

## WSAA Site Spacing

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REFERENCE
35 07 56.00 N.          CLASS = A
84 47 24.00 W.          Current  Spacings to 3rd Adj.
----- Channel 226 - 93.1 MHz -----

DISPLAY DATES
DATA 06-22-21
SEARCH 06-25-21

Call      Channel  Location      Azi      Dist      FCC      Margin
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WSAA      LIC      226A      Benton      TN      302.3      6.84      114.5      -107.7
WNOX      LIC      226A      Karns      TN      36.7      115.45     114.5      1.0
WNOX      CP       226A      Karns      TN      38.1      123.30     114.5      8.8
W227DG    LIC-D    227D      Dalton      GA      205.2      49.01      35.5      13.5
WUCG-LP   LIC      226L1     Blairsville  GA      110.8      80.44      66.5      13.9
WMPZ      LIC-Z    228A      Harrison    TN      269.3      45.59      30.5      15.1
WZGC      LIC-N    225C1     Atlanta      GA      164.2      152.68     132.5      20.2
W227DM    LIC      227D      Dunlap      TN      295.8      59.06      35.5      23.6
WXFC-LP   LIC      224L1     Blue Ridge   GA      126.2      52.21      28.5      23.7
WKXJ      LIC      279C3     Walden      TN      269.3      45.59      11.5      34.1
WMTN-LP   LIC      226L1     Sewanee      TN      275.7      100.94     66.5      34.4
W224AZ    LIC      224D      Chattanooga  TN      270.5      48.63      7.5      41.1
WPPL      LIC-D    280A      Blue Ridge   GA      125.2      50.95      9.5      41.5
WGMZ      LIC-N    226A      Glencoe      AL      217.1      163.50     114.5      49.0
-----
All separation margins include rounding

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## Distance to Contour Report

### Distance to Contour Report

Type of contour: FCC  
Location Variability: 50.0 %  
Time Variability: 50.0 %  
# of Radials Calculated: 360  
FCC Matching HAAT Calculation Used  
Field Strength: 60.00 dBuV/m

GLOBE 30 Second World Database

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Transmitter Information:

Call Letters: WSAA ASR 1051129  
File Number: BLH20080828AAD  
Latitude: 35-07-56 N  
Longitude: 084-47-24 W  
ERP: 4.60 kW  
Channel: 226  
Frequency: 93.1 MHz  
AMSL Height: 383.9 m  
Elevation: 310.9 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No  
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Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
0.0	29.15	122.4
45.0	31.24	143.4
90.0	26.44	98.2
135.0	25.55	91.4
180.0	28.96	120.5
225.0	27.63	108.1
270.0	27.74	109.0
315.0	28.93	120.2

Average HAAT for radials shown: 114.15m

Average Distance for radials shown: 28.205km

Choose a U.S. State or Possession: TN - Tennessee ▼

Station Class: 6 kW Class A ▼

114.3 meters Antenna Height Above Average Terrain (HAAT)

Find Result

Print

Clear Data

## Results:

**Calculated ERP (rounded per Section 73.212) = 4.600 kW**

Unrounded ERP = 4.583047 kW

Comments:

Class A FM stations are authorized throughout the United States.

Maximum class limit determined from:

Class: A Reference ERP: 6 kW Reference HAAT: 100 meters Distance to 60 dBu F(50,50) contour: 28.3 km

Overlap Population Report  
WSAA ASR 1051129 (226) / Benton, TN

Overlap Area Type: Intersection

Areas Included:

WSAA ASR 1051129 (226): FCC F(50-50) 60.00 dBu (FCC HAAT)

PLST: Benton, TN

Population Database: 2010 US Census (PL)

Total Population: 1,385

Overlap Area: 8.31 sq. km (Area determined using 0.01 km cells)

Area Description	Total Population	Total Area [sq. km]	Percent Population	Percent Area
WSAA ASR 1051129 (226)	161,510	2,584	0.9 %	0.3 %
PLST: Benton, TN	1,385	8.31	100.0 %	100.0 %

