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Proposed Translator Contour-to-Contour Allocation Study  
Board of Regents Of The University Of Wisconsin System  
CH# 262D - 100.3 MHz, Pwr= 0.25 kW, HAAT= 56.6 M, COR= 323 M  
Average Protected F(50-50)= 9.9 km  
Omni-directional

DISPLAY DATES  
DATA 06-19-17  
SEARCH 06-19-17

REFERENCE  
42 42 58.0 N.  
89 00 24.6 W.

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
260B1 Janesville	WJVL	LIC _CN WI		276.6 96.4	13.36 BLH19891018KB	42 43 47.0 89 10 10.0	11.000 153	4.0 427	46.4 Southern Wisconsin Broadca	-34.6* ***
264B Racine	WKKV-FM	LIC _CX WI		82.5 263.1	78.86 BMLH20100809CJO	42 48 18.0 88 02 54.0	50.000 152	5.9 386	64.5 Clear Channel Broadcasting	12.8
265A Rockford	WQFL	LIC ZC_ IL		180.5 0.5	43.79 BMLED20110421ABV	42 19 20.0 89 00 41.0	2.700 149	2.6 396	29.6 Educational Media Foundati	12.9
263D Loves Park	W263BJ	LIC _C_ IL		174.3 354.4	43.97 BLFT20111121ENA	42 19 21.0 88 57 14.0	0.230 107	18.8 355	12.1 Mid-way Radio, Inc.	15.1
263A Monona	WTLX	LIC _CX WI		325.7 145.4	56.40 BLH20090306ABX	43 08 04.0 89 23 56.0	6.000 55	38.4 338	24.5 Good Karma Broadcasting, L	17.3
262B1 Savanna	WCCJ	LIC NCN IL		235.4 54.6	113.57 BLH19901204KG	42 07 47.0 90 08 24.0	9.600 157	101.4 374	42.8 Carroll County Communicati	27.3
262B Chicago	WSHE-FM	LIC _CX IL		128.1 309.1	145.60 BLH20030702AAW	41 53 56.0 87 37 23.0	5.700 425	127.2 606	65.8 Chicago Fcc License Sub, L	34.0
265D Madison	W265CV	LIC DV_ WI		311.5 131.1	57.25 BLFT20140725ABJ	43 03 21.0 89 32 06.0	0.250 243	1.0 543	19.0 Capstar Tx, Llc	36.4
261A Portage	WDDC	LIC NCN WI		339.2 158.9	96.71 BLH19990329KG	43 31 42.0 89 26 01.0	3.100 114	38.4 367	25.3 Magnum Communications, Inc	56.4
262D Milwaukee	W262CJ	LIC DC_ WI		64.4 245.2	99.23 BLFT20141023AAP	43 05 46.0 87 54 15.0	0.099 362	41.0 362	12.2 Milwaukee Radio Alliance,	57.5
208B Dekalb	WNIJ	LIC DCN IL		179.7 359.7	77.84 BLED19891011KA	42 00 55.0 89 00 07.0	50.000 128	5.5 380	49.3 Northern Illinois Universi	14.5R 63.3M
259D Dekalb	W286BM	CP _C_ IL		159.2 339.4	73.37 BPFT20160318AAO	42 05 55.0 88 41 29.0	0.250 296	1.1 296	8.3 American Education Foundat	63.6
263D De Kalb	W263BM	LIC _C_ IL		166.2 346.4	88.99 BLFT20130708ABT	41 56 18.0 88 45 03.0	0.250 47	11.8 311	8.4 American Education Foundat	65.3

Terrain database is GLOBE 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.  
All separation margins (if shown) include rounding.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
Incoming contour overlap is ignored.  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
<\*\*\* Protected using U-to-D. (See the XField Exhibit within the Allocation Study.)

## HOW TO READ THE FM COMPUTER PRINT-OUT

### Translator Reference Station

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table. Contour distances are in kilometers and are predicted using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90. The column labeled "\* OUT \*" shows the greatest distance in kilometers of overlap (or smallest distance of clearance) between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing contour overlap. Since translators are able to receive interference there is no "In" or incoming column in this report.

Listed antenna heights and power are the specific antenna heights and power from the FCC database.

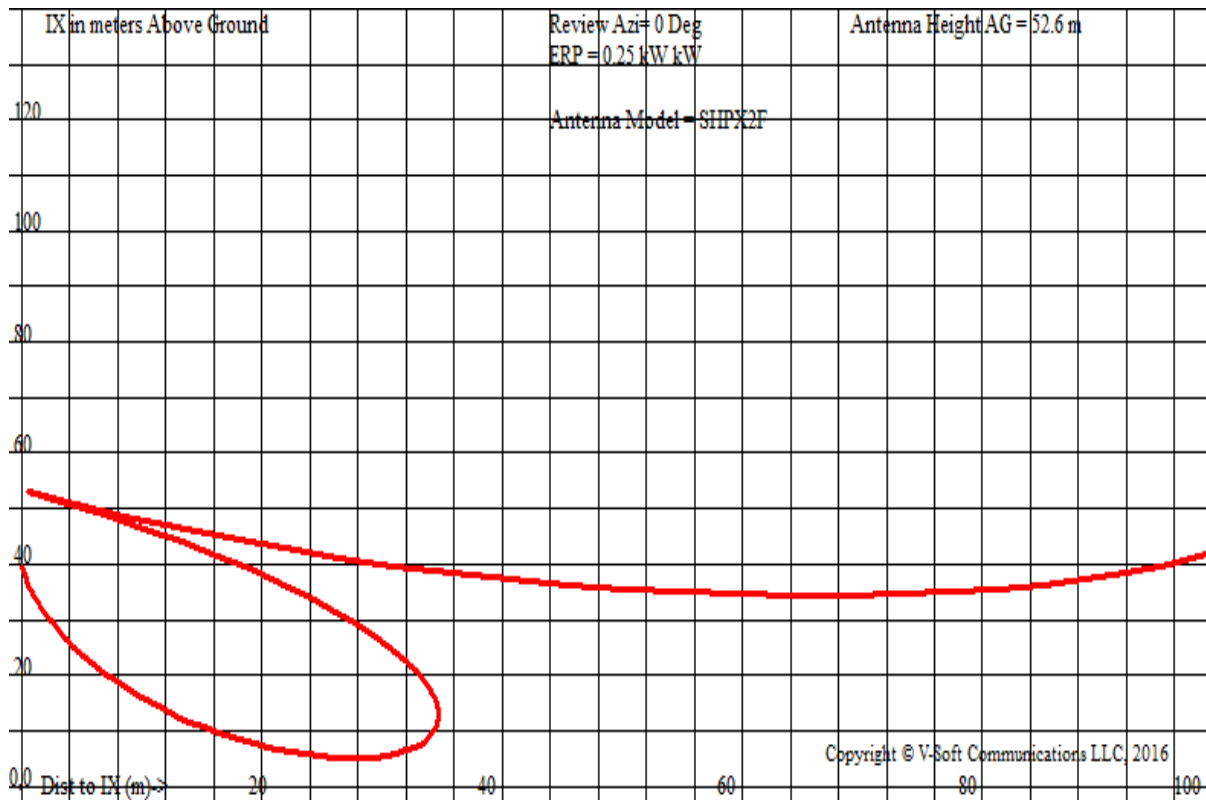
Under the "AZI" column, the first row of numbers indicate the True North azimuths from the reference station toward the database stations, while the numbers in the second row indicate the reverse bearings from the database stations to the reference station. Bearings are calculated using spherical trigonometry.

The columns labeled "INT" and "PRO" contain the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships the minimum spacings the "OUT" columns change its significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column displays the **available clear space** separation in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt or an "X" if the commission is not sure, otherwise it will be an "N" or left blank.

