Exhibit No.:

Issue: Application for Designation as an Eligible

Telecommunications Carrier

Witness: Jonathon D. Reeves

Sponsoring Party: Missouri RSA No. 5 Partnership

Type of Exhibit: Direct Testimony Case No.: TO-2006-0172

Date Testimony Prepared: December 29, 2005

### MISSOURI RSA No. 5 PARTNERSHIP

### **DIRECT TESTIMONY**

**OF** 

### JONATHAN D. REEVES

**CASE NO. TO-2006-0172** 

\* HC denotes "Highly Confidential" Information

December 29, 2005

1		DIRECT TESTIMONY
2		$\mathbf{OF}$
3		JONATHAN D. REEVES
4		APPLICATION OF MISSOURI RSA NO. 5 PARTNERSHIP
5		CASE NO. TO-2006-0172
6		
7	Q.	Please state your name and business address.
8	A.	Jonathan D. Reeves, 3835 North Ninth Street, #409W, Arlington, Virginia 22203.
9	Q.	By whom are you employed and in what capacity?
10	A.	I am the President of JDR Telecom Solutions, LLC, a telecommunications consulting
11		firm.
12	Q.	Please describe your educational background.
13	A.	I received my baccalaureate degree in electrical engineering (1996) from Grove City
14		College, Grove City, Pennsylvania.
15	Q.	Please describe your work experience.
16	A.	From graduation until its merger with Bennet & Bennet, PLLC, in January of 2004, I
17		was employed as a technical consultant with Kurtis & Associates, P.C. working on
18		the design of two-way radio systems (cellular and conventional), point-to-point radio
19		systems, propagation studies, field-testing, network design, system deployment and
20		network optimization. From January of 2004 through March of 2005, I was
21		employed in the same capacity by Bennet & Bennet, PLLC.
22		In March of 2005, I founded JDR Telecom Solutions, LLC. ("JDR"), which
23		provides technical representation to telephone companies, personal communications,

Direct Tes	timo	ony	of
Jonathan I	). R	eev	es

- 1 cellular, paging, microwave and other wireless communication carriers and
- 2 entrepreneurs.
- 3 Q. To what professional associations do you or your firm belong?
- 4 A. The firms that I have worked with have been Associate Members of the Rural
- 5 Cellular Association, the Rural Telecommunications Group ("RTG"), the
- 6 Organization for the Promotion and Advancement of Small Telecommunications
- 7 Companies ("OPASTCO"), the National Telephone Cooperative Association
- 8 ("NTCA") and various states Telecommunications Association.
- 9 Q. What professional services have you provided to Missouri RSA 5 Partnership
- 10 ("**MO** 5")?
- 11 A. I have performed a network analysis of the MO 5 existing cellular network and
- provide ongoing network optimization services. I have analyzed existing network
- coverage and, under the direction of Mr. James A. Simon and Ms. Kathryn G.
- Zentgraf, I have performed analysis of areas where the existing GSM network would
- benefit from enhancement and the coverage that would result from the deployment of
- proposed additional cell sites using proprietary propagation and system analysis
- software. I have analyzed MO 5's coverage and advised MO 5 concerning
- infrastructure modifications that would improve and expand reliable coverage
- 19 provided to its subscribers.
- 20 **Q.** What is the purpose of your testimony in this proceeding?
- 21 A. My testimony will support and expand upon certain statements and factual
- representations in MO 5's Application For Designation As An Eligible
- Telecommunications Carrier for Purposes of Receiving Federal Universal Service

