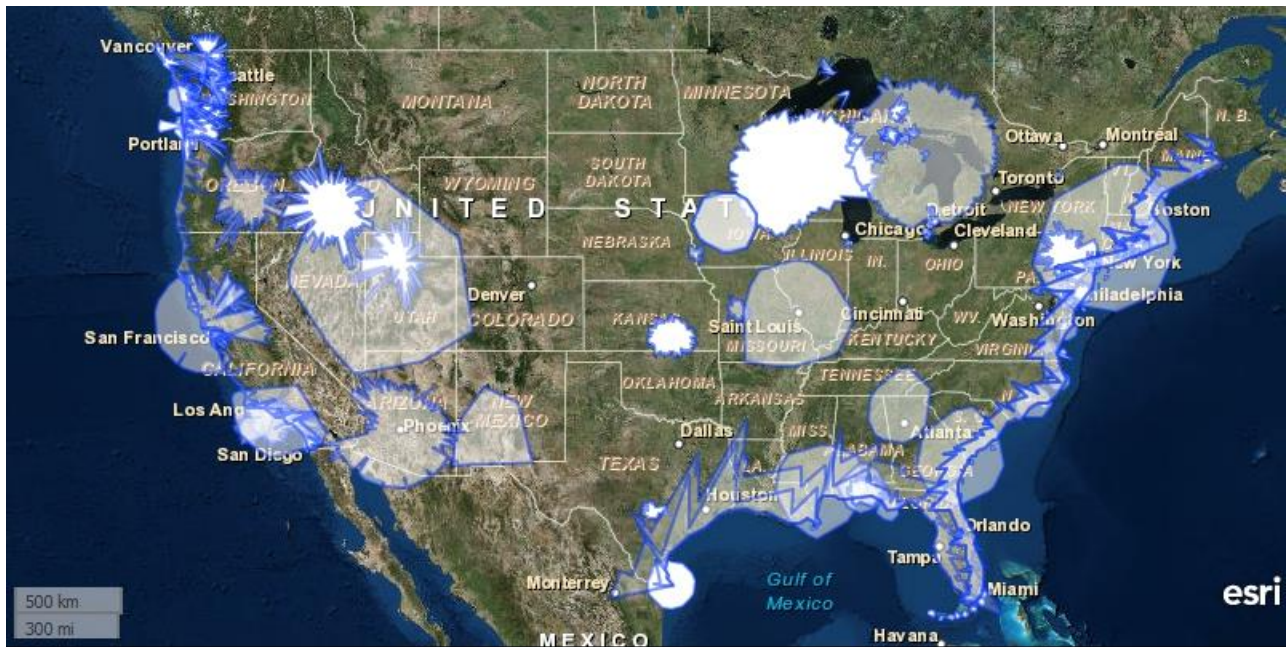


Figure D-29. 3040-3045 MHz Band Segment

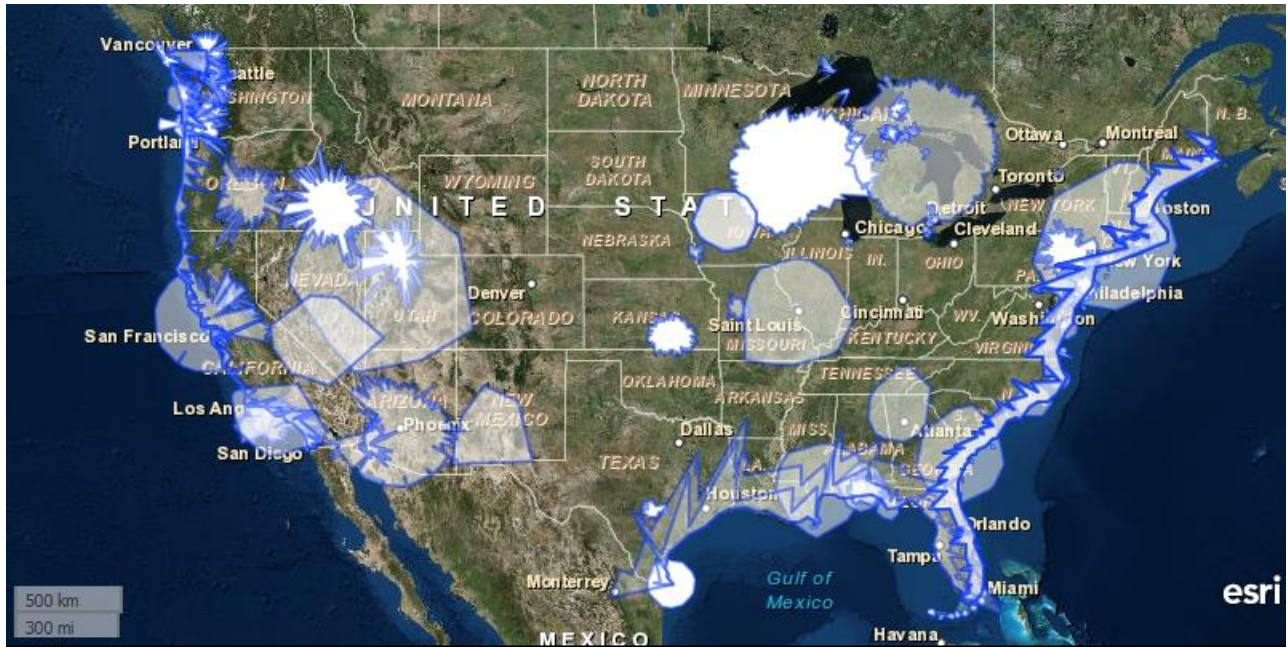


Figure D-30. 3045-3050 MHz Band Segment

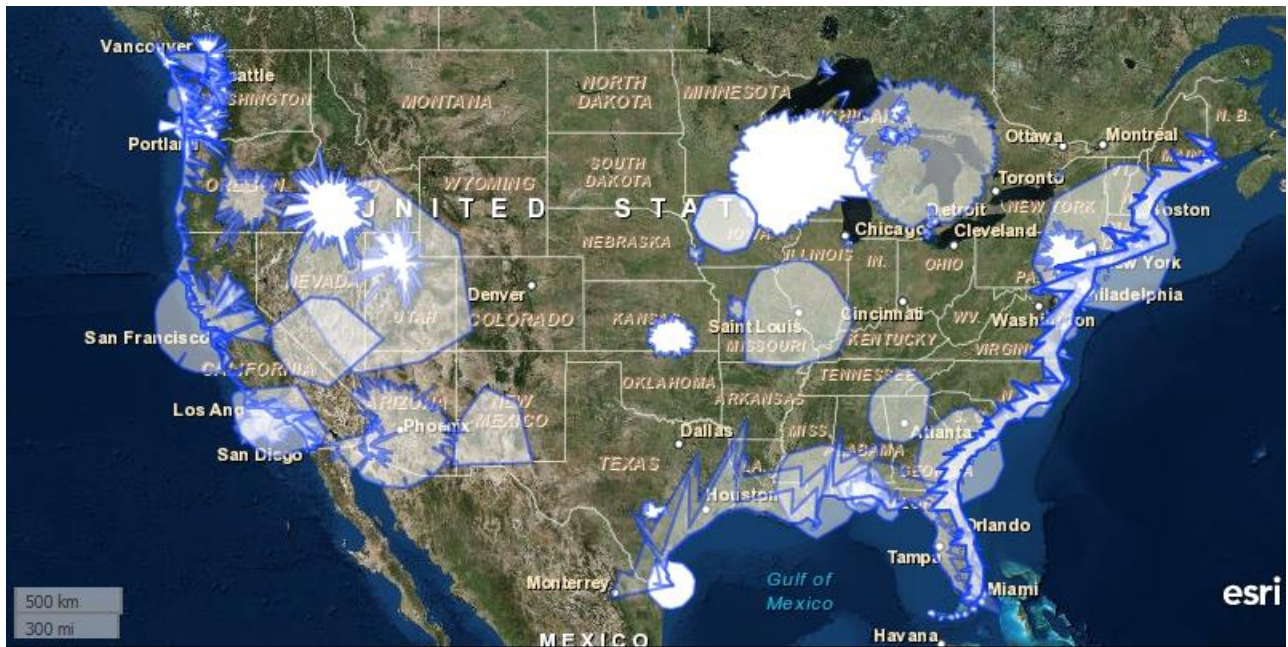


Figure D-31. 3050-3055 MHz Band Segment

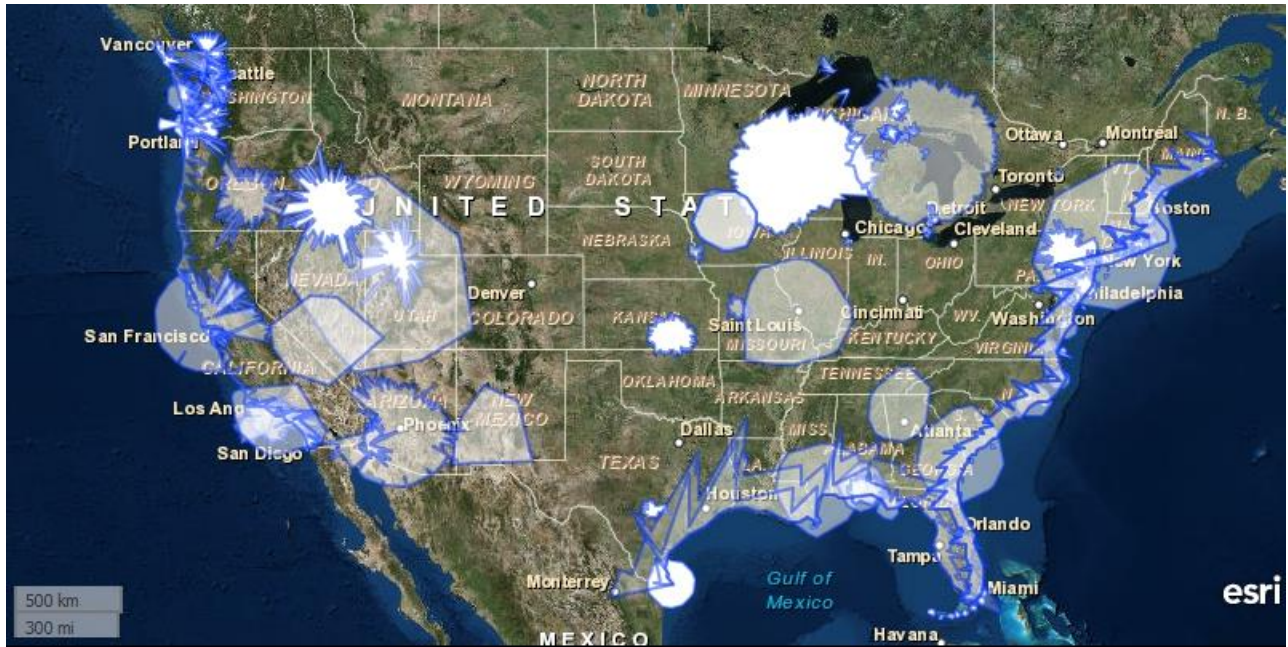


Figure D-32. 3055-3060 MHz Band Segment

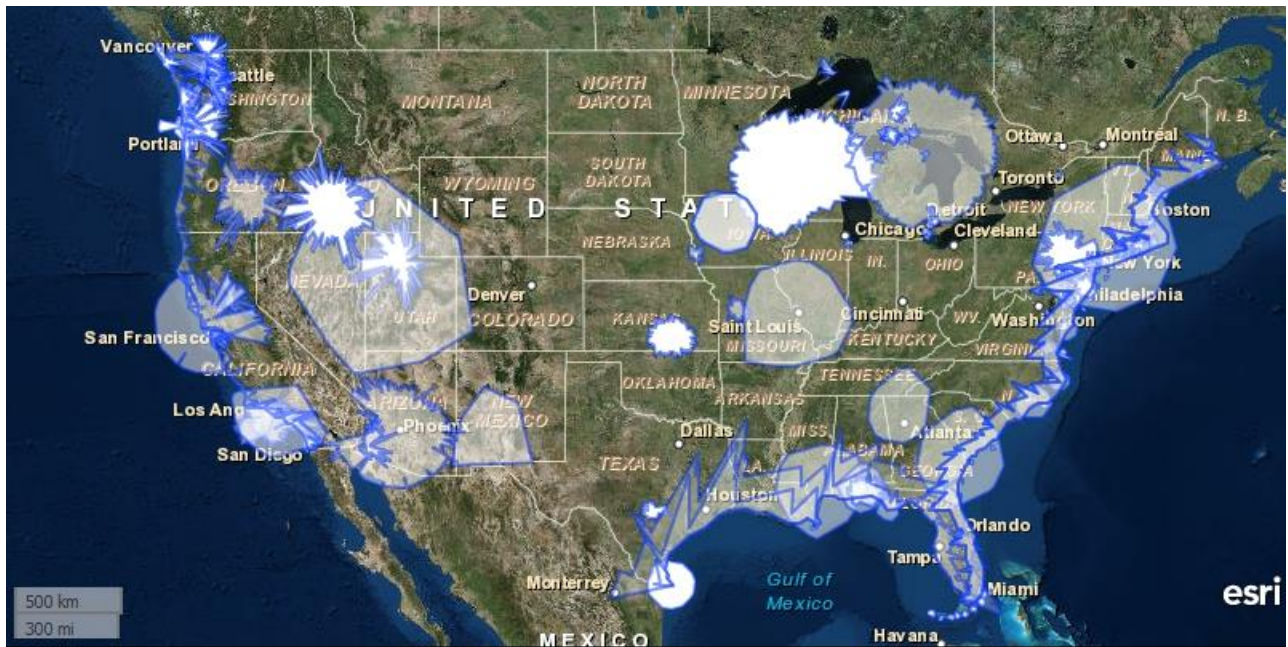


Figure D-33. 3060-3065 MHz Band Segment

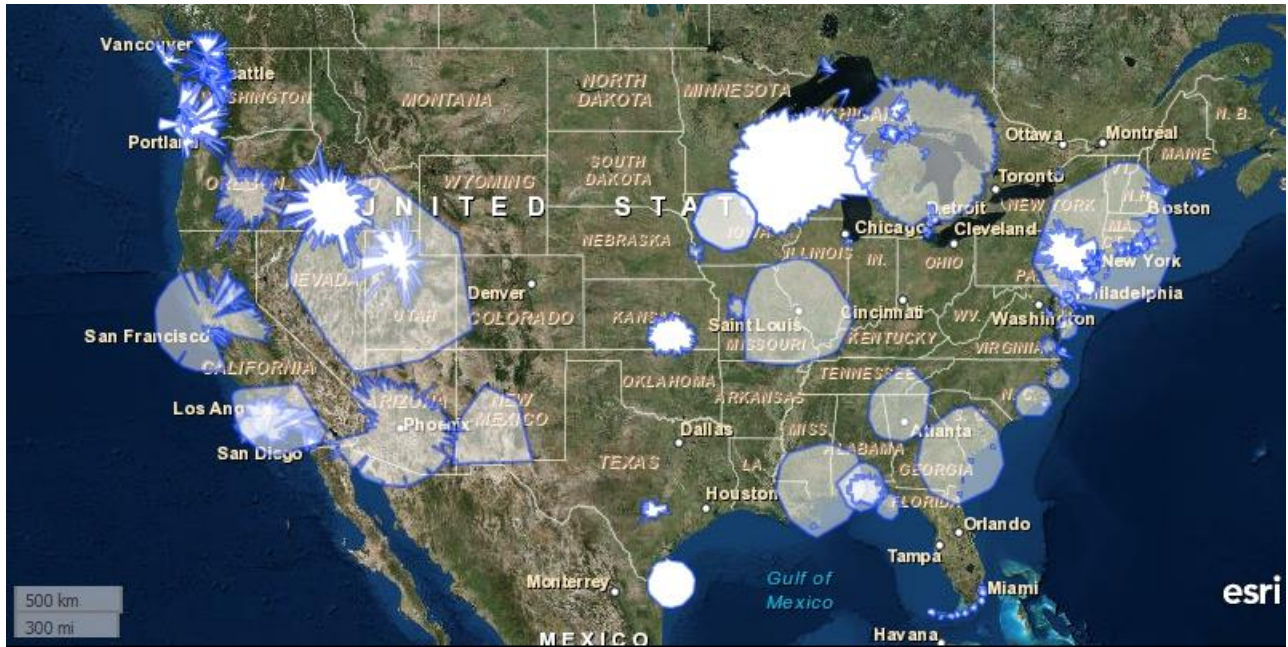


Figure D-34. 3065-3070 MHz Band Segment

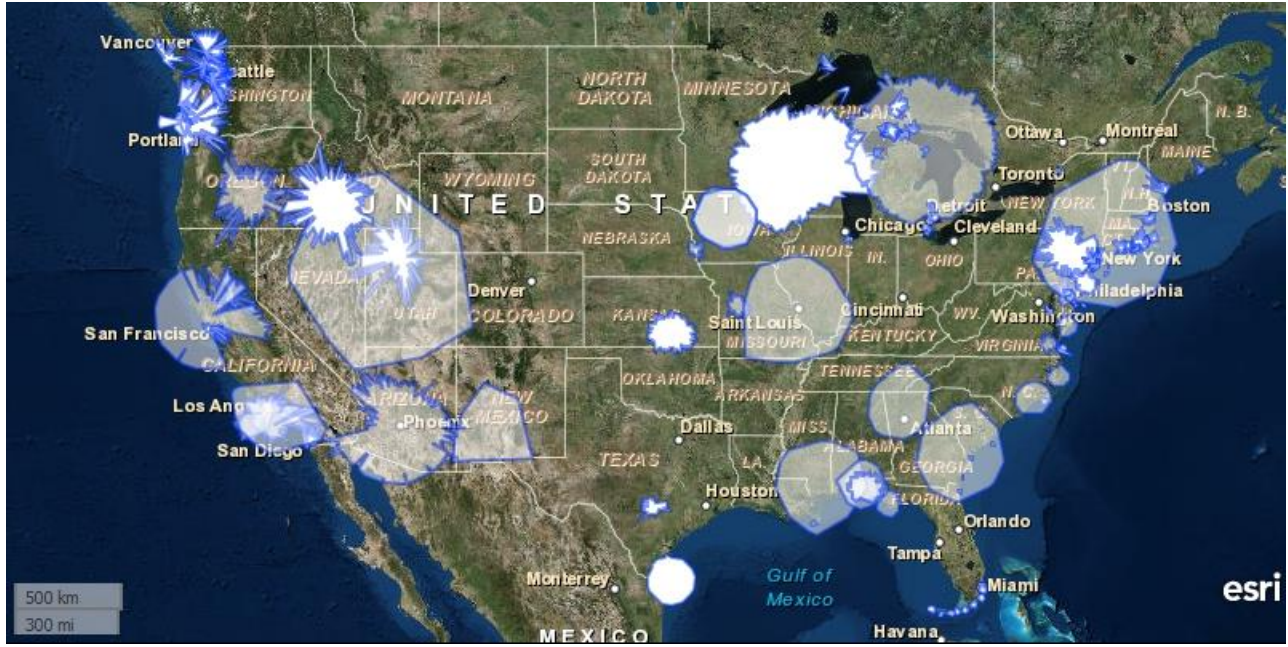


Figure D-35. 3070-3075 MHz Band Segment

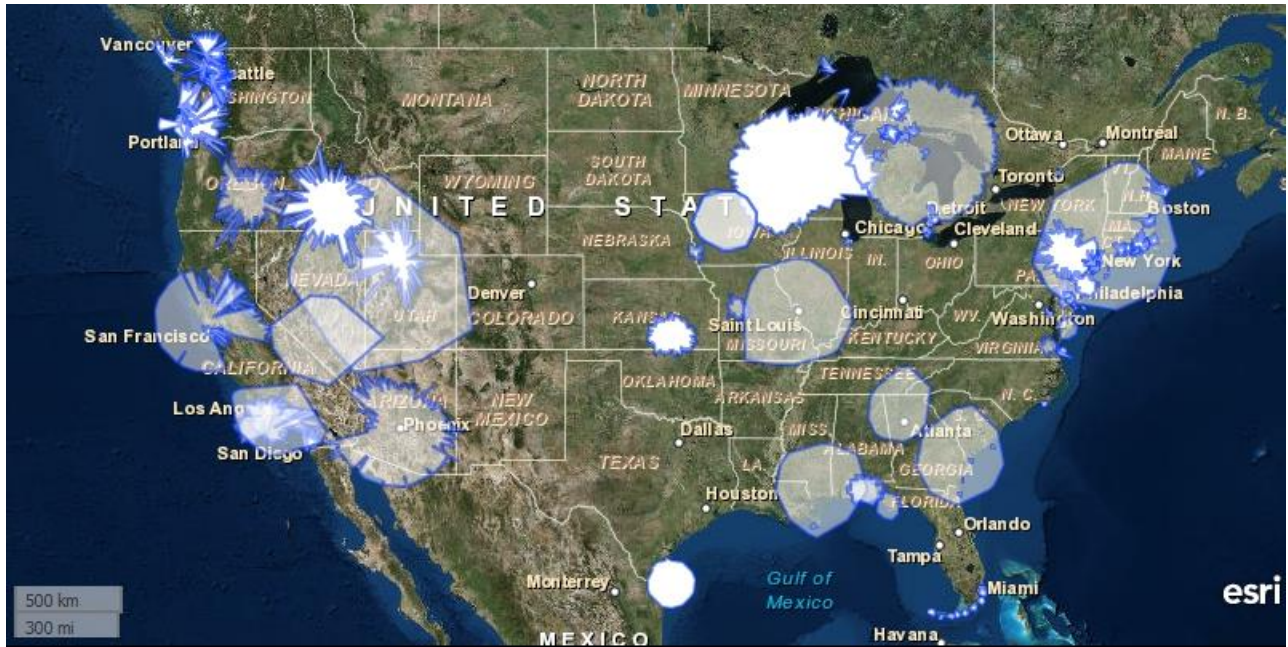


Figure D-36. 3075-3080 MHz Band Segment

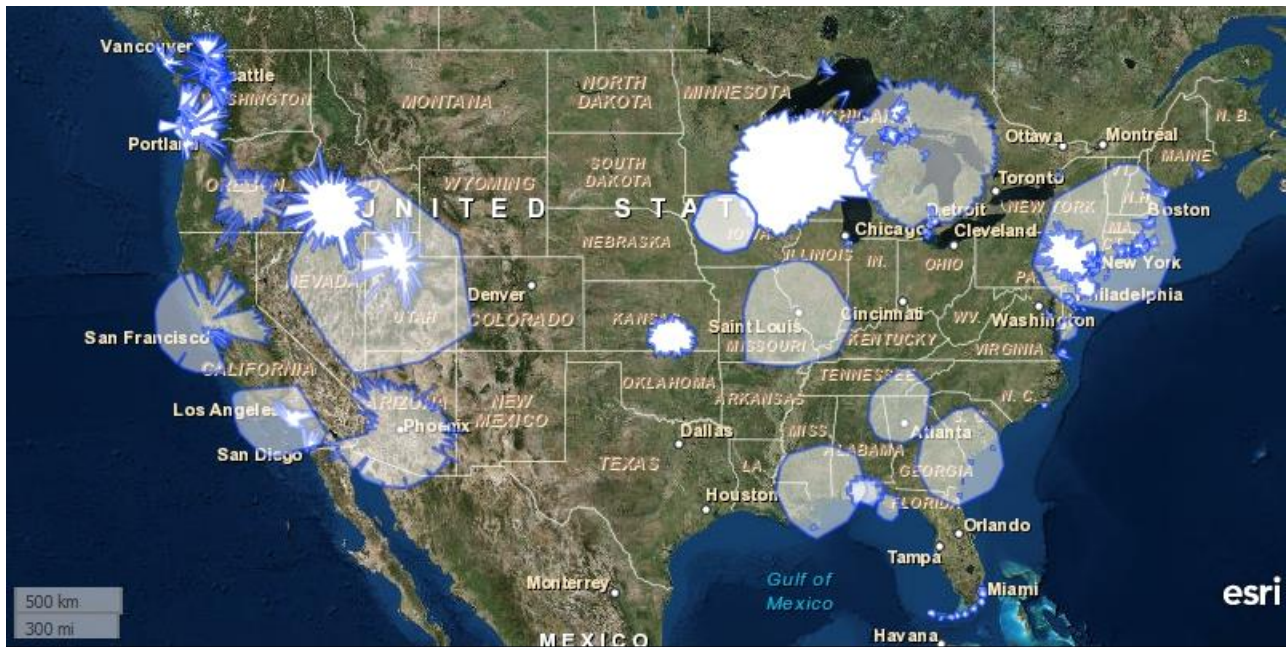


Figure D-37. 3080-3085 MHz Band Segment

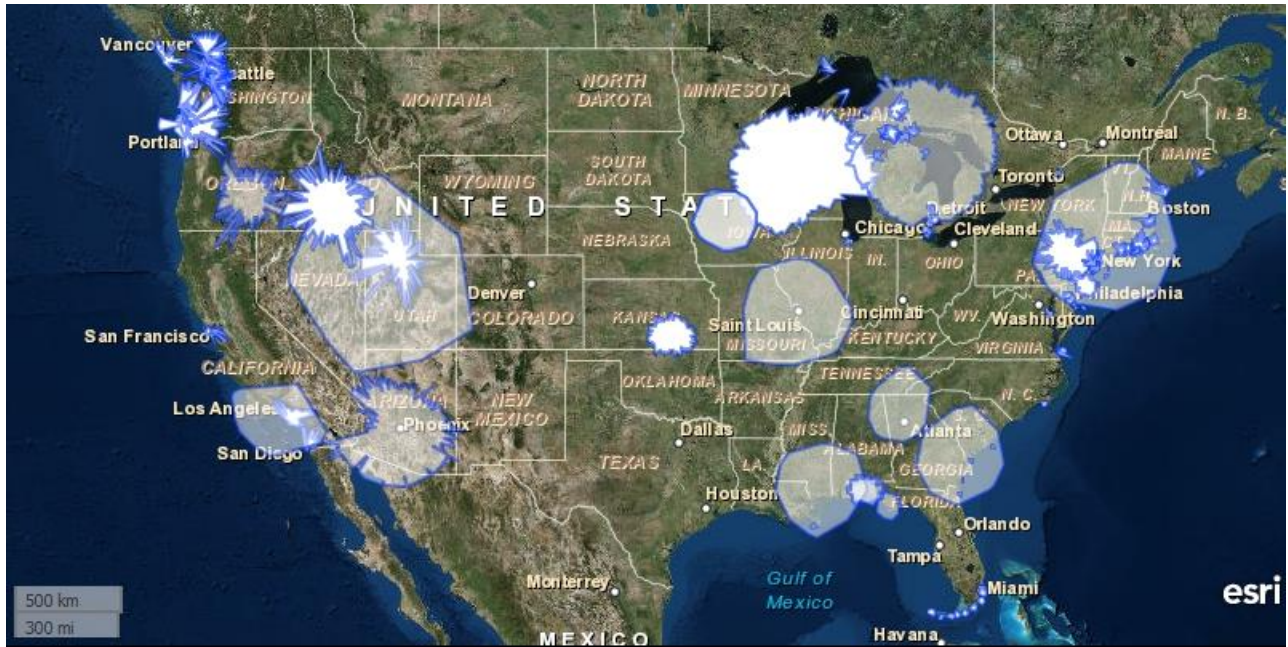


Figure D-38. 3085-3090 MHz Band Segment

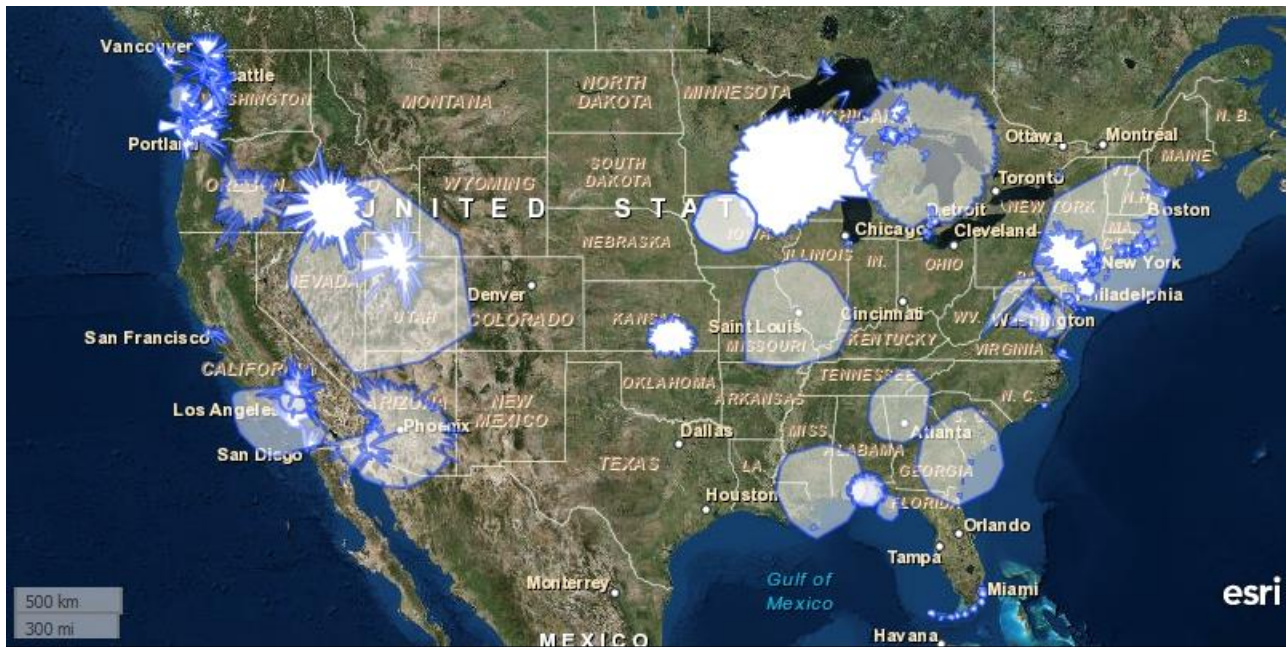


Figure D-39. 3090-3095 MHz Band Segment

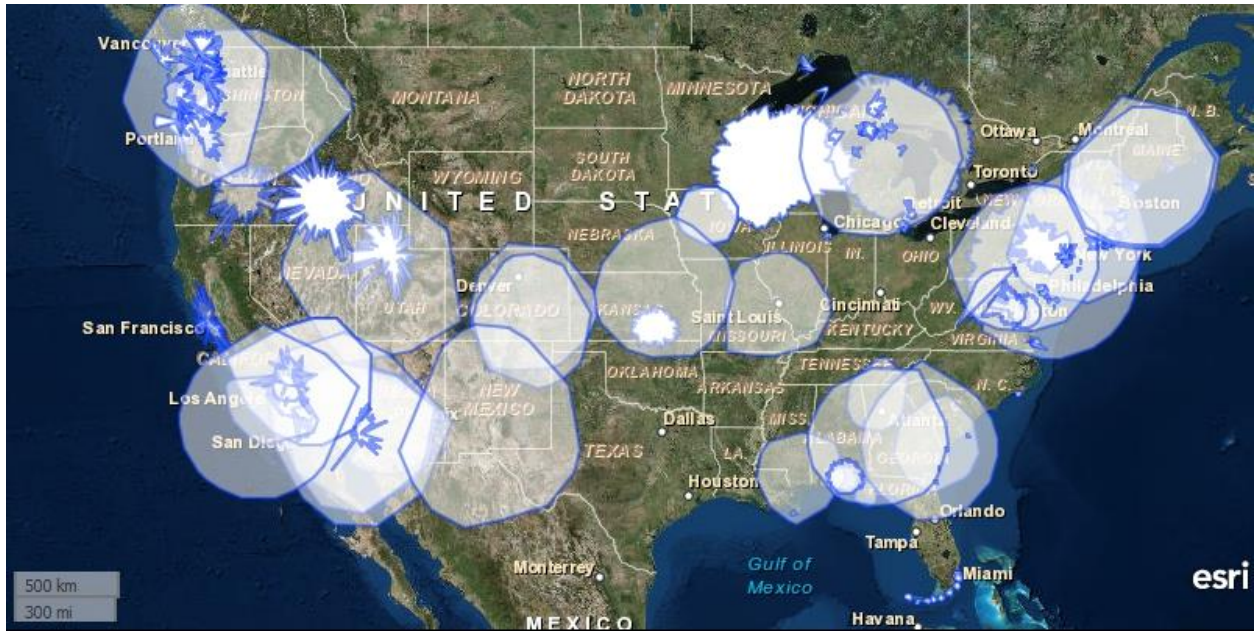


Figure D-40. 3095-3100 MHz Band Segment

APPENDIX E SPECTRUM USAGE PLOTS: 3100-3550 MHZ BAND

This appendix provides the spectrum usage contour plots for the 3100-3550 MHz band for the contiguous United States. The spectrum usage contour plots are provided for each 5 megahertz band segment in the 3100-3550 MHz band. The December 2015 GMF frequency assignment data was used in generating the spectrum usage contour plots.¹⁰ The geographic usage does not include United States and Possessions frequency assignments. The time of usage for transmit or receive stations is displayed on the spectrum usage contours plots using opacity (e.g., degree of transparency). A time of usage: between 50 percent to 100 percent corresponds to an opacity of 100 percent; between 10 percent to 50 percent corresponds to an opacity of 75 percent; between 1 percent to 10 percent corresponds to an opacity of 50 percent; and less than 1 percent corresponds to an opacity of 25 percent.¹¹

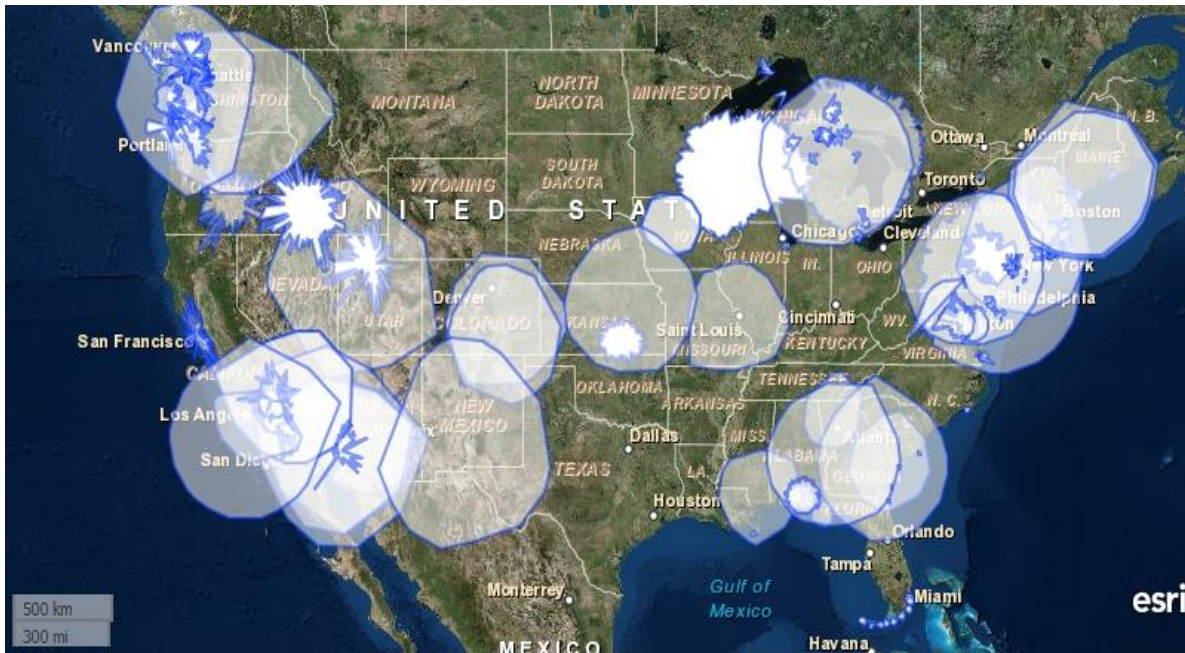


Figure E-1. 3100-3105 MHz Band Segment

¹⁰ The Government Master File is updated on a daily basis.

¹¹ A description of the service that provides the open source satellite imagery map tile used in displaying the contours is available at http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer.

