

ENGINEERING STATEMENT
IN SUPPORT OF MODIFICATION OF
CONSTRUCTION PERMIT (BMPCDT-20080328ADZ)
WWUP-DT, SAULT STE. MARIE, MICHIGAN
CHANNEL 10 25 KW 370 METERS
FEBRUARY 2010

This engineering statement has been prepared on behalf of Heritage Broadcasting Company of Michigan, licensee of TV station WWUP-TV, Sault Ste. Marie, Michigan, in support of a modification of construction permit (BMPCDT-20080328ADZ) to increase station's effective radiated power (ERP).

At present WWUP-TV, Facility ID Number 26993, is authorized to operate its digital TV facilities on Channel 10 (192-198 MHz) with 20.7 kW ERP and 370 meters antenna height above average terrain (HAAT) using a non-directional TV antenna. Station WWUP-TV has completed construction of its digital Channel 10 TV facility and has filed an application for a license. It is now proposed to modify the CP and operate with 25 kW ERP.

The following information provides pertinent data for the proposed WWUP-DT operation.

Name of the Licensee:	Heritage Broadcasting Company of Michigan			
Station Location:	MI-Sault Ste. Marie			
Channel:	10			
Hours of Operation:	Unlimited			
Transmitter:	Type Accepted			
Antenna Type:	RCA, TF-12AH			
Beam Tilt:	0.75			
Antenna Coordinates:	North Latitude:	46 deg	03 min	36 sec
	West Longitude:	84 deg	05 min	57 sec
Transmitter output power:	As required to achieve authorized ERP			

Maximum effective radiated power (Average):	25 kW 13.98 dBk
Elevation of site above mean sea level:	229.8 meters
Overall height of the tower above ground:	343.2 meters
Height of radiation center above ground (meters):	333 meters
Height of radiation center above mean sea level (meters):	563 meters
Height of radiation center above average terrain (meters):	370 meters
Antenna Structure Registration Number:	1002423

Response to questions listed on the FCC Form 301, Section III-D-DTV

Engineering

Question 1. (a)

WWUP-TV will operate its DTV operation on Channel 10 as established in 47 C.F.R. Section 73.622.

Question 1. (d)

WWUP-TV is proposing to modify its CP to operate with higher ERP. An interference study conducted (see attached Table I) according to the FCC OET Bulletin 69, using 1 km/side cells and 0.5 km terrain intervals, indicates the proposed WWUP-DT operation would not cause any interference to other DTV stations exceeding the Commission's guidelines. It is believed any predicted interference to DTV plans is not relevant anymore; therefore, such interference has been disregarded. However, if a waiver of this rule is deemed necessary, it is hereby requested.

Question 1. (e)

The proposed DTV operation would serve 113,754 people within the noise limited service area as compared to 109,599 predicted population for the current CP. As

such, WWUP-DT proposed noise limited contour would serve 4,155 more people than the current authorization. In addition, higher power would provide stronger TV signals within the coverage area for better picture quality.

Question 2.

The attached environmental statement demonstrates that there will not be any significant environmental impact from the proposed DTV operation in accordance with 47 C.F.R. Section 73.1307.

Question 3.

The attached map shows the proposed WWUP-DT contour will encompass the allotted principal community of Sault Ste. Marie, Michigan (see Figure 1).

Question 4.

The proposed WWUP-DT facility complies with Section 73.1030 of the Commission's rules; therefore, notification to radio astronomy installations, radio receiving installations and FCC monitoring stations is not required.

Question 5.

The existing WWUP-DT tower is registered (ASR No. 1002423) by the Commission and no changes are proposed to require a change in the registration.

