



## **Comprehensive Engineering Statement – January 17, 2024**

**Better Life Television, Inc.**

**File # BPDTL-20130325AFT**

This proposal is for a minor change to digital low-power television station K17EZ-D, Rogue River, OR to change the transmitter geographic coordinates, change the antenna model, increase the antenna height, and radiated power. No other changes are proposed.

Licensed coordinates: North Latitude: 42-25-34.4

West Longitude :123-09-02.1

Proposed coordinates: North Latitude: 42-32-26.68

West Longitude: 123-14-51.74

Antenna Data: Elevation: 1,347 m, COR, 42.7 m AG, 1,389.7 m AMSL

Antenna Model: Scala 2X1K723147, Directional 130° T

ERP: 0.687 kW, Horizontal Plane

Facility ID: 50061

Exhibit #1 is an OET 69 TVStudy showing the amount of calculated interference is below the maximum allowed of 0.5 percent.

Exhibit #2 is a table of distances to contour and depression angle to the 36 evenly spaced radials.

Exhibit #3 is a map of the existing noise limited coverage and the proposed coverage.

Exhibit #4 is an OET-65 calculation of power density percentage at head height. Since the antenna will be the only qualifying radio frequency radiator on the tower, the required protections to human exposure will be fully met. This site provides a locked barrier of stranded cable around the heavily wooded site and a sign warning of the RF exposure at the transmitter building. According to the site owner this tower was built in 1978 and since its height is less than 200' it is not processed under the new environmental rules. There have been no controversial issues expressed by the public. The applicant is aware of the requirements to protect workers on the tower and will reduce power or terminate transmission when necessary.

Exhibit #5 is an azimuth graph of the proposed antenna pattern.

Exhibit #6 is an exhibit stating the **qualifications** of the preparer, Doug Vernier

tvstudy v2.2.5 (4uoc83)

Database: 127.0.0.1, Study: BPDTL20130325AFT #219, Model: Longley-Rice

Start: 2024.01.13 10:02:03

Exhibit #1

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Study created: 2024.01.13 10:02:03

Study build station data: LMS TV 2024-01-13

Proposal: K17EZ-D D17 LD CP ROGUE RIVER, OR

File number: BPDTL20130325AFT

Facility ID: 5004

Station data: User record

Record ID: 229

Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K16JJ-D	D16	LD	CP	EUREKA, CA	BLANK0000153507	209.6 km
No	K16IW-D	D16	LD	CP	REDDING, CA	BLANK0000010674	218.2
No	K16NK-D	D16	LD	LIC	CAVE JUNCTION, OR	BLANK0000180215	46.3
No	K16IE-D	D16	LD	LIC	COOS BAY, OR	BLDTT20101216ABJ	117.6
No	K16LL-D	D16	LD	LIC	COTTAGE GROVE, OR	BLANK0000066924	138.5
No	K16JS-D	D16	LD	LIC	EUGENE, OR	BLANK0000166013	162.8
Yes	KTVL	D16	DT	CP	MEDFORD, OR	BLANK0000195348	67.0
No	K16LI-D	D16	LD	LIC	PORT ORFORD, OR	BLANK0000058588	105.1
No	KPIC	D16	LD	LIC	ROSEBURG, OR	BLCDT20131205AIL	74.5
No	K17HE-D	D17	LD	LIC	SUSANVILLE, ETC, CA	BLDTL20101207AFM	334.7
Yes	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	115.5
Yes	K17BA-D	D17	LD	CP	YREKA, CA	BDFCDTT20090325AEK	115.4
No	KABH-CD	D17	DC	LIC	BEND, OR	BLDTA20131029ABN	230.5
No	K17DU-D	D17	LD	LIC	CHRISTMAS VALLEY, OR	BLDTL20120605AAZ	205.0
No	KMTR	D17	DT	LIC	EUGENE, OR	BLANK0000217139	162.7
No	K17NJ-D	D17	LD	LIC	Rockaway Beach, OR	BLANK0000066996	360.3
No	K17OY-D	D17	LD	LIC	CENTERVILLE, WA	BLANK0000193812	379.2
No	K18LJ-D	D18	LD	LIC	DUNSMUR, ETC, CA	BLANK0000011185	165.9

