

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In re New River Community Church	)	
	)	
WYPH-LP, Manchester, Connecticut	)	File No. BLL-20170807AAT
	)	Facility Id. No. 193136
	)	

To: Office of the Secretary  
Attn: Audio Division, Media Bureau

**SUPPLEMENT**

Red Wolf Broadcasting Corporation (“Red Wolf”), licensee of station WDRC-FM, Hartford, Connecticut, hereby supplements its Interference Complaint and other pleadings filed against LPFM station WYPH-LP, Manchester, Connecticut. The purpose of this Supplement is to inform the Commission that WYPH-LP is operating with the wrong antenna and such operation violates Section 73.807(e)(1) of the FCC’s rules. WYPH-LP was granted a second-adjacent waiver to WDRC-FM. This waiver was based on the use of a Nicom BKG-77, 4-bay, half wavelength antenna (the “Nicom Antenna”). However, WYPH-LP installed a Shively model 6812B-2, 2-bay half wavelength antenna (the “Shively Antenna”). As discussed in more detail in the Technical Exhibit of du Triel, Lundin & Rackley, Inc., attached hereto, WYPH-LP’s use of the Shively Antenna causes actual interference to WDRC-FM. This is a serious violation of the FCC’s rules. New River Community Church (“New River”) certified in its construction permit application that WYPH-LP would use the Nicom Antenna to avoid any predicted interference to WDRC-FM. The Commission granted WYPH-LP a permit based on this

certification. However, New River installed the Shively Antenna and has been causing actual interference to WDRC-FM for over three years.<sup>1</sup>

WYPH-LP was ordered off the air on April 23, 2020 because it was causing interference to listeners' reception of WDRC-FM.<sup>2</sup> It now appears that New River knew that it was causing WDRC-FM interference based on its installation of the Shively Antenna. Since then New River has done nothing to resolve this interference or replace the antenna. Rather, New River has attacked Red Wolf and its principal, John Fuller for complaining of interference. For example, in its April 29, 2020 "Response to Interference Complaint and Request to Vacate Cease Operation Order," New River states that "the complaint was fabricated by Red Wolf in bad faith" and accuses Red Wolf of orchestrating "false interference complaints" and asks the FCC to commence an investigation of Red Wolf.<sup>3</sup> In the same pleading New River states that it has "scrupulously complied with all Commission rules governing Low Power FM stations. This is clearly not the case. New River falsely certified that it was going to use the Nicom Antenna but it ended up installing the Shively Antenna, which invalidates the second-adjacent waiver to WDRC-FM. Rather, than admit this key fact, New River wants to blame Red Wolf.

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<sup>1</sup> WYPH-LP also received a second-adjacent waiver to WAQY(FM), Springfield, MA. As noted about in the attached Technical Exhibit, because WYPH-LP is using the Shively Antenna it is also causing interference to WAYQ(FM).

<sup>2</sup> Red Wolf notes that New River has still not filed a silent notification in CDBS indicating that WYPH-LP is silent and the date it went silent.

<sup>3</sup> New River makes similar baseless accusations in its May 26, 2020 "Motion to Strike Opposition to Response," its June 4, 2020 "Reply to Opposition to Motion to Strike," and its September 4, 2020 "Motion to Expedite."

Respectfully submitted,

**RED WOLF BROADCASTING  
CORPORATION**

By: \_\_\_\_\_/s/\_\_\_\_\_  
Scott Woodworth  
Edinger Associates PLLC  
1725 I Street NW, Suite 300  
Washington, DC 20006

October 28, 2020

Its Attorney

TECHNICAL EXHIBIT  
PREPARED ON BEHALF OF RED WOLF BROADCASTING CORPORATION  
IN SUPPORT OF A SUPPLEMENT TO THE  
INTERFERENCE COMPLAINT  
CONCERNING THE OPERATION OF  
LPFM STATION WYPH-LP  
CH 273 (102.5 MHZ), MANCHESTER, CONNECTICUT  
FCC FILE NO. BLL-20170807AAT  
FCC FACILITY ID 193136

This technical exhibit was prepared on behalf of Red Wolf Broadcasting Corporation (“Red Wolf”), licensee of WDRC-FM on channel 275B (102.9 MHz) at Hartford, Connecticut (FCC File No. BLH-20140929AGJ, Facility ID 7718) in support of a supplement to its Interference Complaint filed against LPFM station WYPH-LP on channel 273 (102.5 MHz) at Manchester, Connecticut (“WYPH-LP”), licensed to New River Community Church (FCC File No. 20170807AAT, Facility ID 193136). WYPH-LP was granted a second adjacent channel waiver to WDRC-FM pursuant to the provisions of Section 73.807(e)(1) of the FCC’s rules.<sup>1</sup> The purpose of this Technical Exhibit is demonstrate that WYPH-LP’s licensed operation using the installed Shively model 6812B-2, 2-bay half wavelength (“HW”) spaced antenna does not comply with the waiver provisions of Section 73.807(e)(1) as actual interference is predicted to occur to WDRC-FM in populated areas.