		Support Pursuant to Section 214(e)(2) Of The Telecommunications Act Of 1996
2		("Application") in this docket.
3	Q.	Please provide some background information concerning MO 5's cellular service
4		in Missouri RSA No. 5.
5	A.	Pursuant to its FCC cellular license (Call Sign KNKN487), MO 5 provides analog
6		and digital cellular service in Missouri RSA No. 5, Market No. 508B, which is
7		comprised of all or substantially all of Linn, Macon, Shelby, Chariton and Randolph
8		Counties in Missouri. MO 5 has also claimed a small portion of Knox County, which
9		was previously unserved area, as part of its Missouri RSA No. 5 Cellular Geographic
10		Service Area ("CGSA"). Appendix A to the Application, which is also appended
11		hereto as Appendix A, depicts the MO 5 FCC-licensed CGSA and was prepared by
12		me.
13	Q.	Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G.
13 14	Q.	
	Q.	Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G.
14	Q.	Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G. Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire
14 15		Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G. Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire centers that would be encompassed by the proposed MO 5 ETC service area?
<ul><li>14</li><li>15</li><li>16</li></ul>		Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G.  Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire  centers that would be encompassed by the proposed MO 5 ETC service area?  Yes, I have reviewed that testimony and I personally prepared Application
<ul><li>14</li><li>15</li><li>16</li><li>17</li></ul>		Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G.  Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire  centers that would be encompassed by the proposed MO 5 ETC service area?  Yes, I have reviewed that testimony and I personally prepared Application  Appendix C, also appended hereto as Appendix C, which graphically depicts the
<ul><li>14</li><li>15</li><li>16</li><li>17</li><li>18</li></ul>		Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G. Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire centers that would be encompassed by the proposed MO 5 ETC service area?  Yes, I have reviewed that testimony and I personally prepared Application Appendix C, also appended hereto as Appendix C, which graphically depicts the proposed MO 5 ETC service area overlaid on a map depicting the underlying LEC
<ul><li>14</li><li>15</li><li>16</li><li>17</li><li>18</li><li>19</li></ul>		Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G. Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire centers that would be encompassed by the proposed MO 5 ETC service area?  Yes, I have reviewed that testimony and I personally prepared Application Appendix C, also appended hereto as Appendix C, which graphically depicts the proposed MO 5 ETC service area overlaid on a map depicting the underlying LEC wirecenters. I also prepared Application Appendix D, which is also appended hereto
14 15 16 17 18 19 20		Are you familiar with the pre-filed Direct Testimony of Ms. Kathryn G. Zentgraf in this case as it relates to the Local Exchange Carrier ("LEC") wire centers that would be encompassed by the proposed MO 5 ETC service area?  Yes, I have reviewed that testimony and I personally prepared Application Appendix C, also appended hereto as Appendix C, which graphically depicts the proposed MO 5 ETC service area overlaid on a map depicting the underlying LEC wirecenters. I also prepared Application Appendix D, which is also appended hereto as Appendix D, which lists the rural LECs that are encompassed in the proposed

Q.

A.

disaggregated its study area, I have broken down the study area for that LEC by the LEC zones. For each wirecenter, I have determined the population and square miles served. Dividing the population in the wirecenter by the number of square miles results in population density (persons per square mile) for each wirecenter, which is also listed in Appendix D. In addition to this wirecenter-by-wirecenter analysis, I also computed and compared the population density for the overall LEC study area (or individual disaggregated zone) and compared that population density with the population density for the portion of the LEC study area or disaggregated zone that is proposed to be included within the MO 5 ETC service area. Those numbers are also set forth in Appendix D. I used the MapInfo Exchange Plus software and Missouri population and wire center datasets to perform this analysis.

- Would you please compare the population densities for each rural LEC study area with the population densities for the portion of the study area included in the proposed MO 5 ETC service area?
- Alltel has disaggregated its study area into three discrete zones for purposes of determining its level of high cost support. Of the Alltel wirecenters included in the proposed MO 5 ETC service area, the Laclede and Sumner wirecenters lie within Alltel's Zone 1 while the Mendon and Rothville wire centers lie within Alltel's Zone 2. In the case of the proposed redefinition of the Alltel service area in Zone 1, the population density in the proposed MO 5 service area is 9.56 people per mile as compared to Alltel's Zone 1 study-wide average population density of 28.89 people per square mile. Accordingly, any level of support based upon the entire Alltel Zone 1 study area would have been determined on the average cost of providing

service to a population density of 28.89. Since the population density within the portion of the Alltel Zone 1 study area that lies within MO5's proposed ETC service area is below the population density of the entire Alltel Zone 1 study area, the portion of the Alltel Zone 1 study area which MO5 seeks to include in its ETC designated service area would be expected to have a higher cost of service than the average upon which Alltel's level of USF support is based. Accordingly, since the proposed redefined service area represents a population density well below the average population density upon which the level of USF support for the ILEC was based, under established FCC precedent cited by Ms. Zentgraf in her testimony, there would be no cream skimming issue presented by the proposed redefinition of the Alltel Zone 1 service area.

Similarly, the two wirecenters proposed for inclusion in MO 5's ETC service area from Alltel's Zone 2 study area, are the two most rural wire centers in that entire study area, having population densities of 6.98 and 7.14 persons per square mile, respectively (7.03 persons per square mile on a composite basis) as compared to the population density of 20.02 persons per square mile for the entire Zone 2 study area.

