Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	MB Docket 87-268
And Their Impact upon the	)	
Existing Television Broadcast	)	
Service	)	
	)	
(Booneville, Mississippi)	)	

TO: Office of The Secretary

PETITION FOR RECONSIDERATION

The Mississippi Authority for Educational Television (MAET), through its attorneys and pursuant to Section 1.106 of the Commission's rules, hereby requests reconsideration of the technical facilities allotted to public Station WMAE-DT, Booneville, Mississippi, in the DTV Table of Allotments adopted in the Seventh Report and Order ("Seventh R&O"), FCC 07-138, released August 6, 2007.[1] In support thereof, the following is shown:

1. MAET is the statewide public broadcasting network licensed to provide public television service to the state of Mississippi. Toward that end, MAET operates eight full-service television stations. MAET is committed to making the transition from analog to digital service. Indeed, completing the digital transition for its stations is one of the highest, if not the highest, of MAET's priorities at this time. Critical to this end is the timely and cost-effective implementation of WMAE-DT. For a number of reasons,

[1] The Seventh R&O was published in the Federal Register on September 26, 2007. 72 Fed. Reg. 54720. Accordingly, the deadline for petitions for reconsideration of the decision is October 26, 2007, and this Petition therefore is timely filed.

including the fact that the station was originally allotted out-of-core DTV Channel *55, MAET opted to return to its analog Channel *12 for its permanent DTV operation.

2. In comments filed in response to the Commission's Seventh Further Notice of Proposed Rule Making in the above-referenced proceeding, MAET noted that the Commission's proposed parameters for Station WMAE-DT specified a directional antenna that did not correspond to the omnidirectional pattern certified by MAET in its Pre-Election Certification filed November 1, 2004. MAET further demonstrated that its certified omnidirectional pattern complied with the rules and constituted the most effective and efficient configuration of DTV facilities for Station WMAE-DT, permitting full digital replication without adversely impacting other proposed allotments or necessitating the needless and substantial expense of purchasing a custom directional antenna. However, the Commission without explanation allotted WMAE-DT a directional pattern (ID 74629).[2]

3. As demonstrated in the attached Engineering Statement, the directional operation authorized by the Commission would fall well short of replicating the station's certified digital coverage. Moreover, the omnidirectional allotment sought by MAET in fact complies with the Commission's interference standards.

4. Importantly for MAET and the public that it serves, the requested change in parameters will allow MAET to use the antenna currently providing Channel 12 analog service, on a schedule that will permit "flash-cut" transition in February, 2009. Without the allotment change, MAET will be forced to curtail digital services when first implemented, or to spend hundreds of thousands of dollars on the fabrication, testing,

[2] See Seventh Report and Order, para. 66 and footnote 166.

manufacture, delivery and installation of a directional digital antenna, monies that obviously would be better spent on MAET's other public services.

WHEREFORE, for the foregoing reasons, MAET respectfully requests that the final DTV Table of Allotments be amended as proposed.

Respectfully submitted,

MISSISSIPPI AUTHORITY FOR
EDUCATIONAL TELEVISION

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October 26, 2007

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A PETITION FOR RECONSIDERATION OF THE SEVENTH REPORT AND ORDER AND EIGHTH FURTHER NOTICE OF PROPOSED RULE MAKING (7TH R&O) WITH RESPECT TO THE MISSISSIPPI AUTHORITY FOR EDUCATIONAL TELEVISION (MAET) POST-TRANSITION DIGITAL BROADCAST FACILITY, WMAE-DT CHANNEL *12, BOONEVILLE, MISSISSIPPI.

The firm Kessler and Gehman Associates, Inc. has been retained by the Mississippi Authority for Educational Television (MAET), Jackson, Mississippi, licensee of analog broadcast facility WMAE-TV Channel *12 and digital station WMAE-DT Channel *55, to prepare an engineering analysis in support of a Petition for Reconsideration of the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making (7th R&O) with respect to the operating parameters assigned to the WMAE-DT Channel *12 post-transition facility as adopted in the Final DTV Table of Allotments (TOA).

