

Exhibit A

Mitchell County Public Radio LLC

November 16, 2020

Page 1 of 6

## Technical Discussion

Mitchell County Public Radio LLC is the licensee of LPFM Broadcast Station of WUGC-LP licensed to the City of Pelham, Georgia operating with an antenna center of radiation 76 meters above the average terrain, and a power of 15 watts ERP. The current height was calculated using the FCC 30 Second Terrain Database. The Licensee has since learned that “The default terrain database is the newer GLOBE data, however, the FCC’s legacy terrain data base for the continental 48 states (early 1980’s) is available as an option.” That quote is from the Federal Communications Commission Antenna Height Above Average Terrain (HAAT) Calculator webpage in the discussion of “How is the HAAT determined?” by Mr. Dale Bickel, Senior Electronics Engineer. While it may be an assumption on our part, but stating that “The default terrain database is the newer Globe data...” leads us to believe it should be our first choice for calculating our HAAT.

Because of the forgoing we calculated the HAAT for WUGC-LP’s antenna using the 1 km Globe Terrain Data (Figure 1 a, b & c) with the results showing that according to the data the WUGC-LP antenna center of radiation is 71 meters HAAT. Once we learned that the newer database reflects that the HAAT is 5 meters below the height listed on our license, we used the Federal Communications Commission’s FMpower calculator to determine that (Figure 2) our ERP should be 17 watts at 71 meters HAAT for us to operate at maximum Height and Power for a LP100 class LPFM.

WUGC-LP at its current site remains in compliance with 47 C. R. F. Section 73.807. Applicant certifies that it has reasonable assurance in good faith that the site or proposed structure at the location of its transmitting antenna will be available to the applicant for the applicant’s intended purpose as applicant has a written contract for tower space and unlimited access to the tower site property with the owner, Mr. Yale Whigham of Pelham, Georgia. Mr. Whigham can be contacted during business hours at Whigham Automotive at 229-294-8755.

Based on the information herein, Mitchell County Public Radio LLC respectful requests that the license of WUGC-LP be modified to show the center of radiation at 71 meters above that average terrain and the power output .017 kw ERP.

Jerry E. White

President/Member

Input Data

Latitude 31° 10' 9.3" North  
Longitude 84° 8' 50.3" West (NAD 27)

These coordinates convert to NAD 83 coordinates of  
31° 10' 09.96", North, 84° 08' 49.95" West (NAD 83).

Height of antenna radiation center above mean sea level: 149.7 meters AMSL

Number of Evenly Spaced Radials = 360 0° is referenced to True North

Results

Calculated HAAT = 71 meters

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

Individual "Radial HAAT" Values, in meters

0°	89.1 m	120°	55.4 m	240°	91.8 m
1°	88.6 m	121°	55.8 m	241°	92.1 m
2°	87.8 m	122°	56.0 m	242°	92.4 m
3°	87.0 m	123°	56.2 m	243°	92.7 m
4°	86.1 m	124°	56.3 m	244°	93.1 m
5°	85.2 m	125°	56.3 m	245°	93.6 m
6°	84.3 m	126°	56.2 m	246°	94.2 m
7°	83.5 m	127°	56.2 m	247°	94.7 m
8°	82.7 m	128°	56.3 m	248°	95.1 m
9°	82.3 m	129°	56.3 m	249°	95.3 m
10°	82.1 m	130°	56.3 m	250°	95.5 m
11°	81.8 m	131°	56.5 m	251°	95.8 m
12°	81.4 m	132°	57.0 m	252°	96.1 m
13°	81.1 m	133°	57.8 m	253°	96.4 m
14°	80.8 m	134°	58.8 m	254°	96.5 m
15°	80.5 m	135°	59.3 m	255°	96.4 m
16°	80.0 m	136°	59.5 m	256°	96.3 m
17°	79.3 m	137°	59.4 m	257°	96.3 m
18°	78.5 m	138°	59.1 m	258°	96.3 m
19°	77.5 m	139°	58.5 m	259°	96.5 m
20°	76.5 m	140°	57.6 m	260°	96.7 m
21°	75.7 m	141°	56.6 m	261°	97.0 m
22°	74.9 m	142°	55.6 m	262°	97.3 m
23°	73.8 m	143°	54.7 m	263°	97.5 m
24°	72.3 m	144°	54.2 m	264°	97.6 m
25°	70.5 m	145°	54.0 m	265°	97.6 m
26°	68.6 m	146°	54.0 m	266°	97.5 m
27°	66.5 m	147°	53.9 m	267°	97.4 m
28°	64.3 m	148°	53.7 m	268°	97.2 m
29°	62.0 m	149°	53.3 m	269°	97.1 m
30°	59.9 m	150°	52.8 m	270°	96.9 m
31°	58.3 m	151°	52.1 m	271°	96.9 m