Attachment 1 is a copy of the second adjacent channel waiver request contained in WYPH-LP’s construction permit application for its currently licensed facilities.<sup>2</sup> As indicated, the basis for WYPH-LP’s second adjacent channel waiver to WDRC-FM was use of a Nicom BKG-77, 4-bay, HW antenna to demonstrate that no actual interference would be caused to WDRC-FM using the U/D ratio method<sup>3</sup>. However, as indicated by Attachment 2, which is a copy of WYPH-LP’s application for license for its current facilities<sup>4</sup>, a Shively model 6812B-2, 2-bay, HW spaced antenna (“Shively antenna”) was actually installed.

Therefore, an interference analysis to WDRC-FM was conducted based on the U/D ratio method using the installed Shively antenna. Specifically, the calculated WDRC-FM F(50,50) field strength at the WYPH-LP site is 69 dBu. Using the 40 dB U/D ratio contained in Section 73.1204 of the FCC rules, the proposed WYPH-LP F(50,10) interfering signal is 109 dBu. Figure 1 contains a tabulation and graph of the proposed 109 dBu signal using the vertical plane relative field pattern for the installed Shively antenna (see Figure 2) and assuming free-space propagation. As shown on Figure 1, the interfering 109 dBu signal will reach ground level within the area from approximately 189 feet to 723 feet from the

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<sup>1</sup> See FCC File No. BPH-20160128BFG at pages 3 and 4.

<sup>2</sup> *Id.*

<sup>3</sup> See *Living Way Ministries, Inc.*, 17 FCC Rcd 17054, 17056 (2002).

<sup>4</sup> See BLL-20170807AAT.

WYPH-LP antenna. Figure 3 is a Google Earth map depicting the WDRC-FM interference area which, as indicated, contains houses and occupied buildings, i.e. populated area.<sup>5</sup>

Conclusion

As demonstrated above, WYPH-LP's licensed operation using the installed Shively antenna does not comply with the waiver provisions of Section 73.807(e)(1) as actual interference is predicted to occur to WDRC-FM in populated areas.

I hereby declare under penalty of perjury that the forgoing is true and correct to the best of my personal knowledge and belief.



W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
5120 Station Way  
Sarasota, Florida 34233-3221  
(941) 329-6000  
JEFF@DLR.COM

October 22, 2020

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<sup>5</sup> WYPH-LP's second adjacent channel waiver request also included a waiver to WAQY on second adjacent channel 271B (102.9 MHz) at Springfield, Massachusetts (FCC File No. BMLH-19930514KA, Facility ID 58551). As the calculated WAQY F(50,50) field strength at the WYPH-LP site is also 69 dBu (i.e. the same as WDRC-FM), the herein interference showing to WDRC-FM is also applicable to WAQY.

**WAIVER OF §73.807(a) REQUEST**  
**SHORT-SPACED SECOND ADJACENT CHANNEL**

WYPH-LP  
Manchester, Connecticut  
Channel 273L1 (102.5 MHz)

The proposed modification will keep the proposed station to be second-adjacent channel short-spaced stations WAQY, Springfield, Massachusetts (Facility ID #58551) and WDRC-FM, Hartford, Connecticut (Facility ID #7718).

WAQY operates on channel 271B with 17 kW at 238 meters height above average terrain (HAAT) into a non-directional antenna. WDRC-FM operates on channel 275B with 19.5 kW at 247 meters height above average terrain into a directional antenna with a field value of 1.000 in the direction of the proposed LPFM site from WDRC-FM (thus, the entire 19.5 kW).

WAQY places a 69.0 dBu field strength at the proposed LPFM site and WDRC-FM places a 69.1 dBu field strength at the proposed LPFM site. When further evaluating potential interference, we examine the station with the weaker field strength at the proposed LPFM station which in this case is WAQY.

