

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

In the Matter of
RADWIN, Ltd.
Request for waiver of Section 15.407(a) of the
rules for Unlicensed National Information
Infrastructure devices in the 5.15-5.25 GHz and
5.725-5.85 GHz bands
ET Docket No. 20-128

ORDER

Adopted: July 16, 2020

Released: July 16, 2020

By the Acting Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. By this Order, we grant the request for waiver of Section 15.407(a) of the Commission’s
rules filed by RADWIN, Ltd. (RADWIN) that will allow it to modify certain of its certified Unlicensed
National Information Infrastructure (U-NII) devices to operate with higher power in the 5.15-5.25 GHz
and 5.725-5.850 GHz bands for a period of 60 days. For the reasons discussed below, we find that there is
good cause to grant RADWIN’s request for waiver subject to certain conditions.

II. BACKGROUND

2. On May 1, 2020, RADWIN filed a request for a waiver of Section 15.407(a) of the
Commission’s rules to allow the operation of its JET point-to-multipoint, beamforming fixed wireless
base stations in the 5.15-5.25 GHz and 5.725-5.85 GHz bands at power levels that exceed the limit for
point-to-multipoint systems.1 RADWIN states that the waiver will permit its customers to provide better
high-speed broadband service to subscribers so that they can stay connected and access essential services
during the COVID-19 pandemic.2

3. Sections 15.407(a)(1)(i) and 15.407(a)(3) of the Commission’s rules permit U-NII
devices to operate in the 5.15-5.25 GHz and 5.725-5.85 GHz bands with a maximum conducted power
output of one watt (30 dBm) and an antenna gain of up to 6 dBi, i.e., an EIRP limit of 36 dBm.3 If the
maximum directional gain of the antenna exceeds 6 dBi, the conducted power output must be reduced by
the amount in dB that the antenna gain exceeds 6 dBi, which ensures that the EIRP does not exceed 36
dBm.4 EIRP levels greater than 36 dBm are permitted for fixed point-to-point systems but not for point-
to-multipoint systems.5 RADWIN is seeking a waiver to permit the operation of point-to-multipoint

1 RADWIN, Ltd. Emergency Waiver Request, ET Docket No. 20-128 (filed May 1, 2020) (RADWIN Waiver
Request). The devices for which RADWIN requests a waiver are certified under FCC ID: Q3K-BFJET5X.

2 RADWIN Waiver Request at 2. RADWIN identifies the customers (and the state in which they operate) for which
the waiver would apply. See RADWIN Waiver Request, Att. 1.

3 47 CFR § 15.407(a)(1)(i), (a)(3).

4 Id.

systems that use multiple sequential beams, with EIRP up to 48 dBm, i.e., 12 dB above the limit prescribed by the Commission's rules.⁶ In support of its waiver request, RADWIN sets forth the procedures that its customers would undertake to enable higher power operations under a waiver for a period of 60 days, and the procedures to revert the equipment back to the normally permissible power levels after the expiration of a waiver.⁷ RADWIN subsequently amended its request for operation in the 5.15-5.25 GHz band to a level of 6 dB above the limit, i.e., an EIRP of 42 dBm, which it states is necessary to ensure that its equipment complies with the undesirable emission limits in Section 15.407(b), and clarified that with the 12 dB increase in power for operation in the 5.725-5.850 GHz band, the equipment would still comply with the undesirable emission limits.⁸

4. RADWIN also provided additional steps it will take to ensure that its customers reduce devices' power to the levels permitted by the rules when the waiver period ends.⁹ Specifically, RADWIN will obtain the name and contact information for each customer that connects to its servers to download the waiver capabilities.¹⁰ Each device to which the waiver mode is applied will automatically send its serial number, geographic coordinates and power settings to RADWIN, and RADWIN will compile a list of every customer and every device that operates at higher power.¹¹ RADWIN will send notifications to customers to remind them when the waiver period is ending and will record which customers contact its servers to reduce device power upon expiration of the waiver.¹² As such, RADWIN will have a record of which devices were not reverted back to pre-waiver mode, identified by serial number, customer name, and geographic coordinates.¹³ RADWIN will notify customers when they install the power upgrade capability that it will provide the Commission with a list of those that do not timely downgrade after the waiver ends.¹⁴

