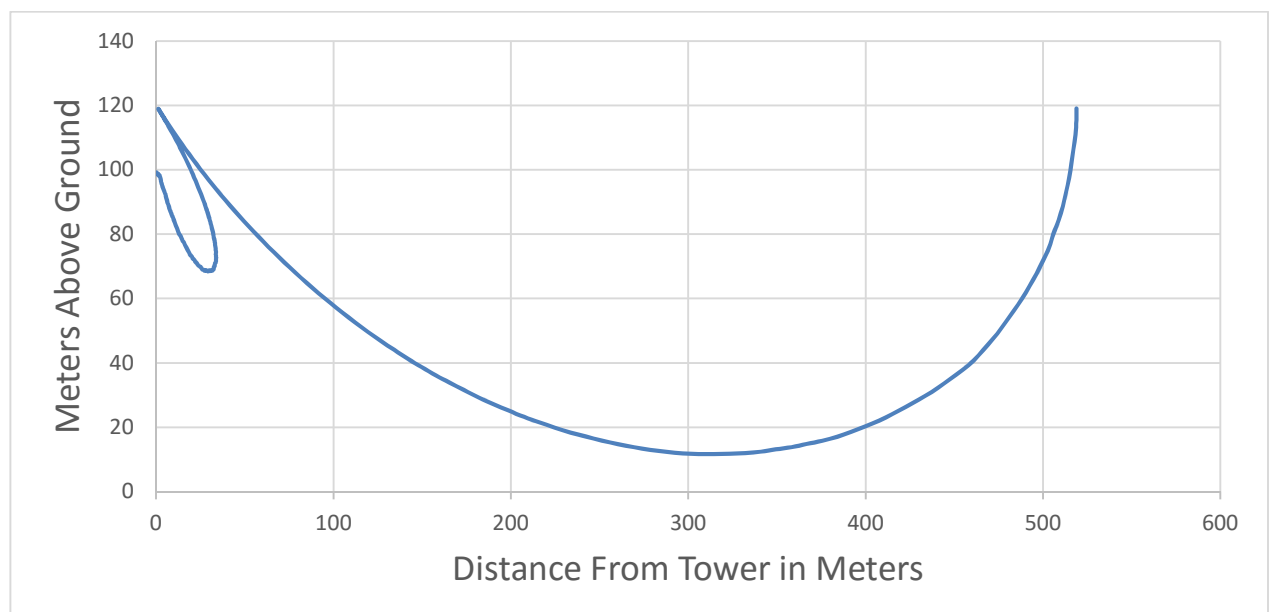


### **Second-Adjacent Channel Protection**

The proposed facility is located within the 60 dBu contour of second-adjacent channel station KWNN (252A, FCC ID 60427), Turlock, California which is protected in accordance with §74.1204(d) at a +40 dB level. KWNN's calculated field is 66.56 dBu at the proposed site based on an ERP of 2 KW and height above average terrain along a 297° radial from KWNN to the proposed site of 134 meters. The translator would require a field intensity of 106.56 dBu to cause interference to the KWN signal. Using the free-space formula to calculate distance to the proposed 106.56 dBu using an ERP of 250 watts we arrive at a worst-case potential interference area radius around the tower of 525 meters at 0° depression angle from horizontal.

The proposed three bay half-wave spaced antenna will be mounted at 120 meters above ground. The vertical plane pattern results in a minimum height above ground for the 106.56 dBu contour of 11.7 meters (38 feet) at 314.5 meters from the tower. There are no multi-story residences at or above this height in this area. The 106.56 dBu contour enters no residences and has zero population inside this predicted interference contour so the proposed operation is in compliance with §74.1204(d). See the graph and tabulation below for details.