Using the U/D method<sup>1</sup>, the proposed LPFM station is predicted to produce an undesired interference overlap in respect to WAQY to the proposed LPFM station's 109.0 dBu interference contour ("overlap zone"). At 100 watts ERP, the overlap zone extends to 249 meters from the radiation center.

To address interference to listeners and potential listeners of both WAQY and WDRC-FM, the applicant proposes to operate using a 4-bay Nicom BKG-77 circularly polarized antenna at half-wave spacing. Per the manufacturer's specifications, at 49 meters above ground level, the 15 degree depression angle will place a 108.54 dBu field strength at 2 meters above ground level. Interference will not reach any point lower than 4.4 meters (14.5 feet) above ground level. There are no structures higher than 2 stories within 249 meters of the proposed site.

Based on these findings, the proposed modified LPFM station will not create any interference to listeners or potential listeners of WAQY and WDRC-FM. New River Community Church is requesting a waiver of §73.807(a) in respect to second-adjacent channel short-spaced stations WAQY, Springfield, Massachusetts and WDRC-FM, Hartford, Connecticut.

Prepared by  
Michelle Bradley  
REC Broadcast Services  
January 28, 2016

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<sup>1</sup> - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).

## Attachment 2

Page 1

Federal Communications Commission Washington, D.C. 20554	Approved by OMB 3060-0938 (August 2000)	FOR FCC USE ONLY
<b>FCC 319</b>		
<b>APPLICATION FOR A LOW POWER FM BROADCAST STATION LICENSE</b>		FOR COMMISSION USE ONLY FILE NO. BLL - 20170807AAT
Read INSTRUCTIONS Before Filling Out Form		

**Section I - General Information**

1.	Legal Name of the Applicant NEW RIVER COMMUNITY CHURCH																						
	Mailing Address 314 WOODBRIDGE ST																						
	City MANCHESTER	State or Country (if foreign address) CT	ZIP Code 06042 -																				
	Telephone Number (include area code) 8603289974		E-Mail Address (if available) BILLGRIMMEISEN@GMAIL.COM																				
	FCC Registration Number: 0023021389	Call Sign WYPH-LP	Facility ID Number 193136																				
2.	Contact Representative (if other than Applicant) JOHN O. BROOMALL, SR.		Firm or Company Name CHRISTIAN COMMUNITY BROADCASTERS																				
	Telephone Number (include area code) 7707201037		E-Mail Address (if available) JOHNBROOMALL@YAHOO.COM																				
3.	<b>Station Location:</b>																						
	City MANCHESTER	State CT																					
4.	<b>Program Test Authority (check one)</b>																						
	<input type="radio"/> Application for license to cover construction permit for LPFM subject to successive license term restrictions (47 C.F.R. Section 73.872(d)). Complete <b>Sections II, III, and VI</b> . Stations subject to successive license term restrictions are not eligible for the automatic program test provisions of 47 C.F.R. Section 73.1620(a)(5). Such stations may commence program test operations only upon the receipt of written notification from the Commission. List construction permit numbers and facility IDs for all facilities involved in the applicant's successive license term authorization.																						
	<table border="1"><thead><tr><th>Permit Number</th><th>Facility ID</th></tr></thead><tbody><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr><tr><td>-</td><td></td></tr></tbody></table>			Permit Number	Facility ID	-		-		-		-		-		-		-		-		-	
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	<input type="radio"/> Application for license to cover construction permit for LPFM station subject to special operating conditions that restrict program test authority. <b>Complete Sections II, III, and VI.</b>  Applicants with construction permits that include program test authority conditions, other than those that relate to successive license term conditions, may commence program test operations only upon the receipt of written notification from the Commission.																						
	<input checked="" type="radio"/> Stations operating pursuant to automatic program test authority.																						
5.	<b>Purpose of Application:</b>																						
	<input checked="" type="radio"/> Application for license to cover construction permit for LPFM station. <b>Complete Sections II, III, and VI.</b>																						

## Attachment 2

Page 2

<input checked="" type="radio"/>	Application for modification of transmission parameters of licensed facility (47 C.F.R. Section 73.875(c)). <b>Complete Sections II, IV, and VI.</b>
<input checked="" type="radio"/>	Application for modification of hours of operation for licensed facility pursuant to changes in a time-share agreement (47 C.F.R. Section 73.875(e)). <b>Complete Sections II, and V.</b>
<input checked="" type="radio"/>	Amendment to a pending license application If an amendment, <b>submit as an Exhibit</b> a listing by section and question number the portions of the pending application that are being revised. [Exhibit 1]