5. In response to the Office of Engineering and Technology's (OET) request for comment on the RADWIN waiver request, fourteen parties filed comments and RADWIN filed reply comments.¹⁵ A number of wireless internet service providers support the waiver request.¹⁶ No party objected to the waiver request outright, but several parties, including Globalstar, 5G Automotive Association, NCTA and

(Continued from previous page) _____

⁵ *Id.* In the 5.15-5.25 GHz band, fixed point-to-point systems may use an antenna with a gain of up to 23 dBi and up to 30 dBm transmitter power, i.e., an EIRP limit of 53 dBm. In the 5.725-5.85 GHz band, fixed point-to-point systems may operate with up to 30 dBm transmitter power and no limit on antenna gain.

⁶ RADWIN Waiver Request at 4.

⁷ *Id.* at 3-5.

⁸ Letter from Adi Nativ, RADWIN, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 20-128, at 2 (Jun. 4, 2020) (RADWIN Jun. 4 *ex parte*).

⁹ *Id.* at 1-2.

¹⁰ *Id.* at 1.

¹¹ *Id.* This list will be updated when customers contact RADWIN's servers to make any changes to device settings while operating under the waiver.

¹² *Id.*

¹³ *Id.* at 1-2.

¹⁴ *Id.* at 2.

¹⁵ *Office of Engineering and Technology Seeks Comment on RADWIN Ltd.'s Request for Emergency Waiver of Section 15.407(a) of the Rules for Unlicensed National Information Infrastructure Devices in the 5.15-5.25 GHz and 5.725-5.85 GHz Bands*, ET Docket No. 20-128, Public Notice, DA 20-497 (OET May 7, 2020).

¹⁶ Big Wave Wireless Comments at 1, PocketiNet Communications Comments at 1, Prairieburg Telephone Comments at 1, Rfwave Comments at 1, Valley Communications Association Comments at 1, Verso Networks Comments at 1.

WiMax Forum support the waiver request so long as it is limited to the requested 60-day time period.¹⁷ These parties are concerned about the impact on various co-channel and adjacent channel operations, e.g., satellite, Cellular Vehicle-to-Everything (C-V2X), Wi-Fi and the Aeronautical Mobile Airport Communication System (AeroMACS), from longer term operation at the higher power levels RADWIN requests.¹⁸ Globalstar requests that the Commission require RADWIN's customers to submit reports providing information on the quantity, radio and antenna model numbers, geographic coordinates, and antenna heights of deployed RADWIN point-to-multipoint base stations.¹⁹

III. DISCUSSION

6. We are authorized to grant a waiver under Section 1.3 of the Commission's rules if the petitioner demonstrates good cause for such action.²⁰ Good cause, in turn, may be found and a waiver granted "where particular facts would make strict compliance inconsistent with the public interest."²¹ To make this public interest determination, the waiver cannot undermine the purposes of the rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.²²

7. We find that granting RADWIN's requested waiver promises to deliver several benefits to consumers of wireless internet service providers that will allow them to stay connected and access essential services during the ongoing challenge of the COVID-19 pandemic. Higher power will provide improved system performance and increased capacity to enable service to more customers simultaneously. This improved performance and capacity will particularly benefit customers in remote areas by providing better access to important services such as telehealth during the current pandemic.

8. We also conclude that, with appropriate operational and technical restrictions to prevent harmful interference to authorized services, granting RADWIN's request for waiver does not undermine the purpose of the rules, i.e., to prevent harmful interference to authorized services. As requested by RADWIN, we are limiting this waiver to a period of 60 days, which will serve to limit the potential impact on authorized services in the same and adjacent bands.²³ No party argued that operation of the RADWIN equipment at the higher power levels it requests for a 60-day time period would result in harmful interference to authorized services.²⁴ In addition, RADWIN equipment will operate at higher power in only a relatively few locations for this limited time period, which will further serve to keep the potential for interference to authorized services low.

