June 4, 2019

Federal Communications Commission
Public Safety and Homeland Security Bureau
445 12th Street SW
Washington, DC 20554

To Whom It May Concern

In accordance with the Rule 90.529 (b)(2) and FCC Public Notice DA 19-331 dated April 25, 2019, the Missouri State Highway Patrol respectfully submits the following information documenting existing use of 700 MHz State Geographic License Spectrum between 769-775/799-805 for the Missouri Statewide Interoperability Network (MOSWIN) using 700 MHz State License Spectrum, under FCC authorization WPTZ785.

Authority and Authorization

FCC Docket 96-86 per the 3rd MO&O and 3rd R&O, adopted September 18, 2000 and released October 10, 2000, permitted 'State' governments to receive 2.4 MHz of spectrum in the form of a geographic 'State' License. Per DA-01-406, released February 15, 2001 this designation consisted of a total of 192 channel pairs (at 6.25 kHz bandwidth operation) or 96 channel pairs (at 12.5 kHz bandwidth) or 48 channel pairs (at 25 kHz bandwidth) operation. At the time of issuance, all state channels ranged in the 764-776 MHz / 794-806 MHz (TV Channels 63/64 & 68/69).

On January 18, 2002, The State of Missouri (Communications Division-Missouri State Highway Patrol-Communications Division) was issued callsign WPTZ785 by the Federal Communications Commission. On December 11, 2007 the license was modified to reflect the change in the band plan of the 700 MHz Public Safety Band. That reconfiguration, which converted previously assigned Wide Band data to a nationwide 700 MHz broadband data allocation, resulted in all 700 MHz State License Geographic Channels being moved to the 769-775 MHz/799-805 MHz band.

Consistent with the Digital Transition (DTV) Transition, FCC guidelines required 700 MHz operations in Missouri to not operate co-channel to any primary analog TV stations assignment except as allowed by applicable contour separation and other pertinent rules. Upon thorough examination of the FCC rules and existing analog primary TV stations at the time, the State of Missouri chose to implement 700 MHz spectrum as permitted and required during the DTV transition.

The Missouri Department of Public Safety completed the initial implementation of MOSWIN network in January 2013 and began using the network in support of the communications needs of public safety users. MOSWIN currently supports the communications needs of over 40,000 individual radios and hundreds of Missouri public safety agencies on its network. The growth in the number of users and their needs has resulted in the building of additional MOSWIN sites. While the initial MOSWIN implementation was a mix of VHF High Band (150 MHz) sites and 700 MHz sites utilizing 700 MHz Geographic State License Spectrum, the majority of new MOSWIN sites, utilize specific 700 MHz Geographic State License Spectrum under the existing authorization, call sign WPTZ785.

On October 1, 2014, the first build-out notification was accepted by the FCC.

<u>Buildout Overview</u>

In this filing, the State of Missouri presents multiple methods of 700 MHz State License use that contribute to meet the FCC's Substantial Service requirement (or provide Substantial Service) benchmark of coverage of 2/3 Missouri's population. MOSWIN utilizes State License Spectrum under authorization WPTZ785 in several ways under 90.529 (b)(2). These methods include:

> Digital Vehicular Repeater System (DVRS) operation ***statewide*** in conjunction with MOSWIN VHF High Band mobile system operation.
>
> Site on Wheels (SOW) 700 MHz trunked deployable solutions for ***statewide*** MOSWIN operations.
>
> Tactical operations on identified 700 MHz State License Spectrum for ***statewide*** itinerant use by the Missouri State Highway Patrol for security details and tactical situations.
>
> Fixed 700 MHz site implementation of forty-six (46) 700 MHz trunked sites utilizing Geographic State License spectrum integrated into the MOSWIN network as of June 4, 2019 with at least an additional ten (10) 700 MHz sites integrated into the network by June 30, 2020.

It is our belief that the usage identified within the elements below, in conjunction with the continued implementation of the MOSWIN network, do collectively meet the Commission's build-out requirements of 90.529 (b)(2), based on the guidance provided. The Missouri Department of Public Safety, in its expansion of the MOSWIN network over the coming years, will continue to expand the network by implementing 700 MHz State License Spectrum at future sites, as needed.

Elements of 700 MHz State License utilization within the MOSWIN network under authorization WPTZ785

ELEMENT 1 The first major component of Missouri's filing will outline the use of 700 MHz Digital Vehicular Repeater System (DVRS) as utilized by several Missouri Statewide Agencies. The Missouri State Highway Patrol utilizes over 1300 700 MHz DVRS that connect to the multi-band VHF/700 MHz mobile radios in their vehicles to achieve portable radio coverage in the mobile coverage designed MOSWIN network. An additional 175 DVRS units are utilized in the MOSWIN network by other Missouri State Agencies for statewide operation. Other statewide agencies utilizing 700 MHz State License Spectrum for vehicular repeaters are the Missouri Department of Natural Resources, Missouri Capital Police, State Emergency Management Agency, Corrections, Homeland Security & the Missouri Interoperability Center.