No	KOHD	D18	DT	LIC	BEND, OR	BLANK0000002204	230.5
No	K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	138.5
No	K18LR-D	D18	LD	CP	COTTAGE GROVE, OR	BLANK0000218824	162.7
Yes	K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	11.7
Yes	KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	48.9
No	KTVC	D18	DT	CP	ROSEBURG, OR	BLANK0000036020	74.3
No	KTVC	D18	DT	LIC	ROSEBURG, OR	BLCDT20060721AAR	77.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D17  
Mask: Stringent  
Latitude: 42 32 26.68 N (NAD83)  
Longitude: 123 14 51.74 W  
Height AMSL: 1388.7 m  
HAAT: 0.0 m  
Peak ERP: 0.687 kW  
Antenna: SCA-2X1K723147 (ID 112364) 130.0 deg  
Elev Pattn: Generic  
Elec Tilt: 2.00

49.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.002 kW	372.2 m	14.5 km
45.0	0.003	789.0	22.1
90.0	0.215	932.4	48.9
135.0	0.660	891.6	55.4
180.0	0.121	707.4	41.6
225.0	0.001	859.6	18.3
270.0	0.002	854.6	19.3
315.0	0.008	796.0	26.5

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 775 m

Distance to Canadian border: 632.2 km

Distance to Mexican border: 1217.0 km

Conditions at FCC monitoring station: Livermore CA

Bearing: 166.2 degrees Distance: 550.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 94.0 degrees Distance: 1521.7 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

Study cell size: 1.00 km

Profile point spacing: 0.50 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

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Interference to BLANK0000195348 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTVL	D16	DT	CP	MEDFORD, OR	BLANK0000195348	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	67.0 km
	KRCR-TV	D15	DT	CP	REDDING, CA	BLANK0000157557	164.4
	KWNV	D16	DT	CP	WINNEMUCCA, NV	BLANK0000230569	428.6
	DKJRW	D17	DT	BL	EUREKA, CA	DTVBL42640	186.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
54157.7	450,381	42365.3		371,536	42301.8	371,528	42264.4 370,773 0.09 0.20
Undesired			Total IX		Unique IX, before	Unique IX, after	

K17EZ-D D17 LD CP	37.4	755			37.4	755
KRCR-TV D15 DT CP	59.5	8	59.5	8	59.5	8
DKJRW D17 DT BL	4.0	0	4.0	0	4.0	0

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Interference to BLANK0000195348 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTVL	D16	DT	CP	MEDFORD, OR	BLANK0000195348	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	67.0 km
	KRCR-TV	D15	DT	BL	REDDING, CA	DTVBL8291	164.4
	KWNV	D16	DT	CP	WINNEMUCCA, NV	BLANK0000230569	428.6
	DKJRW	D17	DT	BL	EUREKA, CA	DTVBL42640	186.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
54157.7	450,381	42365.3	371,536	42302.8	371,528	42265.4 370,773	0.09 0.20
Undesired		Total IX		Unique IX, before		Unique IX, after	
K17EZ-D D17 LD CP	37.4	755			37.4	755	
KRCR-TV D15 DT BL	58.5	8	58.5	8	58.5	8	
DKJRW D17 DT BL	4.0	0	4.0	0	4.0	0	

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Interference to BLDTT20100113ADI LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	115.5 km
	K16IW-D	D16	LD	LIC	REDDING, CA	BLANK0000001146	106.6
	KTVL	D16	DT	CP	MEDFORD, OR	BLANK0000195348	52.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
6186.1	33,523	4869.4	27,492	4843.3	27,461	4834.3 27,461	0.19 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
K17EZ-D D17 LD CP	9.0	0			9.0	0	
KTVL D16 DT CP	26.1	31	26.1	31	26.1	31	

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Interference to BDFCDTT20090325AEK CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K17BA-D	D17	LD	CP	YREKA, CA	BDFCDTT20090325AEK	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	115.4 km
	K16IW-D	D16	LD	LIC	REDDING, CA	BLANK0000001146	106.8
	KTVL	D16	DT	CP	MEDFORD, OR	BLANK0000195348	52.8