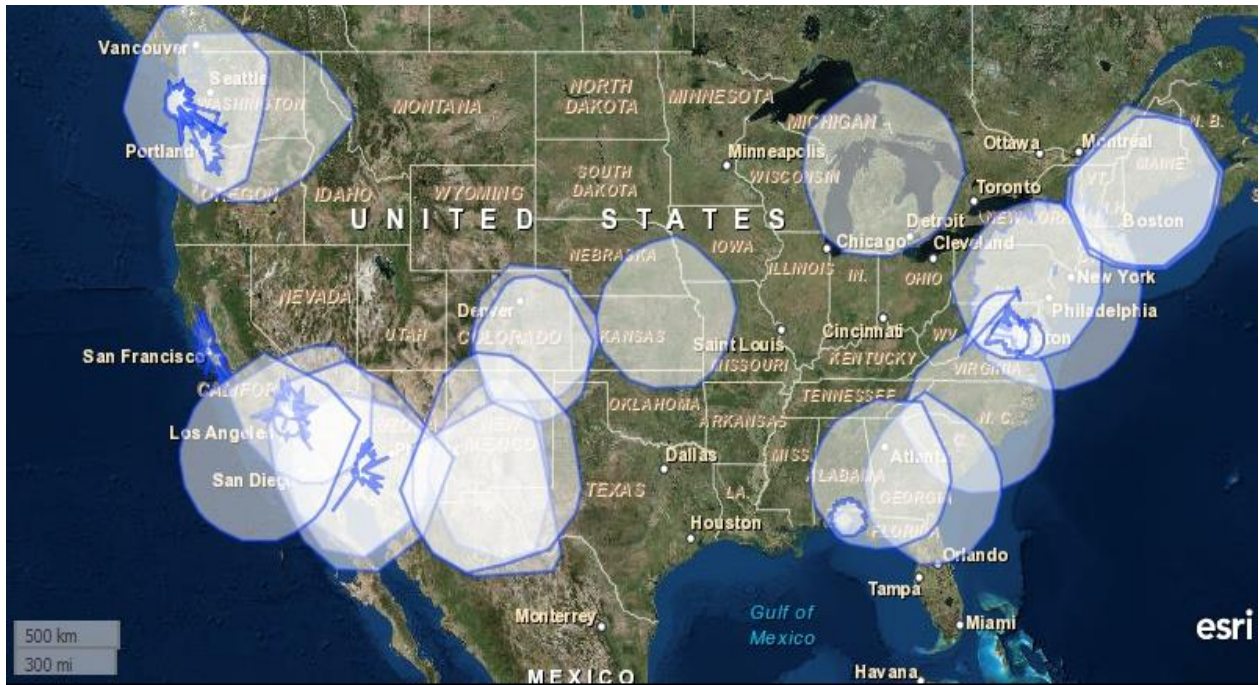


Figure E-2. 3105-3110 MHz Band Segment

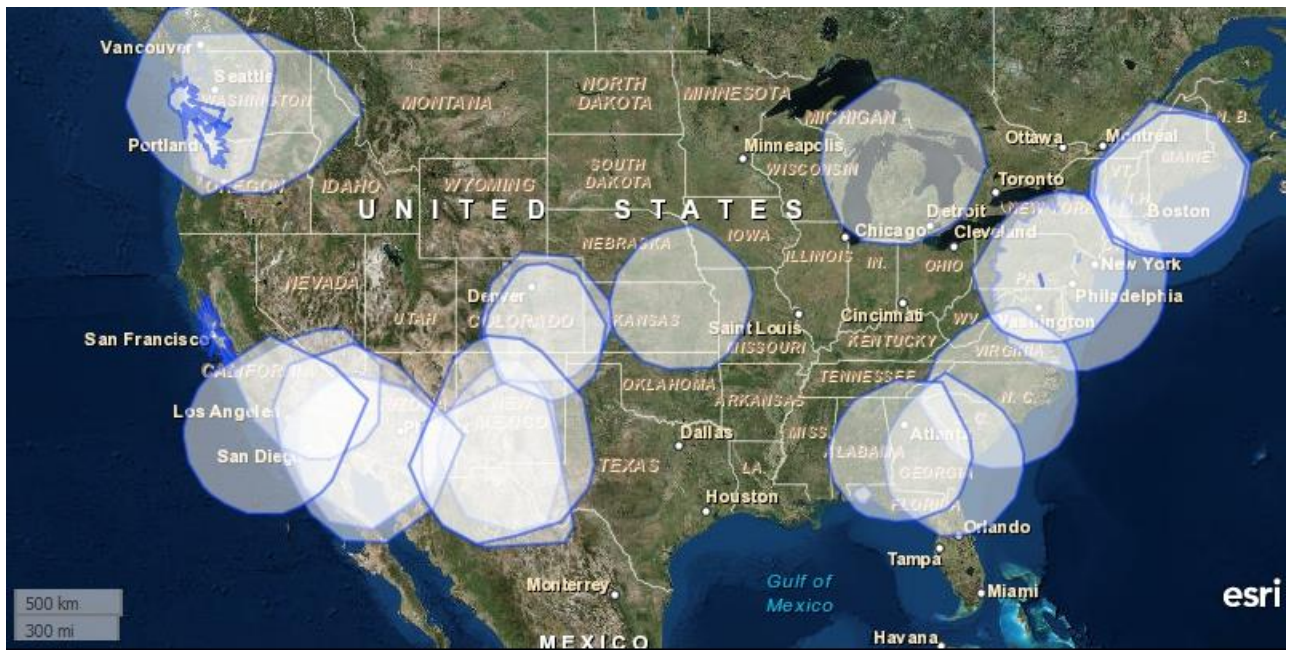


Figure E-3. 3110-3115 MHz Band Segment

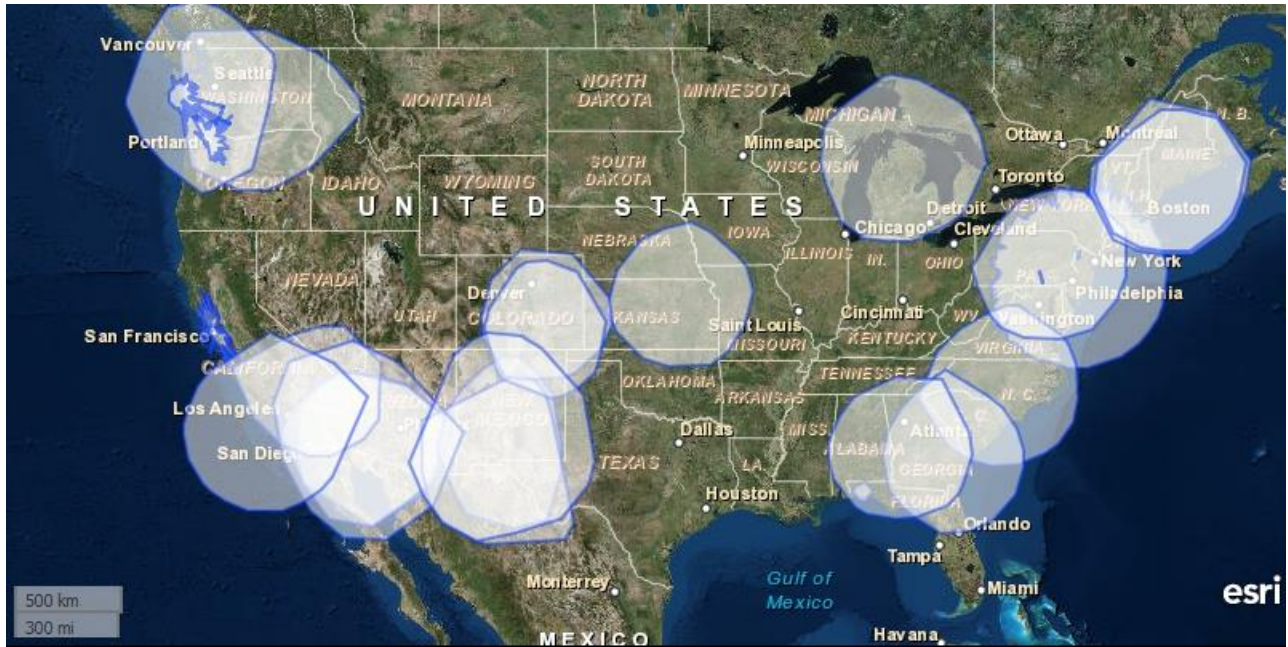


Figure E-4. 3115-3120 MHz Band Segment

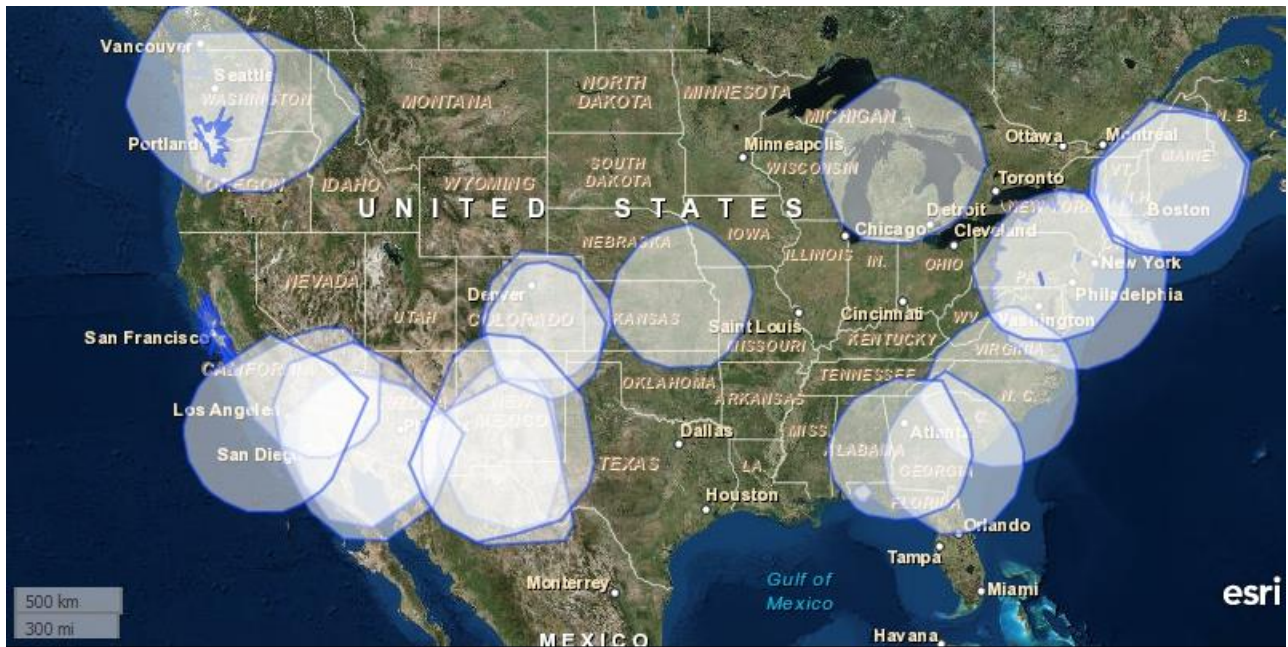


Figure E-5. 3120-3125 MHz Band Segment

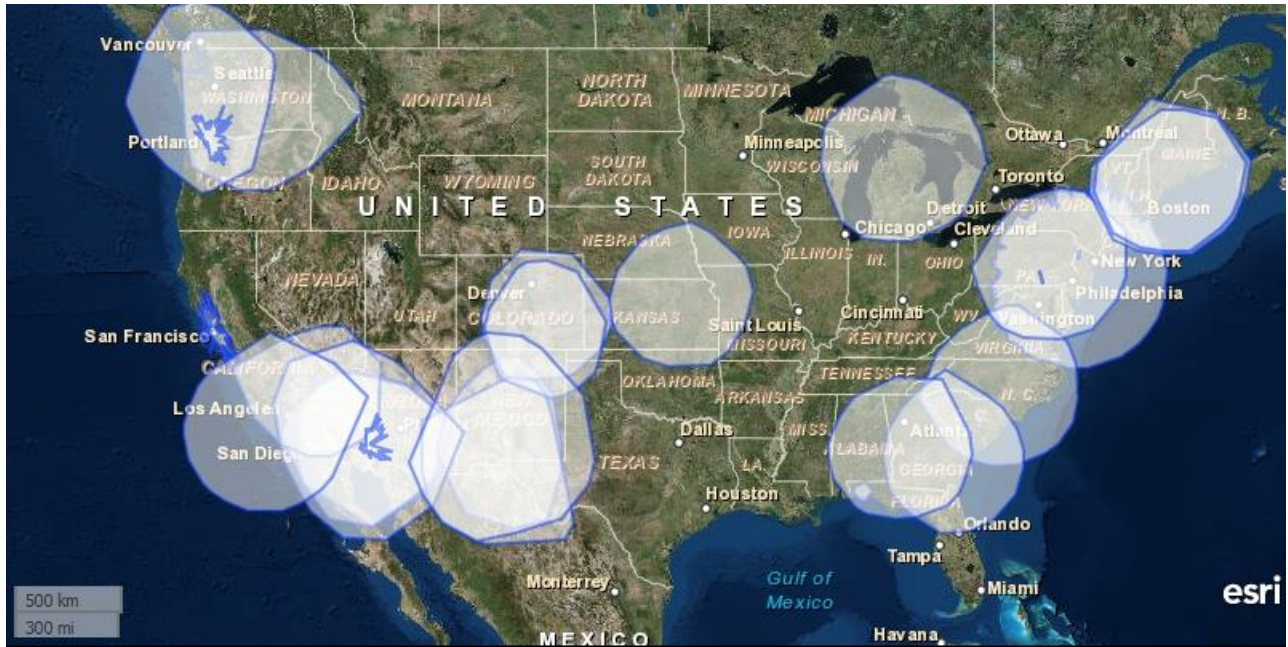


Figure E-6. 3125-3130 MHz Band Segment

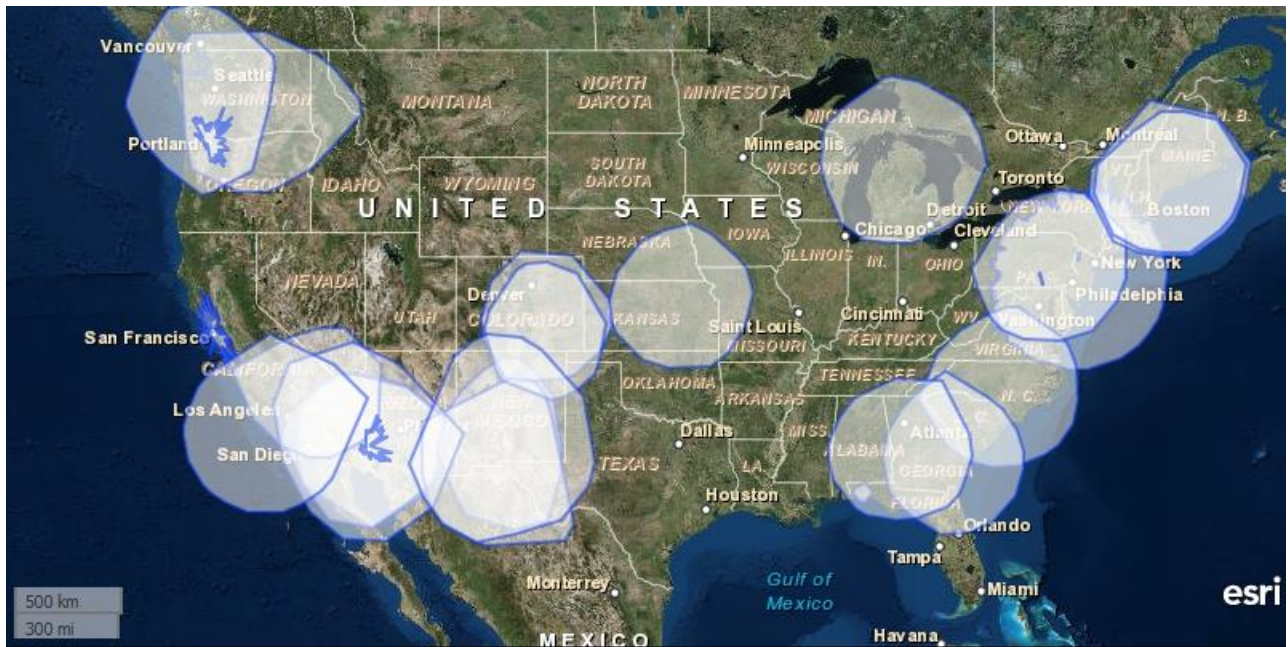


Figure E-7. 3130-3135 MHz Band Segment

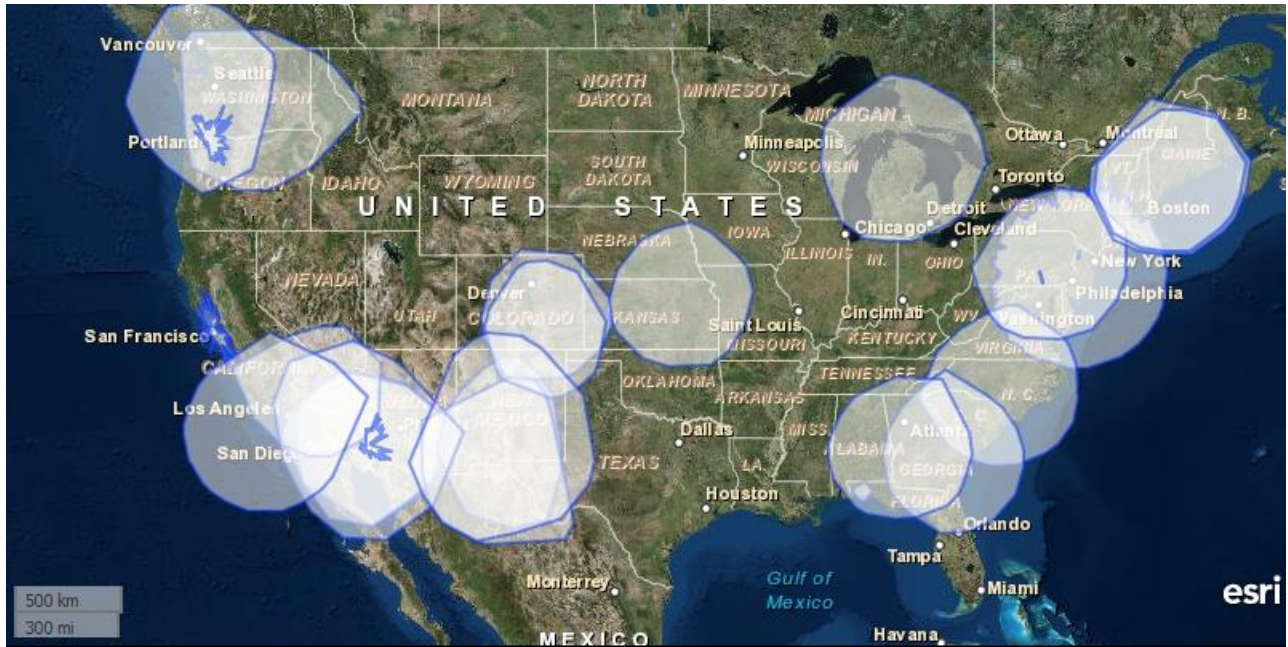


Figure E-8. 3135-3140 MHz Band Segment

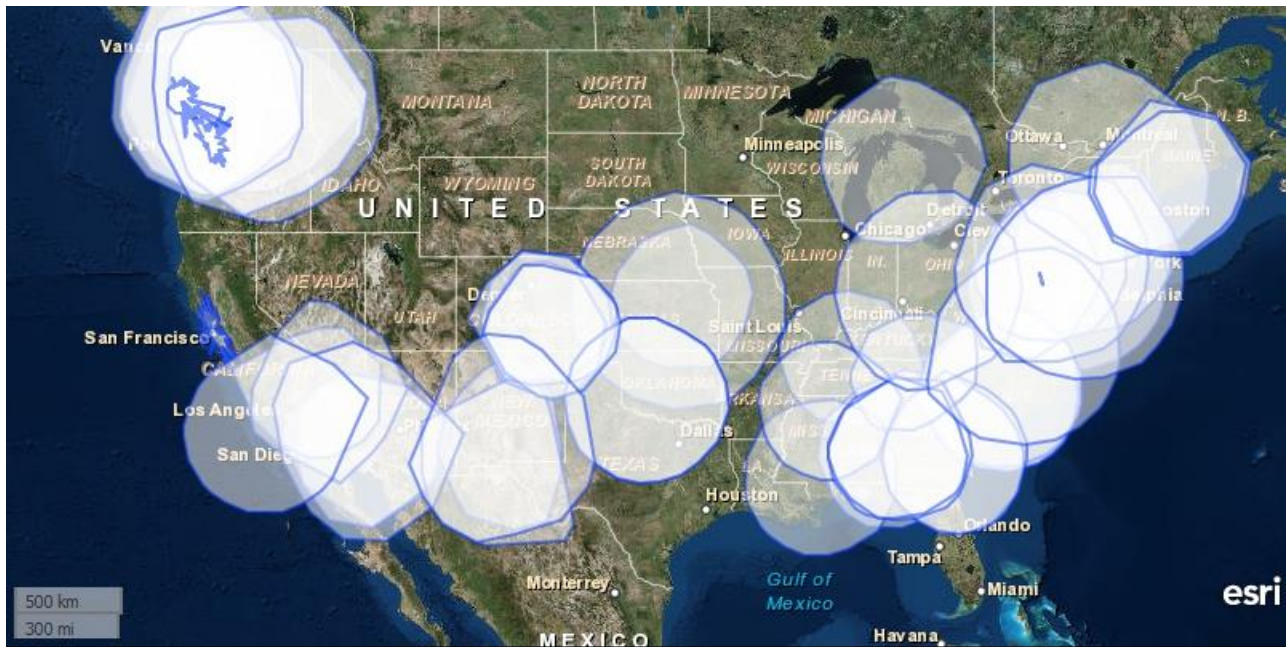


Figure E-9. 3140-3145 MHz Band Segment

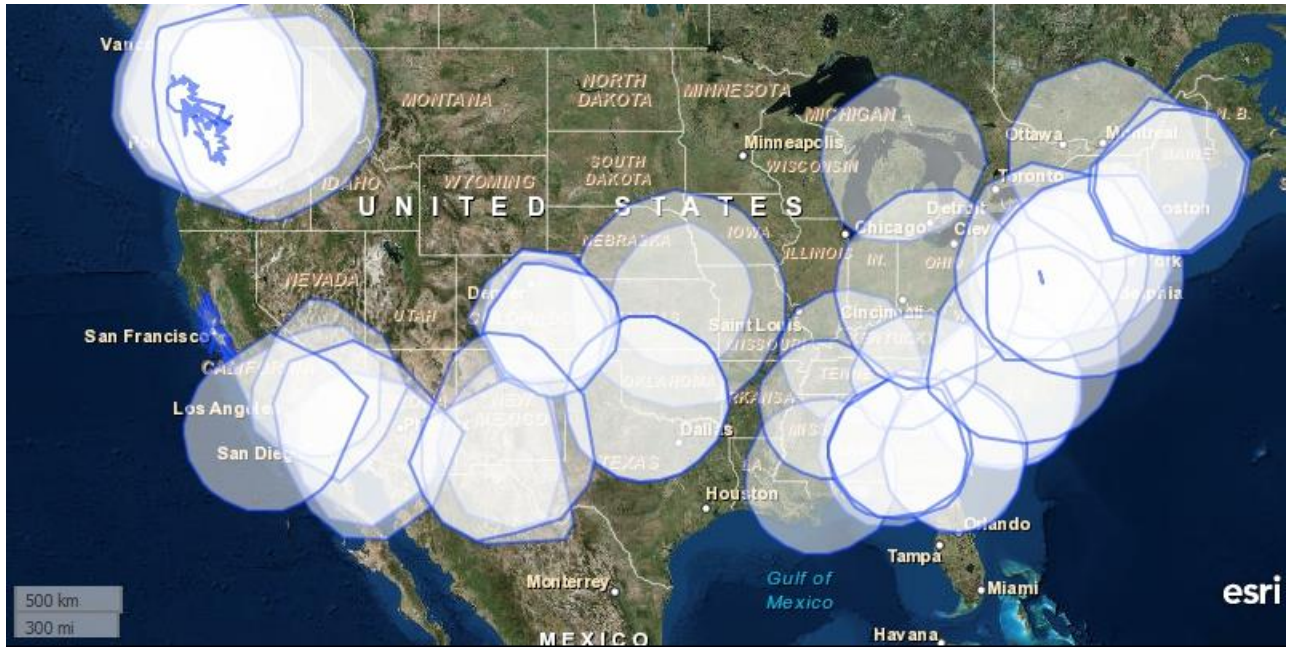


Figure E-10. 3145-3150 MHz Band Segment

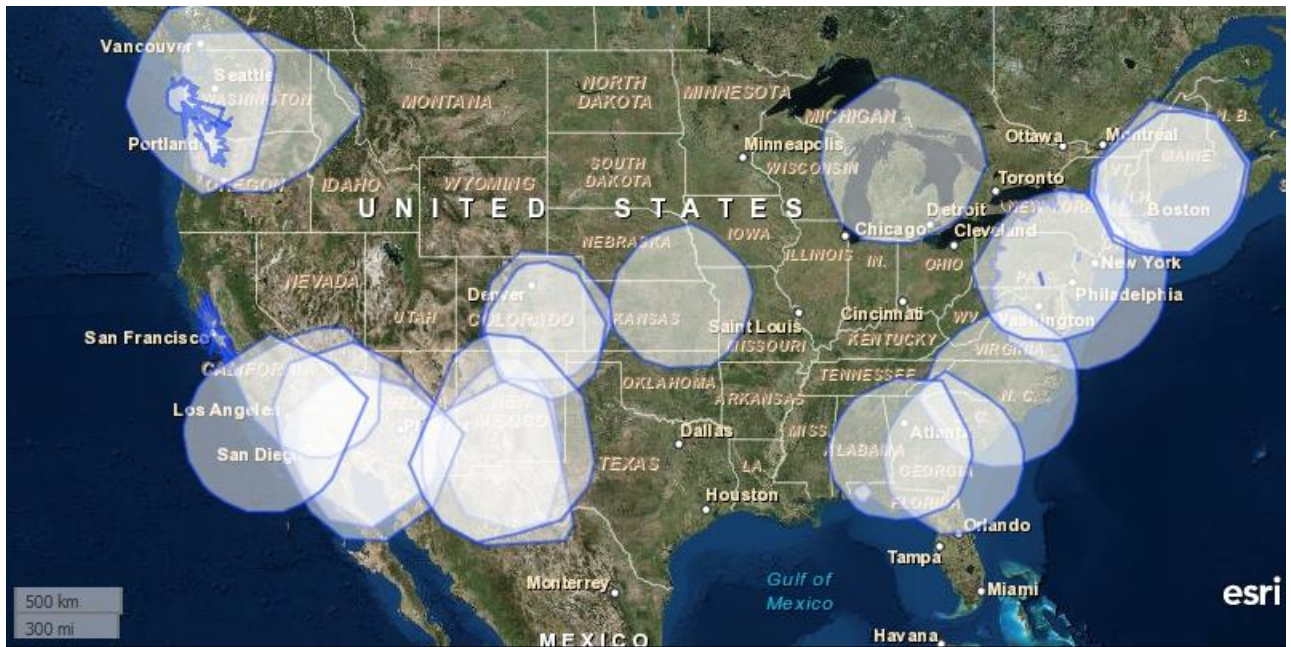


Figure E-11. 3150-3155 MHz Band Segment

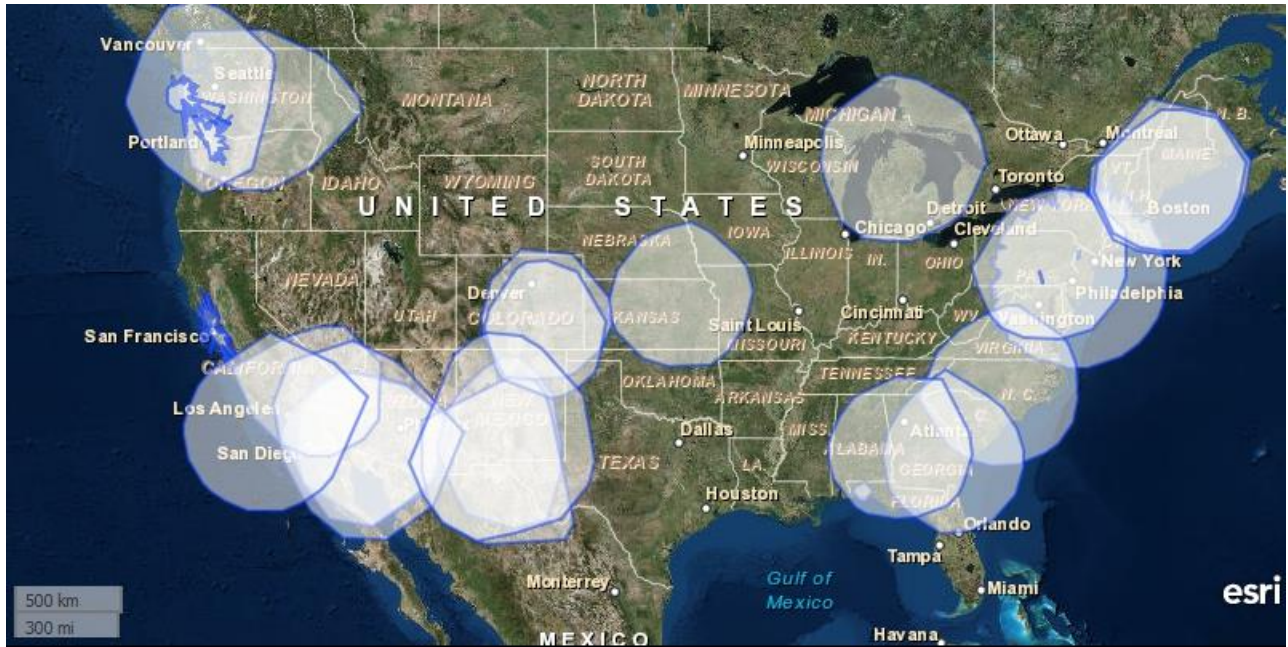


Figure E-12. 3155-3160 MHz Band Segment

