

## **Non-Interference Compliance**

Regarding Facility id 142658

Channel 212

### **Description of Exhibit 13 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

**Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.**

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 through 6 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 7 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 8 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 9 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

**NOTE: The tallest structure within the zone of predicted interference is less than 30 ft (9.1m) in height. This proposal provides 60.2m (197.5ft) of ground clearance, so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

### Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
706684	BLED20031104AAN	WAYR-FM	85.8	85.8
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>85.8</b>

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **85.8 dBμ**, this makes the proposed translator's worst-case interfering contour **125.8 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **26.7 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 8 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **60.2 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference.

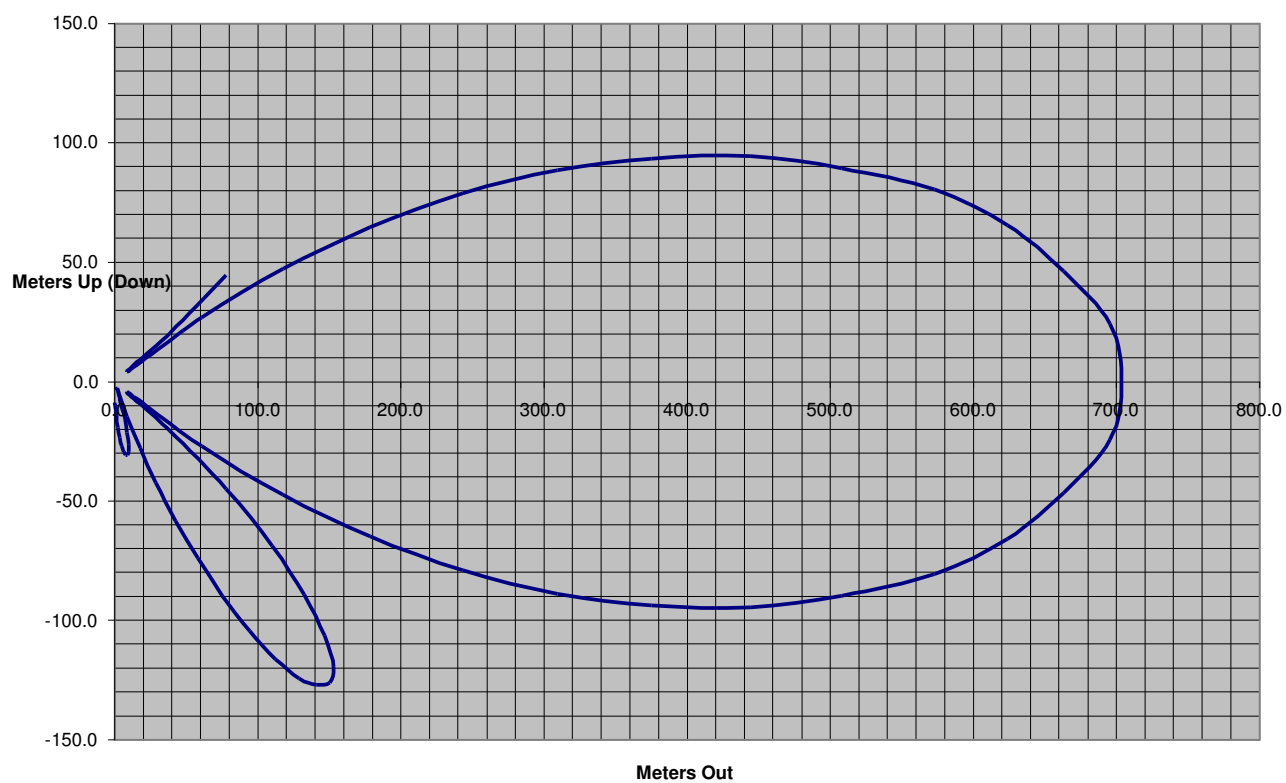
**NOTE: The tallest structure within the zone of predicted interference is less than 30 ft (9.1m) in height. This proposal provides 60.2m (197.5ft) of ground clearance, so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

<b>Antenna Manufacturer:</b>	<b>BEX</b>
<b>Antenna Model:</b>	<b>TFC2K-3(3/4WS)</b>
<b>CORAGL:</b>	<b>65 m</b>
<b>Maximum ERP:</b>	<b>0.055 kW</b>
<b>Interfering Contour:</b>	<b>125.8 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>26.7 m</b>
<b>Min Ground Clearance:</b>	<b>60.2 m</b>