	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
	6120.9	33,491	4821.2	27,148	4803.2
				27,136	4797.2
					27,136
					0.13
					0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K17EZ-D D17 LD CP	6.0	0	6.0
KTVL D16 DT CP	18.1	12	18.1
		12	12

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Interference to BLANK0000072437 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	11.7 km
	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	125.8
	K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	133.5
	KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	60.6
	KTVL	D18	DT	CP	ROSEBURG, OR	BLANK0000036020	66.9
	K19HS-D	D19	LD	LIC	GRANTS PASS, OR	BLDTT20080714ACF	13.3

	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
	2598.4	88,553	2144.1	71,253	2112.9
				68,162	2111.9
					68,162
					0.05
					0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K17EZ-D D17 LD CP	2.0	0	1.0
KDOV-LD D18 LD LIC	29.2	0	28.2
K19HS-D D19 LD LIC	2.0	3,091	2.0
		3,091	3,091

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Interference to BLANK0000072437 LIC scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	11.7 km
	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	125.8
	K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	133.5
	KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	60.6
	KTVC	D18	DT	LIC	ROSEBURG, OR	BLCDT20060721AAR	70.7
	K19HS-D	D19	LD	LIC	GRANTS PASS, OR	BLDTT20080714ACF	13.3
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	2598.4	88,553	2144.1	71,253	2110.9	68,091	2109.9 68,091 0.05 0.00
Undesired			Total IX	Unique IX, before		Unique IX, after	
K17EZ-D D17 LD CP			2.0	0		1.0 0	
KDOV-LD D18 LD LIC			29.2	0		28.2 0	
KTVC D18 DT LIC			2.0	71		2.0 71	
K19HS-D D19 LD LIC			2.0	3,091		2.0 3,091	

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Interference to BLANK0000072437 LIC scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	11.7 km
	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	125.8
	K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	133.5
	KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	60.6
	KTVC	D18	DT	CP	ROSEBURG, OR	BLANK0000036020	66.9
	K19HS-D	D19	LD	CP	GRANTS PASS, OR	BPDTT20111107ALN	22.0
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	2598.4	88,553	2144.1	71,253	2109.9	68,162	2108.8 68,162 0.05 0.00
Undesired			Total IX	Unique IX, before		Unique IX, after	

K17EZ-D D17 LD CP	2.0	0		1.0	0
KDOV-LD D18 LD LIC	29.2	0	29.2	0	28.2
K19HS-D D19 LD CP	5.1	3,091	5.1	3,091	5.1

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Interference to BLANK0000072437 LIC scenario 4

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	11.7 km
	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	125.8
	K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	133.5
	KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	60.6
	KTVC	D18	DT	LIC	ROSEBURG, OR	BLCDT20060721AAR	70.7
	K19HS-D	D19	LD	CP	GRANTS PASS, OR	BPDTT20111107ALN	22.0
	Service area	Terrain-limited		IX-free, before		IX-free, after	
	2598.4	88,553	2144.1	71,253	2107.9	68,091	2106.9
							Percent New IX
							0.05 0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
K17EZ-D D17 LD CP	2.0	0	1.0	0
KDOV-LD D18 LD LIC	29.2	0	29.2	0
KTVC D18 DT LIC	2.0	71	2.0	71
K19HS-D D19 LD CP	5.1	3,091	5.1	3,091

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Interference to BLANK0000201193 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	
Undesireds:	K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	48.9 km
	K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	77.1
	K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	166.2
	K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	60.6
	KTVC	D18	DT	CP	ROSEBURG, OR	BLANK0000036020	113.0
	K19HS-D	D19	LD	LIC	GRANTS PASS, OR	BLDTT20080714ACF	50.3



Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
5812.1 263,222	4549.6 207,009	4536.5 207,009	4533.5 207,009	0.07 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K17EZ-D D17 LD CP	3.0 0		3.0 0
K18LU-D D18 LD LIC	12.1 0	12.1 0	12.1 0
KTVC D18 DT CP	1.0 0	1.0 0	1.0 0

