

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554

In re:)
)
Gray Television Licensee, LLC)
)
Petition for Rulemaking to Amend)
the DTV Table of Allotments for)
Station WEAU-TV, Eau Claire, Wisconsin)
(Facility 7893))

MB Docket No. _____

Rulemaking No. _____

FILED/ACCEPTED

MAY 13 2011

To: Office of the Secretary
Attn: Chief, Media Bureau

Federal Communications Commission
Office of the Secretary

PETITION FOR RULEMAKING

Gray Television Licensee, LLC (“Gray”), licensee of Station WEAU-TV (“WEAU”), Eau Claire, Wisconsin, by counsel, hereby requests an amendment of the post-transition DTV Table of Allotments (the “DTV Table”)¹ to change WEAU’s digital allotment from VHF Channel 13 to UHF Channel 38 at Eau Claire, Wisconsin, with the technical parameters as set forth in the attached Engineering Statement.

Since the March 22, 2011 collapse of the tower holding its main antenna, WEAU has been silent.² Gray is moving quickly to rebuild the tower in order to resume WEAU’s full power operations. In addition to rebuilding WEAU’s tower, Gray must also replace the station’s transmission equipment—including the antenna—that was destroyed in the tower’s collapse. WEAU therefore requests this channel substitution so that it can leverage this significant, unplanned cost in a way that best serves the public interest. Specifically, Gray submits that moving WEAU to a UHF channel would benefit the public by resolving significant over-the-air reception problems in certain portions of

¹ 47 C.F.R. §73.622(i).

² Notification of Silent Status (FCC File No. BLSTA-20110331ABR). WEAU’s programming is being carried temporarily on a multicast stream of WQOW(DT).

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WEAU's predicted service area and by improving the station's ability to provide service to viewers using hand-held and mobile devices in the future. WEAU requests expedited action on this petition so that it can quickly order the necessary equipment to rebuild its broadcast facility and resume full power operations.

Since the end of the digital transition, viewers in pockets of WEAU's service area have reported difficulty receiving the station's digital signal on Channel 13. The problems with indoor reception of digital VHF channels have been well documented through the real-world experiences of many stations. On balance, when using an indoor antenna, over-the-air viewers receive DTV signals better on UHF channels than on VHF channels. Since the DTV transition, WEAU's staff have worked diligently with viewers to resolve reception complaints; however, the only long-term solution is to move to a UHF channel.

The attached Engineering Statement of Chesapeake RF Consultants, LLC³ sets forth in detail the specifications of WEAU's proposal to modify the DTV Table to substitute Channel 38 for Channel 13 at Eau Claire, Wisconsin. The Engineering Statement demonstrates that the proposed Channel 38 facility will provide full principal community coverage to Eau Claire, Wisconsin and that this proposal complies with all relevant technical requirements for amendment of the post-transition DTV Table. As further explained in the Engineering Statement, while the WEAU transmitter site is located within the zone that requires coordination with Canada, it is believed that this allotment complies with the U.S. – Canada allotment procedures.

The proposed Channel 38 facility specifies a non-directional antenna and 1000kW power level. This proposed power level exceeds the maximum allowed for the proposed

³ See Exhibit 1 ("Engineering Statement").

HAAT. However, this the power level complies with Section 73.622(f)(5), which permits the maximum power level to be exceed in order to provide the same geographic coverage area as the largest station within the market. The proposed facility provides a 103.2 percent match to the licensed WEAU Channel 13 facility and increases the net total population serviced by 28,352 persons.

Moreover, UHF channels provide better coverage for hand-held and mobile devices in the future. While WEAU's primary concern is building a facility that brings the best service to its viewers and returns service to those viewers lost after the digital transition, the station would embrace the opportunity to enhance its ability to bring over-the-air mobile video to Eau Claire. Accordingly, WEAU requests the Commission authorize it to rebuild its facilities on Channel 38, a UHF channel that would provide the best service to its over-the-air service to its viewers.

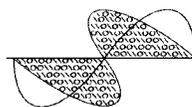
For the foregoing reasons, the proposed amendment to the DTV Table of Allotments will clearly serve the public interest. Gray therefore respectfully requests that the Commission amend the DTV Table to substitute Channel 38 for Channel 13 at Eau Claire, Wisconsin using the specifications set forth in the attached Engineering Statement.