Discussion

The purpose of this engineering statement is to respectfully bring to the Commission's attention that the WMAE-DT Channel *12 facility, as depicted in the Final DTV Table of Allotments (TOA), will fall well short of replicating its pre-transition DTV facilities and can be corrected if WMAE-DT is permitted to use the existing antenna now in use by the licensed WMAE-TV Channel *12 facility.

MAET is licensed to operate the WMAE-TV Channel *12 analog facility with a maximum effective radiated power (ERP) of 100 kW with an antenna height radiation center of 226 meters above average terrain (AAT) using a Harris model TAB-12H directional antenna (BLET-20001011ABQ). MAET is also authorized to operate the WMAE-DT Channel *55 out-

of-core facility with a maximum ERP of 1,000 kW with an antenna height radiation center of 227 meters AAT using a Dielectric model TFU-36GTH O6 nondirectional antenna (BPEDT-20000501AHZ). In its Pre-Election Certification application, MAET certified that it would operate its post-transition DTV station as authorized by its digital construction permit (BPEDT-20000501AHZ) which authorizes a nondirectional antenna; however, the Antenna ID depicted in the proposed DTV TOA (74629) assigns a directional pattern for the WMAE-DT Channel *12 post-transition facility (Exhibit 1). In its Digital Channel Election application (First Round Election), MAET elected to release digital Channel *55, because it is an out-of-core channel, and elected to revert back to Channel *12 for its post-transition digital operation. Accordingly, the FCC assigned WMAE-DT Channel *12 in the proposed DTV TOA.

Referring to Exhibit 2, it can be seen that the proposed DTV TOA facility's protected F(50,90) 36.0 dBuV/m noise limited contour for the WMAE-DT facility (red contour) would fall short of replicating its certified digital F(50,90) 42.4 dBuV/m noise limited (blue contour) due to the proposed directional antenna. The directional antenna assigned in the proposed DTV TOA for WMAE-DT would result in an estimated minimum service population loss of 5,268 persons based on U.S. Census 2004 Estimation Data. The directional azimuth pattern assigned to the WMAE-DT Channel *12 post-transition facility in the proposed DTV TOA could force MAET to purchase a custom antenna to meet the FCC specified azimuth pattern relative field values.

Referring to Exhibit 3, it can be seen that the red F(50,90) 36.0 dBuV/m noise limited contour, representing the Final DTV TOA for the post-transition WMAE-DT Channel *12 facility, would fully replicate the authorized WMAE-DT Channel *55 F(50,90) 42.4 dBuV/m protected contour (blue contour), as certified in the Pre-Election Certification application, if the post-transition WMAE-DT Channel *12 facility were operating with a nondirectional antenna using the ERP and antenna height assigned in the proposed DTV TOA. Therefore, MAET respectfully requests that the assigned antenna azimuth pattern be changed from directional to nondirectional so that it can serve the population that would be served by its authorized out-of core digital facility.

As stated in paragraph 25 of the 7th R&O, the Commission received comments and reply comments in response to the Seventh Further Notice of Proposed Rule Making (7th FNPRM) and its goal was to accommodate the requests made by commenters to the extent possible consistent with the standards outlined in the 7th FNPRM, and particularly the 0.1 percent interference standard. The Commission stated in paragraph 26 of the 7th R&O that proposed changes to the DTV Table and/or Appendix B that are consistent with the standards outlined in the 7th FNPRM and do not create new post-transition interference to a tentative channel designation (TCD) of more than 0.1 percent would be granted.

It has been determined that the WMAE-DT Channel *12 post-transition facility operating with a nondirectional antenna would have no impact to other stations and would not violate the 0.1% additional interference criteria. Exhibits 4 and 5 depict a Longley-Rice interference study map and predicted interference percentage calculations respectively with the WMAE-DT post-transition Channel *12 facility operating with a nondirectional antenna and all other parameters remaining as assigned in the proposed DTV TOA. It can be seen that the only station predicted to receive interference greater than 0.0% from the nondirectional WMAE-DT post-transition Channel *12 facility is the WHBQ-DT post-transition Channel 13 facility which would be predicted to receive only 0.2% interference. Exhibits 6 and 7 depict a Longley-Rice interference study map and predicted interference percentage calculations respectively with the WMAE-DT post-transition Channel *12 facility operating with the assigned parameters in the proposed DTV TOA which includes the assigned directional pattern (Antenna ID 74629). Again, it can be seen that the only station predicted to receive interference greater than 0.0% from the directional WMAE-DT post-transition Channel *12 facility is the WHBQ-DT post-transition Channel 13 facility which would still be predicted to receive only 0.2% interference. Therefore, changing the proposed DTV TOA from a directional to nondirectional azimuth pattern for the WMAE-DT post-transition Channel *12 facility would not cause more than 0.1% additional interference to any post-transition DTV station and in particular would not materially alter the interference received by WHBQ-DT from WMAE-DT.

