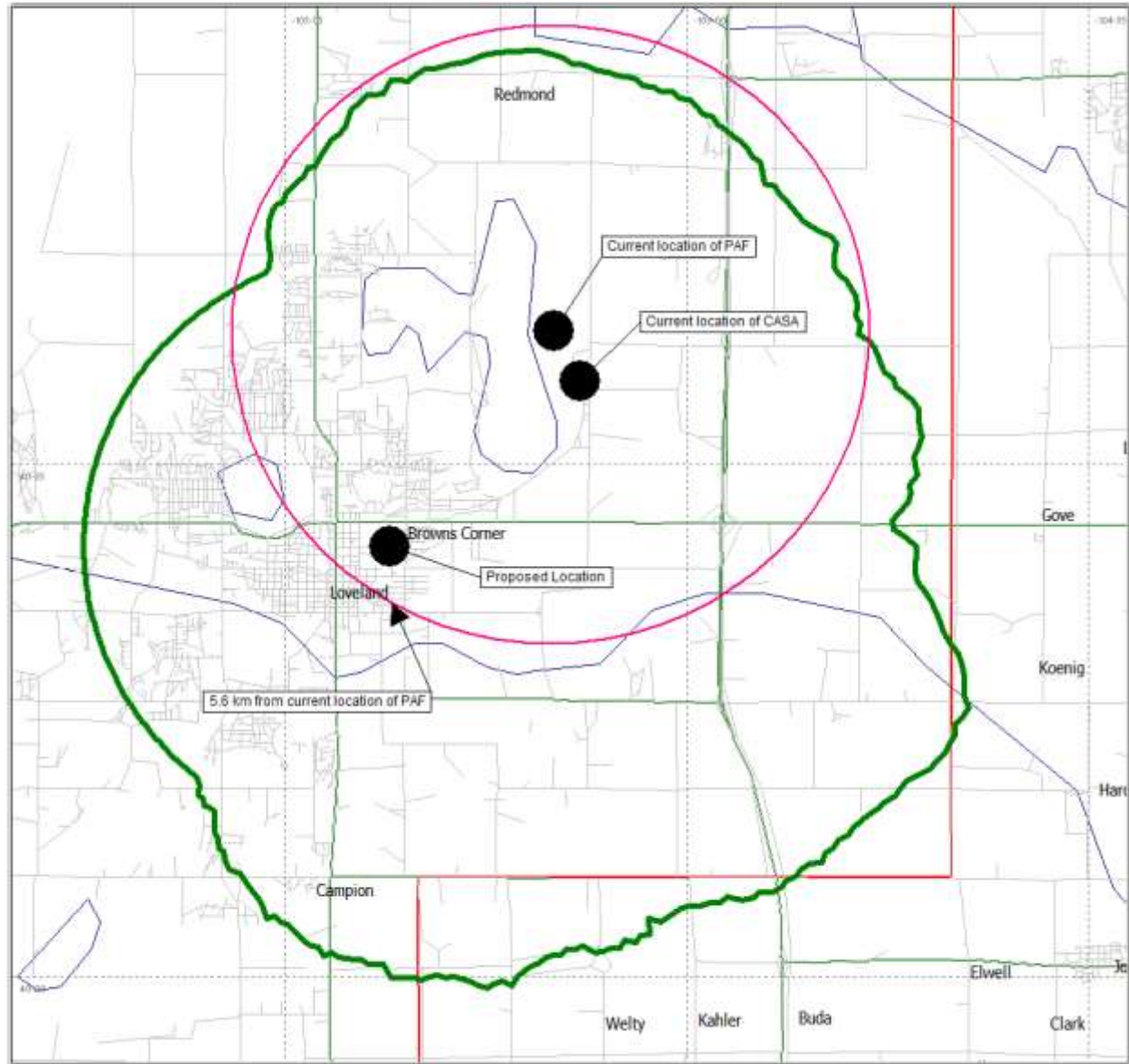




REC Networks
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
844.REC.LPFM/202.621.2355
recnet.com

Amendment for NEW-LP
LOVELAND, CO
PROTECTING AMERICA'S FUTURE
BNPL-20131017AOY

PROPOSED 60dBu F(50, 50) SERVICE CONTOUR



LOVELAND, CO - Channel: 284L1 (104.7 MHz) ~ ERP: 0.080 kW
Elev: 1523 meters ~ RCAGL: 68.7 meters ~ RCAMSL: 1591.7 meters ~ HAAT: 34 meters
ASRN: FAA Registration not necessary.