Respectfully submitted,
GRAY TELEVISION LICENSEE, LLC



Joan Stewart
Wiley Rein LLP
1776 K Street NW
Washington DC 20006
202.719.7000
Its Attorneys

Dated: May 13, 2011



Engineering Statement

Digital Television Channel Change

prepared for

Gray Television Licensee, LLC

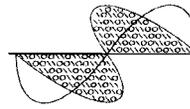
WEAU-TV Eau Claire, WI

Facility ID 7893

Ch. 38 1000 kW 616 m

This engineering statement has been prepared on behalf of *Gray Television Licensee, LLC* (“*Gray*”), licensee of WEAU-TV (Facility ID 7893, Eau Claire, WI) in support of a *Petition for Rulemaking* to change the WEAU-TV digital television post-transition channel assignment and related technical parameters. WEAU-TV’s pre-transition operations were on analog VHF Channel 13 and digital UHF Channel 39. Post-transition, WEAU-TV is licensed to operate as digital on VHF Channel 13 as established in Appendix B of the Seventh Report and Order in MB Docket 87-268 (license file number BLCDDT-20090622ACW). *Gray* herein requests a channel substitution for WEAU-TV.

The tower structure supporting the WEAU-TV main antenna collapsed on March 22, 2011 during an ice storm and WEAU-TV is presently silent. The FCC was notified of the silent status (BLSTA-20110331ABR) and advised that WEAU-TV’s programming is temporarily being carried on a multicast stream of WQOW(DT), (Ch. 15, Eau Claire, WI). *Gray* intends to rebuild the WEAU-TV tower structure at Fairchild, WI, the location of the tower collapse. Meanwhile, to resume operation on Channel 13, *Gray* is making expedited arrangements to install an emergency antenna on a separate tower located behind the WEAU-TV studio facility at Eau Claire, WI (42.7 km from the licensed site at Fairchild).

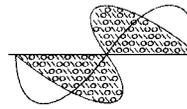


Gray proposes herein to substitute UHF Channel 38 in lieu of the current VHF Channel 13 digital allotment. It is desired to rebuild the main WEAU-TV tower structure and implement a UHF transmission system such that operation on Channel 38 may commence as soon as possible.¹ The channel substitution is intended to aid in recovering viewers that were lost when WEAU-TV ceased analog operation on the transition date.

Since the transition to digital and up to the point of the tower collapse, many viewers continued to experience significant difficulty in receiving WEAU-TV's digital signal as described elsewhere in the *Petition for Rulemaking*. Problems with digital VHF reception by stations in many markets have been widely publicized since the transition date. It has been found that indoor reception is difficult for digital VHF stations such as WEAU-TV due to the longer wavelength signal's inability to readily pass through buildings (the windows are smaller than the wavelength size), the ineffectiveness of many indoor antennas many of which were designed to emphasize the shorter wavelengths for UHF reception, and issues regarding manmade and environmental noise. *Gray* believes that changing to a UHF channel and use of elliptical polarization will substantially restore service and especially improve indoor reception as well as offer better reception for mobile/handheld devices. *Gray's* stations WKYT-TV Lexington, Kentucky and KKTV(DT) Colorado Springs, Colorado have made post-transition channel changes from VHF to UHF² with good success.

¹*Gray* is taking immediate steps to rebuild the tower structure at Fairchild, WI. The tower structure will be designed to support the worst-case load of a Channel 38 top-mount antenna or a Channel 13 top-mount antenna, to allow for operation on Channel 13 should the proposed Channel 38 change not be adopted.

²See MB Docket 09-163 (changed WKYT-TV from Channel 13 to Channel 36) and MM Docket 09-111 (changed KKCO from Channel 10 to Channel 49).



The proposal specifies use of the licensed WEAU-TV site location³ and facilities as summarized in the following.