¹⁷ Globalstar Comments at 3, 5G Automotive Association Comments at 1-2, NCTA Comments at 2, WiMax Forum Comments at 4.

¹⁸ *Id.*

¹⁹ Globalstar Comments at 3.

²⁰ 47 CFR § 1.3. See also *ICO Global Communications (Holdings) Limited v. FCC*, 428 F.3d 264 (D.C. Cir. 2005); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

²¹ *Northeast Cellular*, 897 F.2d at 1166; see also *ICO Global Communications*, 428 F.3d at 269 (quoting *Northeast Cellular*); *WAIT Radio*, 418 F.2d at 1157-59.

²² See, e.g., *WAIT Radio*, 418 F.2d at 1157 (stating that even though the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule); *Northeast Cellular*, 897 F.2d at 1166 (stating that in granting a waiver, an agency must explain why deviation from the general rule better serves the public interest than would strict adherence to the rule).

²³ RADWIN Waiver Request at 3.

²⁴ Globalstar Comments at 3, 5G Automotive Association Comments at 1-2, NCTA Comments at 2, WiMax Forum Comments at 4.

9. We will require that RADWIN maintain a database of the geographic coordinates where their equipment operating at higher power under this waiver is deployed, and that this information be made available to the FCC and NTIA upon request. However, we are not requiring RADWIN to submit detailed information on the quantity, radio and antenna model numbers and antenna heights of their deployed point-to-multipoint base stations as requested by Globalstar.²⁵ We believe that requiring RADWIN to maintain a database of operating locations under this waiver is a sufficient safeguard to address interference concerns and that requiring the additional information requested by Globalstar would be unnecessarily burdensome and of limited value, particularly in light of the fact that this waiver is limited to a short duration of 60 days.

A. Waiver conditions

10. We will impose conditions on the grant of the waiver that are designed to limit the potential for harmful interference from RADWIN's system, while allowing wireless internet service providers to temporarily operate with higher power to provide improved service. Specifically, we will limit the waiver to 60 days, limit the maximum EIRP of devices to the levels requested by RADWIN, and require that devices continue to comply with the undesirable emission limits at these higher power levels. We will also require RADWIN and its customers to follow the procedures described in RADWIN's waiver request and June 4, 2020 letter to increase the devices' EIRP for operation under the waiver, and to reduce the devices' EIRP when the waiver expires. We will also require RADWIN to provide within 20 days of expiration of the waiver a list of its customers that have not followed the procedures to reinstate the pre-waiver on their devices.

11. Accordingly, pursuant to the delegated authority in Sections 0.31 and 0.241 of the Commission's rules, we waive the requirements of Sections 15.407(a) of our rules to permit the operation of the RADWIN JET point-to-multipoint system²⁶ at power levels that exceed the limits in that section. This waiver is subject to the following conditions:

- 1) Operation at the higher power levels specified herein is permitted for a period of 60 days from the release date of this Order.
- 2) Operation is limited to a maximum EIRP of 42 dBm in the 5.15-5.25 GHz band and 48 dBm in the 5.725-5.85 GHz band.
- 3) Devices must continue to comply with the undesirable emission limits in Section 15.407(b).
- 4) To protect Federal Government operations, operation of RADWIN equipment under this waiver is prohibited within the counties listed in the Appendix.
- 5) RADWIN must maintain a database of the geographic coordinates where its equipment operating at higher power under this waiver is deployed, and this information must be made available to the FCC and NTIA upon request.
- 6) Increasing power for any device operating under the waiver must be done in accordance with the procedures described in RADWIN's waiver request and June 4, 2020 letter.
- 7) All devices operating under this waiver must have their power reduced to levels permitted by the rules at the end of the waiver period in accordance with the procedures described in RADWIN's waiver request and June 4, 2020 letter.
- 8) RADWIN will provide within 20 days of expiration of the waiver a list of its customers that have failed to update their devices to the pre-waiver settings.