Grand River has also disaggregated its study area into two Zones. All of the proposed Grand River wire centers included in the proposed MO5 ETC service area are located within Grand River's Zone 2. The average population density for the wire centers proposed for inclusion within the MO5 service area is 8.83 persons per square mile; nearly identical the overall population density of the Grand River's Zone 2 which is 8.48 persons per square mile. Accordingly, the proposed MO5 redefined

service area would be based upon a population density comparable to that upon which Grand Mutual's level of support is based.

With respect to the Mark Twain wire centers, those included within the proposed MO5 ETC service area have an average population density of 7.64 persons per square mile as compared to an overall study area population density of 9.57 persons per square mile.

NEMO has also disaggregated its study area. The wire center included in the proposed MO5 ETC service area is located within NEMO's Group 1 Zone 2. The average population density for the wire centers proposed for inclusion within the MO5 service area is 3.57 persons per square mile as compared to an overall population density of 4.84 for NEMO's Group 1, Zone 2.

Spectra has also disaggregated its study area into distinct zones. Of the wirecenters proposed to be included in the MO 5 ETC service area, the Brunswick and Macon wirecenters are in Zone 1 while the Clarence, Dalton, Elmer, Hunnewell, Keytesville, LaPlata, Shelbina and Shelbyville wirecenters are in Zone 2. The average population density for the Zone 1 wirecenters which MO 5 seeks to include is 50.83 persons per square mile, nearly identical to the composite Zone 1 population density of 49.50 persons per square mile. The Zone 2 wire centers which MO 5 seeks to include have an average population density of 13.37 as compared to an overall Zone 2 population density of 16.23 persons per square mile.

Accordingly, in each and every instance where MO 5 seeks redefinition of the ILEC service area, the population densities within the portions of those study areas sought to be included in the MO 5 ETC service area either fall below or are virtually

1		identical with the overall population densities upon which the LEC level of support
2		has been based.
3	Q.	Ms. Zentgraf has testified to the need to migrate the MO 5 network to the GSM
4		digital technology so the questions I am about to ask with respect to coverage
5		relate to coverage associated with GSM service. What is the extent of the
6		current MO 5 GSM service in the MO 5 FCC-licensed service area?
7	A.	Application Appendix E, also appended hereto as Appendix E, is a map which
8		graphically identifies the areas where GSM coverage would benefit from
9		enhancement. These areas include some of the rural-most portions of MO 5's market.
10		Appendix E, which contains information deemed to be Highly Confidential by MO 5,
11		was prepared by me.
12	Q.	Are you familiar with the MO 5 five-year network enhancement plan that
13		Ms. Zentgraf and Mr. Simon have testified would be deployed if the proposed
14		ETC designation is granted to MO 5?
15	A.	Yes I am. I was asked to identify future cell sites to provide GSM service to specific
16		areas designated by MO 5 into which MO 5 would seek to extend GSM coverage if
17		ETC designation is granted. Application Appendix G, also appended hereto as
18		Appendix G hereto, is a map which graphically depicts the approximate location of
19		each of the cell sites proposed in the MO 5 five-year network enhancement plan.
20		Appendix G, which was prepared by me, is deemed to be Highly Confidential by
21		MO 5.
22	Q.	If this design is intended to provide specific areas with GSM service, why are the
23		proposed cell site locations listed as "approximate?"

- 1 A. Highly Confidential Application Appendix F, which is also appended hereto as 2 Appendix F, identifies the construction timeline for each cell site as specified by 3 MO 5. Since each of these deployments will not occur unless and until MO 5 has 4 been designated as an ETC and, thereafter, as testified to by Mr. Simon, timed to 5 receipt of USF support, MO 5 has not yet gone through the site acquisition process to 6 identify and secure specific parcels of property. Accordingly, I have identified 7 approximate cell site locations to provide the coverage desired by MO 5. While the 8 actual cell site location may shift once formal site acquisition has been undertaken, 9 each actual cell site would be secured to provide coverage to the identified coverage 10 areas.
- 11 Q. What portions of Highly Confidential Appendix F did you prepare?
- 12 A. I identified the population that would be included within the coverage area for each
  13 proposed cell site and the LEC wirecenters where coverage would be enhanced by the
  14 addition of each such cell site.
- 15 Q. What would be the composite GSM coverage that would result from 16 implementation of all of the cell sites identified in Highly Confidential 17 Appendices F and G?
- 18 A. Highly Confidential <u>Appendix H</u> hereto, shows the composite coverage that would 19 result from implementation of those cell sites. <u>Appendix H</u> was prepared by me.
- Q. Assuming the deployment of all cells identified in Highly Confidential

  Appendices F and G, what would be the resulting GSM coverage available in the

  proposed MO 5 ETC service area when the coverage from the proposed new

  cells is added to the existing GSM cell site coverage?

