

**WESTERN OREGON RADIO CLUB, INC.  
MINOR CHANGE TO LICENSED FACILITY  
KISN-LP 95.1 FM PORTLAND, ORE  
FAC ID 195134**

**PARAMETERS**

Channel	236
New Location:	45° 27' 16.1" N 122° 33' 4.7" W -- NAD 83
Antenna AGL	55.5 m
Tower Height	54.8 m (structural support)
Total Structure	56 m
Type:	Lattice, Self Support
Antenna	Shively 6812B
Antenna Ground	332 m
Antenna COR	387.5 m
HAAT	261 m (see Figure 1)
Power	2 w (see Figure 2)
ASR	N/A

PROPOSED ANTENNA IS MOVING APPROX 12.5 METERS SW

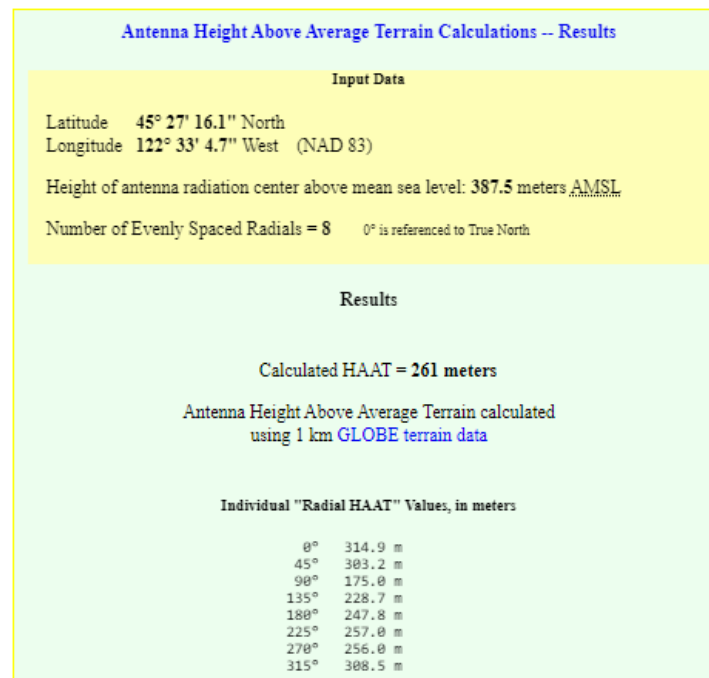


Figure 1: FCC HAAT Calculation from FCC website

Select Contour Type: F(50,50) Service Contour-- FM and NTSC (analog) TV  
F(50,10) Interfering Contour  
F(50,90) Digital TV Service Contour

Select Channel Range: (not TV Virtual Channel) FM Radio or TV Transmit Channels 2-6  
TV Transmit Channels 7-13  
TV Transmit Channels 14-69

Find This: Field Strength, given a Distance (in km)  
Distance, Given a Field Strength (in dBu)  
FM ERP, given Distance and Field Strength [F(50,50) Service Contour]

ERP (kW)  Distance (km)

HAAT (meters)  Field (dBu)

Results:

Calculated ERP (rounded per Section 73.212) = 0.002 kW  
(FM 60 dBu Service Contour only)