Exhibit A

Figure 1-B

Antenna Height Above Average Terrain Calculations – Results

Mitchell County Public Radio LLC

November 16, 2020

Page 3 of 6

32°	57.0 m	152°	51.4 m	272°	97.2 m
33°	56.0 m	153°	50.7 m	273°	97.5 m
34°	55.2 m	154°	50.3 m	274°	97.7 m
35°	54.6 m	155°	50.0 m	275°	98.0 m
36°	53.9 m	156°	49.9 m	276°	98.3 m
37°	53.2 m	157°	49.9 m	277°	98.6 m
38°	52.3 m	158°	49.7 m	278°	98.9 m
39°	51.7 m	159°	49.7 m	279°	99.2 m
40°	51.3 m	160°	50.0 m	280°	99.5 m
41°	50.9 m	161°	50.6 m	281°	99.8 m
42°	50.4 m	162°	51.2 m	282°	100.0 m
43°	49.9 m	163°	51.8 m	283°	100.1 m
44°	49.7 m	164°	52.4 m	284°	100.2 m
45°	49.4 m	165°	52.8 m	285°	100.2 m
46°	49.3 m	166°	52.7 m	286°	100.1 m
47°	49.1 m	167°	52.1 m	287°	100.0 m
48°	49.0 m	168°	51.3 m	288°	99.9 m
49°	48.7 m	169°	50.6 m	289°	99.8 m
50°	48.4 m	170°	50.0 m	290°	99.8 m
51°	48.2 m	171°	50.2 m	291°	99.8 m
52°	47.9 m	172°	50.7 m	292°	99.8 m
53°	47.6 m	173°	51.1 m	293°	99.6 m
54°	47.3 m	174°	51.0 m	294°	99.5 m
55°	47.1 m	175°	50.6 m	295°	99.3 m
56°	47.2 m	176°	49.9 m	296°	99.2 m
57°	47.7 m	177°	49.8 m	297°	99.1 m
58°	48.3 m	178°	50.1 m	298°	99.1 m
59°	48.6 m	179°	50.5 m	299°	99.1 m
60°	48.6 m	180°	50.8 m	300°	99.0 m
61°	48.3 m	181°	50.8 m	301°	98.8 m
62°	48.1 m	182°	50.7 m	302°	98.6 m
63°	47.7 m	183°	50.6 m	303°	98.4 m
64°	47.3 m	184°	50.1 m	304°	98.2 m
65°	46.9 m	185°	49.5 m	305°	98.1 m
66°	46.7 m	186°	48.8 m	306°	98.0 m
67°	46.9 m	187°	48.3 m	307°	97.9 m
68°	47.3 m	188°	47.8 m	308°	97.8 m
69°	47.4 m	189°	47.3 m	309°	97.7 m
70°	47.4 m	190°	46.8 m	310°	97.5 m
71°	47.3 m	191°	46.1 m	311°	97.4 m
72°	47.4 m	192°	45.7 m	312°	97.3 m
73°	47.5 m	193°	45.9 m	313°	97.2 m
74°	47.5 m	194°	46.4 m	314°	97.1 m
75°	47.4 m	195°	46.9 m	315°	96.9 m
76°	47.3 m	196°	47.4 m	316°	96.8 m
77°	47.3 m	197°	47.9 m	317°	96.7 m
78°	47.5 m	198°	48.7 m	318°	96.6 m
79°	47.9 m	199°	49.5 m	319°	96.3 m
80°	48.3 m	200°	50.0 m	320°	96.1 m
81°	48.6 m	201°	50.1 m	321°	95.9 m
82°	48.9 m	202°	49.9 m	322°	95.9 m
83°	49.1 m	203°	49.8 m	323°	95.9 m
84°	49.2 m	204°	50.0 m	324°	95.9 m
85°	49.3 m	205°	50.4 m	325°	95.9 m
86°	49.4 m	206°	51.2 m	326°	95.8 m
87°	49.4 m	207°	52.0 m	327°	95.6 m
88°	49.4 m	208°	53.2 m	328°	95.3 m
89°	49.4 m	209°	54.5 m	329°	95.0 m
90°	49.8 m	210°	55.9 m	330°	94.7 m
91°	50.4 m	211°	57.3 m	331°	94.4 m
92°	50.9 m	212°	58.7 m	332°	94.1 m
93°	51.4 m	213°	60.1 m	333°	93.7 m
94°	51.3 m	214°	61.6 m	334°	93.4 m
95°	51.0 m	215°	63.3 m	335°	93.2 m
96°	50.8 m	216°	65.4 m	336°	93.0 m