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Interference to BLANK0000201193 LIC scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	
Undesireds: K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	48.9 km
K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	77.1
K18LR-D	D18	LD	LIC	COTTAGE GROVE, OR	BLANK0000066926	166.2
K18LU-D	D18	LD	LIC	GLENDALE, ETC., OR	BLANK0000072437	60.6
K19HS-D	D19	LD	LIC	GRANTS PASS, OR	BLDTT20080714ACF	50.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
5812.1 263,222	4549.6 207,009	4537.5 207,009	4534.5 207,009	0.07 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K17EZ-D D17 LD CP	3.0 0		3.0 0
K18LU-D D18 LD LIC	12.1 0	12.1 0	12.1 0

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Interference to proposal scenario 1  
6.84% interference received

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: K17EZ-D	D17	LD	CP	ROGUE RIVER, OR	BPDTL20130325AFT	
Undesireds: KTVL	D16	DT	CP	MEDFORD, OR	BLANK0000195348	67.0 km
K17BA-D	D17	LD	LIC	YREKA, CA	BLDTT20100113ADI	115.5
KDOV-LD	D18	LD	LIC	MEDFORD, OR	BLANK0000201193	48.9
KTVC	D18	DT	CP	ROSEBURG, OR	BLANK0000036020	74.3

<i>Service area</i>	<i>Terrain-limited</i>		<i>IX-free</i>	<i>Percent IX</i>
3602.1      241,394	2827.1      175,096	2780.7	163,112	1.64      6.84
<i>Undesired</i>	<i>Total IX</i>		<i>Unique IX</i>	<i>Prcnt Unique IX</i>
<i>KTVL D16 DT CP</i>	22.3      5,381	12.1	3,818	0.43      2.18
<i>KDOV-LD D18 LD LIC</i>	34.2      8,166	24.1	6,603	0.85      3.77

N. Lat. = 42 32 26.7 W. Lng. = 123 14 51.7  
 HAAT and Distance to Contour,  
 FCC OET,TV 3.2 - 16.1, 130 pts - GLOBE 30 SEC  
 Electrical Beam Tilt = 2 Degrees, post rotated 130 degrees

## Distance to Contour and Depression Angles

Azi.	AV EL	HAAT	dBk	DAng	VFld	D-kw	%Max	D-dBk	51-F9
000	1023.0	366.7	-26.07	0.530	0.965	0.0023	96.5	-26.07	12.64
010	974.7	415.0	-26.07	0.564	0.970	0.0023	97.0	-26.07	13.44
020	827.1	562.6	-26.07	0.657	0.985	0.0024	98.5	-26.07	15.78
030	850.1	539.6	-27.65	0.643	0.983	0.0017	98.3	-27.65	13.85
040	675.0	714.7	-29.59	0.741	0.998	0.0011	99.8	-29.59	13.29
050	637.8	751.9	-21.63	0.760	1.000	0.0069	100.0	-21.63	22.78
060	624.5	765.2	-17.55	0.766	1.000	0.0176	100.0	-17.55	28.15
070	577.8	811.9	-12.69	0.789	1.000	0.0539	100.0	-12.69	35.64
080	479.9	909.8	-9.17	0.836	1.000	0.1212	100.0	-9.17	42.05
090	439.0	950.7	-6.67	0.854	1.000	0.2154	100.0	-6.67	46.24
100	581.0	808.7	-4.48	0.788	1.000	0.3561	100.0	-4.48	47.09
110	564.2	825.5	-2.84	0.796	1.000	0.5200	100.0	-2.84	49.80
120	528.8	860.9	-1.99	0.813	1.000	0.6331	100.0	-1.99	51.69
130	501.4	888.3	-1.63	0.826	1.000	0.6870	100.0	-1.63	52.69
140	525.8	863.9	-1.99	0.814	1.000	0.6331	100.0	-1.99	51.75
150	532.2	857.5	-2.84	0.811	1.000	0.5200	100.0	-2.84	50.37
160	715.9	673.8	-4.48	0.719	0.995	0.3526	99.5	-4.48	44.81
170	751.4	638.3	-6.67	0.700	0.992	0.2120	99.2	-6.67	41.25
180	690.4	699.3	-9.17	0.733	0.997	0.1205	99.7	-9.17	38.75
190	633.6	756.1	-12.69	0.762	1.000	0.0539	100.0	-12.69	34.78
200	558.9	830.8	-17.55	0.798	1.000	0.0176	100.0	-17.55	29.09
210	528.7	861.0	-21.63	0.813	1.000	0.0069	100.0	-21.63	24.21
220	530.1	859.6	-29.59	0.812	1.000	0.0011	100.0	-29.59	14.46
230	477.1	912.6	-27.65	0.837	1.000	0.0017	100.0	-27.65	17.36
240	503.7	886.0	-26.07	0.825	1.000	0.0025	100.0	-26.07	19.05
250	534.6	855.1	-26.07	0.810	1.000	0.0025	100.0	-26.07	18.72
260	526.0	863.7	-26.07	0.814	1.000	0.0025	100.0	-26.07	18.82
270	524.1	865.6	-27.65	0.815	1.000	0.0017	100.0	-27.65	16.92
280	504.3	885.4	-32.09	0.824	1.000	0.0006	100.0	-32.09	11.90
290	458.9	930.8	-27.65	0.845	1.000	0.0017	100.0	-27.65	17.50
300	584.7	805.0	-21.63	0.786	1.000	0.0069	100.0	-21.63	23.50
310	593.8	795.9	-20.80	0.781	1.000	0.0083	100.0	-20.80	24.41
320	604.2	785.5	-21.63	0.776	1.000	0.0069	100.0	-21.63	23.24
330	736.9	652.8	-27.65	0.708	0.993	0.0017	99.3	-27.65	14.83
340	793.1	596.6	-32.09	0.677	0.988	0.0006	98.8	-32.09	10.30
350	959.5	430.2	-27.65	0.575	0.972	0.0016	97.2	-27.65	12.29