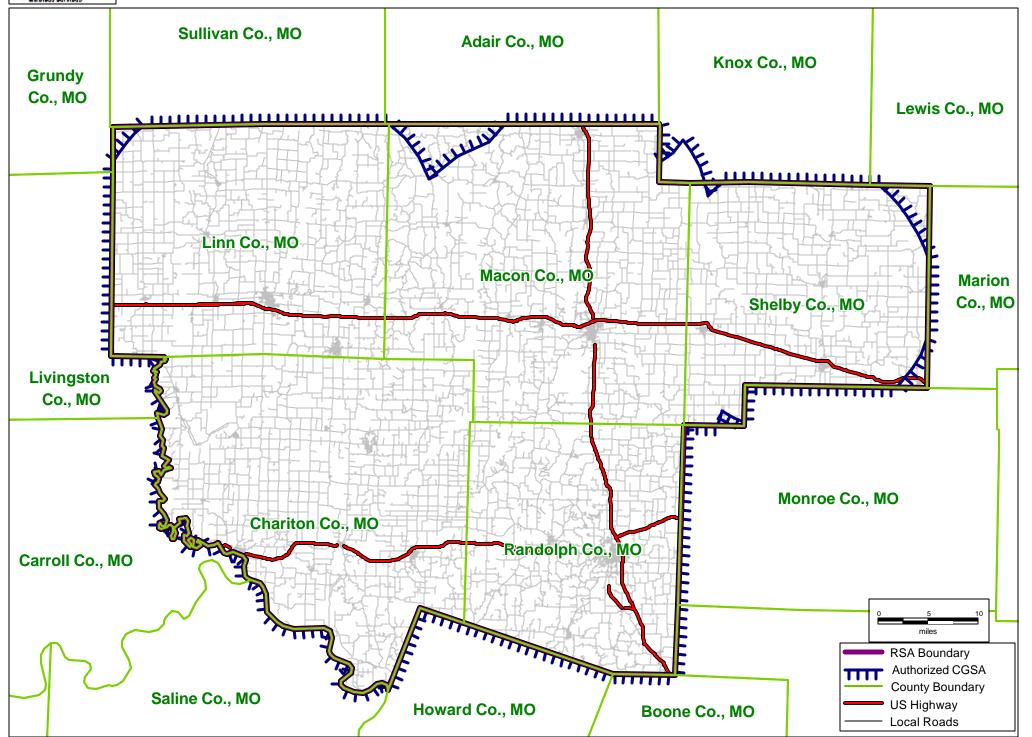
Direct Testimony of Jonathan D. Reeves

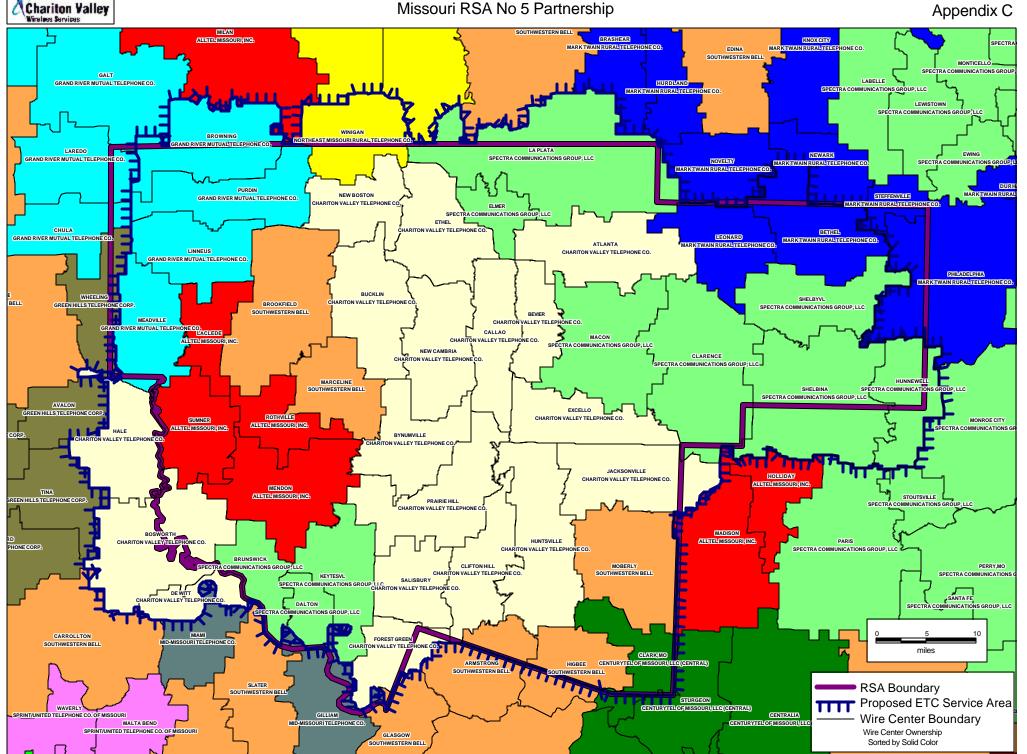
- 1 A. Highly Confidential <u>Appendix I</u> hereto shows the composite GSM coverage when the 2 proposed network enhancement cell sites are added to the existing GSM cell site
- 3 coverage. Appendix I was also prepared by me.
- 4 Q. Are there any other advantages associated with the deployment of the additional cell sites proposed in the MO 5 five-year network enhancement plan?
- 6 A. Yes. One significant advantage relates to the accuracy with which MO 5 will be able 7 to provide locational services in conjunction with E911 calls. Since the MO 5 8 network utilizes GSM technology, unlike the case of code division multiple access 9 technology, there are no handsets available which incorporate global positioning 10 system ("GPS") capabilities to enable the handset, via the GPS satellite service, to 11 provide information to the network as to its precise location. Accordingly, the 12 network must "locate" the handset. This is accomplished by analyzing the signal 13 from the handset at multiple cell sites and using that information to determine the 14 handsets location. As a general rule, the accuracy of this "triangulation" process 15 increases with the number of cell sites that are deployed in a given service area. The 16 proposed deployment of the Network Enhancement plan if ETC designation is 17 granted is in some of the rural-most portions of the MO 5 service area. Accordingly, 18 the increased E911 accuracy will occur in those rural-most areas.
- 19 **Q.** Does that conclude your testimony?
- A. Yes it does.