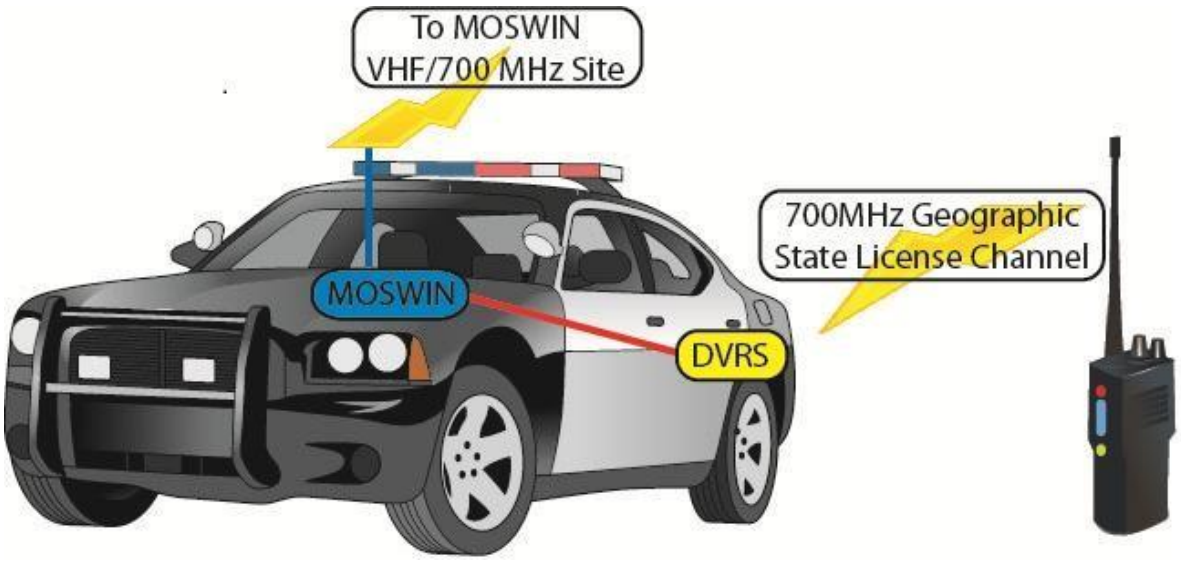
The use of these dedicated DVRS channels connected to the Wide Area VHF/700 MHz Missouri Statewide Interoperability Network (MOSWIN) provides system coverage and interoperability in all of Missouri's 114 counties plus the independent City of St Louis, to other state, local and federal users operating throughout the MOSWIN network.

When a first responder or other MOSWIN user equipped with a 700 MHz DVRS setup leaves his vehicle, the 700 MHz portable radio (DVRS) will tie-in and provides the user portable access to the MOSWIN radio system. More

specifically, the 700 MHz DVRS portable is associated via the DVRS configuration to the internal vehicle VHF/SL 700 MHz trunked mobile subscriber unit. The VHF/SL 700 MHz trunked subscriber unit is then associated to a specific MOSWIN VHF/SL 700 MHz tower transceiver via mobile coverage. Furthermore, the VHF/SL 700 MHz tower location associated provides a specific 37 or 40 dBu service contour that collectively encompasses all cities, and towns within Missouri.

Below is a simple illustration of how the 700 MHz DVRS system works in concert with the VHF/SL 700 MHz MOSWIN Wide Area Network utilizing 700 MHz Geographic State License Spectrum. The MOSWIN network was designed to provide *mobile* coverage throughout the State of Missouri so these vehicular repeater systems offer end users *portable* coverage within the *mobile* MOSWIN footprint. In total over 5000 users access daily 700 MHz Geographic State License spectrum using digital vehicular repeaters throughout the MOSWIN network.

Digital Vehicular Repeater Diagram



The entire population located within Missouri's 114 counties plus the independent City of St Louis is covered by the MOSWIN VHF/700 MHz statewide network with substantial service by the MOSWIN network's VHF High Band Mobile Coverage. The Missouri State Highway Patrol asserts that the DVRS implementation in MOSWIN, utilizing 700MHz State License Spectrum, meets the requirement to provide substantial service to 2/3 of the population, as outlined in 47 CFR 90.529 (b)(2), as of June 4, 2019.

