Kessler and Gehman Associates
Consultants • Broadcast • Wireless

APPLICATION FOR A MINOR MODIFICATION OF AN LPFM BROACAST STATION

WLLJ-LP

Cape Coral, FL

Prepared For:

- Get a Life! Foundation, Inc.
  2825 Gleason Parkway
  Cape Coral, FL 33914

Prepared By:

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1.0 APPLICATION PURPOSE

It is proposed to move the tower and antenna from the construction permitted authorized location[1] to another location on the same property. The new site is less than 100 meters to the SSE of the permitted site and is considered a minor modification, since the move is less than 5.6 km[2].

2.0 STATION TRANSMITTER LOCATION

The proposed transmitter site and support structure shall be as described:

2.1 Permitted and Proposed Transmitter Site Physical Address:

1813 El Dorado Parkway West
Cape Coral, FL 33914-7614

2.2 Proposed Transmitter Site Geographic Coordinates:

It is proposed to move the transmitter site from the (NAD27) geographical coordinates:

N. Latitude 26° 33' 00.6"
W. Longitude 82° 00' 45.2"

To the following (NAD27) geographical coordinates:

N. Latitude 26° 32' 57.6"
W. Longitude 82° 00' 44.0"

2.2 Antenna Structure Registration

The antenna support structure that will mount the proposed LPFM antenna shall have an overall height of 100 ft AGL. Get a Life! Foundation, Inc. ("GALF") has reasonable assurance that it can build the tower at the proposed site. An Antenna Structure Registration (ASR) is not required since there are no airports within 8 kilometers (5 miles) of the proposed site as demonstrated from the FCC's TOWAIR program depicted in Appendix A of this report.

[1] FCC File No BMPL-20160408ABF
[2] Pursuant to 47 CFR 73.870(a)

3.0 ANTENNA AND SITE ELEVATIONS

The applicant proposes to use the structure described in Section 2.0 to mount the LPFM antenna. The pertinent elevations are as described:

3.1 Height of Site AMSL
6.6 ft / 2.0 m

3.2 Overall Height of Structure AGL
100.0 ft / 30.5 m

3.3 Overall Height of Structure AMSL
106.6 ft / 32.5 m

3.4 Antenna Height Radiation Center AGL
93.4 ft / 28.5 m

3.5 Antenna Height Radiation Center AMSL
100.0 ft / 30.5 m

3.6 Antenna Height Above Average Terrain (HAAT) – 3 Second Terrain
98.4 ft / 30.0 m (Refer to Appendix B for HAAT Calculations)

4.0 LPFM EFFECTIVE RADIATED POWER

Pursuant to 47 C.F.R. Section 73.811(a) entitled “Maximum facilities”, LPFM stations will be authorized to operate with maximum facilities of 100 watts ERP at 30 meters HAAT. An LPFM station with a HAAT that exceeds 30 meters will not be permitted to operate with an ERP greater than that which would result in a 60 dBu contour of 5.6 kilometers. In no event will an ERP less than one watt be authorized. No facility will be authorized in excess of one watt ERP at 450 meters HAAT.

Since the calculated antenna HAAT is 30.0m as demonstrated in Appendix B, the applicant shall employ a 100 Watt ERP resulting in a 5.6km 60 dbu contour and is thus well within 47 C.F.R. Section 73.811(a) compliance.

5.0 ALLOCATION ANALYSIS

Appendix C is a long form channel study which demonstrates the distance separation requirements of 47 C.F.R. Section 73.807 to surrounding FM stations.

The proposed facility is short spaced to FM translator W298CB by 2.7km; however, as further demonstrated in Appendix C the construction permitted W298CB facility is also short spaced to W298CB by 2.7km. The proposed facility does not increase the short spacing distance and is thus compliant.

6.0 INTERFERENCE TO TRANSLATOR OR BOOSTER INPUT SIGNALS

Pursuant to the requirements of 47 C.F.R. Section 73.827(a), Appendix D lists the following FM translator stations which are located within 10 km of the proposed LPFM site and are subject to potential third adjacent-channel interference to the reception of their input channel from their parent station from the herein proposed LPFM facility:

- NONE

There are no FM Boosters or FM translators with third-adjacent input channels to the proposed LPFM facility; therefore, the proposed LPFM facility will not cause interference to the input signals of surrounding FM translator and/or FM booster stations.

