

Comprehensive Technical Statement

In Support of

Haitian Relief Radio

Application for New LPFM Station

99.9 MHz, Channel 260L1

Orlando, FL

Second adjacent waiver requested

Introduction

Haitian Relief Radio proposes a new LPFM station to serve Orlando, FL on 99.9 MHz, channel 260L1.

The proposed site meets all spacing requirements with respect to all other operating facilities, construction permits, allocations, and applications, with the exception of WRUM, FCC Facility ID # 59976. A second adjacent waiver is requested with respect to this station. Full details supporting the waiver request are included.

Data Sources

Distances were calculated using the FCC method defined in 73.208 of the Commission's Rules.

The facility data used in preparing the application was current as of June 16, 2013. Compliance with all spacing requirements was confirmed as of October 18, 2013.

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Separation Requirements and Second Adjacent Waiver Request

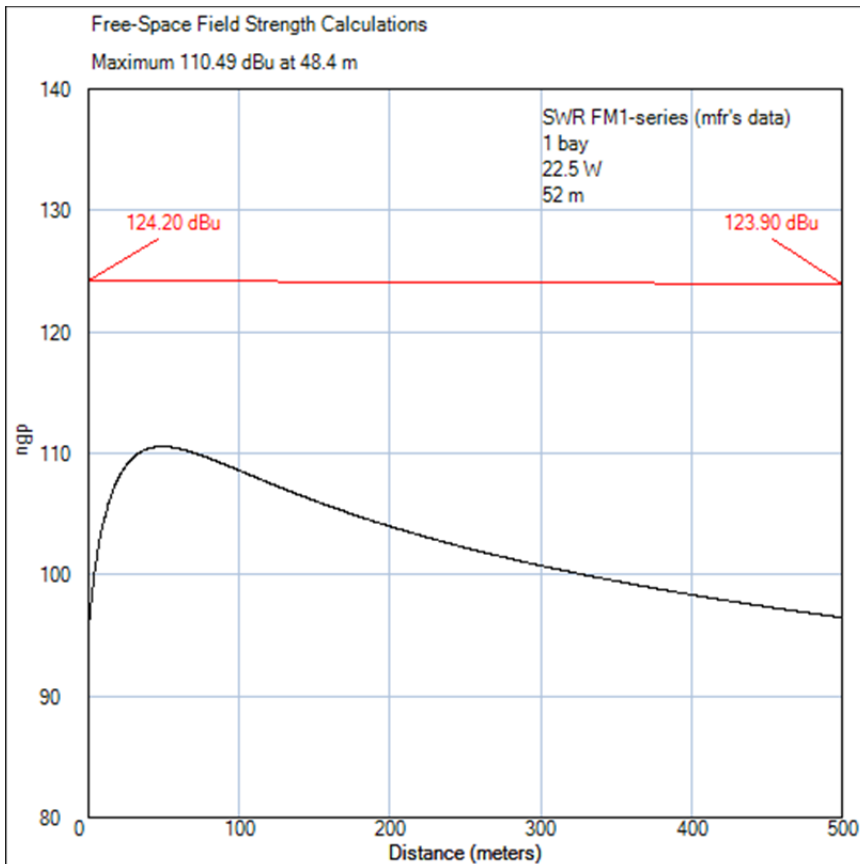
The follow table lists all conflicts that do not exceed the required separations by at least 25 km:

facid	adj	chan	status	call	st	city	kw	erp	brg	km	rq	Δ
59976	2	262C	LIC	WRUM	FL	ORLANDO	100	484	67	31.43	93	-61.57
133444	1	259L1	CP	WBVL-LP	FL	BUENA VENTURA LAKES	0.067	37	196	16.34	14	2.34
133444	1	259L1	LIC	WBVL-LP	FL	BUENA VENTURA LAKES	0.1	24	177	19.02	14	5.02
20372	3	257C2	LIC	WLRQ-FM	FL	COCOA	50	150	108	69.14	53	16.14

The only short-spaced facility is second-adjacent WRUM in Orlando. A waiver is requested based on lack of interference.

