

APPLICATION FOR CONSTRUCTION PERMIT INFORMATION  
RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO

1580 KHZ 1 KW U DAD

March 22, 2017

APPLICATION FOR CONSTRUCTION PERMIT INFORMATION  
RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO

1580 KHZ 1 KW U DAD

Table of Contents

	Executive Summary
Item 1	Broadcast Facility
Item 2	Principal Community Coverage and Service Contours
Item 3	Allocation Requirements
Item 4	Blanketing
Item 5	Environmental Protection
Appendix	Section 307(b) Engineering Factors

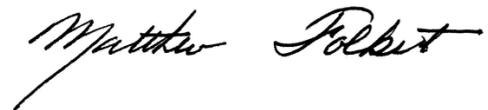
Executive Summary - WVOZ

This engineering exhibit supports an application for construction permit for radio station WVOZ in Aguadilla, Puerto Rico. A minor change for a site location change, with new day and night patterns, is proposed.

WVOZ is presently licensed to the community of Morovis and operates fulltime on 1580 kilohertz with 5 kilowatts daytime and 2.5 kilowatts nighttime, utilizing a directional pattern daytime and a nondirectional pattern during nighttime hours. By means of this present application, the licensee proposes to relocate to a new site, change the community of license to Aguadilla, decrease daytime and nighttime power to 1 kilowatt with a directional antenna pattern daytime and a nondirectional antenna during nighttime hours. The proposed patterns will use the existing towers of WI3XSO, 1260 kilohertz, Aguadilla, PR.

The proposal is classified as a minor change according to 47 CFR 73.3571(a)(2). As a Class B station operating on one of the channels listed in 73.25(c), the proposal satisfies 47 CFR 73.21(a)(2) which permits operation with a nominal power of not less than 0.25 kilowatt nor more than 50 kilowatts at any time.

The Federal Aviation Administration is not being notified of the proposal, as new tower construction is not proposed. Both proposed towers are registered.



Matthew Folkert

March 22, 2017

Broadcast Facility - WVOZ

The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33(a), 73.45, 73.150, 73.160, 73.182(a)-(d), 73.189 and 73.1650. Information included herein demonstrates compliance with all relevant requirements. The technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice.

Proposed Transmitter Location

The location of the proposed WVOZ facility will be located at NAD27 coordinates:

18-24-09 North

67-08-48 West

An antenna site plat is included herein.

Proposed Towers

Two existing towers for WVOZ will be employed for the daytime directional pattern and the nighttime nondirectional antenna pattern will utilize one tower with the remaining tower detuned. The radiating height of each tower is 42.7 meters (140 feet) and each has an overall height of 44.2 meters (145 feet) above ground level. The ASRN for tower 1 is 1227488 and tower 2 is 1239311.

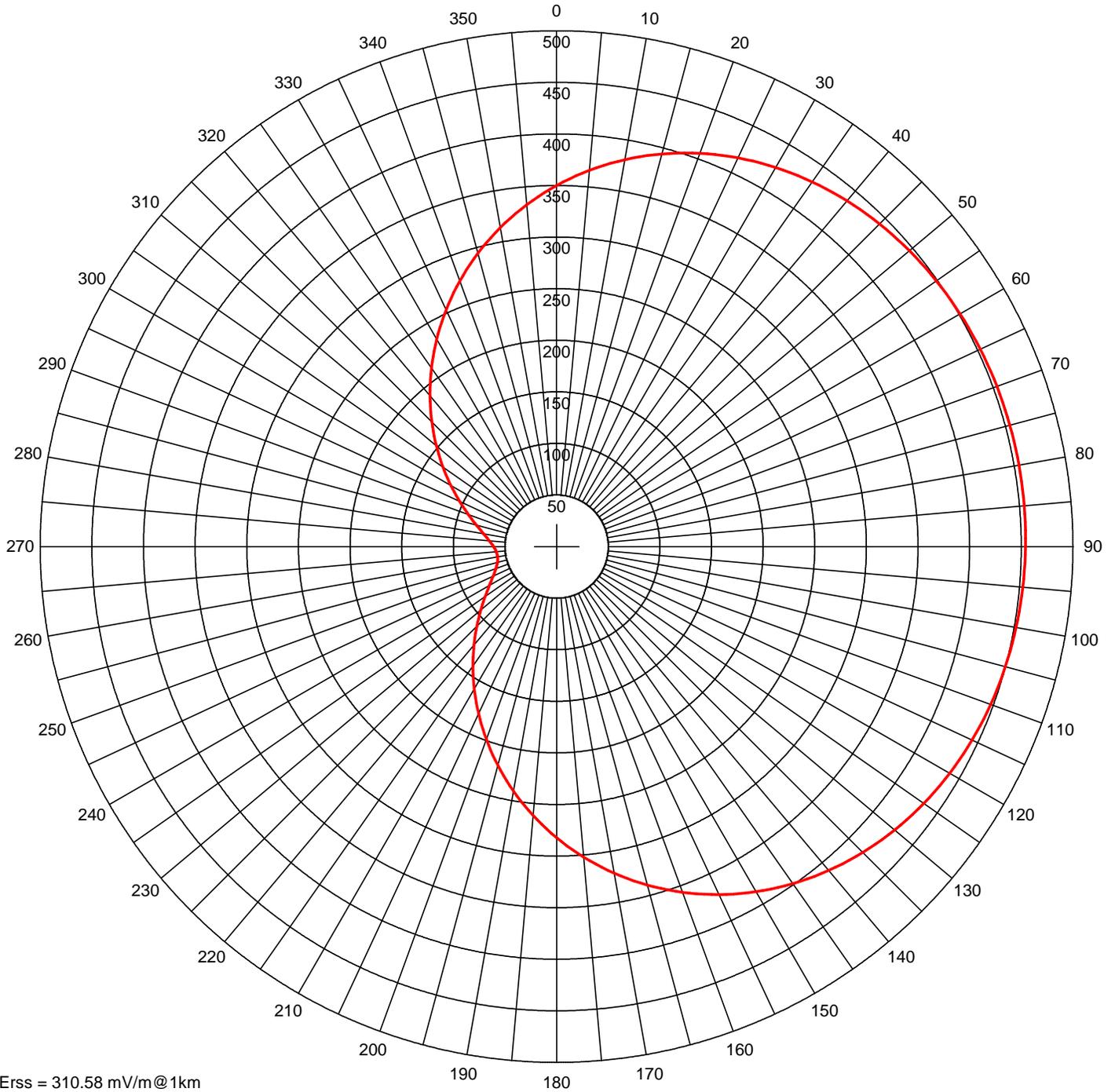
### Ground System

The proposed ground system consists of 120 equally-spaced buried copper wire radials extending to a length of 59.5 meters (195 feet) except where overlap of radials between adjacent towers occurs. Radials are shortened and bonded to transverse copper straps where overlap occurs.

### Proposed Antenna Patterns

Polar graphs of the proposed daytime and nighttime horizontal plane radiation patterns appear on the following pages. Pertinent information with regard to their characteristics are shown along with the polar graphs.

# Daytime Directional Pattern



Erss = 310.58 mV/m@1km  
 Theo RMS: 305.6 mV/m@1km  
 Std RMS: 321.052 mV/m@1km  
 Q: 10.0 mV/m@1km

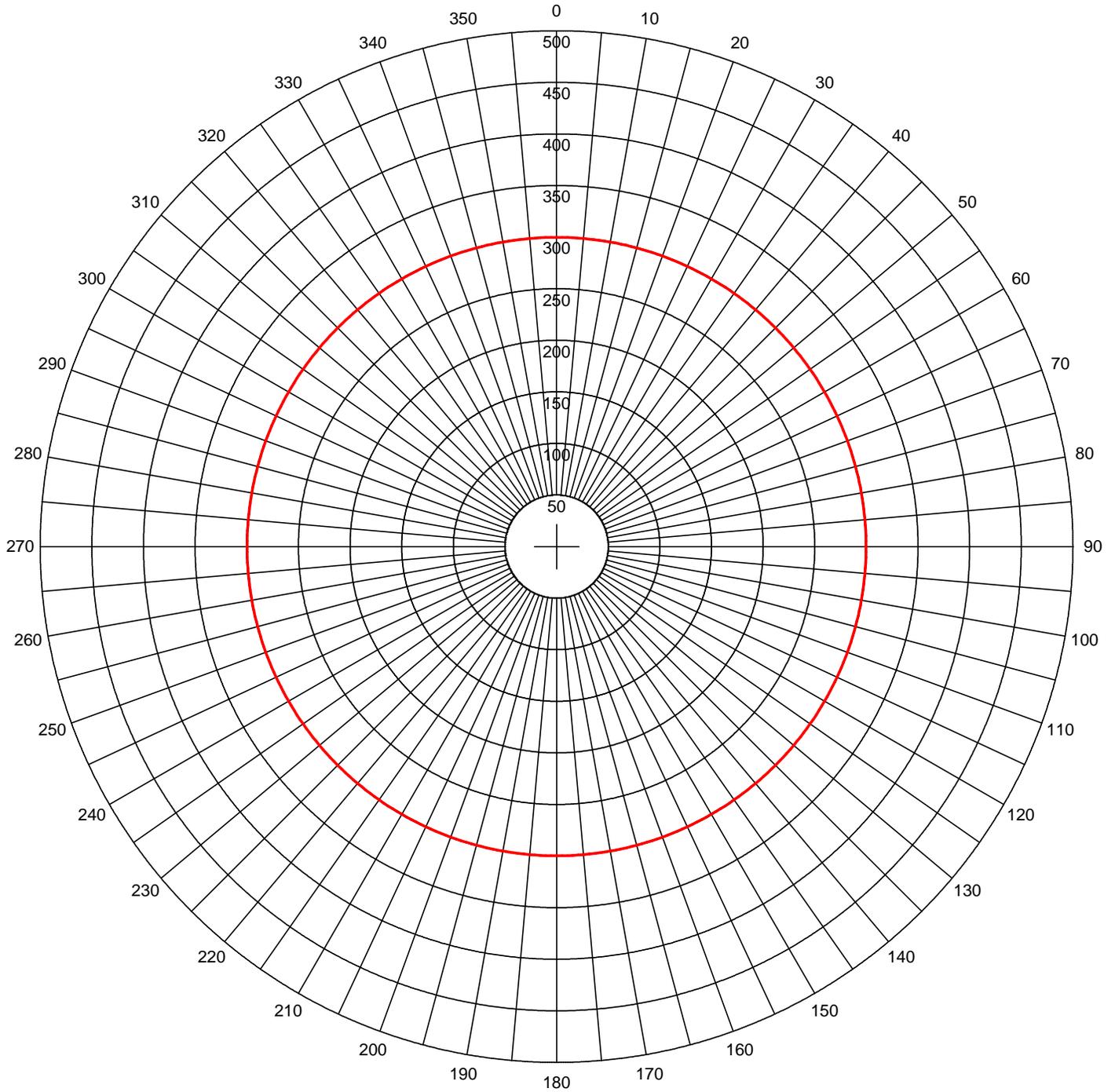
Standard Horizontal Plane Pattern

— Pattern (mV/m @ 1km)  
 — Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	81.0	0	0	0.0	0.0	0.0	0.0
2	0.870	-93.0	75.2	81.0	81.0	0	0	0.0	0.0	0.0	0.0