## Section II - Legal

1. <b>Certification.</b> Applicant certifies that it has answered each question in this application based on its review of the application instructions and worksheets. Applicant further certifies that where it has made an affirmative certification below, this certification constitutes its representation that the application satisfies each of the pertinent standards and criteria set forth in the application instructions.	<input checked="" type="radio"/> Yes <input type="radio"/> No
2. <b>Changed Circumstances.</b> Applicant certifies that, apart from changes already reported, no cause or circumstance has arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application now being incorrect.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 2]
3. <b>Anti-Drug Abuse Act Certification.</b> Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.	<input checked="" type="radio"/> Yes <input type="radio"/> No
The applicant certifies that the statements in this application are true, complete, and correct to the best of its knowledge and belief, and are made in good faith. The applicant acknowledges that all certifications and attached Exhibits are considered material representations. The applicant hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)	
Typed or Printed Name of Person Signing WILLIAM GRIMMEISEN	Typed or Printed Title of Person Signing PRESIDENT
Signature	Date 08/07/2017

## Section III

## APPLICATION TO COVER A CONSTRUCTION PERMIT.

1. <b>Most recent construction permit file number</b> (starts with the prefix BNPL or BMPL).	BPL-20160128BFG
2. <b>Constructed Facility.</b> The facility was constructed as authorized in the underlying construction permit.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 3]
3. <b>Special Operating Conditions.</b> The facility was constructed in compliance with all special operating conditions, terms, and obligations described in the construction permit.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 4]
4 Complete Section VI.	

## Section VI



## Attachment 2

## ENGINEERING SPECIFICATIONS.

Applicants must list technical specifications accurately. Contradictory data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

## TECH BOX

1.	Effective Radiated Power:	100 watts
2.	Transmitter Power Output:	202 watts
3.	Antenna Data	
	Manufacturer	Model
	SHI	6812B2
	Number of Sections	Spacing Between Sections (wavelength)
		0.5
4.	<b>Transmitter Power Output.</b> The applicant certifies that the operating transmitter power output specified in question 2., above, produces the effective radiated power specified in question 1., above.	
	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 5]	

## Exhibits

## Attachment 5

## Description

TECHNICAL STATEMENT IN SUPPORT OF TPO



# Tom Ray

## Broadcast Consulting, LLC.

377 Chestnut Avenue | New Windsor, NY 12553 | 845-418-5065

### ENGINEERING STATEMENT

I, Thomas R. Ray, III, am a contract/consulting Broadcast Engineer. I am Certified as a Professional Broadcast Engineer by the Society of Broadcast Engineers, and hold FCC General RadioTelephone General Class license PG-017214. My works are a matter of record before the Federal Communications Commission.

On August 3, 2017, I moved the transmitting facility of WYPH-LP, Manchester, CT, to fulfill their outstanding Construction Permit, BPL-20160128BFG.

The transmitter site was constructed utilizing a Shively 6812B-2, 2 bay, half wave spaced antenna with a power gain of 0.71. It was mounted on the tower such that the Center of Radiation is 49 Meters Above Ground Level, as specified on the Construction Permit.

The antenna is fed through 175 feet of Cablewave FLC12-50J cable, with a loss of -1.17 dB at the assigned carrier frequency of 102.5 MHz.

There is also a filter employed at the output of the transmitter to isolate the transmitter from other frequencies in use on the tower. Its loss is -0.4 dB.

Effective Radiated Power is 100 Watts.

Therefore:

$100/.71 = 140.9$  Watts required for Antenna Input Power

Line loss + filter loss:

$-1.17 \text{ dB} + (-0.4 \text{ dB}) = -1.57 \text{ dB}$

Using the equation:  $-1.57 = 10 \text{ Log } (140.9/\text{Power In})$  to get Transmitter Power Output, and solving for Power In:

$\text{Power In} = 140.9/(10^{(-1.57/10)})$

Power Into the transmission line/filter combination from the transmitter is: 202.26 Watts.

Transmitter Power Output required for 100 Watts ERP is 202.26 Watts.

The system is currently operating per CP at 100 Watts Effective Radiated Power at 49 meters and meets the criteria set forth in the Construction Permit.