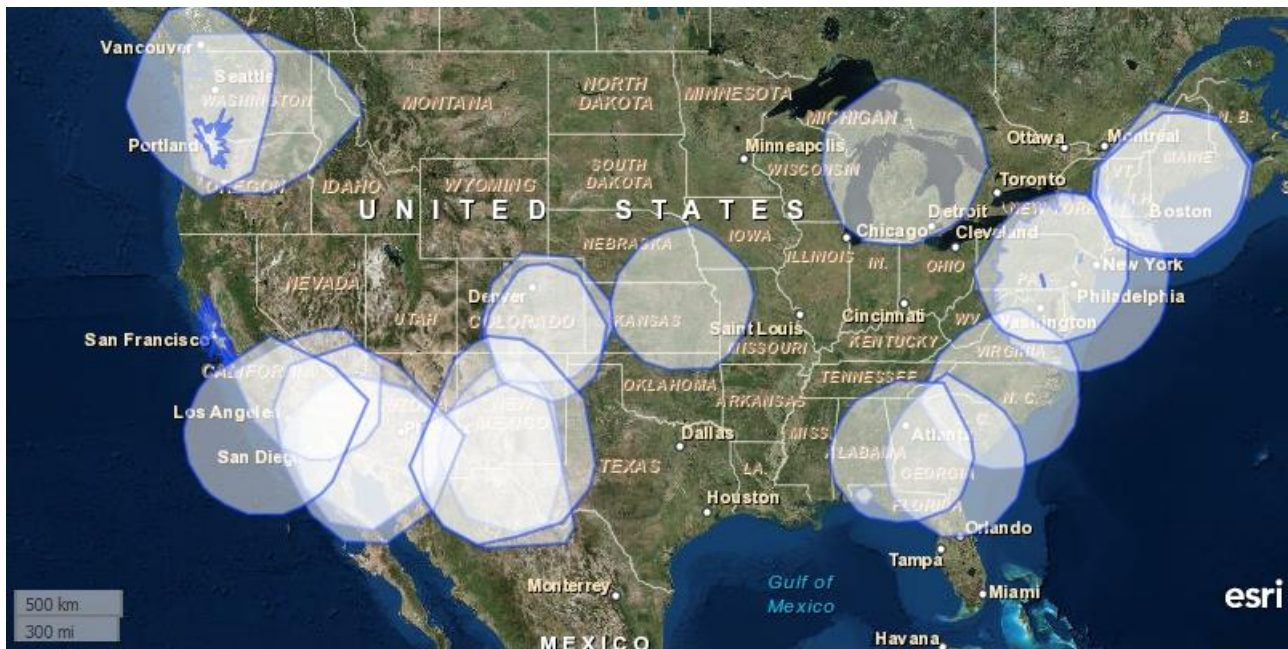


Figure E-13. 3160-3165 MHz Band Segment

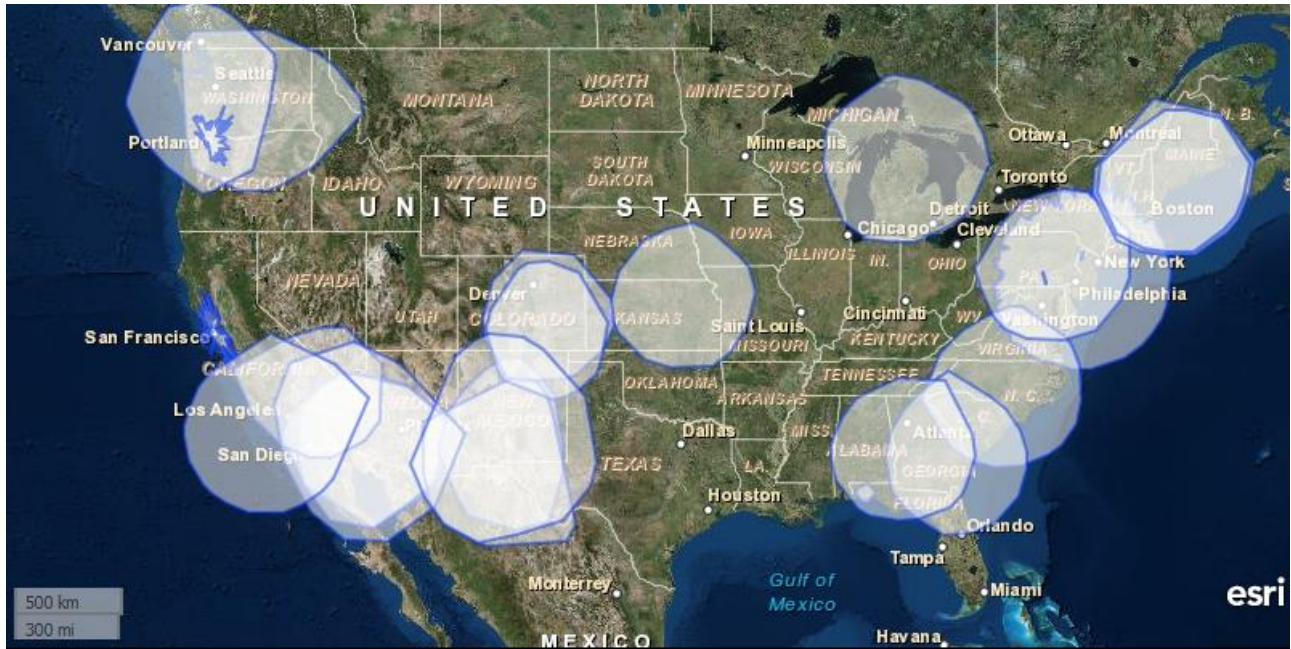


Figure E-14. 3165-3170 MHz Band Segment

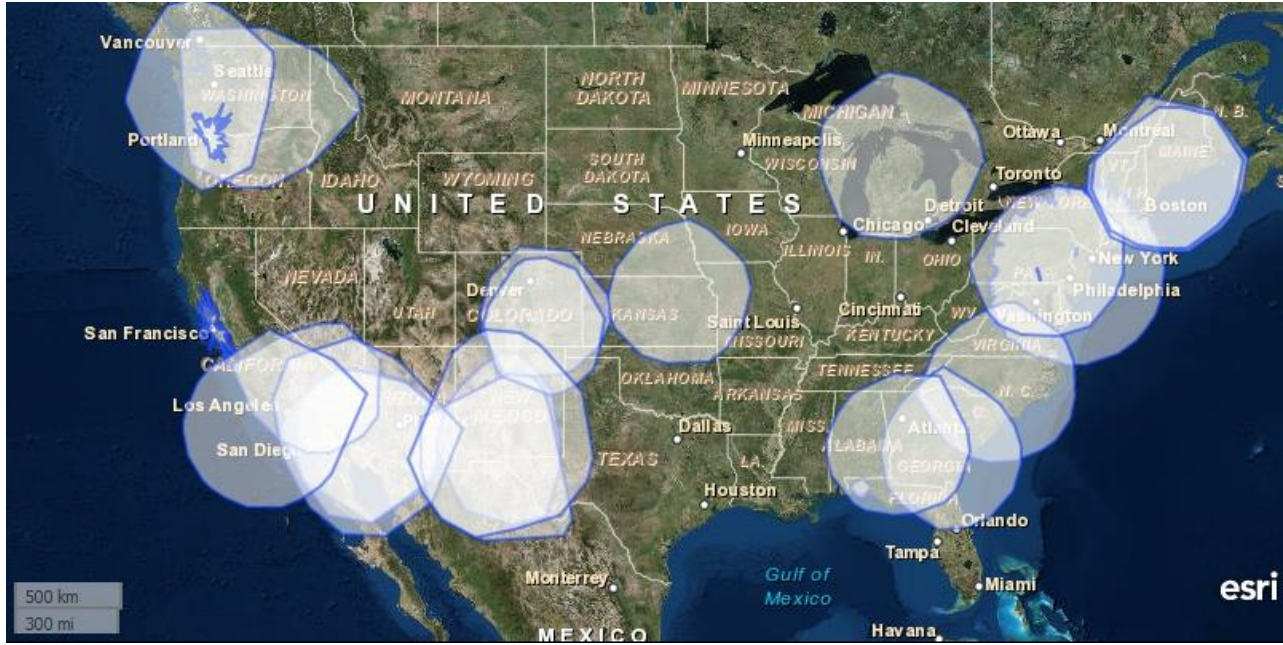


Figure E-15. 3170-3175 MHz Band Segment

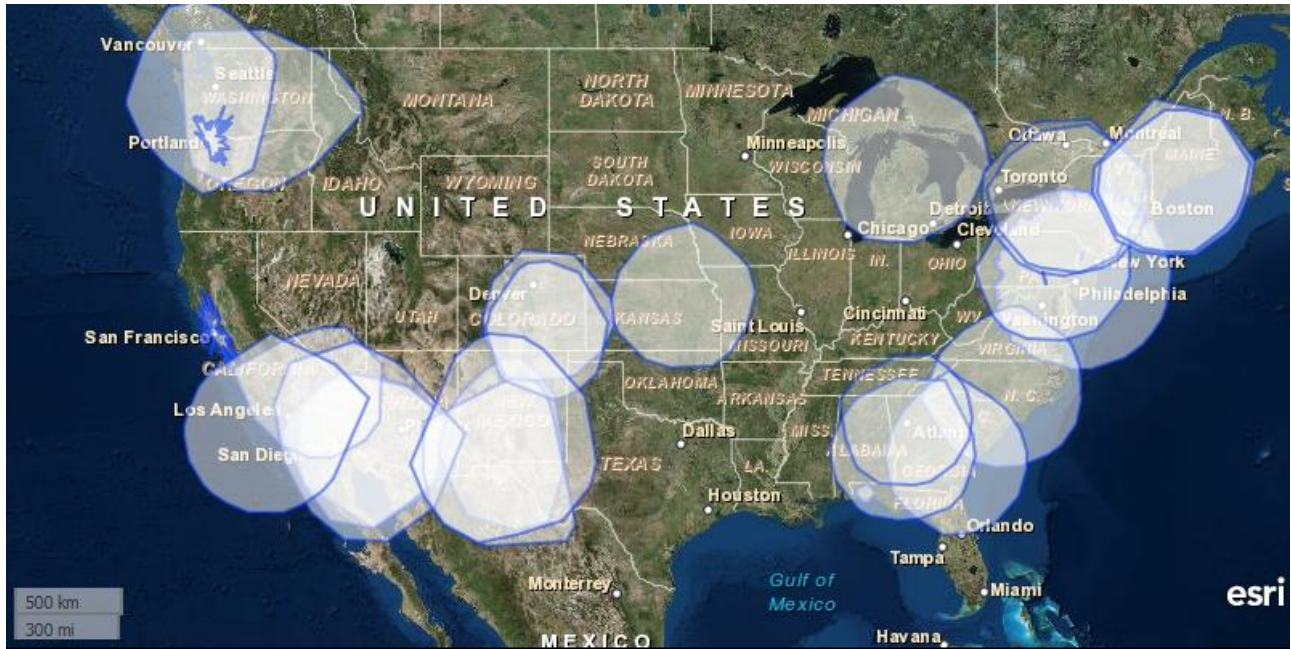


Figure E-16. 3175-3180 MHz Band Segment

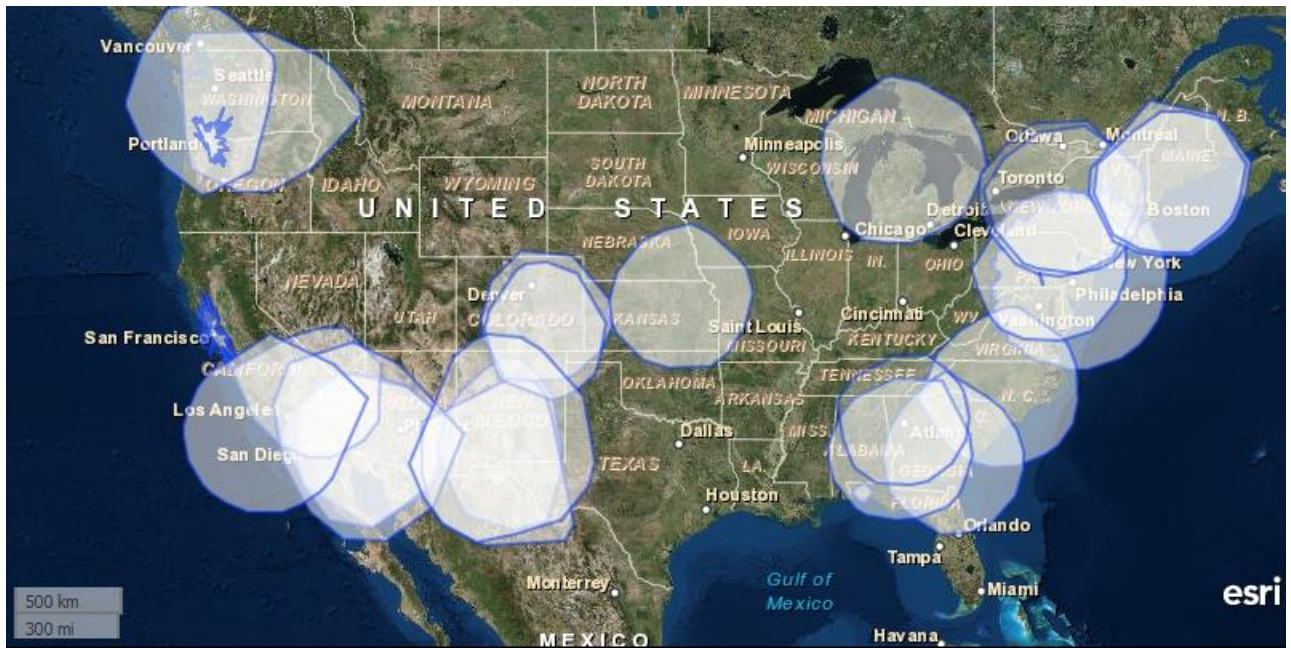


Figure E-17. 3180-3185 MHz Band Segment

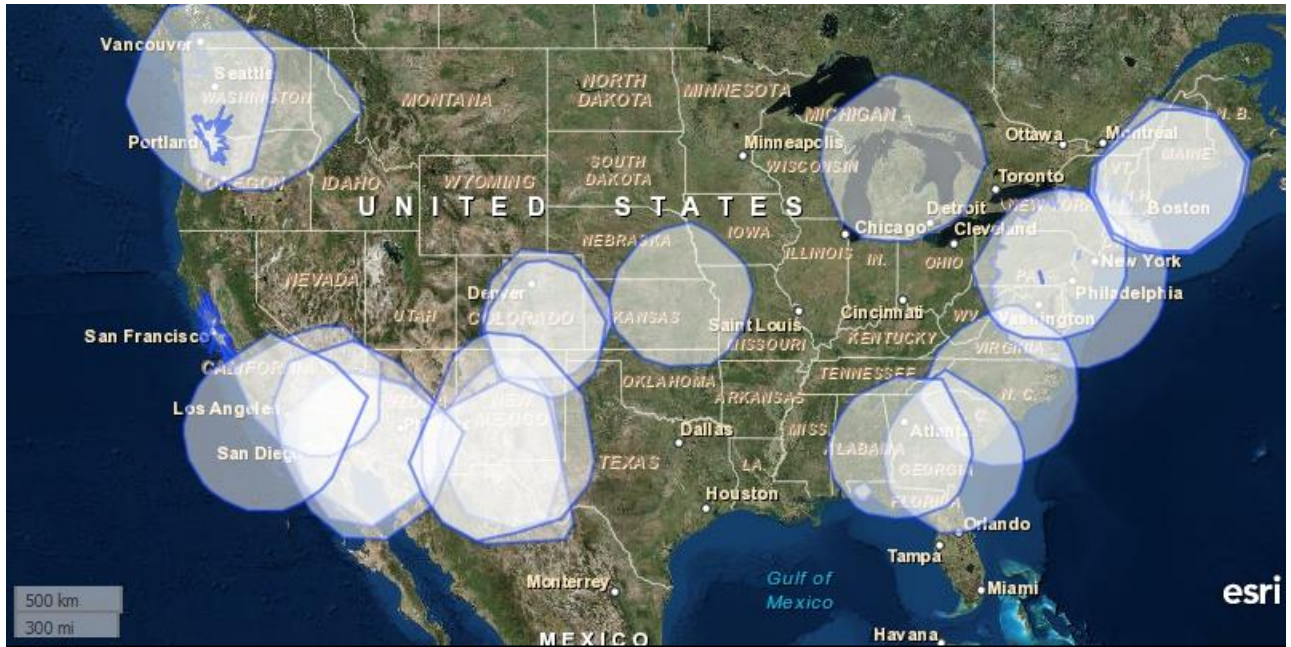


Figure E-18. 3185-3190 MHz Band Segment

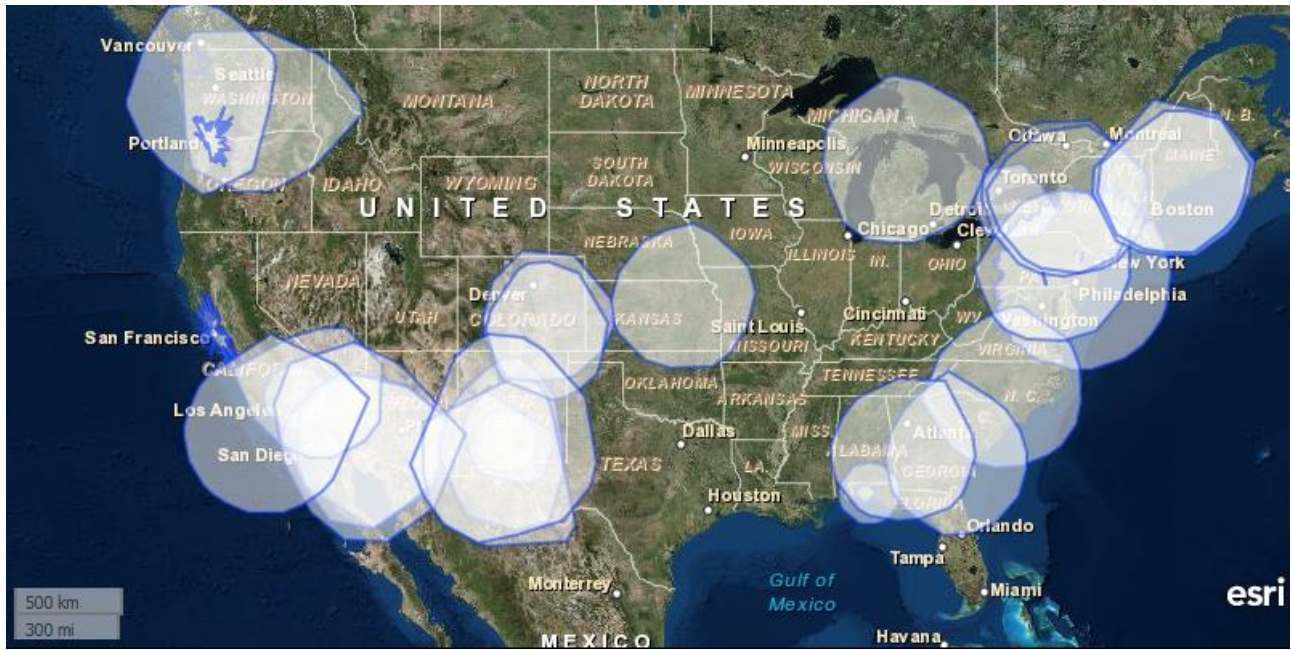


Figure E-19. 3190-3195 MHz Band Segment

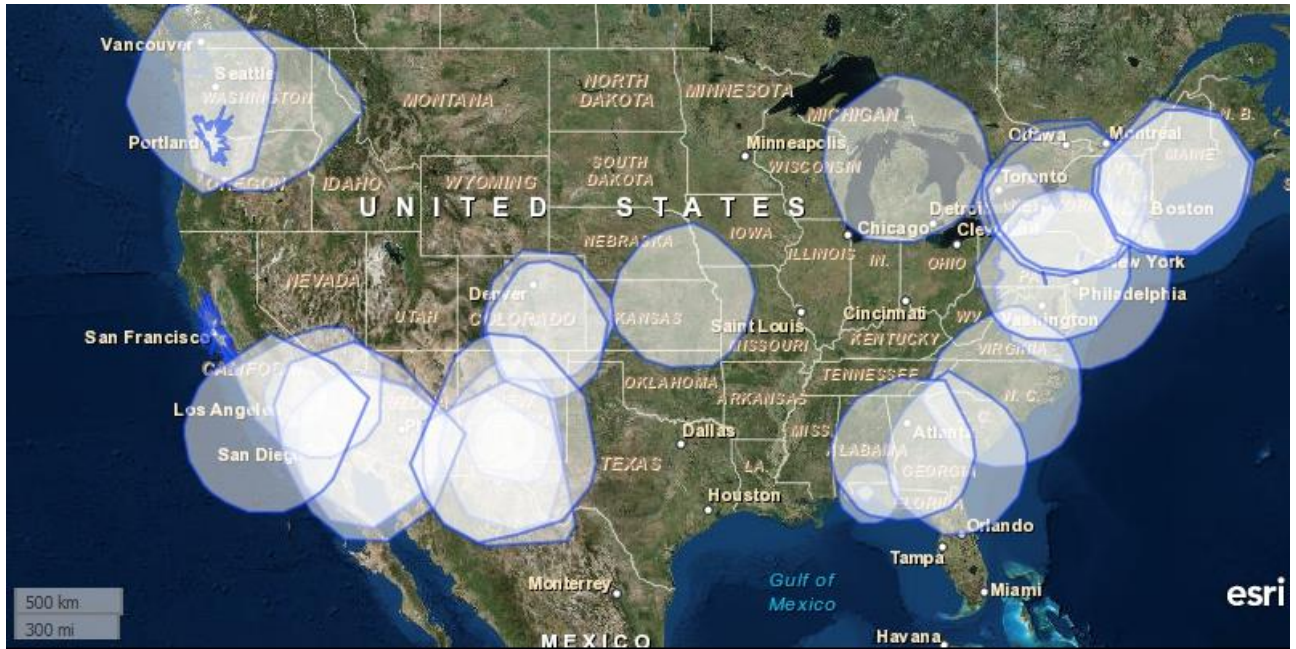


Figure E-20. 3195-3200 MHz Band Segment

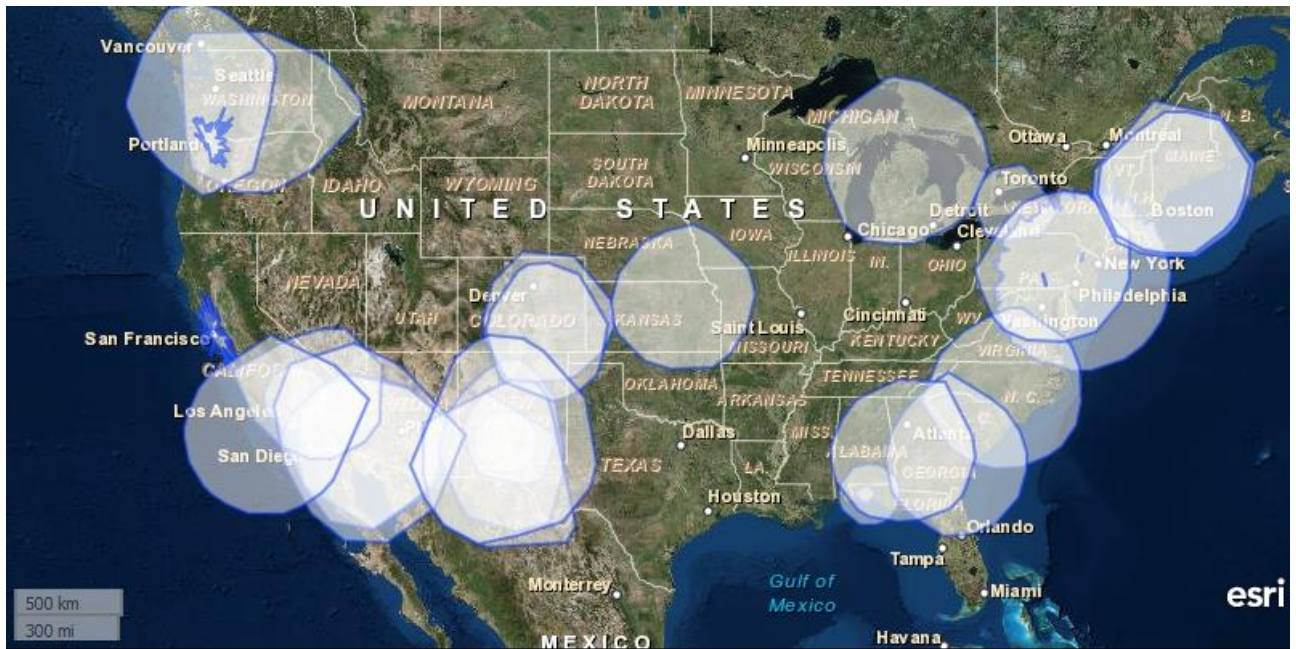


Figure E-21. 3200-3205 MHz Band Segment

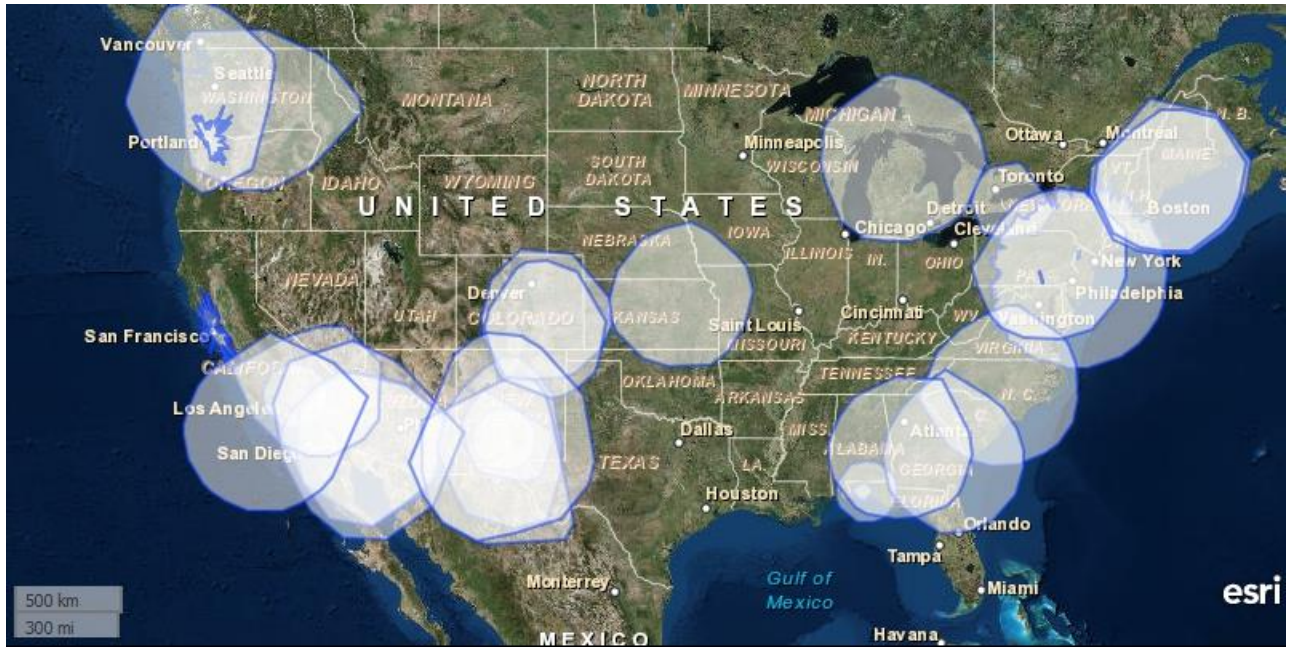


Figure E-22. 3205-3210 MHz Band Segment

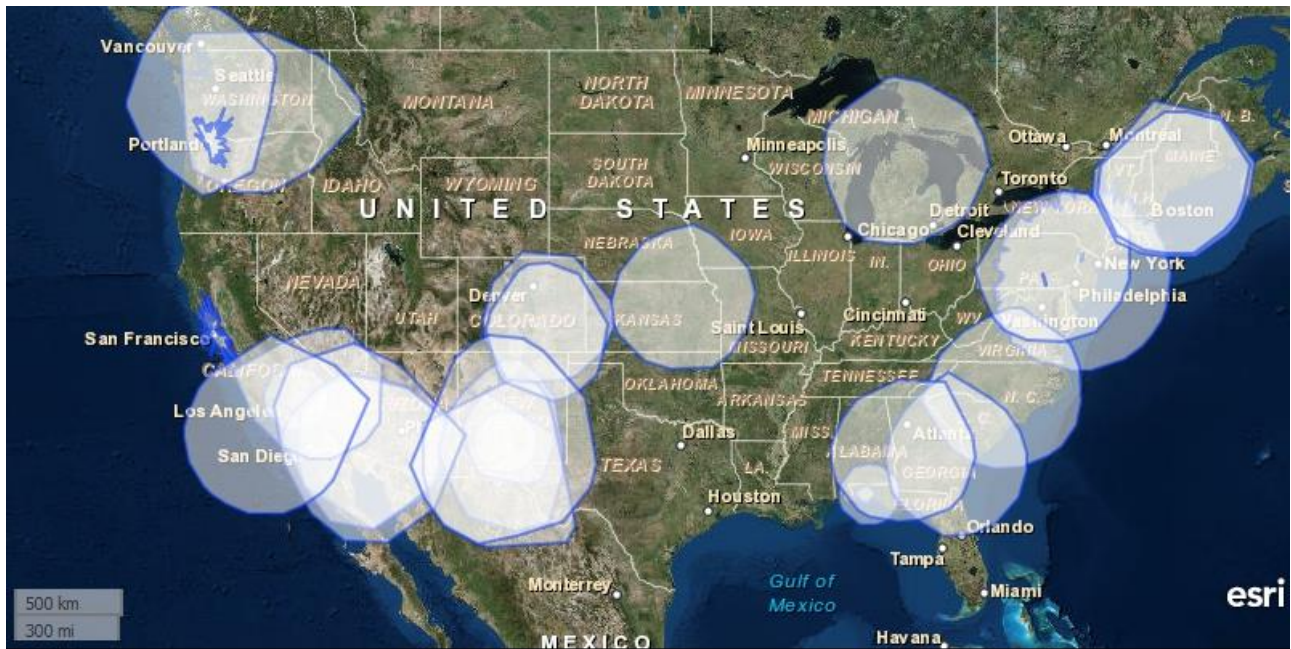


Figure E-23. 3210-3215 MHz Band Segment