²⁵ Globalstar Comments at 3.

²⁶ FCC ID: Q3K-BFJET5X.

- 9) Operation of RADWIN equipment under this waiver within 50 kilometers of the sites listed in Table 1 below requires prior coordination with the National Science Foundation at esm@nsf.gov.

Table 1
Latitude and Longitude of Radio Astronomy Sites

RAS Site	Latitude (North)	Longitude (West)
Allen Telescope Array (ATA), Hat Creek, CA	40°49'04"	121°28'24"
Pisgah Astronomical Research Institute (PARI), Rosman, NC	35°11'59"	82°52'21"
University of Michigan Radio Astronomy Observatory, Stinchfield Woods, MI	42°23'56"	83°56'08"
Arecibo Observatory (AO), PR	18° 20' 37"	66° 45' 11"
Green Bank Telescope (GBT), WV	38° 25' 59"	79° 50' 23"
Very Large Array (VLA), Socorro, NM	34° 04' 44"	107° 37' 06"
Very Long Baseline Array Brewster, WA	48° 07' 52"	119° 41' 00"
Very Long Baseline Array Fort Davis, TX	30° 38' 06"	103° 56' 41"
Very Long Baseline Array Hancock, NH	42° 56' 01"	71° 59' 12"
Very Long Baseline Array Kit Peak, AZ	31° 57' 23"	111° 36' 45"
Very Long Baseline Array Los Alamos, NM	35° 46' 30"	106° 14' 44"
Very Long Baseline Array Mauna Kea, HI	19° 48' 05"	155° 27' 20"
Very Long Baseline Radar North Liberty, IA	41° 46' 17"	91° 34' 27"
Very Long Baseline Array Owens Valley, CA	37° 13' 54"	118° 16' 37"
Very Long Baseline Array Pie Town, NM	34° 18' 04"	108° 07' 09"
Very Long Baseline Array St Croix, VI	17° 45' 24"	64° 35' 01"

- 10) Operation of RADWIN equipment within the geographic zone listed in Table 2 below should not be permitted without prior coordination following the procedures in Section 1.924 of the Commission's rules.²⁷

Table 2

Geographic Zones	Latitude and Longitude of Northeast and Southwest Corners
NRQZ1	37°30'00"N, 80°30'00"W and 39°15'00"N, 78°30'00"W

IV. ORDERING CLAUSES

12. Accordingly, pursuant to authority delegated in Sections 0.31 and 0.241 of the Commission's rules, 47 CFR §§ 0.31, 0.241, and Section 1.3 of the Commission's rules, 47 CFR § 1.3, IT IS ORDERED that the Request for Waiver filed by RADWIN, Ltd. on May 1, 2020 IS GRANTED for a period of 60 days, consistent with the terms of this Order. This action is taken pursuant to Sections 4(i), 302, 303(e), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(e), and 303(r). This action is effective upon release of this Order.

²⁷ 47 CFR Section 1.924.

13. IT IS FURTHER ORDERED that, if no applications for review are timely filed, this proceeding SHALL BE TERMINATED, and the docket CLOSED.

FEDERAL COMMUNICATIONS COMMISSION

Ronald T. Repasi
Acting Chief, Office of Engineering and Technology

Appendix
Counties where higher power operation of RADWIN equipment
under this waiver is prohibited

Table 1
5150-5250 MHz Operation Prohibited

Prohibited County	State
Fairbanks North Star	AK
Southeast Fairbanks	AK
Baldwin	AL
Blount	AL
Covington	AL
Cullman	AL
DeKalb	AL
Escambia	AL
Jackson	AL
Lauderdale	AL
Lawrence	AL
Limestone	AL
Madison	AL
Marshall	AL
Morgan	AL
Winston	AL
La Paz	AZ
Yuma	AZ
Butte	CA
Colusa	CA
El Dorado	CA
Glenn	CA
Imperial	CA
Inyo	CA
Kern	CA
Nevada	CA
Placer	CA
Plumas	CA
Sacramento	CA
San Bernardino	CA
San Luis Obispo	CA
Sierra	CA
Sutter	CA
Tulare	CA

