

**Engineering Statement**  
**KMSP\_TV Channel 9 Minneapolis, MN**  
**Application to Simulcast ATSC 3.0 (NEXT GEN TV) on a Host Station**  
**July 14, 2023**

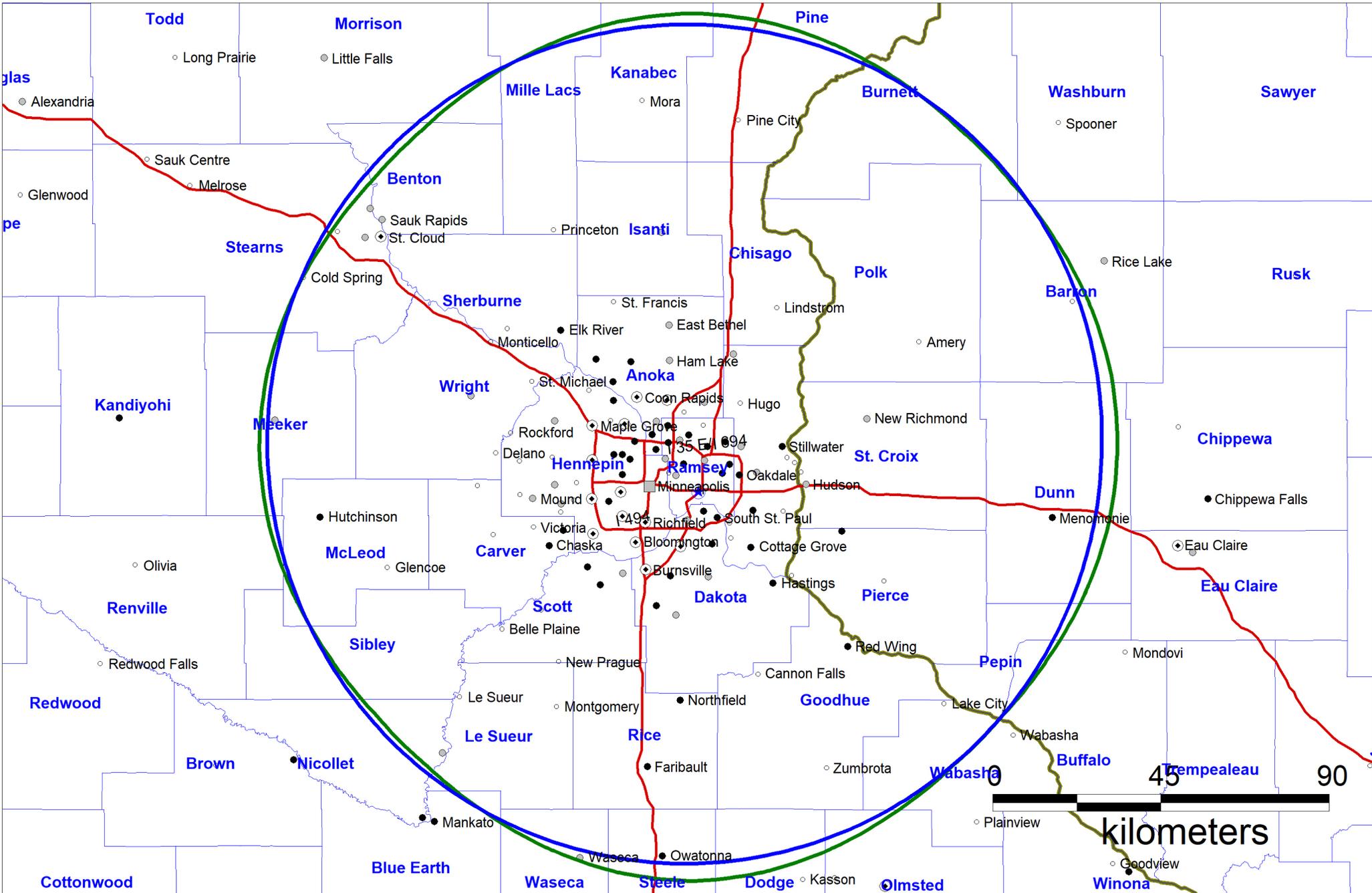
The purpose of this application is to request authorization to allow full service digital television station KMSP-TV channel 9 Minneapolis, MN (Minneapolis DMA) to transmit an ATSC 3.0 (Next Gen TV) signal utilizing the facilities of full-service digital television station WUCW channel 22 Minneapolis, MN (Minneapolis DMA).