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.918	46.3	24.5	24.4	62.9
10	.733	29.6	19.6	19.3	61.6
15	.504	14.0	13.4	13.0	61.5
20	.269	4.0	7.2	6.7	62.5
25	.054	0.2	1.4	1.3	64.4
30	.127	0.9	3.4	2.9	63.3
35	.242	3.2	6.5	5.3	61.3
40	.279	4.3	7.4	5.7	60.2
45	.242	3.2	6.5	4.6	60.4
50	.166	1.5	4.4	2.8	61.6
55	.087	0.4	2.3	1.3	63.1
60	.024	0.0	0.6	0.3	64.4
65	.017	0.0	0.5	0.2	64.6
70	.039	0.1	1.0	0.4	64.0
75	.045	0.1	1.2	0.3	63.8
80	.039	0.1	1.0	0.2	64.0
85	.024	0.0	0.6	0.1	64.4
90	.012	0.0	0.3	0.0	64.7
Minimum Clearance above TGL:					<b>60.2 m</b>



### Vertical Radiation Pattern for BEXT TFC2K-3 (3/4 $\lambda$ )





### Vertical Radiation Pattern for BEXT TFC2K-3 (3/4λ)

ELEV ANGLE	FIELD STRENGTH	FIELD DB	ELEV ERP(KW)	ELEV DBK	103.95DBU CNTR(M)	DISTANCE OUT(M)	DISTANCE UP(DOWN)	ELEVATION AMSL(M)
=====	=====	=====	=====	=====	=====	=====	=====	=====
-90	0.012	-38.30	0.0000	-44.32	8.6	0.0	-8.6	76.6
-88	0.014	-36.90	0.0001	-42.92	10.1	0.4	-10.0	75.2
-86	0.020	-33.80	0.0001	-39.82	14.4	1.0	-14.3	70.9
-84	0.027	-31.30	0.0002	-37.32	19.2	2.0	-19.1	66.1
-82	0.033	-29.50	0.0003	-35.52	23.6	3.3	-23.3	61.9
-80	0.039	-28.20	0.0004	-34.22	27.4	4.8	-27.0	58.2
-78	0.043	-27.40	0.0005	-33.42	30.0	6.2	-29.4	55.8
-76	0.045	-27.00	0.0005	-33.02	31.4	7.6	-30.5	54.7
-74	0.045	-26.90	0.0005	-32.92	31.8	8.8	-30.6	54.6
-72	0.044	-27.20	0.0005	-33.22	30.7	9.5	-29.2	56.0
-70	0.039	-28.10	0.0004	-34.12	27.7	9.5	-26.0	59.2
-68	0.033	-29.70	0.0003	-35.72	23.0	8.6	-21.4	63.8
-66	0.023	-32.60	0.0001	-38.62	16.5	6.7	-15.1	70.1
-64	0.011	-39.10	0.0000	-45.12	7.8	3.4	-7.0	78.2
-62	0.005	-46.80	0.0000	-52.82	3.2	1.5	-2.8	82.4
-60	0.024	-32.50	0.0001	-38.52	16.7	8.3	-14.5	70.7
-58	0.047	-26.60	0.0005	-32.62	32.9	17.4	-27.9	57.3
-56	0.072	-22.80	0.0013	-28.82	51.0	28.5	-42.3	42.9
-54	0.102	-19.80	0.0026	-25.82	72.0	42.3	-58.3	26.9
-52	0.133	-17.50	0.0044	-23.52	93.8	57.8	-73.9	11.3
-50	0.166	-15.60	0.0069	-21.62	116.8	75.1	-89.5	-4.3
-48	0.200	-14.00	0.0100	-20.02	140.4	93.9	-104.3	-19.1
-46	0.229	-12.80	0.0131	-18.82	161.2	112.0	-116.0	-30.8
-44	0.254	-11.90	0.0161	-17.92	178.8	128.6	-124.2	-39.0
-42	0.269	-11.40	0.0181	-17.42	189.4	140.7	-126.7	-41.5
-40	0.279	-11.10	0.0194	-17.12	196.0	150.2	-126.0	-40.8
-38	0.275	-11.20	0.0190	-17.22	193.8	152.7	-119.3	-34.1
-36	0.257	-11.80	0.0165	-17.82	180.9	146.3	-106.3	-21.1
-34	0.226	-12.90	0.0128	-18.92	159.4	132.1	-89.1	-3.9
-32	0.184	-14.70	0.0085	-20.72	129.5	109.8	-68.6	16.6
-30	0.127	-17.90	0.0041	-23.92	89.6	77.6	-44.8	40.4
-28	0.062	-24.20	0.0010	-30.22	43.4	38.3	-20.4	64.8
-26	0.013	-37.60	0.0000	-43.62	9.3	8.3	-4.1	81.1
-24	0.094	-20.50	0.0022	-26.52	66.4	60.7	-27.0	58.2
-22	0.180	-14.90	0.0081	-20.92	126.6	117.4	-47.4	37.8

