

### DTV Allocation Considerations

A study was performed using the FCC's software program, *tvstudy*, v.2.2.5, to ensure that the technical facility proposed herein does not cause interference to other stations above the allowable *de minimis* limits. As demonstrated in the attached study results, the instant proposal is predicted to cause no new interference exceeding 0.5% to the populations served by any relevant protections. Accordingly, the instant proposal satisfies all applicable DTV interference criteria.

### International DTV Considerations

As shown in the attached study, the transmitter site specified herein is within 320 kilometers of the common border between the United States of America and Canada. As demonstrated in the attached study, the technical facility proposed herein satisfies DTV interference criteria with respect to all relevant Canadian allotments, applications and assignments.

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: WBSF 23 CP Reduced Pwr 300 kW, Model: Longley-Rice  
Start: 2019.06.21 09:03:55

Study created: 2019.06.21 09:03:55

Study build station data: LMS TV 2019-06-21

Proposal: WBSF D23 DT CP BAY CITY, MI  
File number: WBSF 23 CP Reduced Pwr 300 kW  
Facility ID: 82627  
Station data: User record  
Record ID: 797  
Country: U.S.  
Zone: I

Search options:

Non-U.S. records included

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WDWO-CD	D22	DC	CP	DETROIT, MI	BLANK0000028102	88.1 km
No	WLLA	D22	DT	CP	KALAMAZOO, MI	BLANK0000034932	159.0
No	WBGU-TV	D22	DT	LIC	BOWLING GREEN, OH	BLANK0000063785	231.7
No	WCIU-TV	D23	DT	CP	CHICAGO, IL	BLANK0000034608	353.3
No	WDTI	D23	DT	CP	INDIANAPOLIS, IN	BLANK0000034481	423.1
No	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000034759	369.2
Yes	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000033631	174.8
No	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	434.0
No	WBAY-TV	D23	DT	LIC	GREEN BAY, WI	BMLCDT20040723ADS	368.0
No	WPTA	D24	DT	LIC	FORT WAYNE, IN	BLANK0000068624	264.2
No	WCML	D24	DT	LIC	ALPENA, MI	BLANK0000034355	88.1
Yes	WPXD-TV	D24	DT	CP	ANN ARBOR, MI	BLANK0000034355	88.1
No	WTLJ	D24	DT	LIC	MUSKEGON, MI	BLANK0000001674	179.3
Yes	CIII-DT	D23	DT	LIC	PARIS, ON	BLANKCANADA209	265.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D23  
Latitude: 43 13 1.00 N (NAD83)  
Longitude: 83 43 17.00 W  
Height AMSL: 577.3 m  
HAAT: 365.0 m  
Peak ERP: 300 kW  
Antenna: DIELECTRIC-TFU-20JSC/VP-R-4C200 (ID 1004775) 0.0 deg  
Elev Pattn: Generic  
Elec Tilt: 0.75

39.7 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	260 kW	380.6 m	95.4 km
45.0	283	370.9	95.4
90.0	60.8	344.7	81.6
135.0	7.07	343.8	68.1
180.0	5.47	349.1	66.9
225.0	45.2	366.2	81.6
270.0	271	380.1	95.7
315.0	267	386.6	96.0

\*\*Proposal is within coordination distance of Canadian border  
Distance to Canadian border: 107.7 km

Distance to Mexican border: 2166.1 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 250.3 degrees Distance: 194.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 266.5 degrees Distance: 1811.9 km

Study cell size: 2.00 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%

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Interference to BLANK0000033631 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000033631	
Undesireds:	WBSF	D23	DT	BL	BAY CITY, MI	DTVBL82627	204.8 km
	WBSF	D23	DT	CP	BAY CITY, MI	WBSF 23 CP Reduced Pwr	174.8
	WDWO-CD	D22	DC	CP	DETROIT, MI	BLANK0000028102	90.8
	WBGU-TV	D22	DT	LIC	BOWLING GREEN, OH	BLANK0000063785	74.8
	WWHO	D23	DT	CP	CHILLICOTHE, OH	BLANK0000034759	194.4
	WPXD-TV	D24	DT	CP	ANN ARBOR, MI	BLANK0000034355	90.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
23263.1	2,872,428	23259.1	2,872,250	22078.0	2,713,998	22073.9 2,713,908	0.02 0.00
2688.5	224,092	2688.5	224,092	2680.5	220,146	2680.5 220,146	0.00 0.00

(in Canada)

