

MULTIPLE SERVICES STUDY

Associated with the
Co-ownership or programming of Stations by

Black Diamond Broadcast Group, LLC

Interim Contour Methodology

April 2023

CERTIFICATION OF ENGINEERS

The firm of Munn-Reese, Broadcast Engineering Consultants, with offices at 385 Airport Drive, Coldwater, Michigan, has been retained for the purpose of preparing the technical data forming this report.

The data utilized in this report was taken from the FCC Secondary Database and data on file. While this information is believed accurate, errors or omissions in the database and file data are possible. This firm may not be held liable for damages as a result of such data errors or omissions.

The report has been prepared by properly trained electronics specialists under the direction of the undersigned whose qualifications are a matter of record before the Federal Communications Commission.

I declare under penalty of the laws of perjury that the contents of this report are true and accurate to the best of my knowledge and belief.

April 19, 2023

MUNN-REESE



By _____

Bruce Bellamy, President

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MUNN-REESE

Broadcast Engineering Consultants
Coldwater, MI 49036

Engineering Statement

This firm was retained to determine whether the continued ownership or programming of its current attributable broadcast interests and with the acquisition of WMPX(AM) – Facility ID No. 39673 and WMRX-FM – Facility ID No. 39674 complies with the Commission's multiple ownership rule, 47 C.F.R. Section 73.3555. Portions of these holdings are subject to analysis under the *Interim Contour-overlap Methodology*. This study addresses the *Interim Contour-overlap Methodology* portion of these holdings.

One new market is created consisting of three FM stations. Per §73.3555 (a)(1)(iii): ***In a radio market with between 15 and 29 full-power, commercial and noncommercial radio stations, not more than 6 commercial radio stations in total or not more than 4 commercial stations in the same service (AM or FM).***

Exhibit 1.0 shows the stations under common control or proposed to be under common control or programming that are relevant for this ownership group. To aid in identifying the respective contours, current or proposed AM contours have been shown with dashed lines, while current or proposed FM contours have been shown with solid lines.

For the one new market defining contours have been shown in **Exhibit 2.0** of this report along with enough additional principal community contours entering the market. The defining contours have been shown with purple dashed lines on this map. AM contours entering the market have been denoted in light blue lines. FM contour entering the market have been shown in red lines. Co-owned or programmed stations entering the market, but not defining the market have been omitted. **Exhibit 2.1** is a tabulation of the stations.

The existing facilities of the stations included in this report were determined by the use of currently updated copies of the FCC computer databases of AM and FM stations. The listed facilities served as the basis for the computation of the respective principal community contours. The accuracy of the results of this study is understood to be limited to the accuracy of these databases. The FCC databases give no indication of licensed facilities that may be inoperative, construction permit facilities that may now be operating under program test authority (but have not yet been issued a license) or facilities which may have been licensed since the last update. Therefore, some stations may have been included or excluded erroneously. However, unless otherwise indicated, all licensed facilities known to be inoperative and all known applications and construction permit facilities, have been eliminated from consideration in this study.

For AM stations, Map M-3 soil conductivity values and the authorized licensed transmitting facilities served as the basis for the computation of the predicted 5.0 mV/m groundwave contour in accordance with §73.183 of the FCC Rules. The distance to the contour was computed for seventy-two (72) equally spaced azimuths beginning with 0° True. For FM stations, the authorized Center of Radiation and ERP values were utilized to compute the predicted 3.16 mV/m (70 dBu) contour as provided in §73.313 of the Rules. The predicted FM contours shown in this report are based on the use of 72 equally spaced terrain radials beginning with 0° True.

