

TECHNICAL ATTACHMENT
NEW LPFM FOR TOBYHANNA, PA

State: PA
City: TOBYHANNA
Channel: 248

Antenna Structure Registration: 1031353
Do you have an FCC Antenna Structure Registration Number?: Y
Yes/No/Filed with the FAA No

Latitude: 41-9-49.6 N
Longitude: 75-19-6.5 W
Structure Type: TOWER
Overall Structure Height: 60.6
Support Structure: 54.9
Ground Elevation: 611.7

Antenna Data

	HORIZONTAL	VERTICAL
Height of Radiation Center Above Ground Level	10	10
Height of Radiation Center AMSL	(FORM CALCULATES)	
MIn Radiated Power	(FORM CALCULATES)	
Max Radiated Power	(FORM CALCULATES)	

Antenna Type

Directional
Non-Directional X

Directional Antenna

Technical Certification

Environmental Effect

*Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? See 47 C.F.R. Section 1.1306?

NO

Interference

*Does the applicant certify that the proposed facility complies with engineering requirements...?

NO

Antenna Height Above Average Terrain Calculations -- Results

Input Data

Latitude 41° 9' 49.6" North
Longitude 75° 19' 6.5" West (NAD 83)

Height of antenna radiation center above mean sea level: 621.7 meters AMSL

Number of Evenly Spaced Radials = 8 0° is referenced to True North

Results

Calculated HAAT = 146 meters

Antenna Height Above Average Terrain calculated using 1 km GLOBE terrain data

Individual "Radial HAAT" Values, in meters

0°	84.1 m
45°	156.7 m
90°	257.5 m
135°	319.0 m
180°	260.4 m
225°	44.1 m
270°	42.4 m
315°	6.4 m

Select Contour Type: F(50,50) Service Contour -- FM and NTSC (analog) TV
F(50,10) Interfering Contour
F(50,90) Digital TV Service Contour

Select Channel Range: FM Radio or TV Transmit Channels 2-6
TV Transmit Channels 7-13
TV Transmit Channels 14-69

Find This: Field Strength, given a Distance (in km)
Distance, Given a Field Strength (in dBu)
FM ERP, given Distance and Field Strength [F(50,50) Service Contour]

1
ERP (kW) 5.56 Distance (km)

146
HAAT (meters) 60 Field (dBu)

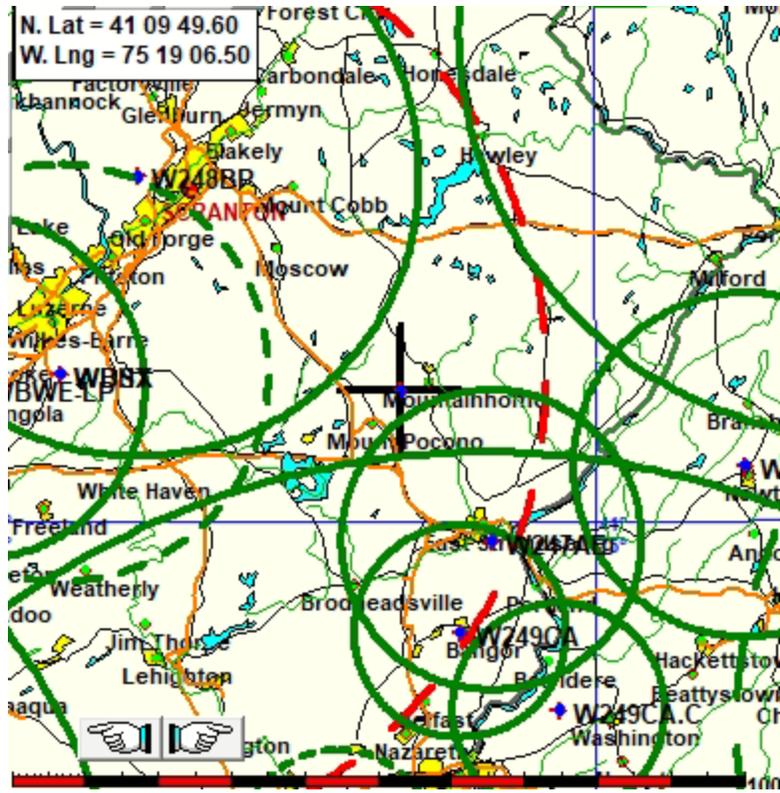
Find Result Clear Form

Results:

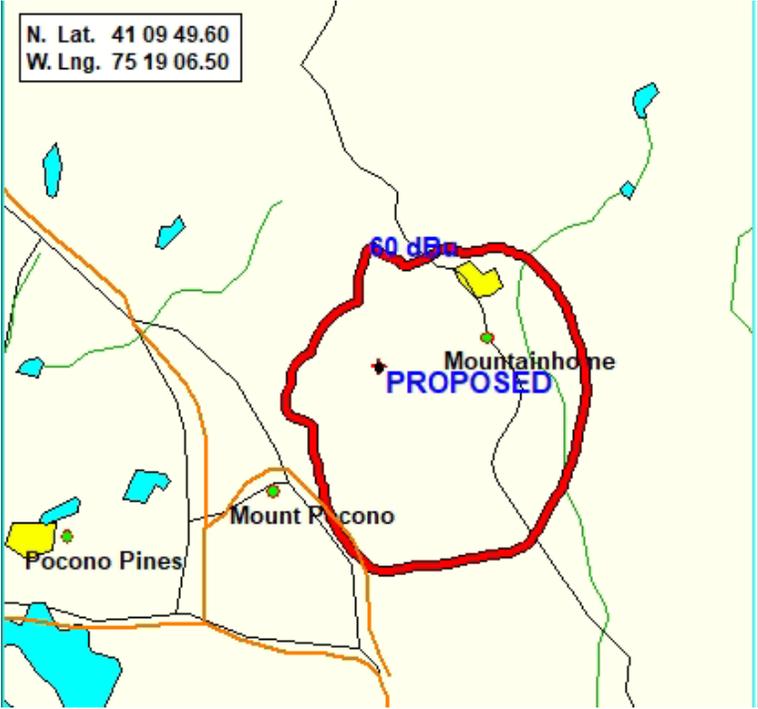
Calculated ERP (rounded per Section 73.212) = **0.004 kW**
(FM 60 dBu Service Contour only)

