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Federal Communications Commission
Office of the Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Section 73.622(i)	)	MM Docket No. 09-115
Final DTV Table of Allotments,	)	RM-11543
Television Broadcast Stations.	)	
(Fond du Lac, Wisconsin)	)	

To: Secretary, FCC
Attn: Chief, Video Division, Media Bureau

COMMENTS IN OPPOSITION TO NPRM

Grand Valley State University ("GVSU"), by counsel and pursuant to Sections 1.415, 1.419 and 1.420 of the Commission's Rules, hereby submits these comments in opposition to the proposal contained in the Notice of Proposed Rule Making ("NPRM") in this proceeding to substitute DTV Channel 5 for DTV Channel 44, assigned to WWAZ-TV, Fond du Lac, Wisconsin.[1] The proposal to substitute DTV Channel 5 for 44 at Fond du Lac is predicated on several flawed assumptions and is not consistent with Commission rules or policy. In support thereof the following is shown.

BACKGROUND

GVSU is the licensee of noncommercial television station WGVK, Kalamazoo, Michigan, operating on DTV Channel 5. Kalamazoo is located in southwestern Michigan, in the Grand Rapids-Kalamazoo-Battle Creek television market (DMA). WGVK's service area

[1] Section 1.420 of the Commission's Rules sets forth additional procedures for proceedings to amend the FM or TV Tables of Allotments, but by its terms applies only to Sections 73.202 and 73.606 of the Commission's Rules, not Section 73.622, the DTV Table of Allotments. Nonetheless, the Appendix to the NPRM references Section 1.420 and directs parties to comply with its provisions. A summary of the NPRM was published in the Federal Register on July 9, 2009. 74 FR 32856 (2009). These comments are therefore timely filed.

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encompasses areas of southwestern Michigan to the shores of Lake Michigan. WGVK's service area is basically due east of the proposed co-channel WWAZ-TV Channel 5 allotment, separated only by the waters of Lake Michigan.

WWAZ-TV and Fond du Lac are in the Green Bay-Appleton television market. WWAZ License, LLC ("WWAZ"), the licensee of WWAZ-TV, has requested the Commission to amend the DTV Table of Allotments to substitute DTV Channel 5 for its assigned DTV Channel 44, proposing to use an existing tower in Milwaukee, Wisconsin, close to the shores of Lake Michigan.[2] This would be a significant relocation of the WWAZ-TV antenna from its current site in Iron Ridge, Wisconsin.[3] The proposed relocation would result in a loss of service to WWAZ-TV viewers in the northwestern portion of the station's authorized digital and formerly licensed analog service areas. The Commission's staff requested WWAZ to make a public interest showing justifying the service loss.[4] Instead, WWAZ filed a supplement on February 23, 2009, proposing the use of two fill-in translator stations to serve the loss area.[5]

In addition to relocating the WWAZ-TV antenna, WWAZ's proposed substitution of DTV Channel 5 for 44 is predicated on a facility operating with an effective radiated power (ERP) of 25 kilowatts at an antenna height above average terrain (HAAT) of 354 meters, using a highly directional antenna.[6] WWAZ admits that its proposed ERP exceeds the permissible levels specified in Section 73.622(f)(6)(ii) of the Rules for its specified HAAT, but asserts that it

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[2] See WWAZ's "Amendment to Petition for Rulemaking" filed August 22, 2008 ("Amended Proposal"), at Exhibit D (Predicted Service Contours) of Exhibit One.

[3] See Antenna Registration No. 1241313 (tower coordinates 43-26-20 North Latitude, 88-31-29 West Longitude). WWAZ proposes to relocate to an existing tower in the Milwaukee antenna farm. See Exhibit A to Exhibit One of WWAZ's Amended Proposal.

[4] NPRM at paragraph 3. Based on a review of the available documents in the Commission's public reference room, the Commission's staff's request for the public interest showing referenced in the NPRM is not contained among the public docket records for this proceeding.