Showing Protection to WJVL



W\_NEW Janesville, WI  
 74.1204(d) Showing  
 Translator or LPFM Maximum Licensed ERP = 0.25  
 Translator or LPFM Antenna Height AG = 52.6 Meters  
 W\_NEW Antenna Model = SHPX2F

Protected Station's Contour = 80.17754 dBu  
 Translator's or LPFM's full Interference contour 120.17754

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 1.000  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW  
 Distance between stations = 13.4 km  
 Protected Station= WJVL, 11 kW, 427 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.0	1.0	1.0	0.2500	108.6658	108.6658	052.600
05.0	0.960	1.0	0.2304	104.3192	103.9222	043.508
10.0	0.845	1.0	0.1785	091.8226	090.4276	036.655
15.0	0.669	1.0	0.1119	072.6974	070.2203	033.785
20.0	0.455	1.0	0.0518	049.4430	046.4612	035.690
25.0	0.226	1.0	0.0128	024.5585	022.2575	042.221
30.0	0.006	1.0	0.0000	000.6520	000.5646	052.274
35.0	0.187	1.0	0.0087	020.3205	016.6456	040.945
40.0	0.339	1.0	0.0287	036.8377	028.2193	028.921
45.0	0.445	1.0	0.0495	048.3563	034.1931	018.407
50.0	0.506	1.0	0.0640	054.9849	035.3436	010.479
55.0	0.525	1.0	0.0689	057.0496	032.7223	005.868
60.0	0.511	1.0	0.0653	055.5282	027.7641	004.511*
65.0	0.472	1.0	0.0557	051.2903	021.6762	006.115
70.0	0.416	1.0	0.0433	045.2050	015.4610	010.121
75.0	0.350	1.0	0.0306	038.0330	009.8437	015.863
80.0	0.277	1.0	0.0192	030.1004	005.2269	022.957
85.0	0.202	1.0	0.0102	021.9505	001.9131	030.733
90.0	0.126	1.0	0.0040	013.6919	000.0000	038.908

\*Interference contour does not touch the ground. 27.7641 meters is within transmitter parking lot.  
 (See attached satellite map)

Satellite View of Proposed 130 dBu service contour (radius = 37 meters):

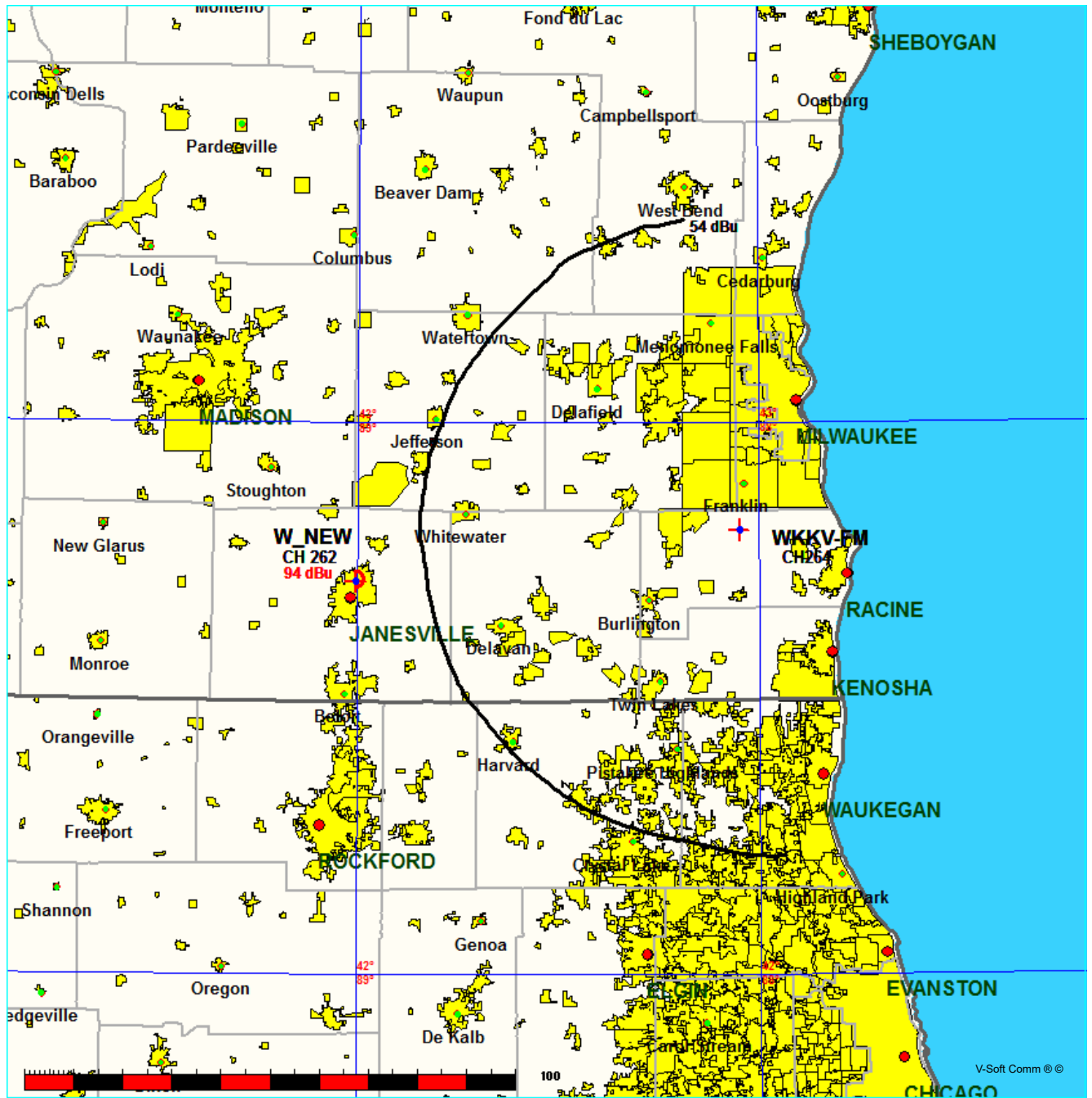


Contour-to-Contour Outgoing Interference Map  
Board Of Regents Of The University Of Wisconsin System

FMCommander Single Allocation Study - 06-23-2017 - GLOBE 30 Sec  
W\_NEW's Overlaps (In= 64.44 km, Out= 12.8 km)

W\_NEW CH 262 D  
Lat= 42 42 58.0, Lng= 89 00 24.6  
0.25 kW 56.6 m HAAT, 323 m COR  
Prot.= 60 dBu, Intef.= 94 dBu

WKKV-FM CH 264 B BMLH20100809CJO  
Lat= 42 48 18.0, Lng= 88 02 54.0  
50.0 kW 152 m HAAT, 386 m COR  
Prot.= 54 dBu, Intef.= 100 dBu