7.0 CHANNEL 6 TELEVISION STATIONS

Section 47 C.F.R. Section 73.825 TV Channel 6 interference is not a factor for LPFM stations operating on channels 221 – 300 and thus is not applicable to the instant application for further analysis.

8.0 AM STATION PROXIMITY

Appendix E demonstrates that there no AM stations within 3.2 km of the proposed coordinates, thus an exhibit demonstrating compliance with 47 C.F.R. Section 73.1692 is not required.

9.0 INTERNATIONAL COORDINATION

The proposed facility lies beyond 320km from any international boarder and thus international coordination is not required.

10.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

10.1 General Environmental Requirements

The proposed support structure and antenna will not:

- Require high intensity white lighting.
- Is not located in an official designated wilderness area or wildlife preserve.
- Does not threaten the existence or habitat of endangered species.

- Does not affect districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places or are eligible for listing.
- Does not affect Indian religious sites.
- Is not located in a floodplain
- Does not require construction that involves significant changes in surface features (e.g., wetland fill, deforestation or water diversion).

10.2 Radio Frequency Radiation (RFR) Compliance.

Appendix F is a RFR analysis which demonstrates that the peak RFR exposure is less than 5% of the most restrictive permissible exposure threshold standing anywhere at ground level and in any proximity to the proposed support structure. Pursuant to OET Bulletin 65, since the proposed operation does not exceed 5% of the most permissible exposure at any location 2 meters above ground, it is not considered a significant contributor to RFR and other sources of RFR need not be taken into consideration for a net effect. The instant application is compliant with the FCC limits for human exposure to RFR and thus is excluded from further environmental processing.

11.0 CONCLUSION

As the allocation study and other studies indicate, the proposed technical parameters meets or exceeds all regulatory criteria.

12.0 CERTIFICATION

The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on March 21, 2017.

KESSLER AND GEHMAN ASSOCIATES, INC.

Ryan Wilhour
Consulting Engineer

APPENDIX A - FCC Towair Study

Antenna Structure Registration (ASR) filing determination was calculated from the FCC's structure registration tool:

http://wireless2.fcc.gov/UlsApp/AsrSearch/towairSearch.jsp

Results are as follows:

DETERMINATION Results	
Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.	
Your Specifications	
NAD83 Coordinates	
Latitude	26-32-58.9 north
Longitude	082-00-43.4 west
Measurements (Meters)	
Overall Structure Height (AGL)	30.5
Support Structure Height (AGL)	30.5
Site Elevation (AMSL)	2
Structure Type	
MTOWER - Monopole	

APPENDIX B - Height Above Average Terrain Calculation

The Height above Average Terrain (HAAT) was calculated from the FCC's HAAT Calculator tool:

https://www.fcc.gov/media/radio/haat-calculator

Results are as follows:

Antenna Height Above Average Terrain Calculations -- Results

Input Data

Latitude **26° 32' 57.6"** North
Longitude **82° 0' 44"** West (NAD 27)

These coordinates convert to NAD 83 coordinates of
26° 32' 58.88", North, 82° 00' 43.33" West (NAD 83).

Height of antenna radiation center above mean sea level: **30.5** meters AMSL

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

Results

Calculated HAAT = **30 meters**

Antenna Height Above Average Terrain calculated
using FCC 30 second terrain database (continental USA only)

Individual "Radial HAAT" Values, in meters

0°	23.7 m
45°	30.5 m
90°	30.5 m
135°	30.5 m
180°	30.5 m
225°	30.5 m
270°	30.5 m
315°	30.5 m

APPENDIX C - Short Spacing Study for Channel 299

Granted Construction Permitted Short Spacing Study:

Get A Life! Foundation, Inc.