[5] *Id.*

[6] WWAZ Amended Proposal at Exhibit One (FCC Form 301, Section III-D DTV Engineering).

complies with Section 73.622(f)(5) of the Rules because it does not exceed the coverage of the largest station in the market (WMVS-DT, Channel 8, Milwaukee).[7]

DISCUSSION

WWAZ's proposal to substitute DTV Channel 5 for its assigned Channel 44 should not be granted for the following reasons:

1) It is premised on relocating the WWAZ-TV antenna to the heart of the adjacent and larger Milwaukee television market, causing a loss of service to portions of WWAZ-TV's authorized service area.

2) WWAZ is not eligible for the newly established replacement digital television translator service[8] because its proposed translators would not provide service to a portion of WWAZ-TV's analog service area that is not served by WWAZ-TV's full, authorized post-transition digital service facilities (which cover all of WWAZ-TV's analog service area).

3) WWAZ proposes operating WWAZ-TV with an ERP and HAAT that exceeds applicable Commission limits for DTV Channel 5.

4) WWAZ cannot propose an ERP and HAAT beyond FCC limits based on the coverage area of a station in a different DMA from its own Green Bay-Appleton television market.

5) WWAZ proposes to use a highly directional antenna with a ratio of maximum to minimum radiation that exceeds the 10 dB limit of Section 73.685(e) of the Rules.

6) The proposed WWAZ-TV Channel 5 antenna would be close to Lake Michigan, a known area of tropospheric ducting which causes enhanced broadcast signal propagation beyond

[7] *Id.* at Exhibit A to Exhibit One.

[8] See *Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Replacement Digital Low Power Television Translator Stations*, Report and Order, FCC 09-36 (May 8, 2009) ("*Replacement Translator Order*").

normally predicted distances,[9] that will result in greater than predicted interference to WGVK's co-channel operation. This is of particular concern given the problems with DTV VHF signal reception that have arisen subsequent to the DTV transition.

Each of these reasons is discussed in greater detail below.

Service Loss From Relocation of the WWAZ-TV Antenna to the Milwaukee Market. WWAZ states that substituting DTV Channel 5 for Channel 44, which is predicated on relocating WWAZ-TV's antenna to Milwaukee, would cause 186,253 people in 2,891 square kilometers to lose service.[10] WWAZ tries to justify the service loss, asserting that the loss area is otherwise well served, that WWAZ-TV's overall service population would increase from 2,167,019 people to 3,022,673, and that it would allow an increase in service to targeted Hispanic viewers from 110,430 to 316,179. While such an increase in service area population is to be expected from relocating the WWAZ-TV antenna to the heart of the much larger Milwaukee television market,[11] this alone cannot justify the loss of established service which is prima facie inconsistent with the public interest.[12]

The only cases upon which WWAZ relied to support its proposal are not apposite. Both involved short-spacing waivers and efforts to facilitate the DTV transition, which the

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[9] For a general description of tropospheric ducting and how it results in signal propagation beyond normally predicted distances see: http://en.wikipedia.org/wiki/Tropospheric_propagation.

[10] WWAZ Amended Proposal at page 2.

[11] WWAZ-TV's home Green Bay-Appleton market ranks as the 70th television DMA with approximately 444,210 television homes. Milwaukee ranks as the 35th television DMA with approximately 905,350 television homes. (Source: Nielsen estimates as of January 1, 2009, obtained from www.nielsenmedia.com.) It is reasonable to assume that the proposed relocation of the WWAZ-TV antenna to Milwaukee is merely a prelude to an attempt to change WWAZ-TV's market designation from Green Bay-Appleton to Milwaukee. That is not, however, within the scope of these comments.

[12] See NPRM at paragraph 3 and footnote 3 (citations omitted).

Commission considered a very high priority.[13] In *KRCA License Corp.*, the Commission stated that the issue of coverage gains and losses was not dispositive to the case. Rather, facilitation of the DTV transition was the dispositive factor.[14] In *Letter to KNTV License, Inc.*, the Commission noted that the majority of the loss area would occur to people residing in other television markets who received a full complement of signals, including affiliates of the same network (NBC); that the proposal would restore network service to almost 400,000 persons who lost that service in 2002; that if the analog station did not relocate it would result in significant interference to more than 175,000 viewers of the station's DTV signal; and that the relocation and co-location of the applicant's DTV facilities would eliminate interference to over 460,000 viewers of another station's DTV signal.[15] Further, both cases involved service loss of their analog signals, not their digital service. In contrast, WWAZ-TV discontinued analog television service before the DTV transition.[16] More importantly, the service loss is for its digital service, it occurs at least in part in its home DMA (Green Bay-Appleton), and it results from WWAZ's proposal to relocate WWAZ-TV's DTV antenna to Milwaukee solely to increase the station's service area in the adjacent and larger Milwaukee DMA.

