

**ENGINEERING EXHIBITS
WPVM-LP ASHEVILLE, NC**

EXHIBIT 8:

FREQUENCY CHANGE REQUEST

WPVM-LP requests to change its frequency from Channel 278, 103.5 MHz, to Channel 279, 103.7 MHz. Section 73.870(a) allows LPFM licensees to relocate to any available frequency as a minor change upon a technical demonstration of reduced interference:

- (1) Although fully spaced with full power co-channel Class C station WIMZ-FM Knoxville, TN, there have been numerous and constant complaints from listeners and would-be listeners who routinely experienced interference from WIMZ-FM in Knoxville. Though this commercial station does not program for the Asheville community, WIMZ-FM's signal does traverse the steep mountain terrain between Asheville and Knoxville via the French Broad River gorge, which flows through Asheville to the north before turning northwest to pass through Knoxville. Asheville is located at a high elevation—within certain parts of this mountainous region, WIMZ-FM appears to be underestimated via FCC contour assumptions.
- (2) WPVM-LP's transmitter site is poorly situated, but not to the complete fault of the licensee. The Asheville vicinity is a challenge for LPFM service. In certain mountainous communities characterized by few very high co-located transmitter sites as the primary broadcast sites for the cities, the LPFM applicant either has to choose to place their antenna at a low-lying site within the rugged terrain and vegetation/building clutter, or co-locate at a high elevation broadcast site to the side of the city where LPFM wattage drops down to single digits. In addition, the spacing to WIMZ-FM prevents WPVM-LP from even locating in Asheville. The

resultant is that WPVM-LP's actual 60 dBu coverage (Longley-Rice) does not even fill its 60 dBu contour, and poorly penetrates into Asheville (See Figure 1)