Ave El= 626.45 M HAAT= 763.25 M AMSL= 1389.7 M

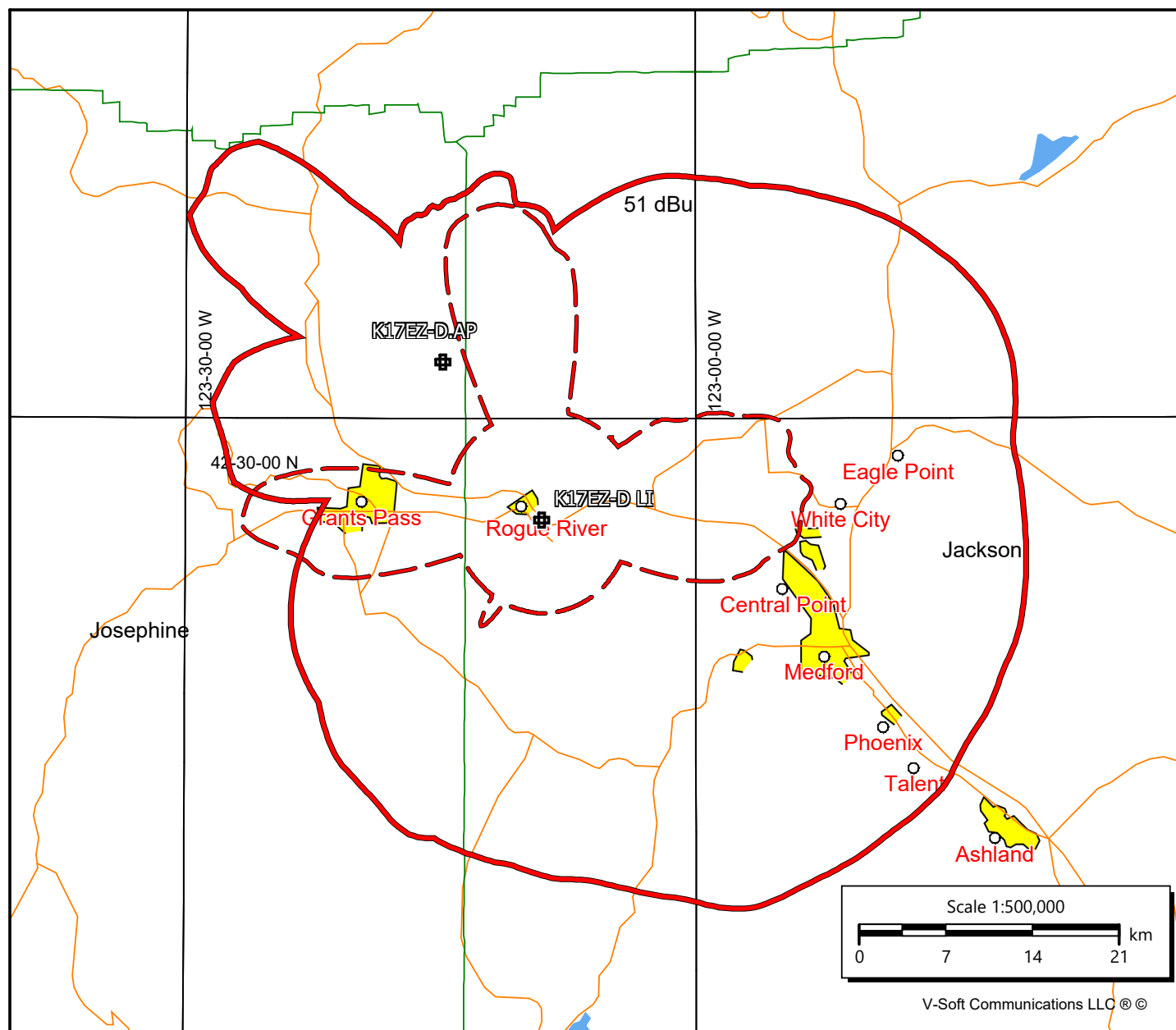
## Noise Limited Coverage - Licensed vs Proposed