The Commission's staff did not accept WWAZ's justification for the service loss. Instead it required WWAZ to make a further public interest showing to justify the service loss.[17] WWAZ did not make such a showing. While it perfunctorily repeated the argument in its

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[13] See *KRCA License Corp.*, 15 FCC Rcd 1794, 1800 (1999) ("We have placed a very high priority on accelerating the television industry's transition to DTV."); *Letter to KNTV License, Inc.*, 19 FCC Rcd 15,479 (2004).

[14] 15 FCC Rcd at 1802.

[15] 19 FCC Rcd at 15485.

[16] The Commission authorized WWAZ-TV to discontinue analog service on July 28, 2008 (DA 08-1569).

[17] NPRM at paragraph 3. As noted in footnote 4, *supra*, a copy of the staff's request to WWAZ for the further public interest justification is missing from the documents in the docket for this proceeding.

Amended Proposal, rather than trying to further justify the service loss it proposed to use two translator stations that would provide service to most of the loss area.[18]

WWAZ is Ineligible for Replacement Digital Television Translators. When the Commission amended its rules to authorize the use of replacement digital television translators it specifically stated that it did not intend the new service as a way for stations to expand their service area beyond their full-power analog service area.[19] The Commission created the new service "to permit full-service television stations to continue to provide service to viewers within their coverage areas who have lost service *as a result of those stations' digital transition*."[20] The Commission adopted strict eligibility criteria for the new service: "only those full-service television stations that can demonstrate that a portion of their analog service areas will not be served by their full, post-transition digital facilities and that the proposed replacement digital television translator service will be used for that purpose."[21] WWAZ does not meet these strict requirements.

Attached as Exhibit 1 hereto is a copy of the coverage map available from the Commission's DTV website showing that WWAZ-TV's authorized post-transition digital facilities on Channel 44 more than fully replicate the station's analog service area.[22] It is not the digital transition that results in the service loss from WWAZ's proposal, but rather WWAZ's

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[18] See WWAZ's Supplement to Petition for Rulemaking, filed February 23, 2009, and its Further Supplement to Petition for Rulemaking, filed June 16, 2009.

[19] *Replacement Translator Order* at paragraph 14.

[20] *Id.* at paragraph 1 (emphasis added).

[21] *Id.* at paragraph 14 (footnotes omitted). See also amended Section 74.787(a)(5)(i) adopted therein.

[22] See http://www.fcc.gov/dtv/markets. The facilities depicted in the coverage map are authorized in BMPCDT-20040209ABG, granted June 22, 2004. WWAZ has received several extensions of this construction permit. The most recent extension was granted on January 27, 2009 (BEPCDT-20081219ADL). WWAZ filed for another extension on June 3, 2009 (BEPCDT-20090603AAJ). Both of these extension applications relied on self-described "confidential information" that was submitted under separate cover with a request for confidential treatment. Thus, it is unknown on what basis WWAZ has requested extensions of the construction permit and whether it relates in any manner to the subject of this proceeding.

desire to change channels and move WWAZ-TV's antenna site to Milwaukee, greatly expanding its service area. Because WWAZ-TV's authorized post-transition DTV facilities cover the entire WWAZ-TV analog service area it is not eligible under the new replacement digital television translator service, and the Commission cannot consider the two translators WWAZ proposes to fill-in for the service loss that results from WWAZ's proposed move to Milwaukee. Allowing WWAZ to use the translators to justify the service loss would directly contravene the Commission's express direction that such translators are not intended to allow a station to expand its full-service post-transition service area.[23]

WWAZ's Proposal Relies on Excessive ERP and HAAT. WWAZ proposes a DTV Channel 5 facility using a directional antenna at 25 kW ERP from an antenna height of 354 meters HAAT. WWAZ acknowledges that this proposal fails to comply with Section 73.622(f)(6)(ii), which limits the maximum ERP a DTV station operating in Zone 1 may provide from a given antenna HAAT above 305 meters. Using the formula set forth in Section 73.622(f)(6)(ii), the maximum ERP at which WWAZ-TV could operate from its proposed height of 354 meters, is 7.84 kilowatts, significantly less than the 25 kilowatts WWAZ proposes.[24]