At the proposed site, the WRUM signal is 84.2 dBu. The lowest WRUM signal within 500 m of the proposed site is 83.9 dBu, making the maximum allowable interfering signal 123.9 dBu.

At the proposed antenna height of 55 m above ground and 86 m above mean sea level, the height above average terrain is 62 m. The expected ERP is 22.5 W. At this ERP, the free-space distance to 123.9 dBu is 21.3 m. With the antenna 55 m above the ground, it is self-evident that interference will not reach the ground. There are no large structures in the vicinity.



The graph to the left shows the expected signal 3 m above the ground, given the proposed antenna height and the expected ERP.

The maximum signal is expected to be more than 10 dB below the allowable level.

(The antenna used to develop the graph is a one-bay SWR FM-1, but any modern antenna model will provide similar performance.)

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Translator / Booster Input Interference

There are no FM Boosters within 50 km of the proposed site.

One FM Translator application and one FM Translator construction permit exist within 10 km of the proposed site.

FCC Facility ID # 156791 (APP) proposed in its short form application to rebroadcast WAFC-FM in Clewiston, FL, FCC Facility ID # 24230, with a direct off-air pickup.

WAFC-FM is now WLLY in Palm Beach Gardens. It lies at a bearing of 147° from the proposed translator site, and operates on Channel 258.

The instant LPFM application is for second-adjacent Channel 260, with a transmitter site 4.6 km away from the translator site at a bearing of 199°. This is 52° from the direction from the translator site to WLLY. This complies with the requirements of § 73.827 for third-adjacent conflicts, which requires a minimum separation of 2 km between the translator and the LPFM proposal, and a 10 km separation if the LPFM is within $\pm 30^\circ$ of the bearing from the translator to the primary station.

In most contexts, second and third adjacent interference are considered equivalent. While § 73.827 appears to apply only to third-adjacent situations, it is submitted that the proposal should be acceptable should the Commission apply § 73.827 to second adjacent situations.

In its long-form application, filed after the June 16, 2013 LPFM data freeze date, the applicant revised the primary station to AM station WRSO in Orlovista, FL, FCC Facility ID # 129548. The delivery method selected is "Direct Off-Air." There can be no interference between any FM station and direct off-air pickup of an AM station.

Therefore, with respect to FCC Facility ID # 156791, neither the application current as of June 16, 2013, nor the later-filed application changing to the AM primary station, appears to present a conflict with the proposed operation.

W245BX (CP), FCC Facility ID # 151803, proposed in its application current as of June 16, 2013, an off-air pickup of WREH via W246BT.

W246BT is not on an adjacent channel to the instant application. No applications including technical changes have been filed since, and the proposed operation does not represent a conflict with W245BX.

Therefore, it is submitted that the instant application complies with the requirements of § 73.827.

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Form 318 Tech Box Data

Class	LP100
Channel	260
Coordinates (NAD-27)	28 28 16 N Lat 81 22 18 W Lon
ASR	1030063
Site Elevation AMSL	31 m
Overall Tower Height AGL	57 m
Radiation Center AGL	55 m
Power/height certification	YES
Environmental	YES - Exhibit 11 (This document)

Additional Information

Coordinates (NAD-83)	28 28 17.0 N Lat 81 22 17.0 W Lon
Height above average terrain	62 m (from the FCC online HAAT calculator)
Estimated ERP	22.5 W-H + 22.5 W-V
Antenna type	Omnidirectional
Manufacturer / Model	SWR FM-1 or similar

International

The FM Agreements with Canada and Mexico require evaluation and potential coordination of any proposal within 320 km of the border.

The distance to the nearest point along the US/Canada border is 1,470 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 1,582 km. Coordination with Mexico is not required.

Quiet Zones

The proposed site is outside the National Radio Quiet Zone (National Radio Astronomy Observatory Notification Area) in West Virginia.

The proposed site is outside the Arecibo Observatory notification area in Puerto Rico.

The proposed site is not within a 100 km extension of the Table Mountain Radio Receiving Zone in Colorado.

Protected Monitoring Stations

The nearest Protected Monitoring Station is 120 km distant, in Vero Beach, FL.