Present Channel 13 Parameters (Appendix B)

Facility ID	State and City		NTSC	DTV								
				Chan	Chan	ERP (kW)	HAAT (m)	Antenna ID	Latitude (DDMMSS)	Longitude (DDMMSS)	Area (sq km)	Population (thous)
7893	WI	EAU CLAIRE	13	13	22.9	607	74548	44-39-51	90-57-41	43031	858	2

Antenna C/R AMSL: 924 meters

Proposed Channel 38 Parameters

Facility ID	State and City		NTSC	DTV								
				Chan	Chan	ERP (kW)	HAAT (m)	Antenna ID	Latitude (DDMMSS)	Longitude (DDMMSS)	Area (sq km)	Population (thous)
7893	WI	EAU CLAIRE	13	38	1000	616	Non-D	44-39-50	90-57-40	45222	912	0.0

Antenna C/R AMSL: 933 meters

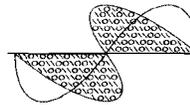
A map is supplied as Figure 1 which depicts the standard predicted coverage contours. This map includes the boundaries of Eau Claire WI, WEAU-TV's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1), as the entire principal community will be encompassed by the 48 dBμ contour.

Figure 2 provides a coverage contour comparison, demonstrating that the channel substitution would not result in any loss area from the digital Channel 13 Appendix B facilities and former analog operations. The proposed WEAU-TV allotment's predicted service population provides a 106.3 percent match of the current Appendix B facility, as detailed in the following table.

Digital Television Population Summary

Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	925,833	940,414
Not affected by terrain losses	875,916	912,045
Lost to all interference	17,858	349
Net DTV Service	858,058	911,696
Match of Appendix B	---	106.25%

³Updated geographic coordinates (one-second change in Latitude, one-second change in Longitude) are specified in order to conform to the WEAU-TV tower's Antenna Structure Registration data (#1033664).



Moreover, the proposed Channel 38 allotment's service population of 911,696 persons provides a 103.2 percent match of the 883,344 service population achieved by the licensed WEAU-TV Channel 13 facility.

A detailed interference study per OET Bulletin 69⁴ shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby stations. The interference study output report is provided as Table 1. Protection requirements towards authorized Class A stations are also satisfied.

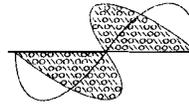
The proposed 1000 kW ERP exceeds the maximum allowed for the proposed antenna HAAT of 616 meters currently permitted by §73.622(f)(8)(i). Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. The total area within the proposed Channel 38 WEAU-TV 41 dB μ contour is 46,359 square kilometers, which does not exceed the 47,721 square kilometers within the licensed WEAU-TV digital Channel 13 facility (BLCDT-20090622ACW) 36 dB μ service contour. Thus, the ERP specified herein is in compliance with §73.622(f)(5) of the Commission's Rules.

The WEAU-TV transmitter site is located 377 km from the U.S. - Canadian border and is thus within the 400 km coordination zone that triggers international coordination. Figure 3 supplies a depiction of a "Step 2" contour protection analysis of the proposed Channel 38 allotment, based on the procedures stated in the *Letter of Understanding*⁵ regarding digital television along the U.S. - Canadian Border. The closest⁶ Canadian digital allotments on Channel 38 are located over 560 km from the WEAU-TV site, based on CDBS data and the allotments contained within Table A as

⁴FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

⁵*Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border*, September 2000.

⁶CHCH-TV-5 (Ch. 38, Sault Ste Marie, ON, 0.25 kW ERP at 112.5 m HAAT) is 563.5 km from WEAU-TV and assumed to be Class B having a protected radius of 45 km. A vacant allotment on Ch. 38 (Kenora, ON, 6 kW ERP at 150 m HAAT) is 626.9 km from WEAU-TV and assumed to be Class C having a protected radius of 70 km.



referenced in the U.S. - Canada Post-Transition Allotment Plan letter exchange made effective December 15, 2008. As shown on Figure 3, the worst-case interfering contour from the proposed WEAU-TV Channel 38 allotment is far from overlap to the protected service radius of the two nearest identifiable Channel 38 Canadian allotments. The U.S. - Canada border is sufficiently distant to WEAU-TV such that Canadian allotments first adjacent to the proposed Channel 38 need not be considered. Thus it is believed that the proposal complies with the U.S. - Canada allotment procedures.

Certification

The undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief.