Unrounded ERP = 0.001698 kW

Figure 2: FCC Power Calculation per FCC Website

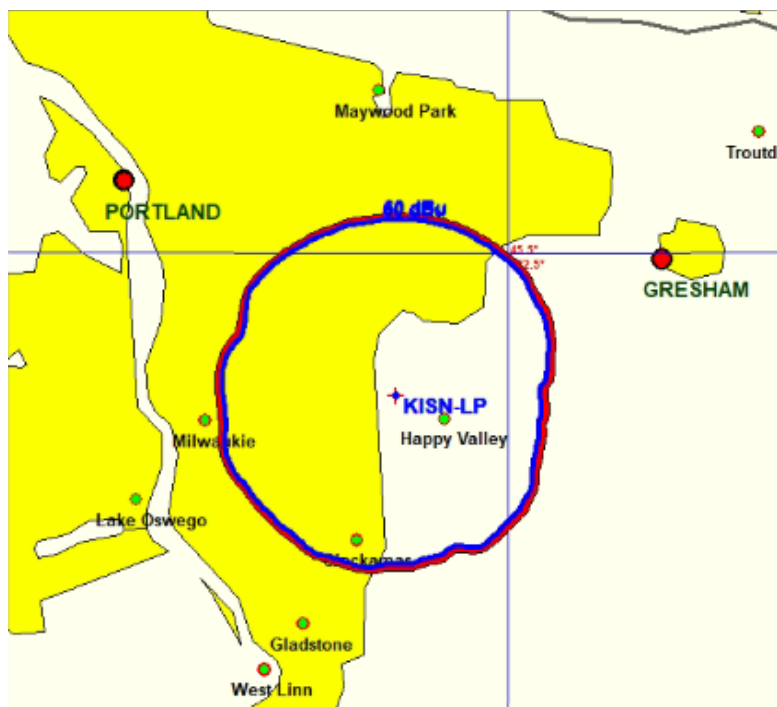


Figure 3: FCC 60 dBu F(50,50), Blue Current, Red Proposed

SPACING

Western Oregon Radio Club, Inc

REFERENCE45 27 16.40 N.122 33 04.30 W.----- Channel 236 - 95.1 MHz -----

CLASS = L1Current Spacings to 2nd Adj.

DISPLAY DATESDATA 05-27-22SEARCH 06-05-22

Call	Channel	Location	Azi	Dist	FCC	Margin
KBFF	LIC 238C0	Portland	OR 288.7	11.91	83.5	-71.6
KNRK	LIC-Z 234C2	Camas	WA 288.7	11.91	52.5	-40.6
KISN-LP	LIC 236L1	Portland	OR 0.0	0.00	23.5	-23.5
NEW	CP 236C3	Odell	OR 74.2	87.39	77.5	9.9
KSND	LIC 236C3	Monmouth	OR 233.2	104.23	77.5	26.7
AU9861581VAC	236A	Trout Lake	WA 48.7	101.56	66.5	35.1
AL11255	ALO 236A	Trout Lake	WA 48.7	101.56	66.5	35.1
K235CU	LIC 235D	Longview	WA 336.7	72.08	20.5	51.6
KBGE	LIC-N 235C3	Cannon Beach	OR 297.7	121.36	66.5	54.9
KITI-FM	LIC-N 236A	Winlock	WA 343.5	126.34	66.5	59.8
KZAS-LP	LIC 236L1	Hood River	OR 70.5	84.80	23.5	61.3

Reference station has protected zone issue: Canada- AM tower  
All separation margins include rounding  
\* See second adjacent waiver request

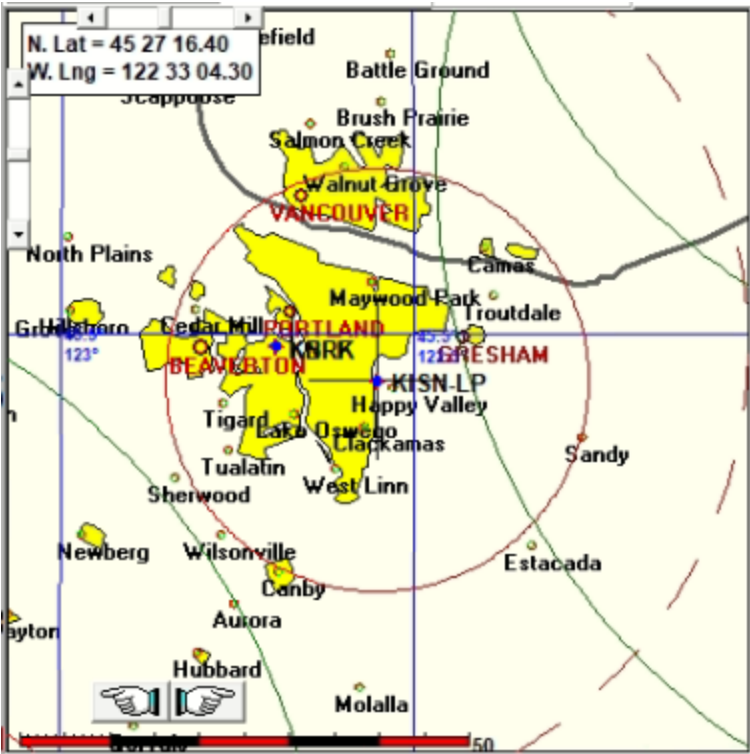


Figure 4: Spacing

## TOWAIR

DETERMINATION Results	
Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.	
Your Specifications	
NAD83 Coordinates	
Latitude	45-27-16.1 north
Longitude	122-33-04.7 west
Measurements (Meters)	
Overall Structure Height (AGL)	56
Support Structure Height (AGL)	54.8
Site Elevation (AMSL)	332
Structure Type	
LTOWER - Lattice Tower	