Prohibited County	State
Yolo	CA
Yuba	CA
Columbia	FL
Escambia	FL
Hamilton	FL
Jefferson	FL
Madison	FL
Okaloosa	FL
Santa Rosa	FL
Suwannee	FL
Walton	FL
Atkinson	GA
Berrien	GA
Brooks	GA
Clinch	GA
Coffee	GA
Colquitt	GA
Cook	GA
Echols	GA
Irwin	GA
Lanier	GA
Lowndes	GA
Thomas	GA
Tift	GA
Ware	GA
Honolulu	HI
Calhoun	IL
Greene	IL
Jersey	IL
Macoupin	IL
Madison	IL
Monroe	IL
Pike	IL
St. Clair	IL

Prohibited County	State
Essex	MA
Middlesex	MA
Plymouth	MA
Suffolk	MA
Worcester	MA
Anne Arundel	MD
Calvert	MD
Caroline	MD
Carroll	MD
Charles	MD
Dorchester	MD
Frederick	MD
Prince George's	MD
Somerset	MD
St. Mary's	MD
Talbot	MD
Washington	MD
Wicomico	MD
Worcester	MD
Franklin	MO
Jefferson	MO
Lincoln	MO
Pike	MO
St. Charles	MO
St. Louis	MO
Warren	MO
Carter	MT
Powder River	MT
Camden	NC
Currituck	NC
Cheshire	NH
Hillsborough	NH
Merrimack	NH
Rockingham	NH
Strafford	NH
Doña Ana	NM
Lincoln	NM
Otero	NM
Sierra	NM
Socorro	NM
Clark	NV

Prohibited County	State
Elko	NV
Esmeralda	NV
Lincoln	NV
Nye	NV
White Pine	NV
Herkimer	NY
Jefferson	NY
Lewis	NY
Oswego	NY
St. Lawrence	NY
Adams	PA
Bedford	PA
Cumberland	PA
Franklin	PA
Fulton	PA
Huntingdon	PA
Juniata	PA
Mifflin	PA
Perry	PA
York	PA
Butte	SD
Harding	SD
Lawrence	SD
Franklin	TN
Giles	TN
Lawrence	TN
Lincoln	TN
Bell	TX
Bosque	TX
Burnet	TX
Coryell	TX
El Paso	TX
Falls	TX
Hamilton	TX
Hudspeth	TX
Lampasas	TX
Llano	TX
McLennan	TX
Mills	TX
San Saba	TX
Travis	TX

Prohibited County	State
Williamson	TX
Juab	UT
Millard	UT
Tooele	UT
Accomack	VA
Caroline	VA
Chesapeake	VA
Essex	VA
Gloucester	VA
Hampton	VA
Isle of Wight	VA
James City	VA
King and Queen	VA
King George	VA
Lancaster	VA
Mathews	VA
Middlesex	VA
Newport News	VA
Norfolk	VA
Northampton	VA
Northumberland	VA
Poquoson	VA
Portsmouth	VA
Richmond	VA
Suffolk	VA
Virginia Beach	VA
Westmoreland	VA
York	VA
Clallam	WA
Grays Harbor	WA
Jefferson	WA
Mason	WA
Pacific	WA
Berkeley	WV
Jefferson	WV
Morgan	WV
Campbell	WY
Crook	WY

Table 2
5725-5850 MHz Operation Prohibited

Prohibited County	State
Fairbanks North Star	AK
Kodiak Island	AK
Southeast Fairbanks	AK
Yukon-Koyukuk	AK
Blount	AL
Covington	AL
Cullman	AL
DeKalb	AL
Escambia	AL
Geneva	AL
Jackson	AL
Lauderdale	AL
Lawrence	AL
Limestone	AL
Madison	AL
Marshall	AL
Mobile	AL
Morgan	AL
Winston	AL
Columbia	AR
Crawford	AR
Franklin	AR
Johnson	AR
Lafayette	AR
Logan	AR
Madison	AR
Miller	AR
Scott	AR
Sebastian	AR
Washington	AR
Cochise	AZ
Graham	AZ
La Paz	AZ
Pima	AZ
Pinal	AZ
Santa Cruz	AZ
Yuma	AZ
Alameda	CA