ELEMENT 2 The second component of our 700MHz Geographic State License use is the deployment of five (5), six (6) channel SL 700 MHz site on wheels (SOW) to link on-site users to the wide area MOSWIN network. The SOW is deployed to areas where MOSWIN coverage has been compromised by an incident or 700 MHz portable coverage is required for a planned event. MOSWIN has coordinated with several 700 MHz SOW's (implemented)

deployed by other Missouri agencies to utilize the same 700 MHz Geographic State License channels throughout Missouri for use with multiple SOW's. The 700 MHz site onboard the SOW connects to a bridging system that allows VHF analog users, using established National VHF Tactical VTAC 36 and VTAC 37 repeater pairs, to be interfaced to the MOSWIN network as necessary in addition to 700 MHz users. During mission critical incidents MOSWIN also deploys portable cache radios capable of operating in conjunction with the deployed SOW.

The SOW solution provides access to the MOSWIN network for all users. Multiple agencies in Missouri have implemented deployable Site on Wheels (SOW) that can also access the MOSWIN network using 700 MHz State Geographic License spectrum under authorization WPTZ785. MOSWIN System Administration has provided the MOSWIN system key and control channel information, necessary to access multiple MOSWIN SOW units, to users throughout the state, including public safety users of 700/800 MHz radios and systems in the St Louis and Kansas City metropolitan areas. This allows access to the MOSWIN network via SOW as it is deployed across the state during mission critical incidents, in support of responders from across Missouri, including responders operating in and around the State's most populated areas.

The Missouri State Highway Patrol asserts that the availability of multiple 700 MHz deployable sites, utilizing 700 MHz State License Geographic Spectrum, integrated into MOSWIN, meets the requirement to provide substantial service to 2/3 of the population, as outlined in 47 CFR 90.529 (b)(2).

ELEMENT 3 An additional element of how the State of Missouri utilizes the 700 MHz State Geographic License under authorization WPTZ785 is mobile tactical use by the Missouri State Highway Patrol (MSHP). The MSHP is the licensee of the Missouri State 700 MHz Geographic License and utilizes 700 MHz State License Spectrum for many itinerant and tactical purposes in support of their mission including criminal investigations, Special Weapons and Tactics personnel (SWAT), and surveillance and security details throughout Missouri. These tactical channels are pre-programmed into subscriber units and made available to specific users. All tactical channels are utilized statewide over Missouri's 114 counties plus the independent City of St Louis.

The Missouri State Highway Patrol asserts that the availability of multiple 700 MHz mobile tactical subscriber units statewide, utilizing 700MHz State License Geographic Spectrum, integrated into MOSWIN, meets the requirement to provide substantial service to 2/3 of the population, as outlined in 47 CFR 90.529 (b)(2).

ELEMENT 4 As the fourth element of its 700 MHz Geographic State License build-out, the Missouri Department of Public Safety has implemented 700 MHz Geographic State License spectrum in forty-six (46) fixed site implementations in the overall MOSWIN network throughout Missouri serving its total population of 5,988,927 (2010 Census).

The Missouri State Highway Patrol in conjunction with the Missouri Department of Public Safety (DPS) has devised a channel plan consisting of ninety-six (96) 12.5 kHz channels to be used for DVRS, Tactical, Site on Wheels (SOW) operation and Trunked Site usage. Twelve (12) 12.5 kHz channels are used for tactical operations, twelve (12) 12.5 kHz channels are used for DVRS and tactical operations and seventy-two (72) 12.5 kHz channels are used throughout the state in trunked sites (including SOW operation), consisting of six (6) 12.5 kHz channels per site.

The breakdown of channel sets is listed below:

Channel	Base Freq	Mobile Freq	Ch Set
25-26	769.15625	799.15625	A
27-28	769.16875	799.16875	B

29-30	769.18125	799.18125	C
31-32	769.19375	799.19375	D
33-34	769.20625	799.20625	E
35-36	769.21875	799.21875	F
65-66	769.40625	799.40625	A
67-68	769.41875	799.41875	B
69-70	769.43125	799.43125	C
71-72	769.44375	799.44375	D
73-74	769.45625	799.45625	E
75-76	769.46875	799.46875	F
105-106	769.65625	799.65625	A
107-108	769.66875	799.66875	B
109-110	769.68125	799.68125	C
111-112	769.69375	799.69375	D
113-114	769.70625	799.70625	E
115-116	769.71875	799.71875	F
145-146	769.90625	799.90625	A
147-148	769.91875	799.91875	B
149-150	769.93125	799.93125	C
151-152	769.94375	799.94375	D
153-154	769.95625	799.95625	E
155-156	769.96875	799.96875	F
185-186	770.15625	800.15625	A
187-188	770.16875	800.16875	B
189-190	770.18125	800.18125	C
191-192	770.19375	800.19375	D
193-194	770.20625	800.20625	E
195-196	770.21875	800.21875	F
225-226	770.40625	800.40625	A
227-228	770.41875	800.41875	B
229-230	770.43125	800.43125	C
231-232	770.44375	800.44375	D
233-234	770.45625	800.45625	E
235-236	770.46875	800.46875	F
265-266	770.65625	800.65625	
267-268	770.66875	800.66875	
269-270	770.68125	800.68125	
271-272	770.69375	800.69375	
273-274	770.70625	800.70625	
275-276	770.71875	800.71875	
305-306	770.90625	800.90625	
307-308	770.91875	800.91875	
309-310	770.93125	800.93125	
311-312	770.94375	800.94375	
313-314	770.95625	800.95625	
315-316	770.96875	800.96875	
645-646	773.03125	803.03125	G
647-648	773.04375	803.04375	H

