ENGINEERING STATEMENT
SUPPORTING REQUEST FOR WAIVER
TELEVISION STATION WFWA(TV)
(FACILITY ID NO. 22108)
FORT WAYNE, INDIANA
CHANNEL 18

Background

This statement was prepared on behalf of Fort Wayne Public Television, Inc., licensee of WFWA(TV), Fort Wayne, Indiana, in support of a request for waiver of the FCC's Phase Assignment, Testing Period, and Phase Completion Date for television station WFWA in the Ft. Wayne DMA[*]. WFWA is licensed for operation on RF Channel 40 with a non-directional effective radiated power (ERP) of 152.8 kW and an antenna height above average terrain (HAAT) of 221 m.

As a result of the FCC's Incentive Auction repack process, the WFWA facility was reassigned to RF Channel 18. WFWA holds a construction permit (C.P.) for an expanded operation on Channel 18 with a maximum directional ERP of 925 kW and an antenna HAAT of 218.8 m.[†] FCC engineering database summary sheets for the WFWA licensed and C.P. facilities are attached hereto for reference.

In coordination with the wireless carrier T-Mobile, WFWA seeks a waiver of the FCC's Phase Assignment, Testing Period, and Phase Completion Date to allow WFWA to make the transition to Channel 18 earlier than its given phase transition date. Specifically, the target date for WFWA to begin operations on Channel 18 is September 1, 2018.[‡] This will facilitate the early deployment of new 600 MHz band wireless broadband services.

This statement demonstrates that WFWA can transition to Channel 18 before its assigned phase date without any disruption to the FCC's transition plans.

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[*] Nielsen Designated Market Area abbreviated as DMA.
[†] See FCC File No. 0000034724.
[‡] The WFWA transition to Channel 18 will be done immediately following the completion of the transition of WISE-TV, Fort Wayne, IN, which is expected to occur on or before September 1, 2018 under a separate agreement with the licensee of WISE-TV to make an early transition to Channel 34.

Assigned Phase

WFWA was assigned to transition Phase 6, with a testing begin date of September 7, 2019. This is based on the latest FCC Phase Assignment spreadsheet dated January 11, 2018.

Linked Station Sets and Linked Station Neighbor Stations

An inspection of the latest FCC Linked Station Set (LSS) and Linked Station Neighbor (LSN) spreadsheet databases indicates that the WFWA facility is part of LSS ID No. 44 in Phase 6. WFWA is associated with WISE-TV (Facility ID 13960) in a LSN, which is the basis for its inclusion in LSS ID No. 44. These are based on the latest LSS and LSN spreadsheets available from the FCC, both dated January 11, 2018.

Interference Caused Analysis Under Current Allocation Environment

An interference analysis was conducted for the WFWA Channel 18 C.P. facility utilizing the latest version[§] of the FCC's *TVStudy* coverage and interference analysis prediction software. The report of the results is attached hereto entitled 'Interference Caused Analysis for WFWA(TV) Channel 18 C.P. Facility Under Current Allocation Environment.'

The results of the analysis indicate that there are no cases of outgoing (caused) interference exceeding the normal 0.5% rounding tolerance level to any other protected full-power or Class A television stations now operating.[**]

Interference Received Analysis Under Current Allocation Environment

An interference analysis specifically for the 'received case' of interference was conducted for the WFWA Channel 18 C.P. facility utilizing the FCC's aforementioned

[§] TVStudy Version 2.2.4

[**] This is under the provision that the WFWA transition to Channel 18 will be done immediately following the completion of the transition of WISE-TV, which is expected to occur on or before September 1, 2018 under a separate agreement with the licensee of WISE-TV to make an early transition to Channel 34.

TVStudy prediction software. The report of the results is attached hereto entitled 'Interference Received Analysis for WFWA(TV) Channel 18 C.P. Facility Under Current Allocation Environment.' The purpose of this study is to evaluate all current environment records in the received interference analysis.

The results of the analysis indicate that there are no cases of incoming (received) interference exceeding the 2% temporary interference limit to the WFWA Channel 18 C.P. facility. In addition, as noted in the interference analysis, considering only the WFWA cells receiving service from the licensed Channel 40 facility, the predicted interference received is equivalent to 0.16%.

