

KMWE-LD MINOR MOD TO STATION LICENSE CH 17 7.5 kW DA  
SAINT CLOUD, MINNESOTA  
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS  
SEPTEMBER 29, 2021

KMWE-LD is a licensed LPTV facility on CH 17 and authorized for LPTV DTV operation under file number **0000159301**. The proposed site is located 45.1 kilometers from the licensed site and there is 51 dBu contour overlap as depicted on Figure 1 attached.

The proposed antenna system employs Kathrein model 75010210 UHF panels, horizontally polarized, antenna system with no beam tilt. The maximum relative field in the elevation pattern across the depression angle range of 15 to 90 degrees is less than 0.35 with a radiation center 18.9 meters above ground. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.35 has been used to calculate the power density 2 meters above ground. The maximum power density is 107.4 uw/cm squared calculated for an ERP of 7,500 watts H. polarization. This value is 33.06% of the Public Exposure MPE per section 1.1310. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Guidelines.

The proposed tower is existing site with access and power and is a lattice structure 19.8 M AGL. FCC TOWAIR analysis shows no airports within a 5 mile radius.

Attached is a copy of the TVStudy interference analysis for CH 17 based on the proposed 7.5 kW ERP and DA antenna described above with an orientation of 315 degrees. As can be seen at the conclusion there is no ISIX above FCC tolerances and no received interference in excess of 4.44%.

It is believed that the proposed facility provides full protection to other television facilities.

## REPORT

Study created: 2021.09.29 15:45:04

Study build station data: LMS TV 2021-09-29

Proposal: KMWE-LD D17 LD CP SAINT CLOUD, MN  
File number: BLANK0000071905  
Facility ID: 184637  
Station data: User record  
Record ID: 971  
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K16CO-D	D16	LD	LIC	ALEXANDRIA, MN	BLDTL20120312ACF	167.4 km
No	K16BQ-D	D16+	LD	LIC	BRAINERD, MN	BLANK0000152329	137.9
No	K16BQ-D	N16+	TX	LIC	BRAINERD, MN	BLTT19880608IT	137.9
No	K16MA-D	D16	LD	LIC	FROST, MN	BLANK0000062831	174.7
No	K16CP-D	D16	LD	LIC	GRANITE FALLS, MN	BLDTL20110824ADB	158.8
No	K46FY-D	D16	LD	LIC	REDWOOD FALLS, MN	BLANK0000063425	125.0
No	KPXM-TV	D16	DT	LIC	ST. CLOUD, MN	BLANK0000054906	28.0
No	K16CG-D	D16	LD	LIC	ST. JAMES, MN	BLDTL20120625AAQ	138.6
No	K17MH-D	D17	LD	CP	CEDAR FALLS, IA	BLANK0000138217	275.8
No	KWQC-TV	D17	DT	LIC	DAVENPORT, IA	BLANK0000097891	473.3
No	KPWT-LD	D17	LD	CP	FORT DODGE, IA	BLANK0000071899	277.8
No	KDAO-CD	D17-	DC	LIC	MARSHALLTOWN, IA	BLANK0000068435	345.8
No	KDAO-CD	D17-	DC	CP	MARSHALLTOWN, IA	BLANK0000156214	370.9
No	K47OQ-D	D17	LD	LIC	ALEXANDRIA, MN	BLANK0000063269	167.4
No	K17OV-D	D17	LD	LIC	DULUTH, MN	BLANK0000158635	216.5
No	K17MX-D	D17	LD	LIC	FROST, MN	BLANK0000062750	174.7
No	K17MY-D	D17	LD	LIC	JACKSON, MN	BLANK0000064443	202.9
No	K17BV-D	D17	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAY	125.0
No	K17MW-D	D17	LD	LIC	ST. JAMES, MN	BLANK0000064441	138.6
No	K17FE-D	D17+	LD	LIC	WADENA, MN	BLANK0000152352	178.6
No	K17FE-D	N17+	TX	LIC	WADENA, MN	BLTT20021223AAH	178.6
No	K17FA-D	D17	LD	LIC	WILLMAR, MN	BLDTT20100122ABO	111.8
No	K17LT-D	D17	LD	CP	FARGO, ND	BNPDTL20100902AAZ	306.4
No	KYNE-TV	D17	DT	LIC	OMAHA, NE	BLANK0000123806	468.5
No	KDSD-TV	D17	DT	LIC	ABERDEEN, SD	BLEDT20110816AAM	319.5
No	K17PB-D	D17	LD	CP	BRERESFORD, SD	BLANK0000157103	342.5
No	K17NF-D	D17+	LD	LIC	BROOKINGS, SD	BLANK0000059096	264.3
No	K17NF-D	D17+	LD	CP	BROOKINGS, SD	BLANK0000067617	264.3
No	WEAU	D17	DT	LIC	EAU CLAIRE, WI	BLANK0000120880	215.7
No	W02CF	D17z	LD	CP	MINOCQUA, WI	BLANK0000071851	310.0
No	KYIN	D18	DT	LIC	MASON CITY, IA	BLEDT20090612AHJ	198.8
No	K18DG-D	D18z	LD	LIC	ALEXANDRIA, MN	BLANK0000024529	167.4

No	KQDS-TV	D18	DT	LIC	DULUTH, MN	BLANK0000120640	217.1
No	K18GF-D	D18	LD	LIC	LITTLE FALLS, MN	BLDTL20120523ADD	108.1
Yes	KHVM-LD	D18	LD	CP	MINNEAPOLIS, MN	BLANK0000052068	35.5
No	K18IR-D	D18	LD	LIC	OLIVIA, MN	BLDTT20120213ABO	107.5
No	K18NE-D	D18	LD	LIC	ST. JAMES, MN	BLANK0000088224	138.6
No	WBOO-LP	D18	LD	CP	ELK MOUND, WI	BLANK0000143670	173.4
No	KKTW-LD	N19-	TX	LIC	Minneapolis, MN	BLTTL19870921IE	63.6

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: Full Service  
Latitude: 45 8 28.80 N (NAD83)  
Longitude: 93 37 3.40 W  
Height AMSL: 320.0 m  
HAAT: 0.0 m  
Peak ERP: 7.50 kW  
Antenna: KATHREIN 75010210 315.0 deg  
Elev Pattn: Generic

49.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.80 kW	36.7 m	23.4 km
45.0	0.019	39.4	7.9
90.0	0.019	40.6	8.0
135.0	0.108	22.3	10.8
180.0	0.019	18.5	7.0
225.0	0.019	15.5	7.0
270.0	1.80	21.9	21.6
315.0	7.50	31.8	28.6

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 28 m

Distance to Canadian border: 355.2 km

Distance to Mexican border: 1839.0 km

Conditions at FCC monitoring station: Grand Island NE

Bearing: 221.5 degrees Distance: 610.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 243.7 degrees Distance: 1097.5 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: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

----- Below is IX received by proposal BLANK0000071905 -----

Proposal receives 4.16% interference from scenario 1  
No IX check failures found.

Based on the information supplied herein, and accompanying application for construction permit, it is believed that the proposed facilities meet all applicable FCC requirements for construction permit.

The foregoing was prepared on behalf of Sagamore Hill of Kansas City Licenses, LLC by Clarence M. Beverage of Communications Technologies, Inc., Medford, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



Clarence M. Beverage  
for Communications Technologies, Inc.  
Medford, New Jersey  
September 29, 2021