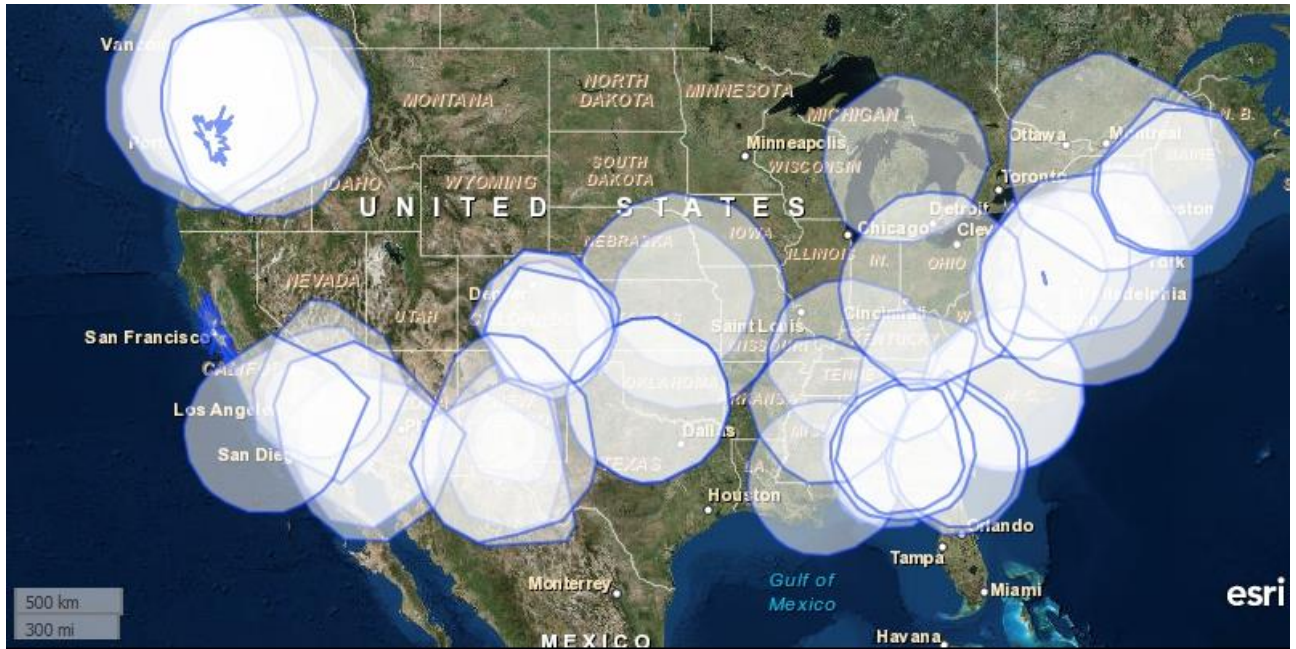


Figure E-24. 3215-3220 MHz Band Segment

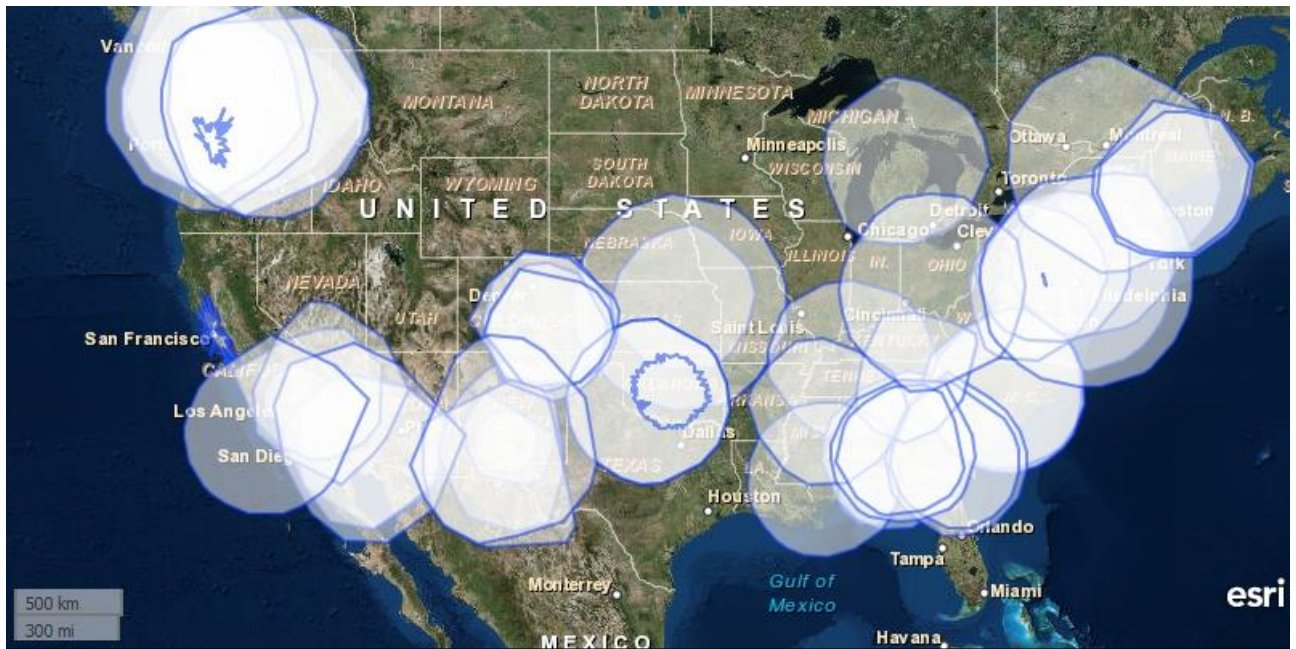


Figure E-25. 3220-3225 MHz Band Segment

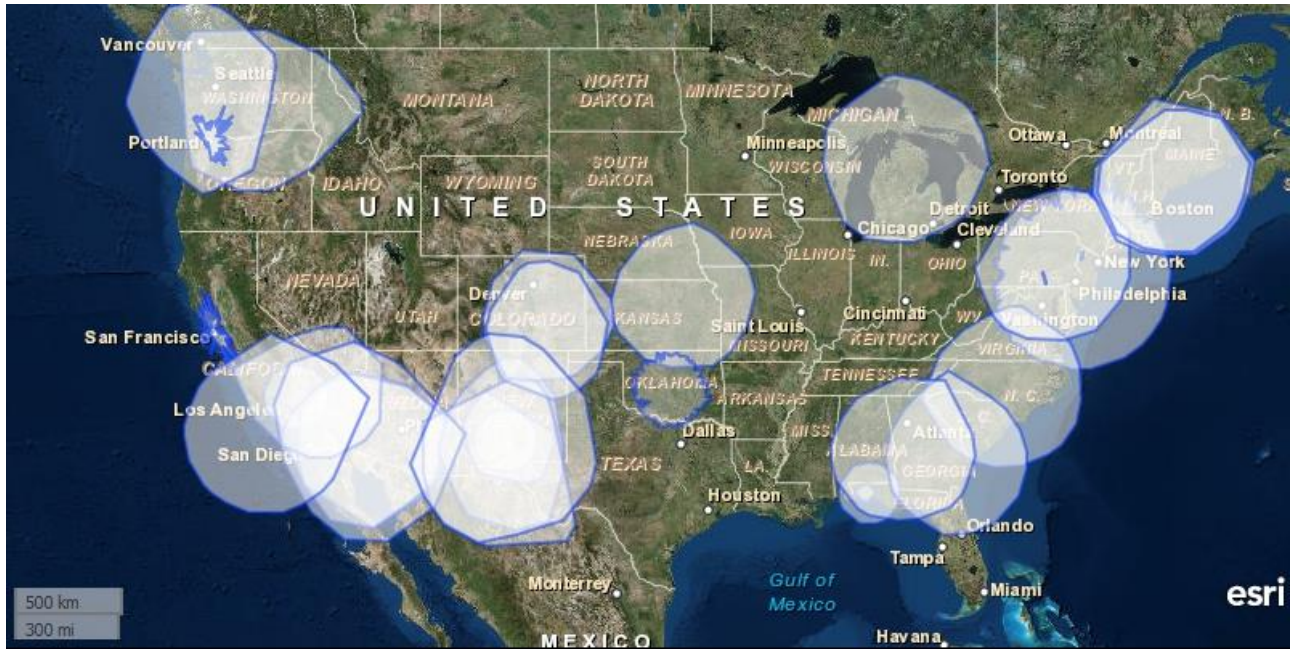


Figure E-26. 3225-3230 MHz Band Segment

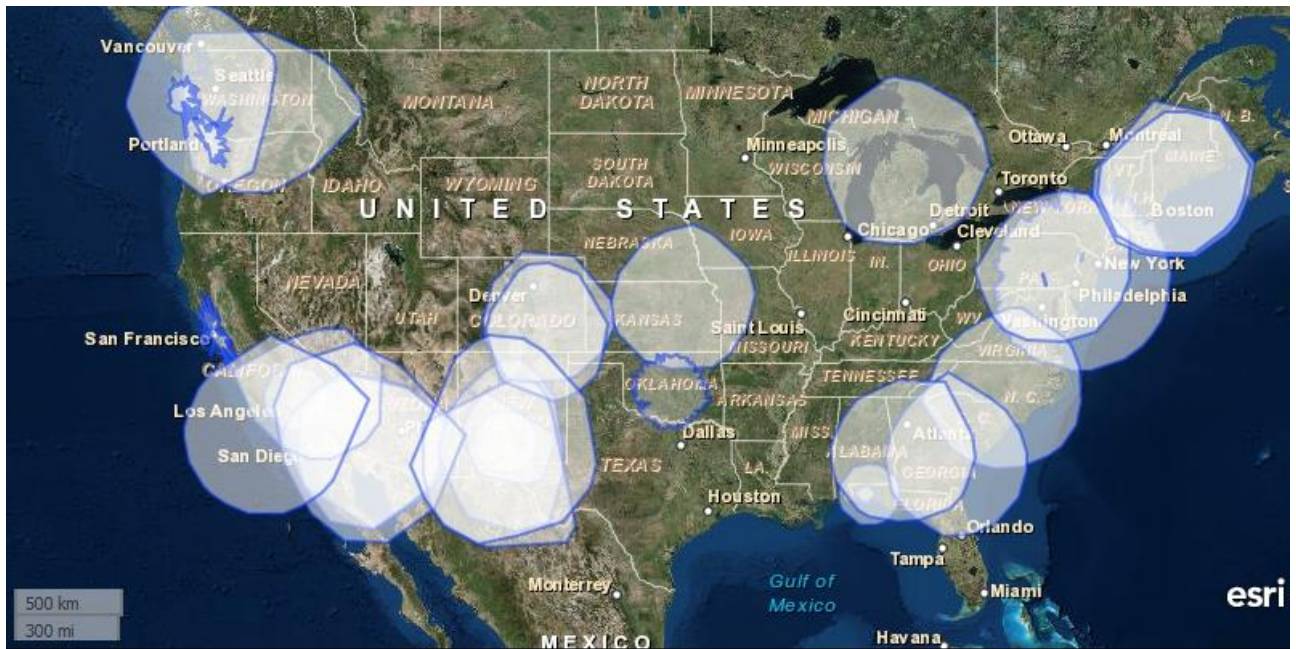


Figure E-27. 3230-3235 MHz Band Segment

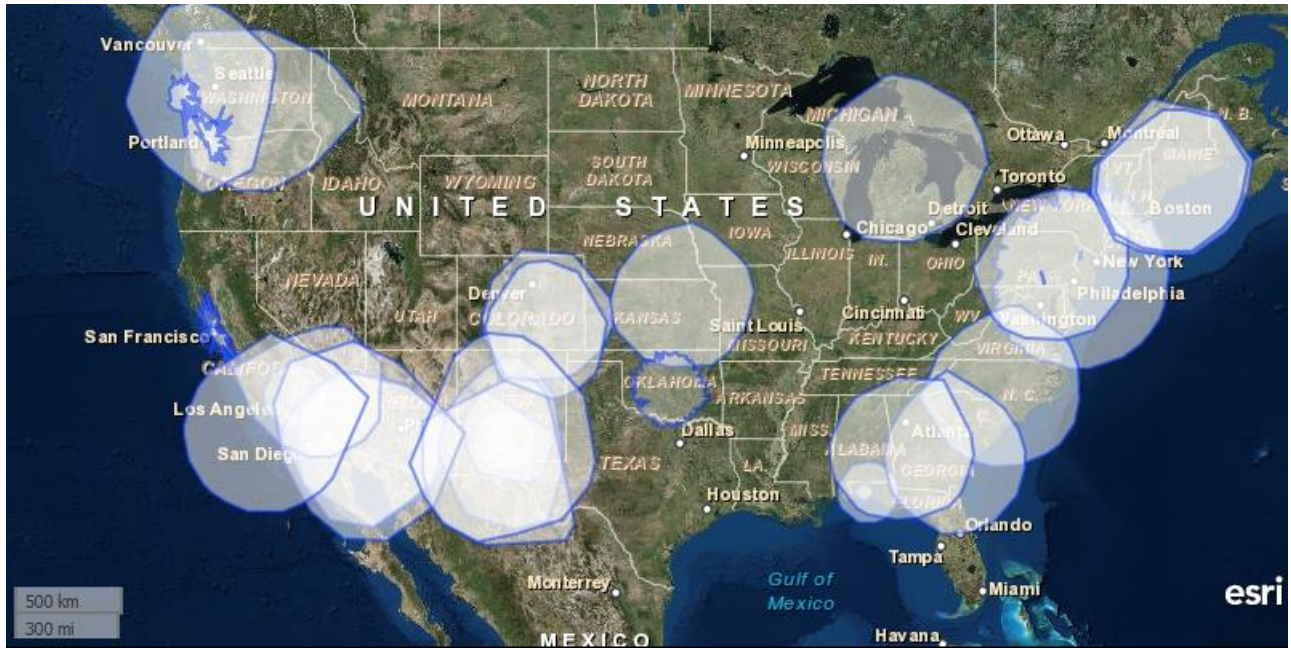


Figure E-28. 3235-3240 MHz Band Segment

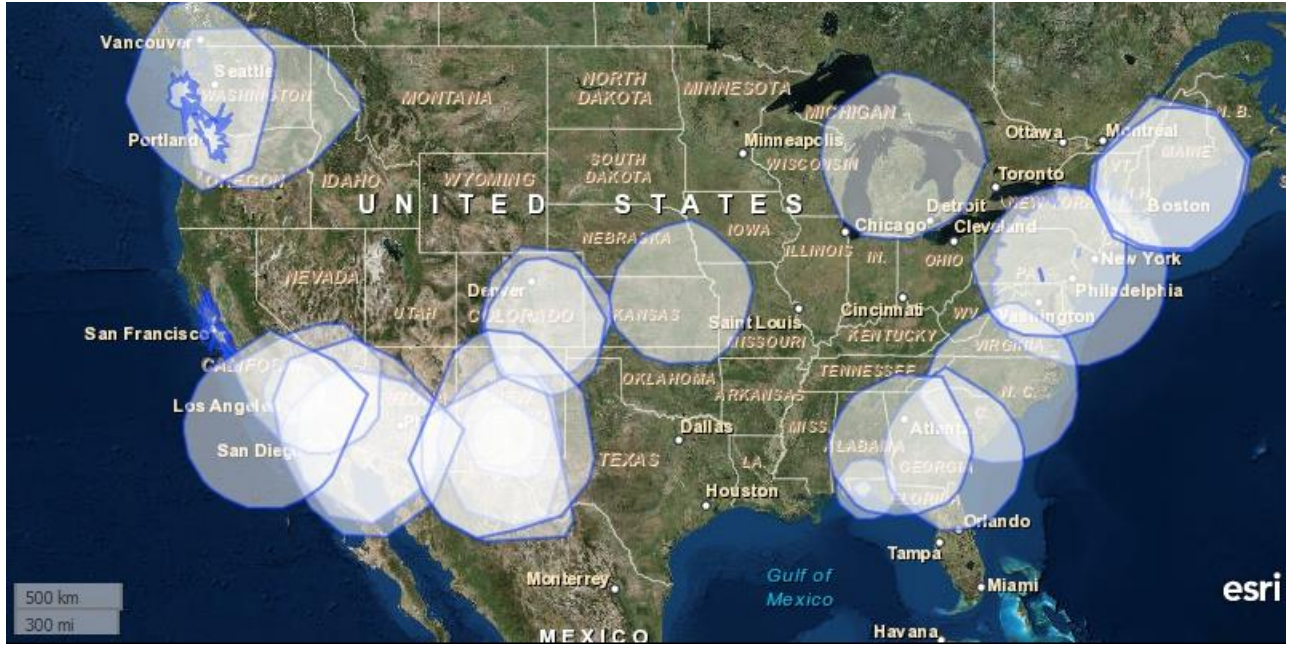


Figure E-29. 3240-3245 MHz Band Segment

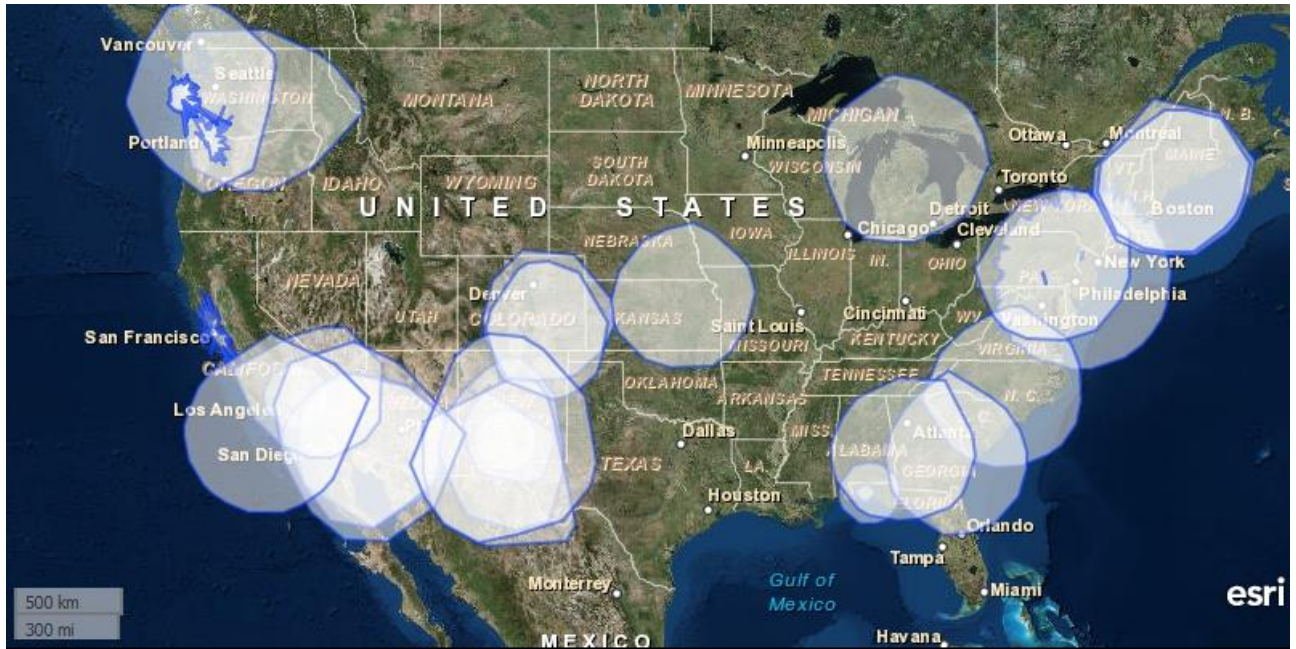


Figure E-30. 3245-3250 MHz Band Segment

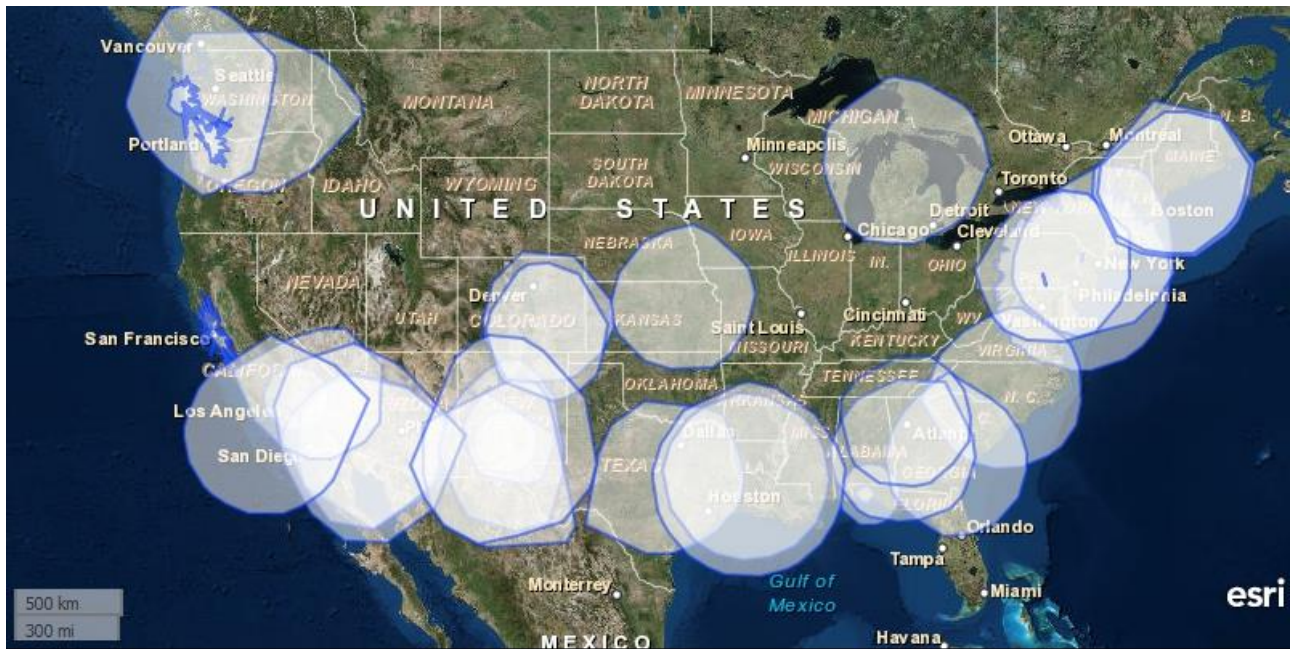


Figure E-31. 3250-3255 MHz Band Segment

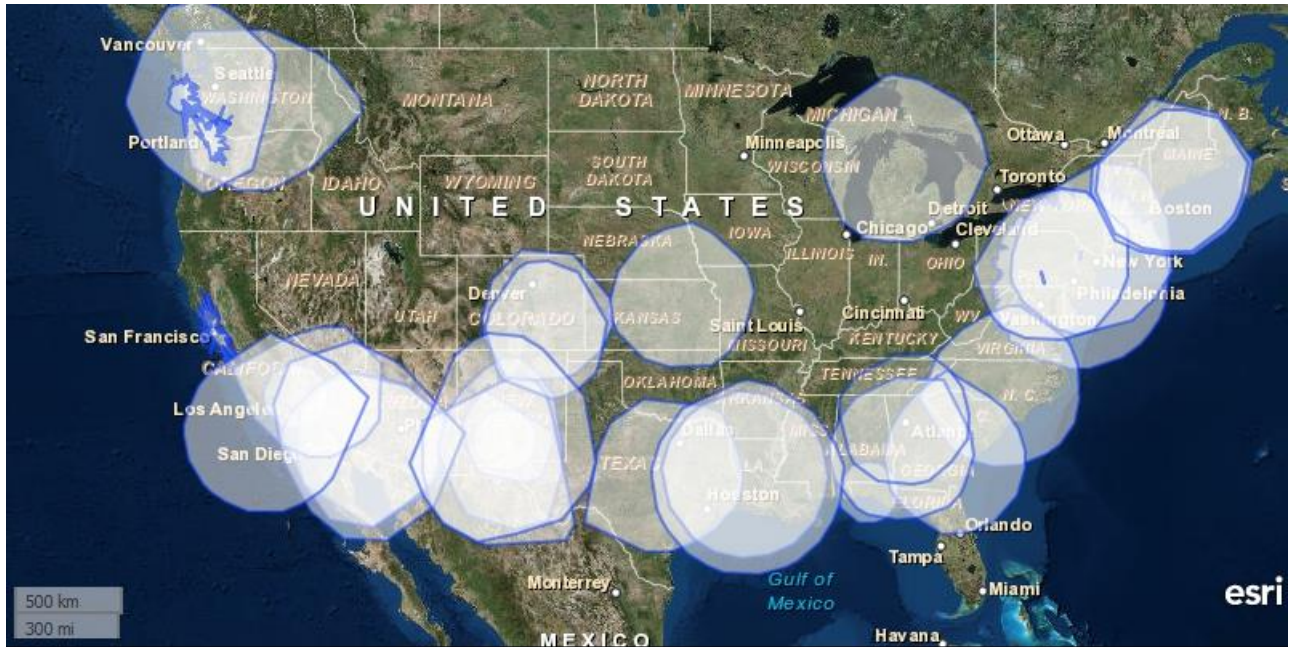


Figure E-32. 3255-3260 MHz Band Segment

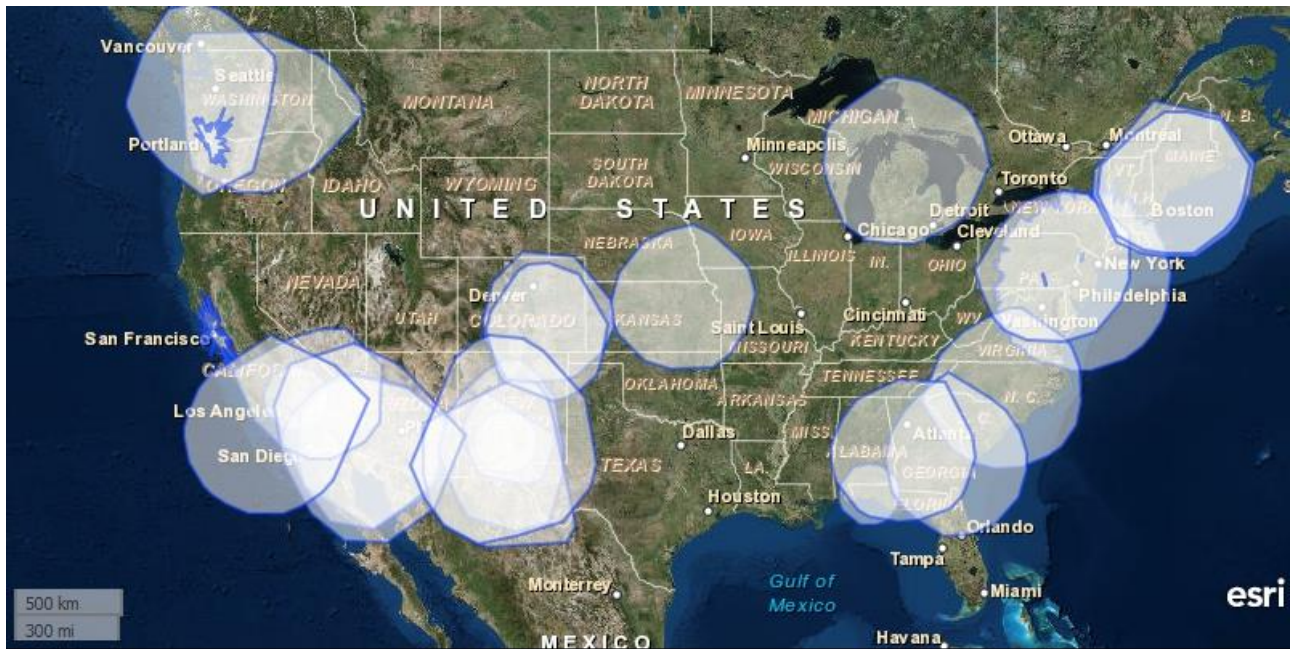


Figure E-33. 3260-3265 MHz Band Segment

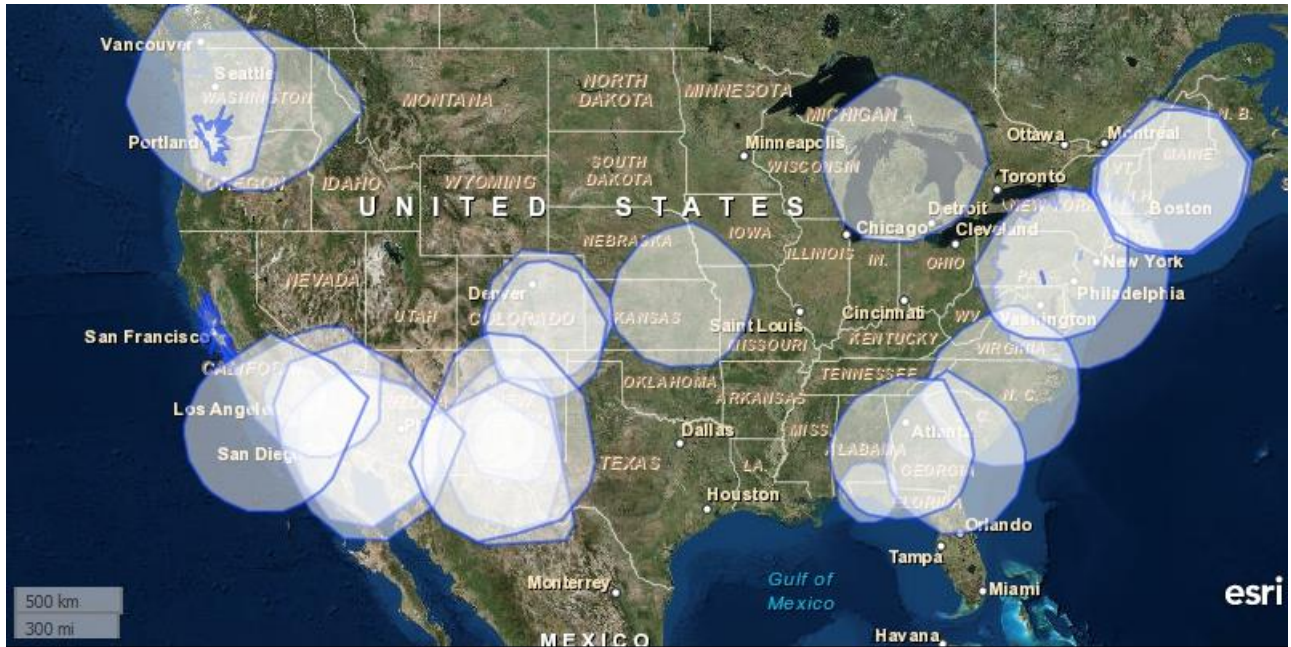


Figure E-34. 3265-3270 MHz Band Segment