### STATE OF MISSOURI

MISSOURI RSA No. 5 PARTNERSHIP  Application for Designation as an Eligible Telecommunications Carrier for Purposes of Receiving Federal Universal Service Support Pursuant to Section 214(e)(2) of the Telecommunications Act of 1996.	) ) ) Case No ) ) )
AFFIDAVIT OF	JONATHAN D. REEVES
CITY OF ARLINGTON  COMMONWEALTH OF VIRGINIA	) ) ss. )
preparation of the foregoing Direct Testi pages of testimony to be presented in Direct Testimony were given by him; that	e, on his oath states: that he has participated in the mony in question and answer form, consisting of a the above case; that the answers in the foregoing the has knowledge of the matters set forth in such a correct to the best of his knowledge and belief.
	Jonathan D. Reeves
Subscribed and sworn to before me this	day of December, 2005.
	Notary Public
My Commission expires:	







## ALLTEL MISSOURI, INC.\*

## Zone 1

	Population	Square Miles	Density
ALBANY	2,322.00	72.72	31.93
BELLFLOWER	850.00	48.96	17.36
BOLIVAR	13,986.00	147.50	94.82
CROCKER	2,882.00	86.17	33.45
DIXON	7,266.00	189.48	38.35
DONIPHAN	7,261.00	336.88	21.55
EOLIA	1,318.00	74.06	17.80
FAIRDEALNG	3,225.00	101.96	31.63
GALLATIN	2,706.00	86.33	31.34
GRANT CITY	1,505.00	104.98	14.34
LACLEDE	605.00	45.06	13.43
LIBERAL	1,865.00	121.99	15.29
MADISON	1,805.00	120.74	14.95
MILAN	3,817.00	203.61	18.75
MORRISVL	2,097.00	60.85	34.46
OLNEY	1,058.00	59.98	17.64
PIEDMONT	4,680.00	138.30	33.84
PLEASAHOPE	2,828.00	62.35	45.36
PURDY	3,249.00	66.97	48.51
SILEX	1,909.00	74.33	25.68
STOTTSCITY	681.00	35.74	19.05
SUMNER	512.00	71.81	7.13
UNION STAR	583.00	42.34	13.77
WINSTON	628.00	57.67	10.89
Total Population Coverage by MO RSA 5 Partnership:	1,117.00		
Total Coverage Area by MO RSA 5 (square mile):		116.87	
MO RSA Total Density:			9.56