Joseph M. Davis, P.E.
April 27, 2011

Chesapeake RF Consultants, LLC
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Yorktown, VA 23692
703-650-9600

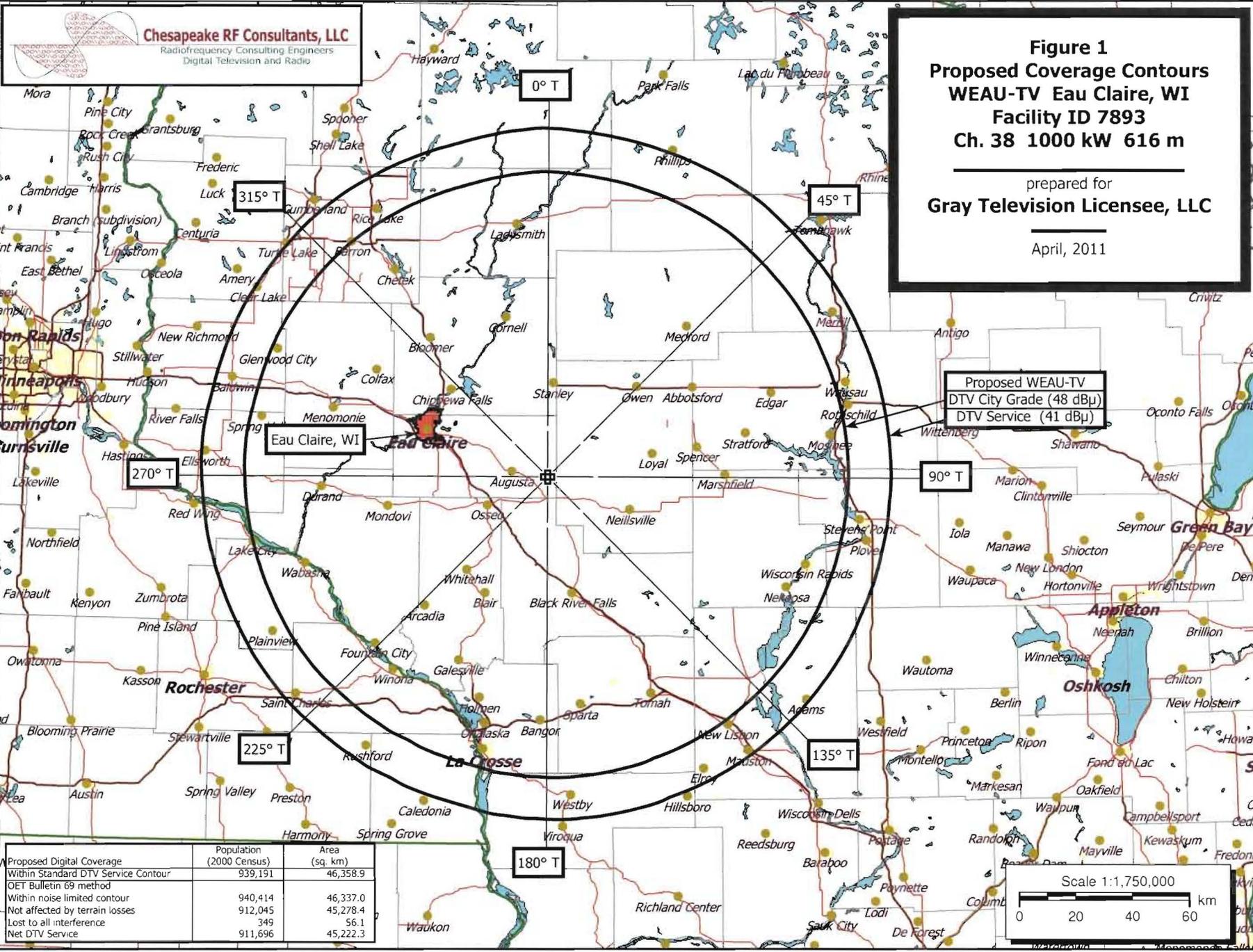
List of Attachments

- | | |
|----------|------------------------------------|
| Figure 1 | Proposed Coverage Contours |
| Figure 2 | Coverage Contour Comparison |
| Figure 3 | Protection of Canada Allotments |
| Table 1 | OET Bulletin 69 Interference Study |