06-23-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

WKKV-FM BMLH20100809CJO

W\_NEW

Channel = 264B

Max ERP = 50 kW

RCAMSL = 386 m

N. Lat. 42 48 18.0

W. Lng. 88 02 54.0

Protected

54 dBu

Channel = 262D

Max ERP = 0.25 kW

RCAMSL = 323 m

N. Lat. 42 42 58.0

W. Lng. 89 00 24.6

Interfering

94 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
203.0	050.0000	0142.5	064.0	132.2	000.2500	0048.7	072.7	26.97	
204.0	050.0000	0142.8	064.1	132.6	000.2500	0048.7	071.7	27.21	
205.0	050.0000	0142.8	064.1	132.9	000.2500	0048.7	070.6	27.45	
206.0	050.0000	0142.9	064.1	133.2	000.2500	0048.6	069.6	27.69	
207.0	050.0000	0143.2	064.1	133.5	000.2500	0048.5	068.5	27.93	
208.0	050.0000	0143.4	064.1	133.8	000.2500	0048.4	067.4	28.18	
209.0	050.0000	0143.6	064.2	134.0	000.2500	0048.4	066.4	28.42	
210.0	050.0000	0143.8	064.2	134.3	000.2500	0048.3	065.3	28.67	
211.0	050.0000	0144.0	064.2	134.6	000.2500	0048.2	064.2	28.92	
212.0	050.0000	0143.9	064.2	134.8	000.2500	0048.2	063.1	29.18	
213.0	050.0000	0143.8	064.2	135.1	000.2500	0048.2	062.0	29.46	
214.0	050.0000	0143.7	064.2	135.3	000.2500	0048.2	060.9	29.74	
215.0	050.0000	0143.8	064.2	135.5	000.2500	0048.2	059.8	30.04	
216.0	050.0000	0143.6	064.2	135.7	000.2500	0048.2	058.7	30.34	
217.0	050.0000	0143.4	064.1	135.8	000.2500	0048.3	057.6	30.65	
218.0	050.0000	0143.2	064.1	136.0	000.2500	0048.3	056.5	30.96	
219.0	050.0000	0143.3	064.1	136.2	000.2500	0048.4	055.4	31.28	
220.0	050.0000	0143.6	064.2	136.3	000.2500	0048.5	054.3	31.60	
221.0	050.0000	0143.9	064.2	136.5	000.2500	0048.5	053.2	31.93	
222.0	050.0000	0144.4	064.3	136.7	000.2500	0048.6	052.1	32.26	
223.0	050.0000	0144.9	064.4	136.9	000.2500	0048.7	051.0	32.58	
224.0	050.0000	0145.2	064.4	137.1	000.2500	0048.7	049.9	32.91	
225.0	050.0000	0145.3	064.4	137.2	000.2500	0048.8	048.7	33.24	
226.0	050.0000	0145.3	064.4	137.2	000.2500	0048.8	047.6	33.56	
227.0	050.0000	0145.1	064.4	137.2	000.2500	0048.8	046.5	33.89	
228.0	050.0000	0144.9	064.4	137.2	000.2500	0048.8	045.4	34.24	
229.0	050.0000	0144.8	064.3	137.1	000.2500	0048.7	044.3	34.59	
230.0	050.0000	0144.8	064.3	137.1	000.2500	0048.7	043.1	34.96	
231.0	050.0000	0145.0	064.4	137.1	000.2500	0048.7	042.0	35.33	
232.0	050.0000	0145.1	064.4	137.0	000.2500	0048.7	040.9	35.72	
233.0	050.0000	0145.2	064.4	136.8	000.2500	0048.7	039.8	36.11	
234.0	050.0000	0145.2	064.4	136.7	000.2500	0048.6	038.6	36.51	
235.0	050.0000	0145.5	064.4	136.5	000.2500	0048.5	037.5	36.93	
236.0	050.0000	0146.4	064.6	136.5	000.2500	0048.5	036.4	37.36	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
237.0	050.0000	0147.6	064.7	136.4	000.2500	0048.5	035.3	37.81
238.0	050.0000	0148.8	064.9	136.4	000.2500	0048.5	034.1	38.27
239.0	050.0000	0149.7	065.0	136.2	000.2500	0048.4	033.0	38.72
240.0	050.0000	0150.1	065.1	135.8	000.2500	0048.3	031.9	39.17
241.0	050.0000	0150.4	065.1	135.4	000.2500	0048.2	030.7	39.67
242.0	050.0000	0150.4	065.1	134.8	000.2500	0048.2	029.7	40.23
243.0	050.0000	0150.2	065.1	134.1	000.2500	0048.3	028.6	40.86
244.0	050.0000	0149.9	065.0	133.2	000.2500	0048.6	027.5	41.54
245.0	050.0000	0149.6	065.0	132.3	000.2500	0048.7	026.5	42.23
246.0	050.0000	0149.2	064.9	131.2	000.2500	0048.6	025.5	42.90
247.0	050.0000	0148.7	064.9	129.9	000.2500	0048.1	024.5	43.52
248.0	050.0000	0148.2	064.8	128.6	000.2500	0047.7	023.5	44.14
249.0	050.0000	0148.0	064.8	127.1	000.2500	0047.9	022.5	44.91
250.0	050.0000	0148.1	064.8	125.5	000.2500	0048.5	021.6	45.77
251.0	050.0000	0148.0	064.8	123.7	000.2500	0048.6	020.6	46.53
252.0	050.0000	0147.5	064.7	121.6	000.2500	0048.2	019.8	47.15
253.0	050.0000	0146.8	064.6	119.2	000.2500	0048.0	019.0	47.75
254.0	050.0000	0146.2	064.5	116.5	000.2500	0048.4	018.3	48.45
255.0	050.0000	0145.9	064.5	113.7	000.2500	0048.1	017.6	48.99
256.0	050.0000	0145.9	064.5	110.8	000.2500	0046.6	016.9	49.30
257.0	050.0000	0146.3	064.6	107.6	000.2500	0045.8	016.2	49.70
258.0	050.0000	0146.7	064.6	104.2	000.2500	0043.6	015.6	49.76
259.0	050.0000	0146.9	064.6	100.4	000.2500	0036.7	015.1	48.57
260.0	050.0000	0146.7	064.6	096.3	000.2500	0032.4	014.8	47.83
261.0	050.0000	0146.2	064.5	091.9	000.2500	0028.4	014.6	47.49
262.0	050.0000	0145.8	064.5	087.5	000.2500	0035.7	014.4	49.00
263.0	050.0000	0145.6	064.5	083.0	000.2500	0040.2	014.4	50.08
264.0	050.0000	0145.8	064.5	078.6	000.2500	0043.4	014.4	50.77
265.0	050.0000	0146.3	064.5	074.1	000.2500	0044.0	014.5	50.79
266.0	050.0000	0147.1	064.7	069.7	000.2500	0043.4	014.6	50.48
267.0	050.0000	0148.1	064.8	065.3	000.2500	0045.8	014.9	50.73
268.0	050.0000	0149.1	064.9	061.2	000.2500	0048.6	015.2	51.17
269.0	050.0000	0150.1	065.1	057.2	000.2500	0049.9	015.6	51.05
270.0	050.0000	0150.6	065.1	053.7	000.2500	0051.1	016.2	50.77
271.0	050.0000	0150.4	065.1	050.6	000.2500	0049.8	016.9	49.90
272.0	050.0000	0150.2	065.1	047.9	000.2500	0048.4	017.7	48.97
273.0	050.0000	0150.0	065.1	045.4	000.2500	0048.3	018.5	48.25
274.0	050.0000	0149.3	065.0	043.3	000.2500	0048.8	019.4	47.57
275.0	050.0000	0148.8	064.9	041.5	000.2500	0050.3	020.3	47.09
276.0	050.0000	0148.2	064.8	039.8	000.2500	0050.6	021.3	46.37
277.0	050.0000	0148.0	064.8	038.2	000.2500	0049.6	022.3	45.43
278.0	050.0000	0148.1	064.8	036.8	000.2500	0050.6	023.2	44.86
279.0	050.0000	0147.9	064.8	035.5	000.2500	0051.9	024.3	44.35
280.0	050.0000	0147.6	064.7	034.5	000.2500	0052.7	025.3	43.74
281.0	050.0000	0147.4	064.7	033.5	000.2500	0053.3	026.3	43.15
282.0	050.0000	0147.7	064.7	032.5	000.2500	0054.3	027.4	42.63
283.0	050.0000	0148.1	064.8	031.6	000.2500	0055.4	028.4	42.16
284.0	050.0000	0148.0	064.8	030.9	000.2500	0056.1	029.5	41.66
285.0	050.0000	0147.3	064.7	030.5	000.2500	0056.6	030.6	41.14
286.0	050.0000	0146.4	064.6	030.1	000.2500	0057.0	031.7	40.66
287.0	050.0000	0145.9	064.5	029.8	000.2500	0057.4	032.8	40.23



Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
288.0	050.0000	0145.8	064.5		029.4	000.2500	0057.8	033.9	39.82
289.0	050.0000	0145.4	064.4		029.1	000.2500	0058.1	035.0	39.39
290.0	050.0000	0145.0	064.4		028.9	000.2500	0058.4	036.1	38.97
291.0	050.0000	0144.8	064.3		028.6	000.2500	0058.6	037.3	38.55
292.0	050.0000	0145.0	064.4		028.4	000.2500	0058.9	038.4	38.15
293.0	050.0000	0145.1	064.4		028.2	000.2500	0059.1	039.5	37.74
294.0	050.0000	0145.1	064.4		028.0	000.2500	0059.3	040.6	37.34
295.0	050.0000	0145.3	064.4		027.9	000.2500	0059.4	041.7	36.94
296.0	050.0000	0145.5	064.4		027.7	000.2500	0059.5	042.8	36.55
297.0	050.0000	0145.8	064.5		027.6	000.2500	0059.6	044.0	36.16
298.0	050.0000	0145.6	064.5		027.7	000.2500	0059.6	045.1	35.77
299.0	050.0000	0145.0	064.4		027.8	000.2500	0059.5	046.2	35.39
300.0	050.0000	0144.3	064.3		027.9	000.2500	0059.4	047.3	35.01
301.0	050.0000	0143.6	064.2		028.1	000.2500	0059.2	048.5	34.64
302.0	050.0000	0142.9	064.1		028.2	000.2500	0059.0	049.6	34.27
303.0	050.0000	0142.3	064.0		028.4	000.2500	0058.8	050.7	33.90
304.0	050.0000	0141.9	063.9		028.6	000.2500	0058.7	051.8	33.54
305.0	050.0000	0141.9	063.9		028.7	000.2500	0058.6	052.9	33.18
306.0	050.0000	0141.9	063.9		028.8	000.2500	0058.4	054.0	32.81
307.0	050.0000	0141.8	063.9		029.0	000.2500	0058.3	055.1	32.45
308.0	050.0000	0141.2	063.8		029.2	000.2500	0058.0	056.2	32.09
309.0	050.0000	0140.3	063.7		029.5	000.2500	0057.7	057.3	31.73
310.0	050.0000	0139.6	063.6		029.8	000.2500	0057.4	058.4	31.38
311.0	050.0000	0139.3	063.5		030.0	000.2500	0057.1	059.5	31.03
312.0	050.0000	0139.0	063.5		030.3	000.2500	0056.8	060.5	30.70
313.0	050.0000	0138.5	063.4		030.5	000.2500	0056.5	061.6	30.37
314.0	050.0000	0138.1	063.4		030.8	000.2500	0056.2	062.7	30.05
315.0	050.0000	0138.0	063.4		031.0	000.2500	0056.0	063.7	29.75
316.0	050.0000	0138.1	063.4		031.3	000.2500	0055.7	064.8	29.45
317.0	050.0000	0138.4	063.4		031.5	000.2500	0055.5	065.9	29.16
318.0	050.0000	0139.0	063.5		031.6	000.2500	0055.3	067.0	28.87
319.0	050.0000	0139.9	063.6		031.8	000.2500	0055.1	068.1	28.58
320.0	050.0000	0140.1	063.7		032.0	000.2500	0054.8	069.2	28.29
321.0	050.0000	0139.6	063.6		032.4	000.2500	0054.5	070.2	28.01
322.0	050.0000	0139.4	063.6		032.7	000.2500	0054.1	071.3	27.72

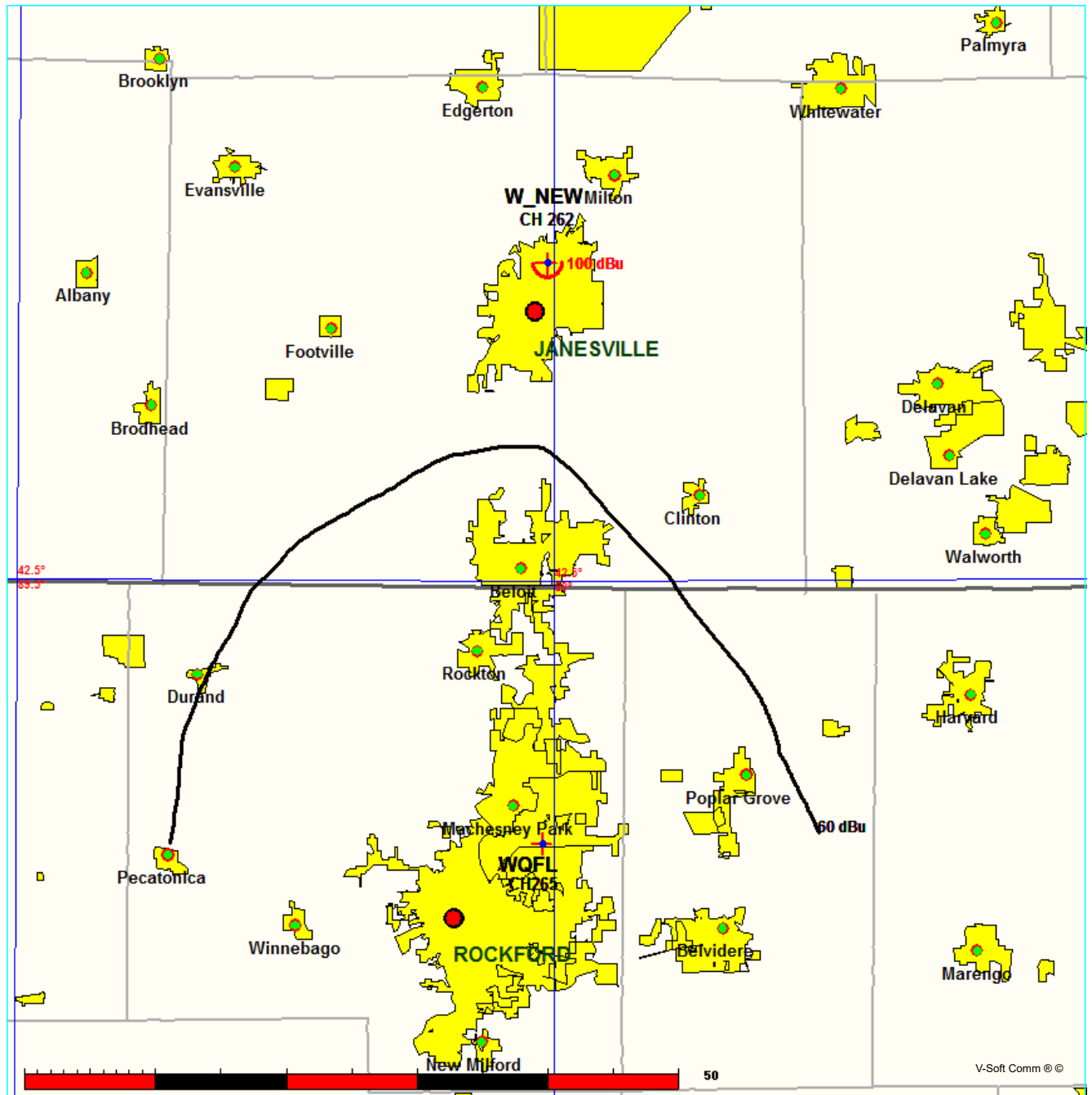


Contour-to-Contour Outgoing Interference Map - vs WQFL  
Board Of Regents Of The University Of Wisconsin System

