

**August 2013  
New FM Translator  
Incline Village, Nevada Channel 245D  
Allocation Study**

The attached spacing study shows the spacing between the proposed translator site and the location of cochannel and adjacent channel stations and proposals. This study was made with the Commission's Class A spacing requirements, and individual situations were examined to determine the lack of prohibited contour overlap per the requirements of §74.1204 of the Rules. The attached allocation study map demonstrates compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

The proposed translator transmitter site is located within the 60 dBu protected contour of second-adjacent channel station KOLC 247C Carson City. The proposed site is 41.16 km from the KOLC transmitter site at a bearing of 207 degrees True. Given the KOLC antenna's 752 meter HAAT and 87 kW ERP along this radial, KOLC places an 83.3 dBu contour at the translator transmitter site. The corresponding interfering contour from the translator is  $83.3 + 40 = 123.3$  dBu. The aerial phot below depicts the 123.3 dBu contour from the proposed facility. There is no population within this contour; the only buildings inside this contour are transmitter buildings. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KOLC.



Hatfield & Dawson Consulting Engineers

The attached spacing study demonstrates compliance with §73.207 of the Commission's Rules regarding spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

Hatfield & Dawson Consulting Engineers

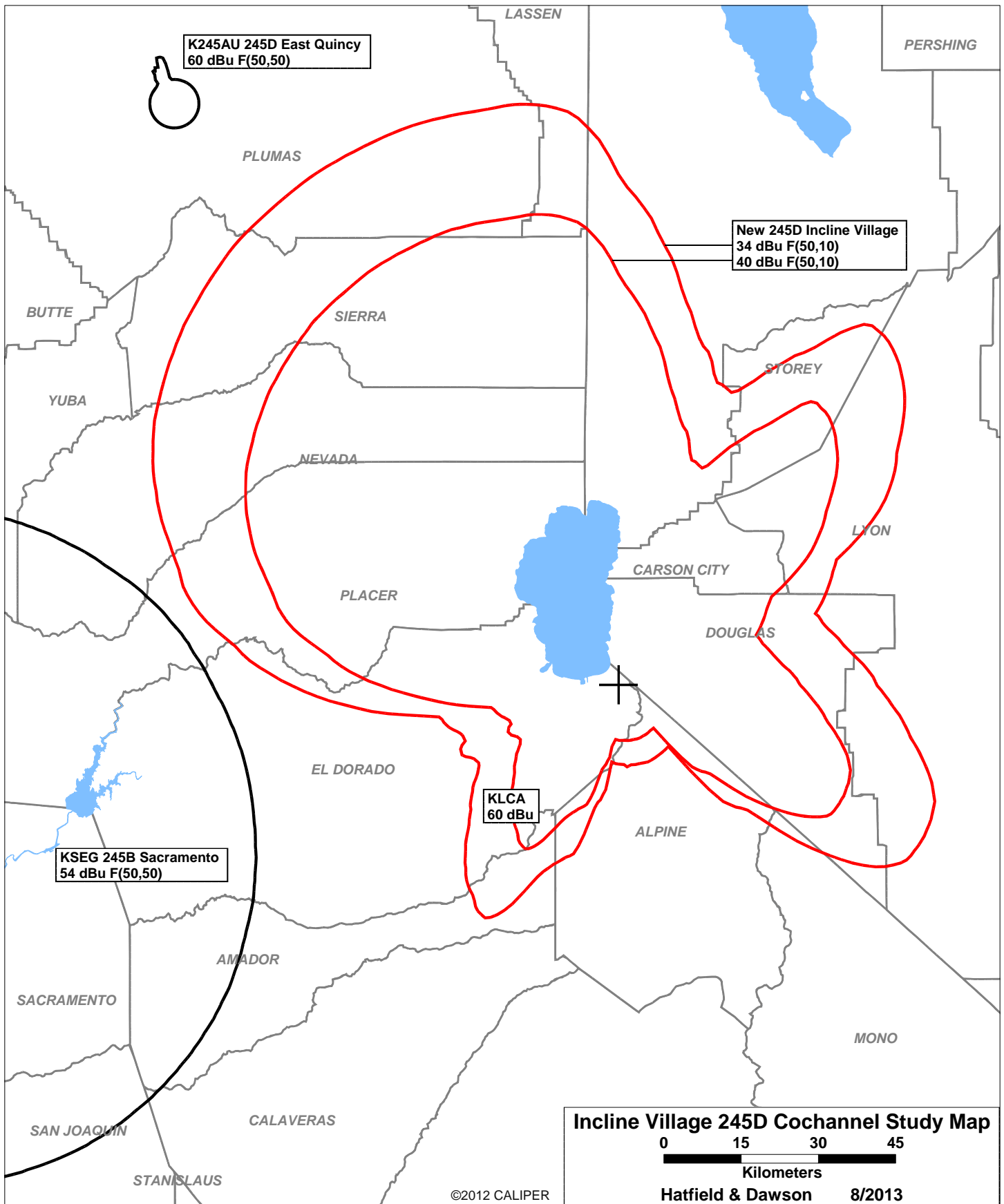
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SEARCH PARAMETERS                               FM Database Date: 130826
Channel: 245A      96.9 MHz                      Page 1
Latitude: 38 55 38
Longitude: 119 55 50
Safety Zone: 50 km
Job Title: 1280211 CH245