Figure 1
Proposed Coverage Contours
WEAU-TV Eau Claire, WI
Facility ID 7893
Ch. 38 1000 kW 616 m

prepared for
Gray Television Licensee, LLC

April, 2011



Proposed Digital Coverage	Population (2000 Census)	Area (sq. km)
Within Standard DTV Service Contour	939,191	46,358.9
OET Bulletin 69 method		
Within noise limited contour	940,414	46,337.0
Not affected by terrain losses	912,045	45,278.4
Lost to all interference	349	56.1
Net DTV Service	911,696	45,222.3

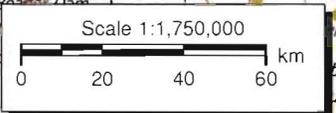
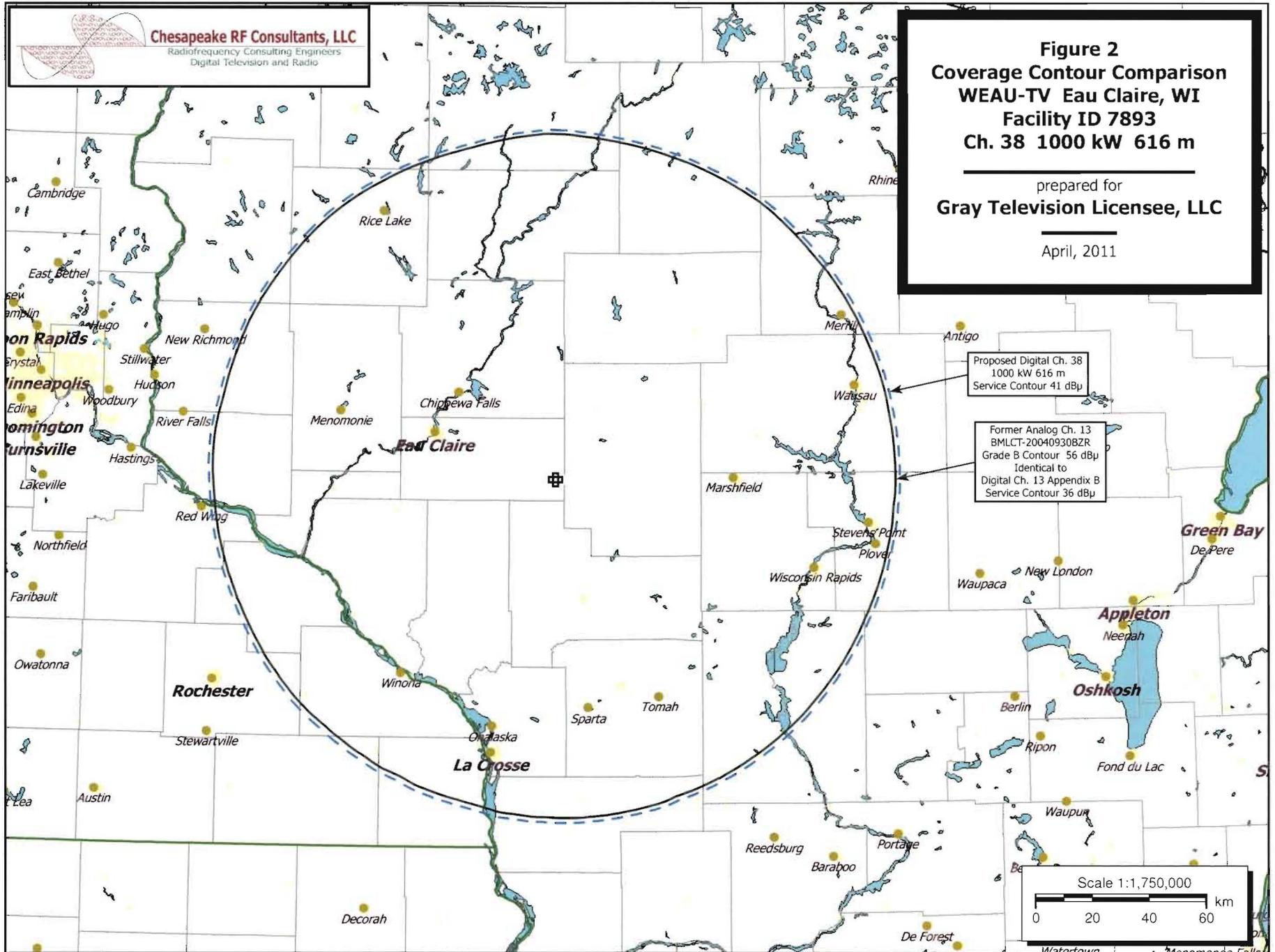