Figure 5: Towair Pass

## SECOND ADJACENT WAIVER REQUEST

License respectfully requests a "second adjacent channel waiver" with regards to Section 47 C.F.R. Section 73.807 of the FCC rules based upon the "Living Way" precedence (Living Way Ministries, Inc., Memorandum Opinion and Order, 17 FCC Red 17054, 17056, ¶ 5 (2002), recon. denied 23 FCC Red 15070 (2008)). This will be accomplished by using Free Space methodology of calculation.

Using U/D methodology, at the proposed KISN-LP transmitter location KBFF has a signal strength of 97.7 dBu and KNRK has a signal strength of 87.0 dBu. Interference will occur when the lesser signal strength (KNRK) interfering signal exceeds the desired signal by 40 dbu. So the area of predicted interference would then be bounded by the 127 dBu contour.

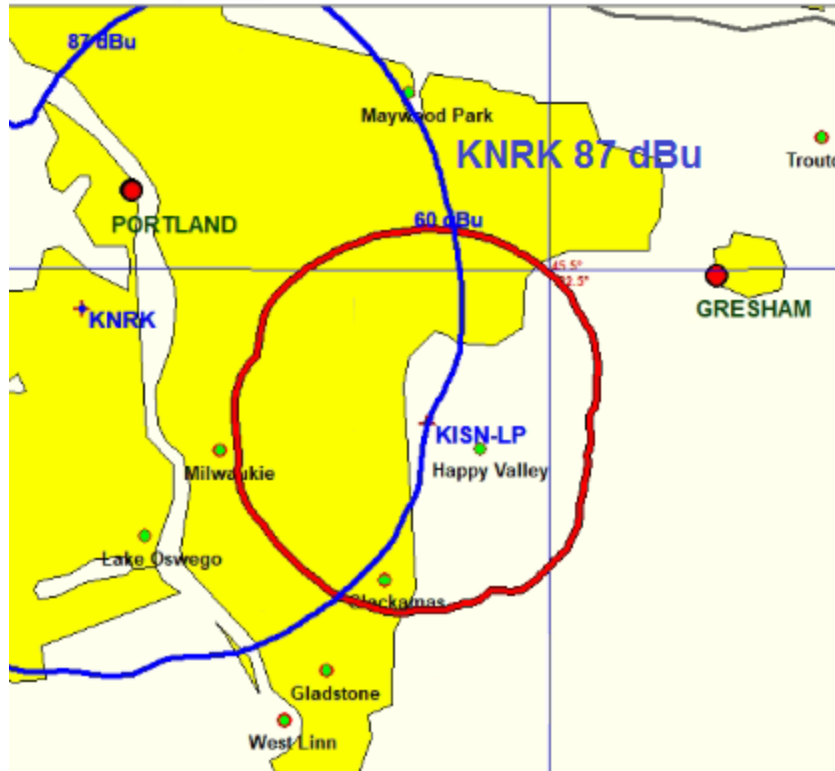


Figure 6: Fields strength at proposed site of second adjacent channel

The distance to this contour, using free space method:

$D = (7.01 \cdot P^{1/2}) / E$ , where P is power (watts), E is field strength (v/m), and D is distance to contour (meters):

$P = 2w$ ,  $E = 127 \text{ dBu}$   $D = 4.4 \text{ meters}$

The interference radius resides totally above ground on the tower.

Due to zero population within this radiation radius, this meets the "Living Way" Criteria to qualify for a Waiver of 47 C.F.R. Section 73.807.

## NON-IONIZING ELECTROMAGNETIC RADIATION

The OER program FM Model for Windows Vers 2.1 Beta was used to determine the maximum predicted RF exposure. The maximum predicted RF exposure for a human standing on the ground would be  $0.03 \mu\text{W}/\text{cm}^2$  at 14.4 m. This represents less than 5% of the FCC Maximum Permissible Exposure (MPE) of  $200 \mu\text{W}/\text{cm}^2$  for uncontrolled environments. 47 CFR 1.307(b)(3) exempts applicants from preparing an Environmental Assessment when the predicted exposure levels would be less than 5% of the FCC limits.