In conclusion, MAET requests that the antenna azimuth pattern assigned to the WMAE-DT Channel *12 post-transition facility in the proposed DTV TOA be changed from directional to nondirectional as certified in its Pre-Election Certification application so that WMAE will be able to serve the population that would be served by its out-of-core digital facility. The directional pattern assigned to WMAE in the proposed DTV TOA would result in thousands of viewers losing service which would not be in the public's best interest. Changing the proposed DTV TOA from a directional to nondirectional azimuth pattern for the WMAE-DT post-transition Channel *12 facility would not create new post-transition interference to a TCD of more than 0.1 percent and therefore should be granted.

Certification

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

KESSLER AND GEHMAN ASSOCIATES, INC.

WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant 25 October, 2007

Federal Communications Commission

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Antenna Make	Model	Service	Antenna Id
D55	MSBOONEVILL_12	DT	74629

Antenna relative field values:

0°	0.937	10°	0.938	20°	0.94	30°	0.941	40°	0.942	50°	0.945
60°	0.949	70°	0.953	80°	0.958	90°	0.964	100°	0.97	110°	0.977
120°	0.985	130°	0.995	140°	0.989	150°	0.973	160°	0.96	170°	0.949
180°	0.942	190°	0.939	200°	0.937	210°	0.936	220°	0.934	230°	0.932
240°	0.931	250°	0.93	260°	0.929	270°	0.928	280°	0.928	290°	0.929
300°	0.93	310°	0.931	320°	0.932	330°	0.933	340°	0.935	350°	0.936

Additional Azimuths:

136°	1

Relative Field Polar Plot

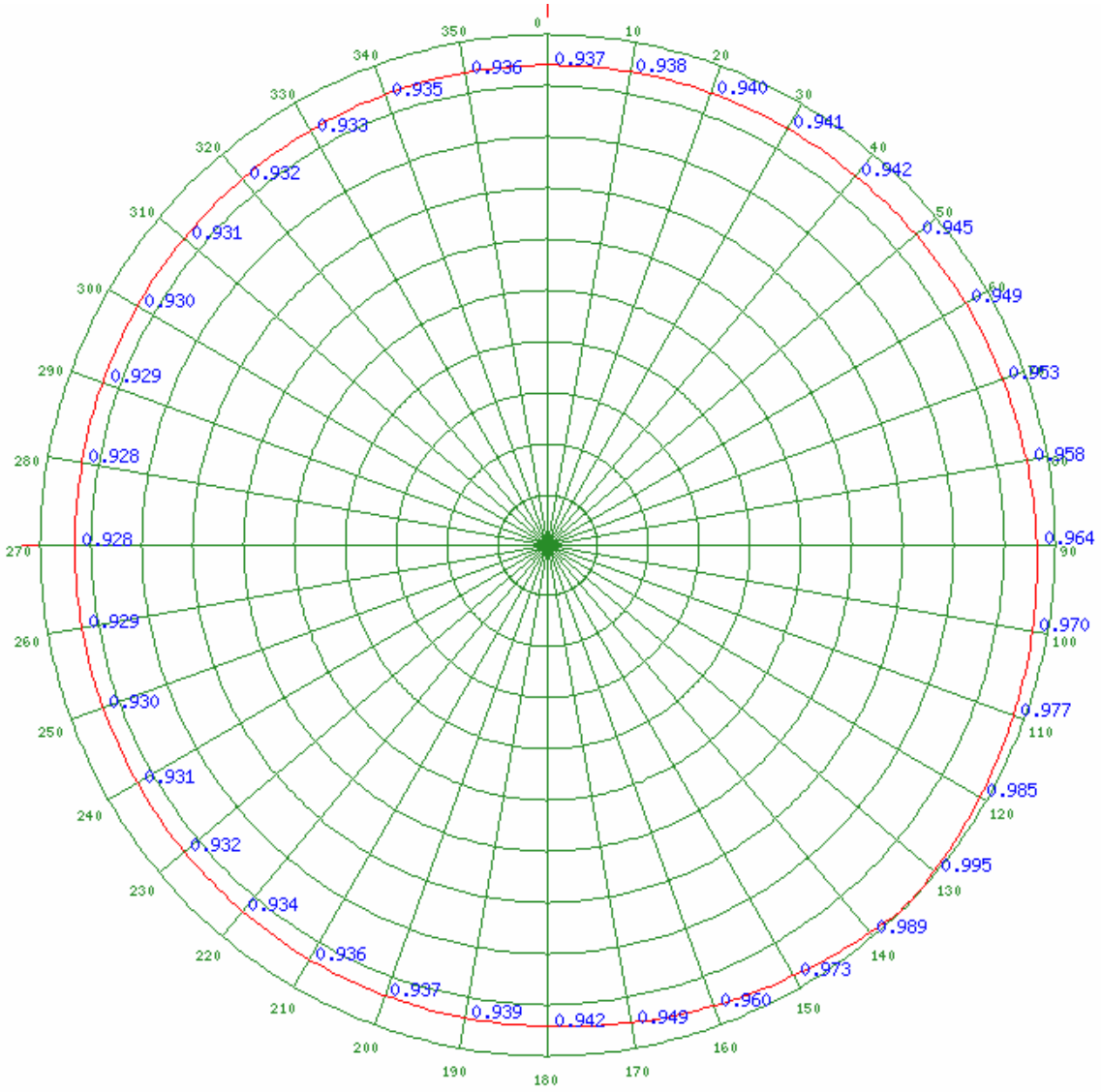
