Educational Media Foundation
5700 West Oaks Boulevard
Rocklin, CA 95765

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 unregistered tower 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 a 2-bay circularly polarized half-wave spaced 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 22A, the proposed facility's maximum contribution to RF on the site is 6.379uW/cm^2 at a distance of 41 meters from the tower, which is 3.2% 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 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.

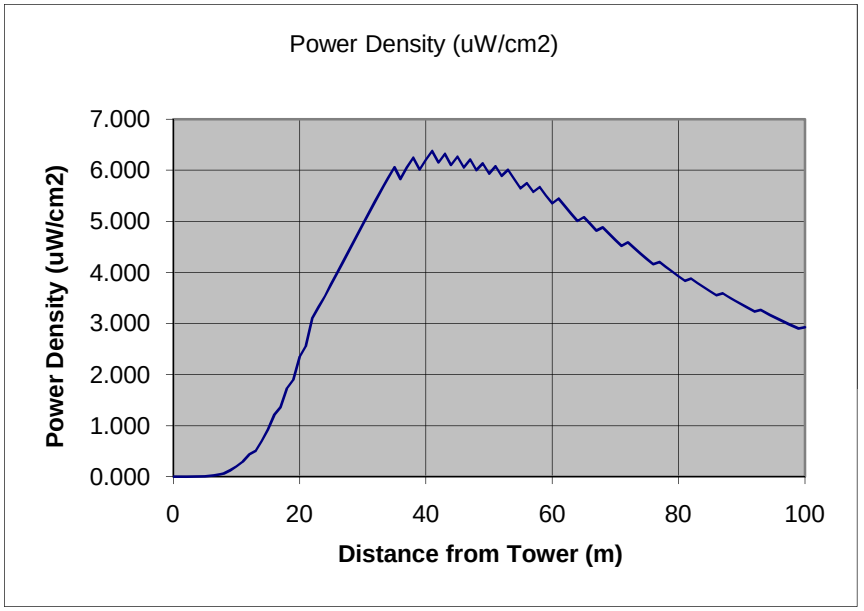
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	1.1 kW	% of OET-65	
Height above ground	26.0 meters	3.2%	Uncontrolled
Height above head	24.0 meters	0.6%	Controlled
Antenna Brand	**ERI**		
Antenna Model	**LP**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	24.0	0.001	1.1	0.000
1	88	24.0	0.001	1.1	0.000
2	85	24.1	0.002	2.2	0.000
3	83	24.2	0.004	4.4	0.001
4	81	24.3	0.007	7.7	0.003
5	78	24.5	0.012	13.2	0.009
6	76	24.7	0.018	19.8	0.019
7	74	25.0	0.025	27.5	0.037
8	72	25.3	0.033	36.3	0.063
9	69	25.6	0.048	52.8	0.129
10	67	26.0	0.061	67.1	0.202
11	65	26.4	0.075	82.5	0.297
12	63	26.8	0.092	101.2	0.432
13	62	27.3	0.101	111.1	0.503
14	60	27.8	0.121	133.1	0.697
15	58	28.3	0.142	156.2	0.925
16	56	28.8	0.166	182.6	1.217
17	55	29.4	0.179	196.9	1.361
18	53	30.0	0.206	226.6	1.732
19	52	30.6	0.22	242	1.898
20	50	31.2	0.25	275	2.353
21	49	31.9	0.266	292.6	2.556
22	47	32.6	0.299	328.9	3.099
23	46	33.2	0.316	347.6	3.320
24	45	33.9	0.333	366.3	3.537
25	44	34.7	0.351	386.1	3.769



26	43	35.4	0.369	405.9	3.996
27	42	36.1	0.388	426.8	4.238
28	41	36.9	0.407	447.7	4.475
29	40	37.6	0.426	468.6	4.705
30	39	38.4	0.445	489.5	4.929
31	38	39.2	0.465	511.5	5.169
32	37	40.0	0.485	533.5	5.401
33	36	40.8	0.505	555.5	5.627
34	35	41.6	0.525	577.5	5.847
35	34	42.4	0.545	599.5	6.059
36	34	43.3	0.545	599.5	5.829
37	33	44.1	0.566	622.6	6.051
38	32	44.9	0.586	644.6	6.246
39	32	45.8	0.586	644.6	6.016
40	31	46.6	0.606	666.6	6.200
41	30	47.5	0.626	688.6	6.379
42	30	48.4	0.626	688.6	6.153
43	29	49.2	0.646	710.6	6.323
44	29	50.1	0.646	710.6	6.104
45	28	51.0	0.666	732.6	6.265
46	28	51.9	0.666	732.6	6.054
47	27	52.8	0.686	754.6	6.208
48	27	53.7	0.686	754.6	6.003
49	26	54.6	0.705	775.5	6.134
50	26	55.5	0.705	775.5	5.937
51	25	56.4	0.725	797.5	6.079
52	25	57.3	0.725	797.5	5.888
53	24	58.2	0.744	818.4	6.008
54	24	59.1	0.744	818.4	5.824
55	24	60.0	0.744	818.4	5.648
56	23	60.9	0.762	838.2	5.747
57	23	61.8	0.762	838.2	5.577
58	22	62.8	0.78	858	5.673
59	22	63.7	0.78	858	5.510
60	22	64.6	0.78	858	5.353
61	21	65.6	0.798	877.8	5.445
62	21	66.5	0.798	877.8	5.293
63	21	67.4	0.798	877.8	5.148

64	21	68.4	0.798	877.8	5.008
65	20	69.3	0.815	896.5	5.083
66	20	70.2	0.815	896.5	4.948
67	20	71.2	0.815	896.5	4.818
68	19	72.1	0.831	914.1	4.879
69	19	73.1	0.831	914.1	4.754
70	19	74.0	0.831	914.1	4.633
71	19	74.9	0.831	914.1	4.517
72	18	75.9	0.848	932.8	4.587
73	18	76.8	0.848	932.8	4.474
74	18	77.8	0.848	932.8	4.365
75	18	78.7	0.848	932.8	4.261
76	18	79.7	0.848	932.8	4.159
77	17	80.7	0.863	949.3	4.206
78	17	81.6	0.863	949.3	4.109
79	17	82.6	0.863	949.3	4.014
80	17	83.5	0.863	949.3	3.922
81	17	84.5	0.863	949.3	3.834
82	16	85.4	0.878	965.8	3.880
83	16	86.4	0.878	965.8	3.794
84	16	87.4	0.878	965.8	3.711
85	16	88.3	0.878	965.8	3.631
86	16	89.3	0.878	965.8	3.553
87	15	90.2	0.892	981.2	3.589
88	15	91.2	0.892	981.2	3.514
89	15	92.2	0.892	981.2	3.440
90	15	93.1	0.892	981.2	3.369
91	15	94.1	0.892	981.2	3.301
92	15	95.1	0.892	981.2	3.234
93	14	96.0	0.905	995.5	3.262
94	14	97.0	0.905	995.5	3.197
95	14	98.0	0.905	995.5	3.134
96	14	99.0	0.905	995.5	3.073
97	14	99.9	0.905	995.5	3.014
98	14	100.9	0.905	995.5	2.956
99	14	101.9	0.905	995.5	2.900
100	13	102.8	0.918	1009.8	2.928