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 1-bay vertically 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 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 9.949uW/cm^2 at a distance of 19 meters from the tower, which is 4.97% 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.

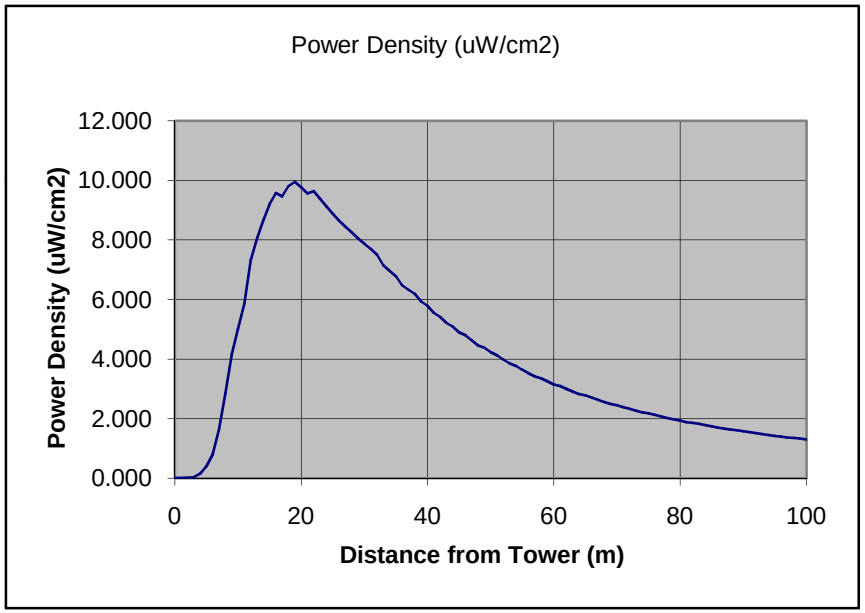
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Exhibit 22 - A // Detailed Report

ERP	0.42 kW	% of OET-65
Height above ground	20.0 meters	4.97% Uncontrolled
Height above head	18.0 meters	1.0% Controlled
Antenna Brand	**Scala**	
Antenna Model	**CA2-FM**	

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	18.0	0.02	8.4	0.017
1	87	18.0	0.02	8.4	0.017
2	84	18.1	0.022	9.24	0.021
3	81	18.2	0.028	11.76	0.033
4	77	18.4	0.06	25.2	0.149
5	74	18.7	0.101	42.42	0.410
6	72	19.0	0.143	60.06	0.797
7	69	19.3	0.209	87.78	1.643
8	66	19.7	0.281	118.02	2.855
9	63	20.1	0.347	145.74	4.171
10	61	20.6	0.389	163.38	5.006
11	59	21.1	0.431	181.02	5.856
12	56	21.6	0.494	207.48	7.315
13	54	22.2	0.532	223.44	8.053
14	52	22.8	0.566	237.72	8.642
15	50	23.4	0.6	252	9.199
16	48	24.1	0.629	264.18	9.569
17	47	24.8	0.643	270.06	9.461
18	45	25.5	0.673	282.66	9.805
19	43	26.2	0.697	292.74	9.949
20	42	26.9	0.71	298.2	9.767
21	41	27.7	0.722	303.24	9.559
22	39	28.4	0.745	312.9	9.636
23	38	29.2	0.755	317.1	9.374
24	37	30.0	0.765	321.3	9.122
25	36	30.8	0.775	325.5	8.878



26	35	31.6	0.785	329.7	8.644
27	34	32.4	0.796	334.32	8.441
28	33	33.3	0.807	338.94	8.245
29	32	34.1	0.818	343.56	8.057
30	31	35.0	0.829	348.18	7.876
31	30	35.8	0.84	352.8	7.703
32	29	36.7	0.849	356.58	7.501
33	29	37.6	0.849	356.58	7.156
34	28	38.5	0.857	359.94	6.961
35	27	39.4	0.865	363.3	6.776
36	27	40.2	0.865	363.3	6.479
37	26	41.1	0.874	367.08	6.329
38	25	42.0	0.883	370.86	6.186
39	25	43.0	0.883	370.86	5.928
40	24	43.9	0.891	374.22	5.788
41	24	44.8	0.891	374.22	5.554
42	23	45.7	0.898	377.16	5.418
43	23	46.6	0.898	377.16	5.206
44	22	47.5	0.906	380.52	5.095
45	22	48.5	0.906	380.52	4.902
46	21	49.4	0.914	383.88	4.803
47	21	50.3	0.914	383.88	4.627
48	21	51.3	0.914	383.88	4.459
49	20	52.2	0.923	387.66	4.386
50	20	53.1	0.923	387.66	4.232
51	19	54.1	0.928	389.76	4.130
52	19	55.0	0.928	389.76	3.990
53	19	56.0	0.928	389.76	3.856
54	18	56.9	0.933	391.86	3.769
55	18	57.9	0.933	391.86	3.646
56	18	58.8	0.933	391.86	3.529
57	18	59.8	0.933	391.86	3.418
58	17	60.7	0.939	394.38	3.354
59	17	61.7	0.939	394.38	3.251
60	17	62.6	0.939	394.38	3.152
61	16	63.6	0.944	396.48	3.090
62	16	64.6	0.944	396.48	2.999
63	16	65.5	0.944	396.48	2.912

64	16	66.5	0.944	396.48	2.828
65	15	67.4	0.95	399	2.783
66	15	68.4	0.95	399	2.705
67	15	69.4	0.95	399	2.630
68	15	70.3	0.95	399	2.559
69	15	71.3	0.95	399	2.490
70	14	72.3	0.956	401.52	2.454
71	14	73.2	0.956	401.52	2.390
72	14	74.2	0.956	401.52	2.328
73	14	75.2	0.956	401.52	2.268
74	14	76.2	0.956	401.52	2.210
75	13	77.1	0.962	404.04	2.182
76	13	78.1	0.962	404.04	2.128
77	13	79.1	0.962	404.04	2.076
78	13	80.0	0.962	404.04	2.026
79	13	81.0	0.962	404.04	1.977
80	13	82.0	0.962	404.04	1.931
81	13	83.0	0.962	404.04	1.886
82	12	84.0	0.968	406.56	1.865
83	12	84.9	0.968	406.56	1.822
84	12	85.9	0.968	406.56	1.781
85	12	86.9	0.968	406.56	1.741
86	12	87.9	0.968	406.56	1.703
87	12	88.8	0.968	406.56	1.665
88	12	89.8	0.968	406.56	1.629
89	11	90.8	0.974	409.08	1.614
90	11	91.8	0.974	409.08	1.580
91	11	92.8	0.974	409.08	1.547
92	11	93.7	0.974	409.08	1.514
93	11	94.7	0.974	409.08	1.483
94	11	95.7	0.974	409.08	1.453
95	11	96.7	0.974	409.08	1.423
96	11	97.7	0.974	409.08	1.395
97	11	98.7	0.974	409.08	1.367
98	10	99.6	0.98	411.6	1.357
99	10	100.6	0.98	411.6	1.331
100	10	101.6	0.98	411.6	1.305