Rochester Radio

Form 318 Application to Amend CP for WMEX-LP

From Channel 291 to Channel 290 at Rochester, NH

Exhibit 11

Overview

This application requests a frequency change from Channel 291 to Channel 290. The application meets the spacing requirements of Section 73.807 with respect to all co-channel and first adjacent channel facilities.

This application also makes a showing of the determination of antenna HAAT as required by Section 73.813, in accordance with the procedure outlined in 73.313(d), employing the HAAT tool available on the Commission's website. The HAAT was determined to be 47 meters, as shown in Exhibit 1 below.

Using that HAAT determination, the maximum allowable Class LP100 ERP (class contour distance of 5.6 km) was then determined by use of the FM and TV Propagation Tool, also available on the Commission's website, as shown in Exhibit 2 below. The maximum allowable ERP was found to be 0.041 kW (41 Watts.)

The applicant hereby respectfully requests authorization of an ERP of 41 Watts based on these determinations, in order to maximize its ability to serve the Rochester community in the face of periodically strong incoming interference from co-channel WBCI in Bath, Maine.

Respectfully submitted,

Dennis Jackson
Technical Consultant
October 2, 2015

Exhibit 1 - Determination of Antenna HAAT

The center of radiation will be located 179 meters above mean sea level. (The elevation Of the antenna site itself is as specified in antenna structure registration ASR 1250789, which itself was determined from the US Topographical map containing the site.)

In accordance with Section 73.212(d) of the Commission's Rules, the Commission's HAAT tool, available online, was employed in order to determine the antenna HAAT, which is 47 meters As shown below. This HAAT tool may be found at:

https://www.fcc.gov/encyclopedia/antenna-height-above-average-terrain-haat-calculator

Antenna Height Above Average Terrain Calculations -- Results

Input Data

Latitude **43° 16' 42"** North
Longitude **71° 1' 34"** West (NAD 27)

These coordinates convert to NAD 83 coordinates of
43° 16' 42.29", North, 71° 01' 32.23" West (NAD 83).

Height of antenna radiation center above mean sea level: **179** meters AMSL

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

Results

Calculated HAAT = **47 meters**

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

Individual "Radial HAAT" Values, in meters

0°	37.1 m
45°	86.5 m
90°	90.3 m
135°	122.7 m
180°	94.4 m
225°	45.8 m
270°	-38.1 m
315°	-63.4 m

Exhibit 2 - Determination of Maximum ERP

The Commission's FM and TV Propagation Tool is available online at:

https://www.fcc.gov/encyclopedia/antenna-height-above-average-terrain-haat-calculator

This tool was employed in order to find the maximum allowable ERP for a Class LP100 station such that the 60 dBu F(50,50) Service Contour would be at a distance from the antenna of 5.6 km (rounded.)

The maximum ERP was found to be 0.41 kW, or 41 Watts, as shown below.

The applicant hereby respectfully requests that the authorized ERP be 41 Watts.