Tower Information

The proposal is for an existing tower, ASR # 1030063. The antenna will be mounted 55 m above the ground. A reasonable assurance letter has been obtained from the tower owner.

Environmental

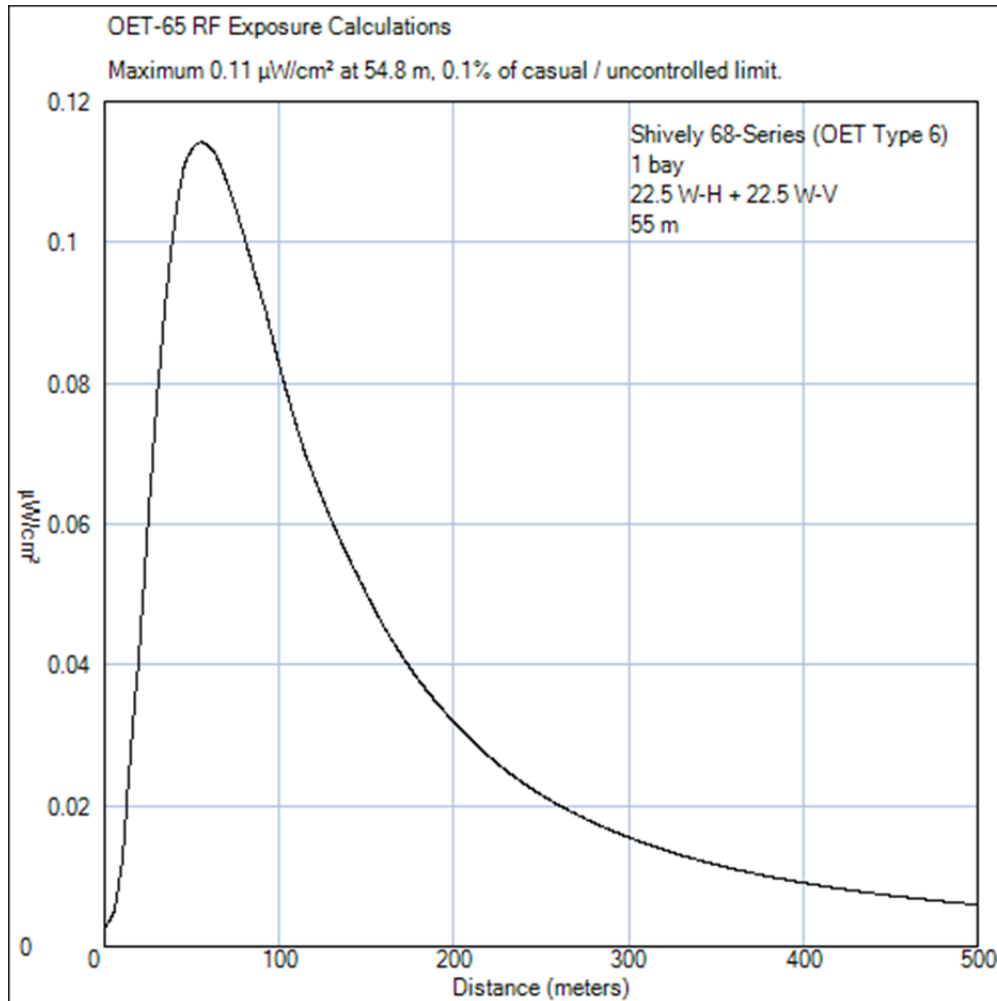
The antenna will be mounted 55 m above ground on an existing 57 m tower. No construction or excavation will be performed.

Therefore, the application does not propose a major environmental action.

RF Exposure

The antenna will be mounted 55 m above ground.

Based on the estimated 22.5 W ERP, the distance to the 200 $\mu\text{W}/\text{cm}^2$ limit for casual / uncontrolled exposure in the horizontal lobe of the antenna will be 2.7 m.



The maximum RF exposure using the formula in OET-65 is 0.11 $\mu\text{W}/\text{cm}^2$. This is far less than 1% of the limit for casual / uncontrolled exposure.

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