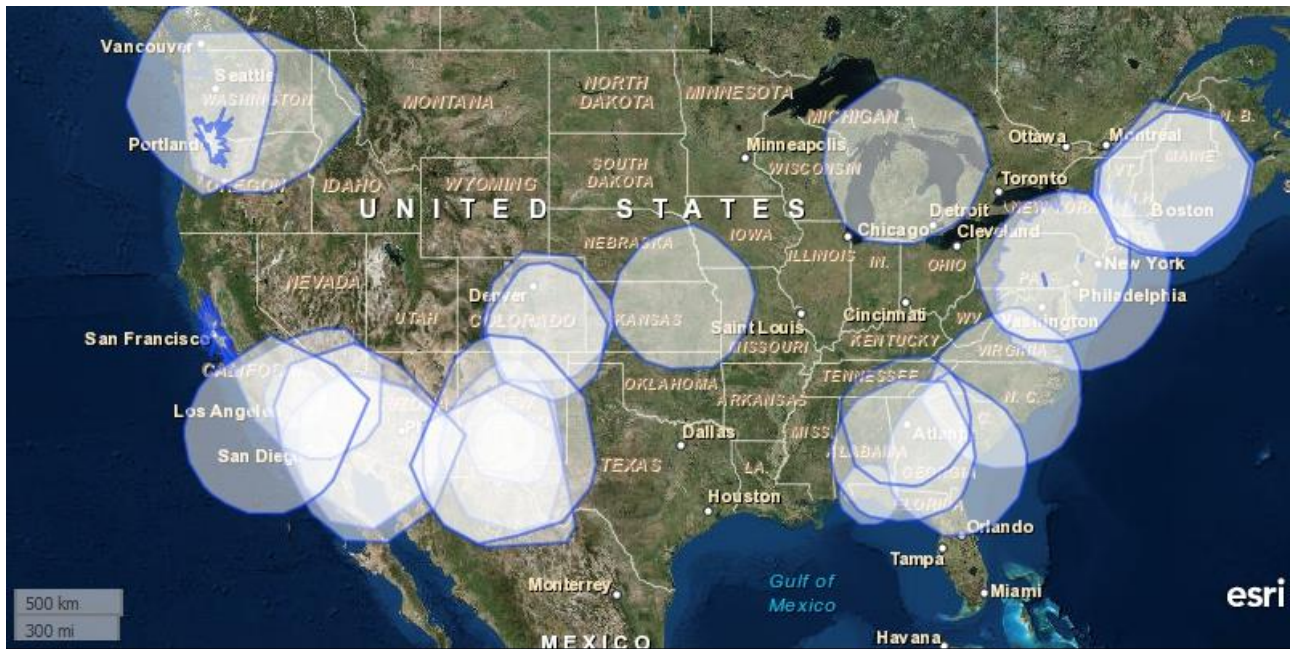


Figure E-35. 3270-3275 MHz Band Segment

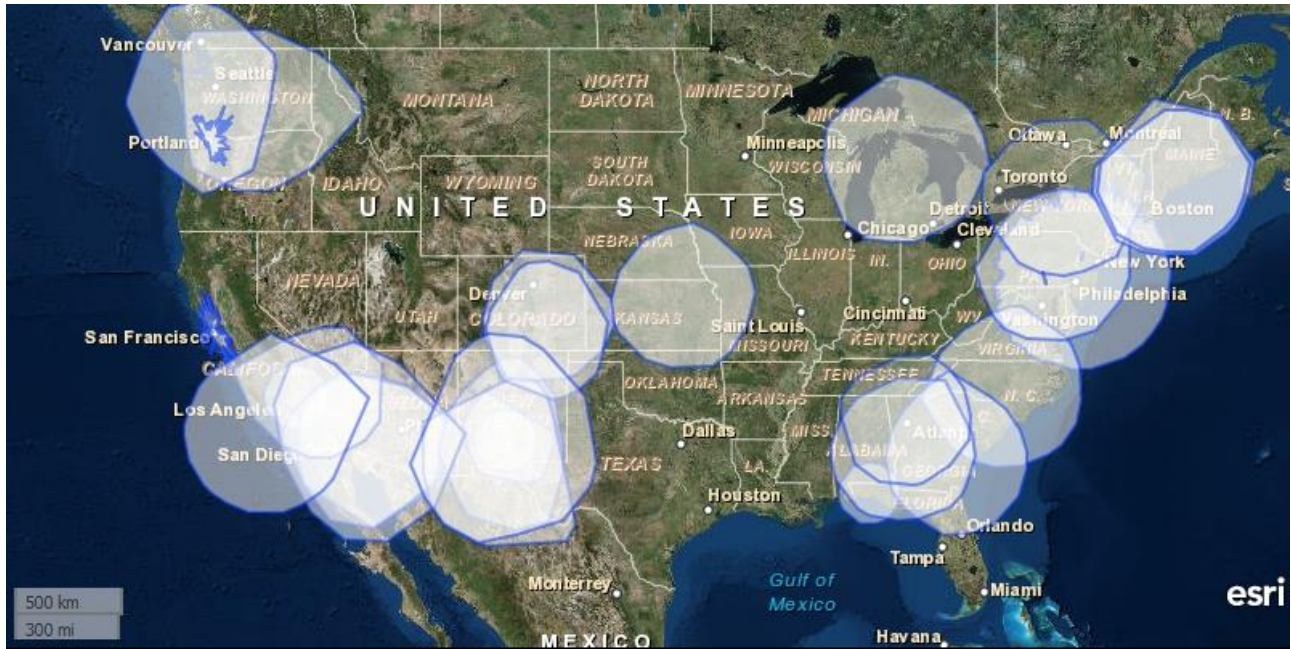


Figure E-36. 3275-3280 MHz Band Segment

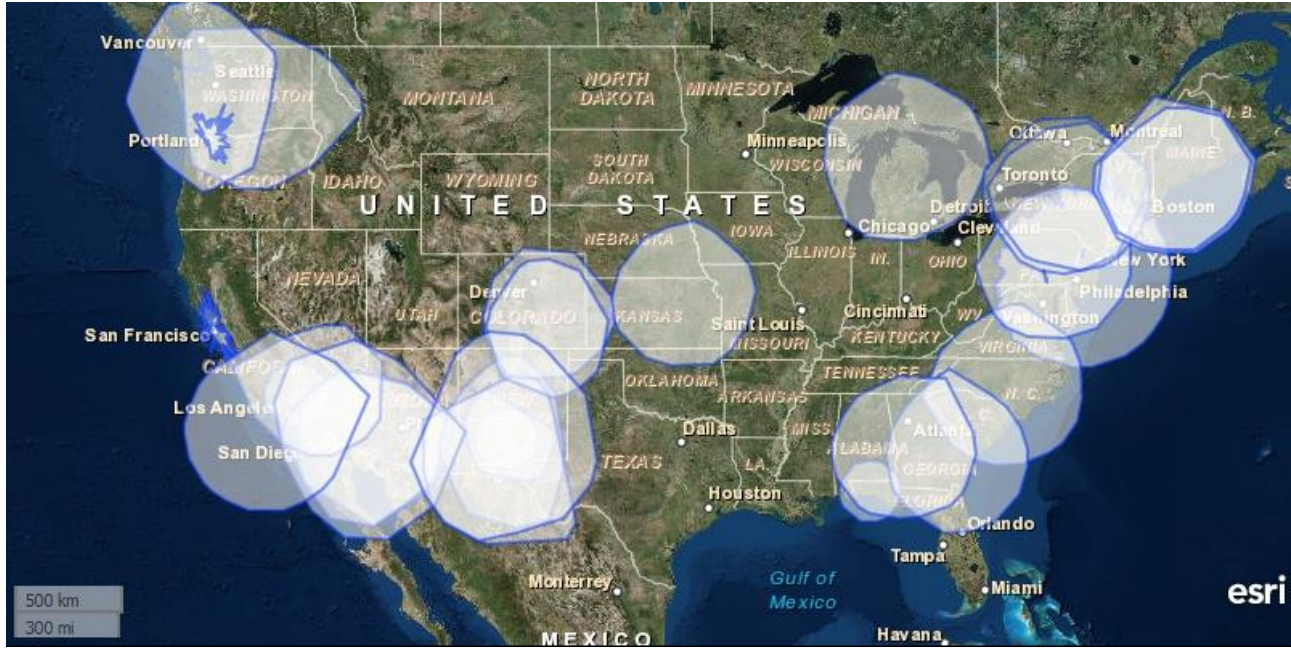


Figure E-37. 3280-3285 MHz Band Segment

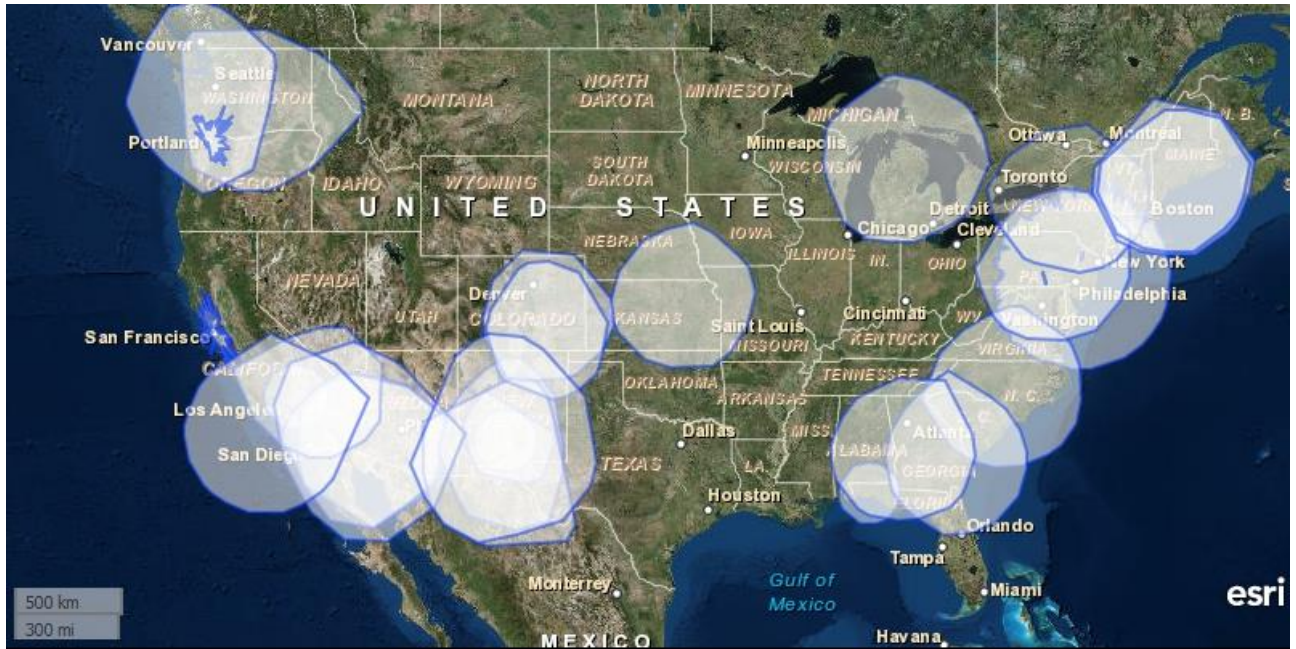


Figure E-38. 3285-3290 MHz Band Segment

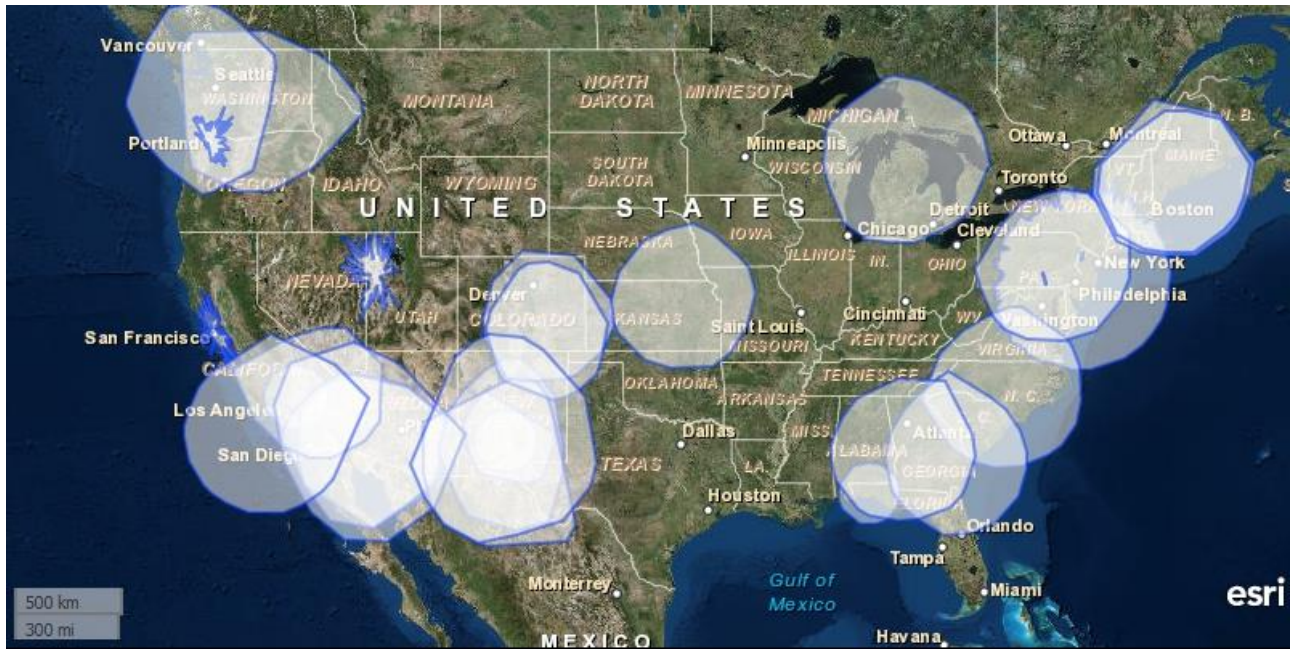


Figure E-39. 3290-3295 MHz Band Segment

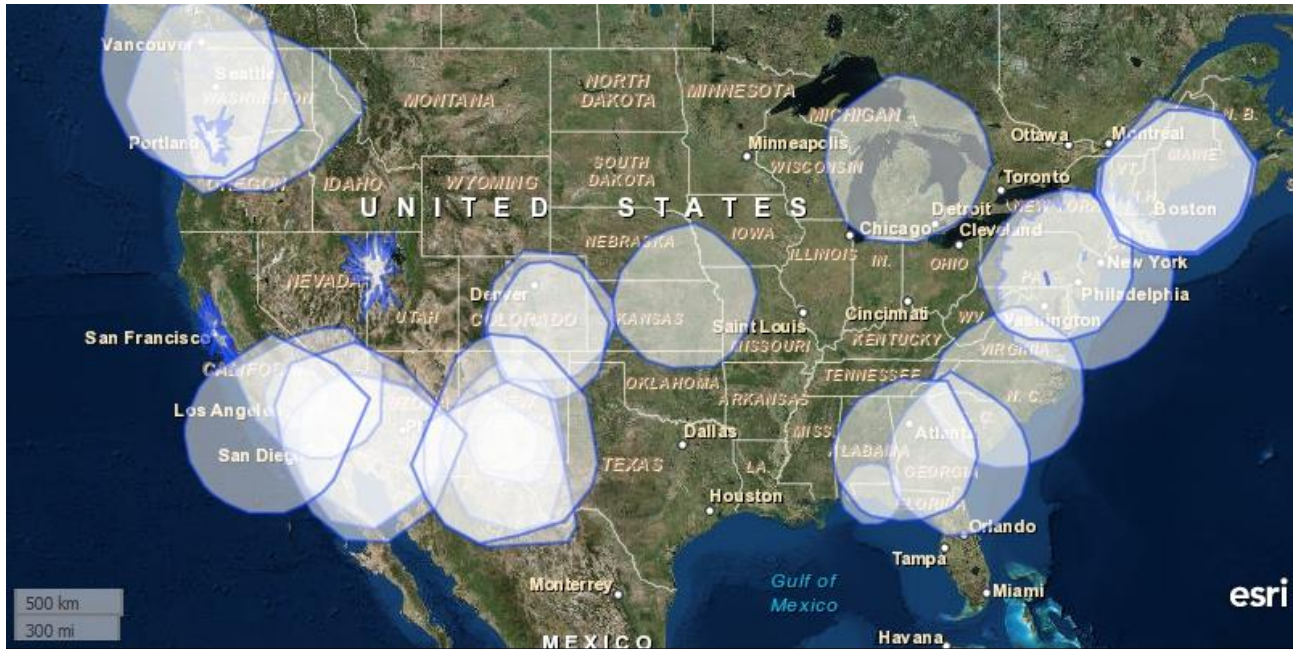


Figure E-40. 3295-3300 MHz Band Segment

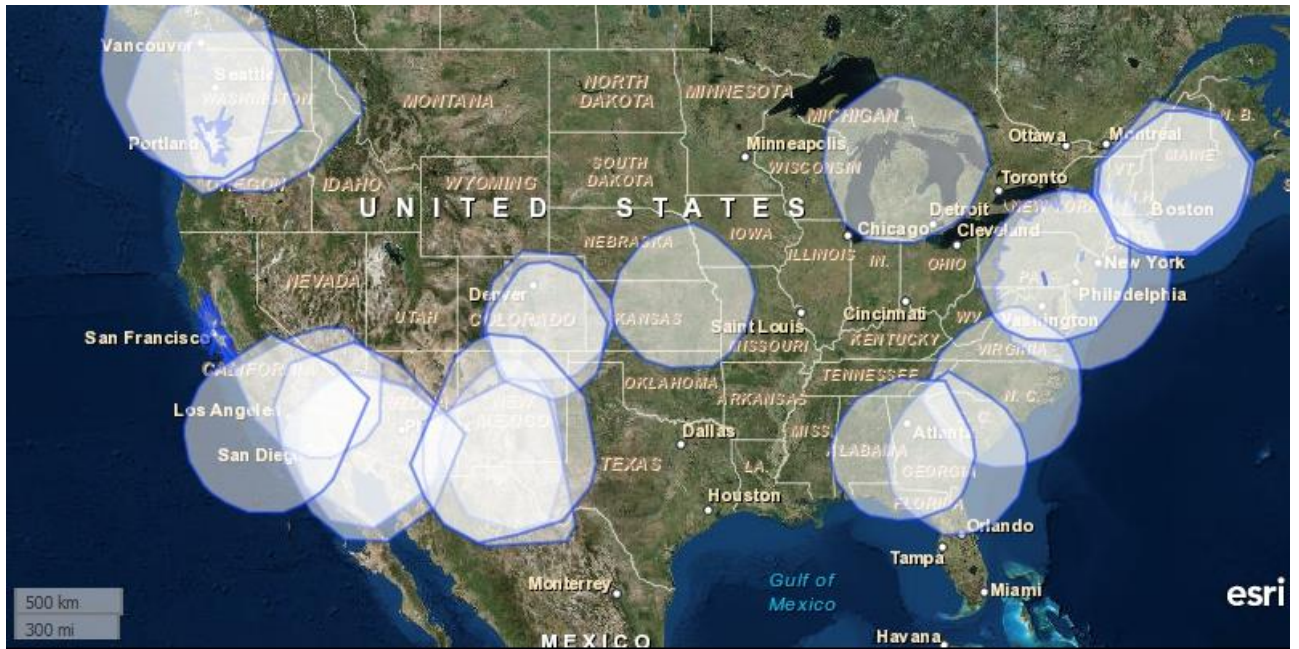


Figure E-41. 3300-3305 MHz Band Segment

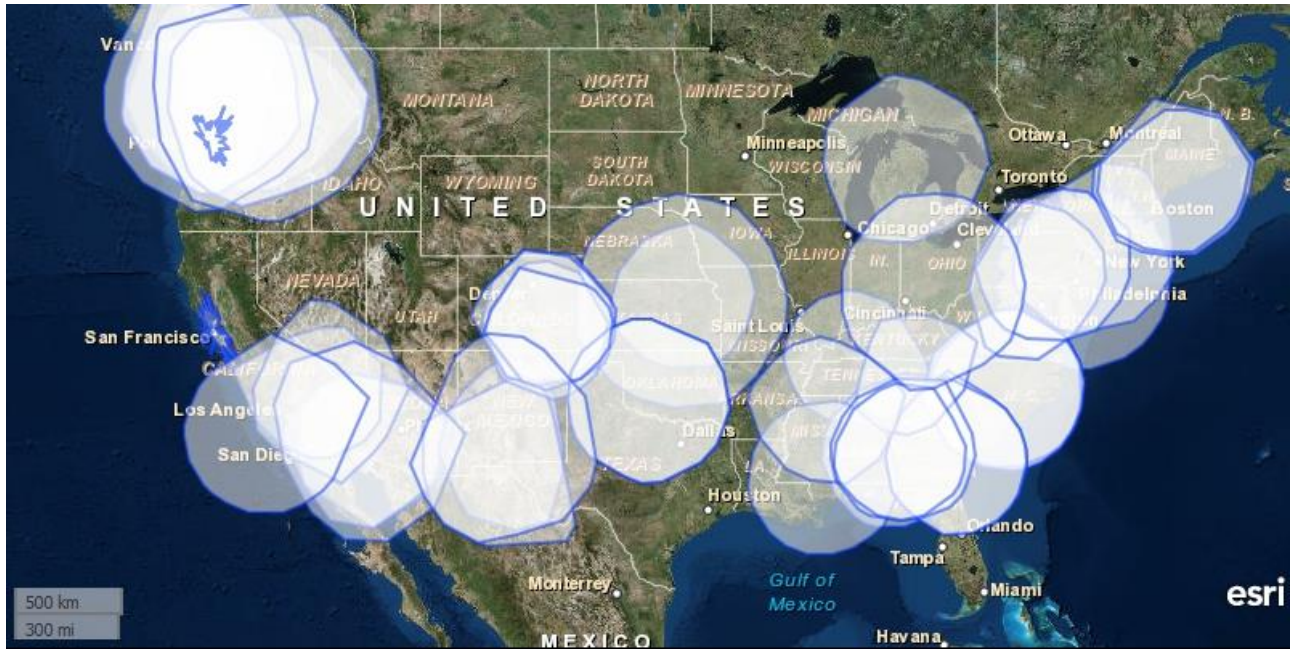


Figure E-42. 3305-3310 MHz Band Segment

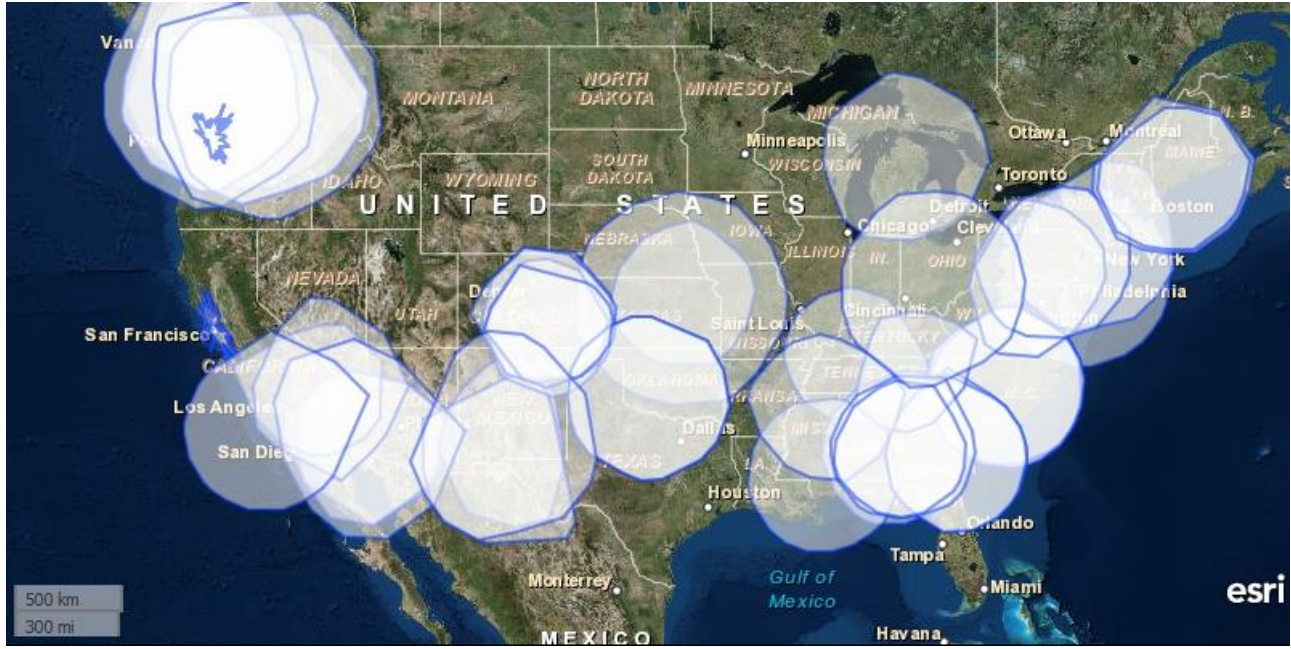


Figure E-43. 3310-3315 MHz Band Segment

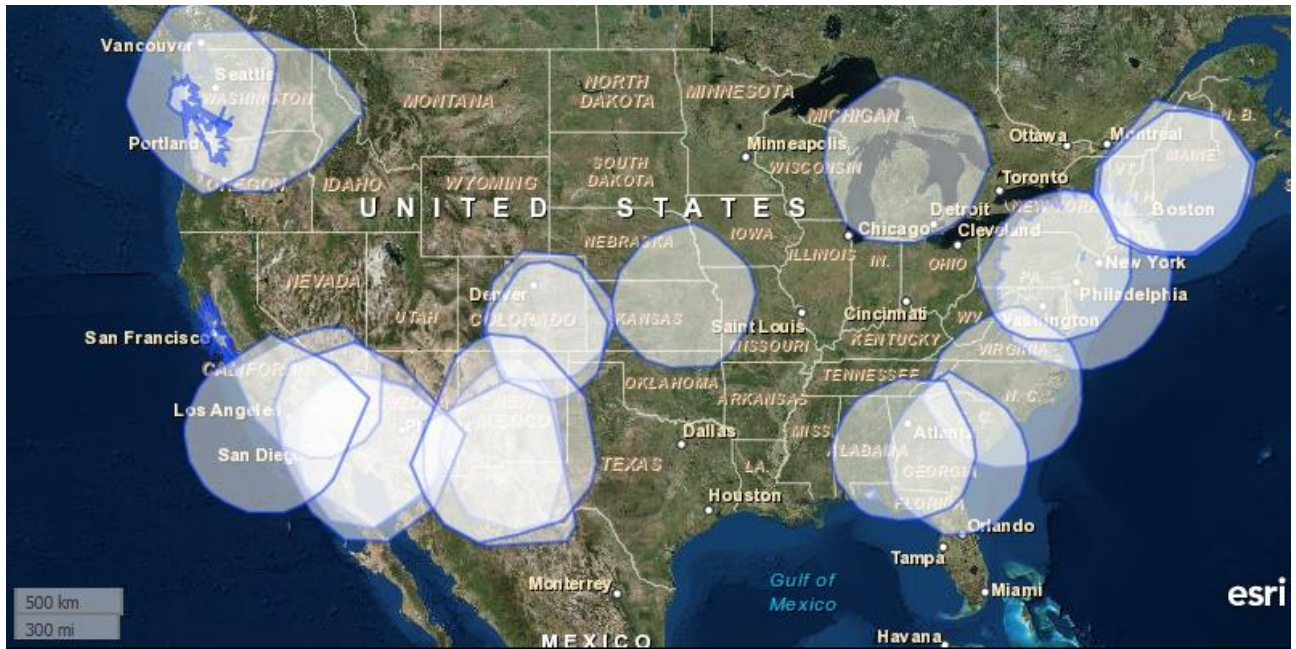


Figure E-44. 3315-3320 MHz Band Segment

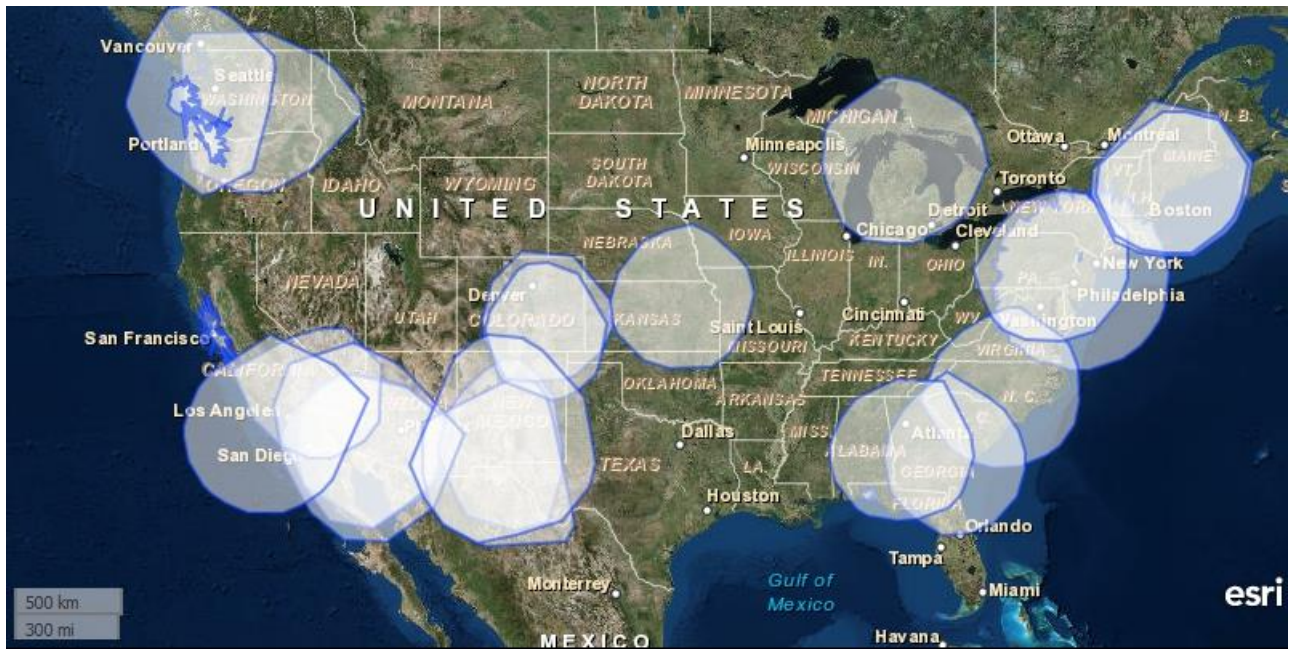


Figure E-45. 3320-3225 MHz Band Segment