649-650	773.05625	803.05625	I
651-652	773.06875	803.06875	J
653-654	773.08125	803.08125	K
655-656	773.09375	803.09375	L
685-686	773.28125	803.28125	G
687-688	773.29375	803.29375	H
689-690	773.30625	803.30625	I
691-692	773.31875	803.31875	J
693-694	773.33125	803.33125	K
695-696	773.34375	803.34375	L
725-726	773.53125	803.53125	G
727-728	773.54375	803.54375	H
729-730	773.55625	803.55625	I
731-732	773.56875	803.56875	J
733-734	773.58125	803.58125	K
735-736	773.59375	803.59375	L
765-766	773.78125	803.78125	G
767-768	773.79375	803.79375	H
769-770	773.80625	803.80625	I
771-772	773.81875	803.81875	J
773-774	773.83125	803.83125	K
775-776	773.84375	803.84375	L
805-806	774.03125	804.03125	G
807-808	774.04375	804.04375	H
809-810	774.05625	804.05625	I
811-812	774.06875	804.06875	J
813-814	774.08125	804.08125	K
815-816	774.09375	804.09375	L
845-846	774.28125	804.28125	G
847-848	774.29375	804.29375	H
849-850	774.30625	804.30625	I
851-852	774.31875	804.31875	J
853-854	774.33125	804.33125	K
855-856	774.34375	804.34375	L
.5 MHz-DVRS			
885-886	774.53125	804.53125	
887-888	774.54375	804.54375	
889-890	774.55625	804.55625	
891-892	774.56875	804.56875	
893-894	774.58125	804.58125	
895-896	774.59375	804.59375	
925-926	774.78125	804.78125	
927-928	774.79375	804.79375	
929-930	774.80625	804.80625	
931-932	774.81875	804.81875	
933-934	774.83125	804.83125	
935-936	774.84375	804.84375	

Channel sets labeled A-L are utilized as trunked pairs being used at fixed sites across the entire state utilizing an

efficient re-use pattern. The State of Missouri determines the re-use pattern with criteria that the 15 dBu interference contour of one site cannot overlap the 40 dBu service contour of another site. These criteria have been proven in our real-world deployment of MOSWIN.