Table I

TW Census data selected 2000

Post Transition Data Base Selected /space/software/cdb/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-28-2009 Time: 14:03:11

Record Selected for Analysis

WWUP-DT USERRECORD-01 SAULT STE. MARIE MI US
 Channel 10 ERP 25. kW HAAT 370. m RCAMSL 00563 m
 Latitude 046-03-36 Longitude 0084-05-57
 Status APP Zone 2 Border
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 1.0 km/side**Distance Increments for Longley-Rice Analysis 0.50 km**

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	25.000	380.8	105.8
45.0	25.000	373.5	105.3
90.0	25.000	382.4	106.0
135.0	25.000	366.4	104.7
180.0	25.000	371.6	105.2
225.0	25.000	366.3	104.7
270.0	25.000	342.3	102.8
315.0	25.000	372.7	105.2

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

WWUP-DT 10 SAULT STE. MARIE MI USERRECORD01

and station

SHORT TO: WWUP-TV 10 SAULT STE. MARIE MI DTVPLN DTVP0259
 46 -03-49 84 -06-08
 Req. separation 273.6 Actual separation 0.5 Short 273.1 km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
Distance to border = 10.1km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
10	WWUP-DT	SAULT STE. MARIE MI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	WBUP	ISHPEMING MI	290.6	CP	BPCDT	-20080402ABL
10	WBUP	ISHPEMING MI	290.6	PLN	DTVPLN	-DTVP0257
10	WBUP	ISHPEMING MI	295.4	APP	BMPCDT	-20091015AAS
10	WILX-TV	ONONDAGA MI	403.8	CP MOD	BMPCDT	-20080618AAZ
10	WILX-TV	ONONDAGA MI	403.8	PLN	DTVPLN	-DTVP0258
11	WBKB-TV	ALPENA MI	157.4	PLN	DTVPLN	-DTVP0314
11	WBKB-TV	ALPENA MI	157.4	CP MOD	BMPCDT	-20080521AAC

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	WBUP	ISHPEMING MI	BPCDT	-20080402ABL

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	WAOW	WAUSAU WI	213.8	CP	BPCDT	-20090409ADU
09	WAOW-TV	WAUSAU WI	213.9	PLN	DTVPLN	-DTVP0227
09	WAOW	WAUSAU WI	213.8	APP	BPCDT	-20091105ACL
10	WWUP-TV	SAULT STE. MARIE MI	290.4	PLN	DTVPLN	-DTVP0259
10	WDIO-DT	DULUTH MN	329.7	CP MOD	BMPCDT	-20080620ABZ
10	WDIO-TV	DULUTH MN	329.6	PLN	DTVPLN	-DTVP0261
11	WLUK-TV	GREEN BAY WI	216.3	CP	BPCDT	-20080313AAM
11	WLUK-TV	GREEN BAY WI	216.4	PLN	DTVPLN	-DTVP0347
10	WWUP-DT	SAULT STE. MARIE MI	290.6	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1

Scenario 1 Affected station 1

Before Analysis

Results for: 10A MI ISHPEMING BPCDT 20080402ABL CP

HAAT 105.0 m, ATV ERP 4.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	108431	12772.7
not affected by terrain losses	87536	11843.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	4843	272.4
lost to ATV IX only	4843	272.4
lost to all IX	4843	272.4

Potential Interfering Stations Included in above Scenario 1

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10A MN DULUTH	DTVPLN	DTVP0261	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A MI ISHPEMING BPCDT 20080402ABL CP
 HAAT 105.0 m, ATV ERP 4.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	108431	12772.7
not affected by terrain losses	87536	11843.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	5064	403.2
lost to ATV IX only	5064	403.2
lost to all IX	5064	403.2

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	DTVPLN	DTVP0261	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.2673%

Worst case new IX 0.2673% Scenario 1

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	WBUP	ISHPEMING MI	DTVPLN -DTVP0257

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
09	WAOW	WAUSAU WI	213.8	CP	BPCDT -20090409ADU
09	WAOW-TV	WAUSAU WI	213.9	PLN	DTVPLN -DTVP0227
09	WAOW	WAUSAU WI	213.8	APP	BPCDT -20091105ACL
10	WWUP-TV	SAULT STE. MARIE MI	290.4	PLN	DTVPLN -DTVP0259
10	WDIO-DT	DULUTH MN	329.7	CP MOD	BMPCDT -20080620ABZ
10	WDIO-TV	DULUTH MN	329.6	PLN	DTVPLN -DTVP0261
11	WLUK-TV	GREEN BAY WI	216.3	CP	BPCDT -20080313AAM
11	WLUK-TV	GREEN BAY WI	216.4	PLN	DTVPLN -DTVP0347
10	WWUP-DT	SAULT STE. MARIE MI	290.6	APP	USERRECORD-01

