

**July 2020**  
**LPFM Station KXCP-LP**  
**Palm Desert, California Channel 246L1**  
**Allocation Study**

The instant application proposes a transmitter site change for LPFM station KXCP-LP. The new site is 7.12 kilometers from the current licensed site, which qualifies as a minor change under the revised rules adopted on April 23, 2020.

**KUNA-FM 244A La Quinta**

The proposed LPFM transmitter site is located within the 60 dBu protected contour of second-adjacent channel station KUNA-FM 244A La Quinta. A second-adjacent channel waiver is requested. The following calculation, performed using the *Living Way* methodology, addresses interference protection to that station.

<i>Protected Station</i>	<i>Distance &amp; Bearing to Proposal</i>	<i>Station ERP and HAAT on that azimuth</i>	<i>Station Field Strength at Proposal</i>	<i>Corresponding LPFM Interfering Contour</i>	<i>Distance to LPFM Interfering Contour</i>
KUNA-FM 244A	16.38 km 289 deg True	0.970 kW 361 meters	73.0 dBu F(50,50)	113.0 dBu	157 meters Free Space

The 113.0 dBu interfering contour from the proposed facility would extend only 157 meters from the antenna. There is no population within this contour, as it overlaps only undeveloped ground and a sand & gravel operation and storage yard, with no occupied buildings. Therefore, the proposed facility is believed to satisfy the requirements of §73.807(e)(1) with respect to KUNA-FM.

**K247CL Indio**

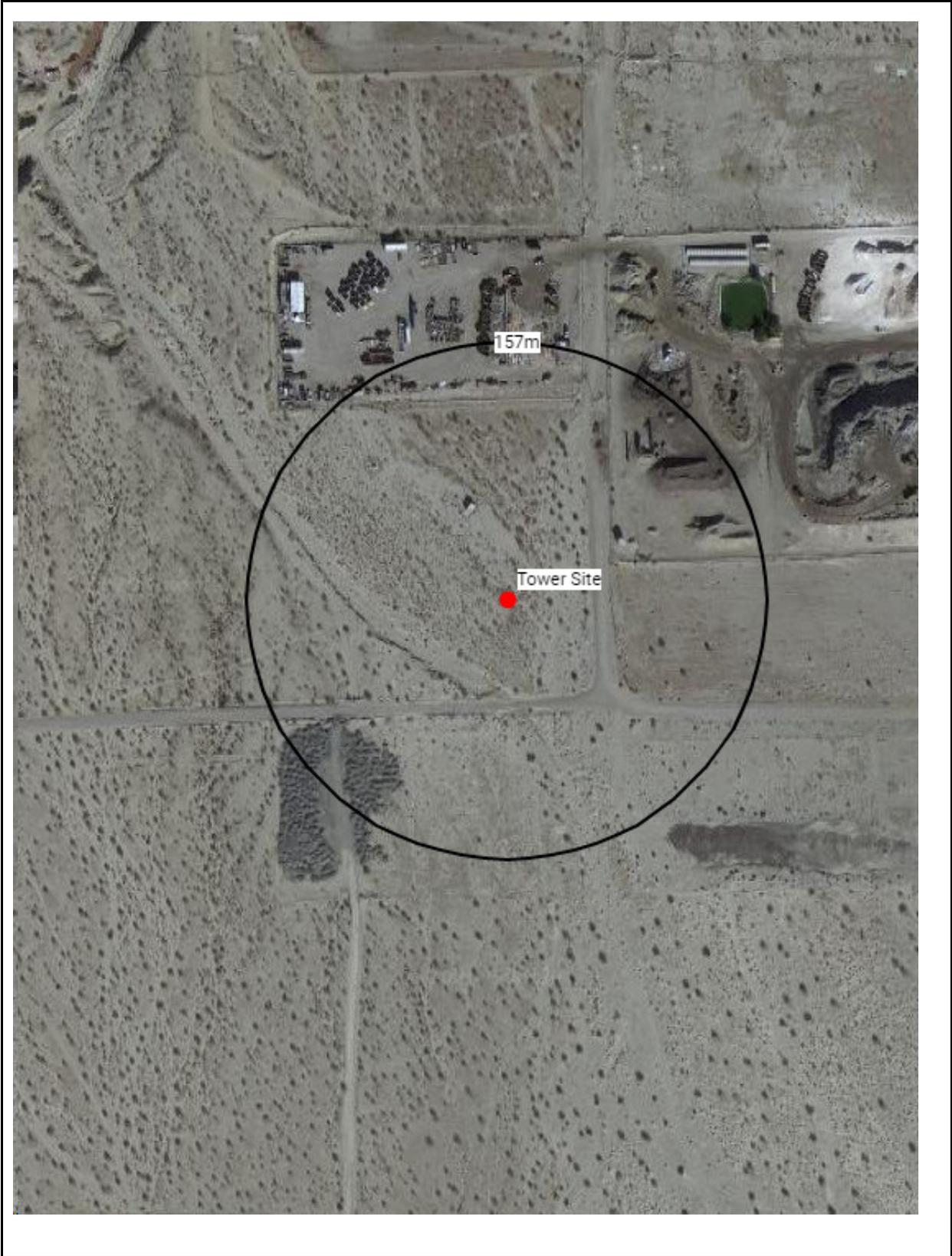
The proposed LPFM transmitter site is short-spaced to K247CL Indio, by 4.6 kilometers. However, the licensed LPFM transmitter site is short-spaced to K247CL by 9.4 kilometers. This short-spacing was created by K247CL. Since the proposed modification of KXCP-LP moves the LPFM farther away from the FM translator, this is believed to satisfy the spacing requirements for LPFM stations.