WWAZ Cannot Use WMVS-DT, Milwaukee to Allow the Proposed Channel 5 Facilities. WWAZ asserts that despite the failure of its proposal to comply with Section 73.622(f)(6)(ii), the proposal is permitted under Section 73.622(f)(5) because the coverage of its proposed Channel 5 facility would not exceed the coverage of WMVS-DT, Milwaukee, "the largest station in the market."[25] But, WWAZ-TV and WMVS-DT are in different markets. WWAZ-TV, Fond du Lac, is in the Green Bay-Appleton DMA. WMVS-DT, Milwaukee, is in

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[23] *Replacement Translator Order* at paragraph 18 ("[t]he purpose of replacement digital television translators is to provide service to analog loss areas, not to expand full-service post-transition stations' service areas.").

[24] See Exhibit 2 hereto, the Declaration of GVSU's Director of Engineering, Mr. Robert Lumbert.

[25] WWAZ Amended Proposal, Exhibit One at Exhibit A.

the Milwaukee DMA. Thus, WMVS-DT's coverage cannot be used as a predicate for applying Section 73.622(f)(5) to WWAZ's proposal for Channel 5 at Fond du Lac.[26]

WWAZ-TV's Proposed Directional Antenna Would Violate Section 73.685(e). Section 73.685(e) of the Rules allows the use of directional antennas "for the purpose of improving service upon an appropriate showing of need." It further provides that stations operating on Channels 2-13 "will not be permitted to employ a directional antenna having a ratio of maximum to minimum radiation in the horizontal plane in excess of 10 dB." WWAZ proposes to use a very highly directional antenna to pull-in the DTV Channel 5 signal in the direction of WGVK, no doubt to avoid prohibited interference to WGVK.[27] Indeed, the maximum ERP of 25 kilowatts at 210 and 330 degrees, contrasts with 0 kilowatts ERP along the azimuths from 60 to 120 degrees towards WGVK and across Lake Michigan. Attached to the Declaration of GVSU's Director of Engineering (Exhibit 2) is a copy of the horizontal pattern for the proposed WWAZ-TV directional antenna that includes a tabulation of the pattern at five degree intervals and shows the relative field strength to three decimal places. Based on that analysis, the WWAZ-TV directional antenna would have a maximum to minimum relative field strength of 1 to 0.001 (*i.e.*, 1000:1). This is a 30 dB maximum to minimum ratio.[28] Further, the ERP in dBk is 13.979 along the 210 and 330 degree azimuths, compared to a minimum of

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[26] Even if WMVS-DT was relevant, a comparison of the geographic coverage of the proposed WWAZ-TV DTV Channel 5 facility with that of WMVS-DT shows that over land, the WWAZ-TV geographic coverage would exceed that of WMVS-DT. *Compare*, WWAZ-TV's predicted service contour in WWAZ's Amended Proposal, Exhibit One at Exhibit D, with the WMVS-DT signal contour available from the Commission's database of DTV coverage maps (http://www.fcc.gov/dtv/markets/). Copies of these maps are provided in Exhibit 3 hereto. It is only over Lake Michigan where WMVS-DT would have a larger geographic "coverage." Section 73.622(f)(5) should not be applied to allow a station to exceed the power and height limits of Section 73.622(f)(6)(ii) based solely on geographic signal coverage over a large body of water.

[27] WWAZ asserts that its proposal would cause interference to 3,291 people (0.1%) within WGVK's protected contour.

[28] See Exhibit 2 at page 2, Declaration of Robert Lumbert.

negative 46.021 along the 60 to 120 degree azimuths. The ratio of maximum to minimum radiation in the horizontal plane for WWAZ's proposed antenna greatly exceeds the 10 dB limit of Section 73685(e) and is not allowed.