Exhibit A

Figure 1-C

Mitchell County Public Radio LLC

November 16, 2020

Page 4 of 6

Antenna Height Above Average Terrain Calculations – Results

97°	50.8 m	217°	67.7 m	337°	92.8 m
98°	50.7 m	218°	70.0 m	338°	92.6 m
99°	50.8 m	219°	72.1 m	339°	92.5 m
100°	50.8 m	220°	74.1 m	340°	92.5 m
101°	50.8 m	221°	75.9 m	341°	92.4 m
102°	51.1 m	222°	77.5 m	342°	92.5 m
103°	51.2 m	223°	78.9 m	343°	92.6 m
104°	51.4 m	224°	80.3 m	344°	92.8 m
105°	51.8 m	225°	81.4 m	345°	93.0 m
106°	52.1 m	226°	82.4 m	346°	92.8 m
107°	52.6 m	227°	83.3 m	347°	92.4 m
108°	53.1 m	228°	84.1 m	348°	91.9 m
109°	53.5 m	229°	85.0 m	349°	91.7 m
110°	53.7 m	230°	85.8 m	350°	91.5 m
111°	53.9 m	231°	86.6 m	351°	91.4 m
112°	53.9 m	232°	87.3 m	352°	91.3 m
113°	53.9 m	233°	87.9 m	353°	91.0 m
114°	54.0 m	234°	88.5 m	354°	90.8 m
115°	54.2 m	235°	89.2 m	355°	90.7 m
116°	54.3 m	236°	89.9 m	356°	90.4 m
117°	54.5 m	237°	90.5 m	357°	90.2 m
118°	54.7 m	238°	91.1 m	358°	89.9 m
119°	55.0 m	239°	91.5 m	359°	89.5 m

Print Results?

New Calculation?

Choose a U.S. State or Possession: GA - Georgia

Station Class: 100 watt LPFM

71 meters Antenna Height Above Average Terrain (HAAT)

Results:

**Calculated ERP (rounded per Section 73.212) = 0.017 kW**

Unrounded ERP = 0.017220 kW

Comments:

Low Power FM (LPFM) stations are authorized throughout the United States.

Maximum class limit determined from:  
Class: L1 Reference ERP: 0.1 kW Reference HAAT: 30 meters Distance to 60 dBu F(50,50) contour: 5.6 km

Exhibit A

Mitchell County Public Radio LLC

November 18, 2020

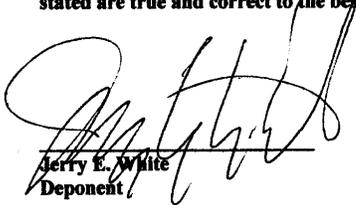
Page 6 of 6

**WUGC-LP**  
P. O. BOX 226  
Pelham, GA 31779

## Affidavit of Jerry E. White

Personally appeared before the undersigned attesting officer, duly authorized to administer oaths, the undersigned deponent, who, having been duly sworn, on oath states and deposes as follows:

That he has prepared and reviewed the attached Application and Technical Exhibit and that the facts herein stated are true and correct to the best of his knowledge and belief as of the date of this affidavit.

  
Jerry E. White  
Deponent

  
Thomas Graham  
Notary Public

11/18/2020