Call: WVOZ  
 Freq: 1580 kHz  
 AGUADILLA, PR, US  
 Hours: D  
 Lat: 18-24-09 N  
 Lng: 067-08-48 W  
 Power: 1.0 kW  
 Theo RMS: 305.60 mV/m@1km  
 @ 1.0 kW

# Nighttime Nondirectional Pattern



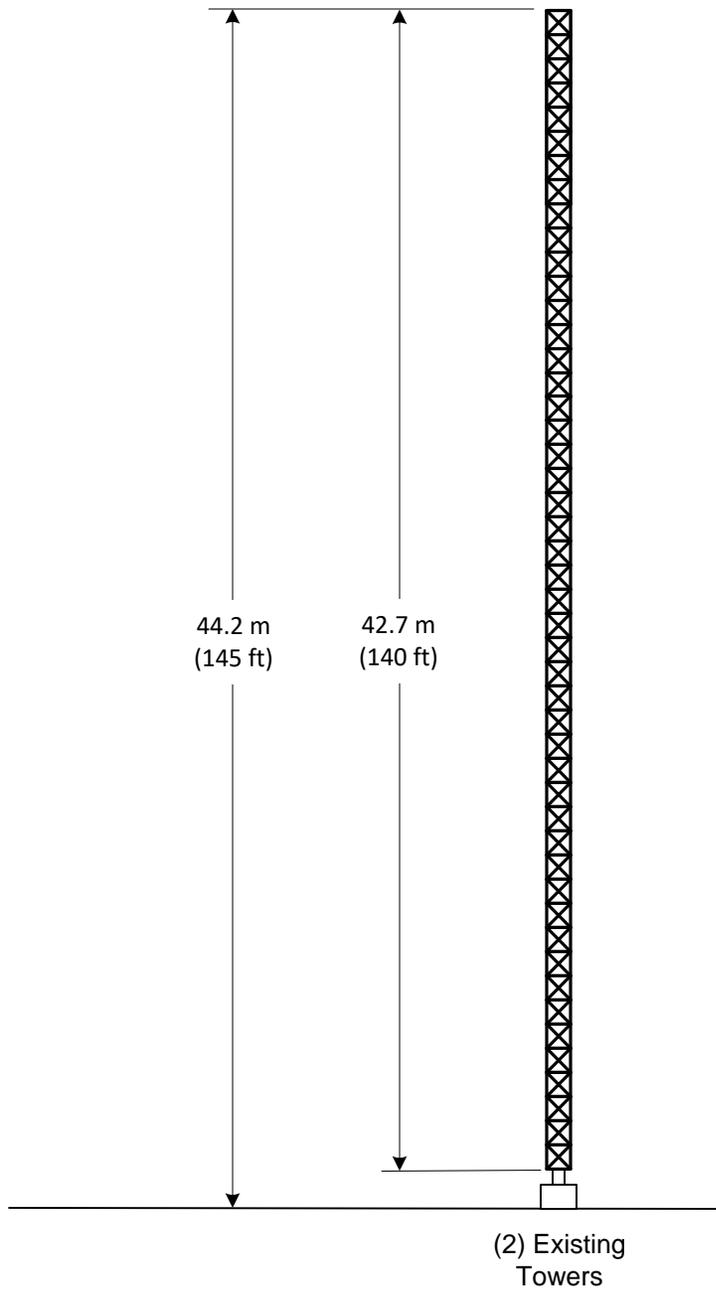
Erss = 299.70 mV/m@1km  
 Theo RMS: 299.7 mV/m@1km

Theoretical Horizontal Plane Pattern

— Pattern (mV/m @ 1km)  
 — Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	81.0	0	0	0.0	0.0	0.0	0.0

Call: WVOZ  
 Freq: 1580 kHz  
 AGUADILLA, PR, US  
 Hours: N  
 Lat: 18-24-09 N  
 Lng: 067-08-48 W  
 Power: 1.0 kW  
 Theo RMS: 299.70 mV/m@1km



Site Coordinates(NAD 27)

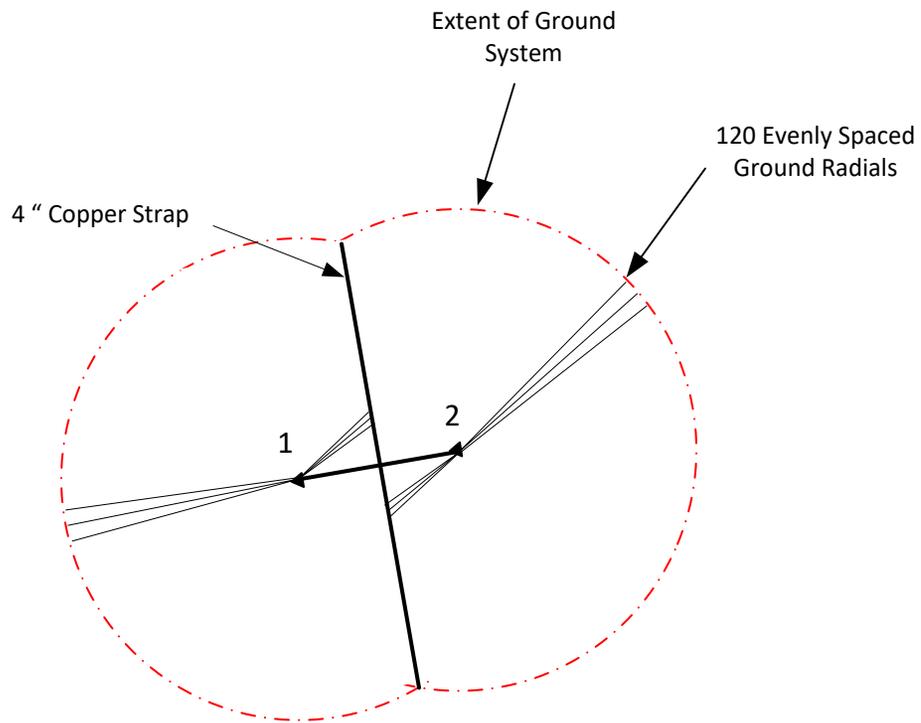
18° 24' 09" N  
67° 08' 48" W

Not To Scale

## **SKETCH OF ANTENNA ELEMENT**

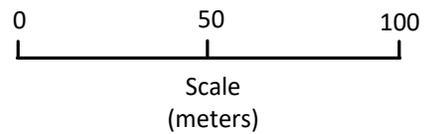
RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO  
1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



Site Coordinates(NAD 27)