FMCommander Single Allocation Study - 06-23-2017 - GLOBE 30 Sec  
W\_NEW's Overlaps (In= 29.63 km, Out= 12.86 km)

W\_NEW CH 262 D  
Lat= 42 42 58.0, Lng= 89 00 24.6  
0.25 kW 56.6 m HAAT, 323 m COR  
Prot.= 60 dBu, Intef.= 100 dBu

WQFL CH 265 A 73.215 Z BMLED20110421ABV  
Lat= 42 19 20.0, Lng= 89 00 41.0  
2.7 kW 149 m HAAT, 396 m COR  
Prot.= 60 dBu, Intef.= 100 dBu



06-23-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

WQFL BMLED20110421ABV

W\_NEW

Channel = 265A

Max ERP = 2.7 kW

RCAMSL = 396 m

N. Lat. 42 19 20.0

W. Lng. 89 00 41.0

Protected

60 dBu

Channel = 262D

Max ERP = 0.25 kW

RCAMSL = 323 m

N. Lat. 42 42 58.0

W. Lng. 89 00 24.6

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
300.0	002.7000	0154.6	028.6	220.4	000.2500	0071.8	038.8	39.49	
301.0	002.7000	0154.6	028.6	220.6	000.2500	0071.7	038.3	39.68	
302.0	002.7000	0154.5	028.6	220.7	000.2500	0071.6	037.8	39.87	
303.0	002.7000	0154.4	028.6	220.8	000.2500	0071.6	037.3	40.07	
304.0	002.7000	0154.5	028.6	220.9	000.2500	0071.5	036.8	40.27	
305.0	002.7000	0155.1	028.6	221.1	000.2500	0071.4	036.3	40.46	
306.0	002.7000	0156.4	028.7	221.3	000.2500	0071.2	035.8	40.65	
307.0	002.7000	0157.9	028.9	221.6	000.2500	0071.0	035.3	40.84	
308.0	002.7000	0159.4	029.0	221.8	000.2500	0070.9	034.8	41.03	
309.0	002.7000	0160.8	029.1	222.1	000.2500	0070.7	034.3	41.23	
310.0	002.7000	0161.9	029.2	222.3	000.2500	0070.6	033.8	41.44	
311.0	002.7000	0162.4	029.3	222.4	000.2500	0070.6	033.3	41.66	
312.0	002.7000	0162.3	029.2	222.4	000.2500	0070.6	032.8	41.88	
313.0	002.7000	0161.6	029.2	222.3	000.2500	0070.6	032.3	42.12	
314.0	002.7000	0160.8	029.1	222.1	000.2500	0070.7	031.8	42.36	
315.0	002.7000	0160.5	029.1	222.1	000.2500	0070.7	031.3	42.61	
316.0	002.7000	0160.8	029.1	222.1	000.2500	0070.7	030.8	42.87	
317.0	002.7000	0161.6	029.2	222.1	000.2500	0070.7	030.2	43.13	
318.0	002.7000	0162.4	029.3	222.1	000.2500	0070.7	029.7	43.41	
319.0	002.7000	0162.9	029.3	222.1	000.2500	0070.7	029.2	43.69	
320.0	002.7000	0163.2	029.3	222.0	000.2500	0070.8	028.7	44.00	
321.0	002.7000	0163.1	029.3	221.9	000.2500	0070.9	028.2	44.31	
322.0	002.7000	0162.8	029.3	221.6	000.2500	0071.0	027.7	44.63	
323.0	002.7000	0162.4	029.3	221.4	000.2500	0071.2	027.2	44.97	
324.0	002.7000	0161.9	029.2	221.0	000.2500	0071.4	026.7	45.31	
325.0	002.7000	0161.4	029.2	220.7	000.2500	0071.6	026.2	45.66	
326.0	002.7000	0160.9	029.1	220.3	000.2500	0072.0	025.8	46.03	
327.0	002.7000	0160.3	029.1	219.9	000.2500	0072.3	025.3	46.40	
328.0	002.7000	0159.9	029.0	219.4	000.2500	0072.7	024.8	46.78	
329.0	002.7000	0159.8	029.0	219.0	000.2500	0073.1	024.3	47.17	
330.0	002.7000	0159.9	029.0	218.6	000.2500	0073.4	023.9	47.55	
331.0	002.7000	0160.1	029.1	218.2	000.2500	0073.8	023.4	47.95	
332.0	002.7000	0160.1	029.1	217.7	000.2500	0074.1	022.9	48.34	
333.0	002.7000	0159.8	029.0	217.1	000.2500	0074.4	022.5	48.71	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
334.0	002.7000	0159.6	029.0	216.5	000.2500	0074.5	022.0	49.07
335.0	002.7000	0159.7	029.0	215.9	000.2500	0074.6	021.6	49.43
336.0	002.7000	0160.1	029.1	215.3	000.2500	0074.7	021.1	49.81
337.0	002.7000	0160.8	029.1	214.7	000.2500	0075.0	020.7	50.21
338.0	002.7000	0162.1	029.2	214.2	000.2500	0075.3	020.2	50.65
339.0	002.7000	0163.6	029.4	213.6	000.2500	0075.9	019.7	51.12
340.0	002.7000	0165.0	029.5	213.0	000.2500	0076.9	019.2	51.63
341.0	002.7000	0165.8	029.5	212.2	000.2500	0078.5	018.7	52.18
342.0	002.7000	0166.6	029.6	211.3	000.2500	0080.3	018.3	52.74
343.0	002.7000	0167.9	029.7	210.5	000.2500	0081.7	017.8	53.29
344.0	002.7000	0169.6	029.9	209.7	000.2500	0082.7	017.4	53.79
345.0	002.7000	0170.9	030.0	208.7	000.2500	0083.0	016.9	54.20
346.0	002.7000	0171.6	030.0	207.5	000.2500	0082.4	016.5	54.48
347.0	002.7000	0171.6	030.0	206.1	000.2500	0081.8	016.2	54.70
348.0	002.7000	0171.1	030.0	204.6	000.2500	0082.0	015.9	54.98
349.0	002.7000	0170.9	030.0	203.0	000.2500	0082.3	015.6	55.25
350.0	002.7000	0170.6	029.9	201.3	000.2500	0081.1	015.3	55.35
351.0	002.7000	0170.7	030.0	199.6	000.2500	0080.2	015.1	55.50
352.0	002.7000	0171.0	030.0	197.9	000.2500	0080.0	014.8	55.57
353.0	002.7000	0171.3	030.0	196.0	000.2500	0079.7	014.6	55.80
354.0	002.7000	0171.4	030.0	194.1	000.2500	0079.4	014.4	56.01
355.0	002.7000	0171.3	030.0	192.1	000.2500	0079.9	014.2	56.26
356.0	002.7000	0170.8	030.0	190.0	000.2500	0080.2	014.1	56.41
357.0	002.7000	0170.5	029.9	187.9	000.2500	0080.0	014.0	56.51
358.0	002.7000	0170.1	029.9	185.8	000.2500	0080.0	014.0	56.57
359.0	002.7000	0169.6	029.9	183.7	000.2500	0078.9	014.0	56.47
000.0	002.7000	0168.7	029.8	181.5	000.2500	0076.3	014.0	56.12
001.0	002.6037	0167.7	029.5	179.4	000.2500	0074.6	014.3	55.51
002.0	002.5091	0166.6	029.1	177.5	000.2500	0072.7	014.7	54.87
003.0	002.4163	0165.3	028.8	175.7	000.2500	0071.3	015.1	54.48
004.0	002.3252	0163.8	028.4	174.1	000.2500	0070.3	015.6	53.97
005.0	002.2359	0162.2	028.0	172.6	000.2500	0069.5	016.0	53.46
006.0	002.1483	0160.3	027.6	171.3	000.2500	0069.0	016.5	52.98
007.0	002.0625	0158.2	027.2	170.1	000.2500	0068.6	017.0	52.47
008.0	001.9784	0156.0	026.8	169.0	000.2500	0068.0	017.6	51.95
009.0	001.8961	0153.7	026.4	168.1	000.2500	0067.5	018.2	51.40
010.0	001.8155	0151.2	025.9	167.3	000.2500	0067.0	018.7	50.85
011.0	001.7584	0149.0	025.6	166.5	000.2500	0066.6	019.2	50.39
012.0	001.7022	0147.0	025.2	165.7	000.2500	0066.3	019.7	49.94
013.0	001.6469	0145.9	025.0	164.9	000.2500	0066.1	020.2	49.55
014.0	001.5925	0145.2	024.7	164.2	000.2500	0065.8	020.6	49.18
015.0	001.5391	0144.2	024.5	163.5	000.2500	0065.6	021.0	48.79
016.0	001.4865	0142.9	024.2	163.0	000.2500	0065.3	021.5	48.38
017.0	001.4349	0141.6	023.9	162.5	000.2500	0065.1	022.0	47.98
018.0	001.3842	0141.0	023.7	162.0	000.2500	0064.8	022.4	47.61
019.0	001.3344	0140.9	023.4	161.4	000.2500	0064.5	022.8	47.25
020.0	001.2855	0141.0	023.3	160.9	000.2500	0064.1	023.2	46.89
021.0	001.2669	0140.4	023.1	160.4	000.2500	0063.5	023.6	46.56
022.0	001.2485	0139.1	023.0	159.9	000.2500	0063.0	024.0	46.20
023.0	001.2302	0137.6	022.8	159.5	000.2500	0062.5	024.4	45.84
024.0	001.2120	0136.3	022.6	159.1	000.2500	0062.1	024.8	45.50