Exhibit 1.0 - Stations under Common Control or Programming

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WGFE

BLH19970212KB
Latitude: 44-49-16.01 N
Longitude: 085-59-46.97 W
ERP: 21.00 kW
Channel: 238
Frequency: 95.5 MHz
AMSL Height: 447.0 m
Elevation: 331.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

- WGFE (238)
- WGFM (286)
- WGFN (251)
- WMKC (275)
- WTWS (221)
- WUPS (253)
- WWMK.C (292)
- WWSS (237)
- WCBY.L
- WCFX (237)
- WMPX.L
- WMRX-FM (249)

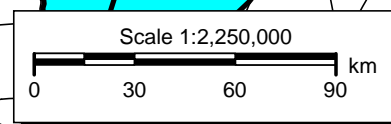
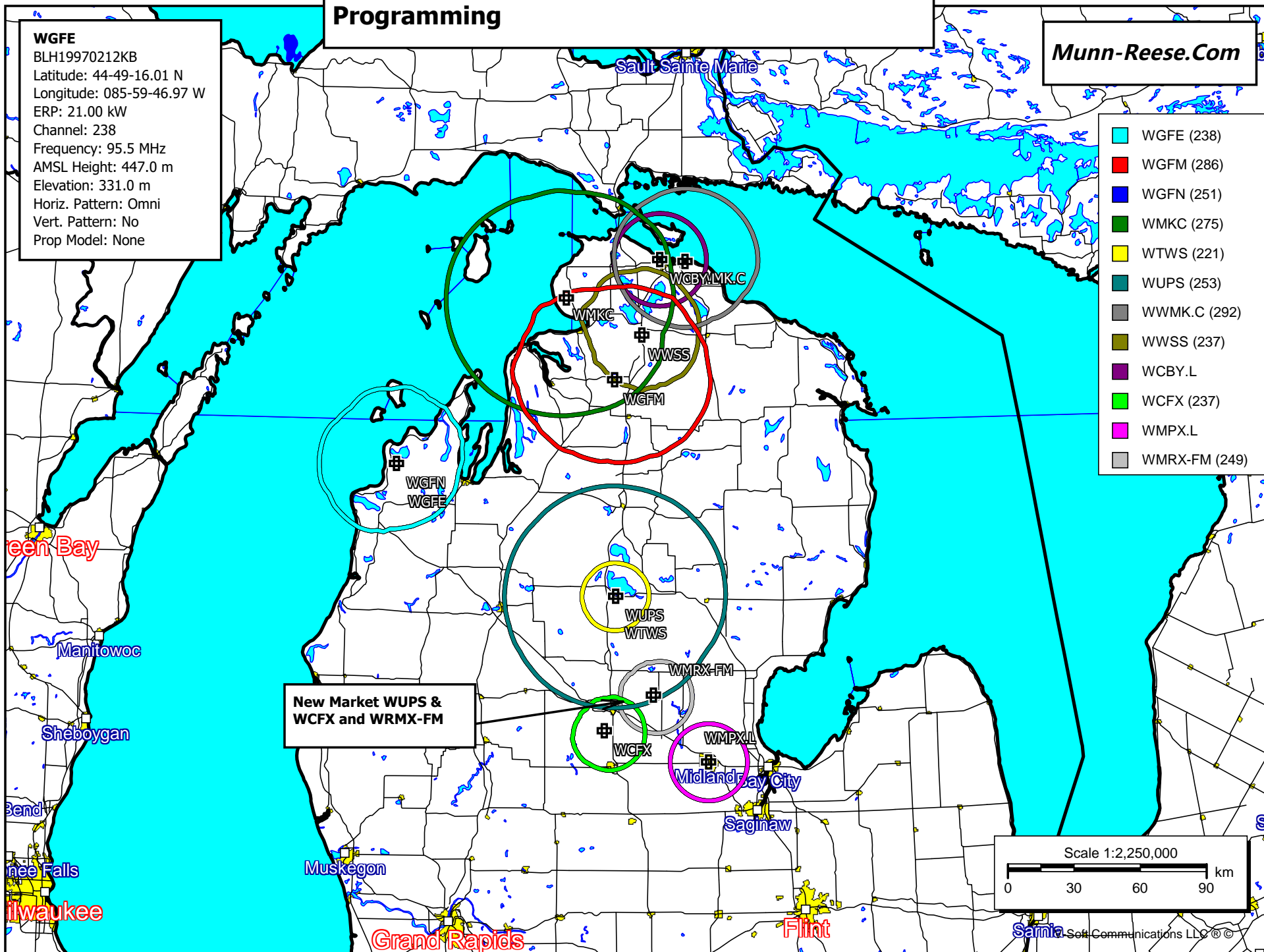
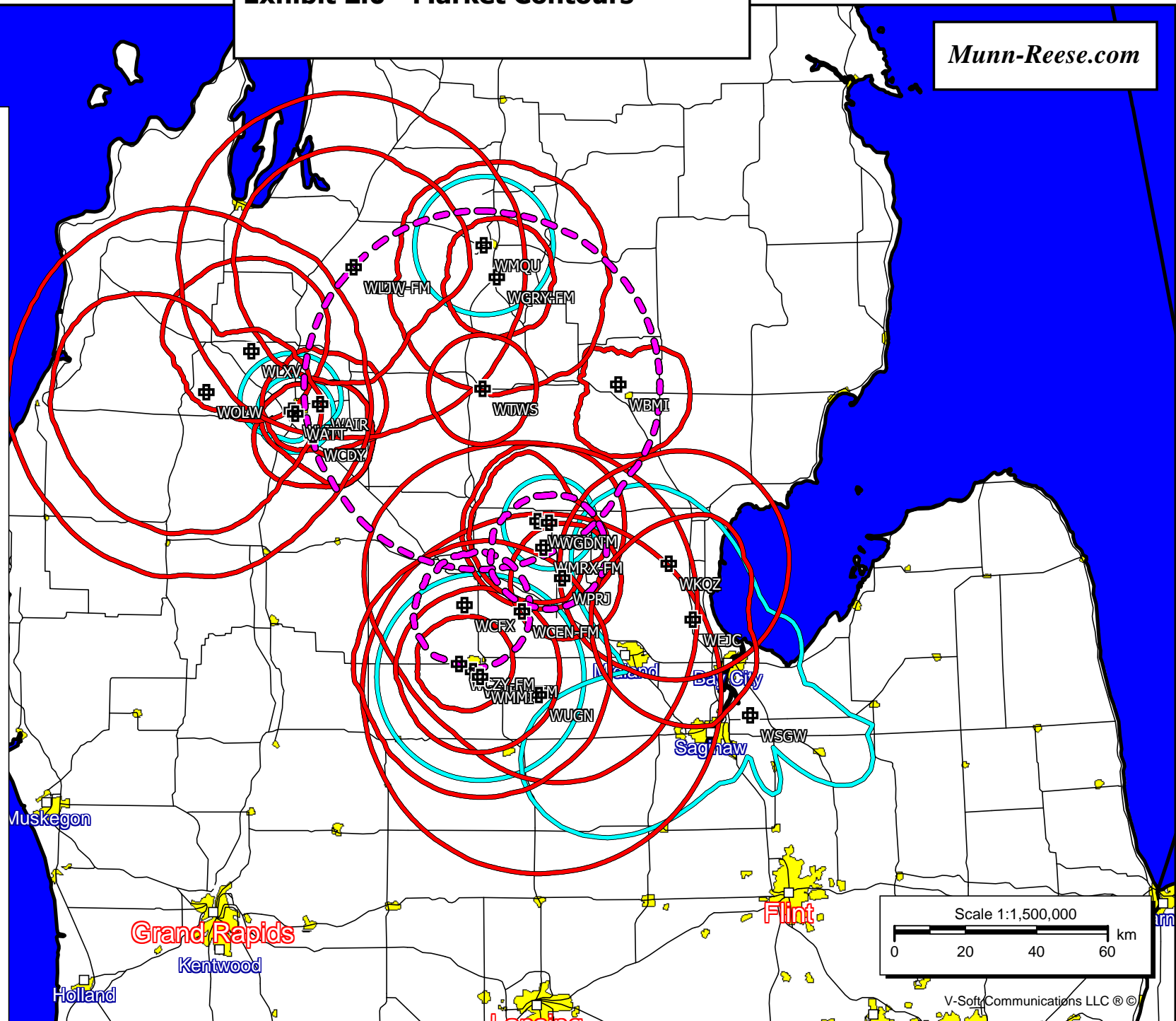


