



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WWHB-CA is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WWHB-CA antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

The predicted emissions of WWHB-CA must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WWHB-CA, which will operate on television Channel 33 (584-590 MHz), the MPE is 391.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and 1,956.7 $\mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed WWHB-CA facility will operate with a maximum ERP of 15 kW from an elliptically polarized omni-directional transmitting antenna with a centerline height of 292 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WWHB-CA facility is predicted to produce a power density at two meters above ground level of 1.073 $\mu\text{W}/\text{cm}^2$, which is 0.27% of the FCC guideline value for an “uncontrolled” environment, and 0.054% of the FCC’s guideline value for “controlled” environments. There is one full-power DTV broadcast facility, four other LPTV DTV facilities, three full-power FM stations and an FM translator that are located at the WWHB-CA site. Therefore, the total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations within the relevant proximity, is 74.47% of the limit applicable to “uncontrolled” environments, and 14.894% of the limit for “controlled” environments. (See Appendix A)

SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WWHB-CA, Stuart, FL
Channel 33, 15 kW, 293.5 m HAAT
October, 2017

CALL	SERVICE	CHANNEL	FREQUENCY	POLAR- IZATION	ANTENNA HEIGHT	ERP (kW)	VERT. RELATIVE FIELD FACTOR	WORST-CASE PREDICTED POWER DENSITY ($\mu\text{W}/\text{cm}^2$)	FCC UNCONTROLLED LIMIT ($\mu\text{W}/\text{cm}^2$)	PERCENT OF UNCONTROLLED LIMIT
WTCN-CA	DT	17	491	H & V	292	15.000	0.300	1.073	327.33	0.33%
WWHB-CA	DT	33	587	H & V	292	15.000	0.300	1.073	391.33	0.27%
WTCE	DT	18	497	H	295	649.000	0.300	22.731	331.33	6.86%
WDOX-LD(CP)	DT	24	533	H	260	4.550	0.300	0.206	355.33	0.06%
WXOD-LD	DT	33	587	H	260	4.450	0.300	0.201	391.33	0.05%
WMMF-LD	DT	39	623	H	290	15.000	0.300	0.544	415.33	0.13%
WKGR	FM	254	98.7	H & V	295	100.000	<note 1>	43.921	200.00	21.96%
WMBX	FM	272	102.3	H & V	294	100.000	<note 1>	44.219	200.00	22.11%
WIRK	FM	276	103.1	H & V	296	90.000	<note 1>	43.619	200.00	21.81%
WLDI (AUX)	FM	238	95.5	H & V	262	15.000	<note2>	1.286	200.00	0.64%
W295BJ	FM	295	106.9	H & V	164	0.190	1.000	0.484	200.00	0.24%

TOTAL PERCENTAGE OF FCC GUIDELINE VALUE = 74.47%

* For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.

note 1: FM Model Antenna: EPA Type 1; 8-bay, full-wave spaced antenna

note 2: FM Model Antenna: EPA Type 3; ERI Rototiller Type, 4-bay, full-wave spaced antenna