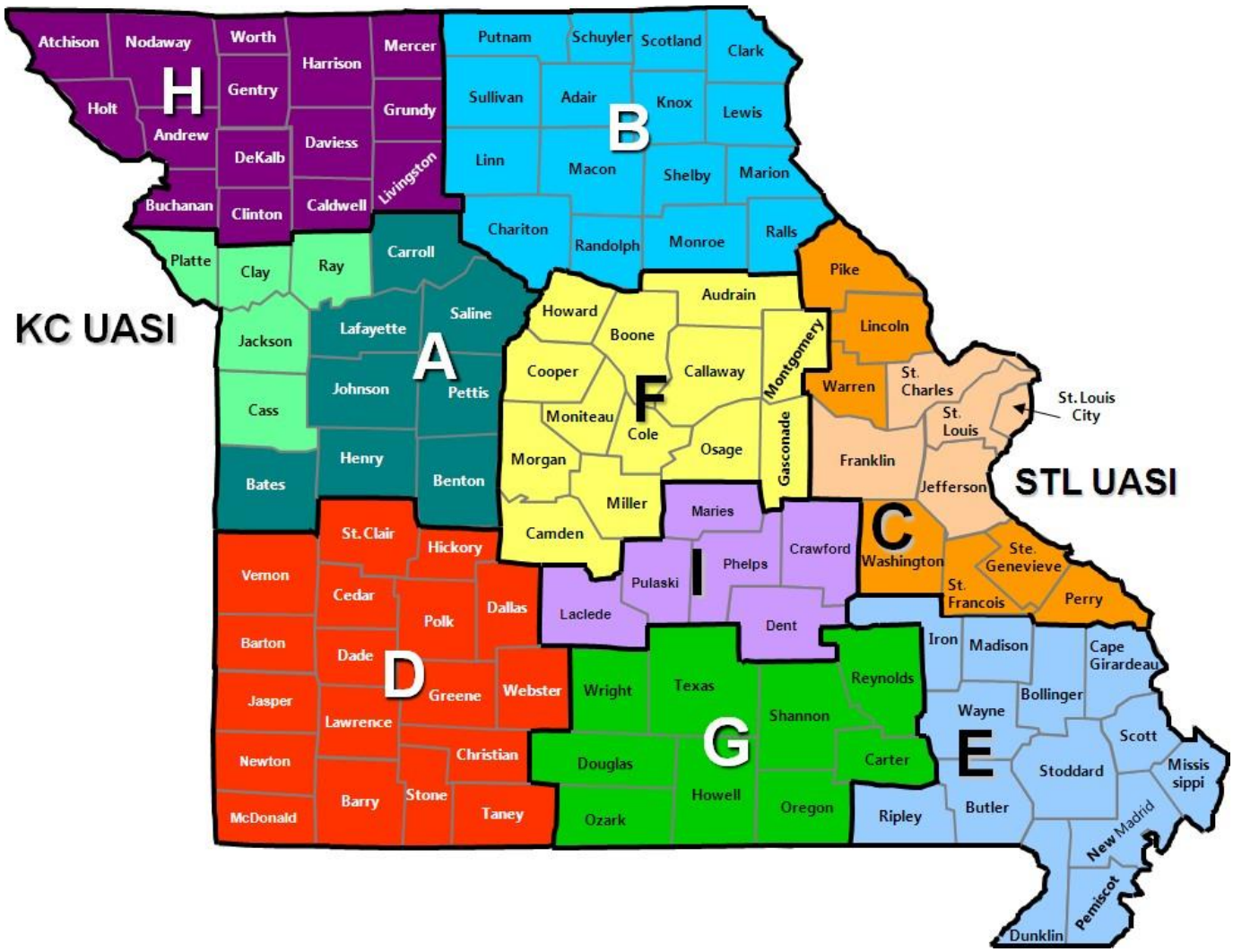
Channels 225-226 through 275-276, 305-306 through 315-316 and 885-886 through 895-896 are designated for tactical and special operations.

Channels 925-926 through 935-936 are designated for DVRS operation

Substantial Service Exhibition and Illustration

For the purpose of illustration of the use of Missouri's 700 MHz Geographic State License Spectrum, the State of Missouri is broken down into 9 Geographic Troop Divisions that also serve as Missouri Homeland Security Regions. Those divisions geographically (see graphic below) consist of the following counties:

Troop A	Troop B	Troop C	Troop D	Troop E	Troop F	Troop G	Troop H	Troop I
Bates	Adair	Franklin	Barry	Bollinger	Audrain	Carter	Andrew	Crawford
Benton	Chariton	Jefferson	Barton	Butler	Boone	Douglas	Atchison	Dent
Carroll	Clark	Lincoln	Cedar	Cape Girardeau	Callaway	Howell	Buchanan	Laclede
Cass	Knox	Perry	Christian	Dunklin	Camden	Oregon	Caldwell	Maries
Clay	Lewis	Pike	Dade	Iron	Cole	Ozark	Clinton	Phelps
Henry	Linn	St. Charles	Dallas	Madison	Cooper	Reynolds	Daviess	Pulaski
Jackson	Macon	St. Francois	Greene	Mississippi	Gasconade	Shannon	DeKalb	
Johnson	Marion	St. Louis	Hickory	New Madrid	Howard	Texas	Gentry	
Lafayette	Monroe	Ste. Genevieve	Jasper	Pemiscot	Miller	Wright	Grundy	
Pettis	Putnam	Warren	Lawrence	Ripley	Moniteau		Harrison	
Platte	Ralls	Washington	McDonald	Scott	Montgomery		Holt	
Ray	Randolph		Newton	Stoddard	Morgan		Livingston	
Saline	Schuyler		Polk	Wayne	Osage		Mercer	
	Scotland		St. Clair				Nodaway	
	Shelby		Stone				Worth	
	Sullivan		Taney					
			Vernon					
			Webster					


