

## **Compliance with 47 C.F.R. 73.525**

### **Introduction**

There are several considerations outlined in 47 C.F.R. 73.525 for TV channel 6 protection. Outlined below are the various factors as they apply to the proposed operation and the WRGB parameters as seen in FCC file number 0000035659.

### **Distance between proposed operation and WRGB**

47 C.F.R. 73.525(a)(1) requires a minimum separation of 187 kilometers for a channel 214 operation. The distance between the proposed station and WRGB is 90.61 kilometers. Since the distance is less than 187 km then WRGB is an affected station and the analysis below is required.

### **Population Limitation**

When a proposed non-commercial station is not co-located with the channel 6 station in question, the applicant is required to show that the interference area (as predicted by the procedures outlined in 47 C.F.R. 73.525(e)(1)) contains no more than 3,000 persons. The actual population figures are contained in Exhibit 21-B, and a map of the interference area is shown in Exhibit 21-A.

### **Vertically Polarized Transmissions**

When an applicant wishes to use vertically polarized transmissions only, C.F.R. 74.525(e)(4) limits the vertical ERP to the maximum permissible horizontally polarized ERP multiplied by 40 (if the predicted interference area lies entirely outside the limits of a city of 50,000 persons) or 10 (if not). (See Exhibit 21-A). Since the predicted interference area lies entirely outside the limits of a city of 50,000 persons, that is multiplied by 40 to obtain the vertical-only ERP.

### **Discussion**

Population in the predicted interference area was determined using the centroid method and the 2010 census. The predicted interference contour (of the theoretical horizontal component of 0.1625 kilowatts) is contained within the WRGB channel 6 grade B (47 dBu F(50,50)) contour (see Exhibit 21-A).

The predicted interference contour is determined from 47 C.F.R. 73.599 for channel 214 to range from 71.8dBu to 90.3dBu. (See Exhibit 21-C for a tabulation of the WRGB protected contour values and the corresponding channel 214 interfering contours)

Exhibit 21-A shows the 54dBu through 59dBu F(50,50) contours for WRGB. Also shown are the corresponding F(50,10) interfering contours for the proposed channel 214 facility. This map also shows the interpolated interfering contour determined from connecting the intersections of the WRGB protected contours and the corresponding interfering contours of the proposed facility (see 47 C.F.R 73.525(e)(1)(ii)).

A population report of the area contained within the interpolated interfering contour is included at Exhibit 21-B. The total population contained within the interfering contour is 2,345 persons.