Unrounded ERP = 0.004027 kW

Power = 4 W ERP



FCC 60 dBu F(50,50)

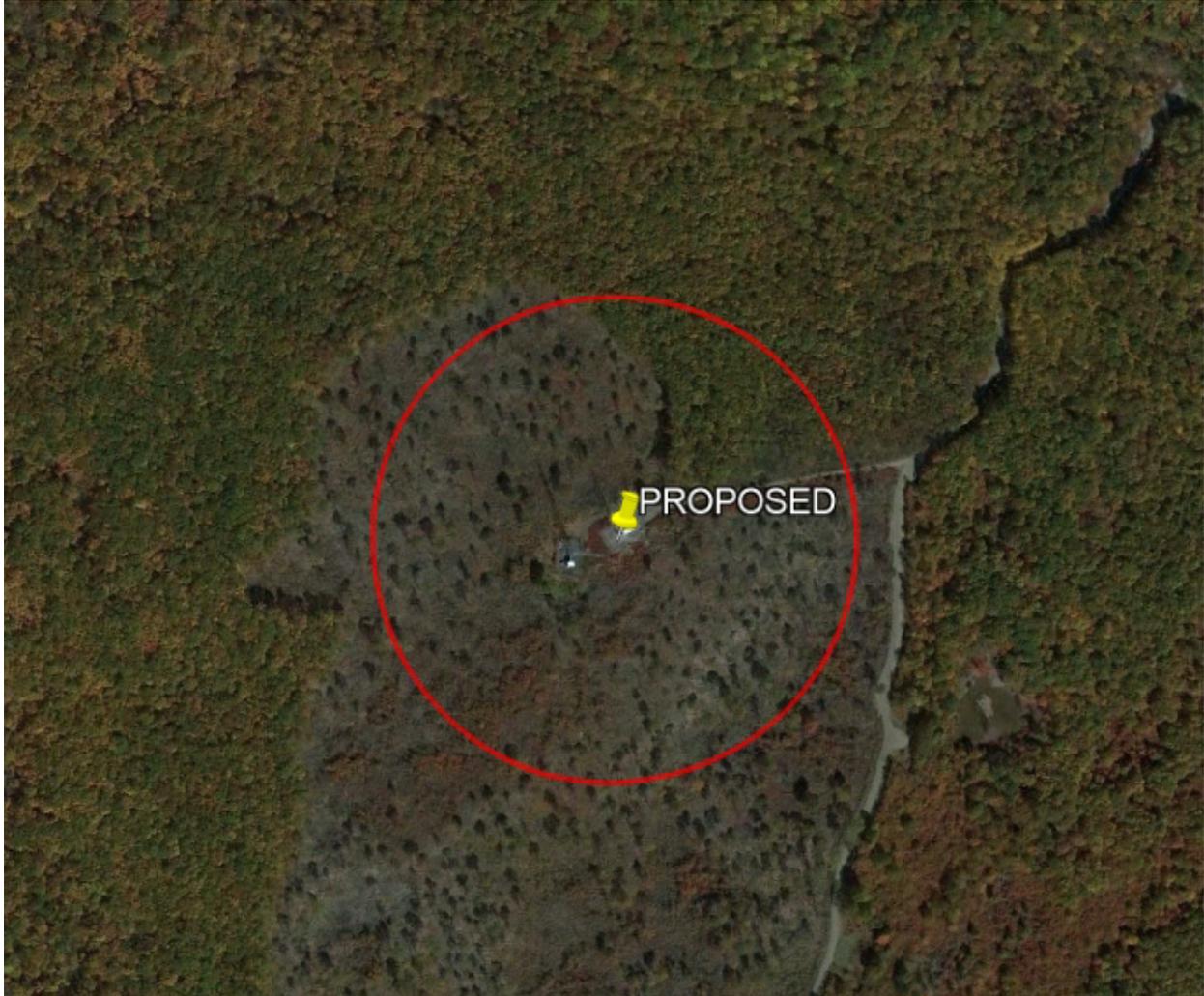


SECOND ADJACENT WAIVER REQUEST

Proposed facility is short-spaced to

CALL	CH	DBU at Proposed	Distance to Interference Contour
WBSX	250B	57.6 dBu	183.5

The value of 57.6 dBu will then be used to determine interference compliance. Interference will occur when the WBSX signal strength's interfering signal exceeds the desired signal by 40 dBu. So the area of predicted interference would then be bounded by the 97.6 dBu contour. The 97.6 dBu contour plotted below.



Due to zero population within this radiation radius, as demonstrated in the aerial shot, this meets the "Living Way" Criteria to qualify for a Waiver of 47 C.F.R. Section 73.807.

Applicant respectfully requests a "second adjacent channel waiver" with regards to Section 47 C.F.R. Section 73.807 of the FCC rules based upon the "Living Way" precedence (Living Way Ministries, Inc., Memorandum Opinion and Order, 17 FCC Red 17054, 17056, ¶ 5 (2002), recon. denied 23 FCC Red 15070 (2008)).