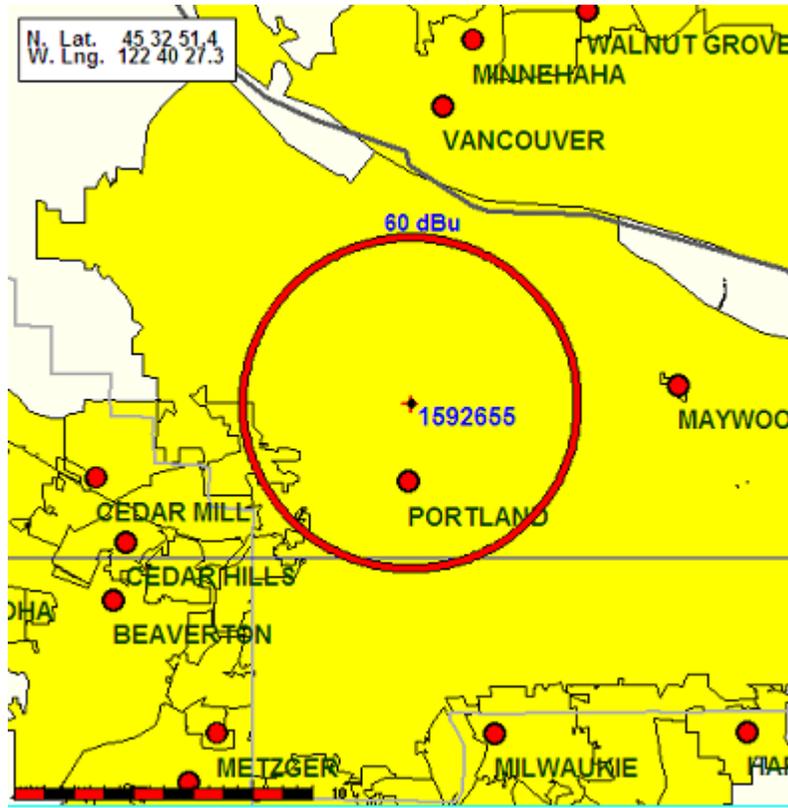


**PROPOSED MINOR AMENDMENT TO PENDING LPFM FACILITY  
PORTLAND, OREGON FOR CASCADE COMMUNITY RADIO**

**File No. BNPL-20131114BUM - Fac. ID No. 196380**

|         |                            |
|---------|----------------------------|
| NAD 83  | 45-32-52.0 N 122-40-23.0 W |
| NAD 27  | 45-32-51.4 N 122-40-27.3 W |
| GROUND  | 55.2                       |
| AGL     | 20.0                       |
| AMSL    | 75.2 m                     |
| HAAT    | -8.7                       |
| WATTS   | 100                        |
| CHANNEL | 268                        |

**PROPOSED FCC 60 DBU**



**PROPOSED SPACING**

Cascade Community Radio

|                                     |                              |                 |
|-------------------------------------|------------------------------|-----------------|
| REFERENCE                           |                              | DISPLAY DATES   |
| 45 32 51.4 N.                       | CLASS = L1 Int = L1          | DATA 12-22-13   |
| 122 40 27.3 W.                      | Current Spacings to 3rd Adj. | SEARCH 01-13-14 |
| ----- Channel 268 - 101.5 MHz ----- |                              |                 |

| Call  | Channel | Location | Azi | Dist | FCC | Margin |
|-------|---------|----------|-----|------|-----|--------|
| ----- |         |          |     |      |     |        |

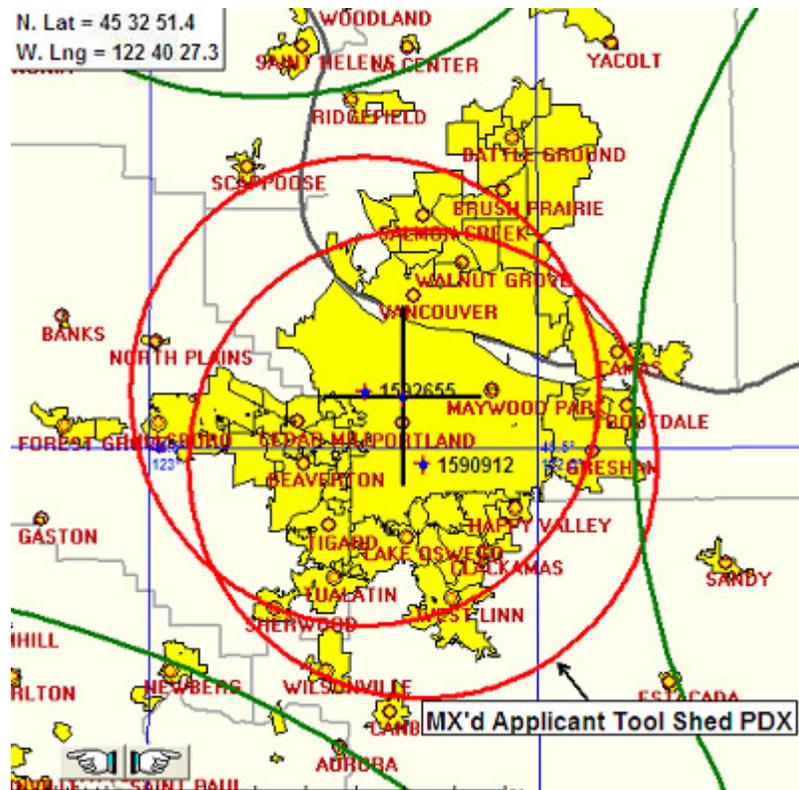
|           |       |       |                  |    |       |        |       |       |
|-----------|-------|-------|------------------|----|-------|--------|-------|-------|
| *KINK     | LIC-N | 270C  | Portland         | OR | 232.7 | 5.76   | 92.5  | -86.7 |
| *KXL-FM   | LIC   | 266C  | Portland         | OR | 232.6 | 5.77   | 92.5  | -86.7 |
| 1592655   | APP   | 268L1 | Portland         | OR | 277.6 | 3.84   | 23.5  | -19.7 |
| **1590912 | APP   | 268L1 | Portland         | OR | 163.5 | 7.08   | 23.5  | -16.4 |
| KDOA      | CP -Z | 268C3 | The Dalles       | OR | 91.7  | 100.72 | 77.5  | 23.2  |
| K268BN    | LIC-D | 268D  | Eufaula/longview | WA | 348.6 | 69.92  | 38.5  | 31.4  |
| KFLY      | LIC   | 268C0 | Corvallis        | OR | 206.3 | 155.41 | 121.5 | 33.9  |
| AL0548    | USE   | 268C3 | The Dalles       | OR | 90.7  | 121.21 | 77.5  | 43.7  |