Prohibited County	State
Butte	CA
Colusa	CA
Contra Costa	CA
El Dorado	CA
Glenn	CA
Imperial	CA
Inyo	CA
Kern	CA
Los Angeles	CA
Marin	CA
Nevada	CA
Orange	CA
Placer	CA
Plumas	CA
Riverside	CA
Sacramento	CA
San Bernardino	CA
San Diego	CA
San Francisco	CA
San Luis Obispo	CA
San Mateo	CA
Santa Barbara	CA
Santa Clara	CA
Santa Cruz	CA
Sierra	CA
Sutter	CA
Tulare	CA
Ventura	CA
Yolo	CA
Yuba	CA
Kent	DE
New Castle	DE
Sussex	DE
Bay	FL
Brevard	FL
Calhoun	FL
Charlotte	FL
Citrus	FL

Prohibited County	State
Clay	FL
Columbia	FL
DeSoto	FL
Duval	FL
Escambia	FL
Franklin	FL
Gulf	FL
Hamilton	FL
Hardee	FL
Hernando	FL
Hillsborough	FL
Holmes	FL
Indian River	FL
Jackson	FL
Jefferson	FL
Lake	FL
Lee	FL
Leon	FL
Liberty	FL
Madison	FL
Manatee	FL
Monroe	FL
Nassau	FL
Okaloosa	FL
Orange	FL
Osceola	FL
Pasco	FL
Pinellas	FL
Polk	FL
Santa Rosa	FL
Sarasota	FL
Seminole	FL
St. Johns	FL
Suwannee	FL
Volusia	FL
Wakulla	FL
Walton	FL
Washington	FL
Atkinson	GA
Bartow	GA
Berrien	GA

Prohibited County	State
Brooks	GA
Camden	GA
Carroll	GA
Charlton	GA
Cherokee	GA
Clayton	GA
Clinch	GA
Cobb	GA
Coffee	GA
Colquitt	GA
Cook	GA
Coweta	GA
Dawson	GA
DeKalb	GA
Douglas	GA
Echols	GA
Fayette	GA
Floyd	GA
Forsyth	GA
Fulton	GA
Gordon	GA
Gwinnett	GA
Hall	GA
Haralson	GA
Henry	GA
Irwin	GA
Lanier	GA
Lowndes	GA
Paulding	GA
Pickens	GA
Polk	GA
Rockdale	GA
Thomas	GA
Tift	GA
Walton	GA
Ware	GA
Honolulu	HI
Kauai	HI
Adair	IA
Boone	IA
Clarke	IA

Prohibited County	State
Dallas	IA
Greene	IA
Guthrie	IA
Jasper	IA
Lucas	IA
Madison	IA
Marion	IA
Marshall	IA
Polk	IA
Story	IA
Union	IA
Warren	IA
Benewah	ID
Kootenai	ID
Calhoun	IL
Clinton	IL
Cook	IL
DuPage	IL
Greene	IL
Jersey	IL
Kane	IL
Lake	IL
Macoupin	IL
Madison	IL
McHenry	IL
Monroe	IL
Pike	IL
St. Clair	IL
Elkhart	IN
LaGrange	IN
Steuben	IN
Simpson	KY
Allen	LA
Beauregard	LA
Bienville	LA
Bossier	LA
Caddo	LA
Claiborne	LA
De Soto	LA
Natchitoches	LA
Orleans	LA

