

Highlands, North Carolina
Application for Minor Modification of FM Translator W269AY
On Channel 277
by
Western North Carolina Public Radio, Inc.

Exhibit 13
Interference Analysis

July 2015

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Timothy L. Warner, Inc.
Post Office Box 8045
Asheville, North Carolina 28814-8045
(828) 258-1238
twarner@tlwinc.net

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Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Exhibit 13, Interference Analysis, for Western North Carolina Public Radio, Inc., and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



Timothy L. Warner, P.E.
Post Office Box 8045
Asheville, North Carolina 28801
(828) 258-1238
twarner@tlwinc.net
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Narrative

This Exhibit supports a minor modification application for FM translator W269AY, Highlands, North Carolina. The modifications proposed are a change of frequency and change of antenna.

This application is being filed as a displacement application because pending construction of WGOG, Walhalla, South Carolina, co-channel with authorized facilities that prevent continuation of the present operation. The licensee of WGOG has informed Western North Carolina Public Radio, Inc. that operation of the co-channel facilities will commence on August 1, 2015. Exhibit 1 supports a waiver request to process this application as a minor modification.

The overlap between the licensed and proposed coverage contours qualify for treatment as a minor modification as shown in Figure 1. Allocation details are provided in this exhibit. This proposal complies fully with the requirements of 74 C.F.R. §74.1204(a).

The proposed modified facilities create no mutual exclusivities as shown in the allocation table in this exhibit.

There is no change of site proposed. The site remains in Jackson County, North Carolina. Jackson County is a rural area which is not part of any Arbitron Metro area. This proposal is not a move-in to any urbanized area.

Site Details

The proposed site is the existing mounting pipe on a water tank. The change of frequency requires a new antenna. An omnidirectional antenna is proposed.

Allocations

This application proposes service to Highlands, North Carolina, on channel 277. An updated Table 1: Allocations is included in this exhibit with a list of the stations, construction permits, allocations, and applications studied. All are protected by this application. The allocations table was prepared using the NGDC 30 arcsecond terrain database which is described below.

Source of Data

Transmitter location, effective radiated power, directional antenna pattern, and elevation data are extracted from the Commission's CDBS. All contours for existing and proposed facilities are calculated using height above average terrain calculated at one degree horizontal increments.

The contours were evaluated using terrain extracted from the NGDC 30 arcsecond terrain database, formatted by V-Soft Communications to match the database in use at the Commission.

All population data is from 2010 U.S. Census PL data files. Population is counted by considering the location of the centroid of each census block. The data for each block is counted if it falls within the area being counted.

Television Channel 6 Protection

There are no television channel 6 stations requiring protection. This application proposes a channel which is not subject to television channel 6 separation requirements.