A map showing the predicted coverage contour for the WFWA C.P. facility and the predicted WFWA Licensed (40) and C.P. (18) service cells is attached hereto. This map demonstrates the basis for the calculation of the predicted interference level to the existing licensed service cells of WFWA. Specifically, only the WFWA Licensed service cells were employed in the evaluation of the service and interference effects on the early transition to Channel 18.

Effects on Linked Station Sets

Because the licensee of WISE-TV will coordinate its early transition to Channel 34 on or before September 1, 2018, the WFWA early transition immediately thereafter in advance of its phase transition date will not create any new linked station sets. In addition, the early transition of WFWA and WISE-TV will eliminate two stations from LSS ID No. 44, which will simplify the transition process.

Conclusion

It is concluded that the early transition of the WFWA C.P. facility on Channel 18, as described herein, will not result in the creation of any linked station sets established in the Incentive Auction repack process.

Louis R. du Treil, Jr., P.E.

du Treil, Lundin & Rackley, Inc.
3135 Southgate Circle
Sarasota, Florida 34239

January 23, 2018

TV Inquiry

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

Callsign: WFWA **Service:** DT **Status:** LIC **App. Status:** GRANT **Border Code:** C **Rec. Type:** C

Channel: 40 **Offset:** **Zone:** 1 **Docket Number:** **DTV Type:**

Fac. ID: 22108 **Assoc. ID:** **Application File No.:** BLEDT-20130905ABC **DT Emission Mask:**

City: FORT WAYNE **State:** IN **Country:** US **CP Expiration Date:**

Party Name: FORT WAYNE PUBLIC TELEVISION, INC. **Last Change Date:** 11/8/2013

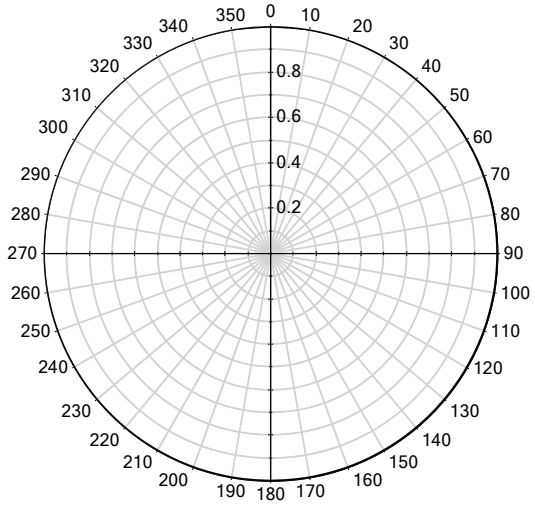
Latitude (NAD 27): 41-06-13
Longitude (NAD 27): 085-11-28
Latitude (NAD 83): 041-06-13.2
Longitude (NAD 83): 085-11-27.9
RCAMSL (m): 467
Site Elevation AMSL (m): 248
HAAT (m): 221
Maximum HAAT (m): 237

Height AGL (m): 219
Overall Height AGL (m): 227.7
ERP (kW): 152.8
Maximum ERP (kW):
Maximum ERP (dBk): 21.84
Maximum ERP at any Angle (kW):

Polarization: H
Electrical Tilt (°): 0.5
Mechanical Tilt (°):
Mechanical Tilt Azimuth (°):
Degrees True (°):
Antenna Make: DIE
Antenna Model: TFU-28GTH-R 04 DC

Antenna Type: N **Antenna ID:** 87164 **Rotation (°):**

0°	1.000	**90°**	1.000	**180°**	1.000	**270°**	1.000
10°	1.000	**100°**	1.000	**190°**	1.000	**280°**	1.000
20°	1.000	**110°**	1.000	**200°**	1.000	**290°**	1.000
30°	1.000	**120°**	1.000	**210°**	1.000	**300°**	1.000
40°	1.000	**130°**	1.000	**220°**	1.000	**310°**	1.000
50°	1.000	**140°**	1.000	**230°**	1.000	**320°**	1.000
60°	1.000	**150°**	1.000	**240°**	1.000	**330°**	1.000
70°	1.000	**160°**	1.000	**250°**	1.000	**340°**	1.000
80°	1.000	**170°**	1.000	**260°**	1.000	**350°**	1.000



Standard Pattern:

Antenna Make: DIE

Antenna Model: TFU-28GTH-R 04 DC

Last Change Date:

Note: Rotation or tilt is not applied to the pattern shown

Type: TOWER **ASRN:** 1030891 **FAA Study No.:** 82-AGL-185-OE **Structure Height (m):** 212.0

Latitude (NAD 27): 041-06-12.8 **Date Received:** 11/11/2011 **Structure Height (ft):** 695.5
Longitude (NAD 27): 085-11-28.1 **Date Entered:** 11/11/2011 **Ground Elevation (m):** 248.0
Latitude (NAD 83): 41-06-13.0 **Date Issued:** 11/11/2011 **Ground Elevation (ft):** 813.6
Longitude (NAD 83): 085-11-28.0 **Date Constructed:** 07/01/1988 **Overall Height AGL (m):** 227.7
Date Dismantled: **Overall Height AGL (ft):** 747.0

Struct. Address:
3632 BUTLER RD **Overall Height AMSL (m):** 475.7
FORT WAYNE IN **Overall Height AMSL (ft):** 1560.7

Entity Name: FORT WAYNE PUBLIC TELEVISION

TV Inquiry

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

Callsign: WFWA **Service:** DT **Status:** CP MOD **App. Status:** GRANT **Border Code:** **Rec. Type:** C

Channel: 18 **Offset:** **Zone:** 1 **Docket Number:** **DTV Type:** POSTTRAN

Fac. ID: 22108 **Assoc. ID:** **Application File No.:** BLANK-0000034724 **DT Emission Mask:**

City: FORT WAYNE **State:** IN **Country:** US **CP Expiration Date:**

Party Name: FORT WAYNE PUBLIC TELEVISION, INC. **Last Change Date:** 1/8/2018

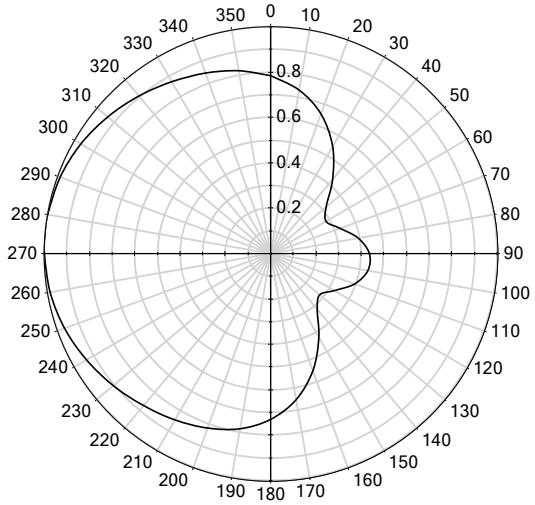
Latitude (NAD 27): 41-06-13
Longitude (NAD 27): 085-11-28
Latitude (NAD 83): 041-06-13.2
Longitude (NAD 83): 085-11-27.9
RCAMSL (m): 467.2
Site Elevation AMSL (m): 248
HAAT (m): 218.8
Maximum HAAT (m):

Height AGL (m): 219.2
Overall Height AGL (m): 227.7
ERP (kW): 925
Maximum ERP (kW):
Maximum ERP (dBk): 29.7
Maximum ERP at any Angle (kW):

Polarization: E
Electrical Tilt (°): 0.5
Mechanical Tilt (°):
Mechanical Tilt Azimuth (°):
Degrees True (°):
Antenna Make:
Antenna Model:

Antenna Type: D **Antenna ID:** 1002472 **Rotation (°):** 355

0°	0.784	**90°**	0.436	**180°**	0.731	**270°**	0.999	**275°**	1.000
10°	0.731	**100°**	0.436	**190°**	0.784	**280°**	0.999		
20°	0.653	**110°**	0.393	**200°**	0.818	**290°**	0.988		
30°	0.547	**120°**	0.326	**210°**	0.846	**300°**	0.967		
40°	0.426	**130°**	0.283	**220°**	0.874	**310°**	0.938		
50°	0.320	**140°**	0.320	**230°**	0.906	**320°**	0.906		
60°	0.283	**150°**	0.426	**240°**	0.938	**330°**	0.874		
70°	0.326	**160°**	0.547	**250°**	0.967	**340°**	0.846		
80°	0.393	**170°**	0.653	**260°**	0.988	**350°**	0.818		



Standard Pattern:

Antenna Make: Die

Antenna Model: TFU-22JTH/VP-R S190

Last Change Date:

Note: Rotation or tilt is not applied to the pattern shown

Type: TOWER **ASRN:** 1030891 **FAA Study No.:** 82-AGL-185-OE **Structure Height (m):** 212.0

Latitude (NAD 27): 041-06-12.8 **Date Received:** 11/11/2011 **Structure Height (ft):** 695.5
Longitude (NAD 27): 085-11-28.1 **Date Entered:** 11/11/2011 **Ground Elevation (m):** 248.0
Latitude (NAD 83): 41-06-13.0 **Date Issued:** 11/11/2011 **Ground Elevation (ft):** 813.6
Longitude (NAD 83): 085-11-28.0 **Date Constructed:** 07/01/1988 **Overall Height AGL (m):** 227.7
Date Dismantled: **Overall Height AGL (ft):** 747.0

Struct. Address:
3632 BUTLER RD
FORT WAYNE IN

Overall Height AMSL (m): 475.7
Overall Height AMSL (ft): 1560.7

Entity Name: FORT WAYNE PUBLIC TELEVISION

INTERFERENCE CAUSED ANALYSIS FOR WFWA(TV) CHANNEL 18
C.P. FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

```
tvstudy v2.2.4 (Z2Qqz3)
Database: localhost,  Study: wfwa18e1,  Model: Longley-Rice

Study build station data: LMS TV 2018-01-23 (121)

    Proposal: WFWA18E1 D18 DT CP FORT WAYNE, IN
 File number: wfwa18e1
 Facility ID: 22108
Station data: User record
   Record ID: 2083
     Country: U.S.
        Zone: I

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

Search options:
All post-transition APP, CP, and baseline records excluded

Stations potentially affected by proposal:

IX   Call      Chan       Svc Status  City, State              File Number             Distance
No   WYIN      D17        DT  LIC     GARY, IN                 BLEDT20040206AAA        186.7 km
Yes  WISE-TV   D18        DT  LIC     FORT WAYNE, IN           BLCDT20091103ACK          0.6
No   WJTS-CD   D18        DC  LIC     JASPER, IN               BLDTL20090212ABK        335.0
No   WKYU-TV   D18        DT  LIC     BOWLING GREEN, KY        BLEDT20040803AAG        461.7
No   WDWO-CD   D18        DC  LIC     DETROIT, MI              BLDTA20130108ABZ        218.6
Yes  WKEF      D18        DT  LIC     DAYTON, OH               BLANK0000004293         172.6
No   WVTV      D18        DT  LIC     MILWAUKEE, WI            BLCDT20101012ADH        314.8
No   WGN-TV    D19        DT  LIC     CHICAGO, IL              BMLCDT20080201APP       221.0
No   WDNI-CD   D19        DC  LIC     INDIANAPOLIS, IN         BLDTA20090615ADH        163.1
No   WXMI      D19        DT  LIC     GRAND RAPIDS, MI         BLCDT20030117ABD        178.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

    Channel: D18
   Latitude:  41  6 13.00 N (NAD83)
  Longitude:  85 11 28.00 W
Height AMSL: 467.2 m
       HAAT: 218.8 m
   Peak ERP: 925 kW
    Antenna: Dielectric-TFU-22JTH/VP-R S190 (ID 1002472) 355.0 deg
Elev Pattrn: Generic
  Elec Tilt: 0.50

39.1 dBu contour:
Azimuth      ERP       HAAT   Distance
  0.0 deg    531 kW   208.4 m   82.7 km
 45.0       94.7      220.2     74.0
 90.0        176      229.8     78.0
135.0       94.7      226.7     74.5
180.0        531      229.3     84.6
225.0        759      220.0     86.7
270.0        925      208.0     87.2
315.0        759      208.4     85.5

**Proposal is within coordination distance of Canadian border
Distance to Canadian border: 195.8 km

Distance to Mexican border: 1928.4 km

Conditions at FCC monitoring station: Allegan MI
Bearing: 339.5 degrees   Distance: 178.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 273.0 degrees   Distance: 1689.6 km
```

INTERFERENCE CAUSED ANALYSIS FOR WFWA(TV) CHANNEL 18
C.P. FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

No land mobile station failures found

Study cell size: 2.00 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 BLCDT20091103ACK LIC scenario 1
**IX: 96.92% interference caused

WISE-TV to transition to Channel 34 on or before September 1, 2018. WFWA to transition to Channel 18 immediately thereafter.