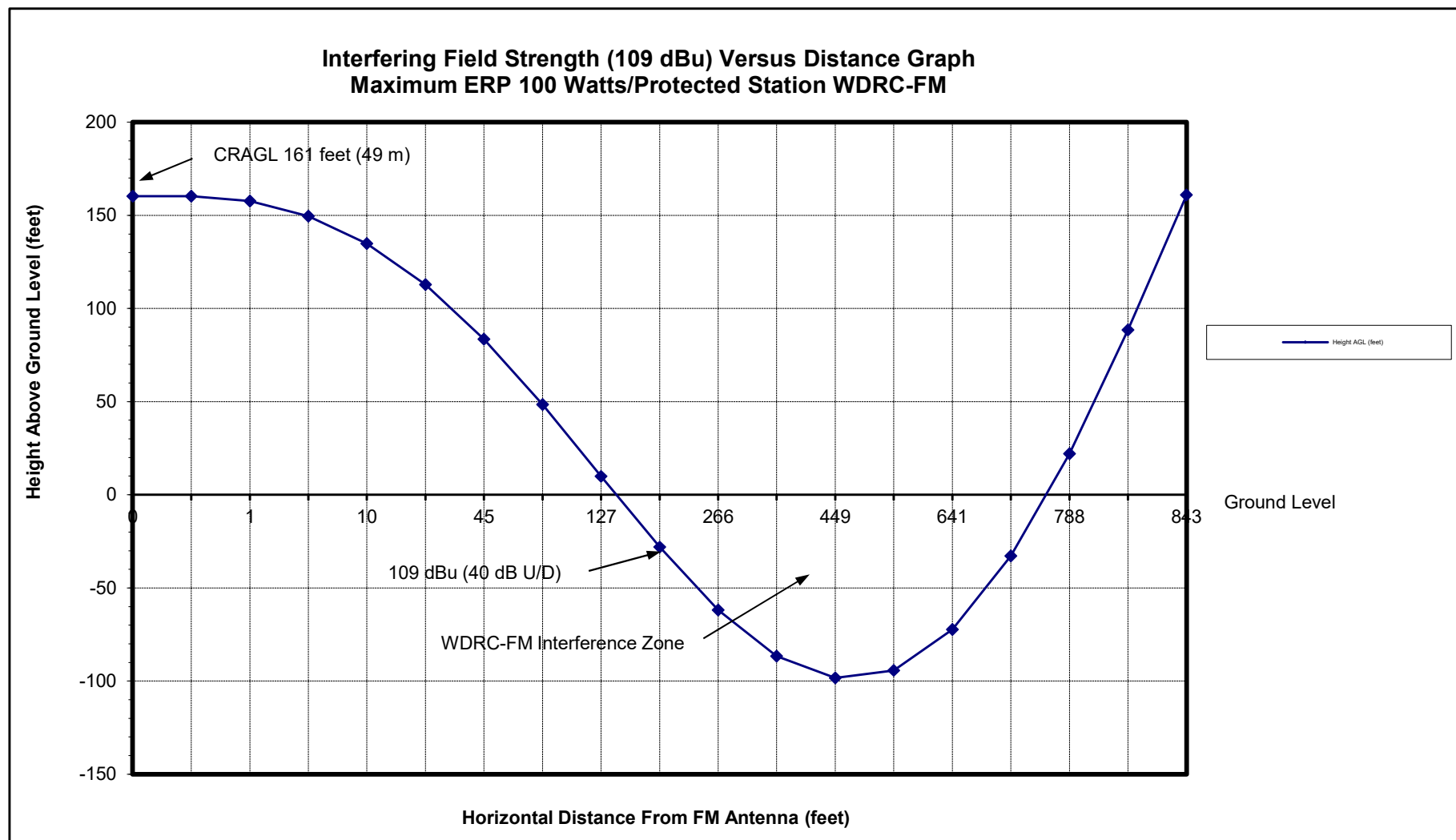
Thomas R. Ray, III CPBE, AMD, DRB

# Interfering Field Strength Vs. Distance Tabulation & Graph

Antenna Shively 6812B-2 2-bay HW  
RCAGL 161 feet ERP 0.1 kW  
Interfering Contour 109 dBu -10 dBk