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

**NOTES:**

\* SEE SECOND ADJACENT WAIVER REQUEST BELOW

\*\* MX'D APPLICATION



**SECOND ADJACENT WAIVER REQUEST**

Using U/D methodology, the proposed relocation will provide zero-population interference overlap areas with both second-adjacent channels:

| Call | COL         | Chan |
|------|-------------|------|
| KINK | PORTLAND OR | 270  |
| KXL  | PORTLAND OR | 268  |

KINK: At the proposed location signal strength of KINK is 110 dBu (see Map, next page). Interference will occur when the interfering signal exceeds the desired signal by 40 dbu. So the area of predicted interference would then be bounded by the 150 dBu contour. The distance to this contour, using free space method, is:

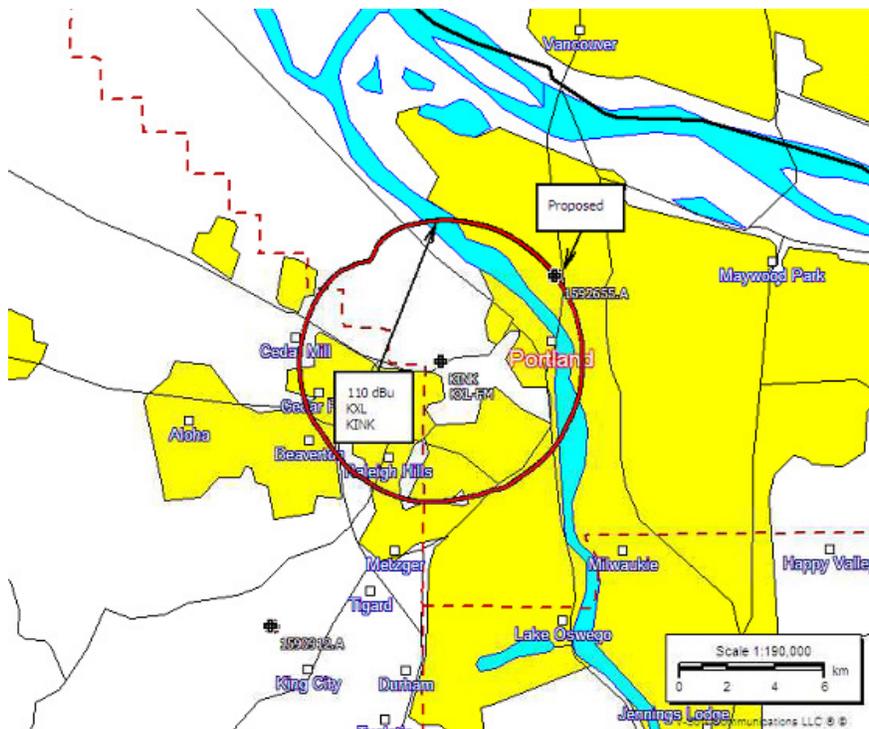
$D = (7.01 * P^{1/2}) / E$ , where P is power (watts), E is field strength (v/m), and D is distance to contour (meters):

D = 2.2 meters.

KXL: At the proposed location signal strength of KRTL is 110 dBu (see Map, next page). Interference will occur when the interfering signal exceeds the desired signal by 40 dbu. So the area of predicted interference would then be bounded by the 150 dBu contour. The distance to this contour, using free space method, is:

D = 2.2 meters

The antenna is proposed to be 20 meters above ground. The antenna's interference radius is 2.2 meters. That means the interference area resides 17.8 meters above ground, far from any populated area.



KXL/KINK Field Strength at proposed transmitter site.

## NON-IONIZING ELECTROMAGNETIC RADIATION (NEIR) ANALYSIS

The Effective Radiated Power for proposed will be 100 watts, mounted on a tower at 20 m AGL. The OET program *FM Model* for Windows, Version 2.10 Beta was used to determine the maximum predicted RF exposure. The settings used were:

Antenna: Phelps-Dodge "Ring Stub"

Vertical ERP (W): 100

Horizontal ERP (W): 100

Antenna Height (m): 20

Number of Elements: 1

Phelps-Dodge "Ring Stub" antenna was selected as a "worst case" emitter. Using these settings, the maximum predicted RF exposure for a human standing on the ground would be less than 12.4  $\mu\text{W}/\text{cm}^2$  at 4.8 m. This represents less than 7% of the FCC Maximum Permissible Exposure (MPE) of 200  $\mu\text{W}/\text{cm}^2$  for uncontrolled environments.

Antenna is mounted on commercial pole. Facility is on private property. If work on tower is required facility will be temporarily powered down.