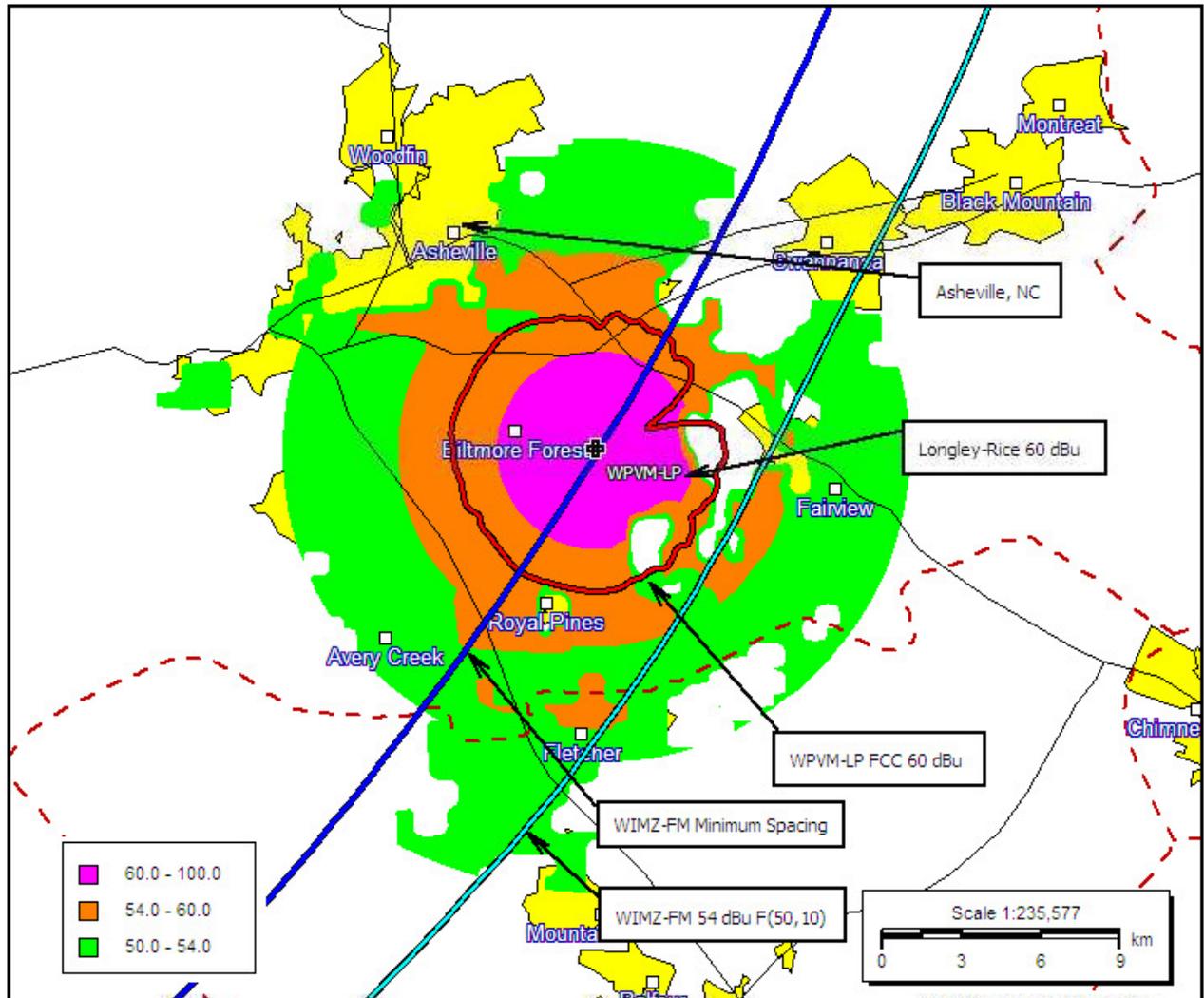


FIGURE 1: WPVM-LP licensed, noting (A) WPVM-LP has scant coverage of its community of license of Asheville, (B) WPVM-LP's poor Longley-Rice 60 dBu coverage (red, above) in comparison to its 60 dBu FCC contour, and (C) just for reference, WPVM-LP's coverage area entirely within WIMZ-FM's 54 dBu F(50,10) contour, which is indicative of strong incoming interference.

(3) Figure 1 also indicates that the current transmitter location is the closest WPVM-LP can propose its facility in relation to Asheville (see minimum co-channel spacing blue circle above). At this location, WPVM-LP is limited to 1 watt of

power, which is not robust enough to counter incoming interference. Moving off this peak on the same channel would require the facility to be re-proposed in areas where intervening terrain would block coverage into Asheville, increasing relative incoming interference.

- (4) There is currently a translator proposed for the first-adjacent channel directly in Asheville on the first adjacent channel (Channel 277, 103.3 MHz, BNPFT-2003-312AQO). If this translator is licensed, WPVM-LP's coverage will not even have fringe coverage to half of Asheville on a good day (Figure 2).

