

OREGON AMATEUR RADIO CLUB
KQRZ-LP TIGARD, ORE
FAC ID 134266

MINOR MODIFICATION

Channel 264
New Location: 45 24 49.00 N. 122 47 03.90 W. -- NAD 83
Antenna AGL 33.5 m
Tower AGL 36.6 m
Antenna Ground 121 m
Antenna COR 154.5 m
HAAT 23 m (see below)
Power 100 w
Minor Change: 8.2 km move

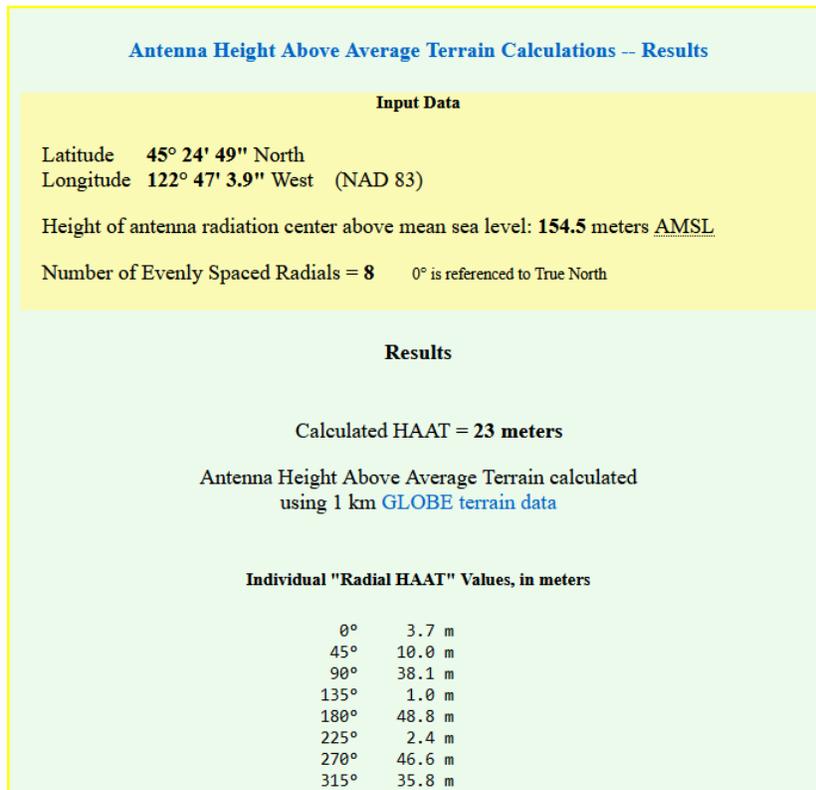


Figure 1: FCC HAAT Calculation

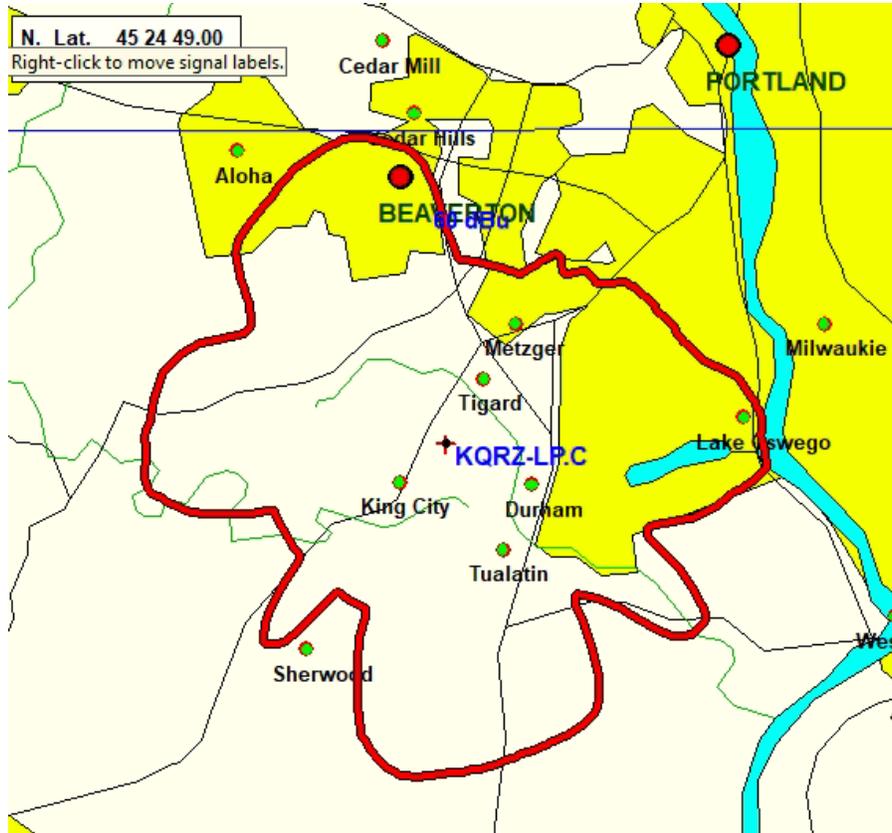


Figure 2: Proposed 60 dBu F(50,50)