H
Atchison
Nodaway
Worth
Harrison
Mercer
Holt
Gentry
Andrew
Grundy
Daviess
DeKalb
Buchanan
Clinton
Caldwell
Livingston
B
Putnam
Schuyler
Scotland
Clark
Sullivan
Adair
Knox
Lewis
Linn
Macon
Shelby
Marion
Chariton
Randolph
Monroe
Ralls
KC UASI
Platte
Clay
Ray
Carroll
Saline
Lafayette
Jackson
A
Johnson
Pettis
Cass
Henry
Bates
Benton
Pike
Audrain
Howard
Boone
Lincoln
Cooper
Callaway
Montgomery
F
Warren
St. Charles
Moniteau
Cole
St. Louis
St. Louis City
Morgan
Osage
Gasconade
Franklin
Jefferson
STL UASI
Miller
Maries
Camden
C
Washington
Ste. Genevieve
St. Clair
Hickory
Crawford
Vernon
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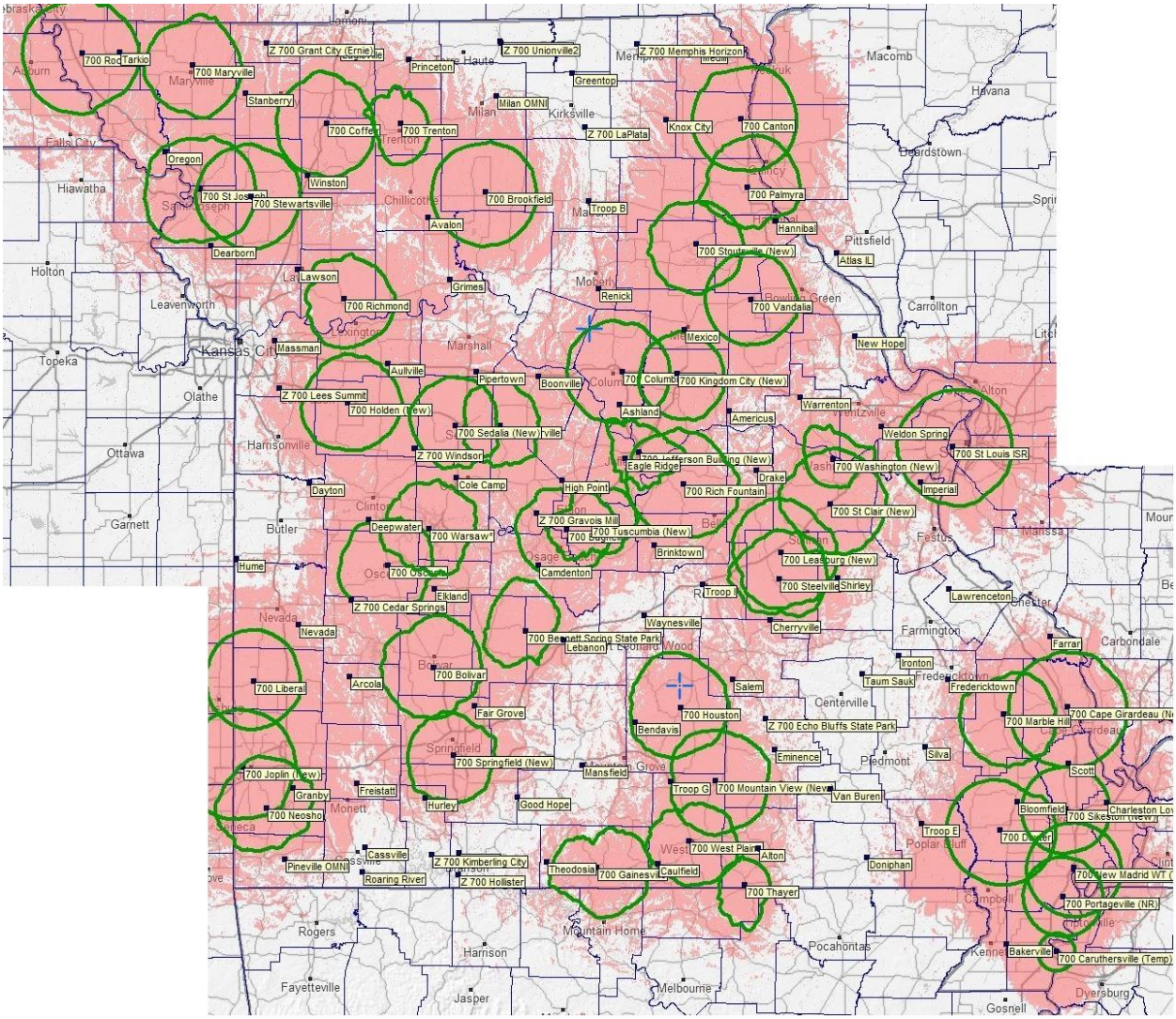
I
Phelps
St. Francois
Perry
Cedar
Polk
Dallas
Laclede
Dent
Barton
Dade
Iron
Madison
Cape Girardeau
D
Greene
Webster
Wright
Texas
Reynolds
Jasper
Bollinger
Lawrence
Shannon
Wayne
Scott
Christian
G
E
Newton
Douglas
Carter
Stoddard
Missis sippi
Barry
Stone
Taney
Howell
Oregon
Ripley
Butler
McDonald
Ozark
New Madrid
Pemiscot
Dunklin