### **Graph of 112.5 dBu contour with respect to ground elevation and distance from tower**



**Distance to contour, slant distance and ground clearance in meters**

<u>Dep (°)</u>	<u>Er(%)</u>	<u>DTC</u>	<u>Slant</u>	<u>Clearance</u>	<u>Dep (°)</u>	<u>Er(%)</u>	<u>DTC</u>	<u>Slant</u>	<u>Clearance</u>
0.1	100.0	518.86	68754.97	119.09	22.5	73.9	383.44	313.58	15.95
0.5	100.0	518.86	13751.16	115.47	23	72.8	377.73	307.12	17.21
1	99.9	518.34	6875.84	110.95	23.5	71.8	372.54	300.94	18.41
1.5	99.9	518.34	4584.19	106.46	24	70.7	366.83	295.03	19.97
2	99.8	517.82	3438.45	101.98	24.5	69.6	361.13	289.37	21.67
2.5	99.7	517.30	2751.07	97.53	25	68.6	355.94	283.94	23.30
3	99.5	516.27	2292.88	93.12	25.5	67.5	350.23	278.74	25.29
3.5	99.4	515.75	1965.65	88.74	26	66.4	344.52	273.74	27.20
4	99.2	514.71	1720.27	84.42	26.5	65.3	338.82	268.94	29.25
4.5	99.0	513.67	1529.46	80.19	27	64.2	333.11	264.32	31.67
5	98.8	512.63	1376.85	75.95	27.5	63.1	327.40	259.88	33.99
5.5	98.5	511.08	1252.01	71.86	28	62.0	321.69	255.61	36.20
6	98.2	509.52	1148.01	67.83	28.5	60.9	315.99	251.49	38.79
6.5	97.9	507.96	1060.04	63.91	29	59.8	310.28	247.52	41.27
7	97.6	506.41	984.66	60.05	29.5	58.8	305.09	243.69	44.12
7.5	97.2	504.33	919.36	56.34	30	57.7	299.38	240.00	46.84
8	96.9	502.78	862.24	52.70	30.5	56.5	293.16	236.44	49.69
8.5	96.5	500.70	811.86	49.14	31	55.3	286.93	232.99	52.66
9	96.1	498.62	767.09	45.73	31.5	54.2	281.22	229.67	55.75
9.5	95.6	496.03	727.06	42.41	32	53.0	275.00	226.45	58.69
10	95.2	493.96	691.05	39.27	32.5	51.9	269.29	223.34	61.73
10.5	94.5	490.32	658.49	36.41	33	50.8	263.58	220.33	64.89
11	93.9	487.21	628.90	33.67	33.5	49.6	257.35	217.42	68.17
11.5	93.2	483.58	601.90	31.04	34	48.5	251.65	214.59	71.26
12	92.5	479.95	577.17	28.63	34.5	47.4	245.94	211.86	74.45
12.5	91.8	476.31	554.43	26.34	35	46.3	240.23	209.21	77.74
13	91.1	472.68	533.45	24.17	35.5	45.2	234.52	206.65	80.83
13.5	90.4	469.05	514.04	22.13	36	44.0	228.30	204.16	84.01
14	89.6	464.90	496.03	20.33	36.5	42.9	222.59	201.74	87.29
14.5	88.9	461.27	479.27	18.67	37	41.8	216.88	199.40	90.65
15	88.1	457.12	463.64	17.13	37.5	40.7	211.18	197.12	93.78
15.5	87.3	452.97	449.04	15.87	38	39.6	205.47	194.91	97.00
16	86.4	448.30	435.35	14.88	38.5	38.5	199.76	192.77	100.30
16.5	85.5	443.63	422.51	13.90	39	37.5	194.57	190.68	103.35
17	84.6	438.96	410.44	13.20	39.5	36.4	188.87	188.66	106.47
17.5	83.8	434.81	399.06	12.50	40	35.4	183.68	186.69	109.33
18	82.8	429.62	388.33	12.09	40.5	34.4	178.49	184.77	112.25
18.5	81.9	424.95	378.19	11.83	41	33.3	172.78	182.91	115.23
19	81.0	420.28	368.59	11.72	41.5	32.3	167.59	181.10	118.28
19.5	80.1	415.61	359.49	11.75	42	31.3	162.40	179.34	118.96
20	79.1	410.42	350.86	11.93	42.5	30.3	157.21	177.62	116.14
20.5	78.1	405.23	342.65	12.43	43	29.3	152.03	175.95	113.63
21	77.1	400.04	334.85	13.08	43.5	28.4	147.36	174.33	110.71
21.5	76.0	394.33	327.42	13.89	44	27.4	142.17	172.75	108.11
22	75.0	389.15	320.34	14.85	44.5	26.5	137.50	171.21	105.82