18° 24' 09" N  
67° 08' 48" W



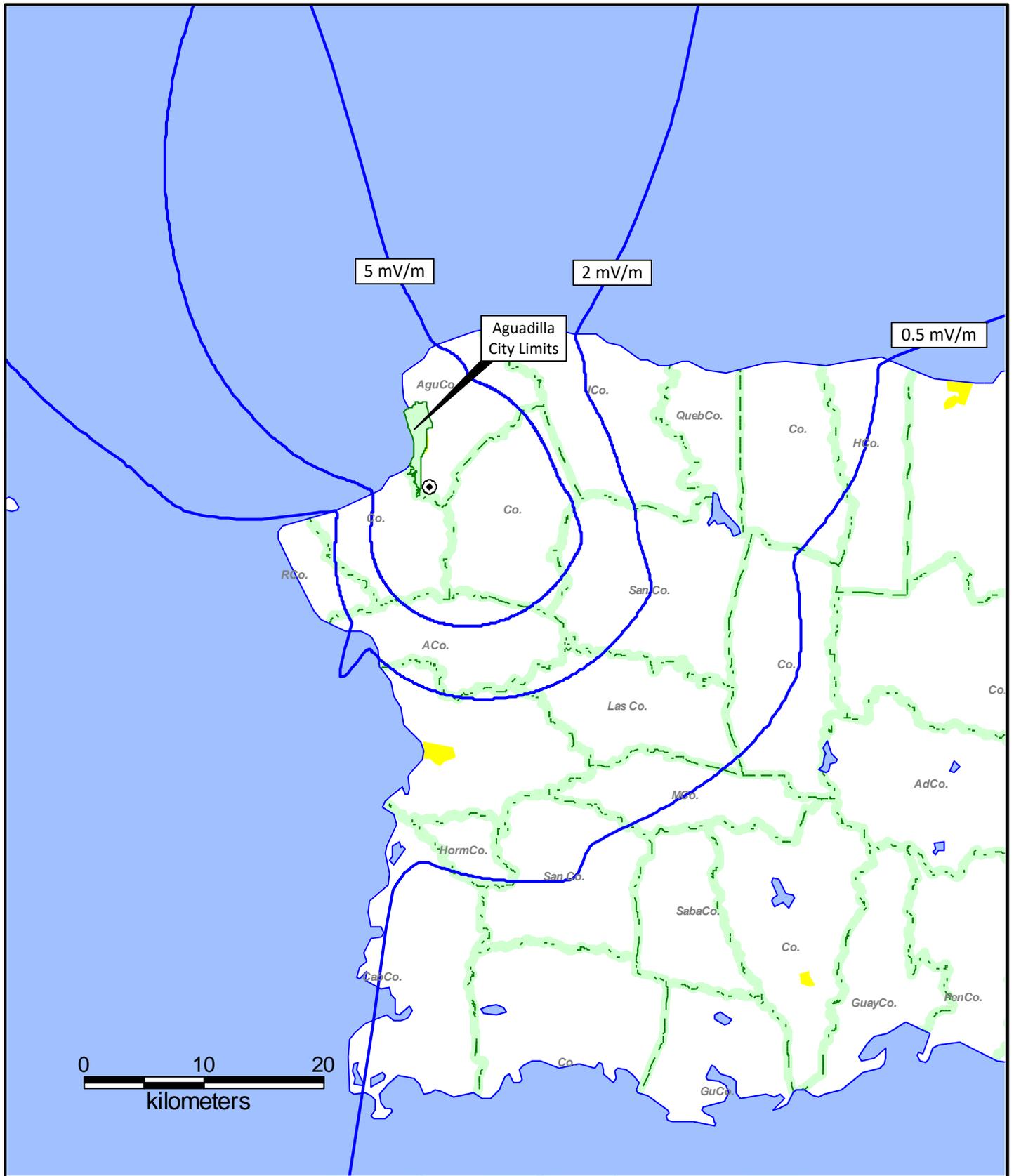
## **ANTENNA SITE PLAT**

RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO  
1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Principal Community Coverage and Service Contours - WVOZ

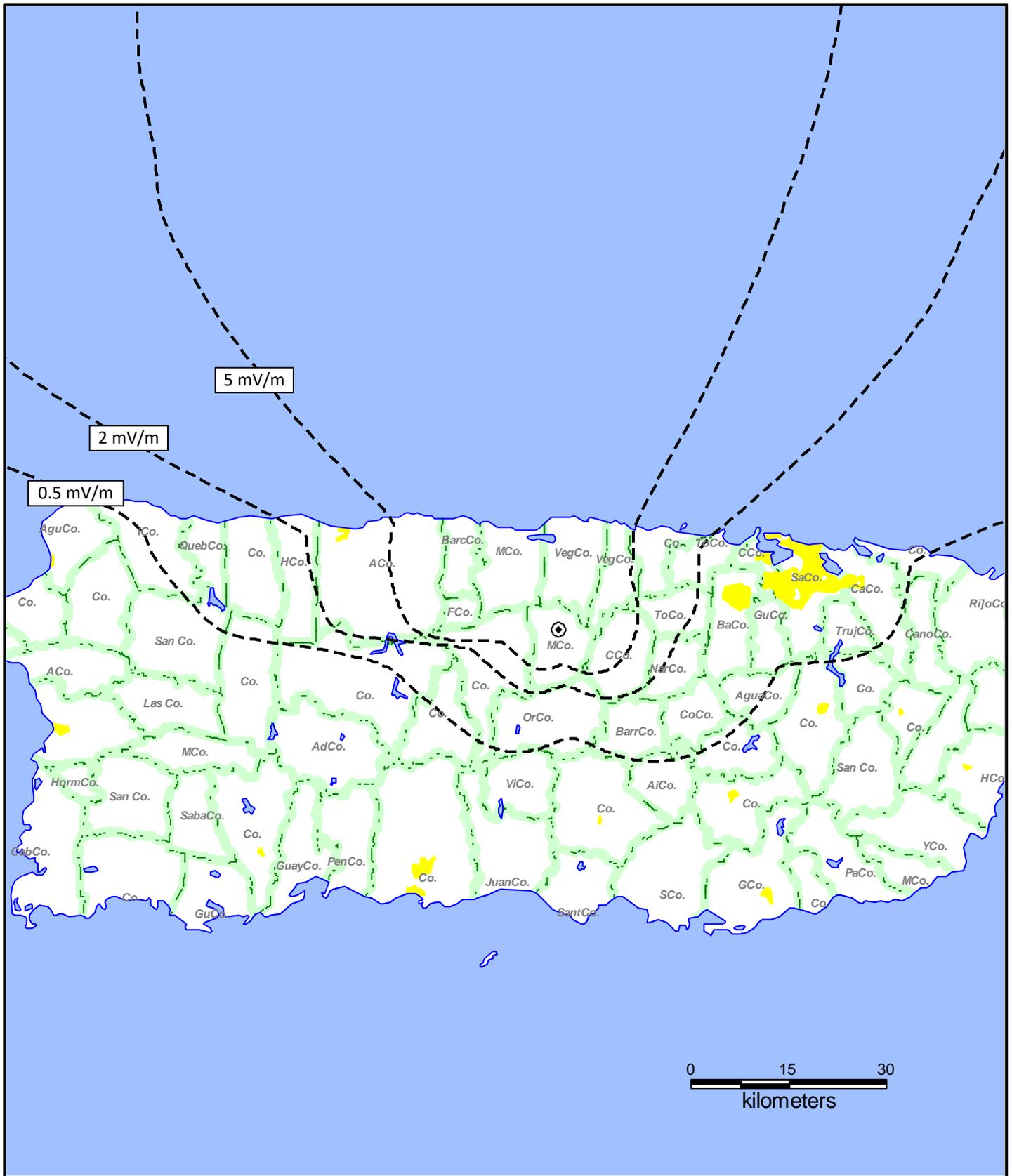
The proposed facility complies with the community coverage requirements of 47 C.F.R. Section 73.24(i). The daytime 5 mV/m and the nighttime 6.3 mV/m(NIF) contours both encompass the entire principal community to be served. Maps showing the proposed and existing daytime and nighttime field strength service contours appear on the following pages.



**PROPOSED DAYTIME PRINCIPAL COMMUNITY COVERAGE AND SERVICE CONTOURS**

RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**EXISTING DAYTIME PRINCIPAL COMMUNITY COVERAGE AND SERVICE CONTOURS**

RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD

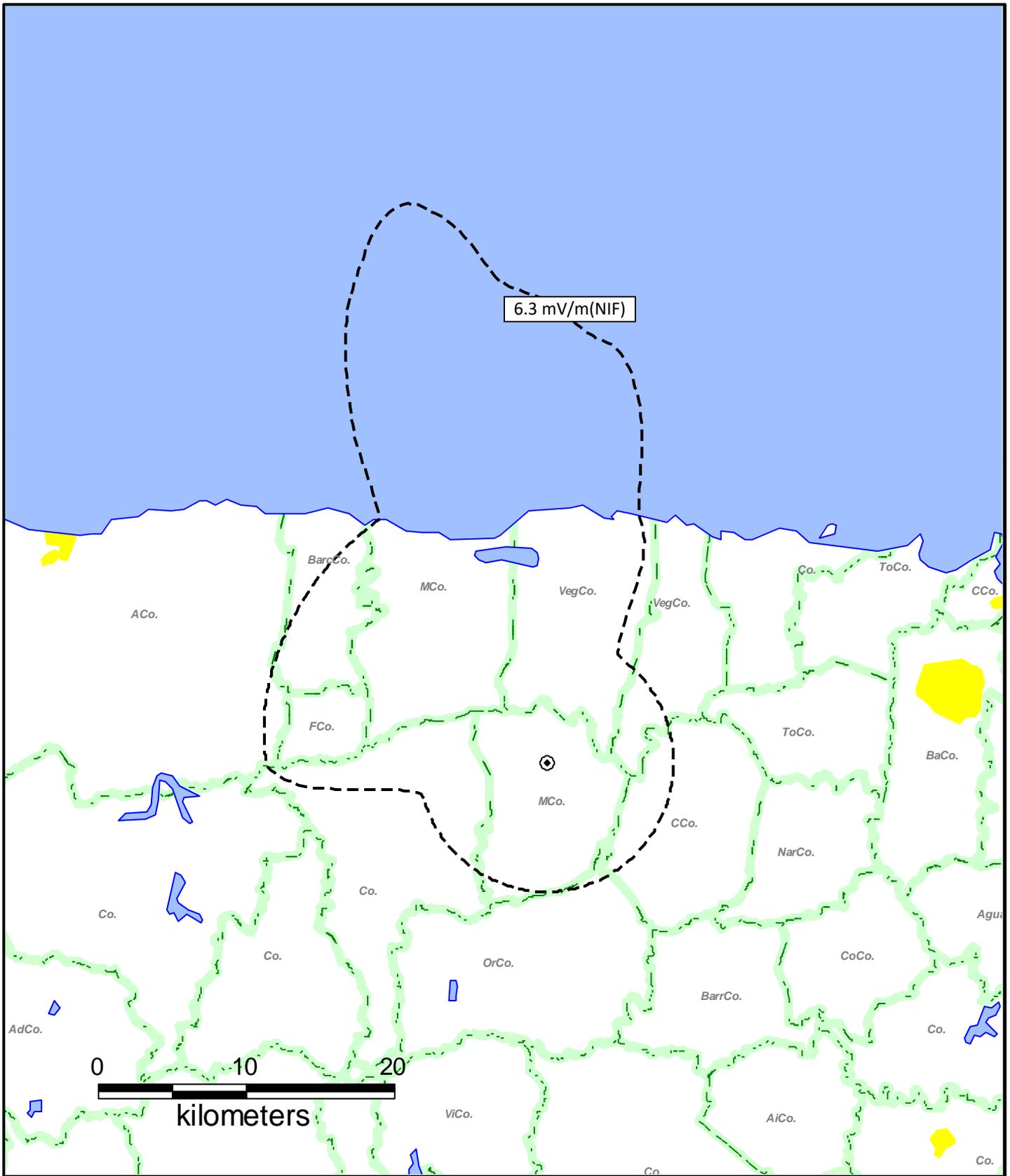
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**PROPOSED NIGHTTIME PRINCIPAL COMMUNITY COVERAGE AND SERVICE CONTOURS**

RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**EXISTING NIGHTTIME PRINCIPAL COMMUNITY COVERAGE AND SERVICE CONTOURS**

RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD

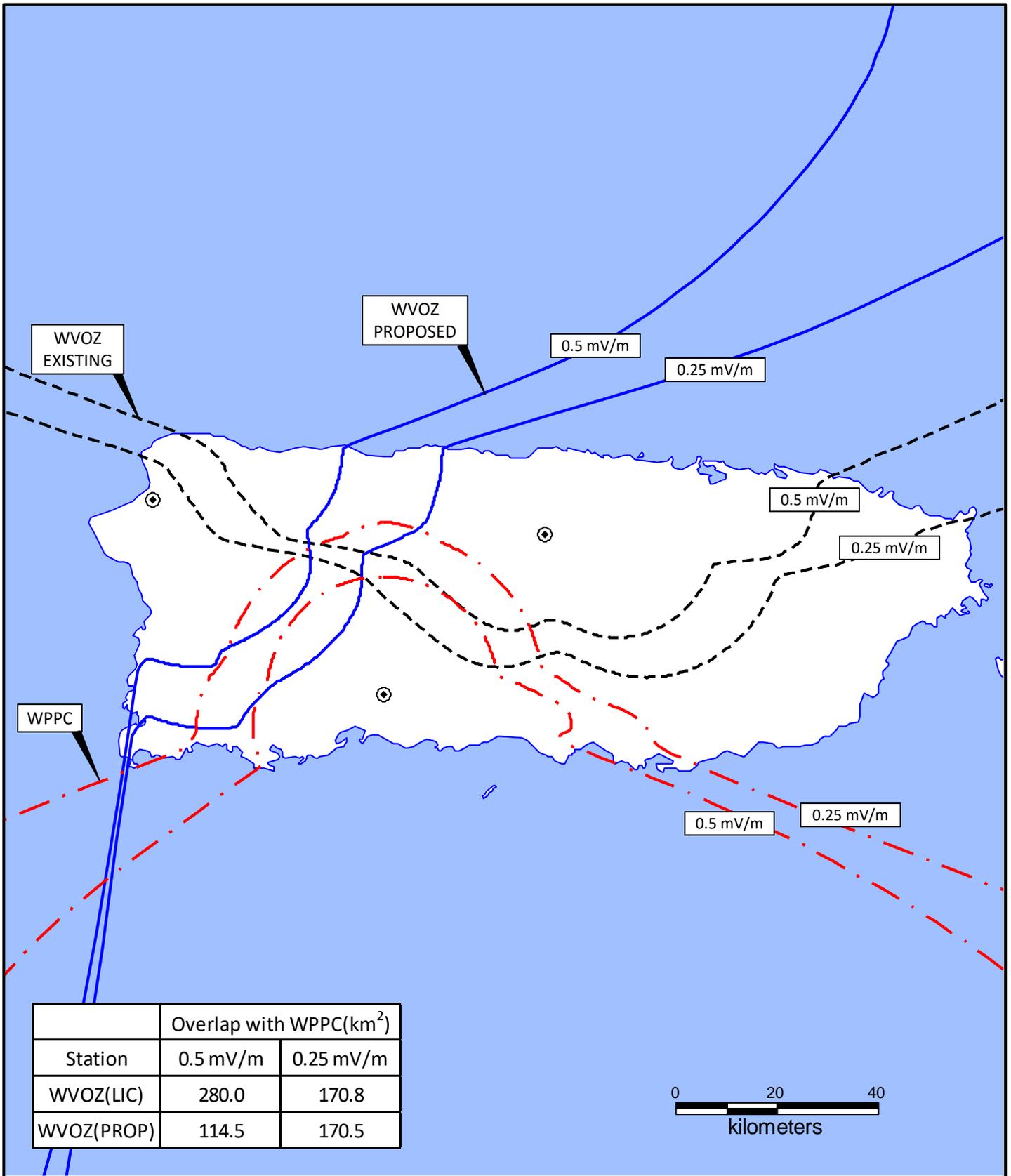
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Allocation Requirements - WVOZ

The proposed facility complies with the requirements of 47 C.F.R. Section 73.37 and 73.182. The proposed operation does not involve prohibited overlap of signal strength contours with other stations where there is not already such overlap. In cases where there is overlap with the presently licensed WVOZ facility, such overlap will not be increased. A daytime allocation study was made utilizing Region 2 conductivities. A nighttime allocation study shows protection to all applicable stations with domestic and international allotments. The following figures support a conclusion that this proposal comports with all interference protection requirements.

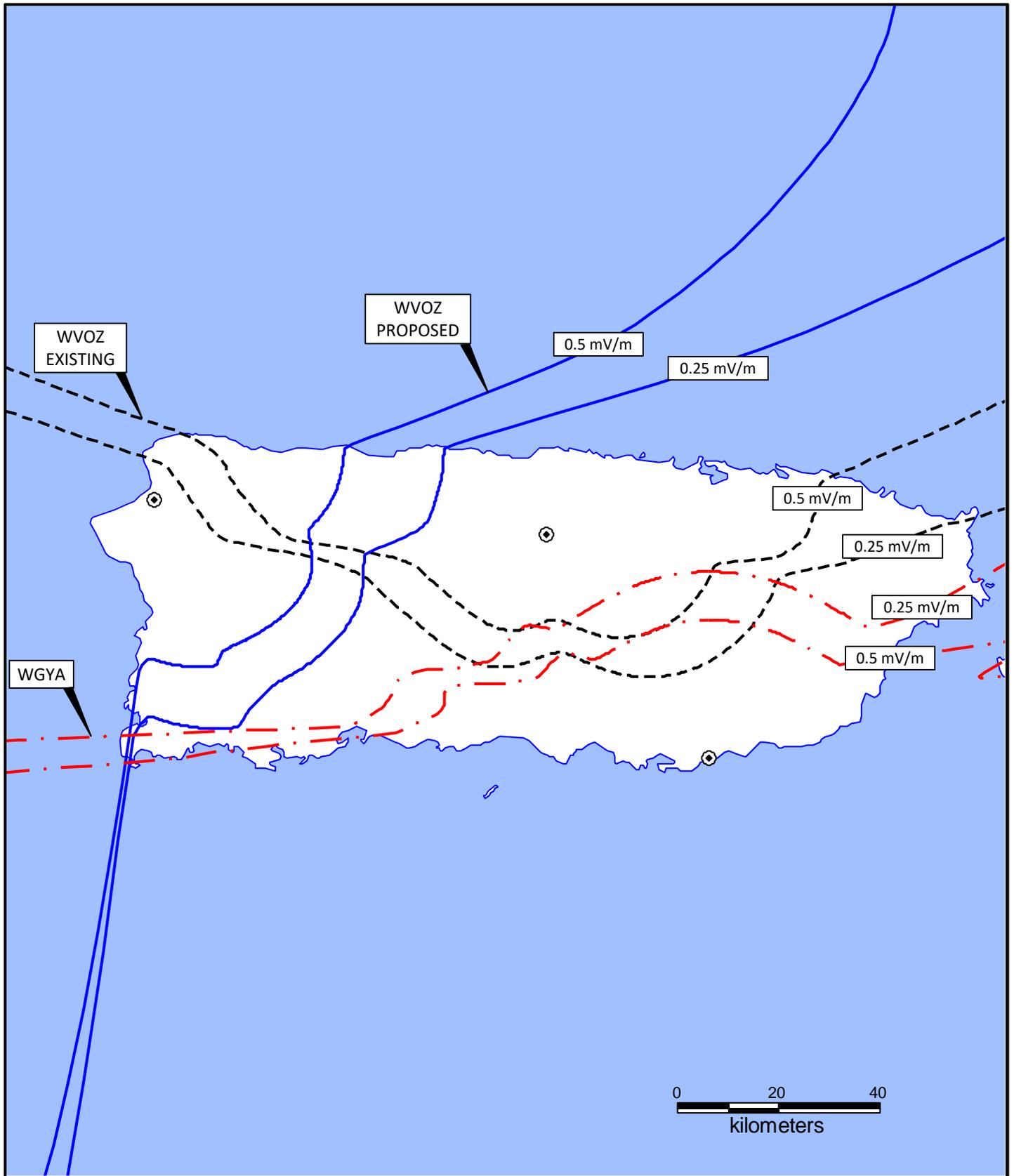
Allocation Study Data

Maps showing the field strength contours requiring study and tabulations of pertinent data regarding the daytime and night hours studies appear on the following pages.