Total scenarios = 2

Result key: 2
 Scenario 1 Affected station 2
 Before Analysis

Results for: 10A MI ISHPEMING DTVPLN DTVP0257 PLN
 HAAT 105.0 m, ATV ERP 4.5 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	106896	12079.4
not affected by terrain losses	88058	11279.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	5665	259.5
lost to ATV IX only	5665	259.5
lost to all IX	5665	259.5

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BMPCDT	20080620ABZ	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A MI ISHPEMING DTVPLN DTVP0257 PLN
 HAAT 105.0 m, ATV ERP 4.5 kW
 POPULATION AREA (sq km)
 within Noise Limited Contour 106896 12079.4
 not affected by terrain losses 88058 11279.0
 lost to NTSC IX 0 0.0
 lost to additional IX by ATV 6079 391.3
 lost to ATV IX only 6079 391.3
 lost to all IX 6079 391.3

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH BMPCDT 20080620ABZ CP
 10A MI SAULT STE. MARIE USERRECORD01 APP

The following station failed the de minimis interference criteria.

10D MI SAULT STE. MARIE USERRECORD01
 ERP 25.00 kW HAAT 370.0 m RCAMSL 563.0 m
 Antenna none

Due to interference to the following station and scenario: 1
 10D MI ISHPEMING DTVPLN DTVP0257
 ERP 4.54 kW HAAT 105.0 m RCAMSL 551.0 m
 Antenna CDB 0000000074721

Percent new interference from proposal: 0.5025 to DTVPLN DTVP0257

Result key: 3
 Scenario 2 Affected station 2
 Before Analysis

Results for: 10A MI ISHPEMING DTVPLN DTVP0257 PLN
 HAAT 105.0 m, ATV ERP 4.5 kW
 POPULATION AREA (sq km)
 within Noise Limited Contour 106896 12079.4
 not affected by terrain losses 88058 11279.0
 lost to NTSC IX 0 0.0
 lost to additional IX by ATV 5665 248.6
 lost to ATV IX only 5665 248.6
 lost to all IX 5665 248.6

Potential Interfering Stations Included in above Scenario 2

10A MN DULUTH DTVPLN DTVP0261 PLN
 10A MI SAULT STE. MARIE DTVPLN DTVP0259 PLN

After Analysis

Results for: 10A MI ISHPEMING DTVPLN DTVP0257 PLN
 HAAT 105.0 m, ATV ERP 4.5 kW
 POPULATION AREA (sq km)
 within Noise Limited Contour 106896 12079.4
 not affected by terrain losses 88058 11279.0
 lost to NTSC IX 0 0.0
 lost to additional IX by ATV 6079 380.4
 lost to ATV IX only 6079 380.4
 lost to all IX 6079 380.4

Potential Interfering Stations Included in above Scenario 2

10A MN DULUTH DTVPLN DTVP0261 PLN
 10A MI SAULT STE. MARIE USERRECORD01 APP

The following station failed the de minimis interference criteria.

10D MI SAULT STE. MARIE USERRECORD01
 ERP 25.00 kW HAAT 370.0 m RCAMSL 563.0 m
 Antenna none

Due to interference to the following station and scenario: 2

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10D MI ISHPEMING DTVPLN DTVP0257
 ERP 4.54 kW HAAT 105.0 m RCAMSL 551.0 m
 Antenna CDB 00000000074721

Percent new interference from proposal: 0.5025 to DTVPLN DTVP0257

Worst case new IX 0.5025% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	WBUP	ISHPEMING MI	BMPCDT	-20091015AAS

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	WAOW	WAUSAU WI	223.4	CP	BPCDT	-20090409ADU
09	WAOW-TV	WAUSAU WI	223.5	PLN	DTVPLN	-DTVP0227
09	WAOW	WAUSAU WI	223.4	APP	BPCDT	-20091105ACL
10	WWUP-TV	SAULT STE. MARIE MI	295.1	PLN	DTVPLN	-DTVP0259
10	WDIO-DT	DULUTH MN	324.4	CP MOD	BMPCDT	-20080620ABZ
10	WDIO-TV	DULUTH MN	324.3	PLN	DTVPLN	-DTVP0261
10	WWUP-DT	SAULT STE. MARIE MI	295.4	APP	USERRECORD-01	