TOWAIR (PASS)

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	45-24-49.0 north
Longitude	122-47-03.9 west
Measurements (Meters)	
Overall Structure Height (AGL)	36.6
Support Structure Height (AGL)	36.6
Site Elevation (AMSL)	121
Structure Type	
LTOWER - Lattice Tower	

FIGURE 3: SPACING

Oregon Amateur Radio Club

REFERENCE		DISPLAY DATES
45 24 49.00 N.	CLASS = L1	DATA 01-11-24
122 47 03.90 W.	Current Spacings to 2nd Adj.	SEARCH 02-19-24
----- Channel 264 - 100.7 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
KXL-FM	LIC	266C	Portland	OR	18.9 12.03	92.5 -80.5
KKRZ	LIC	262C	Portland	OR	13.5 12.43	92.5 -80.1
KQRZ-LP	CP	264L1	Hillsboro	OR	304.2 7.49	23.5 16.0
KQRZ-LP	LIC	264L1	Hillsboro	OR	306.5 8.23	23.5 15.3
KBSF-LP	LIC	264L1	Portland	OR	66.3 25.49	23.5 2.0
K264CU	LIC-D	264D	Kelso	WA	0.6 66.98	38.5 28.5
K264AA	LIC-D	264D	Salem	OR	203.2 67.53	38.5 29.0
KPPT-FM	LIC	264C2	Depoe Bay	OR	234.1 123.56	90.5 33.1

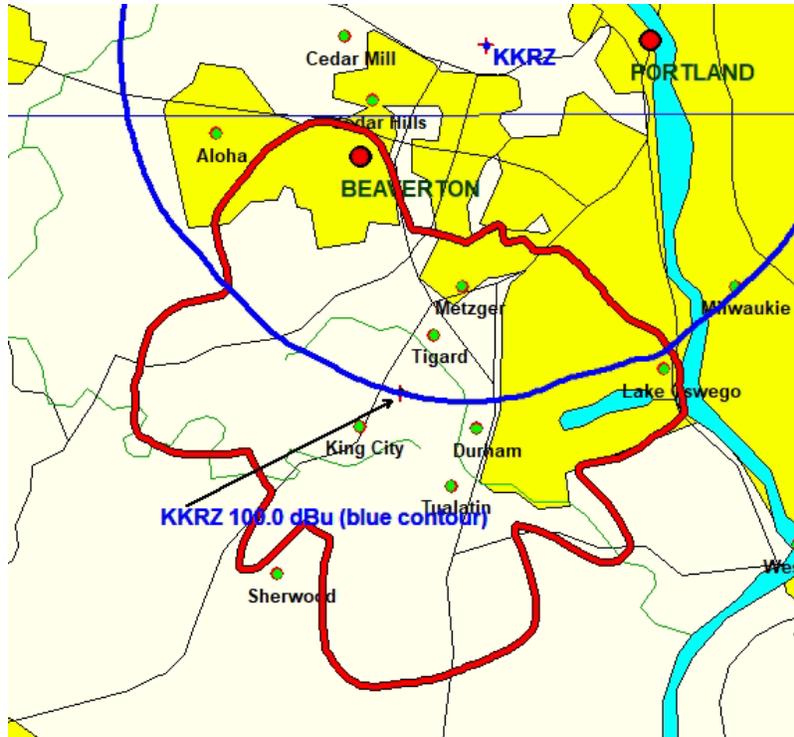
Reference station has protected zone issue: Canada
All separation margins include rounding

* See second adjacent waiver request

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 KQRZ-LP transmitter location KKRZ has a signal strength of 100.0 dBu and KXL has a signal strength of 100.9 dBu. Interference will occur when the lesser signal strength (KXL) interfering signal exceeds the desired signal by 40 dBu. So the area of predicted interference would then be bounded by the 140.0 dBu contour.



The distance to this contour, using free space method:
 $D = (7.01 * P^{1/2}) / E$, where P is power (watts), E is field strength (v/m),
 and D is distance to contour (meters):

P = 100 w, E = 140 dBu D = 7 meters

The antenna is 33.5 m above ground. The interference radius of 7 m is entirely above ground. 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. Thus, the applicant requests a second adjacent waiver based upon evidence no interference is proposed.