	Total Population Coverage by MO RSA 5 Partnership:	1,117.00		
Ī	Total Coverage Area by MO RSA 5 (square mile):		116.87	
ĺ	MO RSA Total Density:			9.56
ĺ	Full Zone:	69,638.00	2,410.78	28.89
Ī	MO RSA 5 - % Coverage:	1.60%	4.85%	

Zone 2

	Population	Square Miles	Density
ALDRICH	1,613.00	76.23	21.16
COFFEY	354.00	39.30	9.01
FAIRVIEW	703.00	28.06	25.05
GREENVILLE	1,910.00	142.31	13.42
HALF WAY	1,362.00	75.17	18.12
HOLLIDAY	605.00	51.48	11.75
IBERIA	3,631.00	157.90	23.00
JAMESON	283.00	41.12	6.88
MARTINSBG	996.00	58.09	17.15
MENDON	760.00	108.87	6.98
MINDENMINS	652.00	62.34	10.46
NAYLOR	1,171.00	44.19	26.50
NEELYVILLE	2,540.00	138.47	18.34
NEW HARTFD	682.00	74.46	9.16
OXLY	1,492.00	49.73	30.00
POLK	1,331.00	77.62	17.15
ROTHVILLE	345.00	48.30	7.14
STARK CITY	985.00	33.81	29.13
STELIZABTH	823.00	56.52	14.56
STOCKTON	5,142.00	227.99	22.55
STOVER	3,372.00	160.44	21.02
VANDALIA	5,474.00	160.00	34.21
VERONA	2,353.00	56.19	41.88
WHEATON	2,142.00	65.22	32.84
Total Population Coverage by MO RSA 5 Partnership:	1,105.00		
Total Coverage Area by MO RSA 5 (square mile):		157.17	
MO RSA Total Density:			7.03
Full Zone:	40,721.00	2,033.81	20.02
MO RSA 5 - % Coverage:	2.71%	7.73%	

 $<sup>^{\</sup>star}$  Only the highlighted wire centers are included in the proposed ETC service area.

### **CHARITON VALLEY TELEPHONE CO.**

ATLANTA	Full Study Area
BUCKLIN	Full Study Area
BEVIER	Full Study Area
BOSWORTH	Full Study Area
BYNUMVILLE	Full Study Area
CALLAO	Full Study Area
CLIFTON HILL	Full Study Area
DE WITT	Full Study Area
ETHEL	Full Study Area
EXCELLO	Full Study Area
FOREST GREEN	Full Study Area
HALE	Full Study Area
HUNTSVILLE	Full Study Area
JACKSONVILLE	Full Study Area
NEW BOSTON	Full Study Area
NEW CAMBRIA	Full Study Area
PRAIRIE HILL	Full Study Area
SALISBURY	Full Study Area

3

### **GRAND RIVER MUTUAL TELEPHONE CO.\***

Zone 2

	Population	Square Miles	Density
ANDOVER	156.00	16.86	9.25
BARNARD	1,220.00	107.65	11.33
BRIMSON	494.00	48.46	10.19
BROWNING	744.00	93.68	7.94
CAINSVILLE	1,008.00	92.62	10.88
CHULA	616.00	63.40	9.72
CONCETNJCT	587.00	47.95	12.24
DARLINGTON	519.00	89.30	5.81
DENVER	226.00	45.93	4.92
EAGLEVILLE	972.00	128.26	7.58
GALT	1,149.00	158.12	7.27
GENTRY	608.00	110.35	5.51
GILMANCITY	726.00	87.59	8.29
GRAHAM	504.00	63.02	8.00
JAMESPORT	1,645.00	108.74	15.13
LAREDO	745.00	79.70	9.35
LINNEUS	531.00	74.12	7.16
LUCERNE	301.00	66.93	4.50
MEADVILLE	939.00	74.04	12.68
MERCER	896.00	130.15	6.88
MT MORIAH	394.00	57.90	6.80
NEWHAMPTON	642.00	93.86	6.84
NEWTOWN	565.00	97.16	5.82
PARNELL	701.00	64.72	10.83
POWERSVL	192.00	42.53	4.51
PRINCETON	2,061.00	221.84	9.29
PURDIN	651.00	82.76	7.87
RAVENWOOD	883.00	77.79	11.35
RIDGEWAY	585.00	66.33	8.82
SHERIDAN	478.00	62.37	7.66
SO LINEVL	136.00	17.33	7.85
SODAVIS CY	89.00	8.85	10.06
SPICKARD	1,345.00	146.74	9.17
WASHITCTR	683.00	102.70	6.65
Total Population Coverage by MO RSA 5 Partnership:	2,865.00		
Total Coverage Area by MO RSA 5 (square mile):		324.60	
MO RSA Total Density:			8.83
Full Zone:	23,991.00	2,829.75	8.48

<sup>\*</sup> Only the highlighted wire centers are included in the proposed ETC service area.