Figure 2
Coverage Contour Comparison
WEAU-TV Eau Claire, WI
Facility ID 7893
Ch. 38 1000 kW 616 m

prepared for
Gray Television Licensee, LLC

April, 2011



Chesapeake RF Consultants, LLC
 Radiofrequency Consulting Engineers
 Digital Television and Radio

Figure 3
Protection of Canada Allotments
WEAU-TV Eau Claire, WI
Facility ID 7893
Ch. 38 1000 kW 616 m

prepared for
Gray Television Licensee, LLC

April, 2011

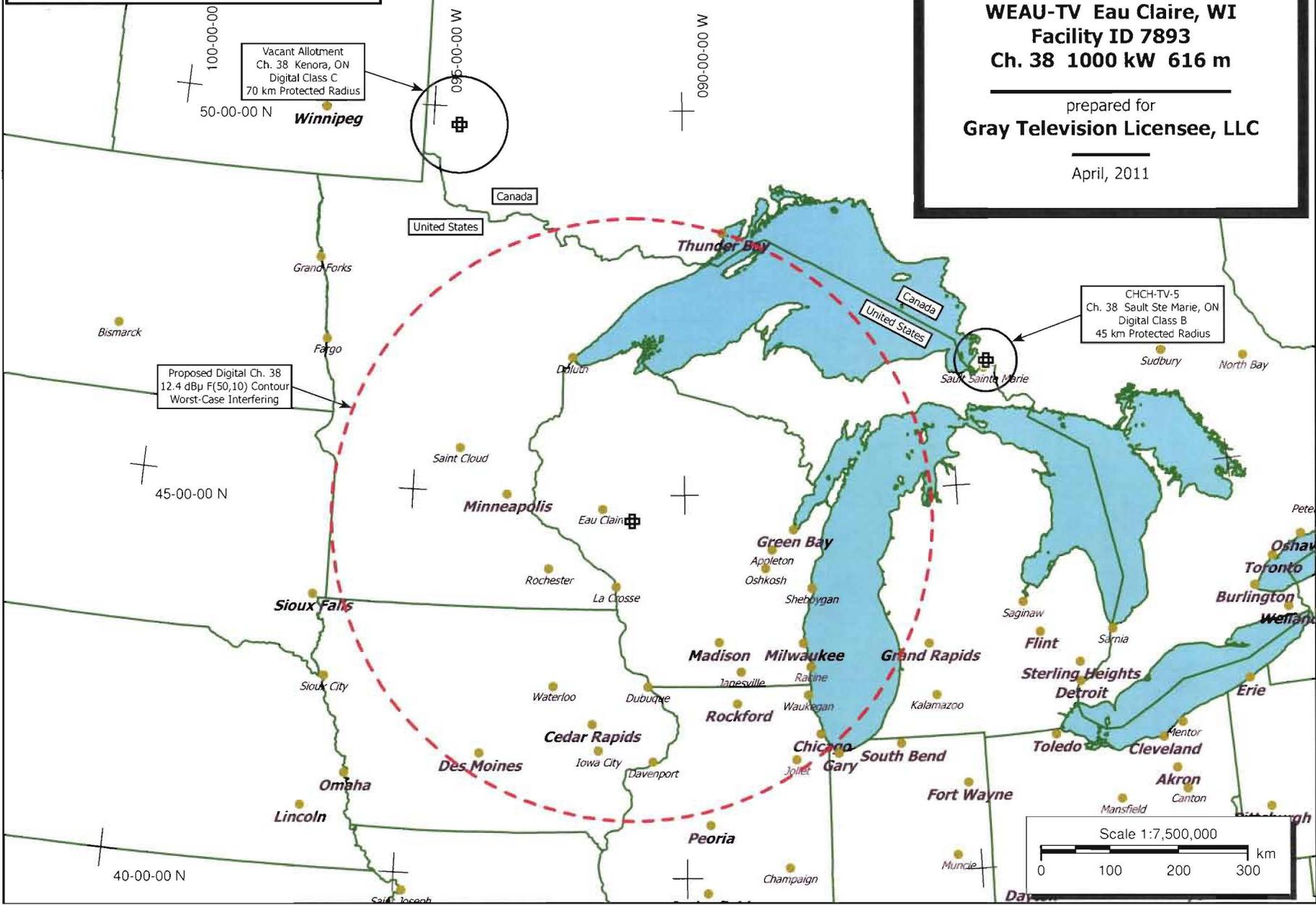


Table 1 WEAU-TV OET Bulletin 69 Interference Study

(worst-case scenarios shown page 1 of 4)

TW Census data selected 2000
 Data Base Selected
 /space/software/cdbs/pt tvdb.sff
 TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-25-2011 Time: 18:01:16

Record Selected for Analysis

WEAU-TV USERRECORD-01 EAU CLAIRE WI US
 Channel 38 ERP 1000.0 kW HAAT 616.0 m RCAMSL 00933 m
 Latitude 044-39-50 Longitude 0090-57-40
 Status APP Zone 2 Border Site number: 01
 Last update Cutoff date Docket

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) does not meet maximum height/power limits
 Channel 38 ERP = 1000.00 HAAT = 616.

Site number	1				
Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)		
0.0	1000.000	631.5	122.3		
45.0	1000.000	620.0	121.7		
90.0	1000.000	608.4	121.1		
135.0	1000.000	610.5	121.2		
180.0	1000.000	596.2	120.4		
225.0	1000.000	595.6	120.3		
270.0	1000.000	625.7	122.0		
315.0	1000.000	641.1	122.9		

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap
 to Class A stations from site # 01