Depression Angle	VRF	ERP (dBk)	Distance to Contour (m)**	Distance to Contour (feet)**	Horiz. Dist. (feet)	Height AGL (feet)
90	0.001	-70.0	0.3	1	0	160
85	0.001	-70.0	0.3	1	0	160
80	0.004	-58.0	1.0	3	1	158
75	0.014	-47.1	3.6	12	3	150
70	0.033	-39.6	8.5	28	10	135
65	0.063	-34.0	16.2	53	22	113
60	0.106	-29.5	27.2	89	45	84
55	0.163	-25.8	41.9	137	79	48
50	0.234	-22.6	60.1	197	127	10
45	0.317	-20.0	81.5	267	189	-28
40	0.411	-17.7	105.6	347	266	-62
35	0.512	-15.8	131.6	432	354	-87
30	0.615	-14.2	158.1	519	449	-98
25	0.716	-12.9	184.0	604	547	-94
20	0.809	-11.8	207.9	682	641	-72
15	0.888	-11.0	228.3	749	723	-33
10	0.949	-10.5	243.9	800	788	22
5	0.987	-10.1	253.7	832	829	88
0	1.000	-10.0	257.0	843	843	161

\*\*Free Space Field Equation= Dist. (km)=LOG-1((107.2+P(DBK)-FS)/20)