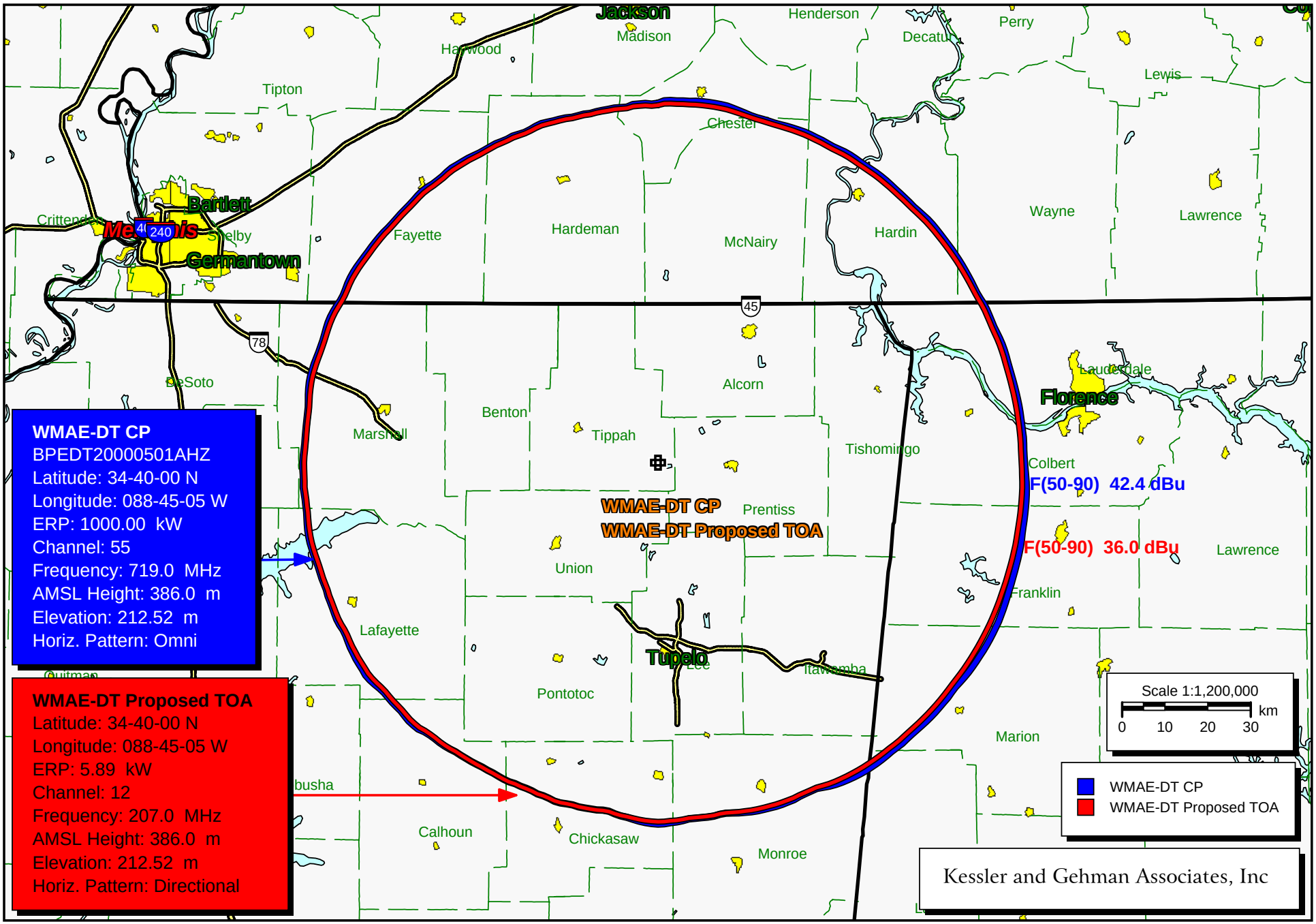
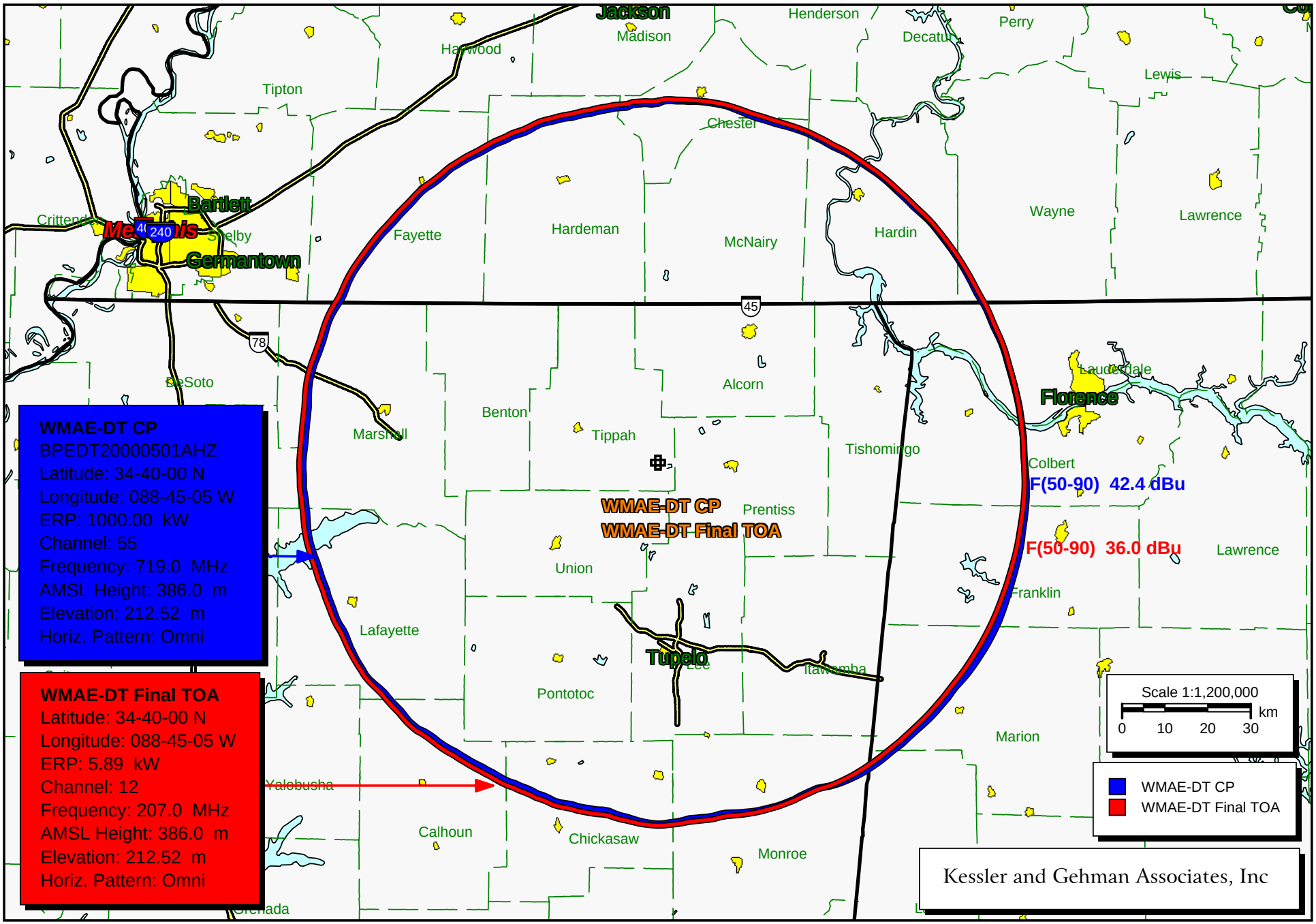