Total scenarios = 2

Result key: 4

Scenario 1 Affected station 3

Before Analysis

Results for: 10A MI ISHPEMING BMPCDT 20091015AAS APP

HAAT 230.0 m, ATV ERP 9.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	118832	16555.0
not affected by terrain losses	106500	15799.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1590	192.9
lost to ATV IX only	1590	192.9
lost to all IX	1590	192.9

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BMPCDT	20080620ABZ	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A MI ISHPEMING BMPCDT 20091015AAS APP

HAAT 230.0 m, ATV ERP 9.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	118832	16555.0
not affected by terrain losses	106500	15799.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1977	297.8
lost to ATV IX only	1977	297.8
lost to all IX	1977	297.8

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BMPCDT	20080620ABZ	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3689%

KHANNA & GULL, Inc. – Consulting Engineers

Result key: 5
 Scenario 2 Affected station 3
 Before Analysis

Results for: 10A MI ISHPEMING BMPCDT 20091015AAS APP
 HAAT 230.0 m, ATV ERP 9.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	118832	16555.0
not affected by terrain losses	106500	15799.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	714	176.1
lost to ATV IX only	714	176.1
lost to all IX	714	176.1

Potential Interfering Stations Included in above Scenario 2

10A MN DULUTH	DTVPLN	DTVP0261	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A MI ISHPEMING BMPCDT 20091015AAS APP
 HAAT 230.0 m, ATV ERP 9.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	118832	16555.0
not affected by terrain losses	106500	15799.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1101	281.0
lost to ATV IX only	1101	281.0
lost to all IX	1101	281.0

Potential Interfering Stations Included in above Scenario 2

10A MN DULUTH	DTVPLN	DTVP0261	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3658%

Worst case new IX 0.3689% Scenario 1

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	WILX-TV	ONONDAGA MI	BMPCDT	-20080618AAZ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	WWTV	CADILLAC MI	198.3	CP MOD	BMPCDT	-20090727ADJ
09	WWTV	CADILLAC MI	198.3	PLN	DTVPLN	-DTVP0196
10	WWTO-TV	LA SALLE IL	383.6	CP	BPCDT	-20080611ACK
10	WWTO-TV	LA SALLE IL	383.6	PLN	DTVPLN	-DTVP0247
10	WWTO-TV	LA SALLE IL	383.6	LIC	BLCDT	-20060630AEE
10	WTHI-TV	TERRE HAUTE IN	427.0	CP MOD	BMPCDT	-20080619AEM
10	WTHI-TV	TERRE HAUTE IN	427.0	PLN	DTVPLN	-DTVP0249
10	WWUP-TV	SAULT STE. MARIE MI	404.2	PLN	DTVPLN	-DTVP0259
10	WCPO-TV	CINCINNATI OH	368.8	CP	BPCDT	-20090723ADV
10	WOIO	SHAKER HEIGHTS OH	265.3	LIC	BLCDT	-19991110AAR
10	WOIO	SHAKER HEIGHTS OH	265.3	PLN	DTVPLN	-DTVP0275
10	WOIO	SHAKER HEIGHTS OH	265.3	CP	BPCDT	-20080620AKW
11	WGVU-TV	GRAND RAPIDS MI	122.4	CP	BPEDT	-20090618AAK
11	WGVU-TV	GRAND RAPIDS MI	122.4	PLN	DTVPLN	-DTVP0315
11	WGVU-TV	GRAND RAPIDS MI	122.4	LIC	BLEDT	-20060703ABP
11	WTOL	TOLEDO OH	130.4	CP MOD	BMPCDT	-20081124AKP
11	WTOL	TOLEDO OH	130.4	PLN	DTVPLN	-DTVP0328
10	WWUP-DT	SAULT STE. MARIE MI	403.8	APP	USERRECORD-01	

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	WILX-TV	ONONDAGA MI	DTVPLN -DTVP0258