Class A Evaluation Complete

Checks to Site Number 01

- 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 = 377.0km

Table 1 WEAU-TV OET Bulletin 69 Interference Study

(worst-case scenarios shown page 2 of 4)

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

 Start of Interference Analysis

Channel	Call	City/State	ARN
38	WEAU-TV	EAU CLAIRE WI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
23	KQEG-CA	LA CRESCENT MN	105.3	LIC	BLTTA	20040602ABA
38	WGBO-DT	JOLIET IL	409.1	CP MOD	BMPCDT	20080618AEI
38	WGBO-DT	JOLIET IL	409.1	LIC	BLCDT	20090618ACD
38	WQAD-TV	MOLINE IL	375.5	LIC	BLCDT	20031014AEO

#####

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	KQEG-CA	LA CRESCENT MN	BLTTA	-20040602ABA

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	WQOW	EAU CLAIRE WI	117.7	CP MOD	BMPCDT	-20041001AOM
20	KSMQ-TV	AUSTIN MN	99.4	LIC	BLEDT	-20081223AAK
23	KCWI-TV	AMES IA	284.9	LIC	BLCDT	-20090612AIO
23	WQPT-TV	MOLINE IL	281.0	LIC	BLEDT	-20030702AAR
23	KTCI-TV	ST. PAUL MN	205.5	CP MOD	BMPEDT	-20100225ABK
23	KTCI-DR	ST. PAUL MN	205.5	APP	BPRM	-20090424ADI
23	KTCI-TV	ST. PAUL MN	205.5	APP	BPEDT	-20100505AHS
23	WBAY-TV	GREEN BAY WI	273.2	LIC	BMLCDT	-20040723ADG
24	K24JA-D	WINONA MN	33.1	CP	BNPDTL	-20090825BYM
30	WHLA-TV	LA CROSSE WI	8.5	LIC	BMLEDT	-20041013AAL
38	WEAU-TV	EAU CLAIRE WI	105.3	APP	USERRECORD-01	

Proposed station is beyond the site to
 nearest cell evaluation distance

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
38	WGBO-DT	JOLIET IL	BMPCDT	-20080618AEI

