tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: W24EI-D Displacement Study ch.24 1x1, Model: Longley-Rice
Start: 2021.12.13 21:47:49

Study created: 2021.12.13 21:47:48

Study build station data: LMS TV 2021-12-11

Proposal: W24EI-D D24 LD LIC Naranjito, PR
File number: BLANK0000004264
Facility ID: 188814
Station data: LMS TV 2021-12-11
Record ID: 25076ff34eacdb2d014ead1731bc00b8
Country: U.S.

Build options:
Protect pre-transition records, not on baseline channel

Search options:
Baseline record excluded if a station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	43.8 km
No	WQSJ-CD	D23	DC	LIC	QUEBRADILLAS, PR	BLANK0000060641	97.0
No	WCVI-TV	D23	DT	LIC	CHRISTIANSTED, VI	BLANK0000053850	173.5
Yes	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	16.7
No	WQQZ-CD	D24	DC	LIC	PONCE, PR	BLANK0000058704	56.3
Yes	WQQZ-CD	D24	DC	CP	PONCE, PR	BLANK0000127578	56.3
Yes	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	52.6
No	W28EQ-D	N32+	TX	LIC	UTUADO, PR	BLTT19890703IC	48.4

No non-directional AM stations were found within 0.8 km

No directional AM stations were found within 3.2 km

Record parameters as studied:

Channel: D24
Mask: Full Service
Latitude: 18 17 26.80 N (NAD83)
Longitude: 66 16 0.60 W
Height AMSL: 525.0 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: ANT-ACS8AR (ID 17789) 185.0 deg
Elev Pattrn: Generic
Elec Tilt: 0.50

49.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.013 kW	420.7 m	22.6 km

45.0	0.013	445.6	23.2
90.0	10.3	261.0	52.8
135.0	13.5	81.9	41.3
180.0	14.7	-21.0	30.5
225.0	12.4	-110.7	29.7
270.0	13.1	157.7	48.0
315.0	0.013	391.7	21.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 203 m

Distance to Canadian border: 2944.5 km

Distance to the Mexican border: 3261.3 km

Conditions at FCC monitoring station: Santa Isabel PR
Bearing: 199.8 degrees Distance: 33.7 km

The proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 311.5 degrees Distance: 4438.2 km

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLANK0000077885 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	43.8 km
	WSJN-CD	D22	DC	LIC	SAN JUAN, PR	BLANK0000160694	33.2
	WQSJ-CD	D23	DC	LIC	QUEBRADILLAS, PR	BLANK0000060641	140.7
	WCVI-TV	D23	DT	LIC	CHRISTIANSTED, VI	BLANK0000053850	132.6
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	27.1
	WQQZ-CD	D24	DC	LIC	PONCE, PR	BLANK0000058704	97.4

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
26309.7	2,945,963	23527.0	2,566,520	23068.4	2,528,856	23030.9	2,521,681	0.16	0.28

Undesired		Total IX		Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	76.8	11,648				37.4	7,175
WSJN-CD D22 DC LIC	86.6	15,189		24.6	13,354	14.8	9,132
WQSJ-CD D23 DC LIC	64.1	11,069		37.4	10,791	33.5	10,544
WCVI-TV D23 DT LIC	47.2	1,012		9.9	488	9.9	488
WUJA D24 DT CP	130.9	12,753		67.9	10,672	67.9	10,672
WQQZ-CD D24 DC LIC	252.9	68		233.2	0	233.2	0

Interference to BLANK0000077885 LIC scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	43.8 km
	WSJN-CD	D22	DC	LIC	SAN JUAN, PR	BLANK0000160694	33.2
	WQSJ-CD	D23	DC	LIC	QUEBRADILLAS, PR	BLANK0000060641	140.7
	WCVI-TV	D23	DT	LIC	CHRISTIANSTED, VI	BLANK0000053850	132.6
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	27.1
	WQQZ-CD	D24	DC	CP	PONCE, PR	BLANK0000127578	97.4

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
26309.7	2,945,963	23527.0	2,566,520	22962.7	2,528,023	22925.3	2,520,848	0.16	0.28

Undesired		Total IX	Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	76.8	11,648			37.4	7,175
WSJN-CD D22 DC LIC	86.6	15,189	24.6	13,354	14.8	9,132
WQSJ-CD D23 DC LIC	64.1	11,069	37.4	10,791	33.5	10,544
WCVI-TV D23 DT LIC	47.2	1,012	7.9	203	7.9	203
WUJA D24 DT CP	130.9	12,753	67.9	10,672	67.9	10,672
WQQZ-CD D24 DC CP	360.5	1,186	338.8	833	338.8	833

Interference to BLANK0000059688 CP scenario 1

****IX: 10.11% interference caused to WUJA CH. 24.**

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	16.7 km
	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	27.1
	WQQZ-CD	D24	DC	LIC	PONCE, PR	BLANK0000058704	71.3
	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	69.1

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
17711.8	2,690,234	14829.0	2,433,183	13905.4	2,398,604	11599.0	2,156,098	16.59	10.11