Antenna Mfg.: Shively Labs  
Antenna Type: 6812-2-SS

Date: 11/23/2011

Station: none

Beam Tilt 0

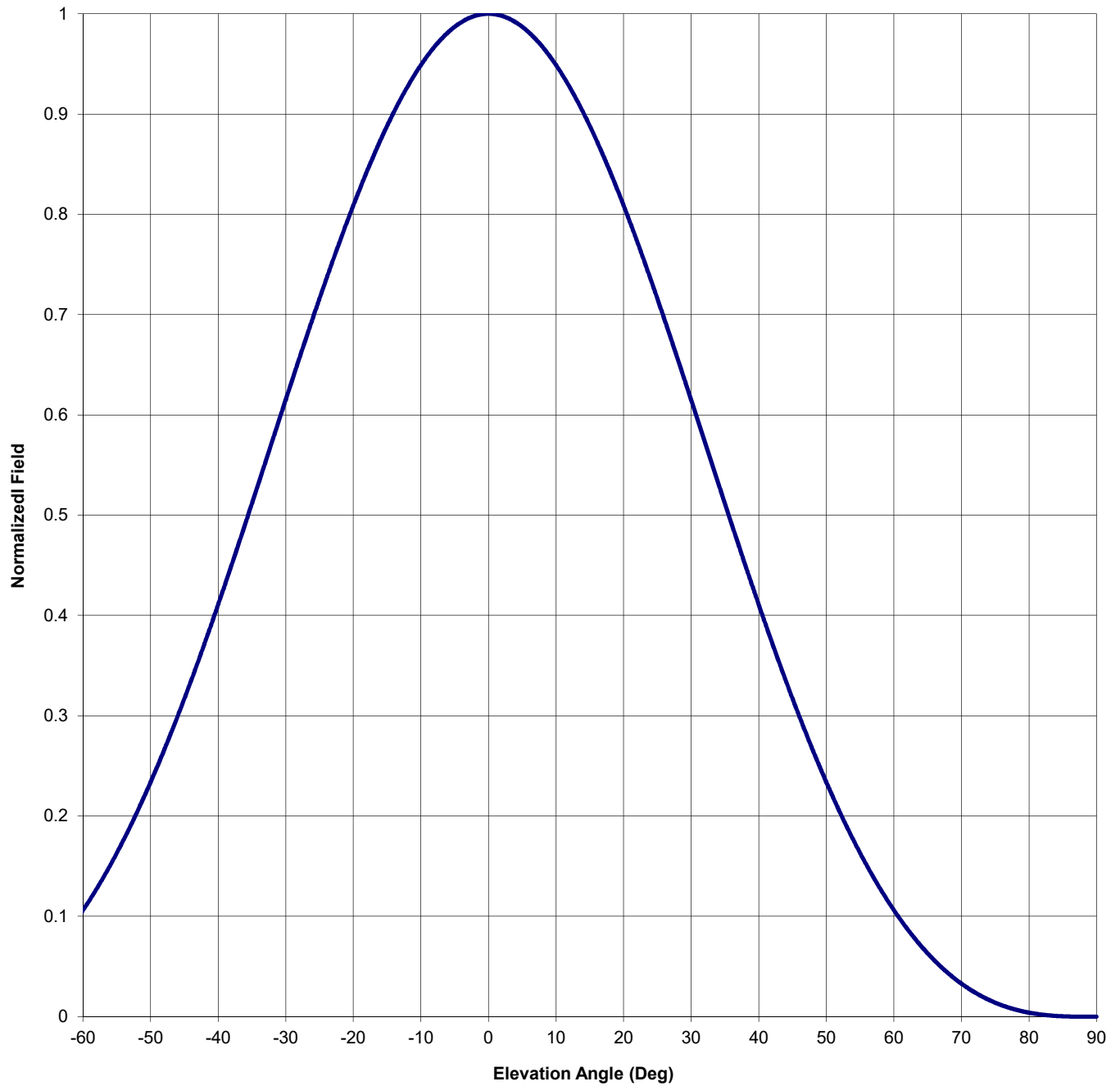
Frequency: 93.1

Gain (Max) 0.700 -1.550 dB

Channel #: 226

Gain (Horizon) 0.700 -1.550 dB

Figure: 3



Antenna Mfg.: Shively Labs  
Antenna Type: 6812-2-SS  
Station: none  
Frequency: 93.1  
Channel #: 226  
Figure: 3