**DAYTIME ALLOCATION STUDY : WPPC**

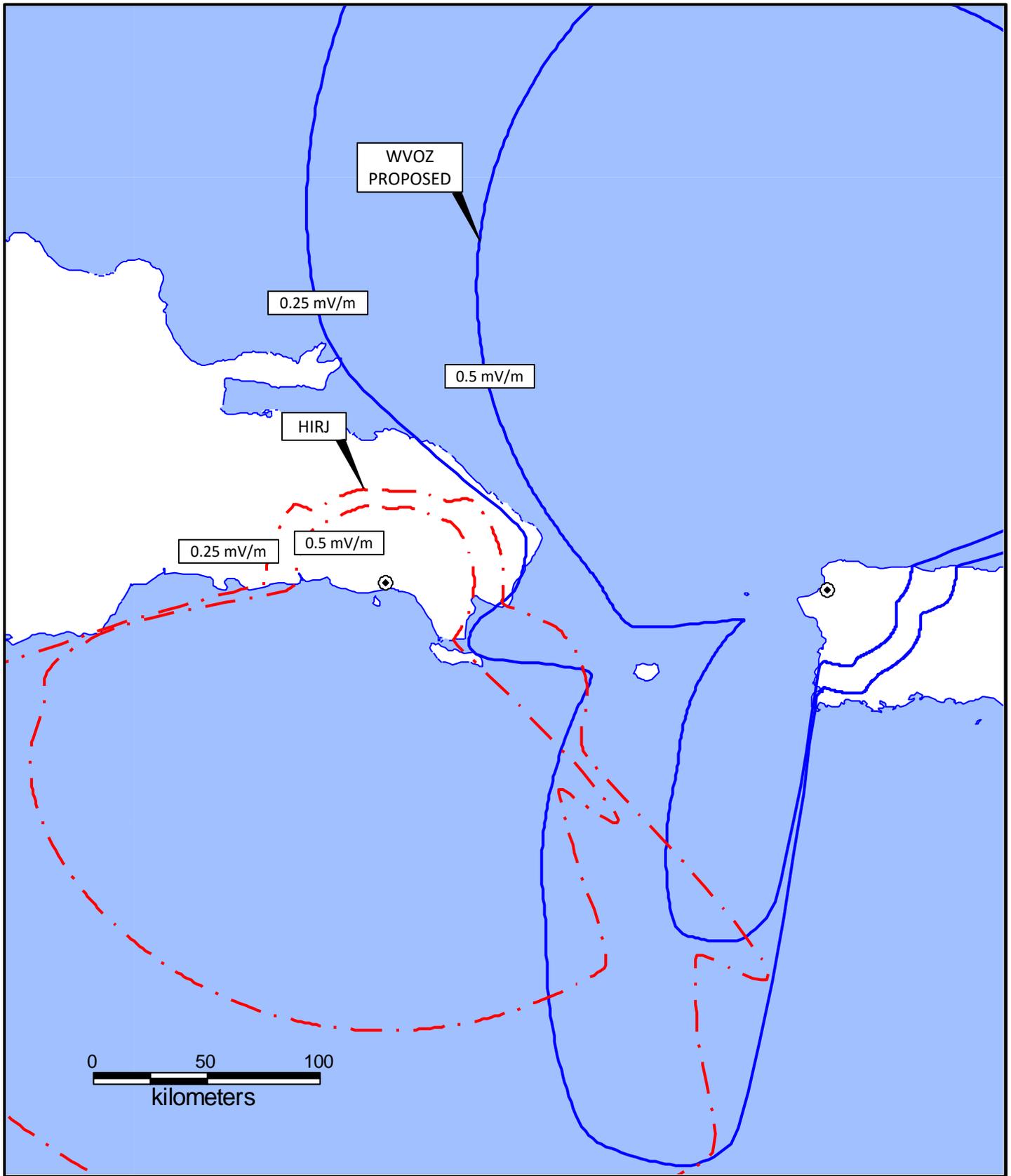
RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD



**DAYTIME ALLOCATION STUDY : WGYA**

RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD

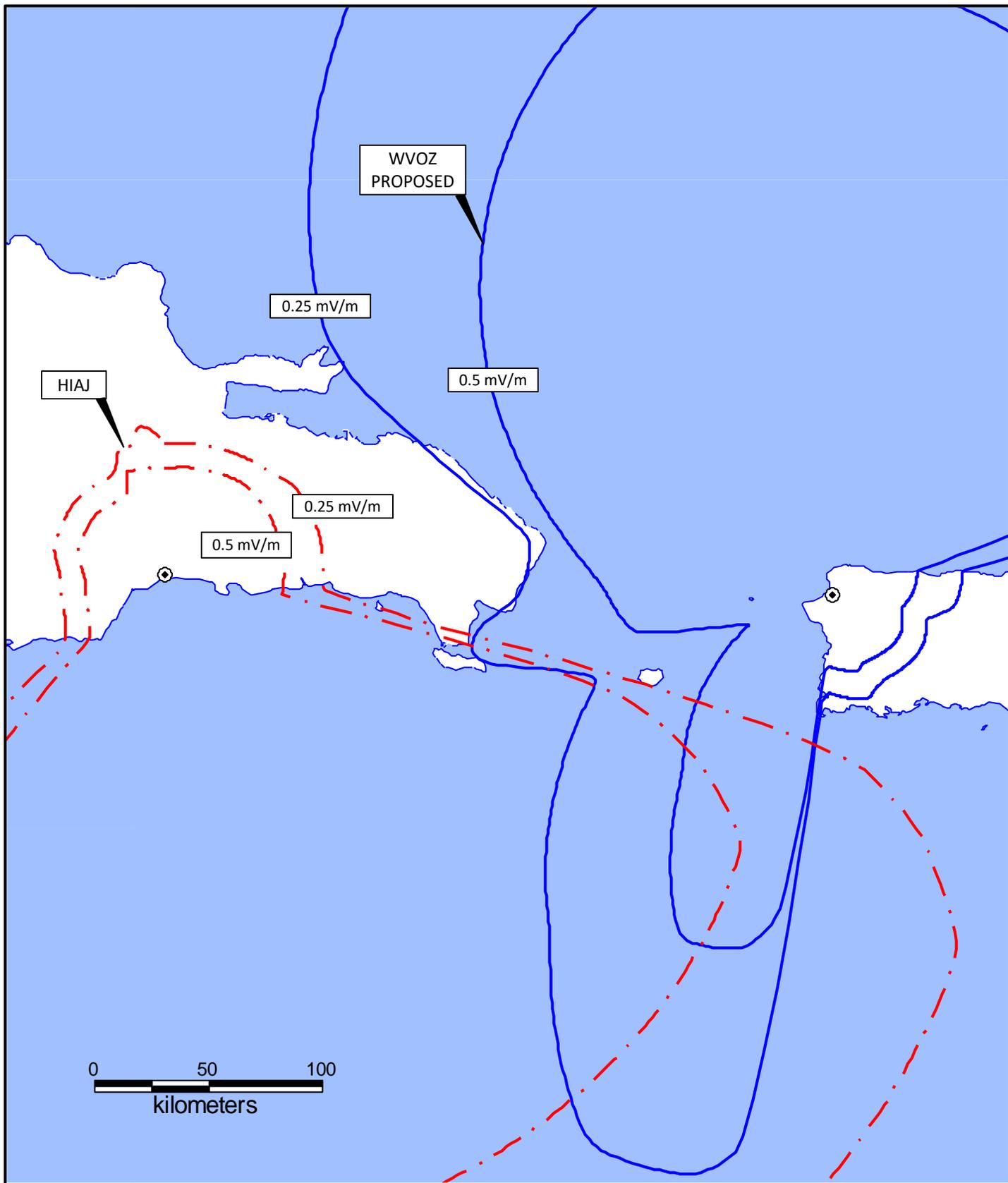
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**DAYTIME ALLOCATION STUDY : HIRJ**

RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO  
1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**DAYTIME ALLOCATION STUDY : HIAJ**

RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO  
1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

## Tabulation of Data Employed in the Calculation of Groundwave Contours

Reference Station: WVOZ, 1580 kHz  
Location: 18-24-09 N, 067-08-48 W

### 1570 kHz

58.9 km      WPPC   L 18-03-47 N 066-43-04 W 1.0 kW ND1 - 282.0 mV/m@1km  
36.6 mi      Azi: 129.7 Class: D Sched: U File #: BL14162  
Location: PENUELAS, PR, US

192.3 km     HIRJ   18-26-00 N 068-58-00 W 0.25 kW ND1 - 300.8 mV/m@1km  
119.5 mi     Azi: 270.7 Class: C Sched: U File #:  
Location: LA ROMANA, , DR

289.2 km     HIAJ   18-29-00 N 069-53-00 W 1.0 kW ND1 - 300.0 mV/m@1km  
179.7 mi     Azi: 271.3 Class: C Sched: U File #:  
Location: S DOMINGO 7, , DR

### 1580 kHz

246.8 km     HIWJ\*   19-12-00 N 069-20-00 W 0.5 kW ND1 - 300.4 mV/m@1km  
153.4 mi     Azi: 290.6 Class: C Sched: U File #:  
Location: SAMANA, , DR

### 1590 kHz

120.0 km     WGYA   L 17-57-13 N 066-06-51 W 1.0 kW ND2 - 321.6 mV/m@1km  
74.6 mi     Azi: 114.6 Class: B Sched: U File #: BL20140326AFG  
Location: GUAYAMA, PR, US

\*. HIWJ no longer operates on 1580Khz. It changed to 1520 Khz. See Application for Construction Permit (BP-19900215AE) for WVOZ with 10KW at Manati acknowledging the frequency move of HIWJ.