Tropospheric Ducting Will Result in Greater Interference to WGVK. Tropospheric ducting, or "ducting," is a phenomenon of enhanced (often significantly enhanced) signal propagation due to certain weather conditions. Temperature inversions that can cause ducting occur most frequently along coastal areas bordering large bodies of water. Sea paths provide ideal conditions for ducting to occur.[29] WWAZ's proposed location for the DTV Channel 5 antenna is close to the shore of Lake Michigan in Milwaukee. There is a direct sea path from this antenna site to WGVK's protected service contour across Lake Michigan. GVSU's Director of Engineering has many years of experience with the effects of frequent ducting over Lake Michigan. He reports that prior to the DTV transition, GVSU's co-owned station WGVU-TV, Channel 35, Grand Rapids, Michigan, received significant interference from co-channel station WMVT-DT, Channel 35, Milwaukee, due to ducting. Viewers of WGVU-TV in the counties along Lake Michigan logged numerous complaints to GVSU's switchboard reporting reception problems due to this interference.

The interference that would result from tropospheric ducting would compound already problematical reception of WGVK's VHF DTV signal. The Commission is well aware of the VHF signal reception difficulties that have arisen subsequent to the DTV transition date. While WGVK may not have experienced the degree of difficulty that some other VHF stations have suffered, its viewers have reported reception difficulties for which the only solution has been the installation of an outdoor antenna. It would not serve the public interest to compound these VHF

[29] *See generally* the description at http://en.wikipedia.org/wiki/Tropospheric_propagation.

reception problems by authorizing a co-channel facility directly across Lake Michigan. The Commission should not rely solely on its standard prediction model when tropospheric ducting is a known phenomenon that occurs with regularity over Lake Michigan, and will greatly exacerbate interference to WGVK from the proposed WWAZ-TV DTV Channel 5 facility.[30]

CONCLUSION

WWAZ has not demonstrated any deficiencies in its current DTV Channel 44 authorization that would necessitate the proposed channel change. As shown above, WWAZ-TV's current DTV authorization more than replicates its analog coverage area. The only reason that WWAZ is seeking the channel change is to increase, substantially, its coverage area, and to do so into the adjacent and much larger Milwaukee television market. It proposes to do this with a facility that fails to meet the technical requirements of Sections 73.622(f) and 73.685(e) of the Commission's Rules. It seeks to fill in significant service loss areas using proposed translator stations for which it is not eligible. All of this would be at the expense of causing interference to WGVK's noncommercial television service to southwestern Michigan. The proposed substitution of DTV Channel 5 for Channel 44 at Fond du Lac, as WWAZ has proposed, neither complies with the Commission's Rules nor is it in the public interest. The Commission should deny WWAZ's proposal and terminate this proceeding.

[30] It is noted that WGVK already is subject to interference to about 2.2% of its service area from station WLMB, Toledo, Ohio, pursuant to an interference acceptance agreement between the two stations. See Exhibit 2, at page 1, Declaration of Robert Lumbert.

Respectfully submitted,

GRAND VALLEY STATE UNIVERSITY

By: _____

Mark Van Bergh
2538C South Arlington Mill Drive
Arlington, VA 22206
703-298-4870
Its Attorney