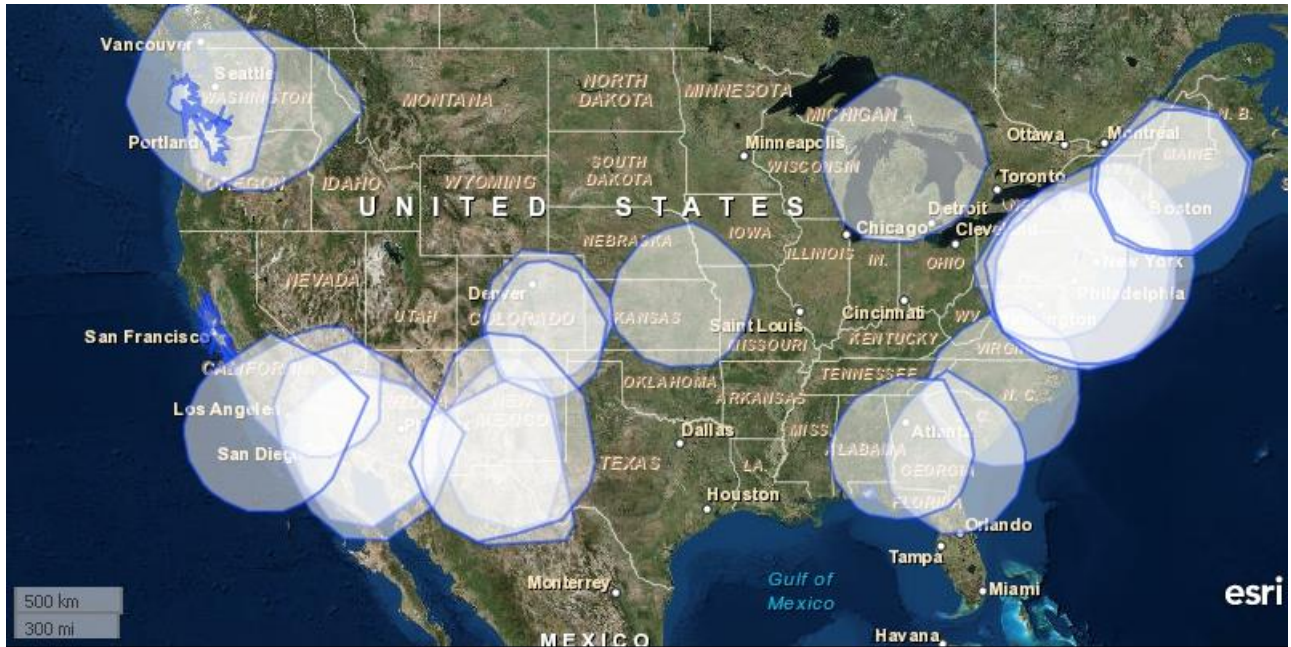


Figure E-46. 3325-3330 MHz Band Segment

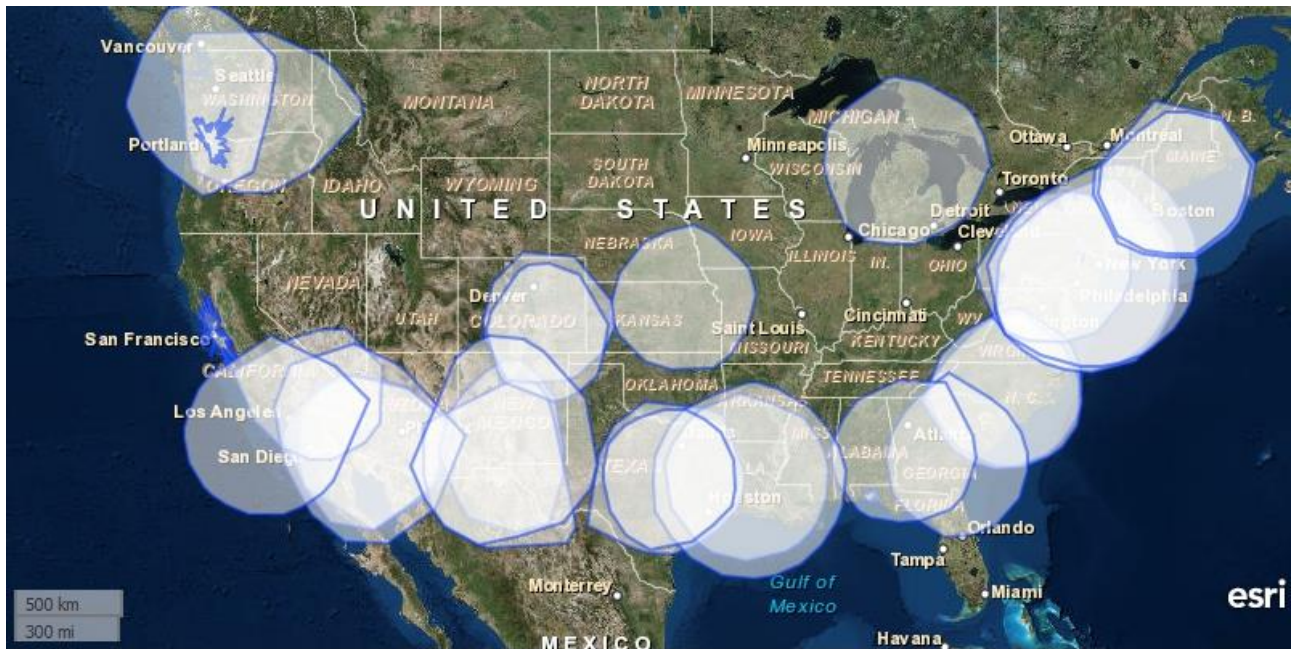


Figure E-47. 3330-3335 MHz Band Segment

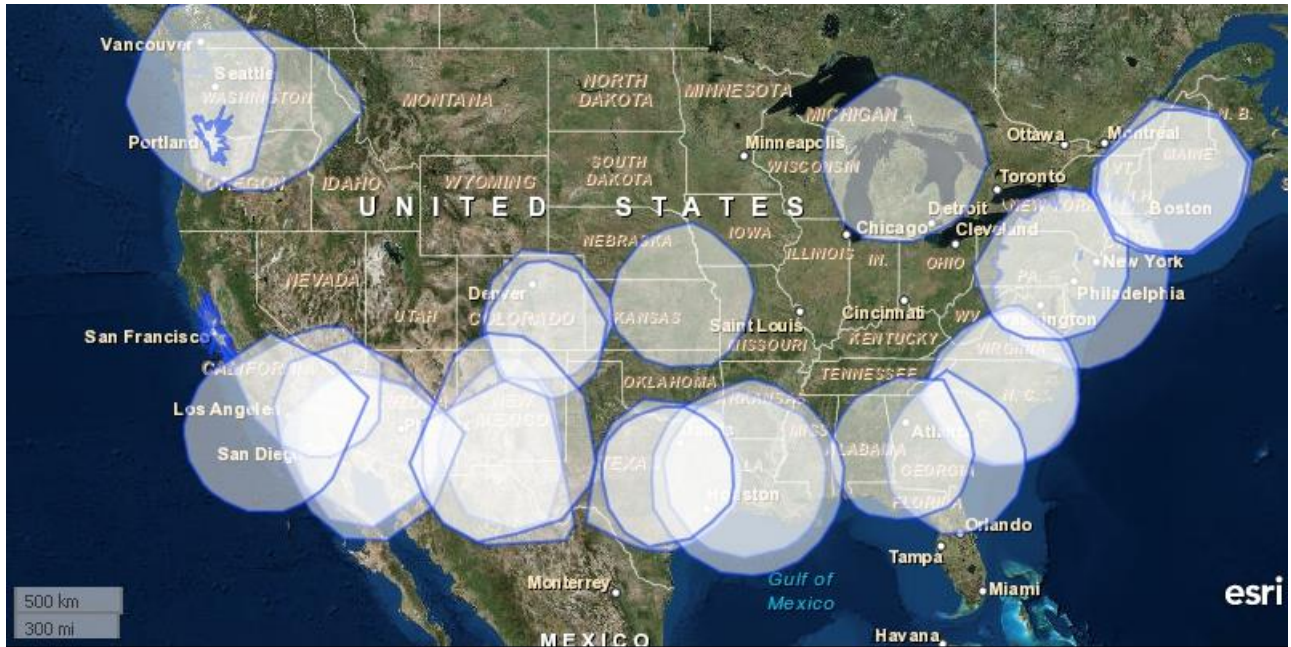


Figure E-48. 3335-3340 MHz Band Segment

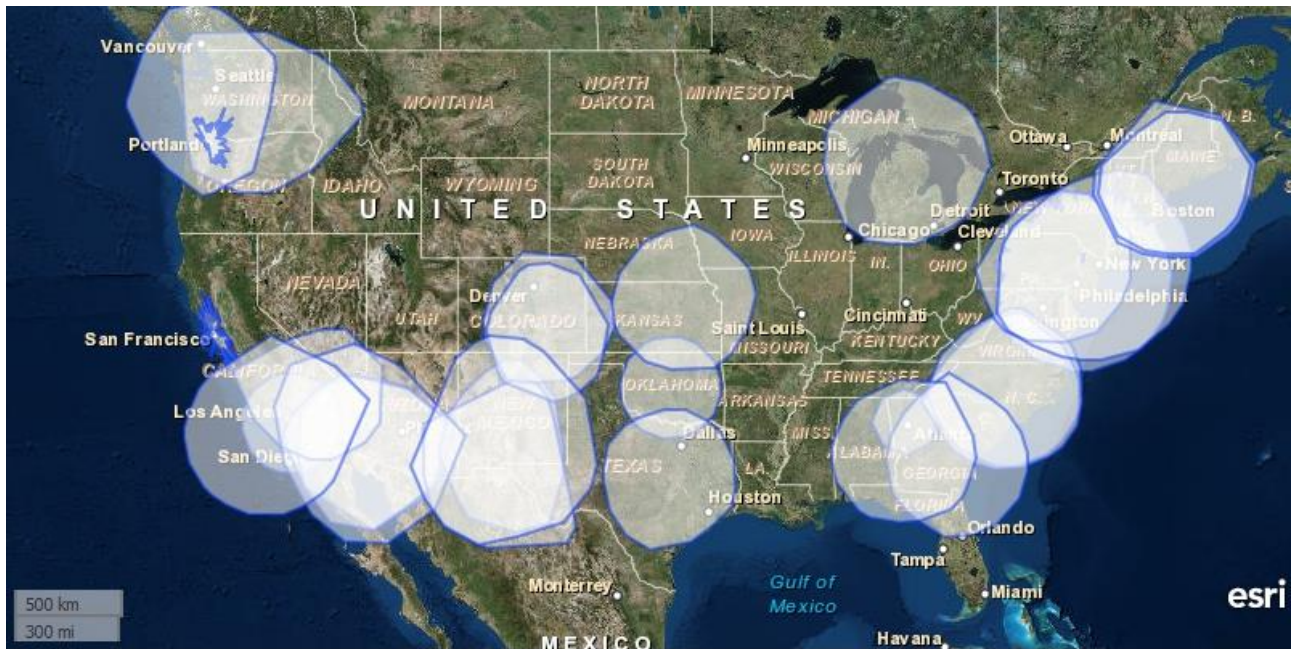


Figure E-49. 3340-3345 MHz Band Segment

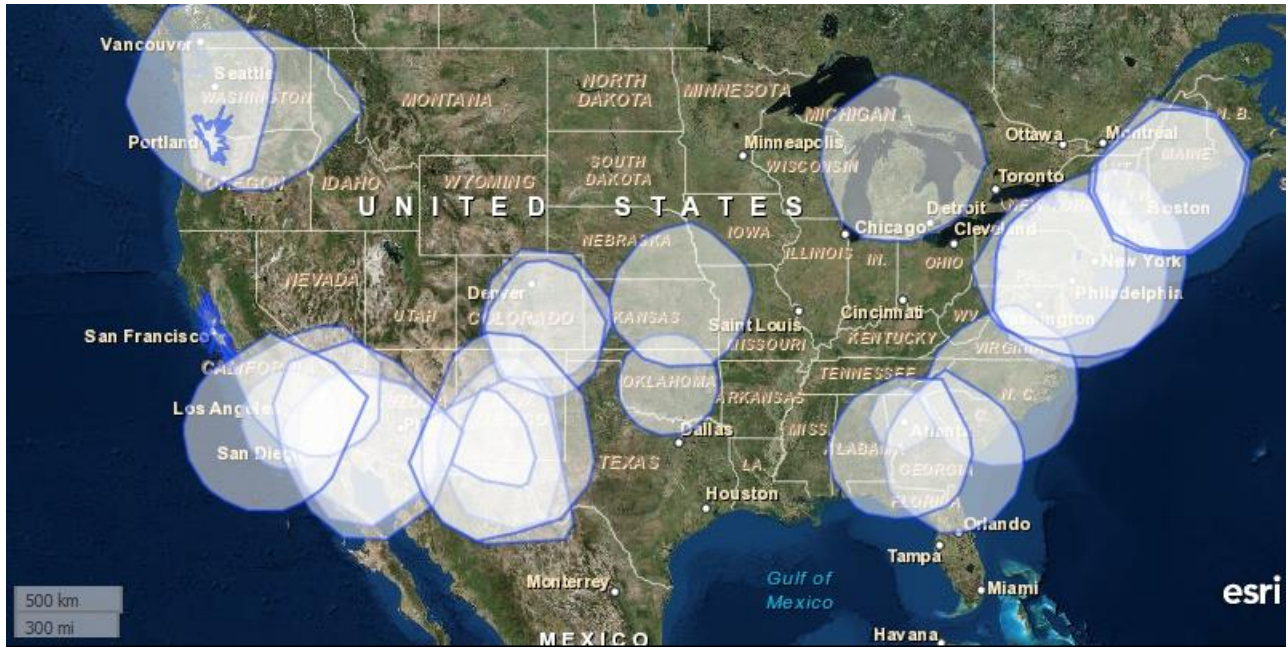


Figure E-50. 3345-3350 MHz Band Segment

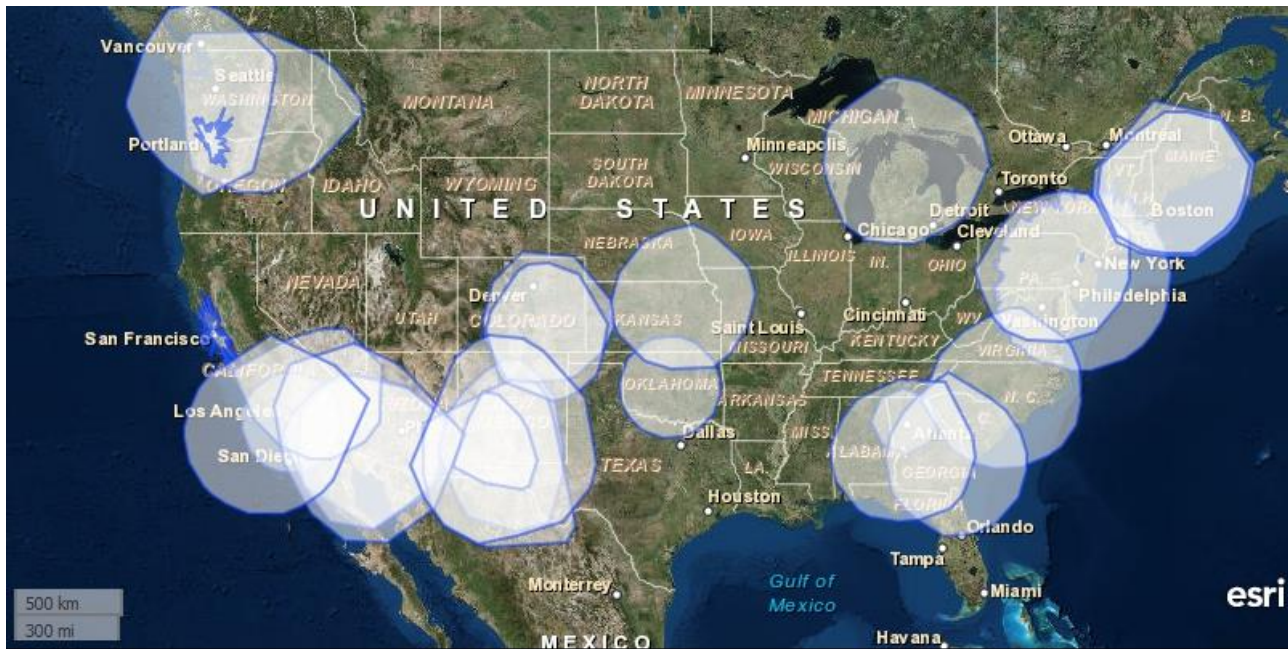


Figure E-51. 3350-3335 MHz Band Segment

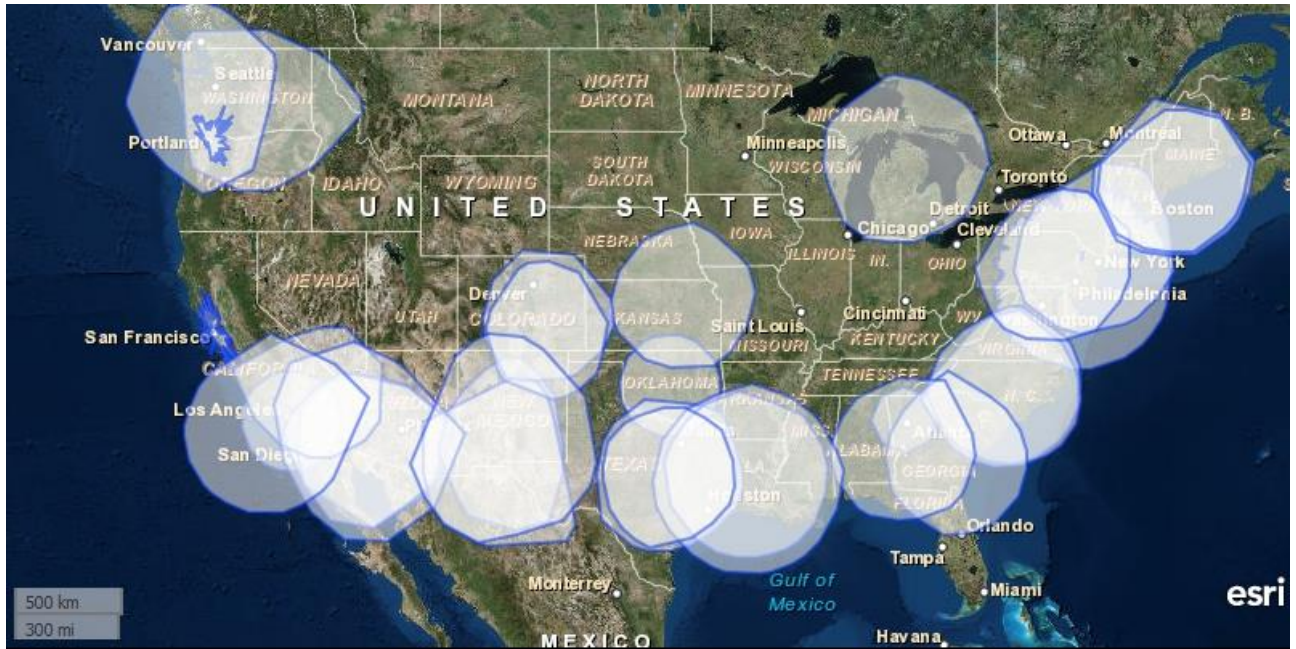


Figure E-52. 3355-3360 MHz Band Segment

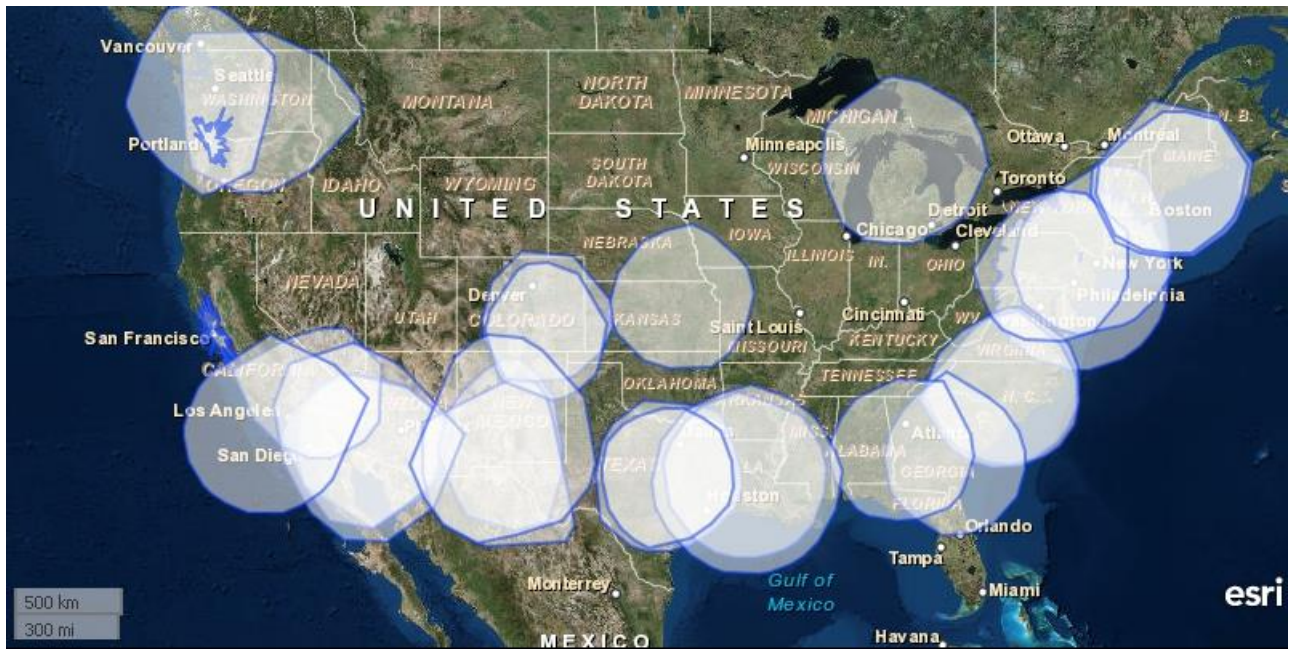


Figure E-53. 3360-3365 MHz Band Segment

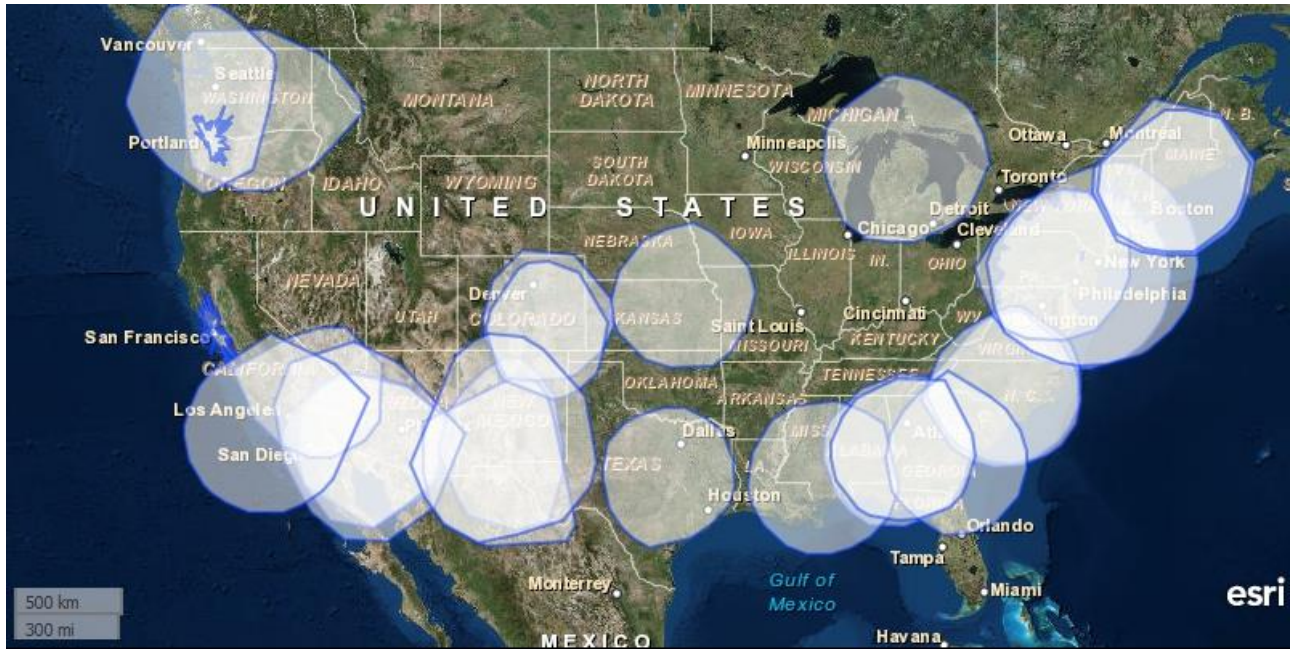


Figure E-54. 3365-3370 MHz Band Segment

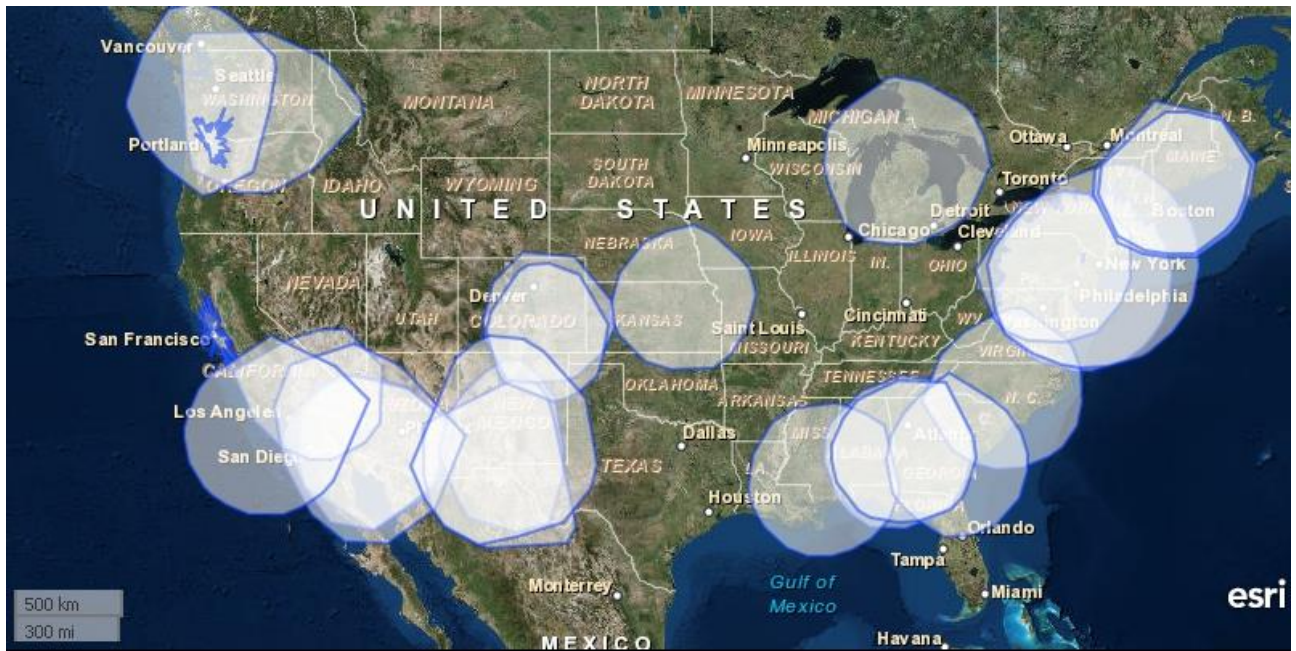


Figure E-55. 3370-3375 MHz Band Segment

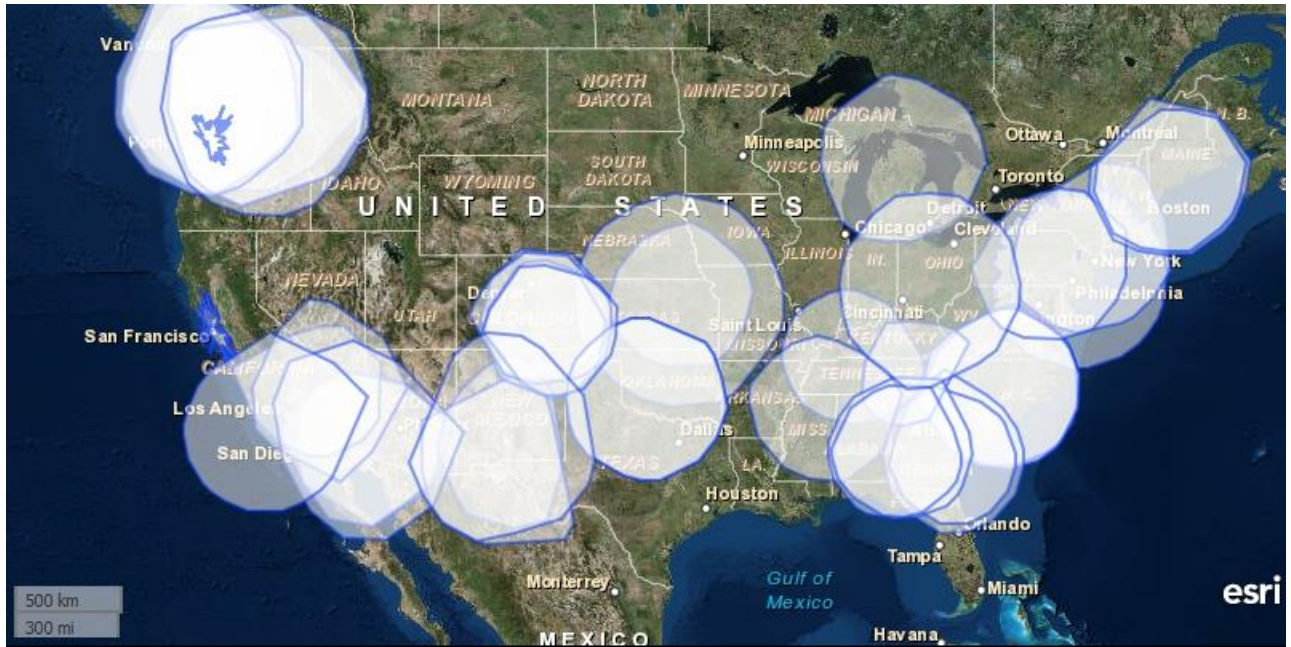


Figure E-56. 3375-3380 MHz Band Segment