REFERENCE — DISPLAY DATES
26 33 00.6 N. — CLASS = L1 — DATA 03-21-17
82 00 45.2 W. — Current Spacings to 2nd Adj. — SEARCH 03-21-17

Channel 299 - 107.7 MHz

Call	Channel	Location		Azi	Dist	FCC	Margin
W298CB	LIC 298D	Melbourne	FL	56.1	17.8	20.5	-2.7
WSRZ-FM	LIC 300C2	Coral Cove	FL	326.2	80.3	79.5	0.8
WFUG-LP	LIC 299L1	Lehigh Acres	FL	80.7	41.2	23.5	17.7
W299BJ	LIC 299D	Naples	FL	148.4	43.7	25.5	18.2
W298AV	LIC 298D	Englewood	FL	326.7	55.9	20.5	35.4
WCIW-LP	LIC 299L1	Immokalee	FL	106.0	62.2	23.5	38.7

All separation margins include rounding

Proposed short spacing study:

Get A Life! Foundation, Inc.

REFERENCE — DISPLAY DATES
26 32 57.6 N. — CLASS = L1 — DATA 03-21-17
82 00 44.0 W. — Current Spacings to 2nd Adj. — SEARCH 03-21-17

Channel 299 - 107.7 MHz

Call	Channel	Location		Azi	Dist	FCC	Margin
W298CB	LIC 298D	Melbourne	FL	55.8	17.8	20.5	-2.7
WSRZ-FM	LIC 300C2	Coral Cove	FL	326.3	80.4	79.5	0.9
WFUG-LP	LIC 299L1	Lehigh Acres	FL	80.6	41.1	23.5	17.6
W299BJ	LIC 299D	Naples	FL	148.4	43.6	25.5	18.1
W298AV	LIC 298D	Englewood	FL	326.7	56.0	20.5	35.5
WCIW-LP	LIC 299L1	Immokalee	FL	105.9	62.2	23.5	38.7

All separation margins include rounding

APPENDIX D – Translator and Booster Proximity

The proposed transmitter site proximity to FM boosters and translators was determined using the FCC's FMQuery tool:

https://www.fcc.gov/media/radio/fm-query

Results are as follows:

Boosters within 10km of the proposed LPFM transmitter site:

Search Parameters:

Service:	FB
Search radius:	10.00 km
Center lat / lon:	N 26 32 57.60 W 82 0 44.00
Lower Channel	200
Upper Channel	300

FM Query Results

Tue Mar 21 14:15:11 2017 Eastern time

Print Results (one page per record)

First Record

*** 0 FM Records within 10.00 km distance of
26° 32' 57.60" N, 82° 0' 44.00" W ***

Translators within 10km of the proposed LPFM transmitter site:

Search Parameters:

Service:	FX
Search radius:	10.00 km
Center lat / lon:	N 26 32 57.60 W 82 0 44.00
Lower Channel	200
Upper Channel	300

FM Query Results

Tue Mar 21 14:16:04 2017 Eastern time

Print Results (one page per record)

First Record

*** 0 FM Records within 10.00 km distance of
26° 32' 57.60" N, 82° 0' 44.00" W ***

APPENDIX E – AM Station Proximity

The proposed transmitter site proximity to AM stations was determined using the FCC's FMQuery tool:

https://www.fcc.gov/media/radio/am-query

Results are as follows:

AM Stations within 3.2 km radius for 47 C.F.R. Section 73.1692 compliance:

Search Parameters:

Search radius:	3.20 km
Center lat / lon:	N 26 32 57.60 W 82 0 44.00
Lower Frequency	530
Upper Frequency	1700

AM Query Results

Tue Mar 21 14:19:42 2017 Eastern time

Print Results (Landscape printing preferred)

*** 0 AM Records within 3.20 km distance of 26° 32' 57.60" N, 82° 0' 44.00" W ***

Return to AM Query Data Entry screen

APPENDIX F - Far Field Exposure to RF Emissions

A theoretical analysis has been conducted of the human exposure to radio frequency radiation ("RFR") using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain[3] extraction is compiled from the support structure site, if the support structure is on a rooftop with no higher elevations (e.g., elevator shaft) then flat terrain is compiled. Terrain is extracted using radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360 degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

[3] Terrain extraction is based upon a 3 arc second point spacing terrain database.

FAR FIELD EXPOSURE TO RF EMISSIONS