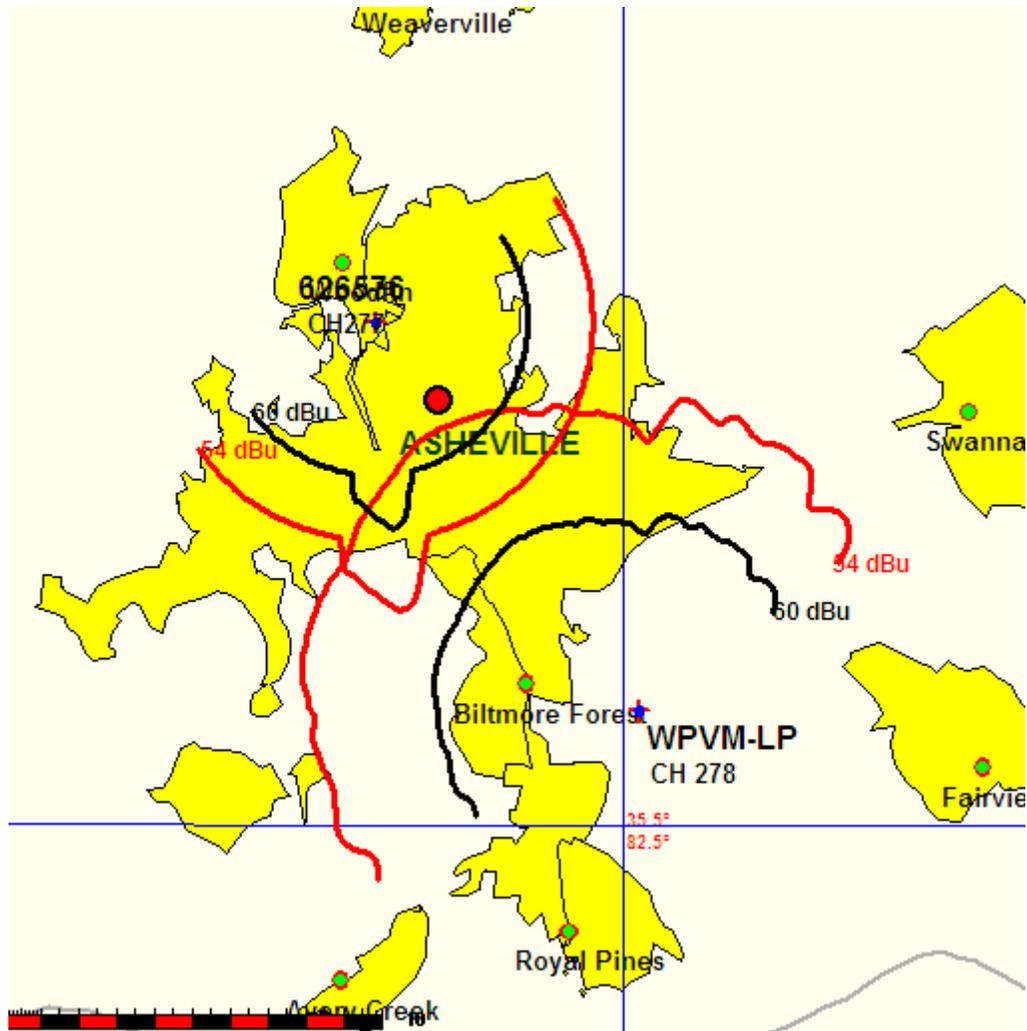


FIGURE 2: Proposed translator BNPFT-2003-312AQO vs WPVM-LP current.

(5) WPVM-LP proposes moving to Channel 279, 103.7 MHz, a first adjacent channel. Such move three channels up or down is considered a minor change.

Conclusion: The applicant is convinced the proposed channel relocation will yield much less interference than the current channel. The applicant believes that this channel change request qualifies under Section 73.870(a).