EXHIBIT 1



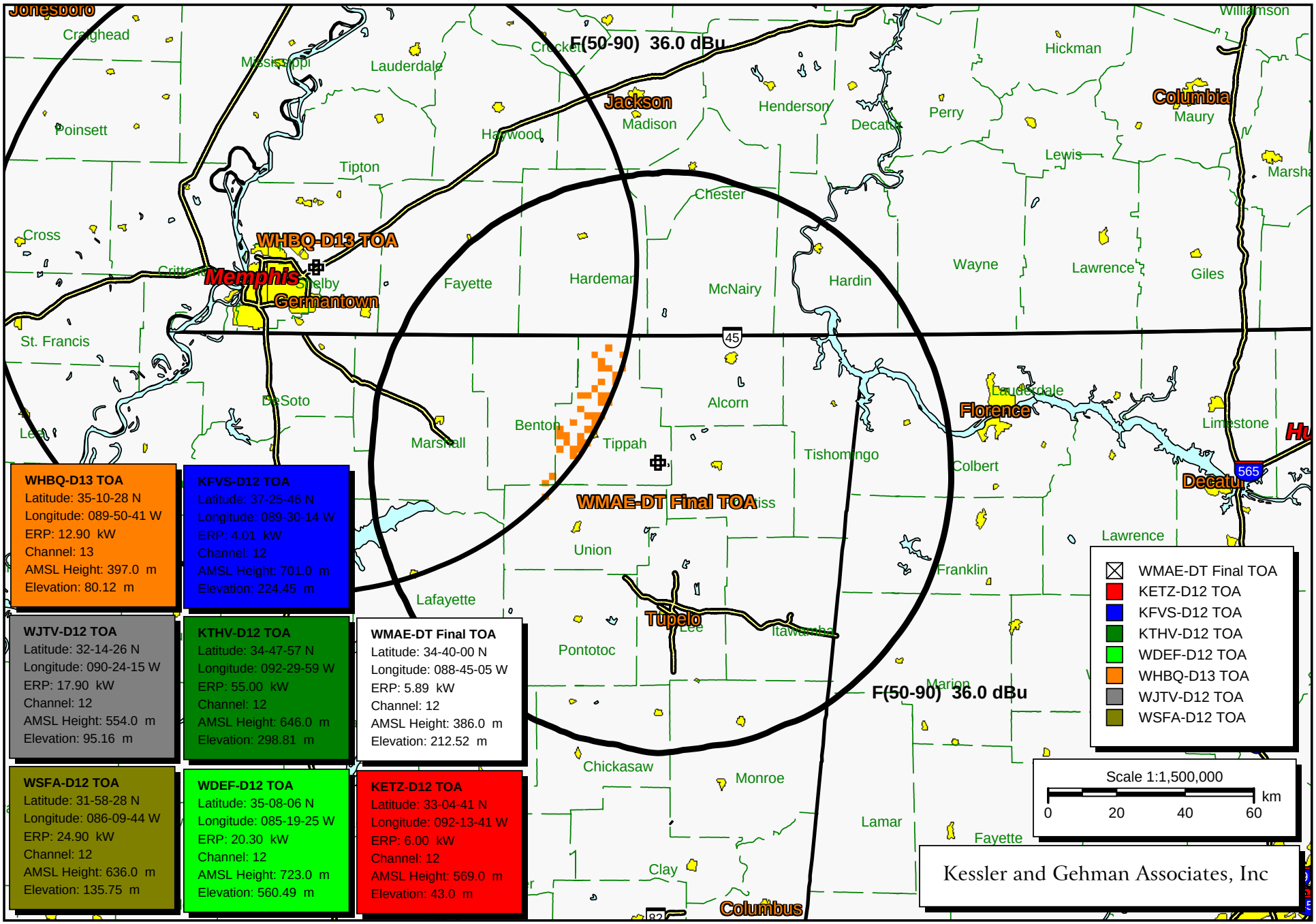
WMAE-DT Proposed DTV Table of Allotments Verification