## Nighttime Allocation Study

### Night Allocation Protection Report

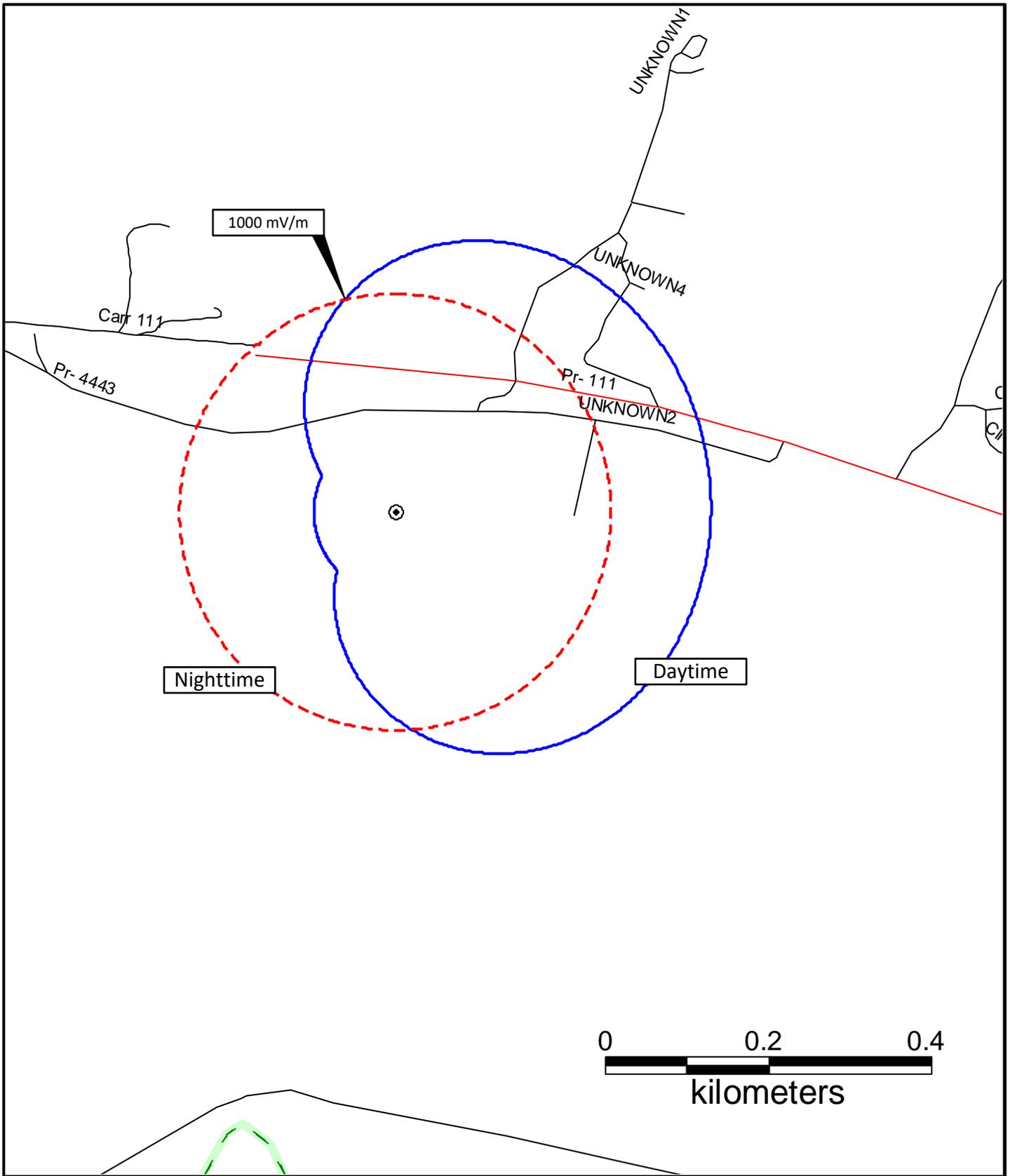
Call: WVOZ  
 Freq: 1580 kHz  
 AGUADILLA, PR, US  
 Hours: N  
 Lat: 18-24-09 N  
 Lng: 067-08-48 W  
 Power: 1.0 kW  
 Theo RMS: 299.70 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	81.0	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
WGYA	US	PR	GUAYAMA	413.77	1.501	181.33	173.01	8.32
50% = 5.076, 25% = 6.002; HIDA-C=4.11 WKTP=2.98 WRXB=1.70 WARV=1.60 HJJQ-A=1.59 KMIC=1.51								
CMHQ-C	CU		SANTA CRUZ S	19.38	1.496	385.95	296.91	89.04
50% = 2.966, 25% = 3.443; WSRF=2.08 WVOZ=1.50 YNR11-A=1.50 HJQZ-A=1.23								
WSRF	US	FL	FORT LAUDERDALE	26.99	2.249	416.61	299.54	117.07
50% = 5.154, 25% = 6.666; XEDM/A=3.75 YNR11-A=2.55 UNK-A=2.45 WVOZ=2.25 KXZZ=1.87 XERF/A=1.86 KHEP=1.73 WCCF=1.69								
WCCF	US	FL	PUNTA GORDA	21.97	1.991	453.13	299.68	153.45
50% = 6.809, 25% = 7.963; WSRF=5.34 XEDM/A=4.23 YNR11-A=2.49 KXZZ=2.45 XERF/A=2.20								
WLIM	US	NY	PATCHOGUE	9.41	1.165	618.76	299.70	319.06
50% = 3.83, 25% = 4.659; CKDO/A=3.83 XEDM/A=1.76 WJFK=1.56 CJLV/ =1.22								
CKDO/A (95)	CA	ON	OSHAWA	1.39	0.252	906.88s	299.70	607.18
50% = 0.488, 25% = 0.64; XEDM/A=0.49 WLIM=0.22 WJFK=0.18 WVKO=0.18 WHLY=0.17 WSRF=0.17								
WJFK	US	MD	MORNINGSIDE	10.29	2.245	1090.49	299.70	790.79
50% = 8.011, 25% = 8.978; WLIM=6.54 CKDO/A=4.63 WVKO=3.26 XEDM/A=2.41								
WVKO	US	OH	COLUMBUS	7.67	2.845	1854.45	299.70	1554.75
50% = 10.144, 25% = 11.379; WHLY=10.14 WJFK=3.89 XEDM/A=3.38								
KXZZ	US	LA	LAKE CHARLES	8.69	3.692	2123.18	299.70	1823.48
50% = 13.228, 25% = 15.105; XEDM/A=10.24 XERF/A=8.38 KHEP=4.87 KWED=3.97 KGAF=3.69								
WHLY	US	IN	SOUTH BEND	6.07	2.605	2147.01	299.70	1847.31
50% = 9.286, 25% = 10.42; CKDO/A=9.29 XEDM/A=3.83 WVKO=2.77								

Blanketing - WVOZ

The provisions of 47 CFR 73.24(g) require that the population within the 1,000 mV/m contour not exceed 300 persons or 1 percent of the population within the 25 mV/m groundwave contour. At the proposed location, during daytime and nighttime hours, the proposed 1,000 mV/m contour encompasses 97 persons. Thus, the requirements of 47 CFR 73.24(g) are met.



**PROPOSED BLANKETING CONTOUR**

RADIO STATION WVOZ  
 AGUADILLA, PUERTO RICO  
 1580 KHZ 1 KW U DAD

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Appendix

Section 307(b) Engineering Factors

1. *Proposal*

It is proposed to change the city of license of WVOZ from Morovis, Puerto Rico to Aguadilla, Puerto Rico. The instant proposal is mutually-exclusive with the licensed WVOZ facility. This proposal is considered to be a minor change according to Section 73.3571(a) of the FCC Rules and is being filed pursuant to the requirements of Section 73.3571(j) of the FCC Rules.

2. *City Populations, Local Service and Urbanized Area Considerations*

The 2010 U.S. Census lists the community of Morovis as a Municipio in Puerto Rico with a total population of 32,610. Morovis is a part of the San Juan, PR Urbanized Area. Other than WVOZ, there are no other full-service AM or FM stations licensed to Morovis.

The 2010 U.S. Census lists the community of Aguadilla as Municipio in Puerto Rico with a total population of 60,949. Aguadilla is part of the Aguadilla-Isabela-San Sebastian Urbanized area. There are a total of four AM and FM stations licensed to Aguadilla. These are: WABA (850 kHz), WWNA (1340 kHz), WTPM (Channel 225B) and WIVA-FM (Channel 262B).

Because the instant proposal involves the relocation from a community in one urbanized area (San Juan) to one in another urbanized area (Aguadilla-Isabela-San Sebastian) is considered to be an 'intra-urban' community of license relocation. Therefore, for evaluation purposes, the proposal is considered under Priority 4, other public interest factors, of the FCC's allotment priorities.

Under the FCC's *Rural Radio* policy, the community of Morovis is a part of the San Juan Urbanized area. Therefore, for evaluation of local services, consideration shall be with respect to local services to the San Juan Urbanized area.

A study of the aural services in Puerto Rico indicates that there are 38 other AM and FM facilities licensed to communities that are a part of the San Juan Urbanized area. The attached Table 1 provides a listing of the stations identified. It is noted that the San Juan Urbanized Area has a total population of 2,148,315 based on 2010 U.S. Census data.

A study of the aural services in Puerto Rico indicates that there are 10 AM and FM facilities licensed to communities that are a part of the Aguadilla-Isabela-San Sebastian Urbanized Area. The attached Table 2 provides a listing of the

stations. It is noted that the Aguadilla-Isabela-San Sebastian Urbanized Area has a total population of 306,196 based on 2010 U.S. Census data. Based on this, the instant proposal will provide the Aguadilla-Isabela-San Sebastian Urbanized Area with its eleventh local aural service.

Morovis, as part of the San Juan Urbanized Area, will not be deprived of its sole existing local service since there are 38 other local aural services allotted to the San Juan Urbanized Area.

The attached Figure 1 is a map showing the Morovis and Aguadilla city limits, in addition to showing the extent of the San Juan and Aguadilla-Isabela-San Sebastian Urbanized areas. It is noted that the licensed WVOZ daytime 5 mV/m contour covers less than 50% of the population of the San Juan urbanized area. Also the predicted daytime 5 mV/m contour of the proposed WVOZ will cover less than 50% of the population of the Aguadilla-Isabela-San Sebastian urbanized area.<sup>1</sup>

It is noted that the licensed WVOZ 5 mV/m contour encompasses no population within the Aguadilla-Isabela-San Sebastian urbanized area; and likewise for the proposed WVOZ 5 mV/m with respect to the San Juan urbanized area.

### *3. Gain and Loss Areas and Available Services*

The gain and loss areas are shown on the map at Figure 1. The licensed WVOZ daytime 2 mV/m contour is loss area and the proposed WVOZ daytime 2 mV/m contour is gain area.

The loss area contains a total population of 483,683. The gain area contains a population of 221,474.

### *4. 5 mV/m and 2 mV/m Daytime Coverage*

The licensed WVOZ facility provides daytime 5 mV/m and 2 mV/m service to the following populations and areas (loss area):

Contour	Population (2010)	Land Area (sq. km)
5 mV/m	268,314	727.3
2 mV/m	483,683	1,246

<sup>1</sup> The predicted licensed WVOZ 5 mV/m contour encompasses a population of 183,931, or 9%, of the San Juan urbanized area population. The predicted proposed WVOZ 5 mV/m contour encompasses a population of 112,814, or 37%, of Aguadilla-Isabela-San Sebastian urbanized area population.