Table 1: Allocations

Allocations Study												
Western North Carolina Public Radio												
REFERENCE	CH# 277D - 103.3 MHz, Pwr= 0.01 kw, HAAT= 358.2 M, COR= 1298 M								DISPLAY DATES			
35 02 21.0 N.	Average Protected F(50-50)= 11.0 km								DATA 07-28-15			
83 13 04.0 W.	Omni-directional								SEARCH 07-28-15			
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)	
278C Knoxville	WIMZ-FM	LIC	CY TN	339.5 159.2	129.97 BMLH19890601KB	36 08 06.0 83 43 29.0	100.000 525	135.6 875	91.1 Midwest Communications, In	-17.6*	21.7	
277C0 Atlanta	WVEE	LIC	C GA	216.1 35.4	175.23 BMLH20080222ADZ	33 45 33.0 84 20 05.0	100.000 310	172.4 594	72.7 Cbs Radio East Inc.	-9.9	58.7	
277A Greer	WRTH	LIC	CX SC	92.3 273.0	98.65 BMLH20150504ACF	34 59 54.0 82 08 17.0	2.700 151	82.0 420	28.0 Caron Broadcasting, Inc.	5.1	33.0	
279D Franklin	W279CS	CP	DV NC	294.4 114.2	36.31 BNPFT20130828AFE	35 10 24.0 83 34 52.0	0.010 666	0.2 1668	14.7 Radio Training Network, In	24.4	20.6	
275D Hazelwood, Etc.	W237AR	CP	DC NC	12.0 192.1	47.97 BMJPFT20130830ALT	35 27 43.0 83 06 26.0	0.125 727	0.3 1852	12.9 western North Carolina Pub	39.3	25.6	
276A Honea Path	WHQA	LIC	C SC	137.6 318.0	92.11 BMLED20150323ABW	34 25 31.0 82 32 26.0	6.000 100	44.5 323	28.8 The Power Foundation	34.5	42.9	
275C3 Clarkesville	WDUN-FM	LIC	ZCN GA	212.2 31.9	72.64 BLH19920304KC	34 29 05.0 83 38 24.0	16.000 126	3.2 502	31.7 Jacobs Media Corporation	56.5	40.2	
280A Easley	WOLI-FM	LIC	CN SC	109.3 289.6	66.89 BLH19860613KC	34 50 21.0 82 31 37.0	6.000 100	2.5 397	24.5 Davidson Media Station wol	52.3	40.8	
274A Murphy	WCNG	LIC	NCN NC	272.7 92.2	71.37 BLH19901119KB	35 04 00.0 83 59 58.0	3.000 72	2.2 641	22.2 Cherokee Broadcasting Co.,	57.8	47.2	
275D Greenville	W275BJ	LIC	DC SC	98.2 278.7	74.41 BLFT20150629ABO	34 56 29.0 82 24 41.0	0.250	1.0 733	24.6 Caron Broadcasting, Inc.	61.6	48.7	
279C3 Maysville	WXKT	LIC	NCX GA	208.9 28.6	83.82 BLH20090918ACK	34 22 39.0 83 39 35.0	4.100 250	3.0 570	33.2 Cox Radio, Inc.	67.7	49.9	
276C2 Etowah	WLLJ	LIC	CN TN	289.7 108.9	140.79 BLH19890814KF	35 27 24.0 84 40 43.0	50.000 150	77.4 418	51.6 Friendship Broadcasting Ll	51.5	71.5	
277L1 Asheville	WSFM-LP	LIC	NC	43.8 224.2	86.13 BLL20150518AAP	35 35 48.0 82 33 31.0	0.100 1	730	51.8 Friends Of Community Radio	54.8		
276D Hendersonville	W276CT	CP	C NC	63.2 243.7	74.57 BNPFT20130830AMD	35 20 19.0 82 29 05.0	0.010 80	7.5 768	5.4 western North Carolina Pub	57.1	56.3	
279D Hendersonville	W279AI	LIC	C NC	64.5 244.9	70.32 BLFT19971204TG	35 18 34.0 82 31 10.0	0.010 262	0.2 967	9.7 Radio Training Network, In	60.0	60.0	
278C3 Greenwood	WZSN	LIC	CN SC	135.9 316.4	135.12 BLH19921130KA	34 09 46.0 82 11 41.0	25.000 100	60.3 264	39.2 Broomfield Broadcasting, I	61.8	75.7	
280A Blue Ridge	WPPL	LIC	DC GA	259.7 79.1	103.71 BLH20000216AAW	34 52 03.0 84 20 02.0	5.500 104	3.3 698	35.0 Fannin County Broadcasting	89.7	68.4	

Terrain database is FCC NGDC 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 adj.

All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

W269AY_m

Proposed

Latitude: 35-02-21 N

Longitude: 083-13-04 W

ERP: 0.01 kW

Channel: 277 103.3 MHz

AMSL Height: 1298.0 m

Elevation: 1291.0 m

Horiz. Pattern: Omni

W269AY

BLFT19970919TF

Latitude: 35-02-21 N

Longitude: 083-13-04 W

ERP: 0.01 kW

Channel: 269 101.7 MHz

AMSL Height: 1298.0 m

Elevation: 1291.0 m

Horiz. Pattern: Omni

W269AY on 103.3

Licensed and Proposed Contours

July 2015

Timothy L. Warner, Inc.

Licensed F(50-50) 60.00 dBu

Proposed F(50-50) 60.00 dBu

W269AY
W269AY_m

Scale 1:250,000

0 3 6 9 km

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Rabun