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 1064760) 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 17A, the proposed facility's maximum contribution to RF on the site is .084uW/cm^2 at a distance of 100 meters from the tower, which is less than 1% 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.

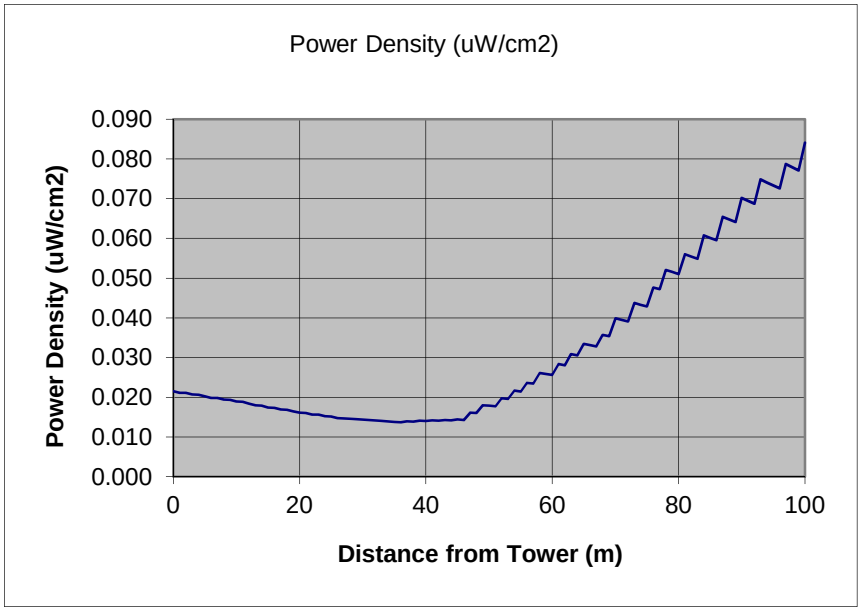
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	0.25 kW	% of OET-65	
Height above ground	100.0 meters	0.0%	Uncontrolled
Height above head	98.0 meters	0.0%	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	98.0	0.157	39.325	0.022
1	89	98.0	0.156	38.975	0.021
2	89	98.0	0.156	38.975	0.021
3	88	98.0	0.154	38.6	0.021
4	88	98.1	0.154	38.6	0.021
5	87	98.1	0.153	38.225	0.020
6	86	98.2	0.152	37.875	0.020
7	86	98.2	0.152	37.875	0.020
8	85	98.3	0.15	37.5	0.019
9	85	98.4	0.15	37.5	0.019
10	84	98.5	0.148	37.075	0.019
11	84	98.6	0.148	37.075	0.019
12	83	98.7	0.147	36.675	0.018
13	82	98.9	0.145	36.25	0.018
14	82	99.0	0.145	36.25	0.018
15	81	99.1	0.143	35.825	0.017
16	81	99.3	0.143	35.825	0.017
17	80	99.5	0.142	35.425	0.017
18	80	99.6	0.142	35.425	0.017
19	79	99.8	0.14	35.075	0.016
20	78	100.0	0.139	34.75	0.016
21	78	100.2	0.139	34.75	0.016
22	77	100.4	0.138	34.425	0.016
23	77	100.7	0.138	34.425	0.016
24	76	100.9	0.136	34.075	0.015
25	76	101.1	0.136	34.075	0.015



26	75	101.4	0.135	33.75	0.015
27	75	101.7	0.135	33.75	0.015
28	74	101.9	0.135	33.7	0.015
29	74	102.2	0.135	33.7	0.015
30	73	102.5	0.135	33.65	0.014
31	72	102.8	0.134	33.6	0.014
32	72	103.1	0.134	33.6	0.014
33	71	103.4	0.134	33.55	0.014
34	71	103.7	0.134	33.55	0.014
35	70	104.1	0.134	33.5	0.014
36	70	104.4	0.134	33.5	0.014
37	69	104.8	0.136	33.875	0.014
38	69	105.1	0.136	33.875	0.014
39	68	105.5	0.137	34.275	0.014
40	68	105.8	0.137	34.275	0.014
41	67	106.2	0.139	34.65	0.014
42	67	106.6	0.139	34.65	0.014
43	66	107.0	0.14	35.025	0.014
44	66	107.4	0.14	35.025	0.014
45	65	107.8	0.142	35.425	0.014
46	65	108.3	0.142	35.425	0.014
47	64	108.7	0.151	37.825	0.016
48	64	109.1	0.151	37.825	0.016
49	63	109.6	0.161	40.25	0.018
50	63	110.0	0.161	40.25	0.018
51	63	110.5	0.161	40.25	0.018
52	62	110.9	0.171	42.675	0.020
53	62	111.4	0.171	42.675	0.020
54	61	111.9	0.18	45.075	0.022
55	61	112.4	0.18	45.075	0.021
56	60	112.9	0.19	47.5	0.024
57	60	113.4	0.19	47.5	0.023
58	59	113.9	0.201	50.325	0.026
59	59	114.4	0.201	50.325	0.026
60	59	114.9	0.201	50.325	0.026
61	58	115.4	0.213	53.175	0.028
62	58	116.0	0.213	53.175	0.028
63	57	116.5	0.224	56	0.031

64	57	117.0	0.224	56	0.031
65	56	117.6	0.235	58.825	0.033
66	56	118.2	0.235	58.825	0.033
67	56	118.7	0.235	58.825	0.033
68	55	119.3	0.247	61.675	0.036
69	55	119.9	0.247	61.675	0.035
70	54	120.4	0.263	65.8	0.040
71	54	121.0	0.263	65.8	0.039
72	54	121.6	0.263	65.8	0.039
73	53	122.2	0.28	69.925	0.044
74	53	122.8	0.28	69.925	0.043
75	53	123.4	0.28	69.925	0.043
76	52	124.0	0.296	74.075	0.048
77	52	124.6	0.296	74.075	0.047
78	51	125.3	0.313	78.2	0.052
79	51	125.9	0.313	78.2	0.052
80	51	126.5	0.313	78.2	0.051
81	50	127.1	0.329	82.325	0.056
82	50	127.8	0.329	82.325	0.055
83	50	128.4	0.329	82.325	0.055
84	49	129.1	0.348	87.025	0.061
85	49	129.7	0.348	87.025	0.060
86	49	130.4	0.348	87.025	0.060
87	48	131.0	0.367	91.725	0.065
88	48	131.7	0.367	91.725	0.065
89	48	132.4	0.367	91.725	0.064
90	47	133.1	0.386	96.425	0.070
91	47	133.7	0.386	96.425	0.069
92	47	134.4	0.386	96.425	0.069
93	46	135.1	0.405	101.13	0.075
94	46	135.8	0.405	101.13	0.074
95	46	136.5	0.405	101.13	0.073
96	46	137.2	0.405	101.13	0.073
97	45	137.9	0.423	105.83	0.079
98	45	138.6	0.423	105.83	0.078
99	45	139.3	0.423	105.83	0.077
100	44	140.0	0.444	111.08	0.084