The proposed WVOZ facility will provide 5 mV/m and 2 mV/m service to the following populations and areas (gain area):

Contour	Population (2010)	Land Area (sq. km)
5 mV/m	118,545	267.7
2 mV/m	221,474	575.2

As indicated in the map at Figure 1, there is no overlap of the respective licensed and proposed WVOZ 5 mV/m and 2 mV/m daytime groundwater contours over land.

The predicted contours on which the above figures were based were calculated in accordance with the FCC Rules using the FCC's Region 2 conductivity database and using 72 evenly-spaced radials. Population figures were calculated using a computer program that sums the populations for the 2010 Census block centroids falling within the subject contour.

#### 5. Other Fulltime AM and FM Aural Services

An analysis was conducted of other fulltime AM and FM aural services within the respective licensed and proposed WVOZ daytime 2 mV/m groundwater contour. Figure 2 is a map showing the other fulltime aural services available to the gain and loss areas. The study was done for all populated land areas within the respective contours. The results are summarized as follows:

WVOZ Licensed 2 mV/m Contour	
Number of Other Fulltime Aural Services	Population
26	187
27	1,674
28	9,420
29	17,499
30	43,651
31	23,325
32	17,089
33	42,784
34	38,909
35	76,364
36	102,681
37	49,976
38	32,021
39	23,150
40	4,953

WVOZ Proposed 2 mV/m Contour	
Number of Other Fulltime Aural Services	Population
21	14,309
22	50,299
23	37,051
24	60,689
25	24,207
26	6,324
27	22,944
28	2,897
29	2,665
30	89

Based the above tables, it is evident that both the gain and loss areas are 'well served' by FCC standards, since all areas receive greater than five fulltime aural services. However, the WVOZ proposal will result in providing an additional aural service to an area that is significantly lesser served. Whereas the loss area is served by from 26 to 40 fulltime aural services, the gain area will be served by from 21 to 30 fulltime aural services.

Table 3 is a tabulation of all of the AM and FM stations considered in the analysis of other aural services.

## 6. Conclusion

According to the FCC's '*Rural Radio*' policies, the instant proposal would be considered under 'Priority 4' of the FCC allotment priorities: 'Other public interest matters.' Under this priority, the FCC has de-emphasized the strict population gain and loss consideration in favor of evaluation of how a proposal would achieve a better balance of distribution of radio service in consideration of the entire proposal.

The instant proposal achieves this goal by providing an eleventh aural service to the Aguadilla-Isabela-San Sebastian urbanized area, while removing a 39<sup>th</sup> aural service from the San Juan urbanized area.

In addition to the other public interest factors, based on the foregoing, the engineering factors weigh in favor of the instant proposal.

SECTION 307(B) ENGINEERING FACTORS  
WVOZ, AGUADILLA, PUERTO RICO

Table 1

Call Sign	City	State	Channel/Frequency
WODA	BAYAMON	PR	234
WXYX	BAYAMON	PR	264
WBYM	BAYAMON	PR	1560
WVJP-FM	CAGUAS	PR	277
WVJP	CAGUAS	PR	1110
WIDA-FM	CAROLINA	PR	213
WQBS-FM	CAROLINA	PR	299
WIDA	CAROLINA	PR	1400
WLEY	CAYEY	PR	1080
WNVE	CEIBA	PR	269
WFAB	CEIBA	PR	890
WNVM	CIDRA	PR	249
WORO	COROZAL	PR	223
WALO	HUMACAO	PR	1240
WRRE	JUNCOS	PR	1460
WZOL	LAS PIEDRAS	PR	252
WLUZ	LEVITTOWN	PR	203
WNRT	MANATI	PR	245
WMNT	MANATI	PR	1500
WKUM	OROCOVIS	PR	1470
WJIT	SABANA	PR	1250
WRTU	SAN JUAN	PR	209
WIPR-FM	SAN JUAN	PR	217
WZNT	SAN JUAN	PR	229
WPRM-FM	SAN JUAN	PR	256
WIOA	SAN JUAN	PR	260
WTOK-FM	SAN JUAN	PR	273
WKAQ-FM	SAN JUAN	PR	284
WCAD	SAN JUAN	PR	289
WKAQ	SAN JUAN	PR	580
WUNO	SAN JUAN	PR	630
WAPA	SAN JUAN	PR	680
WIAC	SAN JUAN	PR	740
WQBS	SAN JUAN	PR	870
WIPR	SAN JUAN	PR	940
WQII	SAN JUAN	PR	1140
WBMJ	SAN JUAN	PR	1190
WSKN	SAN JUAN	PR	1320

SECTION 307(B) ENGINEERING FACTORS  
WVOZ, AGUADILLA, PUERTO RICO

Table 2

Call Sign	City	State	Channel/Frequency
WFDT	AGUADA	PR	288
WTPM	AGUADILLA	PR	225
WIVA-FM	AGUADILLA	PR	262
WABA	AGUADILLA	PR	850
WWNA	AGUADILLA	PR	1340
WVID	ANASCO	PR	212
WELX	ISABELA	PR	268
WNVI	MOCA	PR	1040
WLRP	SAN SEBASTIAN	PR	1460
WUPR	UTUADO	PR	1530

STATIONS CONSIDERED IN OTHER FULLTIME AURAL SERVICES ANALYSIS  
RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO

Call Sign	Service	Status	City*	Class	Channel**	Service Contour***
WCRP	FM	LIC	GUAYAMA	B	201	60
WRUO	FM	LIC	MAYAGUEZ	A	202	60
WLUZ	FM	LIC	LEVITTOWN	B	203	60
WPUC-FM	FM	LIC	PONCE	B	205	60
WRTU	FM	LIC	SAN JUAN	B	209	60
WVID	FM	LIC	ANASCO	B	212	60
WIDA-FM	FM	LIC	CAROLINA	B	213	60
WIPR-FM	FM	LIC	SAN JUAN	B	217	60
WZCA	FM	LIC	QUEBRADILLAS	A	219	60
WZET	FM	LIC	HORMIGUEROS	A	221	60
WORO	FM	LIC	COROZAL	B	223	54
WTPM	FM	LIC	AGUADILLA	B	225	54
WZNT	FM	LIC	SAN JUAN	B	229	54
WNOD	FM	LIC	MAYAGUEZ	B	231	54
WODA	FM	LIC	BAYAMON	B	234	54
WEGM	FM	LIC	SAN GERMAN	B	236	54
WFID	FM	LIC	RIO PIEDRAS	B	239	54
WAEL-FM	FM	LIC	MARICAO	B	241	54
WRXD	FM	LIC	FAJARDO	B	243	54
WNRT	FM	LIC	MANATI	B	245	54
WOYE	FM	LIC	RIO GRANDE	A	247	60
WIOB	FM	LIC	MAYAGUEZ	B	248	54
WNVN	FM	LIC	CIDRA	A	249	60
WUKQ-FM	FM	LIC	MAYAGUEZ	B	254	54
WPRM-FM	FM	LIC	SAN JUAN	B	256	54
WIDI	FM	LIC	QUEBRADILLAS	B	258	54
WIOA	FM	LIC	SAN JUAN	B	260	54
WIVA-FM	FM	LIC	AGUADILLA	B	262	54
WXYX	FM	LIC	BAYAMON	B	264	54
WRIO	FM	LIC	PONCE	B	266	54
WELX	FM	LIC	ISABELA	B	268	54
WZAR	FM	LIC	PONCE	B	270	54
WMIO	FM	LIC	CABO ROJO	A	272	60
WTOK-FM	FM	LIC	SAN JUAN	B	273	54
WDIN	FM	LIC	CAMUY	B	275	54
WVJP-FM	FM	LIC	CAGUAS	B	277	54
WXLX	FM	LIC	LAJAS	B	279	54
WERR	FM	LIC	VEGA ALTA	B	281	54
WKAQ-FM	FM	LIC	SAN JUAN	B	284	54
WIOC	FM	LIC	PONCE	B	286	54
WFDT	FM	LIC	AGUADA	A	288	60
WCAD	FM	LIC	SAN JUAN	B	289	54
WRRH	FM	LIC	HORMIGUEROS	A	291	60
WNIK-FM	FM	LIC	ARECIBO	B1	293	57