EXHIBIT 2



WMAE-DT replicates NTSC with omni antenna

EXHIBIT 3



WMAE-DT Channel 12 Outgoing Longley-Rice Interference Study Using Final DTV TOA Parameters

EXHIBIT 4

Outgoing Interference Population Report

WMAE-DT Final TOA (12) Booneville, MS
Broadcast Type: Digital
Lat: 34-40-00 N Lng: 088-45-05 W ERP: 5.89 kW AMSL: 386.0 m
TV Outgoing Interference Study
Signal Resolution: 2.0 km
Consider NTSC Taboo: Yes
# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 1.0 km

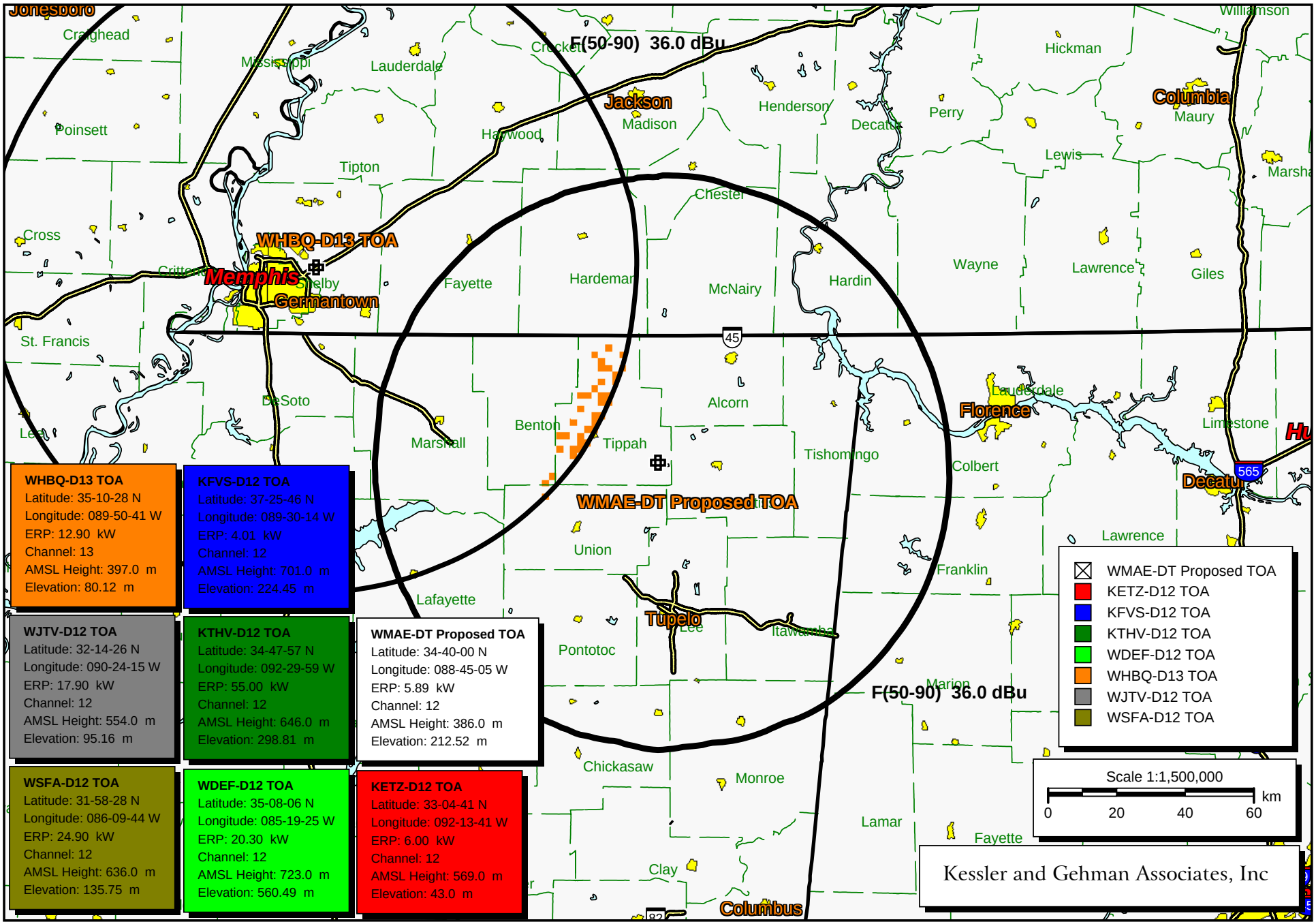
Primary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
KETZ-D12 TOA (12)	El Dorado	AR	366.7	242.3
KFVS-D12 TOA (12)	Cape Girardeau	MO	313.9	347.7
KTHV-D12 TOA (12)	Little Rock	AR	343.5	273.5
WDEF-D12 TOA (12)	Chattanooga	TN	317.5	79.6
WHBQ-D13 TOA (13)	Memphis	TN	114.7	299.7
WJTV-D12 TOA (12)	Jackson	MS	309.8	210.2
WSFA-D12 TOA (12)	Montgomery	AL	383.7	140.4