**K17EZ-D AP**

BPDTL-20130325AFT  
 Latitude: 42-32-26.68 N  
 Longitude: 123-14-51.74 W  
 ERP: 0.687 kW  
 Channel: 17  
 Frequency: 491.0 MHz  
 AMSL Height: 1389.7 m  
 Horiz. Pattern: Directional

**K17EZ-D LI**

BLDTL-20110325ABA  
 Latitude: 42-25-34.40 N  
 Longitude: 123-09-02.10 W  
 ERP: 0.079 kW  
 Channel: 17  
 Frequency: 491.0 MHz  
 AMSL Height: 657.8 m  
 Horiz. Pattern: Directional



## RF Hazard Study:

RFHAZ 4 (TM) Ver 4.0.13 - (C) V-Soft Communications 2020

Print Disk Write Multiple Stations Other R.F. Help

**Study**  
☐ FM  
☐ TV  
☒ DTV

**OET 65 Method**  
☒ OET #65-Pure  
☐ OET Manual

**Scale =  $\mu\text{W}/\text{sq cm}$**   
☐ 50 ☐ 100 ☐ 200 ☐ 500  
☒ 1000 ☐ 1500 ☐ 3000

Multiple Stations in Study = 0

Graph Distance 100

**Antenna Parameters**  
H kW .687 V kW 0  
Chan # 17 Freq 491 Mhz  
COR Meters Above Ground 17

Field at -90 Deg. 0.2

FCC Max = 329.3  $\mu\text{W}/\text{sq cm}$   
**Base Pwr Density**  $\mu\text{W}/\text{sq cm}$   
3.17682  
% of Max  
0.9647