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SEARCH PARAMETERS                               FM Database Date: 20200706
Channel: 246L1 97.1 MHz                        Page 1
Latitude: 33 51 2.5 (NAD83)
Longitude: 116 23 34.9
Safety Zone: 32 km
Job Title: KXCP-LP 246L1 PALM DESERT
    
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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)
KUNA-FM LIC	LA QUINTA CA	BMLH-20010619AAJ	244A 96.7	0.970 177.0	33 48 8.1 116 13 33.0	109.2	16.38 -12.62	29 SHORT
KXCP-LP LIC	PALM DESERT CA	BLL-20160628ABI	246L1 97.1	0.100 0.0	33 47 50.4 116 21 1.2	146.4	7.12 -16.88	24 SHORT
KOYT-LP LIC	ANZA CA	BLL-20171128ABX	246L1 97.1	0.050 0.0	33 33 57.5 116 42 17.0	222.4	42.80 18.80	24 CLEAR
K247CL LIC	INDIO CA	BLFT-20171107ACQ	247D 97.3	0.034 0.0	DA 33 48 8.1 116 13 33.0	109.2	16.38 -4.62	21 TRANS
KLYY LIC	RIVERSIDE CA	BLH-19951215KD	248B 97.5	72.000 557.0	DA 34 14 4.0 117 8 27.1	302.0	81.12 14.12	67 CLEAR

==== END OF FM SPACING STUDY FOR CHANNEL 246L1 =====



Hatfield & Dawson Consulting Engineers

**July 2020**  
**LPFM Station KXCP-LP**  
**Palm Desert, California Channel 246L1**  
**RF Exposure Study**

**Facilities Proposed**

The proposed operation will be on Channel 246L1 (106.1 MHz) with an effective radiated power of 100 watts. Operation is proposed with an antenna to be mounted on an existing tower in the KGAY(AM) directional array, with FCC Antenna Structure Registration Number 1212825.

**RF Exposure Calculations**

OET Bulletin 65 Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (Edition 97-01) states in part that:

When performing an evaluation for compliance with the FCC's RF guidelines all significant contributors to the ambient RF environment should be considered. . . For purposes of such consideration, significance can be taken to mean any transmitter producing more than 5% of the applicable exposure limit (in terms of power density or the square of the electric or magnetic field strength) at accessible locations.

As will be demonstrated below, the proposed operation of KXCP-LP will produce less than 5% of the applicable exposure limit for both controlled and uncontrolled environments. Thus, the proposed facility is categorically excluded from the requirement of further study. Therefore, pursuant to §1.1307(b)(3) of the Commission's Rules no calculations are required for the other broadcast facilities in the vicinity, and precise calculations are made only with regard to the levels from this proposal.

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 500 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the KXCP-LP antenna system have been made assuming that the antenna will radiate 100% power straight down to a point 2 meters above ground at the base of the tower (58 meters below the antenna). Under this worst-case assumption, the highest calculated ground level power density from KXCP-LP occurs at the base of the antenna support structure. At this point the power density is calculated to be 2.0  $\mu\text{W}/\text{cm}^2$ , which is 1% of 200  $\mu\text{W}/\text{cm}^2$  (the FCC standard for uncontrolled environments).

These calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation of KXCP-LP alone is less than 5% of the applicable FCC exposure limit at all locations between 1 and 500 meters from the base of the antenna support structure. Section 1.1307(b)(3) of the Commission's Rules excludes applications for new facilities or modifications to existing facilities from the requirement of preparing an environmental assessment when the calculated emissions from the applicants proposed facility are predicted to be less than 5% of the applicable FCC exposure limit. Therefore, the proposed facility is in compliance with Section 1.1301 et seq and no further analysis of RF exposure at this site is required in this application.

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 radiation in excess of FCC guidelines.

#### **KGAY(AM) 1270 kHz Thousand Palms**

The translator antenna will be installed on a tower used by AM station KGAY 1270 kHz. KGAY operates with 5000 watts directional daytime and 750 watts directional nighttime. The tower base is fenced to prevent access.