<u>Dep (°)</u>	<u>Er(%)</u>	<u>DTC</u>	<u>Slant</u>	<u>Clearance</u>	<u>Dep (°)</u>	<u>Er(%)</u>	<u>DTC</u>	<u>Slant</u>	<u>Clearance</u>
45	25.6	132.83	169.71	103.49	67.5	1.6	8.30	129.89	73.50
45.5	24.7	128.16	168.24	101.13	68	1.4	7.26	129.42	74.30
46	23.8	123.49	166.82	98.73	68.5	1.2	6.23	128.97	75.10
46.5	23.0	119.34	165.43	96.67	69	1.0	5.19	128.54	75.92
47	22.1	114.67	164.08	94.58	69.5	0.9	4.67	128.11	76.75
47.5	21.3	110.52	162.76	92.46	70	0.7	3.63	127.70	77.58
48	20.5	106.37	161.48	90.31	70.5	0.6	3.11	127.30	77.94
48.5	19.7	102.22	160.22	88.52	71	0.4	2.08	126.91	78.79
49	18.9	98.06	159.00	86.71	71.5	0.3	1.56	126.54	79.65
49.5	18.2	94.43	157.81	85.28	72	0.2	1.04	126.18	80.03
50	17.4	90.28	156.65	83.43	72.5	0.1	0.52	125.82	80.91
50.5	16.7	86.65	155.52	81.97	73	0.0	0.05	125.48	81.79
51	16.0	83.02	154.41	80.48	73.5	0.1	0.52	125.15	82.69
51.5	15.3	79.39	153.33	79.39	74	0.2	1.04	124.84	83.59
52	14.6	75.75	152.28	77.89	74.5	0.3	1.56	124.53	84.50
52.5	14.0	72.64	151.26	76.78	75	0.4	2.08	124.23	85.42
53	13.3	69.01	150.26	75.66	75.5	0.4	2.08	123.95	85.84
53.5	12.7	65.90	149.28	74.54	76	0.5	2.59	123.67	86.77
54	12.1	62.78	148.33	73.83	76.5	0.5	2.59	123.41	87.21
54.5	11.5	59.67	147.40	72.69	77	0.6	3.11	123.16	88.15
55	11.0	57.07	146.49	71.97	77.5	0.6	3.11	122.91	89.10
55.5	10.4	53.96	145.61	71.25	78	0.7	3.63	122.68	89.55
56	9.9	51.37	144.75	70.96	78.5	0.7	3.63	122.46	90.51
56.5	9.3	48.25	143.90	70.24	79	0.7	3.63	122.25	91.48
57	8.8	45.66	143.08	69.96	79.5	0.7	3.63	122.04	92.45
57.5	8.3	43.07	142.28	69.24	80	0.8	4.15	121.85	92.92
58	7.9	40.99	141.50	68.96	80.5	0.8	4.15	121.67	93.39
58.5	7.4	38.40	140.74	68.68	81	0.8	4.15	121.50	93.86
59	7.0	36.32	140.00	68.85	81.5	0.8	4.15	121.33	94.34
59.5	6.5	33.73	139.27	68.59	82	0.8	4.15	121.18	94.82
60	6.1	31.65	138.56	68.77	82.5	0.8	4.15	121.04	95.31
60.5	5.7	29.58	137.87	68.52	83	0.8	4.15	120.90	95.80
61	5.3	27.50	137.20	68.72	83.5	0.9	4.67	120.78	96.29
61.5	5.0	25.94	136.55	68.93	84	0.9	4.67	120.66	97.30
62	4.6	23.87	135.91	68.69	84.5	0.9	4.67	120.56	97.79
62.5	4.3	22.31	135.29	68.91	85	0.8	4.15	120.46	98.29
63	3.9	20.24	134.68	69.15	85.5	0.9	4.67	120.37	98.28
63.5	3.6	18.68	134.09	69.85	86	0.9	4.67	120.29	98.26
64	3.3	17.12	133.51	70.10	86.5	0.9	4.67	120.22	98.25
64.5	3.1	16.08	132.95	70.36	87	0.9	4.67	120.16	98.76
65	2.8	14.53	132.41	71.09	87.5	0.9	4.67	120.11	98.75
65.5	2.5	12.97	131.87	71.37	88	0.9	4.67	120.07	98.74
66	2.3	11.93	131.36	72.13	88.5	0.9	4.67	120.04	98.73
66.5	2.0	10.38	130.85	72.42	89	0.9	4.67	120.02	98.73
67	1.8	9.34	130.36	73.19	89.5	0.9	4.67	120.00	99.25