CHANNEL STUDY

Ground 677 m
 AGL 35.5 m
 ARL 5.0 m
 COL 712.5 m
 HAAT -18.3 m

Mountain Area Information Network

REFERENCE		DISPLAY DATES
35 35 48.8 N.	CLASS = L1	DATA 07-17-12
82 33 19.2 W.	Current Spacings to 3rd Adj.	SEARCH 09-26-12
----- Channel 279 - 103.7 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin	
WQNO	LIC 282A	Fletcher	NC 145.6	9.34	28.5	-19.2	*
626576	APP 277D	Woodfin	NC 327.9	2.92	7.5	-4.6	**
WPVM-LP	LIC 278L1	Asheville	NC 145.0	9.41	13.5	-4.1	
640483	APP 276D	Skyland	NC 161.9	13.38	13.5	0.12	*
W279AI	LIC 279D	Hendersonville	NC 174.2	32.05	31.5	0.55	
WIMZ-FM	LIC 278C	Knoxville	TN 299.9	121.32	119.5	1.8	
WXIS	LIC 280A	Erwin	TN 14.4	62.01	55.5	6.5	
649314	APP 276D	Black Mountain	NC 79.3	19.28	7.5	11.8	
649317	APP 277D	Black Mountain	NC 79.3	19.28	7.5	11.8	
649544	APP 276D	Hendersonville	NC 174.2	32.05	13.5	18.6	
650271	APP-D 281D	Flat Rock	NC 164.6	40.76	13.5	27.3	
WOLI-FM	LIC 280A	Easley	SC 178.2	84.10	55.5	28.6	
WIKQ	LIC 276A	Tusculum	TN 353.3	59.31	28.5	30.8	
WSOC-FM	LIC-N 279C	Charlotte	NC 102.2	173.97	129.5	44.5	
WOLT	LIC 277A	Greer	SC 150.2	76.48	28.5	48.0	
WNCC-FM	APP-N 281A	Sylva	NC 247.3	76.92	28.5	48.4	
WNCC-FM	CP -N 281A	Franklin	NC 242.1	78.36	28.5	49.9	

 Reference station has protected zone issue:
 All separation margins include rounding

*Note: Translator application BNPFT-20030317BGF (Skyland, NC) and full power commercial facility WQNO (Fletcher, NC) are located on a third adjacent channel.

Section 3 of H.R. 6533 (111th) has eliminated third-adjacent minimum distance separation requirements. The Fifth Report and Order, Fourth Further Notice of Proposed Rulemaking and Fourth Order on Reconsideration for Docket 99-25, which officially repealed third adjacent spacing, was published in the Federal Register April 5, 2012, effective June 4, 2012.

****WAIVER REQUEST FOR TRANSLATOR MINIMUM SECOND-ADJACENT SPACING**

Concerning translator application BNPFT-20030312AQO (“626576 APP” above) for Woodfin, NC, on channel 277, is second adjacent from the proposed. Applicant respectively requests a waiver of Section 73.807 of the Commission’s rules concerning the minimum distance separation between stations. The request for the waiver is in the public interest because Channel 279 represents the only channel in Asheville that could accommodate a channel change (no other LPFM channels are open in Asheville). The Third Further Notice of Proposed Rule Making for Docket 99-25 declared Asheville a “spectrum available” market, but since then Clear Channel station WQNS recently submitted application BPH -20120807ACK to move their rural service from Waynesville, NC to Woodfin, NC (aka Asheville). This proposal eliminates 105.3 FM—the only fully-spaced channel in Asheville—for LPFM usage in Asheville. The following “spectrum available” channels were reviewed in the Asheville area. None of the channels, however, served Asheville, except Channel 279, with this requested waiver:

- 238 Translator on co-channel with contour over Asheville
- 239 WGNW-LP 60 dBu contour gets into Asheville
- 240 Translator application from Radio Training Network on co-channel in Asheville
- 248 Translator covering Asheville on first adjacent channel (249). Translator applications covering Asheville on first adjacent channel (247)
- 249 Translators applications for Asheville on co-channel
- 250 Translator covering Asheville on first adjacent (251); Translator covering Asheville on first adjacent (249)

- 263 WRES-LP covering Asheville on first adjacent channel
- 264 WRES-LP covering Asheville on co-channel
- 265 WRES-LP covering Asheville on first adjacent channel
- 277 Translator applications covering Ashville
- 278 Translator application first-adjacent (277) 60 dBu covering Ashville
- >279 Translator co-channel, and second adjacent translator in Ashville<
- *280 WQNQ second-adjacent preclusion, part precluded by WXIS
- 286 Channel negated by full-power move-in
- 287 Channel negated by full-power move-in

If Channel 279 is not grantable for WPVM-LP to relocate to, station will then have to discontinue operation.

Note that the LCRA does not prescribe a second adjacent waiver process for translators.