Site: PROPOSED
 Coordinates: 40-24-12.1 N, 105-03-41.1 W
 Freq: 104.70000 MHz
 ERP: 80.00 W

Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	80.00	73	180	7.95	40.474831	-105.061417
5	80.00	77	180	8.18	40.476664	-105.052986
10	80.00	83	200	8.53	40.478872	-105.043912
15	80.00	88	230	8.79	40.479742	-105.034509
20	80.00	88	190	8.79	40.477666	-105.025860
25	80.00	90	160	8.89	40.475854	-105.016972
30	80.00	92	140	8.99	40.473407	-105.008245
35	80.00	93	130	9.05	40.470001	-105.000065
40	80.00	93	100	9.05	40.465676	-104.992666
45	80.00	88	80	8.79	40.459255	-104.987925
50	80.00	89	70	8.84	40.454459	-104.981344
55	80.00	93	60	9.05	40.450001	-104.973823
60	80.00	89	50	8.84	40.443095	-104.970908
65	80.00	84	60	8.58	40.435947	-104.969503
70	80.00	87	50	8.74	40.430210	-104.964360
75	80.00	94	50	9.10	40.424490	-104.957608
80	80.00	88	60	8.79	40.417048	-104.959127
85	80.00	85	100	8.64	40.410088	-104.959767
90	80.00	87	130	8.74	40.403315	-104.958173
95	80.00	91	120	8.94	40.396302	-104.956188
100	80.00	102	110	9.48	40.388494	-104.951111
105	80.00	112	50	9.91	40.380227	-104.948347
110	80.00	112	50	9.91	40.372811	-104.951430
115	80.00	103	50	9.53	40.367095	-104.959465
120	80.00	96	60	9.20	40.361967	-104.967408
125	80.00	92	60	8.99	40.356929	-104.974456
130	80.00	88	60	8.79	40.352503	-104.981926
135	80.00	83	70	8.53	40.349120	-104.990274
140	80.00	74	80	8.00	40.348245	-105.000751
145	80.00	71	90	7.84	40.345556	-105.008321
150	80.00	70	60	7.79	40.342649	-105.015435
155	80.00	66	40	7.57	40.341614	-105.023644
160	80.00	65	70	7.52	40.339815	-105.031074
165	80.00	70	90	7.79	40.335653	-105.037617
170	80.00	66	80	7.57	40.336271	-105.045898
175	80.00	63	100	7.41	40.337011	-105.053801
180	80.00	63	60	7.41	40.336757	-105.061417
185	80.00	58	90	7.09	40.339869	-105.068704
190	80.00	56	160	6.96	40.341710	-105.075679
195	80.00	52	100	6.72	40.344959	-105.081948
200	80.00	48	110	6.45	40.348817	-105.087464
205	80.00	44	150	6.16	40.353134	-105.092148
210	80.00	39	430	5.80	40.358201	-105.095629
215	80.00	34	630	5.42	40.363392	-105.098141
220	80.00	23	880	5.11	40.368153	-105.100185
225	80.00	1	980	5.11	40.370860	-105.104066
230	80.00	-14	1020	5.11	40.373814	-105.107623
235	80.00	-26	1220	5.11	40.376993	-105.110829
240	80.00	-44	960	5.11	40.380373	-105.113659
245	80.00	-50	1110	5.11	40.383928	-105.116092
250	80.00	-36	1580	5.11	40.387631	-105.118109
255	80.00	-20	1470	5.11	40.391453	-105.119695
260	80.00	-26	1090	5.11	40.395366	-105.120838
265	80.00	-41	850	5.11	40.399341	-105.121528
270	80.00	-47	830	5.11	40.403345	-105.121761
275	80.00	-26	1490	5.11	40.407351	-105.121535
280	80.00	-46	1890	5.11	40.411325	-105.120852
285	80.00	-25	1630	5.11	40.415240	-105.119715
290	80.00	-36	1400	5.11	40.419064	-105.118135
295	80.00	-28	1230	5.11	40.422769	-105.116123
300	80.00	-35	950	5.11	40.426326	-105.113695
305	80.00	-45	1040	5.11	40.429708	-105.110868
310	80.00	-66	800	5.11	40.432890	-105.107664
315	80.00	-89	610	5.11	40.435847	-105.104107
320	80.00	-79	560	5.11	40.438556	-105.100226
325	80.00	-45	440	5.11	40.440998	-105.096048
330	80.00	-3	420	5.11	40.443153	-105.091607
335	80.00	14	390	5.11	40.445005	-105.086935
340	80.00	41	340	5.93	40.453504	-105.085402
345	80.00	47	280	6.38	40.458832	-105.080952
350	80.00	53	230	6.79	40.463496	-105.075354
355	80.00	64	190	7.46	40.470213	-105.069105