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
025.0	001.1940	0135.2	022.4		158.8	000.2500	0061.6	025.2	45.16
026.0	001.1761	0133.7	022.3		158.5	000.2500	0061.3	025.6	44.83
027.0	001.1584	0131.8	022.0		158.3	000.2500	0061.1	026.0	44.50
028.0	001.1407	0129.7	021.8		158.1	000.2500	0060.9	026.5	44.18
029.0	001.1233	0127.9	021.6		157.9	000.2500	0060.8	026.9	43.89
030.0	001.1059	0126.4	021.4		157.8	000.2500	0060.7	027.3	43.60
031.0	001.0956	0124.9	021.2		157.6	000.2500	0060.6	027.7	43.34
032.0	001.0853	0123.5	021.1		157.4	000.2500	0060.5	028.1	43.08
033.0	001.0750	0122.4	021.0		157.2	000.2500	0060.4	028.5	42.85
034.0	001.0648	0121.6	020.8		156.9	000.2500	0060.3	028.8	42.62
035.0	001.0547	0121.0	020.8		156.7	000.2500	0060.2	029.2	42.41
036.0	001.0446	0120.5	020.7		156.5	000.2500	0060.2	029.5	42.21
037.0	001.0345	0120.2	020.6		156.3	000.2500	0060.2	029.9	42.02
038.0	001.0245	0120.0	020.5		156.1	000.2500	0060.2	030.2	41.84
039.0	001.0146	0119.6	020.4		155.9	000.2500	0060.2	030.6	41.65
040.0	001.0047	0118.8	020.3		155.8	000.2500	0060.2	030.9	41.47
041.0	001.0014	0118.2	020.3		155.6	000.2500	0060.3	031.3	41.30
042.0	000.9981	0117.8	020.2		155.4	000.2500	0060.3	031.6	41.15
043.0	000.9948	0117.6	020.2		155.2	000.2500	0060.3	032.0	41.00
044.0	000.9915	0117.3	020.2		155.1	000.2500	0060.4	032.3	40.85
045.0	000.9883	0117.1	020.1		154.9	000.2500	0060.4	032.7	40.70
046.0	000.9850	0117.0	020.1		154.7	000.2500	0060.4	033.0	40.56
047.0	000.9817	0117.0	020.1		154.6	000.2500	0060.4	033.3	40.41
048.0	000.9785	0117.1	020.1		154.4	000.2500	0060.4	033.7	40.27
049.0	000.9752	0117.2	020.1		154.3	000.2500	0060.4	034.0	40.12
050.0	000.9720	0117.4	020.1		154.1	000.2500	0060.4	034.3	39.98
051.0	000.9688	0117.3	020.0		154.0	000.2500	0060.4	034.7	39.83
052.0	000.9655	0116.9	020.0		154.0	000.2500	0060.4	035.0	39.68
053.0	000.9623	0116.6	019.9		153.9	000.2500	0060.4	035.4	39.53
054.0	000.9591	0116.4	019.9		153.9	000.2500	0060.3	035.7	39.39
055.0	000.9559	0116.5	019.9		153.8	000.2500	0060.3	036.1	39.24
056.0	000.9527	0116.6	019.9		153.7	000.2500	0060.3	036.4	39.10
057.0	000.9495	0116.7	019.9		153.7	000.2500	0060.3	036.8	38.96
058.0	000.9463	0116.7	019.9		153.7	000.2500	0060.3	037.1	38.81
059.0	000.9431	0116.5	019.8		153.7	000.2500	0060.3	037.5	38.67

Contour-to-Contour Outgoing Interference Map - vs W263BJ  
Board Of Regents Of The University Of Wisconsin System

