

CH 6 TV Protection Study

The CH 6 TV station that is within the required study distance of 196 km for FM CH 208 is as follows:

KOIN (LIC)	45-30-58	100.0 kW ERP	Separation distance: 82.37 km
Portland, OR	122-43-59	533 m HAAT	CH 6 azimuth to FM: 104.7 deg.
BLCT2115		611 m COR AMSL	FM azimuth to CH 6: 284.7 deg.

The proposed FM will operate on CH 208 with a maximum ERP of 7.0 kW (DA), vertical-polarization only, at a COR AMSL of 1853 meters. Per Section 73.525, the maximum permissible vertically polarized ERP of 7.0 kW (DA) was calculated by multiplying the maximum horizontally polarized ERP of .175 kW by 40, as the FM predicted interference area lies entirely outside the limits of a city of 50,000 persons or more.

The tabulation of the HAAT & distances to the affected CH 6 protected contours from 90 through 120 degrees is as follows:

Azimuth	90	100	110	120
HAAT (m)	531.9	532.0	529.8	526.9
CH 6 Protected	Distance (km)			
55 dBu	100.8	100.8	100.6	100.4
56 dBu	98.2	98.2	98.1	97.8
57 dBu	95.7	95.7	95.6	95.4
58 dBu	93.3	93.3	93.2	93.0
59 dBu	91.0	91.0	90.8	90.6
60 dBu	88.6	88.6	88.5	88.3
61 dBu	86.3	86.3	86.2	86.0
62 dBu	84.0	84.0	83.8	83.7
63 dBu	81.6	81.6	81.5	81.3
64 dBu	79.2	79.2	79.0	78.9
65 dBu	76.7	76.7	76.6	76.4
66 dBu	74.2	74.2	74.1	73.9
67 dBu	71.7	71.7	71.6	71.4
68 dBu	69.2	69.2	69.1	68.9
69 dBu	66.7	66.7	66.6	66.4

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The tabulation of the HAAT & distances of the FM interference contours is as follows:

45-19-58 / 121-42-48
.175 kW maximum horizontally polarized ERP
(7.0 kW (DA) maximum permissible vertically polarized ERP)
510 meters HAAT 1853 meters COR AMSL

Azimuth	CH 6 Protected dBu	U/D ratio dB	FM Interference dBu	HAAT (m)	Dist. (km)
0	63	4.9	67.9	85.5	4.7
10	62	5.5	67.5	69.8	4.4
20	62	5.5	67.5	118.6	5.7
30	62	5.5	67.5	74.0	4.5
40	61	6.3	67.3	171.6	6.9
50	60	7.0	67.0	255.3	8.6
60	59	7.8	66.8	330.0	9.9
70	59	7.8	66.8	329.6	9.9
80	59	7.8	66.8	321.0	9.8
90	58	8.6	66.6	362.3	10.5
100	58	8.6	66.6	417.2	11.1
110	58	8.6	66.6	368.8	10.6
120	57	9.5	66.5	427.4	12.8
130	56	10.4	66.4	540.3	16.6
140	55	11.3	66.3	638.4	21.4
150	56	10.4	66.4	628.9	22.1
160	57	9.5	66.5	579.6	20.9
170	58	8.6	66.6	584.9	20.9
180	59	7.8	66.8	686.2	22.7
190	60	7.0	67.0	672.3	22.1
200	62	5.5	67.5	722.0	22.3
210	64	4.4	68.4	661.7	20.0
220	65	3.8	68.8	685.7	19.8
230	66	3.4	69.4	647.2	18.4
240	67	3.0	70.0	672.2	18.0
250	68	2.6	70.6	882.2	19.7
260	69	2.3	71.3	924.9	17.9
270	68	2.6	70.6	748.7	14.1
280	67	3.0	70.0	599.4	11.5
290	67	3.0	70.0	834.2	10.8
300	66	3.4	69.4	822.5	9.5
310	66	3.4	69.4	720.6	7.6
320	65	3.8	68.8	638.1	7.8
330	65	3.8	68.8	542.7	8.9
340	65	3.8	68.8	582.7	10.7
350	64	4.4	68.4	280.9	8.3

The FM predicted interference area contains 1,154 persons (2000 Census), therefore, the proposed FM is in compliance with the CH 6 TV protection requirements of Section 73.525. Page 3 contains a map showing the affected CH 6 protected contours and the FM predicted interference area.

A map of the Hood River area, Oregon, showing radio frequency contours and protected areas. The map includes the following locations and features:

- Locations:** SCAPPOOSE, Skyline, Hood River, MOSIER, Odell, CITY OF THE DALLS, The Dalles, Sandy, Mounx Hood, Parkdale, WASCO, CLACKAMAS, Estacada, Warm Springs, SILVERTON, Mount Angel, MOLALLA, SCOTTS MILLS, HUBBARD, DONALD, AURORA, ST. PAUL, TURNER, CLIMITY, Mulino, Colton, Corbett, Cascade Locks, Dee, and Hood River.
- Radio Frequency Contours:**
 - CH 6 Protected Contours:** Indicated by blue dots and lines, with frequencies 45, 30, 122, and 30.
 - FM Predicted Interference Area:** A red shaded area with a red outline, labeled "FM Predicted Interference Area".
 - CH 6 Protected Contours:** A series of brown diagonal lines forming a protective boundary.
- Other Features:**
 - KOIN CH 6:** A blue dot representing a radio station.
 - KPFR FM:** A blue dot representing a radio station.
 - FM Predicted Interference Area:** A red shaded area with a red outline, labeled "FM Predicted Interference Area".
 - CH 6 Protected Contours:** A series of brown diagonal lines forming a protective boundary.