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e-mail: [sales@bext.com](mailto:sales@bext.com)**



### Vertical Radiation Pattern for BEXT TFC2K-3 (3/4λ)

ELEV ANGLE	FIELD STRENGTH	FIELD DB	ELEV ERP(KW)	ELEV DBK	103.95DBU CNTR(M)	DISTANCE OUT(M)	DISTANCE UP(DOWN)	ELEVATION AMSL(M)
=====	=====	=====	=====	=====	=====	=====	=====	=====
-20	0.269	-11.40	0.0181	-17.42	189.4	178.0	-64.8	20.4
-18	0.363	-8.80	0.0330	-14.82	255.5	243.0	-78.9	6.3
-16	0.457	-6.80	0.0522	-12.82	321.6	309.2	-88.7	-3.5
-14	0.550	-5.20	0.0755	-11.22	386.7	375.2	-93.5	-8.3
-12	0.646	-3.80	0.1042	-9.82	454.3	444.4	-94.5	-9.3
-10	0.733	-2.70	0.1343	-8.72	515.6	507.8	-89.5	-4.3
-8	0.822	-1.70	0.1690	-7.72	578.6	572.9	-80.5	4.7
-6	0.891	-1.00	0.1986	-7.02	627.1	623.7	-65.6	19.6
-4	0.944	-0.50	0.2228	-6.52	664.3	662.7	-46.3	38.9
-2	0.989	-0.10	0.2443	-6.12	695.6	695.2	-24.3	60.9
0	1.000	0.00	0.2500	-6.02	703.6	703.6	0.0	85.2
2	0.989	-0.10	0.2443	-6.12	695.6	695.2	24.3	109.5
4	0.944	-0.50	0.2228	-6.52	664.3	662.7	46.3	131.5
6	0.891	-1.00	0.1986	-7.02	627.1	623.7	65.6	150.8
8	0.822	-1.70	0.1690	-7.72	578.6	572.9	80.5	165.7
10	0.733	-2.70	0.1343	-8.72	515.6	507.8	89.5	174.7
12	0.646	-3.80	0.1042	-9.82	454.3	444.4	94.5	179.7
14	0.550	-5.20	0.0755	-11.22	386.7	375.2	93.5	178.7
16	0.457	-6.80	0.0522	-12.82	321.6	309.2	88.7	173.9
18	0.363	-8.80	0.0330	-14.82	255.5	243.0	78.9	164.1
20	0.269	-11.40	0.0181	-17.42	189.4	178.0	64.8	150.0
22	0.180	-14.90	0.0081	-20.92	126.6	117.4	47.4	132.6
24	0.094	-20.50	0.0022	-26.52	66.4	60.7	27.0	112.2
26	0.013	-37.60	0.0000	-43.62	9.3	8.3	4.1	89.3
28	0.062	-24.20	0.0010	-30.22	43.4	38.3	20.4	105.6
30	0.127	-17.90	0.0041	-23.92	89.6	77.6	44.8	130.0