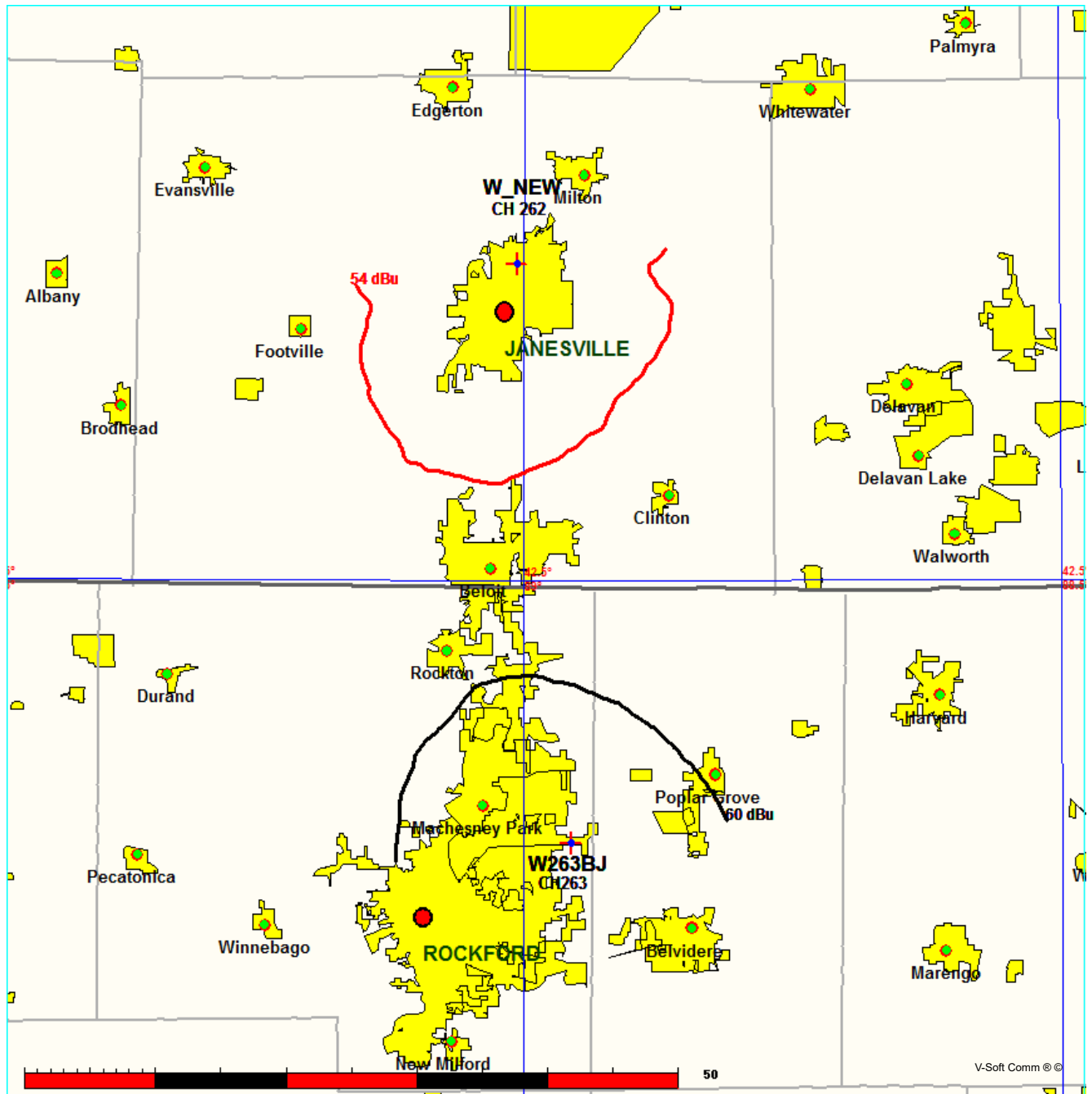
FMCommander Single Allocation Study - 06-23-2017 - GLOBE 30 Sec  
W\_NEW's Overlaps (In= 14.1 km, Out= 15.08 km)

W\_NEW CH 262 D

Lat= 42 42 58.0, Lng= 89 00 24.6  
0.25 kW 56.6 m HAAT, 323 m COR  
Prot.= 60 dBu, Intef.= 54 dBu

W263BJ CH 263 D BLFT20111121ENA

Lat= 42 19 21.0, Lng= 88 57 14.0  
0.23 kW 106.8 m HAAT, 355 m COR  
Prot.= 60 dBu, Intef.= 54 dBu



06-23-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

W263BJ BLFT20111121ENA

W\_NEW

Channel = 263D

Max ERP = 0.23 kW

RCAMSL = 355 m

N. Lat. 42 19 21.0

W. Lng. 88 57 14.0

Protected

60 dBu

Channel = 262D

Max ERP = 0.25 kW

RCAMSL = 323 m

N. Lat. 42 42 58.0

W. Lng. 89 00 24.6

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
294.0	000.2300	0115.2	013.5	191.8	000.2500	0080.0	039.1	40.23	
295.0	000.2300	0116.0	013.5	191.8	000.2500	0080.0	038.9	40.33	
296.0	000.2300	0117.1	013.6	191.8	000.2500	0080.0	038.6	40.43	
297.0	000.2300	0118.3	013.7	191.8	000.2500	0080.0	038.4	40.53	
298.0	000.2300	0119.3	013.7	191.8	000.2500	0080.0	038.1	40.63	
299.0	000.2300	0119.8	013.8	191.7	000.2500	0080.1	037.9	40.74	
300.0	000.2300	0119.7	013.8	191.6	000.2500	0080.1	037.7	40.84	
301.0	000.2300	0119.4	013.7	191.4	000.2500	0080.1	037.4	40.93	
302.0	000.2300	0118.8	013.7	191.3	000.2500	0080.2	037.2	41.03	
303.0	000.2300	0118.1	013.7	191.1	000.2500	0080.2	037.0	41.12	
304.0	000.2300	0117.2	013.6	190.9	000.2500	0080.2	036.8	41.21	
305.0	000.2300	0116.1	013.6	190.6	000.2500	0080.2	036.6	41.29	
306.0	000.2300	0115.1	013.5	190.4	000.2500	0080.2	036.4	41.37	
307.0	000.2300	0114.1	013.4	190.1	000.2500	0080.2	036.2	41.45	
308.0	000.2300	0113.3	013.4	189.9	000.2500	0080.1	036.1	41.53	
309.0	000.2300	0112.8	013.4	189.7	000.2500	0080.1	035.9	41.60	
310.0	000.2300	0112.3	013.3	189.5	000.2500	0080.1	035.7	41.68	
311.0	000.2300	0111.6	013.3	189.2	000.2500	0080.0	035.5	41.76	
312.0	000.2300	0111.0	013.3	189.0	000.2500	0080.0	035.3	41.83	
313.0	000.2300	0110.8	013.3	188.7	000.2500	0080.0	035.1	41.91	
314.0	000.2300	0110.9	013.3	188.5	000.2500	0080.0	034.9	42.00	
315.0	000.2300	0111.3	013.3	188.3	000.2500	0080.0	034.7	42.09	
316.0	000.2300	0111.8	013.3	188.2	000.2500	0080.0	034.5	42.18	
317.0	000.2300	0112.7	013.4	188.0	000.2500	0080.0	034.3	42.27	
318.0	000.2300	0113.6	013.4	187.8	000.2500	0080.0	034.1	42.37	
319.0	000.2300	0114.4	013.5	187.6	000.2500	0080.0	033.9	42.46	
320.0	000.2300	0115.0	013.5	187.4	000.2500	0080.0	033.7	42.55	
321.0	000.2300	0115.8	013.5	187.2	000.2500	0080.0	033.5	42.64	
322.0	000.2300	0117.0	013.6	187.0	000.2500	0080.0	033.3	42.74	
323.0	000.2300	0118.1	013.7	186.7	000.2500	0080.1	033.1	42.84	
324.0	000.2300	0118.7	013.7	186.5	000.2500	0080.1	032.9	42.93	
325.0	000.2300	0119.4	013.7	186.2	000.2500	0080.0	032.7	43.01	
326.0	000.2300	0120.9	013.8	186.0	000.2500	0080.0	032.5	43.11	
327.0	000.2300	0122.2	013.9	185.7	000.2500	0080.0	032.3	43.20	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
328.0	000.2300	0122.3	013.9	185.4	000.2500	0080.0	032.1	43.27
329.0	000.2300	0121.3	013.8	185.0	000.2500	0080.0	032.0	43.32
330.0	000.2300	0120.1	013.8	184.6	000.2500	0079.9	031.9	43.35
331.0	000.2300	0119.3	013.7	184.2	000.2500	0079.5	031.8	43.36
332.0	000.2300	0118.3	013.7	183.8	000.2500	0079.0	031.8	43.34
333.0	000.2300	0117.3	013.6	183.3	000.2500	0078.4	031.7	43.31
334.0	000.2300	0116.4	013.6	182.9	000.2500	0077.9	031.6	43.28
335.0	000.2300	0115.6	013.5	182.5	000.2500	0077.3	031.5	43.25
336.0	000.2300	0114.8	013.5	182.1	000.2500	0076.8	031.5	43.22
337.0	000.2300	0114.0	013.4	181.7	000.2500	0076.4	031.4	43.20
338.0	000.2300	0113.2	013.4	181.2	000.2500	0076.0	031.4	43.19
339.0	000.2300	0112.4	013.3	180.8	000.2500	0075.7	031.3	43.17
340.0	000.2300	0111.3	013.3	180.4	000.2500	0075.3	031.3	43.14
341.0	000.2300	0110.0	013.2	179.9	000.2500	0075.0	031.3	43.11
342.0	000.2300	0108.8	013.1	179.5	000.2500	0074.6	031.3	43.07
343.0	000.2300	0107.9	013.1	179.0	000.2500	0074.3	031.3	43.04
344.0	000.2300	0107.3	013.0	178.6	000.2500	0074.0	031.2	43.01
345.0	000.2300	0106.6	013.0	178.2	000.2500	0073.5	031.2	42.97
346.0	000.2300	0105.5	012.9	177.8	000.2500	0073.0	031.2	42.90
347.0	000.2300	0104.1	012.9	177.3	000.2500	0072.6	031.3	42.83
348.0	000.2300	0102.6	012.8	176.9	000.2500	0072.2	031.3	42.75
349.0	000.2300	0101.0	012.7	176.5	000.2500	0071.8	031.4	42.68
350.0	000.2300	0099.0	012.5	176.1	000.2500	0071.5	031.5	42.60
351.0	000.2300	0096.7	012.4	175.6	000.2500	0071.2	031.6	42.51
352.0	000.2300	0094.8	012.3	175.2	000.2500	0071.0	031.7	42.43
353.0	000.2300	0093.4	012.2	174.8	000.2500	0070.7	031.8	42.36
354.0	000.2300	0092.6	012.1	174.5	000.2500	0070.5	031.8	42.31
355.0	000.2300	0091.8	012.1	174.1	000.2500	0070.3	031.9	42.26
356.0	000.2300	0091.4	012.1	173.7	000.2500	0070.1	031.9	42.22
357.0	000.2300	0090.7	012.0	173.3	000.2500	0069.8	032.0	42.17
358.0	000.2300	0089.8	012.0	173.0	000.2500	0069.6	032.0	42.11
359.0	000.2300	0088.7	011.9	172.6	000.2500	0069.5	032.1	42.05
000.0	000.2300	0087.7	011.8	172.2	000.2500	0069.3	032.2	42.00
001.0	000.2300	0086.6	011.8	171.9	000.2500	0069.2	032.3	41.94
002.0	000.2300	0085.4	011.7	171.6	000.2500	0069.1	032.4	41.88
003.0	000.2300	0084.2	011.6	171.2	000.2500	0069.0	032.5	41.81
004.0	000.2300	0082.6	011.5	170.9	000.2500	0068.9	032.7	41.74
005.0	000.2300	0081.5	011.4	170.6	000.2500	0068.8	032.8	41.67
006.0	000.2300	0080.3	011.4	170.3	000.2500	0068.7	032.9	41.60
007.0	000.2300	0079.9	011.3	170.0	000.2500	0068.5	033.0	41.55
008.0	000.2300	0079.4	011.3	169.7	000.2500	0068.4	033.1	41.49
009.0	000.2300	0078.5	011.2	169.4	000.2500	0068.2	033.2	41.42
010.0	000.2300	0077.4	011.2	169.1	000.2500	0068.1	033.4	41.34
011.0	000.2300	0076.4	011.1	168.9	000.2500	0068.0	033.5	41.27
012.0	000.2300	0076.1	011.1	168.6	000.2500	0067.8	033.6	41.21
013.0	000.2300	0076.1	011.1	168.3	000.2500	0067.6	033.7	41.15
014.0	000.2300	0075.9	011.1	168.0	000.2500	0067.4	033.8	41.09
015.0	000.2300	0075.4	011.0	167.7	000.2500	0067.2	033.9	41.01
016.0	000.2300	0074.8	011.0	167.5	000.2500	0067.1	034.0	40.94
017.0	000.2300	0074.8	011.0	167.2	000.2500	0066.9	034.1	40.88
018.0	000.2300	0075.0	011.0	166.9	000.2500	0066.8	034.2	40.83



Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
019.0	000.2300	0074.6	011.0		166.6	000.2500	0066.7	034.3	40.76
020.0	000.2300	0073.8	010.9		166.4	000.2500	0066.6	034.4	40.69
021.0	000.2300	0072.9	010.9		166.2	000.2500	0066.5	034.6	40.61
022.0	000.2300	0072.2	010.8		166.0	000.2500	0066.4	034.7	40.54
023.0	000.2300	0071.6	010.8		165.8	000.2500	0066.4	034.9	40.47
024.0	000.2300	0070.9	010.7		165.6	000.2500	0066.3	035.0	40.40
025.0	000.2300	0070.1	010.7		165.4	000.2500	0066.2	035.2	40.32
026.0	000.2300	0069.4	010.6		165.2	000.2500	0066.2	035.4	40.25
027.0	000.2300	0068.9	010.6		165.1	000.2500	0066.1	035.5	40.18
028.0	000.2300	0068.4	010.6		164.9	000.2500	0066.1	035.7	40.11
029.0	000.2300	0068.1	010.5		164.7	000.2500	0066.0	035.8	40.04
030.0	000.2300	0067.9	010.5		164.5	000.2500	0065.9	035.9	39.97
031.0	000.2300	0067.9	010.5		164.3	000.2500	0065.9	036.1	39.91
032.0	000.2300	0067.9	010.5		164.1	000.2500	0065.8	036.2	39.84
033.0	000.2300	0067.9	010.5		163.9	000.2500	0065.7	036.4	39.78
034.0	000.2300	0067.9	010.5		163.7	000.2500	0065.6	036.5	39.71
035.0	000.2300	0068.0	010.5		163.5	000.2500	0065.6	036.6	39.64
036.0	000.2300	0068.3	010.6		163.3	000.2500	0065.5	036.8	39.58
037.0	000.2300	0068.4	010.6		163.1	000.2500	0065.4	036.9	39.51
038.0	000.2300	0068.2	010.6		163.0	000.2500	0065.3	037.1	39.44
039.0	000.2300	0067.9	010.5		162.9	000.2500	0065.3	037.2	39.37
040.0	000.2300	0067.6	010.5		162.7	000.2500	0065.2	037.4	39.29
041.0	000.2300	0067.4	010.5		162.6	000.2500	0065.2	037.6	39.22
042.0	000.2300	0067.2	010.5		162.5	000.2500	0065.1	037.7	39.15
043.0	000.2300	0067.1	010.5		162.3	000.2500	0065.1	037.9	39.07
044.0	000.2300	0067.1	010.5		162.2	000.2500	0065.0	038.0	39.00
045.0	000.2300	0067.2	010.5		162.1	000.2500	0064.9	038.2	38.93
046.0	000.2300	0067.3	010.5		161.9	000.2500	0064.8	038.4	38.85
047.0	000.2300	0067.5	010.5		161.8	000.2500	0064.7	038.5	38.78
048.0	000.2300	0067.7	010.5		161.7	000.2500	0064.6	038.7	38.71
049.0	000.2300	0067.8	010.5		161.6	000.2500	0064.6	038.8	38.63
050.0	000.2300	0067.8	010.5		161.5	000.2500	0064.5	039.0	38.55
051.0	000.2300	0067.8	010.5		161.4	000.2500	0064.4	039.2	38.48
052.0	000.2300	0067.7	010.5		161.3	000.2500	0064.3	039.4	38.40
053.0	000.2300	0067.7	010.5		161.2	000.2500	0064.3	039.5	38.33