MO RSA 5 - % Coverage:

11.94%

11.47%

### **MARK TWAIN RURAL TELEPHONE CO.\***

	Population	Square Miles	Density
BARING	611.00	60.14	10.16
BETHEL	528.00	89.34	5.91
BRASHEAR	1,176.00	84.04	13.99
DURHAM	674.00	22.79	29.57
GREENTOP	922.00	66.07	13.95
HURDLAND	401.00	50.26	7.98
KNOX CITY	593.00	98.08	6.05
LEONARD	692.00	70.41	9.83
NEWARK	300.00	49.68	6.04
NOVELTY	270.00	66.87	4.04
PHILA	2,451.00	201.11	12.19
STEFFENVL	191.00	24.72	7.73
WILLIAMSTN	576.00	87.69	6.57
WYACONDA	491.00	60.44	8.12
Total Danielation Courses to MO DCA 5 Dantagraphics	4 000 00		

Total Population Coverage by MO RSA 5 Partnership:	1,220.00		
Total Coverage Area by MO RSA 5 (square mile):		159.75	
MO RSA Total Density:			7.64
Full Zone:	9,876.00	1031.64	9.57
MO RSA 5 - % Coverage:	12.35%	15.49%	

<sup>\*</sup> Only the highlighted wire centers are included in the proposed ETC service area.

### NORTHEAST MISSOURI RURAL TELEPHONE CO.\*

Group 1 Zone 2

	Population	<b>Square Miles</b>	Density
GREEN CITY	852.00	188.24	4.53
LEMONS	258.00	45.40	5.68
POLLOCK	369.00	53.11	6.95
WINIGAN	257.00	71.99	3.57

Total Population Coverage by MO RSA 5 Partnership:	257.00		
Total Coverage Area by MO RSA 5 (square mile):		71.99	
MO RSA Total Density:			3.57
Full Zone:	1,736.00	358.74	4.84
MO RSA 5 - % Coverage:	14.80%	20.07%	

<sup>\*</sup> Only the highlighted wire centers are included in the proposed ETC service area.

### **SPECTRA COMMUNICATIONS GROUP, LLC\***

Zone 1

	Population	Square Miles	Density
AURORA	9,956.00	74.92	132.89
BRUNSWICK	1,251.00	46.65	26.82
CAMERON	10,803.00	131.32	82.26
CANTON	4,152.00	139.31	82.26
CONCORDIA	3,647.00	93.69	38.93
KAHOKA	3,053.00	98.85	30.89
MACON	7,189.00	119.40	60.21
MONROECITY	3,710.00	173.43	21.39
MOUNTANGRV	8,337.00	190.63	43.73
MT VERNON	7,659.00	131.44	58.27
PALMYRA	5,769.00	136.94	42.13
POTOSI	13,623.00	320.96	42.44
SAVANNAH	6,790.00	78.72	86.26

Total Population Coverage by MO RSA 5 Partnership:	8,440.00		
Total Coverage Area by MO RSA 5 (square mile):		166.05	
MO RSA Total Density:			50.83
Full Zone:	85,939.00	1,736.26	49.50
MO RSA 5 - % Coverage:	9.82%	9.56%	

<sup>\*</sup> Only the highlighted wire centers are included in the proposed ETC service area.

Zone 2

	Population	Square Miles	Density
AMAZONIA	1,212.00	35.19	34.44
ANNAPOLIS	1,658.00	148.43	11.17
ARCOLA	413.00	56.28	7.34
AVENUECITY	1,611.00	34.45	46.76
AVILLA	1,612.00	98.40	16.38
BELGRADE	728.00	58.16	12.52
BELLEVIEW	779.00	96.79	8.05
BIRCH TREE	2,100.00	151.63	13.85
BOLCKOW	630.00	39.18	16.08
BOSS	1,168.00	97.22	12.01
BRAYMER	1,924.00	97.66	19.70
BRONAUGH	760.00	60.99	12.46
BUNKER	1,587.00	219.18	7.24
CALEDONIA	1,291.00	52.59	24.55
CENTERVL	622.00	70.19	8.86
CLARENCE	1,525.00	148.76	10.25
CLARKSDALE	549.00	38.99	14.08