R E C NETWORKS
CHANNEL REPORT

NAD27 LATITUDE: 40 - 24' 12.1" - LONGITUDE: 105 - 03' 41.1"
CHANNEL: 284 - CLASS: LPFM(LP-100)

CHAN	FREQ	CALL	LOCATION	CLS	DIST	REQ	CLEAR	BEAR
230	93.9	KCWA : WAY MEDIA, INC.	LOVELAND	CO A	14.3	0.0	14.3	314.6
281	104.1	K281BW : MITCHELL A. BERANEK : Closest third adjacent station on 104.1	CHEYENNE	WY D	91.2	0.0	91.2	22.4
282	104.3	KKFN : LINCOLN FINANCIAL MEDIA COMPANY OF COLORADO	LONGMONT	CO C1	79.0	73.0	6.0	186.3
283	104.5	KYAP : WHITE PARK BROADCASTING, INC.	CENTENNIAL	WY C2	131.8	80.0	51.8	318.2
283	104.5	KYAP : WHITE PARK BROADCASTING, INC.	CENTENNIAL	WY C2	103.1	80.0	23.1	341.9
284	104.7	KELS-LP : PLYMOUTH GATHERING INC.	GREELEY	CO L1	27.7	24.0	3.7	94.2
284	104.7	KNNG : MEDIA LOGIC LLC	STERLING	CO C1	173.2	111.0	62.2	82.7
284	104.7	NEW : NORTH DENVER COMMUNITY RADIO	DENVER	CO L1	36.7	24.0	12.7	158.2
284	104.7	KKCS : EDUCATIONAL MEDIA FOUNDATION	CALHAN	CO A	168.6	67.0	101.6	157.5
284	104.7	KTRS-FM : TOWNSQUARE MEDIA CASPER LICENSE, LLC	CASPER	WY C1	279.9	111.0	168.9	338.6
284	104.7	NEW : PROTECTING AMERICA'S FUTURE : Former location	LOVELAND,	CO L1	4.7	24.0	-19.3	36.2
284	104.7	K284BY : MARY MEDICUS : 11.402 dBu service contour - medium tier translator	MASONVILLE	CO D	32.8	32.0	0.8	316.6
284	104.7	NEW : COLORADO ALLIANCE FOR A SECURE AMERICA : Being dismissed as a part of this settlement agreement	LOVELAND	CO L1	4.4	24.0	-19.6	48.3
284	104.7	KKVM : VAIL RADIO PARTNERS, LLC	VAIL	CO C1	145.8	111.0	34.8	234.4
285	104.9	KRRR : BRAHMIN BROADCASTING CORPORATION	CHEYENNE	WY C2	87.0	80.0	7.0	20.8
286	105.1	KXKL-FM1 : WILKS LICENSE COMPANY-DENVER LLC	BOULDER	CO D	50.9	6.0	44.9	194.5
286	105.1	KXKL-FM : WILKS LICENSE COMPANY-DENVER LLC	DENVER	CO C	90.1	93.0	-2.9	188.0
287	105.3	KMGQ : LARAMIE MOUNTAIN BROADCASTING, LLC	PINE BLUFFS	WY A	132.6	0.0	132.6	41.7
287	105.3	KZKS : WESTERN SLOPE COMMUNICATIONS, L.L.C.	RIFLE	CO C	283.5	0.0	283.5	248.5

LPFM SECOND ADJACENT CHANNEL WAIVER STUDY

Loveland, CO
Channel 284L1 (104.7 MHz)

Based on a study performed by Michelle Bradley of REC Networks, it has been determined that this proposed site qualifies for a second adjacent waiver as specified in Section 73.807(e) of the Commission's Rules.

Station KXKL (Facility ID # 59959) Denver, CO operates on Channel 286C. KXKL operates 100 kW ERP at 356 meters HAAT and is located 90.1 km from the proposed LPFM facility.