#### WSAA.P

ASR 1051129

Latitude: 35-07-56 N

Longitude: 084-47-24 W

ERP: 4.60 kW

Channel: 226

Frequency: 93.1 MHz

AMSL Height: 383.9 m

Elevation: 310.9 m

Horiz. Pattern: Omni

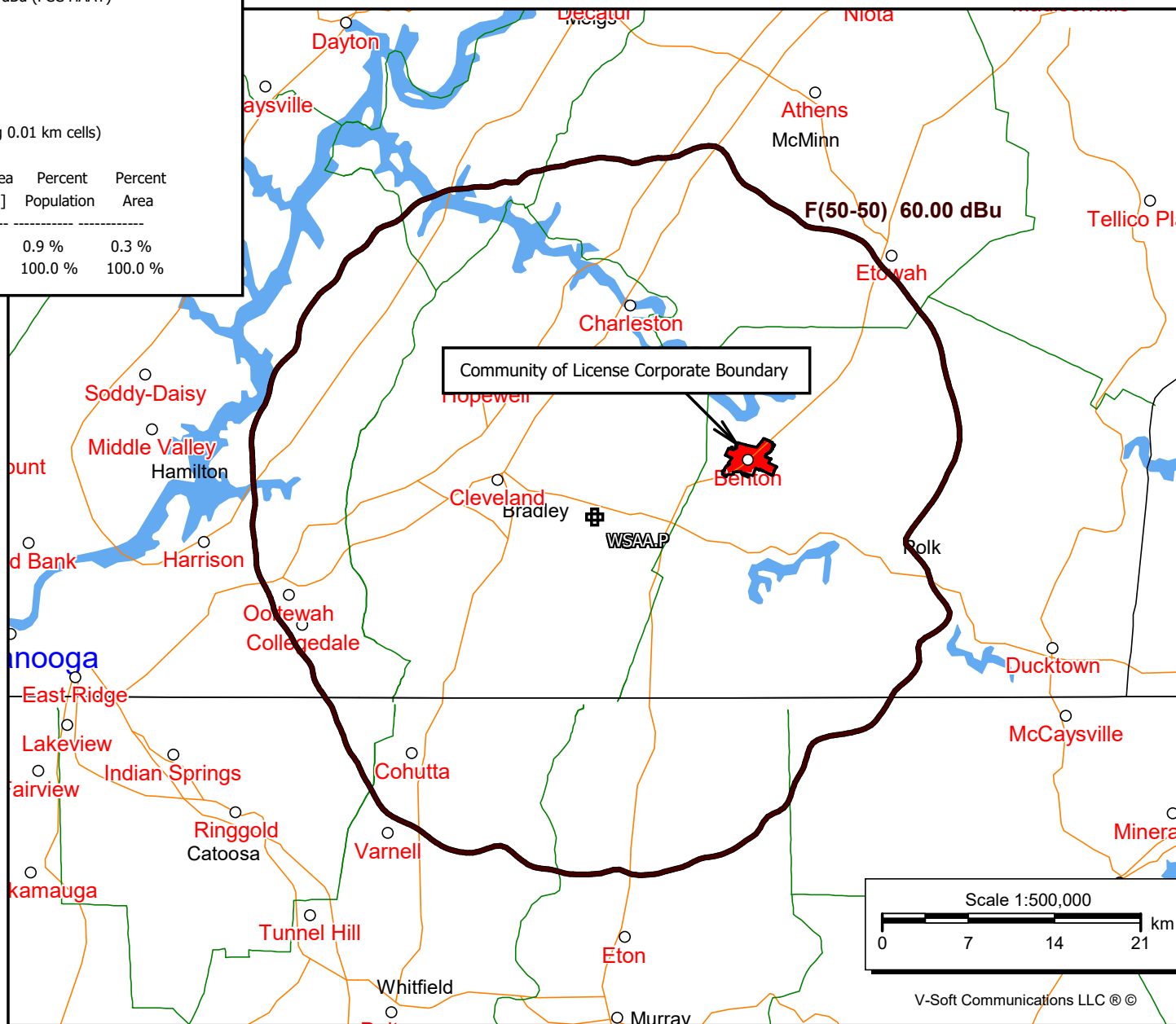
Vert. Pattern: No

Prop Model: None

## Community of License Coverage - Benton, TN

Note: WSAA Proposed 60dbu Service Contour encompasses 100% of the area and population of Benton, TN

Exhibit 3



## **Environmental Protection**

There are two main factors that need to be addressed in order to make sure that the environment around a proposed facility is protected.

### **1) Significant affects to the environment.**

EMF's proposed facility will be constructed on an existing tower (tower ID 1051129) and will cause no adverse effects to the surrounding environment at the site.

### **2) Human exposure to excess levels of radiofrequency radiation.**

The proposed facility is to be built using an ERI 2-bay full-waved circularly polarized rototiller style (EPA Type 3) antenna.