	Population	Square Miles	Density
COLLINS	1,311.00	99.25	13.21
COSBY	267.00	12.29	21.72
DADEVILLE	1,028.00	89.50	11.49
DALTON	244.00	27.90	8.75
EASTON	391.00	19.66	19.89
EDGAR SPG	2,462.00	205.12	12.00
ELDORDOSPG	7,033.00	156.29	45.00
ELLSINORE	2,132.00	139.85	15.24
ELMER	218.00	33.35	6.54
EMINENCE	1,396.00	220.02	6.34
EVERTON	1,432.00	76.57	18.70
EWING	474.00	41.11	11.53
FILLMORE	622.00	54.24	11.47
FREMONT	520.00	104.25	4.99
GOLDENCITY	2,075.00	131.12	15.83
GORIN	294.00	43.97	6.69
GOWER	2,715.00	87.81	30.92
GREENFIELD	2,799.00	107.91	25.94
GROVESPRNG	1,723.00	117.02	14.72
HAMILTON	2,982.00	114.69	26.00
HARTVILLE	2,851.00	147.96	19.27
HELENA	790.00	40.52	19.50
HOUSTON	5,587.00	221.40	25.23
HUMANSVL	2,959.00	118.12	25.05
HUNNEWELL	619.00	65.18	9.50
IRONDALE	1,431.00	30.24	47.32
IRONTON	6,966.00	232.00	30.03
JERICO SPG	1,425.00	124.85	11.41
KEYTESVL	618.00	72.91	8.48
KIDDER	1,113.00	69.34	16.05
KINGSTON	1,009.00	75.88	13.30
LA BELLE	1,158.00	97.38	11.89
LA GRANGE	2,389.00	96.58	24.74
LA PLATA	3,085.00	205.00	15.05
LADDONIA	1,219.00	69.01	17.66
LAWSON	5,864.00	91.65	63.98
LESTERVL	676.00	106.65	6.34
LEWISTOWN	1,210.00	72.05	16.79
LICKING	5,527.00	238.15	23.21
LOWRY CITY	2,500.00	162.12	15.42
MANES	1,596.00	148.81	10.73
MAYSVILLE	3,533.00	206.22	17.13
MILO	1,105.00	73.40	15.05
MONTAUK	762.00	52.83	14.42
MONTICELLO	454.00	50.89	8.92

	Population	Square Miles	Density
NEBO	1,236.00	153.00	8.08
NORWOOD	1,981.00	105.39	18.80
OATES	1,225.00	144.35	8.49
OSBORN	731.00	57.30	12.76
OSCEOLA	3,761.00	263.12	14.29
PARIS	2,893.00	180.53	16.03
PERRY	1,685.00	151.52	11.12
PLATTSBURG	4,574.00	125.00	36.59
RAYMONDVL	898.00	65.91	13.62
REVERE	569.00	72.02	7.90
ROBY	2,240.00	189.43	11.82
ROCKVILLE	831.00	104.19	7.98
ROSENDALE	1,194.00	43.20	27.64
SANTA FE	222.00	34.01	6.53
SARCOXIE	3,712.00	96.45	38.49
SCHELLCITY	1,570.00	149.21	10.52
SHELBINA	3,117.00	159.10	19.59
SHELBYVL	1,249.00	86.22	14.49
SHELDON	1,101.00	92.97	11.84
STEWARTSVL	1,504.00	46.67	32.23
STOUTSVL	212.00	33.44	6.34
TIMBER	1,335.00	251.87	5.30
TRIMBLE	337.00	11.81	28.54
TURNEY	308.00	16.13	19.09
VAN BUREN	2,216.00	197.56	11.22
VANZANT	1,103.00	138.06	7.99
WALKER	2,517.00	182.81	13.77
WAYLAND	2,474.00	156.10	15.85
WEAUBLEAU	971.00	36.58	26.54
WESTQUINCY	457.00	30.31	15.08
WHITESVL	393.00	45.78	8.58
WINONA	2,684.00	182.78	14.68
Total Population Coverage by MO RSA 5 Partnership:	10,675.00		
Total Coverage Area by MO RSA 5 (square mile):		798.42	
MO RSA Total Density:			13.37
Full Zono:	100 000 00	0.057.07	10.00

Total Coverage Area by MO RSA 5 (square mile):	10,6/5.00	798.42	
		7 30.42	10.07
MO RSA Total Density:			13.37
Full Zone:	160,033.00	9,857.97	16.23
MO RSA 5 - % Coverage:	6.67%	8.10%	

<sup>\*</sup> Only the highlighted wire centers are included in the proposed ETC service area.