



SPACING

Snoqualmie Educational Radio Project

REFERENCE 38 34 26.5 N. CLASS = L1 DISPLAY DATES  
 121 28 45.2 W. Current Spacings to 3rd Adj. DATA 08-28-13  
 ----- Channel 243 - 96.5 MHz ----- SEARCH 09-30-13

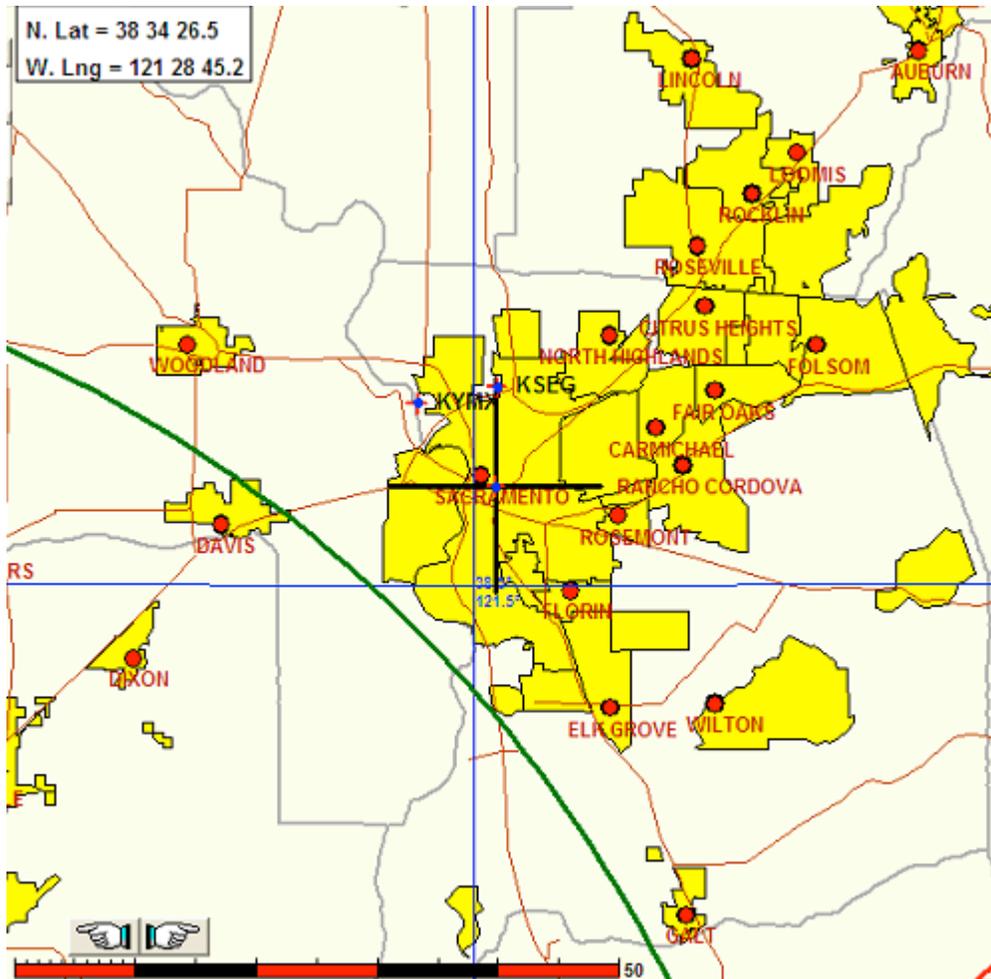
Call	Channel	Location	Azi	Dist	FCC	Margin
*KSEG	LIC 245B	Sacramento	CA 1.2	8.21	66.5	-58.3
*KYM	LIC 241B	Sacramento	CA 317.0	9.40	66.5	-57.1
KOIT	LIC 243B	San Francisco	CA 223.3	124.58	111.5	13.1

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

NOTES:

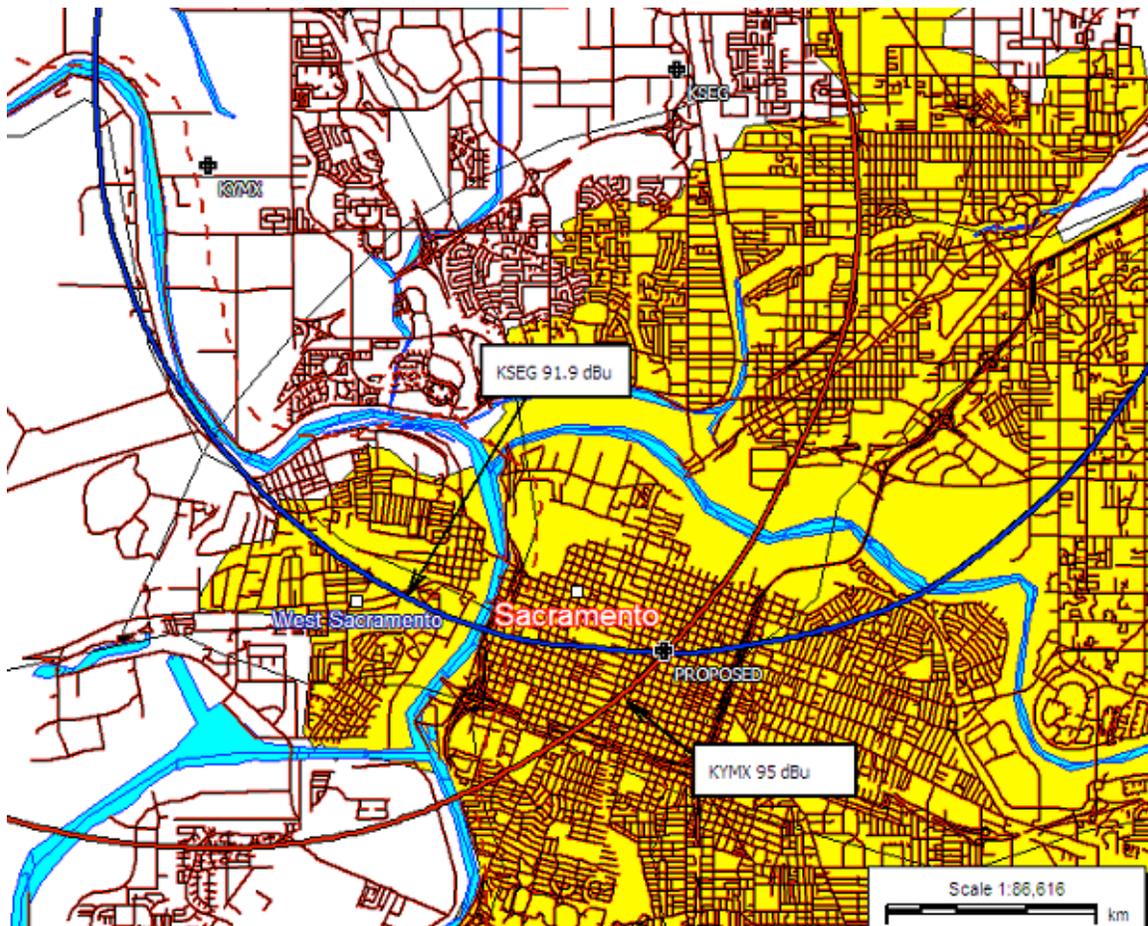
\* KSEG and KYM 2<sup>nd</sup> ADJ - See 2<sup>nd</sup> adjacent spacing waiver request

SPACING MAP



SECOND ADJACENT WAIVER REQUEST

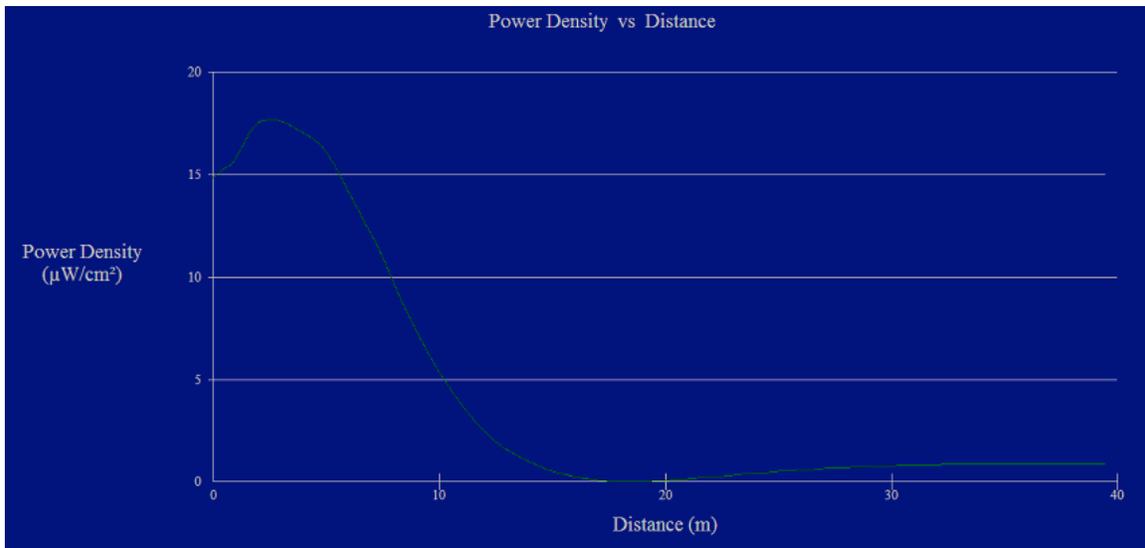
Applicant requests a waiver of the Second Adjacent minimum spacing requirements stated in §73.807 of the FCC rules using U/D no-population inference protocol. At the proposed facility site, KYMX SACRAMENTO CA CH 241B (Distance 9.5, 50 kW) has an estimated signal strength of 91.9 dBu, and KSEGSACRAMENTO CA 245B (Distance 8.2, 50 kW) has an estimated signal strength of 95 dBu. At a proposed 45 watts, the maximum interference radius around the proposed transmitter is thus 12.5 meters. Applicant proposes to locate 12.6 meters above the roof on an antenna mast. Since the interference zone does not reach the top floor, zero population is affected, thus passing second adjacent waiver request requirements.



## NON-IONIZING ELECTROMAGNETIC RADIATION (NEIR) ANALYSIS

The Effective Radiated Power for proposed will be 50 watts, mounted on a tower in a rural area at 18 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): 50  
Horizontal ERP (W): 50  
Antenna Height (m): 12.6  
Number of Elements: 2  
Element Spacing: .5



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 17.7  $\mu\text{W}/\text{cm}^2$  at 2.8 m. This represents less than 8.9% of the FCC Maximum Permissible Exposure (MPE) of 200  $\mu\text{W}/\text{cm}^2$  for uncontrolled environments.

The antenna is on a mast on top of a penthouse roof which is inherently in climbable. No other broadcast entity co-located on the roof. Facility is private property with limited roof access. If work on roof is required facility will be temporarily powered down.