MOSWIN Statewide Trunked Sites Utilizing 700 MHz State License Channels

<u>Green Circles – 40 dBu Service Contour</u>
<u>Pink Fill – Talkout to mobiles with a minimum -95 dBm signal strength</u>



MOSWIN Trunked Site – Coverage by Population

Rank	Trunked Site	Population Covered	County	Population	% of Population Covered
1	St Louis ISR	999,539	St. Louis County	999,539	100.0%
2			Jackson County	688,554	0.0%
3	Washington & St Louis ISR	108,325	St. Charles County	385,115	28.1%
4	Springfield	286,759	Greene County	286,759	100.0%
5			Clay County	236,068	0.0%
6	St Clair & St Louis ISR	125,525	Jefferson County	222,639	56.4%
7	Columbia	174,589	Boone County	174,589	100.0%
8	Joplin	112,443	Jasper County	118,522	94.9%
9	St Clair & Washington	102,413	Franklin County	102,413	100.0%
10	Holden	5,224	Cass County	101,888	5.1%
11			Platte County	96,899	0.0%
12	St Joseph	89,425	Buchanan County	89,425	100.0%
13	Springfield	42,003	Christian County	83,028	50.6%
14	Cape Girardeau	78,013	Cape Girardeau County	78,013	100.0%
15	Jefferson City	76,749	Cole County	76,749	100.0%
16			St. Francois County	66,248	0.0%
17	Joplin & Neosho	58,237	Newton County	58,237	100.0%
18			Lincoln County	54,800	0.0%
19			Taney County	54,308	0.0%
20	Holden	53,941	Johnson County	53,941	100.0%
21			Pulaski County	53,132	0.0%
22	Steelville	10,883	Phelps County	44,873	24.3%
23	Bagnell	21,981	Camden County	44,855	49.0%
24	Kingdom City	44,793	Callaway County	44,793	100.0%
25	Dexter	2,356	Butler County	42,826	5.5%
26	Otterville & Sedalia	42,039	Pettis County	42,309	99.4%
27	Mountain View & West Plains	40,139	Howell County	40,139	100.0%

28	Sikeston & Cape Girardeau	38,858	Scott County	38,858	100.0%
29			Lawrence County	38,131	0.0%
30	Springfield	1,566	Webster County	37,558	4.2%
31	Bennett Springs	12,662	Laclede County	35,488	35.7%
32			Barry County	35,398	0.0%
33	Washington	3,208	Warren County	33,554	9.6%
34	Richmond & Holden	17,799	Lafayette County	32,655	54.5%
35	Springfield	2,332	Stone County	31,529	7.4%
36	Bolivar	31,347	Polk County	31,347	100.0%
37	Dexter	2,996	Dunklin County	30,905	9.7%
38	Dexter	29,634	Stoddard County	29,634	100.0%
39	Palmyra	28,703	Marion County	28,703	100.0%
40	Vandalia & Kingdom City	20,088	Audrain County	25,763	78.0%
41	Houston	25,714	Texas County	25,714	100.0%
42			Adair County	25,437	0.0%
43			Randolph County	24,987	0.0%
44	Steelville, Washington & St Clair	7,125	Washington County	24,968	28.5%
45	Tuscumbia & Bagnell	24,947	Miller County	24,947	100.0%
46	Leasburg & Steelville	24,387	Crawford County	24,387	100.0%
47			Saline County	23,010	0.0%
48	Richmond	22,859	Ray County	22,859	100.0%
49	Neosho	3,821	McDonald County	22,753	16.8%
50	Maryville	22,744	Nodaway County	22,744	100.0%
51	Osceola & Warsaw	17,002	Henry County	21,834	77.9%
52	Liberal	3,211	Vernon County	20,665	15.5%
53	Stewartsville	19,895	Clinton County	20,495	97.1%
54	Otterville	10,023	Morgan County	20,097	49.9%
55	Cape Girardeau	2,108	Perry County	19,135	11.0%
56	Warsaw	18,918	Benton County	18,918	100.0%
57	Vandalia	9,033	Pike County	18,517	48.8%
58			Wright County	18,304	0.0%
59	New Madrid &	18,030	New Madrid	18,030	100.0%