July 24, 2009

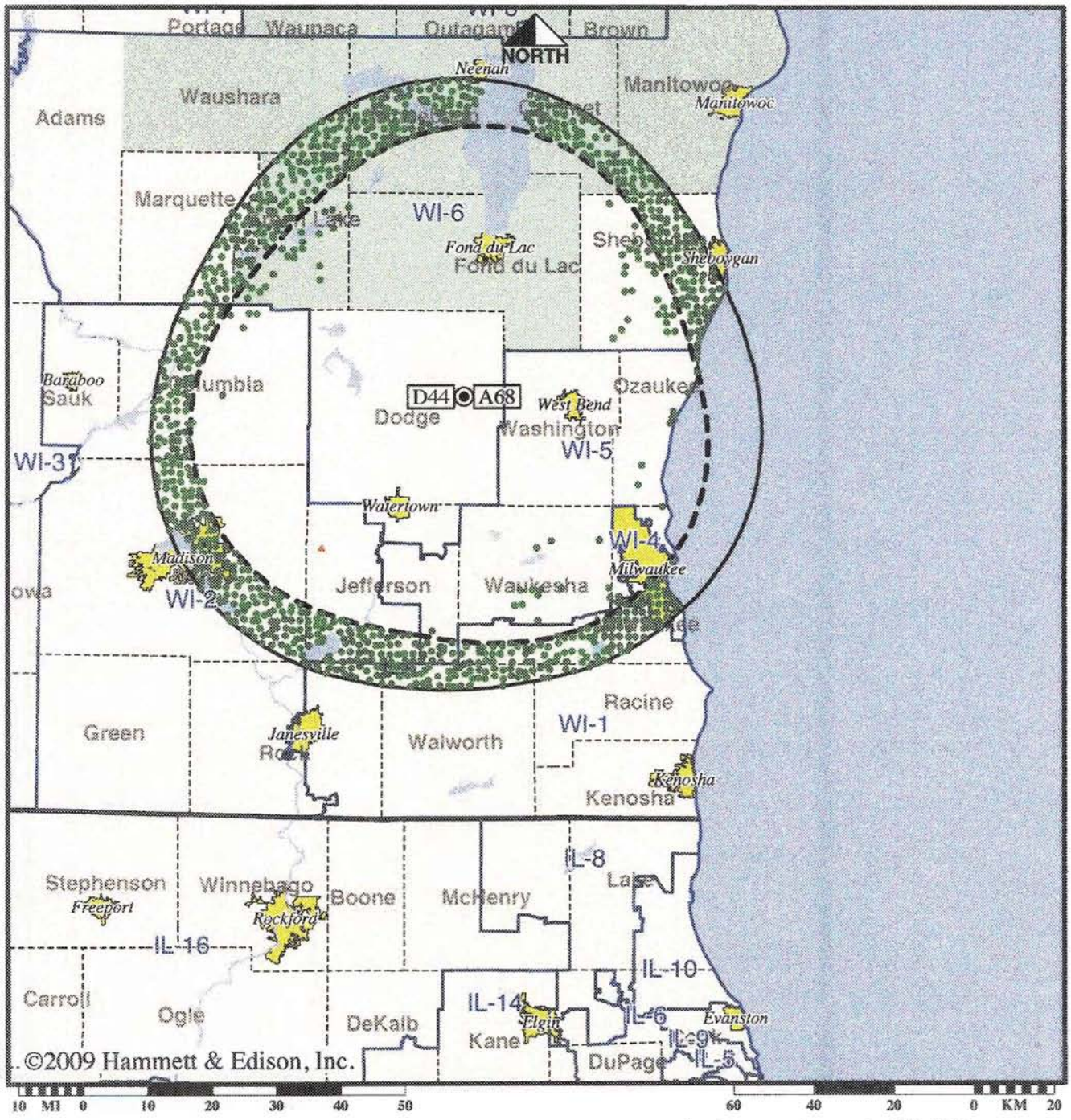
EXHIBIT 1

Station WWAZ-TV • Analog Channel 68, DTV Channel 44 • Fond du Lac, WI

Approved Post-Transition Operation: Granted Construction Permit

Digital CP (solid): 700 kW ERP at 195 m HAAT
vs. Analog (dashed): 4986 kW ERP at 195 m HAAT

Market: Green Bay-Appleton, WI



- Coverage gained after DTV transition
- No symbol = no change in coverage
- Coverage lost after DTV transition

Analog service	1,439,162 persons
Digital service	2,102,690
Analog loss	55
Digital gain	663,583
Net gain	663,528

BMPCDT-20040209ABG
WWAZ-TV Digital CP

Map set 2

EXHIBIT 2

DECLARATION

I, Robert Lumbert, hereby state as follows.

I have been the Director of Engineering for Grand Valley State University (GVSU) for the past 20 years. My responsibilities include supervision and oversight of all technical and engineering matters for GVSU's television stations, WGVK, Kalamazoo and WGVU-TV, Grand Rapids, Michigan.

WGVK is assigned DTV Channel 5 with an ERP of 10kW and a HAAT of 169 meters. At the time those facilities were authorized GVSU had entered into an interference acceptance agreement with Dominion Broadcasting Inc., licensee of television station WLMB, Toledo, Ohio. A copy of that agreement was filed with the FCC on May 21, 2002 as part of an amendment to GVSU's application BPCDT-20000214AAP. Pursuant to that agreement, WGVK receives interference to 2.2% of WGVK's DTV service area population from WLMB.