Exhibit 2.0 - Market Contours

Munn-Reese.com

REF
WUPS
WCFX
WMRX-FM

- REF
- WEJC (202)
- WIAA (204)
- WCMU-FM (208)
- WBHL (214)
- WOLW (216)
- WMHW-FM (218)
- WTWS (221)
- WJZQ (225)
- WKQZ (227)
- WCEN-FM (233)
- WLJW-FM (240)
- WLXV (244)
- WUGN (259)
- WQON (262)
- WGRY-FM (266)
- WPRJ (269)
- WGDN-FM (276)
- WCZY-FM (282)
- WAIR (285)
- WBMI (288)
- WCKC (296)
- WCDY (300)
- WSGW
- WMMI
- WGDN
- WMQU
- WLJW
- WATT



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Total number of overlapping contours: 31

Reference:

Callsign	Type	Chan City	St	File Number	Dist (km)	Azi (deg)
WUPS	FM	253C1 Harrison	MI	BLH20080924AKU	0.0	0.0
WCFX	FM	237A Clare	MI	BLH20150828ABE	61.0	184.8
WMRX-FM	FM	249A Beaverton	MI	BMLH20151016ADO	47.8	159.0

Overlapping Contours:

Callsign	Type	Chan City	St	File Number	Dist (km)	Azi (deg)
WEJC	FM	202C1 White Star	MI	0000143199	87.6	137.6
WIAA	FM	204C0 Interlochen	MI	BLH2019900105KB	77.6	269.2
WCMU-FM	FM	208C1 Mount Pleasant	MI	BMLH20161227AAT	79.3	181.9
WBHL	FM	214C3 Harrison	MI	BLH20121003ACR	40.2	157.4
WOLW	FM	216C1 Cadillac	MI	BLH2019880502KC	77.6	269.2
WMHW-FM	FM	218C3 Mount Pleasant	MI	BMLH20161222AAW	79.3	181.9
WTWS	FM	221A Houghton Lake	MI	BLH20080919AFJ	0.0	0.0
WJZQ	FM	225C1 Cadillac	MI	BMLH20020517AAG	49.7	313.3
WKQZ	FM	227C2 Midland	MI	BLH19881027KB	71.7	133.2
WCEN-FM	FM	233C1 Hemlock	MI	BMLH20041124AGB	63.5	169.9
WLJW-FM	FM	240C2 Fife Lake	MI	BLH20140207ABG	49.7	313.3
WLXV	FM	244C3 Cadillac	MI	BLH19940204KZ	65.7	279.2
WUGN	FM	259C0 Midland	MI	BLH20130702ABR	87.4	169.5
WQON	FM	262C1 Grayling	MI	BLH19950714KB	31.5	7.2
WGRY-FM	FM	266A Roscommon	MI	BLH19900322KB	31.5	7.2
WPRJ	FM	269A Coleman	MI	0000112403	57.6	157.1
WGDN-FM	FM	276C3 Gladwin	MI	BMLH20120515AAB	40.2	157.4
WCZY-FM	FM	282A Mount Pleasant	MI	BLH19910828KB	77.5	184.9
WAIR	FM	285A Lake City	MI	BLH20170428ABF	45.8	264.6
WBMI	FM	288A West Branch	MI	BLH20071004ABN	38.1	88.2
WCKC	FM	296A Cadillac	MI	BLH19930111KB	49.3	254.8
WCDY	FM	300A Mcbain	MI	BLH20101018AAX	49.3	254.8
WSGW	AM	790 SAGINAW	MI	BMML20151201HXA	118.5	140.6
WMMI	AM	830 SHEPHERD	MI	BL19870210AB	80.8	180.4
WGDN	AM	1350 GLADWIN	MI	BL20020416ABO	42.0	153.6
WMQU	AM	1230 GRAYLING	MI	BL19890809AE	40.3	0.4
WLJW	AM	1370 CADILLAC	MI	BL11997	53.9	263.4
WATT	AM	1240 CADILLAC	MI	BL20130722AFA	53.0	262.4

Distance and bearing calculations from coordinates: 44-17-21.04 N, 084-44-32.01 W

Duopoly Options:

TV: Not Included

FM: 3.16 mV/m (70 dBu); Include NCE

AM: 5.0 mV/m

Stations more than 92 km from the common area were excluded.