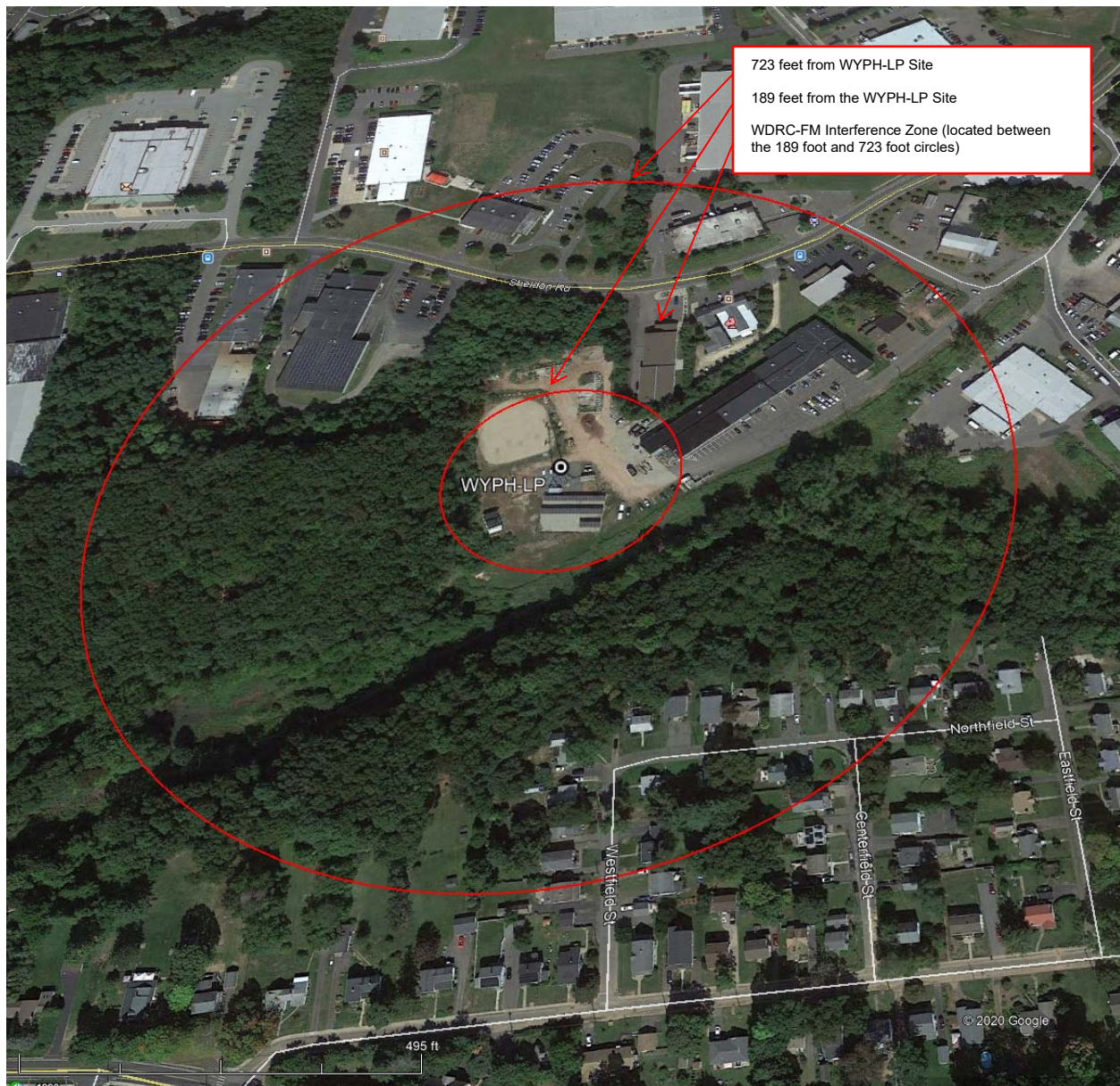
Date: 11/23/2011

Beam Tilt 0  
Gain (Max) 0.700 -1.550 dB  
Gain (Horizon) 0.700 -1.550 dB

Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field
-90	0.000	-44	0.335	0	1.000	46	0.300
-89	0.000	-43	0.353	1	0.999	47	0.282
-88	0.000	-42	0.372	2	0.998	48	0.266
-87	0.000	-41	0.391	3	0.995	49	0.249
-86	0.000	-40	0.411	4	0.992	50	0.234
-85	0.000	-39	0.431	5	0.987	51	0.219
-84	0.001	-38	0.451	6	0.981	52	0.204
-83	0.001	-37	0.471	7	0.975	53	0.190
-82	0.002	-36	0.491	8	0.967	54	0.176
-81	0.003	-35	0.512	9	0.958	55	0.163
-80	0.004	-34	0.532	10	0.949	56	0.151
-79	0.005	-33	0.553	11	0.938	57	0.139
-78	0.007	-32	0.574	12	0.927	58	0.127
-77	0.009	-31	0.594	13	0.915	59	0.116
-76	0.011	-30	0.615	14	0.902	60	0.106
-75	0.014	-29	0.636	15	0.888	61	0.096
-74	0.017	-28	0.656	16	0.874	62	0.087
-73	0.020	-27	0.676	17	0.858	63	0.079
-72	0.024	-26	0.696	18	0.843	64	0.071
-71	0.028	-25	0.716	19	0.826	65	0.063
-70	0.033	-24	0.735	20	0.809	66	0.056
-69	0.038	-23	0.754	21	0.791	67	0.050
-68	0.043	-22	0.773	22	0.773	68	0.043
-67	0.050	-21	0.791	23	0.754	69	0.038
-66	0.056	-20	0.809	24	0.735	70	0.033
-65	0.063	-19	0.826	25	0.716	71	0.028
-64	0.071	-18	0.843	26	0.696	72	0.024
-63	0.079	-17	0.858	27	0.676	73	0.020
-62	0.087	-16	0.874	28	0.656	74	0.017
-61	0.096	-15	0.888	29	0.636	75	0.014
-60	0.106	-14	0.902	30	0.615	76	0.011
-59	0.116	-13	0.915	31	0.594	77	0.009
-58	0.127	-12	0.927	32	0.574	78	0.007
-57	0.139	-11	0.938	33	0.553	79	0.005
-56	0.151	-10	0.949	34	0.532	80	0.004
-55	0.163	-9	0.958	35	0.512	81	0.003
-54	0.176	-8	0.967	36	0.491	82	0.002
-53	0.190	-7	0.975	37	0.471	83	0.001
-52	0.204	-6	0.981	38	0.451	84	0.001
-51	0.219	-5	0.987	39	0.431	85	0.000
-50	0.234	-4	0.992	40	0.411	86	0.000
-49	0.249	-3	0.995	41	0.391	87	0.000
-48	0.266	-2	0.998	42	0.372	88	0.000
-47	0.282	-1	0.999	43	0.353	89	0.000
-46	0.300	0	1.000	44	0.335	90	0.000
-45	0.317			45	0.317		



Figure 3



**WYPH-LP PREDICTED INTERFERENCE TO WDRC-FM  
BASED ON U/D RATIO METHOD**

LPFM STATION WYPH-LP

MANCHESTER, CONNECTICUT

CH 273 (102.5 MHZ) 0.1 KW (H&V)

*du Treil, Lundin & Rackley, Inc. Sarasota, Florida*



**CERTIFICATE OF SERVICE**

I hereby certify that on this 28<sup>th</sup> day October, 2020, I caused copies of the foregoing “**Supplement**” to be mailed via first-class postage prepaid mail to the following:

Christopher Imlay  
Booth, Freret & Imlay, LLC  
14356 Cape May Road  
Silver Spring, MD 20904

\_\_\_\_\_  
/s/  
Scott Woodworth