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
09	WWTW	CADILLAC MI	198.3	CP MOD	BMPCDT -20090727ADJ
09	WWTW	CADILLAC MI	198.3	PLN	DTVPLN -DTVP0196
10	WWTO-TV	LA SALLE IL	383.6	CP	BPCDT -20080611ACK
10	WWTO-TV	LA SALLE IL	383.6	PLN	DTVPLN -DTVP0247
10	WWTO-TV	LA SALLE IL	383.6	LIC	BLCDT -20060630AEE
10	WTHI-TV	TERRE HAUTE IN	427.0	CP MOD	BMPCDT -20080619AEM
10	WTHI-TV	TERRE HAUTE IN	427.0	PLN	DTVPLN -DTVP0249
10	WWUP-TV	SAULT STE. MARIE MI	404.2	PLN	DTVPLN -DTVP0259
10	WCPO-TV	CINCINNATI OH	368.8	CP	BPCDT -20090723ADV
10	WOIO	SHAKER HEIGHTS OH	265.3	LIC	BLCDT -19991110AAR
10	WOIO	SHAKER HEIGHTS OH	265.3	PLN	DTVPLN -DTVP0275
10	WOIO	SHAKER HEIGHTS OH	265.3	CP	BPCDT -20080620AKW
11	WGVU-TV	GRAND RAPIDS MI	122.4	CP	BPEDT -20090618AAK
11	WGVU-TV	GRAND RAPIDS MI	122.4	PLN	DTVPLN -DTVP0315
11	WGVU-TV	GRAND RAPIDS MI	122.4	LIC	BLEDT -20060703ABP
11	WTOL	TOLEDO OH	130.4	CP MOD	BMPCDT -20081124AKP
11	WTOL	TOLEDO OH	130.4	PLN	DTVPLN -DTVP0328
10	WWUP-DT	SAULT STE. MARIE MI	403.8	APP	USERRECORD-01

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	WBKB-TV	ALPENA MI	DTVPLN -DTVP0314

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	WWUP-TV	SAULT STE. MARIE MI	157.8	PLN	DTVPLN -DTVP0259
11	WGVU-TV	GRAND RAPIDS MI	271.5	CP	BPEDT -20090618AAK
11	WGVU-TV	GRAND RAPIDS MI	271.5	PLN	DTVPLN -DTVP0315
11	WGVU-TV	GRAND RAPIDS MI	271.5	LIC	BLEDT -20060703ABP
11	WTOL	TOLEDO OH	337.0	CP MOD	BMPCDT -20081124AKP
11	WTOL	TOLEDO OH	337.0	PLN	DTVPLN -DTVP0328
11	WLUK-TV	GREEN BAY WI	355.3	CP	BPCDT -20080313AAM
11	WLUK-TV	GREEN BAY WI	355.3	PLN	DTVPLN -DTVP0347
12	WJRT-TV	FLINT MI	169.2	APP	BPCDT -20091013AHG
12	WJRT-TV	FLINT MI	169.2	PLN	DTVPLN -DTVP0370
12	WJRT-TV	FLINT MI	169.2	CP	BPCDT -20080610AAJ
10	WWUP-DT	SAULT STE. MARIE MI	157.4	APP	USERRECORD-01

Total scenarios = 12

Result key: 6
Scenario 1 Affected station 6
Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 1

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 1

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 7
 Scenario 2 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 2

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 2

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 8
 Scenario 3 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 3

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 3

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 9
 Scenario 4 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 4

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN

10A MI SAULT STE. MARIE DTVPLN DTVP0259 PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN

HAAT 202.0 m, ATV ERP 19.8 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 4

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 10
 Scenario 5 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN

HAAT 202.0 m, ATV ERP 19.8 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 5

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN

HAAT 202.0 m, ATV ERP 19.8 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 5

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 11
 Scenario 6 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN

HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 6

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA	DTVPLN	DTVP0314	PLN
HAAT 202.0 m, ATV ERP 19.8 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	142575	21613.6	
not affected by terrain losses	134635	20892.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	2858	297.2	
lost to ATV IX only	2858	297.2	
lost to all IX	2858	297.2	

Potential Interfering Stations Included in above Scenario 6

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 12
 Scenario 7 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA	DTVPLN	DTVP0314	PLN
HAAT 202.0 m, ATV ERP 19.8 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	142575	21613.6	
not affected by terrain losses	134635	20892.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	2407	278.3	
lost to ATV IX only	2407	278.3	
lost to all IX	2407	278.3	