Undesired		Total IX	Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	2564.8	253,591			2306.4	242,506
WVSN D23 DT LIC	839.8	29,741	368.8	29,553	297.9	21,233
WQQZ-CD D24 DC LIC	530.1	751	64.1	740	54.3	181
WQHA D25 DT LIC	24.6	4,275	19.7	4,098	7.9	1,902

Interference to BLANK0000059688 CP scenario 2

**IX: 10.09% interference caused to WUJA Ch. 24.

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	16.7 km
	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	27.1
	WQQZ-CD	D24	DC	CP	PONCE, PR	BLANK0000127578	71.3
	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	69.1

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
17711.8	2,690,234	14829.0	2,433,183	13689.5	2,395,856	11515.2	2,154,232	15.88	10.09

Undesired	Total IX		Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	2564.8	253,591			2174.3	241,624
WVSN D23 DT LIC	839.8	29,741	326.4	27,144	261.3	19,057
WQQZ-CD D24 DC CP	788.4	5,908	280.0	3,488	138.1	2,047
WQHA D25 DT LIC	24.6	4,275	19.7	4,098	7.9	1,902

Interference to BLANK0000127578 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WQQZ-CD	D24	DC	CP	PONCE, PR	BLANK0000127578	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	56.3 km
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	71.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
9176.4	908,061	8412.7	700,167	8395.0	695,168	8394.0	695,155	0.01	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	3.9	329			1.0	13
WUJA D24 DT CP	17.7	4,999	17.7	4,999	14.8	4,683

Interference to BLANK0000145869 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	52.6 km
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	69.1
	WQQZ-CD	D24	DC	LIC	PONCE, PR	BLANK0000058704	17.3
	WIPR-TV	D26	DT	CP	SAN JUAN, PR	BLANK0000034681	76.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
16924.2	3,238,028	12198.8	2,296,305	11006.2	1,782,570	10979.6	1,775,959	0.24	0.37

Undesired		Total IX		Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	121.1	165,253				26.6	6,611
WUJA D24 DT CP	199.9	347,144	59.1	90,055		38.4	61,804
WQQZ-CD D24 DC LIC	732.4	35,638	76.0	21,910		76.0	21,910
WIPR-TV D26 DT CP	1057.5	401,770	262.3	131,383		250.4	125,565

Interference to BLANK0000145869 LIC scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	
Undesired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	52.6 km
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	69.1
	WQQZ-CD	D24	DC	CP	PONCE, PR	BLANK0000127578	17.3
	WIPR-TV	D26	DT	CP	SAN JUAN, PR	BLANK0000034681	76.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
16924.2	3,238,028	12198.8	2,296,305	10962.9	1,781,614	10936.3	1,775,00	30.24	0.37

Undesired		Total IX		Unique IX, before		Unique IX, after	
W24EI-D D24 LD LIC	121.1	165,253				26.6	6,611
WUJA D24 DT CP	199.9	347,144	59.1	90,055		38.4	61,804
WQQZ-CD D24 DC CP	913.9	47,959	119.3	22,866		119.3	22,866
WIPR-TV D26 DT CP	1057.5	401,770	127.1	120,200		115.2	114,382

Interference to proposal scenario 1

60.93% interference received (Interference received from WUJA)

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	
Undesired:	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	43.8 km
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	16.7
	WQQZ-CD	D24	DC	LIC	PONCE, PR	BLANK0000058704	56.3
	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	52.6

Service area		Terrain-limited		IX-free		Percent IX	
4465.5	2,243,575	3836.9	1,970,199	2362.5	769,826	38.43	60.93

Undesired	Total IX		Unique IX		Prcnt Unique IX	
WVSN D23 DT LIC	27.6	10,179	8.9	3,432	0.23	0.17
WUJA D24 DT CP	1462.6	1,196,838	1438.9	1,189,541	37.50	60.38
WQQZ-CD D24 DC LIC	6.9	646	2.0	96	0.05	0.00
WQHA D25 DT LIC	1.0	7	1.0	7	0.03	0.00

Interference to proposal scenario 2

60.97% interference received (Interference received from WUJA)

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	W24EI-D	D24	LD	LIC	Naranjito, PR	BLANK0000004264	
Undesired:	WVSN	D23	DT	LIC	HUMACAO, PR	BLANK0000077885	43.8 km
	WUJA	D24	DT	CP	CAGUAS, PR	BLANK0000059688	16.7
	WQQZ-CD	D24	DC	CP	PONCE, PR	BLANK0000127578	56.3
	WQHA	D25	DT	LIC	AGUADA, PR	BLANK0000145869	52.6

Service area		Terrain-limited		IX-free		Percent IX	
4465.5	2,243,575	3836.9	1,970,199	2360.6	768,908	38.48	60.97

Undesired	Total IX		Unique IX		Prcnt Unique IX	
WVSN D23 DT LIC	27.6	10,179	7.9	2,797	0.21	0.14
WUJA D24 DT CP	1462.6	1,196,838	1431.1	1,186,501	37.30	60.22
WQQZ-CD D24 DC CP	18.7	5,298	3.9	1,014	0.10	0.05
WQHA D25 DT LIC	1.0	7	1.0	7	0.03	0.00