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
38	WQAD-TV	MOLINE IL	238.2	LIC	BLCDT	-20031014AEO
38	WKMJ-TV	LOUISVILLE KY	421.0	LIC	BLEDT	-20030410AAK
38	WSYM-TV	LANSING MI	252.7	LIC	BLCDT	-20061107ADX
39	WACE	PEORIA IL	213.9	CP	BPCDT	-20080620AFR
39	WACE	PEORIA IL	213.9	LIC	BLCDT	-20070801EQU

Table 1 WEAU-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 3 of 4)

38 WEAU-TV EAU CLAIRE WI 409.1 APP USERRECORD-01
Proposal causes no interference

#####

Analysis of Interference to Affected Station 3

Analysis of current record
Channel Call City/State Application Ref. No.
38 WGBO-DT JOLIET IL BLCDT -20090618ACD

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	WQAD-TV	MOLINE IL	238.2	LIC	BLCDT -20031014AEO
38	WKMJ-TV	LOUISVILLE KY	421.0	LIC	BLEDT -20030410AAK
38	WSYM-TV	LANSING MI	252.7	LIC	BLCDT -20061107ADX
39	WAOE	PEORIA IL	213.9	CP	BPCDT -20080620AFR
39	WAOE	PEORIA IL	213.9	LIC	BLCDT -20070801EOU
38	WEAU-TV	EAU CLAIRE WI	409.1	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 4

Analysis of current record
Channel Call City/State Application Ref. No.
38 WQAD-TV MOLINE IL BLCDT -20031014AEO

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	WGBO-DT	JOLIET IL	238.2	CP MOD	BMPCDT -20080618AEI
38	WGBO-DT	JOLIET IL	238.2	LIC	BLCDT -20090618ACD
39	WAOE	PEORIA IL	103.1	CP	BPCDT -20080620AFR
39	WAOE	PEORIA IL	103.1	LIC	BLCDT -20070801EOU
38	WEAU-TV	EAU CLAIRE WI	375.5	APP	USERRECORD-01

Total scenarios = 4

Result key: 1
Scenario 1 Affected station 4
Before Analysis

Results for: 38A IL MOLINE BLCDT 20031014AEO LIC
HAAT 334.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1080059	31437.1
not affected by terrain losses	1069235	31209.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	149196	784.4
lost to ATV IX only	149196	784.4
lost to all IX	149196	784.4

Potential Interfering Stations Included in above Scenario 1

38A IL JOLIET	BMPCDT	20080618AEI	CP
39A IL PEORIA	BPCDT	20080620AFR	CP

After Analysis

Table 1 WEAU-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 4 of 4)

Results for: 38A IL MOLINE BLCDT 20031014AEO LIC
HAAT 334.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1080059	31437.1
not affected by terrain losses	1069235	31209.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	149394	792.4
lost to ATV IX only	149394	792.4
lost to all IX	149394	792.4

Potential Interfering Stations Included in above Scenario 1

38A IL JOLIET	BMPCDT	20080618AEI	CP
39A IL PEORIA	BPCDT	20080620AFR	CP
38A WI EAU CLAIRE	USERRECORD01		APP

Percent new IX = 0.0215%
Worst case new IX 0.0215% Scenario 1

#####

Analysis of Interference to Affected Station 5

Analysis of current record
Channel Call City/State Application Ref. No.
38 WEAU-TV EAU CLAIRE WI USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	WGBO-DT	JOLIET IL	409.1	CP MOD	BMPCDT -20080618AEI
38	WGBO-DT	JOLIET IL	409.1	LIC	BLCDT -20090618ACD
38	WQAD-TV	MOLINE IL	375.5	LIC	BLCDT -20031014AEO

Total scenarios = 1

Result key: 5
Scenario 1 Affected station 5
Before Analysis

Results for: 38A WI EAU CLAIRE USERRECORD01 APP
HAAT 616.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	940414	46337.0
not affected by terrain losses	912045	45278.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	349	56.1
lost to ATV IX only	349	56.1
lost to all IX	349	56.1

Potential Interfering Stations Included in above Scenario 1

38A IL MOLINE	BLCDT	20031014AEO	LIC
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