LCRA Section 3(b) only pertains to minimum spacing between LPFM and full-service FM stations:

(b) Restriction-

(1) IN GENERAL- The Federal Communications Commission shall not amend its rules to reduce the minimum co-channel and first- and second-adjacent channel distance separation requirements in effect on the date of enactment of this Act between--

(A) low-power FM stations; and

(B) full-service FM stations.

(2) WAIVER-

(A) IN GENERAL- Notwithstanding paragraph (1), the Federal Communications Commission may grant a waiver of the second-adjacent channel distance separation requirement to low-power FM stations that establish, using methods of predicting interference taking into account all relevant factors, including terrain-sensitive propagation models, that their proposed operations will not result in interference to any authorized radio service.

Thus, the waiver process stipulated in Section 3(b)(2) only pertains to waiver requests for spacing against full power licensees. The Commission has full authority to pursue waiver requests concerning translators on second adjacent channels per its own internal review.

FACILITY RELOCATION REQUEST

The applicant proposes to move to a new location 9.4 km from the current licensed site.

A waiver of Section 73.870(a) is thus requested, as the move exceeds 5.6 km as

stipulated for minor changes. Waivers to Section 73.870(a) have been granted before to LPFM applicants moving greater than 5.6 km with good reason. We believe the following reasons constitute a firm basis for granting such a waiver.

- (1) The original location proposed for the licensed facility was not initially favored. The applicant desired coverage of Asheville but minimum spacing requirements forced the applicant to make do with any location due to scarcity of channels and broadcast location, locating at a site to the south of town with and *ERP of 1 watt*. This move rectifies the situation by proposing relocation to a site that was initially favored but was originally precluded from being applied for.
- (2) The current antenna location does not cover roughly half of Asheville due to the unfavorable distance to the central city. Applicant believes that in order to cover Asheville properly a 9.4 km move is required.
- (3) Relocation to the proposed site would assure long-term viability of WPVM-LP because of its centralized location in relation to Asheville. WPVM-LP is a non-commercial community radio station, which is a rare public service commodity on the FM band.
- (4) Channel 279 is the only available channel to move to that will cover Asheville. However, the channel is not available to be moved to within 5.6 km of the current licensed transmitter site. WPVM-LP picked the closest location it could find to adhere to the minimum spacing requirements of Section 73.807. Figure 3 depicts this move.