The proposed LPFM facility will operate from a radiation center of 69.7 meters above ground level which places it at 34 meters HAAT. As a result, the LPFM station will need to operate at 80 watts in order to meet the maximum service contour allowed under §73.811(a) of the Commission's Rules.

At 80 watts ERP, the 100 dBu F(50,10) interference contour of the proposed LPFM station will extend to 627 meters (0.627km).

We have measured the distance from KXKL to the 60 dBu contour at the 7, 8 and 9 degree azimuth, plotted those points and then connected three points with a line. We then plotted a circle extending 627 meters from the LPFM tower site. There was no overlap between the 100 dBu interference contour of the proposed LPFM station and the 60 dBu service contour of KXKL. (See map and explanation in this document).

Therefore, based on the information presented, REC submits that the proposed LPFM station will not create any interference to existing or potential listeners of second adjacent channel station KXKL.

The applicant requests a waiver of §73.807 of the Commission's Rules in respect to KXKL.

Report completed by
Michelle Eyre Bradley
Founder, REC Networks
February 21, 2014

APPENDIX A

In the following map, the points for KXKL's service contour at the 7, 8 and 9 degree azimuth are shown. The red line that connects the point is KXKL's 60dBu F(50, 50) service contour.

The yellow pin is the proposed LPFM transmitter site.

The blue circle is the 627 meter radius around the LPFM transmitter site. This is the 100 dBu F(50, 10) interference contour of the proposed LPFM station.



HOW THIS DATA WAS PREPARED

- The HAAT values were based on default 1km GLOBE terrain data obtained from the FCC's HAAT web service in one degree increments.
- The ERP and HAAT values were then calculated in the FCC's CURVES web service to obtain the distance to the 60dBu contour based on the HAAT value.
- Using the NAD27 coordinates of KXKL, the FCC's SPRONG web service was then used to determine the geographic coordinates at the distances determined by CURVES for each azimuth checked.
- The NOAA NADCON web service was used to convert the NAD27 coordinates to NAD83 for presentation in Google Earth.

KXKL NAD27 Coordinates: 39-36-0.0 N / 105-12-36.0 W

Azimuth	7 degrees	8 degrees	9 degrees
HAAT at that azimuth	532.3 meters	544.9 meters	557.2 meters
Distance to 60 dBu contour	88.65 km	89.37 km	90.01 km
NAD27 coordinates at 60dBu contour	40-23-29 N 105-4-57 W	40-23-45 N 105-3-47 W	40-23-58 N 105-2-37 W
Above coordinates converted to NAD83	40-23-28.94 N 105-4-58.93 W	40-23-44.94 N 105-3-48.93 W	40-23-57.94 N 105-2-38.93 W

Output from NADCON for station

North American Datum Conversion

NAD 27 to NAD 83

NADCON Program Version 2.11

=====

Transformation #: 1 Region: Conus

	Latitude	Longitude
NAD 27 datum values:	40 24 12.10000	105 03 41.10000
NAD 83 datum values:	40 24 12.04000	105 03 43.02651
NAD 83 - NAD 27 shift values:	-0.06000	
1.92651 (secs.)		
	-1.851	45.428
(meters)		
Magnitude of total shift:		45.465 (meters)

TOWAIR Determination Results

[? HELP](#)

[New Search](#) [Printable Page](#)

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results	
Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria.	
Your Specifications	
NAD83 Coordinates	
Latitude	40-24-12.0 north
Longitude	105-03-43.0 west
Measurements (Meters)	
Overall Structure Height (AGL)	69.7
Support Structure Height (AGL)	63.7
Site Elevation (AMSL)	1523
Structure Type	
BPOLE - Building with Pole	

Antenna Height Above Average Terrain Calculations -- Input

Latitude **40 24 12.1 North**
Longitude **105 3 41.1 West** (NAD 27)

Height of antenna radiation center above mean sea level [RCAMSL] = **1592.0** meters

Number of Evenly Spaced Radials = 8 0° is referenced to True North

Results:

Calculated HAAT= 34. meters

(Antenna Height Above Average Terrain)
using 1 km GLOBE terrain data)

Antenna Radiation Center Heights Above Individual Radials:

0.0°	74.3 meters
45.0°	98.0 meters
90.0°	83.6 meters
135.0°	83.9 meters
180.0°	62.1 meters
225.0°	7.2 meters
270.0°	-43.7 meters
315.0°	-96.2 meters