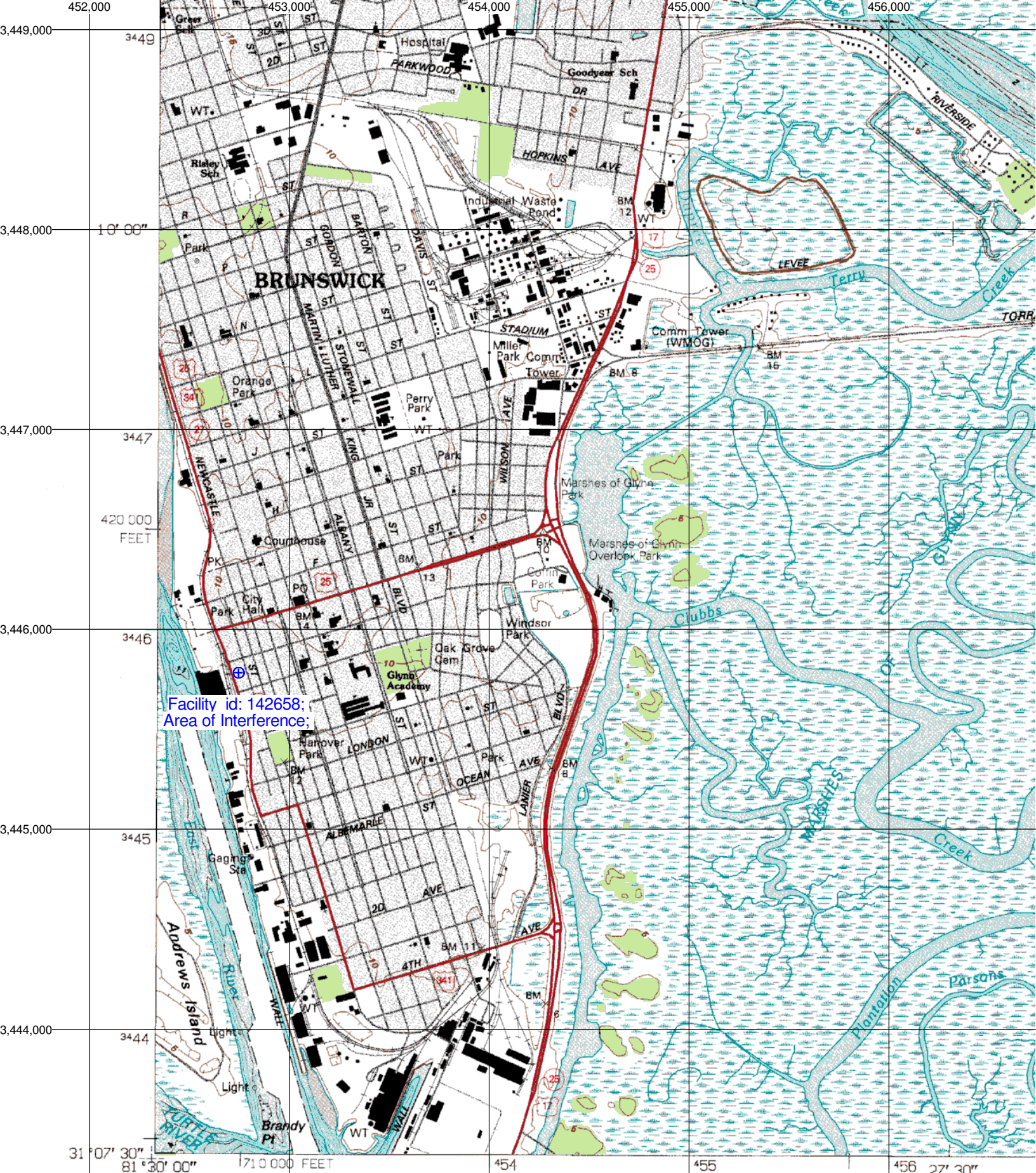
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e-mail: [sales@bext.com](mailto:sales@bext.com)**

# **Adjacent Channel Study** **For Station W212BY, Facility\_id: 142658**

## **Co-channel through third adjacent:**

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
706684	77585	BLED	20031104AAN	WAYR-FM	GOOD TIDINGS TRUST, INC	C3	BRUNSWICK	GA	LIC	14	103	214	2	5.3	0.3282
668985	89988	BLED	20020305AAO	WTLD	RESURRECTION HOUSE MINISTRIES, INC.	A	JESUP	GA	LIC	6	78	213	1	65.3	0
513110	93578	BLFT	20000706AGB	W214BG	FAMILY WORSHIP CENTER CHURCH, INC.	D	WAYCROSS	GA	LIC	0.055	91	214	2	82.4	0
1447286	73125	BMLED	20110930ARB	WJCT-FM	WJCT, INC.	C1	JACKSONVILLE	FL	LIC	98	256	210	2	96.5	0
103663	31936	BLED	19870715KA	WKTZ-FM	JONES COLLEGE	C2	JACKSONVILLE	FL	LIC	50	148	215	3	96.9	0
1228440	23923	BMLED	20080131AJH	WXVS	GEORGIA PUBLIC TELECOMMUNICATIONS CO	C1	WAYCROSS	GA	LIC	79	329	211	1	102.8	0
269876	59247	BLED	19980616KC	WHCJ	SAVANNAH STATE UNIVERSITY	A	SAVANNAH	GA	LIC	6	75	212	0	106.1	0

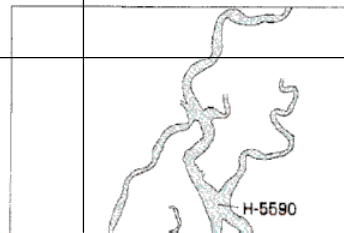




Facility id: 142658;  
Area of Interference;

Produced by the United States Geological Survey  
in cooperation with State of Georgia agencies  
Planimetry by photogrammetric methods from imagery dated 1974  
Topography by planimetric surveys 1952 and 1954. Revised from imagery  
dated 1993 and other sources. Field checked 1993. Map edited 1995  
Bathymetry compiled by the National Ocean Service from  
tide-coordinated hydrographic surveys. This information  
is not intended for navigational purposes  
Mean lower low water (dotted) line and mean high water  
(heavy solid) line compiled by NOS from tide-coordinated

# HYDROGRAPHIC SURVEY INDEX



1  
1000





Google earth

feet  
meters