Prohibited County	State
Rapides	LA
Red River	LA
Sabine	LA
St. Bernard	LA
St. Tammany	LA
Vernon	LA
Webster	LA
Barnstable	MA
Bristol	MA
Dukes	MA
Essex	MA
Middlesex	MA
Nantucket	MA
Norfolk	MA
Plymouth	MA
Suffolk	MA
Worcester	MA
Anne Arundel	MD
Baltimore	MD
Calvert	MD
Caroline	MD
Cecil	MD
Charles	MD
Dorchester	MD
Harford	MD
Howard	MD
Kent	MD
Prince George's	MD
Queen Anne's	MD
Somerset	MD
St. Mary's	MD
Talbot	MD
Wicomico	MD
Worcester	MD
Alcona	MI
Allegan	MI
Alpena	MI
Barry	MI
Berrien	MI
Branch	MI
Calhoun	MI

Prohibited County	State
Cass	MI
Cheboygan	MI
Eaton	MI
Kalamazoo	MI
Kent	MI
Montmorency	MI
Oscoda	MI
Presque Isle	MI
St. Joseph	MI
Van Buren	MI
Becker	MN
Clay	MN
Marshall	MN
Norman	MN
Otter Tail	MN
Polk	MN
Wilkin	MN
Bates	MO
Benton	MO
Carroll	MO
Cass	MO
Cooper	MO
Franklin	MO
Henry	MO
Jackson	MO
Jefferson	MO
Johnson	MO
Lafayette	MO
Lincoln	MO
Morgan	MO
Pettis	MO
Pike	MO
Ray	MO
Saline	MO
St. Charles	MO
St. Clair	MO
St. Louis	MO
Warren	MO
Forrest	MS
George	MS
Hancock	MS

Prohibited County	State
Harrison	MS
Jackson	MS
Pearl River	MS
Perry	MS
Stone	MS
Carter	MT
Powder River	MT
Camden	NC
Chowan	NC
Currituck	NC
Dare	NC
Gates	NC
Hyde	NC
Pasquotank	NC
Perquimans	NC
Tyrrell	NC
Washington	NC
Bottineau	ND
Cass	ND
Grand Forks	ND
Griggs	ND
McHenry	ND
McLean	ND
Mountrail	ND
Nelson	ND
Ransom	ND
Renville	ND
Richland	ND
Steele	ND
Traill	ND
Walsh	ND
Ward	ND
Hillsborough	NH
Merrimack	NH
Rockingham	NH
Atlantic	NJ
Burlington	NJ
Camden	NJ
Cumberland	NJ
Gloucester	NJ
Hunterdon	NJ

Prohibited County	State
Mercer	NJ
Middlesex	NJ
Monmouth	NJ
Ocean	NJ
Salem	NJ
Somerset	NJ
Warren	NJ
Bernalillo	NM
Chaves	NM
Cibola	NM
Curry	NM
Doña Ana	NM
Lincoln	NM
Otero	NM
Quay	NM
Roosevelt	NM
Sandoval	NM
Santa Fe	NM
Sierra	NM
Socorro	NM
Torrance	NM
Valencia	NM
Clark	NV
Elko	NV
Esmeralda	NV
Lincoln	NV
Nye	NV
White Pine	NV
Cayuga	NY
Chenango	NY
Cortland	NY
Erie	NY
Genesee	NY
Herkimer	NY
Jefferson	NY
Lewis	NY
Madison	NY
Niagara	NY
Oneida	NY
Onondaga	NY
Orleans	NY

Prohibited County	State
Oswego	NY
Seneca	NY
St. Lawrence	NY
Tompkins	NY
Wayne	NY
Wyoming	NY
Brown	OH
Butler	OH
Champaign	OH
Clark	OH
Clermont	OH
Clinton	OH
Darke	OH
Fayette	OH
Franklin	OH
Greene	OH
Hamilton	OH
Highland	OH
Logan	OH
Madison	OH
Miami	OH
Montgomery	OH
Pickaway	OH
Preble	OH
Shelby	OH
Union	OH
Warren	OH
Adair	OK
Cherokee	OK
Haskell	OK
Latimer	OK
Le Flore	OK
Sequoyah	OK
Berks	PA
Bucks	PA
Chester	PA
Delaware	PA
Lancaster	PA
Lehigh	PA
Montgomery	PA
Northampton	PA