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
KETZ-D12 TOA (12	0.0	0	450,183	0	0	0.0
KFVS-D12 TOA (12	3.9	0	703,904	0	0	0.0
KTHV-D12 TOA (12	4.0	10	1,171,374	0	28	0.0
WDEF-D12 TOA (12	12.0	163	1,381,741	0	406	0.0
WHBQ-D13 TOA (13	156.4	1,185	1,481,986	0	2,753	0.2
WJTV-D12 TOA (12	8.2	12	829,967	0	27	0.0
WSFA-D12 TOA (12	0.0	0	802,863	0	0	0.0



WMAE-DT Channel 12 Outgoing Longley-Rice Interference Study Using Proposed DTV TOA Parameters EXHIBIT 6

Outgoing Interference Population Report

WMAE-DT Final TOA (12) Booneville, MS
Broadcast Type: Digital
Lat: 34-40-00 N Lng: 088-45-05 W ERP: 5.89 kW AMSL: 386.0 m
TV Outgoing Interference Study
Signal Resolution: 2.0 km
Consider NTSC Taboo: Yes
# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 1.0 km

Primary Terrain: 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
KETZ-D12 TOA (12)	El Dorado	AR	366.7	242.3
KFVS-D12 TOA (12)	Cape Girardeau	MO	313.9	347.7
KTHV-D12 TOA (12)	Little Rock	AR	343.5	273.5
WDEF-D12 TOA (12)	Chattanooga	TN	317.5	79.6
WHBQ-D13 TOA (13)	Memphis	TN	114.7	299.7
WJTV-D12 TOA (12)	Jackson	MS	309.8	210.2
WSFA-D12 TOA (12)	Montgomery	AL	383.7	140.4

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
KETZ-D12 TOA (12	0.0	0	450,183	0	0	0.0
KFVS-D12 TOA (12	0.0	0	703,904	0	0	0.0
KTHV-D12 TOA (12	4.0	10	1,171,374	0	28	0.0
WDEF-D12 TOA (12	12.0	163	1,381,741	0	406	0.0
WHBQ-D13 TOA (13	144.4	1,161	1,481,986	0	2,703	0.2
WJTV-D12 TOA (12	8.2	12	829,967	0	27	0.0
WSFA-D12 TOA (12	0.0	0	802,863	0	0	0.0