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Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KLCA LIC	TAHOE CITY CA	BLH-980116KC	243C1 96.5	6.100 903.0	39-18-38 119-53-01	5.4 SS	42.75 -32.25	75 SHORT
K245AU LIC	EAST QUINCY CA	BLFT-70105ADW	245D 96.9	0.050 112.0	39-56-25 120-55-39	323.1	141.48 0.00	0 TRANS
KSEGaux LIC	SACRAMENTO CA	BXLH-10810AAG	245B 96.9	8.400 78.0	38-38-53 121-28-38	257.4	137.91 0.00	0 AUX
KSEG LIC	SACRAMENTO CA	BLH-990714KC	245B 96.9	50.000 152.0	38-38-53 121-28-38	257.4	137.91 -40.09	178 SHORT
NEW-T APP	INCLINE VILLAGE NV	BNPFT-30317MAT	245D 96.9	0.250 0.0	38-55-27 119-53-58	97.2	2.72 0.00	0 TRANS
K246BX CP	SONORA CA	BNPFT-30327AKJ	246D 97.1	0.010 646.0	38-00-30 120-21-44	200.3	108.73 0.00	0 TRANS
KOLCaux LIC	CARSON CITY NV	BLH-911206KA	247C 97.3	31.000 620.0	39-15-21 119-42-37	27.4	41.16 0.00	0 AUX
KOLC LIC	CARSON CITY NV	BMLH-860530KA	247C 97.3	87.000 644.0	39-15-21 119-42-37	27.4	41.16 -53.84	95 SHORT
KSRN LIC	KINGS BEACH CA	BLH-981015KD	299C3 107.7	0.230 874.0	39-18-48 119-52-59	5.4	43.06 31.06	12 CLEAR

===== END OF FM SPACING STUDY FOR CHANNEL 245 =====



K245AU 245D East Quincy  
60 dBu F(50,50)

New 245D Incline Village  
34 dBu F(50,10)  
40 dBu F(50,10)

KSEG 245B Sacramento  
54 dBu F(50,50)

KLCA  
60 dBu

### Incline Village 245D Cochannel Study Map

0 15 30 45  
Kilometers

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**August 2013  
New FM Translator  
Incline Village, Nevada Channel 245D  
RF Exposure Study**

**Facilities Proposed**

The proposed operation will be on Channel 245D (96.9 MHz) with a maximum lobe effective radiated power of 220 watts. Operation is proposed with an antenna to be mounted on an existing tower having FCC Antenna Structure Registration Number 1280211.