Both KMSP-TV and WUCW, as shown on the map below (Figure 1), are located in the Minneapolis DMA. The facilities of the two stations are located 1.25 km apart at approximately the same elevation (KMSP-TV 713 m, WUCW 712.1 m RCAMSL) and both have similar coverage patterns as shown on the attached map (Figure 1). KMSP-TV operates with an Effective Radiated Power (ERP) of 36.2 kW on channel 9 while WUCW operates with an ERP of 790 kW on channel 22.

The maps below show that the two stations cover essentially the same area (See the coverage comparison maps in Figures 1 & 2). The predicted service population of WUCW (when computed inside the noise limited contour of KMSP-TV) is slightly larger (100.52%) than that of the KMSP-TV licensed facility (See Figure 3).

In view of the above KMSP-TV will be in full compliance concerning the coverage requirements as stated in the Rules for simulcasting its ATSC 1.0 signal in an ATSC 3.0 format on host station WUCW.

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**KMSB-TV Channel 9 / WUCW Channel 22 Predicted Noise Limited Contour Compare**

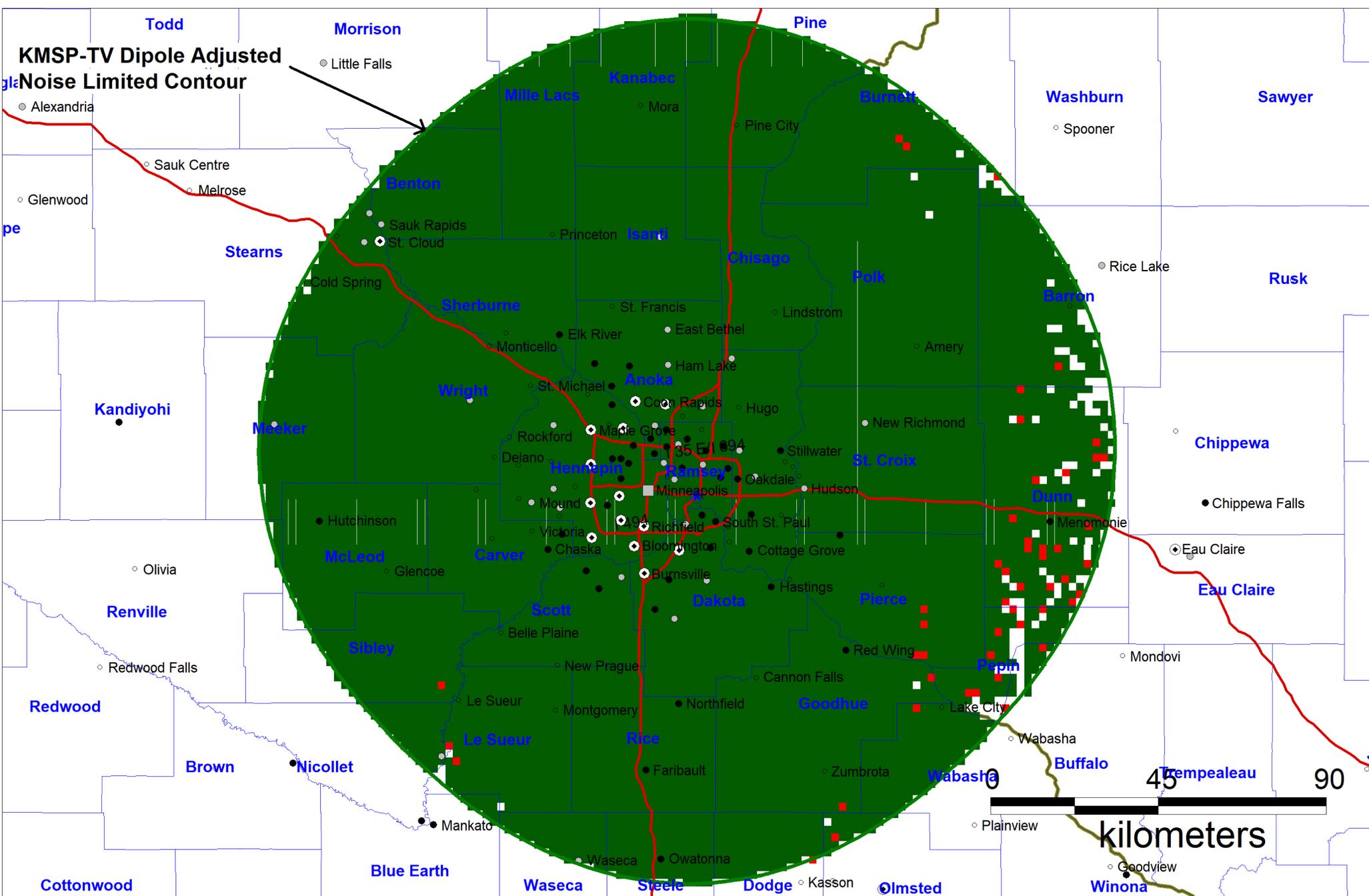
**Figure 1**



**KMSB-TV Channel 9 ERP 36.2 kW (DA) HAAT 435 m**



**WUCW Channel 22 ERP 790 kW (OMNI) HAAT 436.2 m**



**KMSP-TV Channel 9 / WUCW Channel 22 Predicted Noise Limited Service Compare Inside KMSP NLC**

**Figure 2**

- Service Provided by WUCW Channel 22 ERP 790 kW (OMNI) HAAT 436.2 m
- Locations Served by KMSP-TV but not Served by WUCW

Figure 3

Predicted Service Comparison  
 KMSB-TV CH 9 Minneapolis, MN vs WUCW CH 22 (Inside KMSB-TV NLC) Minneapolis, MN

State	County	KMSB-TV Licensed ERP 36.2 kW DA HAAT 435 m		WUCW Licensed ERP 790 kW DA HAAT 436.2 m		Gain / Loss	
		Population	Households	Population	Households	Population	Households