**Title**

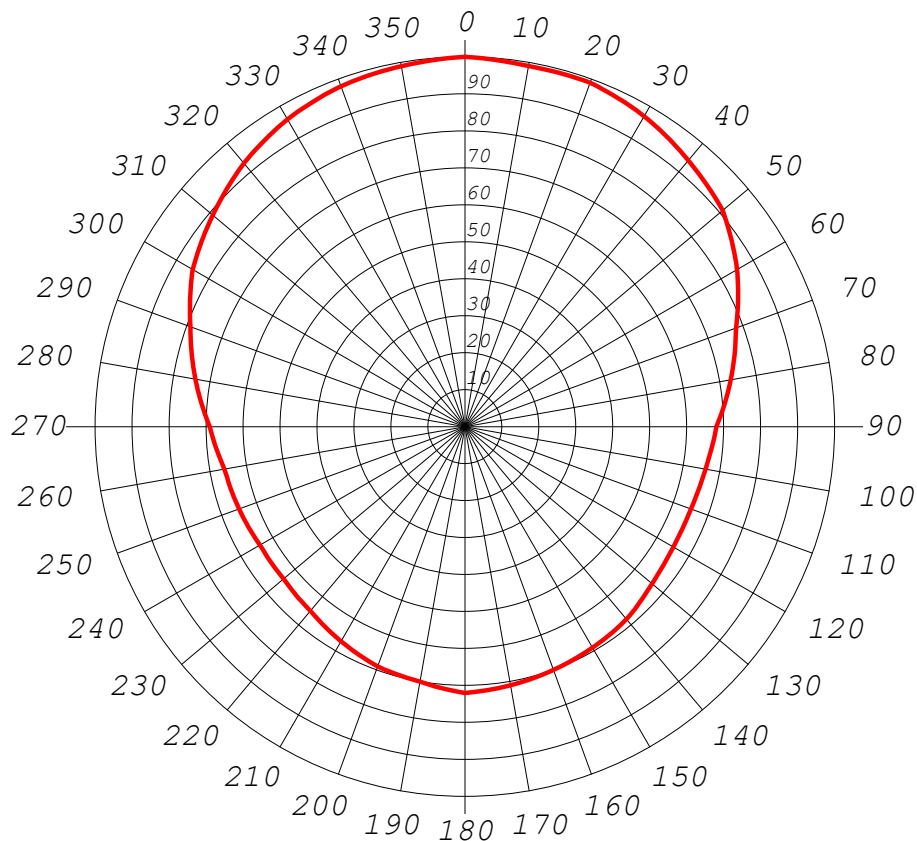
**1.0%**

Environment  
☒ Controlled ☐ Yes ☒ No

Graph Type  
☒ Power Density ☐ Percent Maximum ☐ Random Colors

# Scala 2X1K723147, Pre-rotation 130 degrees

Exhibit #5



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	1.000	-11.02	0.079	0.00	180	0.720	-13.88	0.041	-2.85
10	0.990	-11.11	0.077	-0.09	190	0.700	-14.12	0.039	-3.10
20	0.990	-11.11	0.077	-0.09	200	0.690	-14.25	0.038	-3.22
30	0.970	-11.29	0.074	-0.26	210	0.670	-14.50	0.035	-3.48
40	0.940	-11.56	0.070	-0.54	220	0.650	-14.77	0.033	-3.74
50	0.910	-11.84	0.065	-0.82	230	0.640	-14.90	0.032	-3.88
60	0.850	-12.44	0.057	-1.41	240	0.640	-14.90	0.032	-3.88
70	0.780	-13.18	0.048	-2.16	250	0.650	-14.77	0.033	-3.74
80	0.730	-13.76	0.042	-2.73	260	0.660	-14.63	0.034	-3.61
90	0.680	-14.37	0.037	-3.35	270	0.690	-14.25	0.038	-3.22
100	0.660	-14.63	0.034	-3.61	280	0.740	-13.64	0.043	-2.62
110	0.650	-14.77	0.033	-3.74	290	0.790	-13.07	0.049	-2.05
120	0.650	-14.77	0.033	-3.74	300	0.850	-12.44	0.057	-1.41
130	0.660	-14.63	0.034	-3.61	310	0.890	-12.04	0.063	-1.01
140	0.680	-14.37	0.037	-3.35	320	0.930	-11.65	0.068	-0.63
150	0.690	-14.25	0.038	-3.22	330	0.960	-11.38	0.073	-0.35
160	0.700	-14.12	0.039	-3.10	340	0.980	-11.20	0.076	-0.18
170	0.710	-14.00	0.040	-2.97	350	0.990	-11.11	0.077	-0.09

Rotation Angle = 130

**Declaration:**

I, Douglas L. Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 40 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 1/2006);

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by Better Life Television, Inc. to prepare the engineering showings appended hereto;

That, I have prepared these broadcast engineering showings, the technical information contained in same and the facts stated within are true of my knowledge;

That, under penalty of perjury, I declare that the foregoing is correct.

Douglas L. Vernier

A handwritten signature in blue ink, appearing to read "Doug Vernier", with a large, stylized loop at the end.

Executed of January 17, 2024