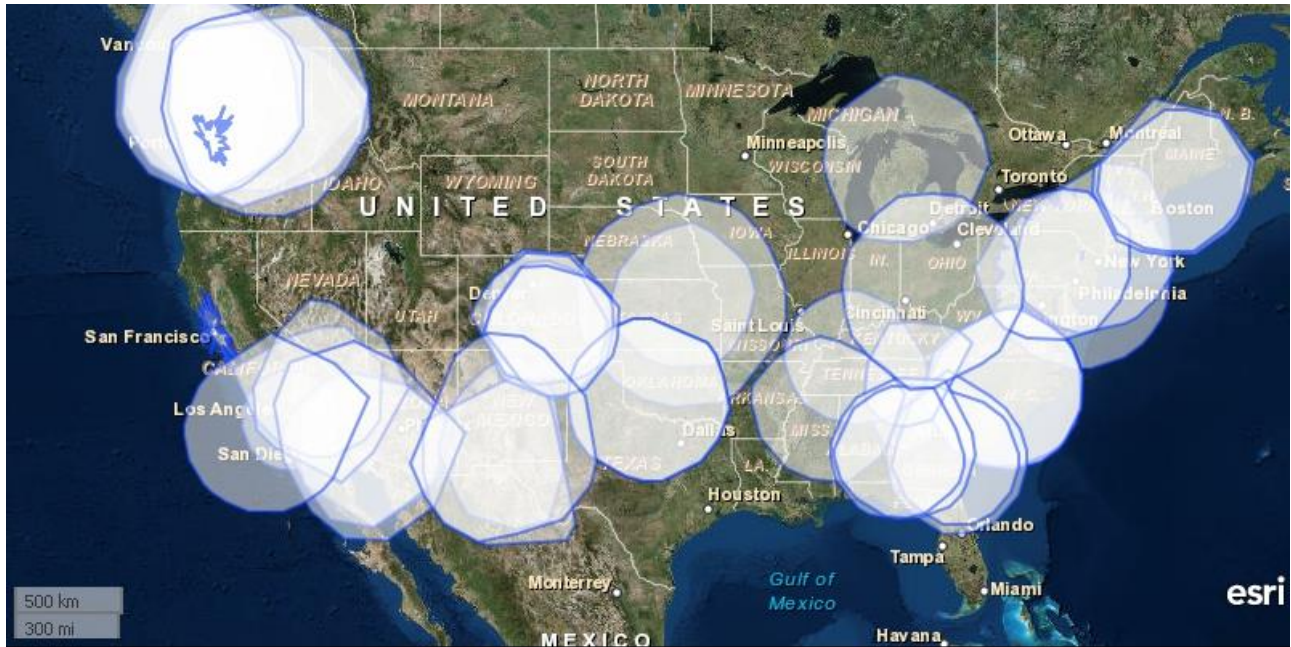


Figure E-57. 3380-3385 MHz Band Segment

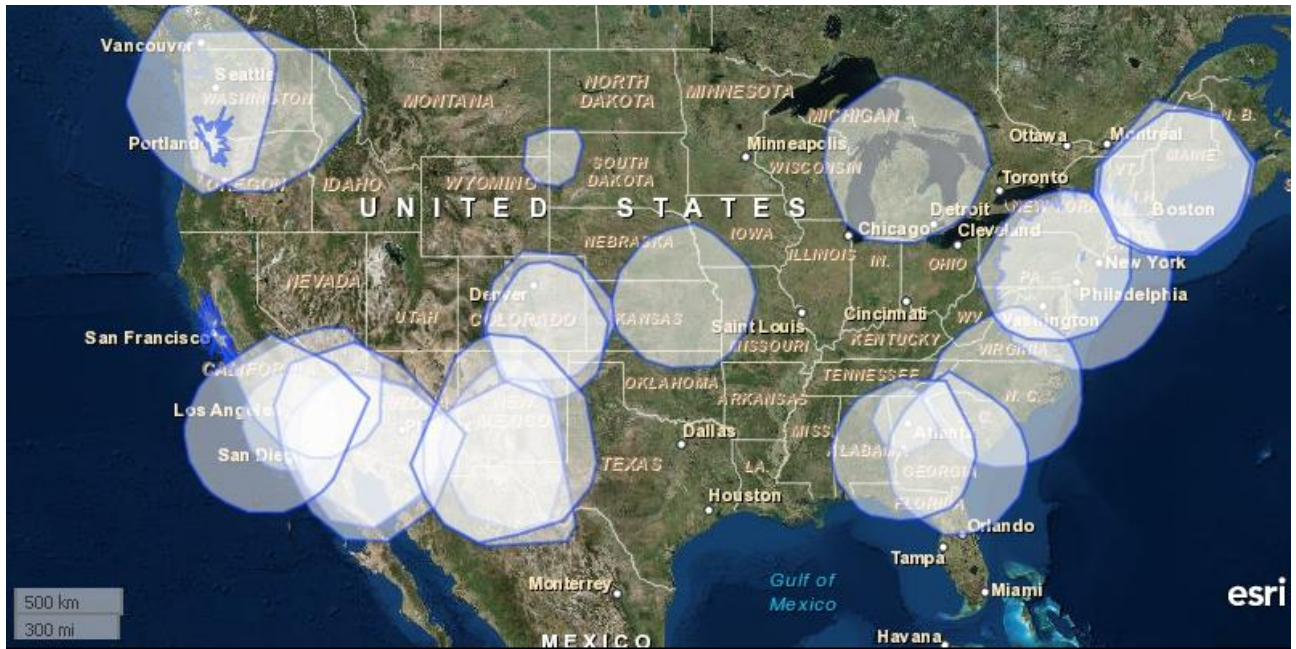


Figure E-58. 3385-3390 MHz Band Segment

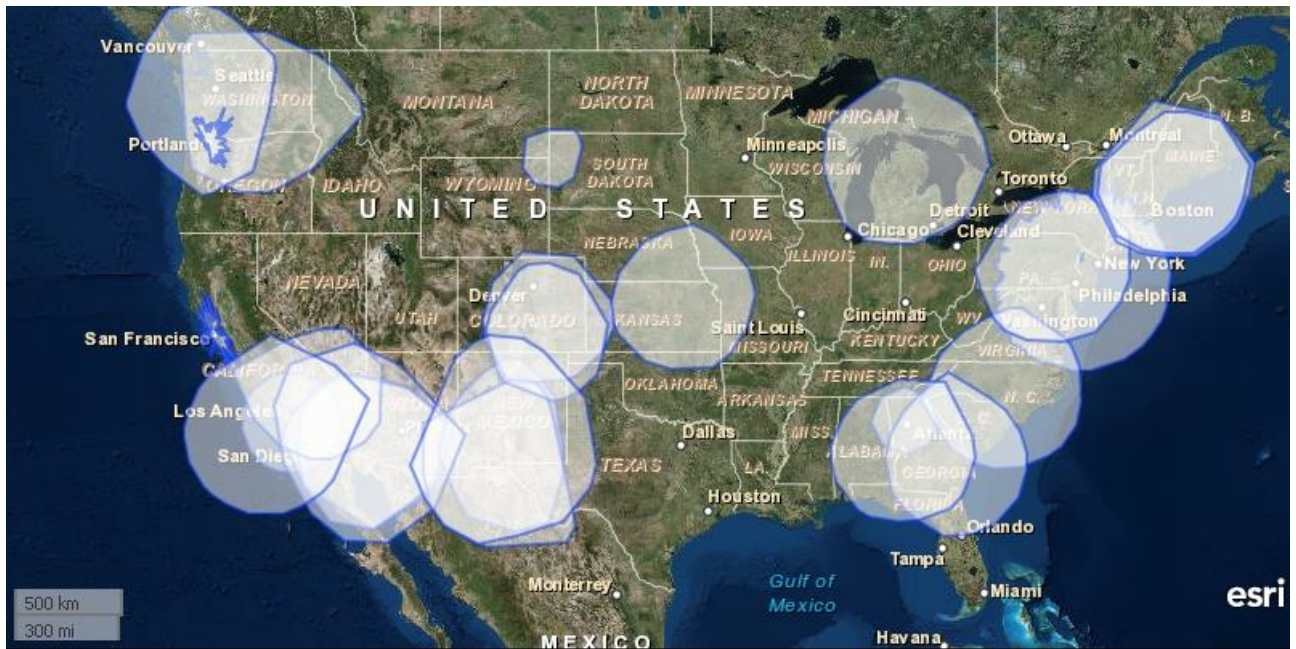


Figure E-59. 3390-3395 MHz Band Segment

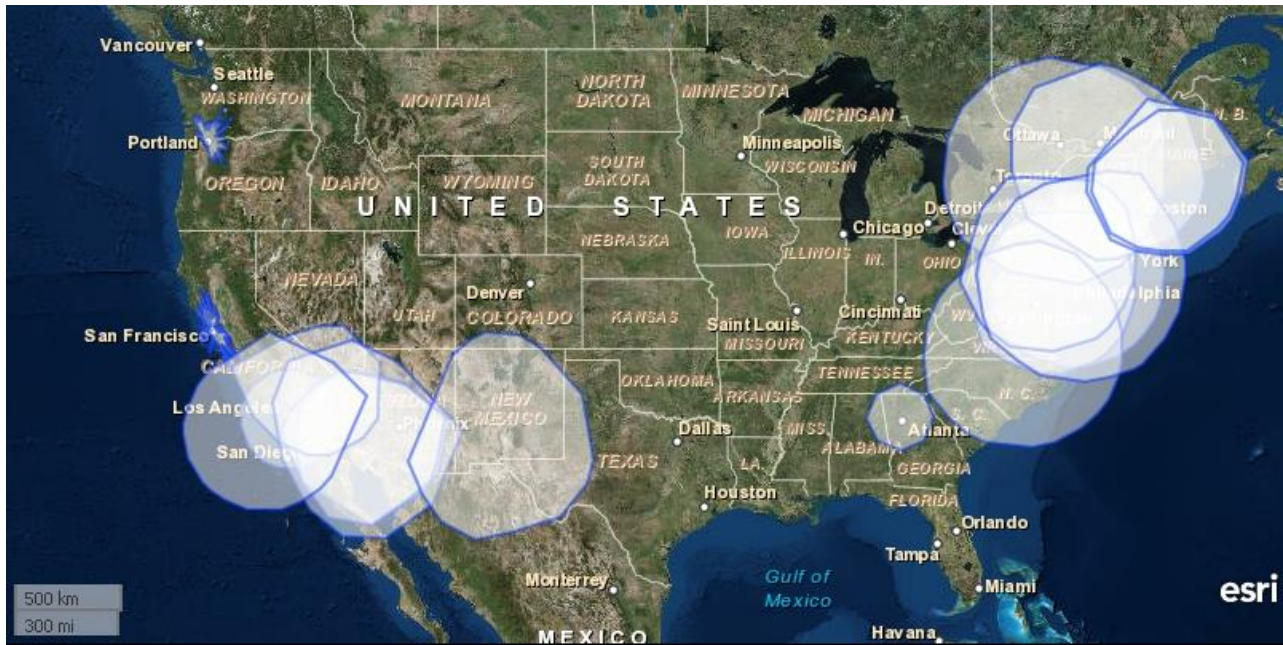


Figure E-60. 3395-3400 MHz Band Segment

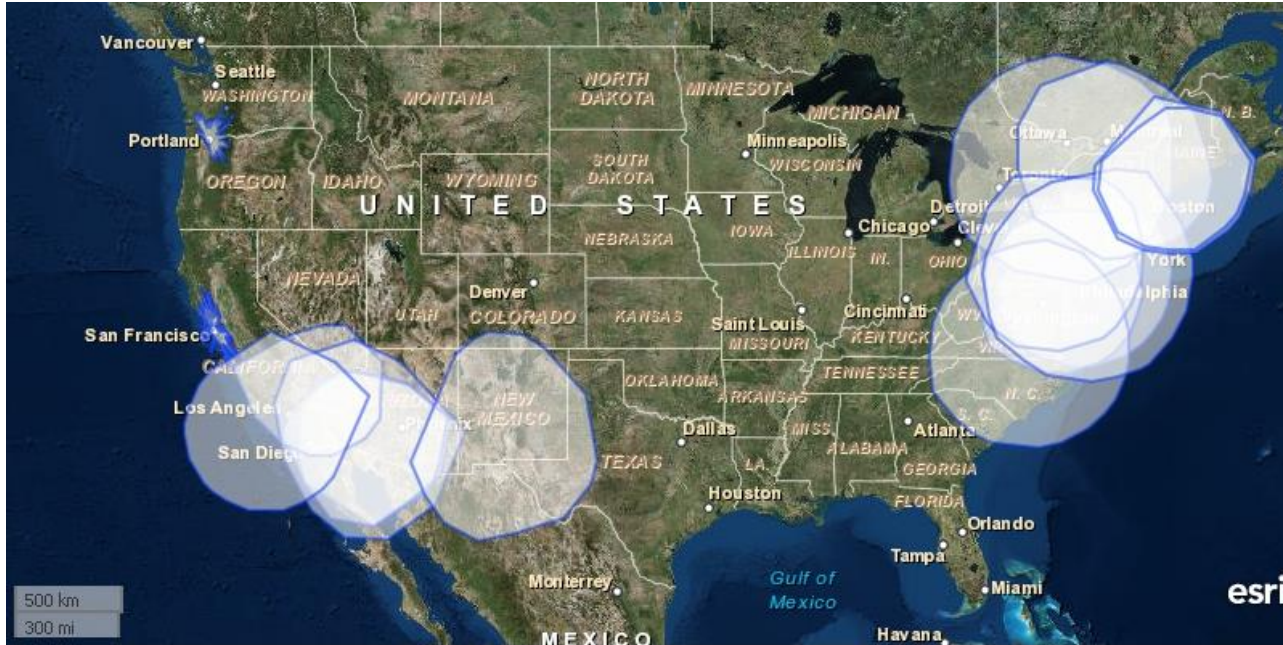


Figure E-61. 3400-3405 MHz Band Segment



Figure E-62. 3405-3410 MHz Band Segment



Figure E-63. 3410-3415 MHz Band Segment



Figure E-64. 3415-3420 MHz Band Segment



Figure E-65. 3420-3425 MHz Band Segment

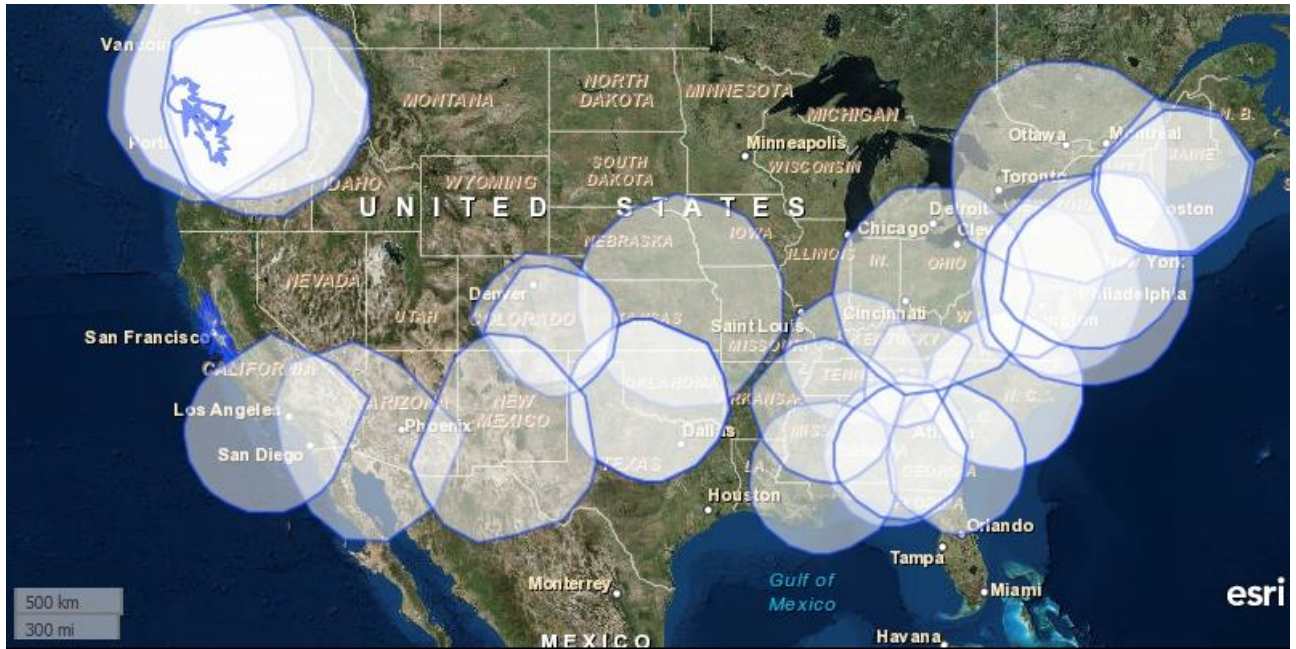


Figure E-66. 3425-3430 MHz Band Segment

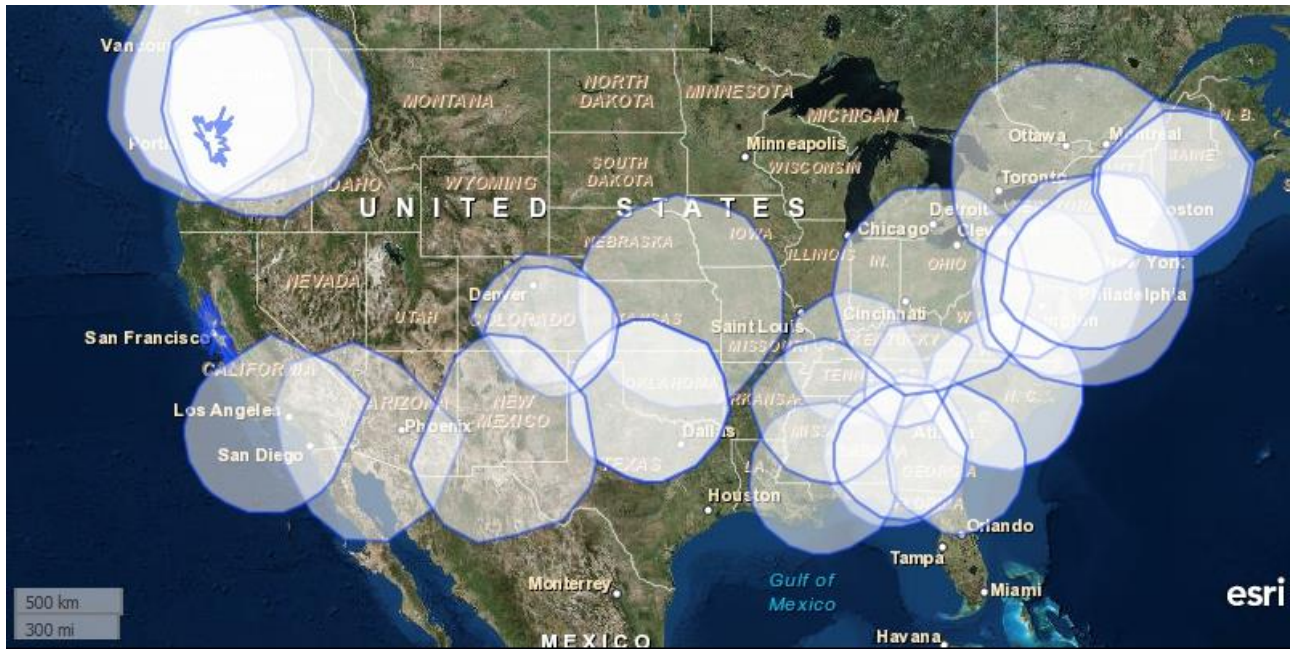


Figure E-67. 3430-3435 MHz Band Segment



Figure E-68. 3435-3440 MHz Band Segment

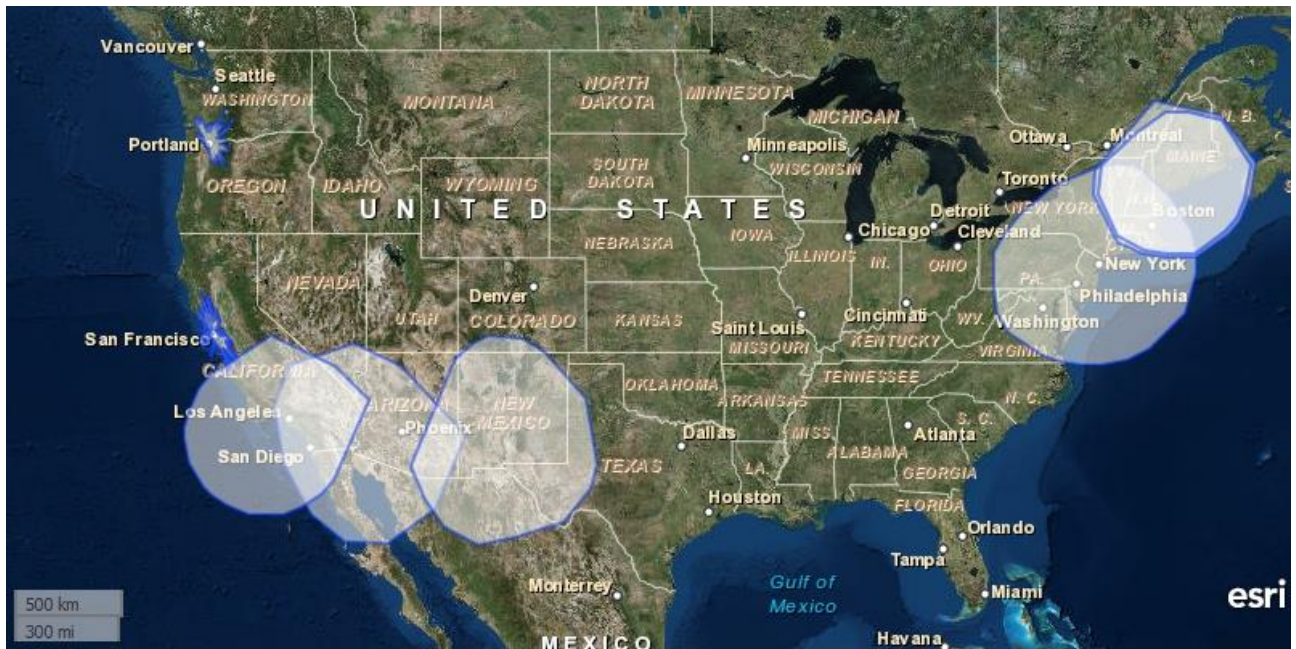


Figure E-69. 3440-3445 MHz Band Segment



Figure E-70. 3445-3450 MHz Band Segment