MN	ANOKA	330,844	121,227	330,844	121,227	0	0
MN	BENTON	33,537	13,258	34,069	13,460	532	202
MN	BLUE EARTH	1,752	684	1,865	729	113	45
MN	CARVER	91,042	32,891	91,042	32,891	0	0
MN	CHISAGO	53,887	19,470	53,887	19,470	0	0
MN	DAKOTA	398,552	152,060	398,552	152,060	0	0
MN	DODGE	3,726	1,416	3,981	1,516	255	100
MN	GOODHUE	43,772	17,751	46,100	18,695	2,328	944
MN	HENNEPIN	1,152,425	475,913	1,152,425	475,913	0	0
MN	ISANTI	37,816	13,972	37,816	13,972	0	0
MN	KANABEC	15,603	6,143	15,603	6,143	0	0
MN	LE SUEUR	26,371	10,209	26,516	10,267	145	58
MN	MCLEOD	35,961	14,354	35,961	14,354	0	0
MN	MEEKER	18,327	7,181	18,424	7,216	97	35
MN	MILLE LACS	19,815	7,622	19,815	7,622	0	0
MN	MORRISON	782	288	782	288	0	0
MN	NICOLLET	8,467	2,606	12,473	3,950	4,006	1,344
MN	OLMSTED	2,566	925	3,225	1,160	659	235
MN	PINE	16,458	6,487	16,458	6,487	0	0
MN	RAMSEY	508,640	202,691	508,640	202,691	0	0
MN	RENVILLE	110	38	110	38	0	0
MN	RICE	64,142	22,315	64,142	22,315	0	0
MN	SCOTT	129,928	45,108	129,928	45,108	0	0
MN	SHERBURNE	88,499	30,212	88,499	30,212	0	0
MN	SIBLEY	11,487	4,510	11,487	4,510	0	0
MN	STEARNS	97,060	36,465	97,762	36,718	702	253
MN	STEELE	30,384	11,891	30,435	11,912	51	21
MN	WABASHA	8,485	3,508	9,334	3,855	849	347
MN	WASECA	8,948	3,665	8,987	3,683	39	18
MN	WASHINGTON	238,136	87,859	238,136	87,859	0	0
MN	WRIGHT	124,700	44,473	124,700	44,473	0	0
WI	BARRON	14,548	5,861	17,644	7,193	3,096	1,332
WI	BUFFALO	230	96	254	108	24	12
WI	BURNETT	9,291	3,944	9,812	4,200	521	256
WI	DUNN	30,435	11,068	36,044	13,406	5,609	2,338
WI	PEPIN	4,182	1,728	4,397	1,820	215	92
WI	PIERCE	40,719	14,907	41,012	14,999	293	92
WI	POLK	43,852	17,854	44,109	17,967	257	113
WI	ST. CROIX	84,345	31,799	84,345	31,799	0	0
WI	WASHBURN	35	17	35	17	0	0
<b>TOTALS</b>		<b>3,829,859</b>	<b>1,484,466</b>	<b>3,849,650</b>	<b>1,492,303</b>	<b>19,791</b>	<b>7,837</b>