STATIONS CONSIDERED IN OTHER FULLTIME AURAL SERVICES ANALYSIS  
RADIO STATION WVOZ  
AGUADILLA, PUERTO RICO

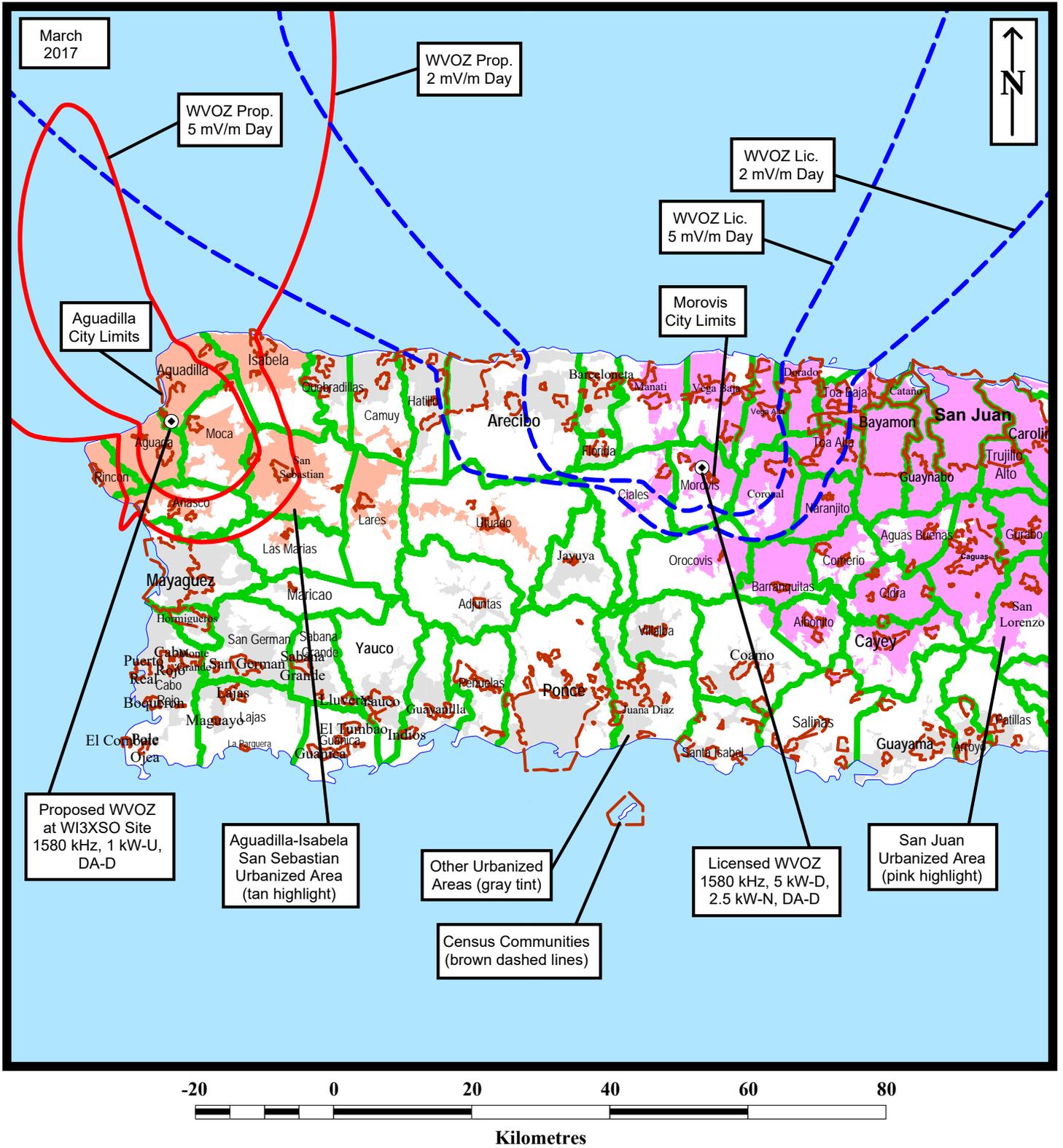
Call Sign	Service	Status	City*	Class	Channel**	Service Contour***
WMEG	FM	LIC	GUAYAMA	B	295	54
WCMN-FM	FM	LIC	ARECIBO	B	297	54
WQBS-FM	FM	LIC	CAROLINA	B	299	54
WKAQ	AM	L	SAN JUAN	B	580	7.6
WYEL	AM	L	MAYAGUEZ	B	600	14.2
WUNO	AM	L	SAN JUAN	B	630	7.7
WAPA	AM	L	SAN JUAN	B	680	15.1
WKJB	AM	L	MAYAGUEZ	B	710	7.8
WIAC	AM	L	SAN JUAN	B	740	6.7
WORA	AM	L	MAYAGUEZ	B	760	29.3
WKVM	AM	L	SAN JUAN	B	810	5.3
WABA	AM	L	AGUADILLA	B	850	7.2
WQBS	AM	L	SAN JUAN	B	870	5.6
WYAC	AM	L	CABO ROJO	B	930	6.3
WIPR	AM	L	SAN JUAN	B	940	8
WDNO	AM	L	QUEBRADILLAS	B	960	8.3
WPRA	AM	L	MAYAGUEZ	B	990	10.2
WOSO	AM	L	SAN JUAN	B	1030	12.4
WNVI	AM	L	MOCA	B	1040	10.3
WMIA	AM	L	ARECIBO	B	1070	7.8
WMSW	AM	L	HATILLO	B	1120	13.4
WBQN	AM	L	BARCELONETA-MANATI	B	1160	26.6
WNIK	AM	L	ARECIBO	B	1230	17.3
WJIT	AM	L	SABANA	B	1250	14.7
WCMN	AM	L	ARECIBO	B	1280	13.3
WTLI	AM	L	MAYAGUEZ	B	1300	13.3
WSKN	AM	L	SAN JUAN	B	1320	12.5
WWNA	AM	L	AGUADILLA	B	1340	10
WEGA	AM	L	VEGA BAJA	B	1350	13
WISA	AM	L	ISABELA	B	1390	15.4
WRSS	AM	L	SAN SEBASTIAN	B	1410	15.6
WLRP	AM	L	SAN SEBASTIAN	B	1460	14.7
WKUM	AM	L	OROCOVIS	B	1470	13.4
WMNT	AM	L	MANATI	B	1500	18
WRSJ	AM	L	SAN JUAN	B	1520	7
WBYM	AM	L	BAYAMON	B	1560	7.6
WCMA	AM	L	BAYAMON	B	1600	14.4

\* All Puerto Rico.

\*\* Channel number for FM stations and frequency (kHz) for AM stations.

\*\*\* Predicted f(50,50) service contour in dBu in the case of FM stations and nighttime interference-free service contour in mV/m in the case of AM stations.

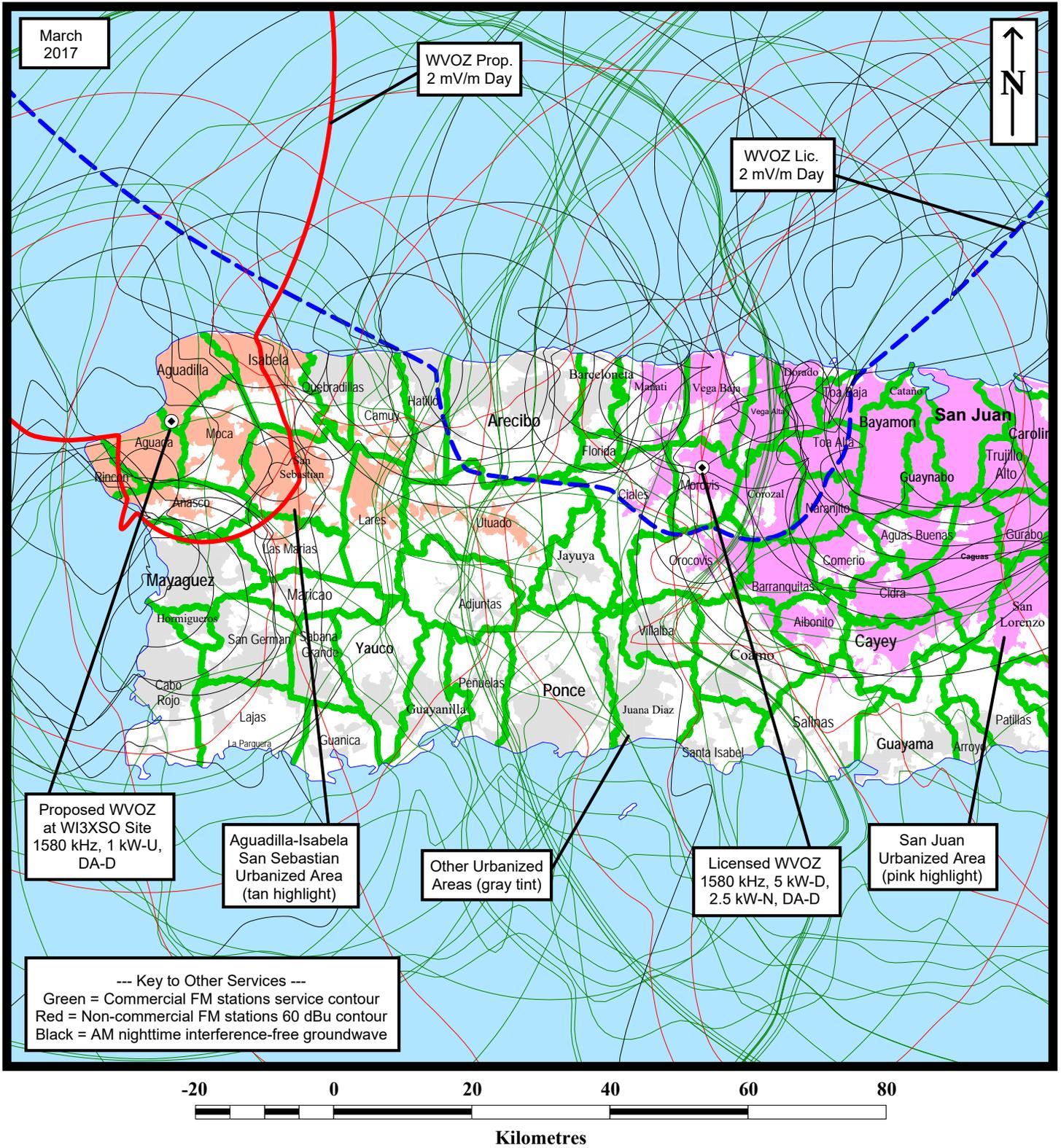
Figure 1



### SECTION 307(B) ANALYSIS MAP

duTreil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



## OTHER FULL-TIME AURAL SERVICES ANALYSIS MAP

duTreil, Lundin & Rackley, Inc. Sarasota, Florida

Environmental Protection - WVOZ

The proposed facility is excluded from environmental processing under the requirements of 47 C.F.R. Section 1.1306. The proposed facility will not have a significant environmental impact and will comply with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments.

The proposed operation will be evaluated in terms of both the electric and magnetic field components which will be present at the base of each tower. Using Figures 1 through 4 of Supplement A to OET Bulletin 65, the worst case interpolated distances at which the electric and magnetic fields would fall below ANSI guidelines will be calculated before construction. The areas surrounding the base of each tower will be appropriately restricted with a fence having the required minimum radius unless field measurement data indicates otherwise. The fences will assure that persons on the property outside the fenced areas will not be exposed to radiofrequency field levels in excess of those recommended by the ANSI. In addition, warning signs will be posted.