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

As can be seen in Exhibit 4-A, the proposed facility's maximum contribution to RF on the site is  $8.28\text{uW/cm}^2$  at a distance of 49 meters from the tower, which is 4.14% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the  $200\text{ uW/cm}^2$  limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

**RF Analysis: WSAA**  
**FIN 63493**

Site type: Proposed  
Channel: 226  
Class: A  
ERP: 4.6kw  
Antenna: ERI  
Model LPX-2E  
# of bays 2  
bay spacing 1.0  
COR AGL: 73m  
Polarization: Circular Pol

Distance From Tower (m)	WSAA Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	1.7303	1.73	0.865
1	1.7299	1.73	0.865
2	1.7290	1.73	0.864
3	1.7273	1.73	0.864
4	1.7250	1.73	0.863
5	1.7221	1.72	0.861
6	1.7185	1.72	0.859
7	1.8107	1.81	0.905
8	1.9677	1.97	0.984
9	2.1293	2.13	1.065
10	2.2951	2.30	1.148
11	2.4647	2.46	1.232
12	2.6375	2.64	1.319
13	2.8171	2.82	1.409
14	3.0281	3.03	1.514
15	3.2433	3.24	1.622
16	3.4620	3.46	1.731
17	3.6832	3.68	1.842
18	3.9064	3.91	1.953
19	4.1306	4.13	2.065
20	4.3478	4.35	2.174
21	4.5548	4.55	2.277
22	4.7598	4.76	2.380
23	4.9621	4.96	2.481
24	5.1608	5.16	2.580
25	5.3552	5.36	2.678
26	5.5445	5.54	2.772
27	5.7365	5.74	2.868
28	5.9332	5.93	2.967
29	6.1227	6.12	3.061
30	6.3041	6.30	3.152
31	6.4769	6.48	3.238
32	6.6404	6.64	3.320
33	6.7938	6.79	3.397
34	6.9368	6.94	3.468
35	7.1029	7.10	3.551
36	7.2587	7.26	3.629
37	7.4021	7.40	3.701
38	7.5327	7.53	3.766
39	7.6499	7.65	3.825
40	7.7537	7.75	3.877
41	7.8435	7.84	3.922
42	7.9193	7.92	3.960
43	8.0128	8.01	4.006
44	8.0965	8.10	4.048
45	8.1647	8.16	4.082

Distance From Tower (m)	0.0000 Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	8.2174	8.22	4.109
47	8.2547	8.25	4.127
48	8.2767	8.28	4.138
<b>49</b>	<b>8.2837</b>	<b>8.28</b>	<b>4.142</b>
50	8.2759	8.28	4.138
51	8.2537	8.25	4.127
52	8.1676	8.17	4.084
53	8.0645	8.06	4.032
54	7.9515	7.95	3.976
55	7.8293	7.83	3.915
56	7.6984	7.70	3.849
57	7.5594	7.56	3.780
58	7.4130	7.41	3.707
59	7.2598	7.26	3.630
60	7.1003	7.10	3.550
61	6.9353	6.94	3.468
62	6.7624	6.76	3.381
63	6.5845	6.58	3.292
64	6.4032	6.40	3.202
65	6.2192	6.22	3.110
66	6.0328	6.03	3.016
67	5.8448	5.84	2.922
68	5.6555	5.66	2.828
69	5.4656	5.47	2.733
70	5.2754	5.28	2.638
71	5.0856	5.09	2.543
72	4.8963	4.90	2.448
73	4.7082	4.71	2.354
74	4.5162	4.52	2.258
75	4.3267	4.33	2.163
76	4.1399	4.14	2.070
77	3.9561	3.96	1.978
78	3.7756	3.78	1.888
79	3.5986	3.60	1.799
80	3.4254	3.43	1.713
81	3.2560	3.26	1.628
82	3.0908	3.09	1.545
83	2.9298	2.93	1.465
84	2.7731	2.77	1.387
85	2.6209	2.62	1.310
86	2.4733	2.47	1.237
87	2.3304	2.33	1.165
88	2.1955	2.20	1.098
89	2.0648	2.06	1.032
90	1.9385	1.94	0.969
91	1.8166	1.82	0.908
92	1.6991	1.70	0.850
93	1.5860	1.59	0.793
94	1.4773	1.48	0.739
95	1.3730	1.37	0.687
96	1.2732	1.27	0.637
97	1.1778	1.18	0.589
98	1.0867	1.09	0.543
99	0.9999	1.00	0.500
100	0.9174	0.92	0.459