

Attachment #22A
WBEA (FM)
Channel 269A – 101.7 MHz
6 kW ERP – 82 m HAAT
Southold, New York
March 2004

§73.315 Compliance Utilizing §73.313(e)

From the proposed WBEA site of North Latitude 40° 52' 10" and West Longitude 72° 34' 37" the 70 dBu contour does not cover the community of license, Southold, New York. However, in this particular case, we find that a supplemental method of depicting city grade coverage as noted in Section 73.313(e) of the Commission's Rules would be appropriate.

WBEA has been authorized to serve "Southold" since 1979. Southold is a distinctive community and is a Census Designated Place, but is not incorporated. Inquiries to local and county officials have indicated that the boundaries of the unincorporated area are not defined by a single legal document. Rather, the only incorporated entity with legally defined boundaries is Southold Town, which is much larger than the area normally known as Southold and includes other communities such as Peconic, Cutchogue, Mattituck and Laurel to the west and Greenport, East Marion, Sterling, Orient and the offshore Plum Island and Fisher's Island to the east. The most clearly defined boundary that appears to correspond to the community locally known as Southold is Zip Code 11971. The map in Attachment #22B shows that area.

Using "Probe 3", a commercially available program from V-Soft Communications, we have determined that on the 30 degree city radial to a distance of 28.8 kilometers to the extreme city limit of Southold, New York, the ΔH factor is 8.57 meters using the 3

second terrain database. This 8.57 meter ΔH , being less than the threshold of 20 meters qualifies as terrain “departing widely” from the standard. Therefore, this application qualifies for the use of a supplemental method of contour prediction to comply with the community of license coverage requirements of §73.315.

Southold, New York is within an arc between 20° and 43° from the proposed WBEA transmitter. Utilizing the Commission’s 50/50 curves, these radials fall short of covering the city of license. We alternatively have determined the location of the 70 dBu contour using the Longley-Rice prediction method. This methodology, purchased from V-Soft Communications in a program called “Probe 3” was used to produce this Technical Note 101 study. In this particular situation, coverage calculations for the 70 dBu contour have been made in a point-to-point mode (mean occurrence drop-off). We find that utilizing the Longley-Rice contour prediction method, 81% of the community of Southold, New York is served by the city grade contour inside the traditional FCC 60 dBu (50/50) contour.

The following table is a comparison of the standard FCC method of calculating the 70 dBu and the Longley-Rice method. In all cases, the Longley-Rice method exceeds the FCC method greater than 10%.

Radial (Bearing)	Location of 70 dBu (FCC Method) in km	Location of 70 dBu (Longley-Rice Method) in km	Percent Change	Gain (km)
20°	14.9	23.8	59.7	8.9
21°	14.9	23.6	58.4	8.7
22°	14.9	23.3	56.4	8.4
23°	14.9	23.5	57.7	8.6
24°	14.9	23.8	59.7	8.9
25°	14.9	26.3	76.5	11.4
26°	14.9	26.4	77.2	11.5
27°	14.9	26.5	77.9	11.6
28°	14.9	26.6	78.5	11.7
29°	14.9	26.8	79.9	11.9
30°	14.9	26.9	80.5	12.0
31°	14.9	27.4	23.9	12.5
32°	14.8	28.0	89.2	13.2

33°	14.8	27.4	85.1	12.6
34°	14.8	24.9	68.2	10.1
35°	14.8	25.1	69.6	10.3
36°	14.7	25.3	72.1	10.6
37°	14.7	27.4	86.4	12.7
38°	14.7	27.6	87.8	12.9
39°	14.7	27.6	87.8	12.9
40°	14.6	29.4	101.4	14.8
41°	14.6	28.5	95.2	13.9
42°	14.6	30.8	111.0	16.2
43°	14.7	30.5	107.5	15.8

Also in this exhibit is a graphic depiction of the WBEA normally calculated 70 dBu contour, the Technical Note 101 contour, the traditional 60 dBu (50/50) contour, the WBEA transmitter and Southold, New York, the community of license. This map is drawn using the commercially available program "Probe 3" from V-Soft Communications.

Based on this supplemental depiction, we find that the community of Southold, New York is adequately served by the city grade contour of WBEA in compliance with §73.315 of the Commission's Rules