Potential Interfering Stations Included in above Scenario 7

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA	DTVPLN	DTVP0314	PLN
HAAT 202.0 m, ATV ERP 19.8 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	142575	21613.6	
not affected by terrain losses	134635	20892.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	2858	297.2	
lost to ATV IX only	2858	297.2	
lost to all IX	2858	297.2	

Potential Interfering Stations Included in above Scenario 7

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 13
 Scenario 8 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA	DTVPLN	DTVP0314	PLN
HAAT 202.0 m, ATV ERP 19.8 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	142575	21613.6	
not affected by terrain losses	134635	20892.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	2407	278.3	
lost to ATV IX only	2407	278.3	
lost to all IX	2407	278.3	

Potential Interfering Stations Included in above Scenario 8

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA	DTVPLN	DTVP0314	PLN
HAAT 202.0 m, ATV ERP 19.8 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	142575	21613.6	
not affected by terrain losses	134635	20892.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	2858	297.2	
lost to ATV IX only	2858	297.2	
lost to all IX	2858	297.2	

Potential Interfering Stations Included in above Scenario 8

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 14
 Scenario 9 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA	DTVPLN	DTVP0314	PLN
HAAT 202.0 m, ATV ERP 19.8 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	142575	21613.6	
not affected by terrain losses	134635	20892.4	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	2407	278.3	
lost to ATV IX only	2407	278.3	
lost to all IX	2407	278.3	

Potential Interfering Stations Included in above Scenario 9

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 9

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 15
 Scenario 10 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 10

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 10

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 16
 Scenario 11 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4

lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 11

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 11

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 17
 Scenario 12 Affected station 6
 Before Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 12

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA DTVPLN DTVP0314 PLN
 HAAT 202.0 m, ATV ERP 19.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21613.6
not affected by terrain losses	134635	20892.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 12

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN

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10A MI SAULT STE. MARIE USERRECORD01 APP

Percent new IX = 0.3411%

Worst case new IX 0.3411% Scenario 5

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	WBKB-TV	ALPENA MI	BMPCDT -20080521AAC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	WWUP-TV	SAULT STE. MARIE MI	157.8	PLN	DTVPLN -DTVP0259
11	WGVU-TV	GRAND RAPIDS MI	271.5	CP	BPEDT -20090618AAK
11	WGVU-TV	GRAND RAPIDS MI	271.5	PLN	DTVPLN -DTVP0315
11	WGVU-TV	GRAND RAPIDS MI	271.5	LIC	BLEDT -20060703ABP
11	WTOL	TOLEDO OH	337.0	CP MOD	BMPCDT -20081124AKP
11	WTOL	TOLEDO OH	337.0	PLN	DTVPLN -DTVP0328
11	WLUK-TV	GREEN BAY WI	355.3	CP	BPCDT -20080313AAM
11	WLUK-TV	GREEN BAY WI	355.3	PLN	DTVPLN -DTVP0347
12	WJRT-TV	FLINT MI	169.2	APP	BPCDT -20091013AHC
12	WJRT-TV	FLINT MI	169.2	PLN	DTVPLN -DTVP0370
12	WJRT-TV	FLINT MI	169.2	CP	BPCDT -20080610AAJ
10	WWUP-DT	SAULT STE. MARIE MI	157.4	APP	USERRECORD-01

Total scenarios = 12

Result key: 18
 Scenario 1 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 1

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 1

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
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11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 19
 Scenario 2 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 2

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 2

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 20
 Scenario 3 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 3

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 3

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 21
Scenario 4 Affected station 7
Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2081	244.4
lost to ATV IX only	2081	244.4
lost to all IX	2081	244.4

Potential Interfering Stations Included in above Scenario 4

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2532	263.3
lost to ATV IX only	2532	263.3
lost to all IX	2532	263.3

Potential Interfering Stations Included in above Scenario 4

11A MI GRAND RAPIDS	BPEDT	20090618AAK	CP
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3402%

Result key: 22
Scenario 5 Affected station 7
Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0

lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 5

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 5

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 23
 Scenario 6 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 6

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 6

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 24
 Scenario 7 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 7