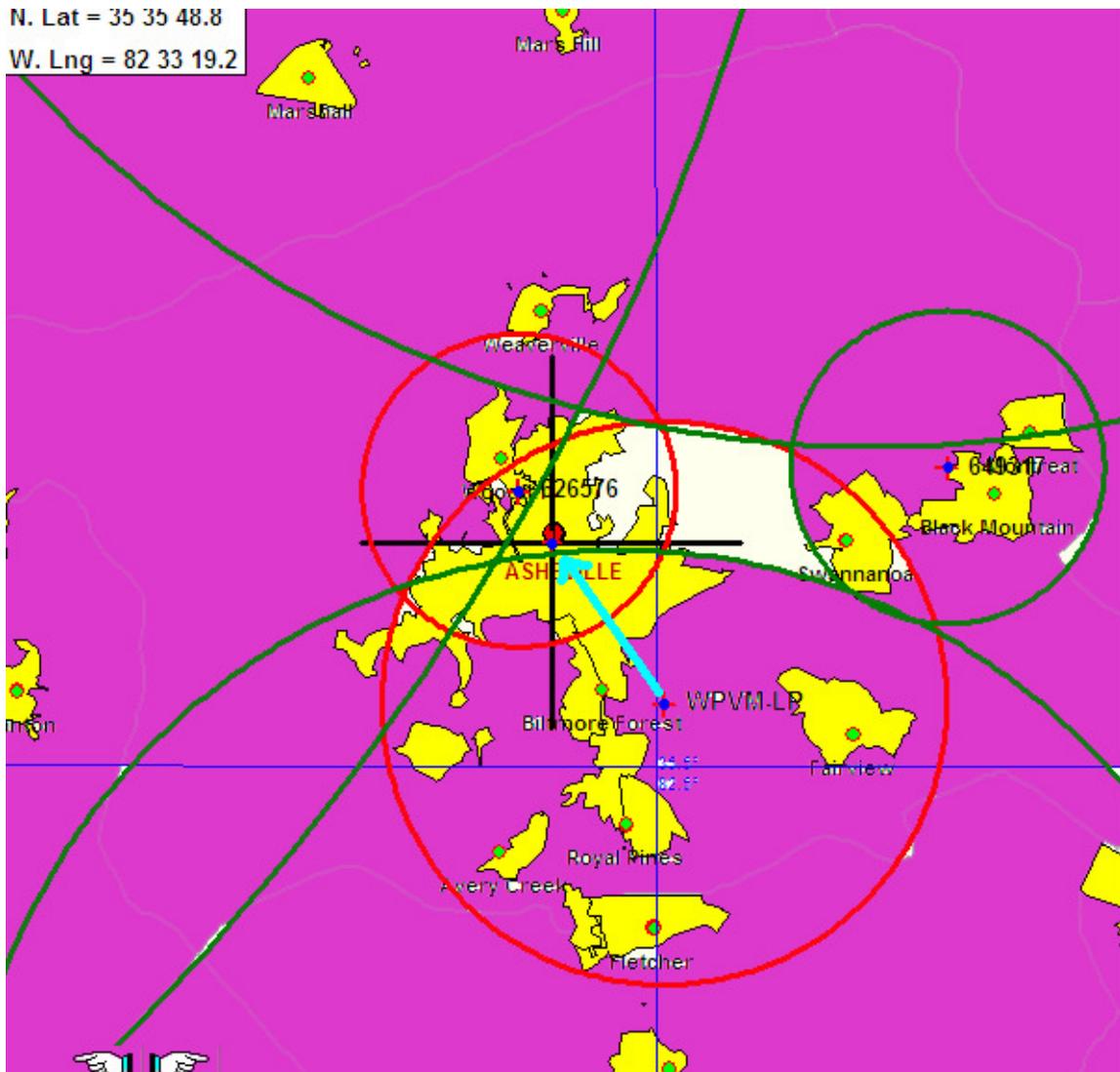


FIGURE 3: The drawing above shows WPVM's current licensed location, and a cyan-colored arrow that points to the station's proposed location. Note the minimum spacing for the proposed channel only allows a limited area to relocate to that is more than 5.6 km away from the current location (the purple area is prohibited for relocation according to Section 73.807)

Conclusion: For reasons due to scarcity of channels and viable locations to relocate to, a waiver of Section 73.870(a) is thus requested by WPVM-LP. Applicant believes the move is in the public interest.

EXHIBIT 10:

ENVIRONMENTAL COMPLIANCE

The Effective Radiated Power for proposed will be 100 watts. The antenna will be located on the top of a building roof, 35 m above ground, 5 meters above roof level.

Version 2.10 Beta was used to determine the maximum predicted RF exposure. The settings used were:

- Antenna: ERI or Jampro "Rototiller" type antenna
- Horizontal ERP (W): 100
- Vertical ERP (W): 100
- Antenna Height (m): 5
- Number of Elements: 1
- Element Spacing: 1

Antenna will be mounted on top of a mast. Using these settings, the maximum predicted RF exposure for a human standing on the roof would be $165.2 \mu\text{W}/\text{cm}^2$ at 3 m. This represents 82.6 % of the Maximum Permissible Exposure (MPE) of $200 \mu\text{W}/\text{cm}^2$ for uncontrolled environments. There are no other sources of RF energy on the structure or in the vicinity.

The pole is inherently unclimbable. The site will have a sign all necessary RF exposure hazards to climbers posted. If any work needs to be done around the structure the RF power will be temporarily shut off.