**RF Exposure Calculations**

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

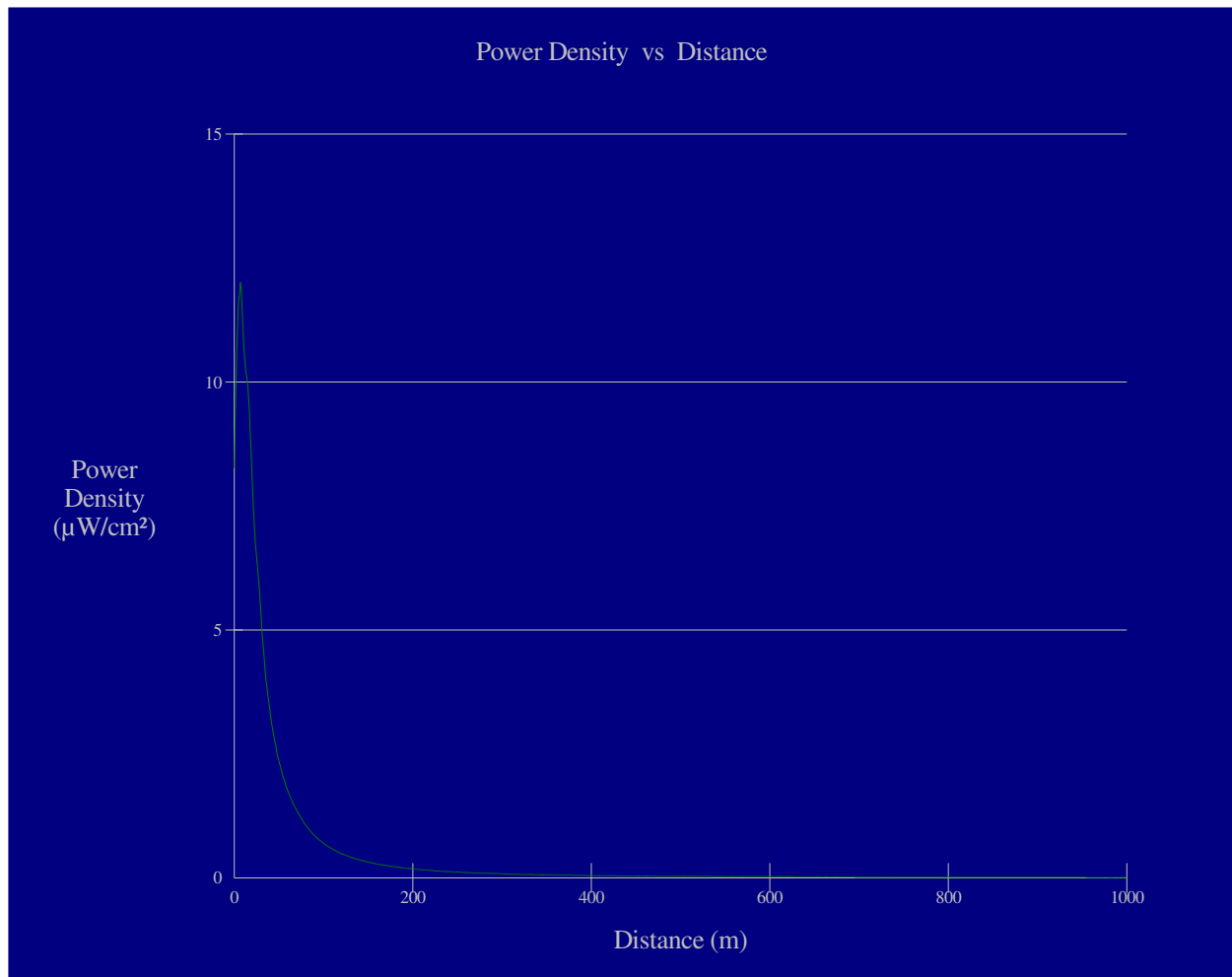
Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

*D* is the distance in meters from the center of radiation to the calculation point.

Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 1000 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the proposed antenna system assume a Type 1 element pattern, which is the "worst case" element pattern. The highest calculated ground level power density occurs at a distance of 7 meters from the base of the antenna support structure. At this point the power density is calculated to be 12.0  $\mu W/cm^2$ , which is 6% of 200  $\mu W/cm^2$  (the FCC standard for uncontrolled environments).

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.



## Ground-Level RF Exposure

## OET FMModel

### Incline Village 245D

Antenna Type: Scala CA2H (ring stub element model used for this study)

No. of Elements: 1

Element Spacing: 1.0 wavelength

Distance: 1000 meters

Horizontal ERP: 0.220 kW

Vertical ERP: zero kW

Antenna Height: 15 meters AGL

Maximum Calculated Power Density is  $12.0 \mu\text{W}/\text{cm}^2$  at 7 meters from the antenna structure.