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 7

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 25
 Scenario 8 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 8

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
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within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 8

11A MI GRAND RAPIDS	DTVPLN	DTVP0315	PLN
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 26
 Scenario 9 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 9

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 9

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 27
 Scenario 10 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP
 HAAT 202.0 m, ATV ERP 20.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 10

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 10

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	BMPCDT	20081124AKP	CP
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 28
 Scenario 11 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 11

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 11

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	BPCDT	20080313AAM	CP
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Result key: 29
 Scenario 12 Affected station 7
 Before Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2407	278.3
lost to ATV IX only	2407	278.3
lost to all IX	2407	278.3

Potential Interfering Stations Included in above Scenario 12

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 11A MI ALPENA BMPCDT 20080521AAC CP

HAAT 202.0 m, ATV ERP 20.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	142575	21614.6
not affected by terrain losses	134635	20893.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2858	297.2
lost to ATV IX only	2858	297.2
lost to all IX	2858	297.2

Potential Interfering Stations Included in above Scenario 12

11A MI GRAND RAPIDS	BLEDT	20060703ABP	LIC
11A OH TOLEDO	DTVPLN	DTVP0328	PLN
11A WI GREEN BAY	DTVPLN	DTVP0347	PLN
10A MI SAULT STE. MARIE	USERRECORD01		APP

Percent new IX = 0.3411%

Worst case new IX 0.3411% Scenario 5

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Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	WWUP-DT	SAULT STE. MARIE MI	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	WBUP	ISHPEMING MI	290.6	CP	BPCDT -20080402ABL
10	WBUP	ISHPEMING MI	290.6	PLN	DTVPLN -DTVP0257
10	WBUP	ISHPEMING MI	295.4	APP	BMPCDT -20091015AAS
10	WILX-TV	ONONDAGA MI	403.8	CP MOD	BMPCDT -20080618AAZ
10	WILX-TV	ONONDAGA MI	403.8	PLN	DTVPLN -DTVP0258
11	WBKB-TV	ALPENA MI	157.4	PLN	DTVPLN -DTVP0314
11	WBKB-TV	ALPENA MI	157.4	CP MOD	BMPCDT -20080521AAC

Total scenarios = 3

Result key: 30
 Scenario 1 Affected station 8
 Before Analysis

Results for: 10A MI SAULT STE. MARIE USERRECORD01 APP
 HAAT 370.0 m, ATV ERP 25.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	118490	34630.1
not affected by terrain losses	114268	33129.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	441	77.6
lost to ATV IX only	441	77.6
lost to all IX	441	77.6

Potential Interfering Stations Included in above Scenario 1

10A MI ISHPERING BPCDT 20080402ABL CP

Result key: 31
 Scenario 2 Affected station 8
 Before Analysis

Results for: 10A MI SAULT STE. MARIE USERRECORD01 APP
 HAAT 370.0 m, ATV ERP 25.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	118490	34630.1
not affected by terrain losses	114268	33129.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	441	70.6
lost to ATV IX only	441	70.6
lost to all IX	441	70.6

Potential Interfering Stations Included in above Scenario 2

10A MI ISHPERING DTVPLN DTVP0257 PLN

Result key: 32
 Scenario 3 Affected station 8
 Before Analysis

Results for: 10A MI SAULT STE. MARIE USERRECORD01 APP
 HAAT 370.0 m, ATV ERP 25.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	118490	34630.1
not affected by terrain losses	114268	33129.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	514	195.0
lost to ATV IX only	514	195.0
lost to all IX	514	195.0