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WISE-TV	D18	DT	LIC	FORT WAYNE, IN	BLCDT20091103ACK	
Undesireds:	WFWA18E1	D18	DT	CP	FORT WAYNE, IN	wfwa18e1	0.6 km
	WKEF	D18	DT	LIC	DAYTON, OH	BLANK0000004293	172.2

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
20465.5	1,089,665	20465.5	1,089,665	20152.5	1,074,128	490.5	33,057	97.57	96.92

Undesired	Total IX		Unique IX, before		Unique IX, after	
WFWA18E1 D18 DT CP	19967.0	1,055,927			19662.0	1,041,071
WKEF D18 DT LIC	313.0	15,537	313.0	15,537	8.0	681

Interference to BLANK0000004293 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WKEF	D18	DT	LIC	DAYTON, OH	BLANK0000004293	
Undesireds:	WFWA18E1	D18	DT	CP	FORT WAYNE, IN	wfwa18e1	172.6 km
	WDEM-CD	D17	DC	LIC	COLUMBUS, OH	BLDTA20090223ACT	108.3
	WISE-TV	D18	DT	LIC	FORT WAYNE, IN	BLCDT20091103ACK	172.2
	WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	108.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
29638.7	3,623,762	29470.8	3,619,081	25971.2	3,462,665	25651.0	3,447,403	1.23	0.44

Undesired	Total IX		Unique IX, before		Unique IX, after	
WFWA18E1 D18 DT CP	2682.9	115,506			320.2	15,262
WDEM-CD D17 DC LIC	4.0	880	0.0	0	0.0	0
WISE-TV D18 DT LIC	2963.1	120,263	2951.0	119,123	592.4	19,101
WCLL-CD D19 DC LIC	548.6	37,293	536.5	36,153	536.5	36,153

INTERFERENCE RECEIVED ANALYSIS FOR WFWA(TV) CHANNEL 18
C.P. FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

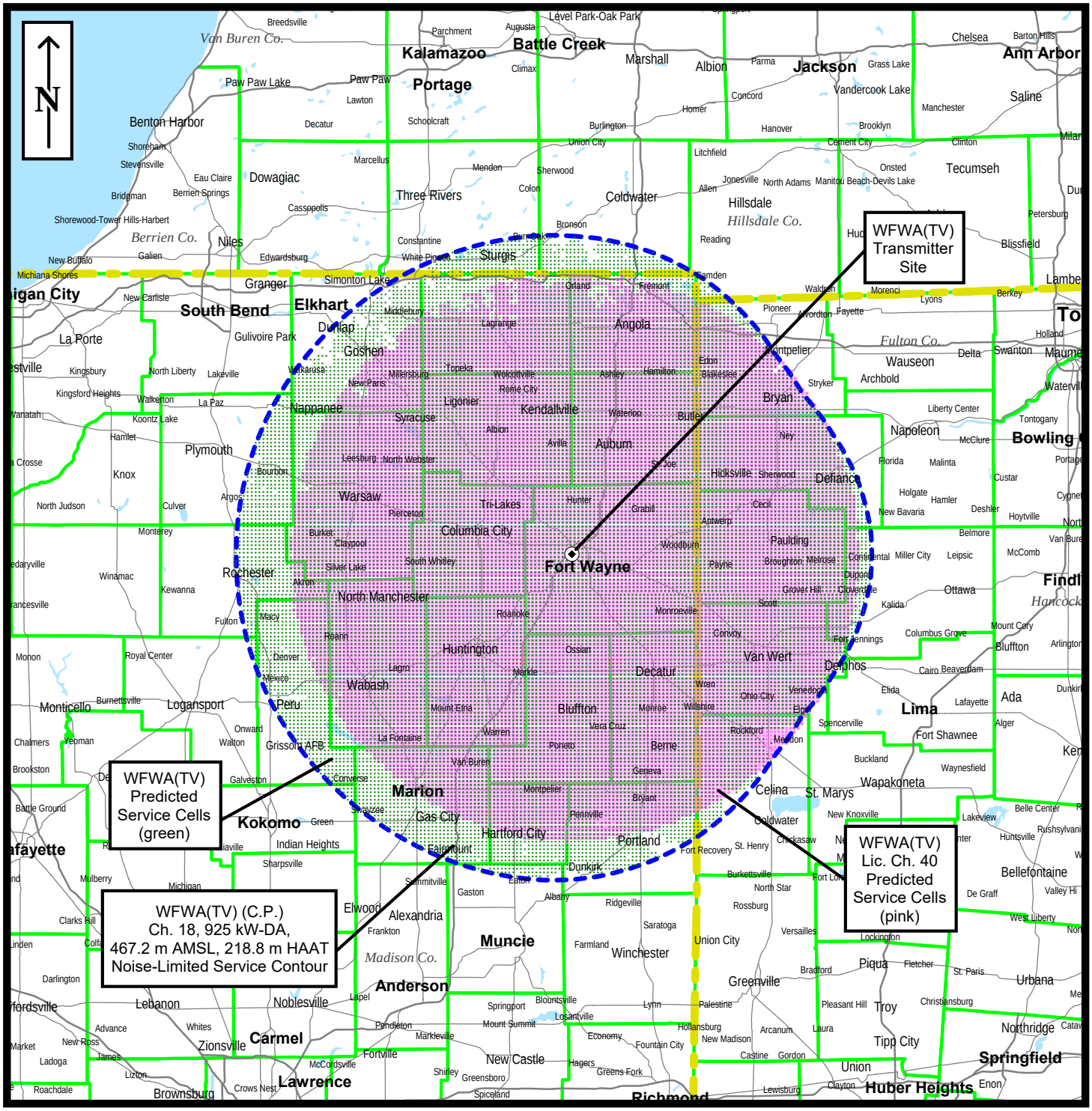
```
tvstudy v2.2.4 (Z2Qqz3)

    Database: localhost
Station Data: LMS TV 2017-12-11 (105)
       Study: LMS171211
       Model: Longley-Rice
    Scenario: wfwa18e1r
```

