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 tower (tower ID 1236935) 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 Scala CA5-CP 1-bay circularly polarized full-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 antenna 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 24A, the proposed facility's maximum contribution to RF on the site is 6.035uW/cm^2 at a distance of 31 meters from the tower, which is 3.0175% 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.

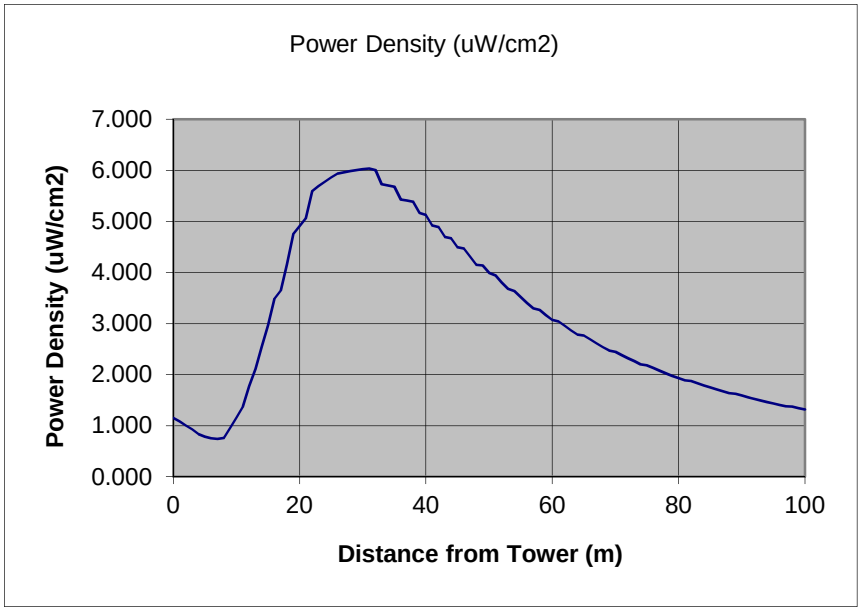
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	0.45 kW	% of OET-65	
Height above ground	20.0 meters	3.0%	Uncontrolled
Height above head	18.0 meters	0.6%	Controlled
Antenna Brand	**Scala**		
Antenna Model	**CA5-CP**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	18.0	0.157	70.785	1.148
1	87	18.0	0.153	68.805	1.081
2	84	18.1	0.148	66.735	1.008
3	81	18.2	0.143	64.485	0.927
4	77	18.4	0.138	61.965	0.838
5	74	18.7	0.135	60.66	0.783
6	72	19.0	0.134	60.48	0.754
7	69	19.3	0.136	60.975	0.740
8	66	19.7	0.14	63.045	0.760
9	63	20.1	0.161	72.45	0.962
10	61	20.6	0.18	81.135	1.152
11	59	21.1	0.201	90.585	1.369
12	56	21.6	0.235	105.89	1.778
13	54	22.2	0.263	118.44	2.112
14	52	22.8	0.296	133.34	2.538
15	50	23.4	0.329	148.19	2.969
16	48	24.1	0.367	165.11	3.488
17	47	24.8	0.386	173.57	3.648
18	45	25.5	0.423	190.49	4.156
19	43	26.2	0.465	209.39	4.750
20	42	26.9	0.486	218.84	4.909
21	41	27.7	0.507	228.29	5.056
22	39	28.4	0.548	246.74	5.592
23	38	29.2	0.568	255.74	5.691
24	37	30.0	0.588	264.74	5.780
25	36	30.8	0.608	273.74	5.860



26	35	31.6	0.628	282.74	5.933
27	34	32.4	0.646	290.84	5.962
28	33	33.3	0.664	298.94	5.986
29	32	34.1	0.682	307.04	6.006
30	31	35.0	0.7	315.14	6.022
31	30	35.8	0.718	323.24	6.035
32	29	36.7	0.734	330.26	6.005
33	29	37.6	0.734	330.26	5.729
34	28	38.5	0.749	337.23	5.703
35	27	39.4	0.765	344.21	5.677
36	27	40.2	0.765	344.21	5.428
37	26	41.1	0.781	351.23	5.408
38	25	42.0	0.796	358.2	5.386
39	25	43.0	0.796	358.2	5.162
40	24	43.9	0.81	364.5	5.125
41	24	44.8	0.81	364.5	4.918
42	23	45.7	0.824	370.8	4.887
43	23	46.6	0.824	370.8	4.696
44	22	47.5	0.838	377.1	4.670
45	22	48.5	0.838	377.1	4.493
46	21	49.4	0.852	383.4	4.471
47	21	50.3	0.852	383.4	4.307
48	21	51.3	0.852	383.4	4.152
49	20	52.2	0.866	389.7	4.136
50	20	53.1	0.866	389.7	3.991
51	19	54.1	0.876	394.07	3.940
52	19	55.0	0.876	394.07	3.806
53	19	56.0	0.876	394.07	3.679
54	18	56.9	0.886	398.48	3.637
55	18	57.9	0.886	398.48	3.519
56	18	58.8	0.886	398.48	3.406
57	18	59.8	0.886	398.48	3.298
58	17	60.7	0.895	402.84	3.266
59	17	61.7	0.895	402.84	3.166
60	17	62.6	0.895	402.84	3.070
61	16	63.6	0.905	407.21	3.043
62	16	64.6	0.905	407.21	2.953
63	16	65.5	0.905	407.21	2.867

64	16	66.5	0.905	407.21	2.784
65	15	67.4	0.915	411.62	2.764
66	15	68.4	0.915	411.62	2.687
67	15	69.4	0.915	411.62	2.613
68	15	70.3	0.915	411.62	2.541
69	15	71.3	0.915	411.62	2.473
70	14	72.3	0.922	414.99	2.447
71	14	73.2	0.922	414.99	2.383
72	14	74.2	0.922	414.99	2.321
73	14	75.2	0.922	414.99	2.261
74	14	76.2	0.922	414.99	2.204
75	13	77.1	0.93	418.37	2.184
76	13	78.1	0.93	418.37	2.130
77	13	79.1	0.93	418.37	2.078
78	13	80.0	0.93	418.37	2.027
79	13	81.0	0.93	418.37	1.979
80	13	82.0	0.93	418.37	1.932
81	13	83.0	0.93	418.37	1.887
82	12	84.0	0.937	421.79	1.873
83	12	84.9	0.937	421.79	1.831
84	12	85.9	0.937	421.79	1.789
85	12	86.9	0.937	421.79	1.749
86	12	87.9	0.937	421.79	1.710
87	12	88.8	0.937	421.79	1.673
88	12	89.8	0.937	421.79	1.637
89	11	90.8	0.945	425.16	1.627
90	11	91.8	0.945	425.16	1.593
91	11	92.8	0.945	425.16	1.559
92	11	93.7	0.945	425.16	1.527
93	11	94.7	0.945	425.16	1.495
94	11	95.7	0.945	425.16	1.465
95	11	96.7	0.945	425.16	1.435
96	11	97.7	0.945	425.16	1.406
97	11	98.7	0.945	425.16	1.378
98	10	99.6	0.952	428.54	1.373
99	10	100.6	0.952	428.54	1.346
100	10	101.6	0.952	428.54	1.320