	Portageville		County		
60			Ste. Genevieve County	17,882	0.0%
61	Otterville & Columbia	13,663	Cooper County	17,620	77.5%
62	St Joseph	12,432	Andrew County	17,358	71.6%
63	Portageville & Caruthersville	12,552	Pemiscot County	17,344	72.4%
64	Bennett Springs & Bolivar	16,441	Dallas County	16,441	100.0%
65			Bates County	16,405	0.0%
66	Columbia	4,388	Moniteau County	15,904	27.6%
67	Houston	1,874	Dent County	15,566	12.0%
68	Brookfield	1,899	Macon County	15,319	12.4%
69	Brookfield	1,722	Livingston County	15,025	11.5%
70	Rich Fountain & Leasburg	5,800	Gasconade County	14,769	39.3%
71	Sikeston	7,564	Mississippi County	13,916	54.4%
72	Osceola	972	Cedar County	13,862	7.0%
73			Ripley County	13,807	0.0%
74	Rich Fountain	13,610	Osage County	13,610	100.0%
75			Douglas County	13,391	0.0%
76	Marble Hill	124	Wayne County	13,369	0.9%
77	Stewartsville	11,258	DeKalb County	12,564	89.6%
78	Marble Hill	12,347	Bollinger County	12,347	100.0%
79		12,248	Linn County	12,248	100.0%
80	Marble Hill	1,922	Madison County	12,226	15.7%
81	Liberal	11,942	Barton County	11,942	100.0%
82	Vandalia	2,634	Montgomery County	11,618	22.7%
83	Thayer	4,602	Oregon County	10,779	42.7%
84			Iron County	10,286	0.0%
85	Vandalia, Stoutsville & Palmyra	10,208	Ralls County	10,208	100.0%
86	Columbia	562	Howard County	10,144	5.5%
87	Trenton	10,111	Grundy County	10,111	100.0%
88	Canton	10,078	Lewis County	10,078	100.0%
89	Osceola	9,396	St. Clair County	9,396	100.0%
90	Osceola & Warsaw	4,843	Hickory County	9,352	51.8%

91	Gainesville	9,328	Ozark County	9,328	100.0%
92			Caldwell County	9,046	0.0%
93	Rich Fountain	4,982	Maries County	8,959	55.6%
94	Richmond	1,852	Carroll County	8,909	20.8%
95	Stoutsville	6,113	Monroe County	8,676	70.5%
96	Coffey	4,832	Harrison County	8,615	56.1%
97	Coffey	8,300	Daviess County	8,300	100.0%
98	Mountain View	4,023	Shannon County	8,273	48.6%
99	Brookfield	39,002	Chariton County	7,586	514.1%
100	Bolivar	2,232	Dade County	7,581	29.4%
101	Canton	3,110	Clark County	6,807	45.7%
102	Coffey	2,021	Gentry County	6,688	30.2%
103			Sullivan County	6,382	0.0%
104			Reynolds County	6,361	0.0%
105			Carter County	6,255	0.0%
106	Stoutsville	3,005	Shelby County	6,084	49.4%
107	Rock Port	5,335	Atchison County	5,335	100.0%
108			Scotland County	4,883	0.0%
109			Putnam County	4,846	0.0%
110	Rock Port	2,013	Holt County	4,499	44.7%
111			Schuyler County	4,450	0.0%
112			Knox County	3,976	0.0%
113			Mercer County	3,669	0.0%
114			Worth County	2,053	0.0%
TOTAL		3,185,726		5,760,433	55.3%

The State of Missouri covers approximately 180,560 square kilometers. Each 700 MHz trunked site covers approx. 1809.56 square kilometers. Forty-six (46) trunked sites utilizing 700 MHz State License Spectrum cover approximately 83238.76 square kilometers or approximately 46.1% of the total area of the state and 55.3% of the population.

There is another major metropolitan area of the state where another public safety entity has built out their own 700/800 MHz trunked system. In order not to duplicate efforts, MOSWIN has deliberately not built new 700 MHz trunked sites utilizing 700 MHz State License Spectrum in that location as of today, however plans to add a site that will cover the entire Kansas City Missouri Metropolitan area by June 2020 is planned, funded and being worked on as of today. MOSWIN users can now roam into this area using Project 25 Inter RF Subsystem Interface (ISSI). This allows MOSWIN users to continue to operate seamlessly while utilizing the other trunked system.

Fixed trunking sites utilizing 700 MHz SL Channels cover all or part of eight-seven (87) of the

one hundred fourteen (114) counties and City of St Louis, or 76.3% of the total number of counties, as of June 4, 2019.

While the Missouri State Highway Patrol acknowledges the coverage of its 700 MHz trunked sites alone, do not cover 2/3 of the population or geographic area, we can assert the combination of DVRS, tactical operations, SOW and fixed trunked site usage as whole, well exceeds the requirement to provide substantial service to 2/3 of the population, as outlined in 47 CFR 90.529 (b)(2).

With the retention of 700 MHz State License Spectrum under FCC authorization WPZT785 and continued build-out of trunked sites, the Missouri State Highway Patrol, in conjunction with MOSWIN will continue to provide a proven inter-operability solution to public safety agencies and the citizens of the State of Missouri.

Thank you for your consideration regarding this filing. If you have any questions, please don't hesitate to contact us.

Sincerely

J. Corey Chaney

J. Corey Chaney, Director of Radio
Communications Division