Figure E-71. 3450-3445 MHz Band Segment



Figure E-72. 3455-3460 MHz Band Segment



Figure E-73. 3460-3465 MHz Band Segment



Figure E-74. 3465-3470 MHz Band Segment



Figure E-75. 3470-3475 MHz Band Segment



Figure E-76. 3475-3480 MHz Band Segment



Figure E-77. 3480-3485 MHz Band Segment

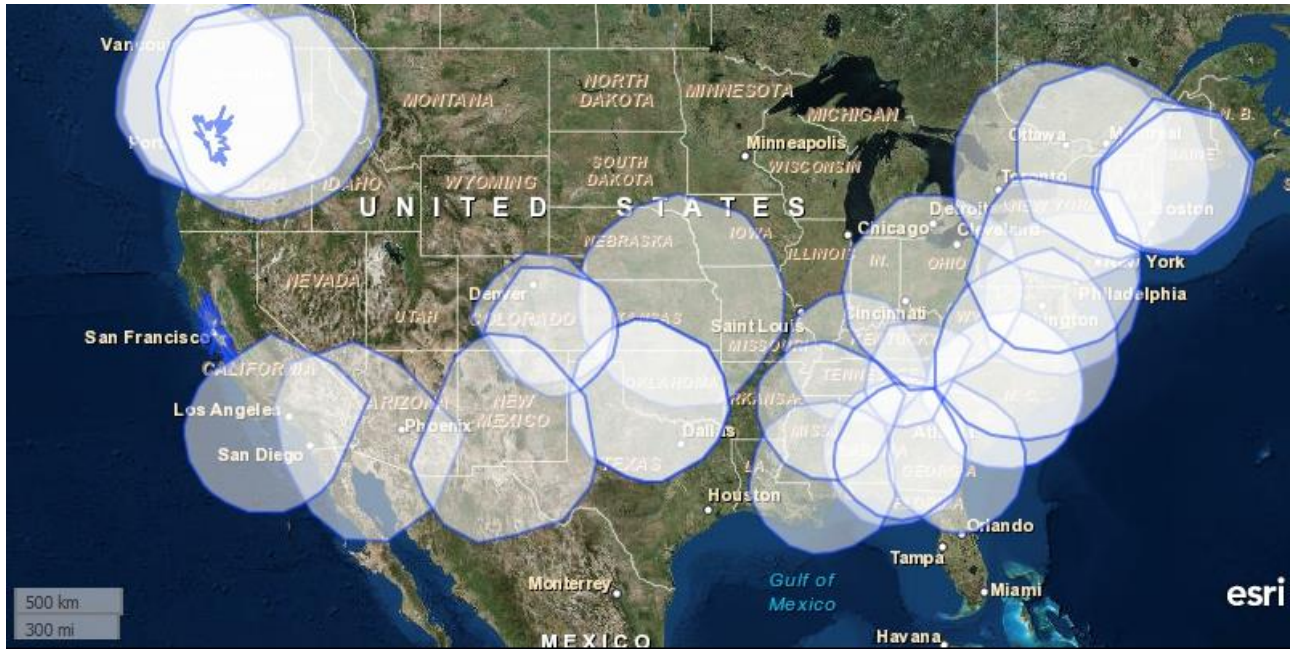


Figure E-78. 3485-3490 MHz Band Segment

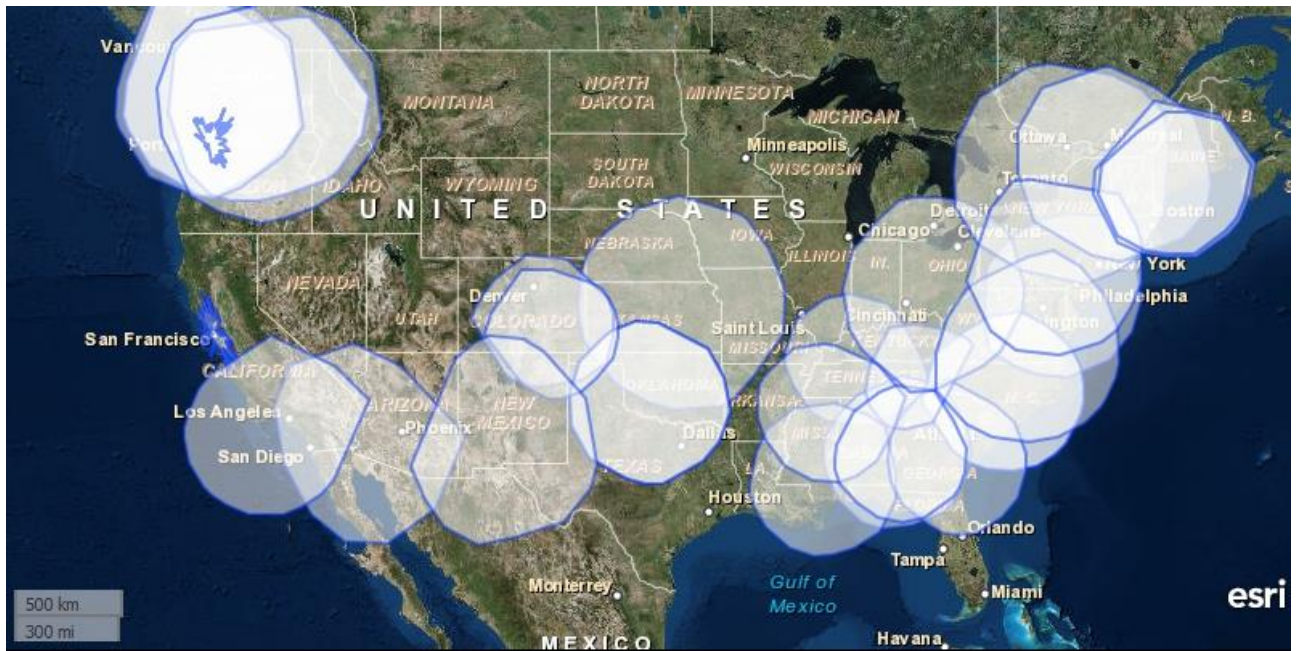


Figure E-79. 3490-3495 MHz Band Segment



Figure E-80. 3495-3500 MHz Band Segment



Figure E-81. 3500-3505 MHz Band Segment



Figure E-82. 3505-3510 MHz Band Segment



Figure E-83. 3510-3515 MHz Band Segment



Figure E-84. 3515-3520 MHz Band Segment



Figure E-85. 3520-3525 MHz Band Segment



Figure E-86. 3525-3530 MHz Band Segment



Figure E-87. 3530-3535 MHz Band Segment



Figure E-88. 3535-3540 MHz Band Segment



Figure E-89. 3540-3545 MHz Band Segment



Figure E-90. 3545-3550 MHz Band Segment