The proposal of WWAZ-TV to substitute DTV Channel 5 for its currently authorized DTV Channel 44 will increase the level of interference to WGVK. WGVK is located in southwestern Michigan. Much of its service area is along the eastern shore of Lake Michigan. This is an area known for increased interference due to Tropospheric ducting. Allowing WWAZ-TV's proposal for a DTV Channel 5 allotment, operating from an antenna site in Milwaukee that is very close to Lake Michigan, and using an antenna operating at twice the HAAT (354 meters) and two and half times the ERP (25kW) of WGVK, given the unique Lake Michigan signal propagation environment, will result in considerably more interference to WGVK than the 0.1% WWAZ-TV claims.

WWAZ-TV proposes that the Commission allow it to operate at 25kW. According to Section 73.622(f)(6) of the FCC's rules, the maximum ERP for a DTV VHF Channel 5 in Zone 1 is 10 kW for an HAAT up to 305 meters (WWAZ-TV's proposed reference site for Channel 5 is in Zone 1). For a proposed HAAT in excess of 305 meters the following equation from Section 73.622(f)(6)(ii) applies: ERP = 92.57 – 33.24 LOG (HAAT). For WWAZ-TV's proposed HAAT of 354 meters the maximum ERP would be 7.84 kW, significantly less than the proposed 25 kW. WWAZ-TV asserts that it can use the higher power because that proposed facility would not exceed the geographic coverage of WMVS-DT, Channel 8, Milwaukee. But WMVS-DT and WWAZ-TV are not in the same market.

In addition to the excessive ERP proposed, WWAZ-TV also proposes the use of a highly directional Dielectric Antenna with a front to back ratio of at least 25 million to one. The maximum power of the antenna as shown in WWAZ-TV's tabulation of the azimuth pattern is 25 kW, while at its minimum it is 0 kW. In terms of relative field strength, the maximum 1.000 value along the 210 and

330 degree azimuths contrasts with the minimum of 0.001 along the 60 to 120 degree azimuths (see the attached Comm Study depiction of WWAZ-TV's proposed horizontal pattern). This is a 30 dB front to back ratio. The Comm Study tabulation of the pattern also shows the dBk values of the proposed antenna having a maximum of 13.979 dBk on the 210 and 330 degree azimuths, and a minimum of -46.021 along the 60 to 120 degree azimuths. Such a front to back ratio is not permitted under Section 73.685(e) of the FCC's rules. This rule limits directional antennas on Channels 2-13 to a ratio of maximum to minimum radiation in the horizontal plane of 10dB. This limitation is designed, at least in part, to protect stations in situations such as WGVK from interference.

The parameters of a DTV Channel 5 facility across Lake Michigan from WGVK is critical given our experience that in West Michigan, ducting occurs with almost every weather front that arrives from the west over the lake. This is the predominant direction from which Michigan weather originates. The warm waters of Lake Michigan in the winter and cold waters in the summer create the perfect atmospheric conditions for Tropospheric ducting. During the period leading up to the digital transition on June 12, GVSU's co-owned station, WGVU-TV, analog Channel 35, Grand Rapids, Michigan, suffered severe interference from WMVT, DTV Channel 35, Milwaukee, Wisconsin. WMVT's antenna site is at the same geographic coordinates as the proposed DTV Channel 5 (43-5-46 North Latitude, 87-54-15 West Longitude according to the FCC's database). WGVU-TV viewers in the counties along Lake Michigan logged numerous complaints with our switchboard inquiring as to whether we were having technical difficulties when in fact they were experiencing interference from co-channel WMVT caused by Tropospheric ducting. Just as WGVU-TV and WMVT were co-channel stations prior to the DTV transition, WGVK would be co-channel with WWAZ-TV, operating at the same antenna site as WMVT, if the DTV Channel 5 substitution is allowed.

Additionally, many WGVK viewers are facing significant challenges establishing digital reception of the station, including in the counties along Lake Michigan in the western part of WGVK's service area. Installing outdoor antennas has been their only recourse. Currently the FCC is considering the very real problem of poor building penetration of VHF DTV signals, which is further evidenced by the many calls our station receives. Adding new co-channel interference to WGVK from across Lake Michigan will only increase these problems for WGVK's viewers.

