

## 47 C.F.R. §73.807(e)(1) Second-Adjacent Waiver Request

### Light City Church

### Proposed LPFM

All Authorized second-adjacent stations with which the proposed LPFM does not meet the channel separations requirements of §73.807 are listed below. The table lists the minimum signal level of the primary station's service contour that reaches the proposed tower site for the proposed LPFM.

Facility ID	Call Sign	Contour at Tower F(50,50)
54890	WRNO-FM	104 dBu
19212	KLRZ	*

Minimum protected contour signal level at the LPFM proposed tower site: **104 dBu**

\*KLRZ is a 73.215 station whose 60 dBu contour is not affected by the proposed LPFM

This study will use the minimum contour of 104 dBu to represent a worst-case potential interference level. At 40 dB above 104 dBu, the LPFM interference contour is 144 dBu. Calculation of distance at this power and signal level requires the use of the free-space calculation due to the distance being less than 1.5 km.

The following table uses the free space formula to calculate the worst-case height above ground level. At 144 dBu and 100 watts, the worst-case height is 28 meters. Therefore, no interference is predicted to reach the ground.

## §73.807(e)(1) Waiver Request NEW LPFM vs WNRO-FM

Antenna:	Nicom BKG 77 - Single Bay	ERP (watts): 100
Protected Contour at tower - F(50,50):	104 dBu	RC-AGL (m): 30
Interference Ratio:	40 dB	Relative field at Azimuth: 1.000
Interference Contour - F(50,10):	144 dBu	ERP (watts) at Azimuth: 100

DEPRESSION ANGLE	RELATIVE FIELD	ERP (WATTS)	dBk	DISTANCE (m)		
				Contour	Horizontal	AGL
0	1.000	100.0	-10.00	4.4	4.4	30.0
5	0.999	99.8	-10.01	4.4	4.4	29.6
10	0.982	96.4	-10.16	4.3	4.3	29.2
15	0.954	91.0	-10.41	4.2	4.1	28.9
20	0.918	84.3	-10.74	4.1	3.8	28.6
25	0.872	76.0	-11.19	3.9	3.5	28.4
30	0.818	66.9	-11.74	3.6	3.1	28.2
35	0.758	57.5	-12.41	3.4	2.7	28.1
40	0.691	47.7	-13.21	3.1	2.3	28.0
45	0.616	37.9	-14.21	2.7	1.9	28.1
50	0.538	28.9	-15.38	2.4	1.5	28.2
55	0.465	21.6	-16.65	2.1	1.2	28.3
60	0.391	15.3	-18.16	1.7	0.9	28.5
65	0.313	9.8	-20.09	1.4	0.6	28.7
70	0.239	5.7	-22.43	1.1	0.4	29.0
75	0.176	3.1	-25.09	0.8	0.2	29.2
80	0.129	1.7	-27.79	0.6	0.1	29.4
85	0.103	1.1	-29.74	0.5	0.0	29.5
90	0.105	1.1	-29.58	0.5	0.0	29.5
WORST CASE HEIGHT AGL (m)						28.0