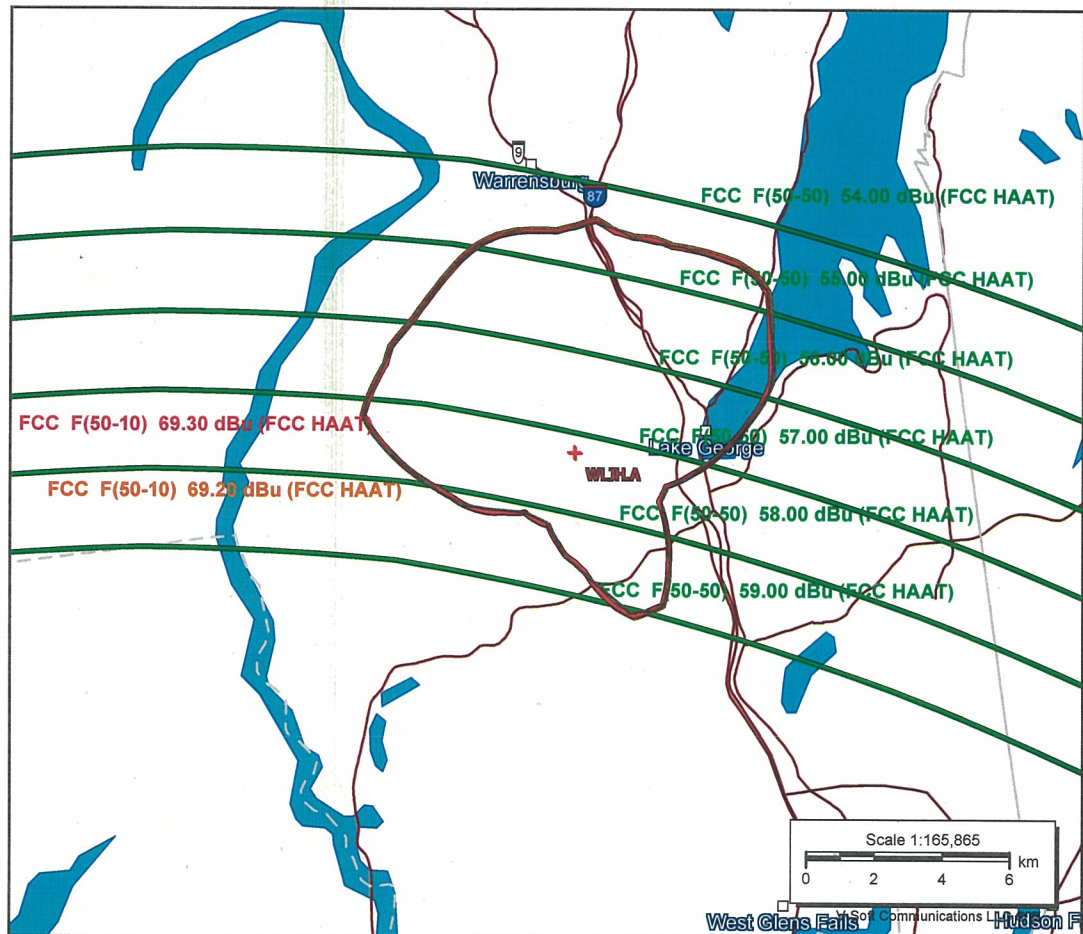
### **Conclusion**

For the reasons outlined above, the proposed operation fully complies with the provisions of 47 C.F.R. 73.525.

**Exhibit 21-A**  
**WRGB TV6 and WLJH Interference Study**

**WLJH.A**  
BPED20180302AAT  
Latitude: 43-25-12 N  
Longitude: 073-45-37 W  
ERP: 0.0163 kW  
Channel: 214  
Frequency: 90.7 MHz  
AMSL Height: 684.0 m  
Elevation: 634.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

**WRGB-D.A**  
0000035622  
Latitude: 42-37-31.02 N  
Longitude: 074-00-38.24 W  
ERP: 60.00 kW  
Channel: 6  
Frequency: 85.0 MHz  
AMSL Height: 648.8 m  
Elevation: 542.8 m  
Horiz. Pattern: Omni  
Vert. Pattern: Yes  
Elec Tilt: 0.75  
Prop Model: None



## **Population Report**

Polygon Population Report

Population Database: 2010 US Census (PL)

Total Population: 2,345

Housing Units: 1,620

Total Area: 86.4 sq. km

## Tabulation of Contours

### Channel-Six TV Protection Study

WRGB APP 06 1C Dom 60.000 kW 392 m HAAT TH  
Schenectady NY 648.0 m COR AMSL -  
Lat= 42 37 31.0, Lng= 74 00 38.2 - NAD 27

App ID# 0 0000035659  
Dist.=90.61 km, Azi=193.1°, Rev Azi=12.9°

Direct line HAAT Grade B, 47 dBu= 117.39 km & Grade A= 64.27 km

Distance from reference to Grade B = -26.78 km

Cutoff Dist from Full Service or Class CA= 187

Maximum Co-located power= 46.8 kW

WRGB Signal Contour at Reference location = 57.1 dBu

Add 6 dB to FM Contour value if within angle.

TV/FM D to U values.

47.0	71.8	55.0	69.2	63.0	70.6	71.0	76.0	79.0	82.0	87.0	88.4
48.0	71.2	56.0	69.2	64.0	71.0	72.0	76.6	80.0	82.8	88.0	89.0
49.0	70.6	57.0	69.2	65.0	71.4	73.0	77.3	81.0	83.7	89.0	89.5
50.0	70.0	58.0	69.2	66.0	72.2	74.0	78.0	82.0	84.5	90.0	90.3
51.0	69.7	59.0	69.3	67.0	73.0	75.0	78.8	83.0	85.4	91.0	90.3
52.0	69.5	60.0	69.6	68.0	73.8	76.0	79.6	84.0	86.2	92.0	90.3
53.0	69.2	61.0	69.9	69.0	74.5	77.0	80.4	85.0	87.1	93.0	90.3
54.0	69.2	62.0	70.2	70.0	75.2	78.0	81.2	86.0	87.9	94.0	90.3

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