Prohibited County	State
Philadelphia	PA
York	PA
Bristol	RI
Newport	RI
Providence	RI
Berkeley	SC
Charleston	SC
Colleton	SC
Dorchester	SC
Georgetown	SC
Orangeburg	SC
Williamsburg	SC
Butte	SD
Harding	SD
Lawrence	SD
Bedford	TN
Cannon	TN
Cheatham	TN
Davidson	TN
DeKalb	TN
Dickson	TN
Franklin	TN
Giles	TN
Hickman	TN
Lawrence	TN
Lincoln	TN
Macon	TN
Marshall	TN
Maury	TN
Montgomery	TN
Moore	TN
Robertson	TN
Rutherford	TN
Smith	TN
Sumner	TN
Trousdale	TN
Williamson	TN
Wilson	TN
Aransas	TX
Bailey	TX
Bee	TX

Prohibited County	State
Bell	TX
Bosque	TX
Brazoria	TX
Calhoun	TX
Cass	TX
Chambers	TX
Coke	TX
Concho	TX
Coryell	TX
Deaf Smith	TX
El Paso	TX
Ellis	TX
Falls	TX
Fort Bend	TX
Freestone	TX
Galveston	TX
Harris	TX
Harrison	TX
Hill	TX
Hudspeth	TX
Irion	TX
Kenedy	TX
Kleberg	TX
Liberty	TX
Limestone	TX
Marion	TX
McLennan	TX
Menard	TX
Montgomery	TX
Navarro	TX
Newton	TX
Nueces	TX
Panola	TX
Parmer	TX
Refugio	TX
Runnels	TX
Sabine	TX
San Patricio	TX
Schleicher	TX
Sterling	TX
Tom Green	TX

Prohibited County	State
Box Elder	UT
Davis	UT
Juab	UT
Millard	UT
Tooele	UT
Weber	UT
Accomack	VA
Albemarle	VA
Caroline	VA
Charles City	VA
Charlottesville	VA
Chesapeake	VA
Culpeper	VA
Essex	VA
Fauquier	VA
Fluvanna	VA
Franklin	VA
Fredericksburg	VA
Gloucester	VA
Goochland	VA
Greene	VA
Hampton	VA
Hanover	VA
Henrico	VA
Isle of Wight	VA
James City	VA
King and Queen	VA
King George	VA
King William	VA
Lancaster	VA
Louisa	VA
Madison	VA
Mathews	VA
Middlesex	VA
New Kent	VA
Newport News	VA
Norfolk	VA
Northampton	VA
Northumberland	VA
Orange	VA
Page	VA

Prohibited County	State
Poquoson	VA
Portsmouth	VA
Prince William	VA
Rappahannock	VA
Richmond	VA
Rockingham	VA
Southampton	VA
Spotsylvania	VA
Stafford	VA
Suffolk	VA
Surry	VA
Sussex	VA
Virginia Beach	VA
Warren	VA
Westmoreland	VA
Williamsburg	VA
York	VA
Adams	WA
Clallam	WA
Ferry	WA
Grays Harbor	WA
Island	WA
Jefferson	WA
King	WA
Kitsap	WA
Kittitas	WA
Lewis	WA
Lincoln	WA
Mason	WA
Pacific	WA
Pend Oreille	WA
Pierce	WA
San Juan	WA
Skagit	WA
Snohomish	WA
Spokane	WA
Stevens	WA
Thurston	WA
Whitman	WA
Adams	WI
Clark	WI

Prohibited County	State
Columbia	WI
Jackson	WI
Juneau	WI
Kenosha	WI
La Crosse	WI
Marquette	WI
Milwaukee	WI
Monroe	WI
Portage	WI
Racine	WI
Richland	WI
Sauk	WI
Vernon	WI
Walworth	WI
Waushara	WI
Wood	WI
Campbell	WY
Crook	WY