Desired station / Undesired station	Service area		Terrain-limited		Interference-free	
	Total interference		Unique interference			
WFWA18E1 D18 DT CP FORT WAYNE, IN	21103.5	1,141,942	21087.5	1,141,550	20732.5	1,125,963
WYIN D17 DT LIC GARY, IN	0.0	0	0.0	0		
WDNI-CD D19 DC LIC INDIANAPOLIS, IN	0.0	0	0.0	0		
WJTS-CD D18 DC LIC JASPER, IN	0.0	0	0.0	0		
WDWO-CD D18 DC LIC DETROIT, MI	0.0	0	0.0	0		
WXMI D19 DT LIC GRAND RAPIDS, MI	0.0	0	0.0	0		
WKEF D18 DT LIC DAYTON, OH	351.0	15,000	340.0	14,603	(1.28%)*	
WVTV D18 DT LIC MILWAUKEE, WI	15.0	984	4.0	587	(0.05%)	

* Considering Existing WLOX Predicted Service Cells

Desired station / Undesired station	Service area		Terrain-limited		Interference-free	
	Total interference		Unique interference			
WFWA D40 DT LIC FORT WAYNE, IN	17168.2	930,286	17163.2	930,074	17022.9	923,921
W40CN-D D40 DC LIC SUGAR GROVE, IL	0.0	0	0.0	0		
WTVQ-DT D40 DT LIC LEXINGTON, KY	0.0	0	0.0	0		
WKAR-TV D40 DT LIC EAST LANSING, MI	140.3	6,153	138.3	6,042		
WLPC-CD D40 DC LIC Redford, MI	0.0	0	0.0	0		
WHIO-TV D41 DT LIC DAYTON, OH	0.0	0	0.0	0		
WHIZ-TV D40 DT LIC ZANESVILLE, OH	0.0	0	0.0	0		
WPXE-TV D40 DT LIC KENOSHA, WI	2.0	111	0.0	0		

Desired station / Undesired station	Service area		Terrain-limited		Interference-free	
	Total interference		Unique interference			
WFWA D40 DT LIC FORT WAYNE, IN					16937.1	922,458
INTERFERENCE/SERVICE LOSS FOR WFWA CHANNEL 18			85.0	1,463	(0.16%)	



PREDICTED COVERAGE CONTOUR FOR WFWA(TV) WITH LICENSED (40) AND C.P. (18) SERVICE CELLS

duTreil, Lundin & Rackley, Inc. Sarasota, Florida