

HAAT Calculation

47 CFR 73.811 defines the maximum LPFM facility:

(a) Maximum facilities. LPFM stations will be authorized to operate with maximum facilities of 100 watts ERP at 30 meters HAAT. An LPFM station with a HAAT that exceeds 30 meters will not be permitted to operate with an ERP greater than that which would result in a 60 dBu contour of 5.6 kilometers. In no event will an ERP less than one watt be authorized. No facility will be authorized in excess of one watt ERP at 450 meters HAAT.

The HAAT of the instant facility is less than 30m.

Table 1 shows the HAAT of the instant facility calculated along 8 radials using the FCC's HAAT Calculator. It shows 30m. Table 2 shows the HAAT of the instant facility calculated using NED 03 Sec terrain along eight radials. It is 29.6m.

Table 1

Results:

Calculated HAAT= 30. meters

(Antenna Height Above Average Terrain)
using the 30 second FCC/NGDC terrain data)

Antenna Radiation Center Heights Above Individual Radials:

0.0°	126.3 meters
45.0°	134.4 meters
90.0°	134.9 meters
135.0°	97.4 meters
180.0°	-47.8 meters
225.0°	-89.7 meters
270.0°	-110.0 meters
315.0°	-5.9 meters

Table 2

Call Letters: NEW.C
Latitude: 46-32-42.60 N
Longitude: 087-26-39.60 W
ERP: 0.10 kW
Channel: 280
Frequency: 103.9 MHz
AMSL Height: 318.0 m
Above Ground Level: 44m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 50.0 %
of Radials Calculated: 8
FCC Matching HAAT Calculation Used
Field Strength: 60.00 dBuV/m

Primary Terrain: NED 3 Second US Terrain

Bearing (deg)	HAAT (m)
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0.0	125.2
45.0	131.2
90.0	129.9
135.0	101.1
180.0	-50.1
225.0	-88.8
270.0	-109.1
315.0	-2.7

Average HAAT for radials shown: 29.6 m