Undesired	Total IX	Unique IX, before	Unique IX, after
WBSF D23 DT BL	12.0 815	4.0 398	
WBSF D23 DT CP	40.1 2,840		8.0 488
WDWO-CD D22 DC CP	76.4 55,538	0.0 0	0.0 0
WBGU-TV D22 DT LIC	462.8 15,627	462.8 15,627	462.8 15,627
WWHO D23 DT CP	574.3 29,236	514.1 21,531	506.1 20,529
WWHO D23 DT CP	8.0 3,946	8.0 3,946	8.0 3,946
WPXD-TV D24 DT CP	196.3 120,453	87.9 60,035	83.9 59,383

(in Canada)

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Interference to BLANK0000034355 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WPXD-TV	D24	DT	CP	ANN ARBOR, MI	BLANK0000034355	
Undesireds:	WBSF	D23	DT	BL	BAY CITY, MI	DTVBL82627	118.3 km
	WBSF	D23	DT	CP	BAY CITY, MI	WBSF 23 CP Reduced Pwr	88.1
	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000033631	90.8
	WPTA	D24	DT	LIC	FORT WAYNE, IN	BLANK0000068624	218.3
	WCML	D24	DT	LIC	ALPENA, MI	BLEDT20110707ABQ	302.8
	WTLJ	D24	DT	LIC	MUSKEGON, MI	BLANK0000001674	217.9
	WEAO	D24	DT	CP	AKRON, OH	BLANK0000034293	208.8
	WXYZ-TV	D25	DT	CP	DETROIT, MI	BLANK0000034678	5.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
17583.3	5,249,447	17583.3	5,249,447	17259.1	5,165,821	17191.4 5,155,117	0.39 0.21
4373.5	406,662	4373.5	406,662	3892.3	379,289	3892.3 379,289	0.00 0.00

(in Canada)

Undesired	Total IX	Unique IX, before	Unique IX, after
WBSF D23 DT BL	15.9 2,002	8.0 211	
WBSF D23 DT CP	95.6 13,165		75.7 10,915
WNWO-TV D23 DT CP	108.6 67,142	92.6 65,843	92.6 65,843
WPTA D24 DT LIC	60.0 3,869	24.0 1,519	24.0 1,519
WCML D24 DT LIC	11.9 459	0.0 0	0.0 0
WTLJ D24 DT LIC	24.0 1,418	4.0 126	4.0 126
WEAO D24 DT CP	19.9 2,479	0.0 0	0.0 0
WEAO D24 DT CP	481.1 27,373	481.1 27,373	481.1 27,373

(in Canada)

WXYZ-TV D25 DT CP	151.7	11,770	147.8	11,631	147.8	11,631
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Interference to BLANKCANADA209 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	CIII-DT	D23	DT	LIC	PARIS, ON	BLANKCANADA209	
Undesireds:	WBSF	D23	DT	BL	BAY CITY, MI	DTVBL82627	275.9 km
	WBSF	D23	DT	CP	BAY CITY, MI	WBSF 23 CP Reduced Pwr	265.4
	WETM-TV	D23	DT	CP	ELMIRA, NY	BLANK0000029984	318.9
	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000033631	297.3
	WPXI	D23	DT	CP	PITTSBURGH, PA	BLANK0000034876	313.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
19191.0	3,492,205	19131.0	3,437,306	19119.0	3,437,306	19115.1 3,436,835	0.02 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WBSF D23 DT BL	0.0	0	0
WBSF D23 DT CP	4.0	471	4.0 471
WETM-TV D23 DT CP	4.0	0	4.0 0
WNWO-TV D23 DT CP	4.0	0	0.0 0
WPXI D23 DT CP	8.0	0	4.0 0

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Interference to proposal scenario 1  
6.49% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WBSF	D23	DT	CP	BAY CITY, MI	WBSF 23 CP Reduced Pwr	
Undesireds:	WDWO-CD	D22	DC	CP	DETROIT, MI	BLANK0000028102	88.1 km
	WNWO-TV	D23	DT	CP	TOLEDO, OH	BLANK0000033631	174.8
	WPXD-TV	D24	DT	CP	ANN ARBOR, MI	BLANK0000034355	88.1
	CIII-DT	D23	DT	LIC	PARIS, ON	BLANKCANADA209	265.4
Service area		Terrain-limited		IX-free		Percent IX	
23139.2	1,631,786	23127.2	1,630,961	22686.6	1,525,063	1.91 6.49	

Undesired	Total IX	Unique IX	Prct Unique IX
WDWO-CD D22 DC CP	308.3 79,475	24.0 6,830	0.10 0.42
WNWO-TV D23 DT CP	308.5 70,093	48.1 6,258	0.21 0.38
WPXD-TV D24 DT CP	332.5 89,256	40.1 12,187	0.17 0.75
CIII-DT D23 DT LIC	28.0 2,162	8.0 34	0.03 0.00