Potential Interfering Stations Included in above Scenario 3

10A MI ISHPERING BMPCDT 20091015AAS APP

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

ENVIRONMENTAL PROTECTION ACT

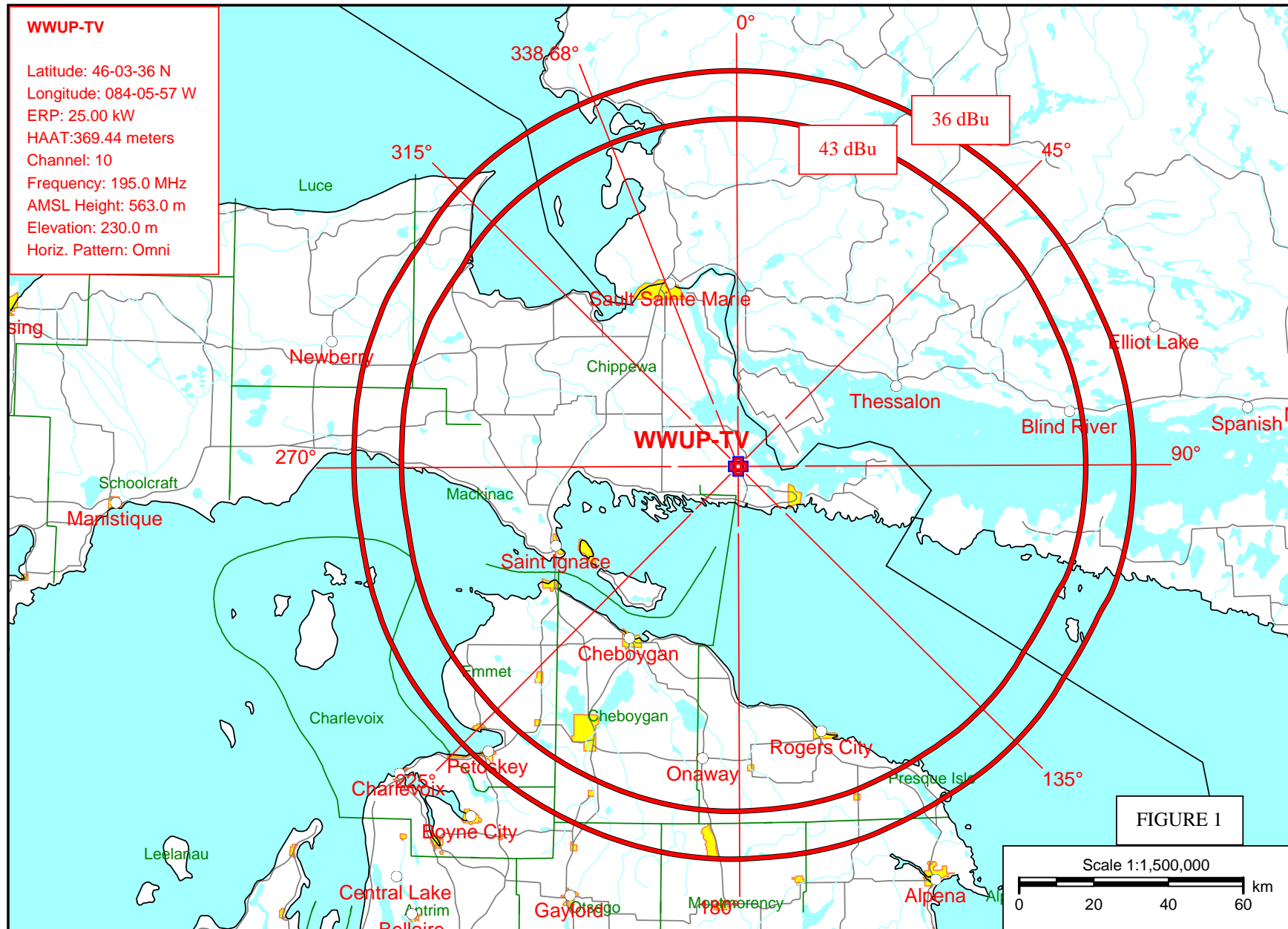
Since WWUP-DT will be using a licensed tower (ASR No. 1002423), for the DTV operation the environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent; therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 25 kW and a radiation center of 333 meters above ground level, the proposed Channel 10 DTV operation would have a maximum of 1.9 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of tower assuming an antenna field factor of 0.5 in the downward direction.

The Commission's guidelines for TV Channel 10 are 1,000 $\mu\text{W}/\text{cm}^2$ for the occupational/controlled, and 200 $\mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment.

The above analysis indicates that members of the public and personnel working around the WWUP-DT tower would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, WWUP-DT has established procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.



COMPUTED CONTOURS FOR THE PROPOSED DTV OPERATION OF WWUP-TV, SAULT STE. MARIE, MICHIGAN