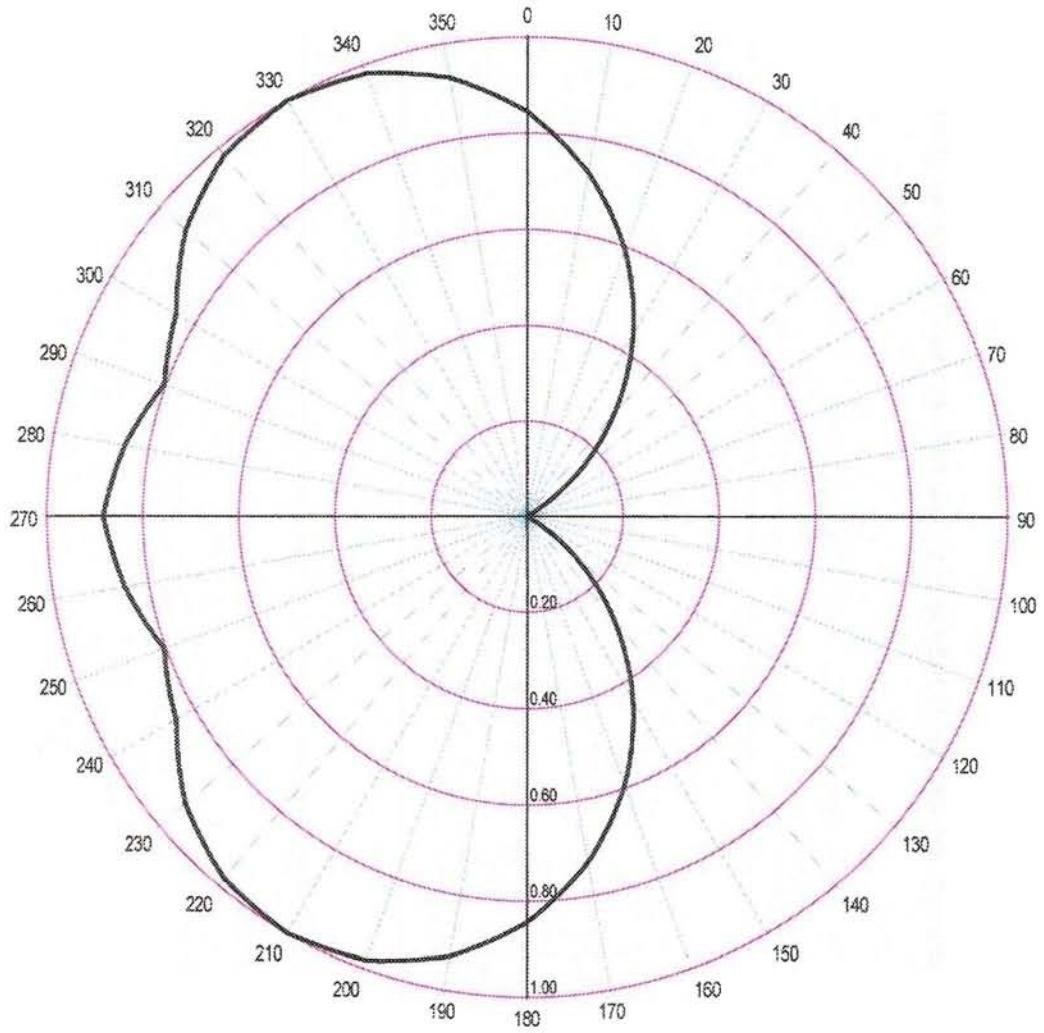
For the reasons stated above, adding a new co-channel station WWAZ-TV on DTV Channel 5 across Lake Michigan from WGVK, with a proposed power, height and directional antenna that violate FCC rules and regulations, is not in the public interest of the lake shore viewers in WGVK's service area. Not now nor in the future.

I hereby declare under penalty of perjury that the foregoing statements are true and correct to the best of my knowledge and belief.

Robert Lumbert

Director of Engineering
WGVK
Grand Valley State University
301 W. Fulton St.
Grand Rapids, MI 49504

July 23, 2009



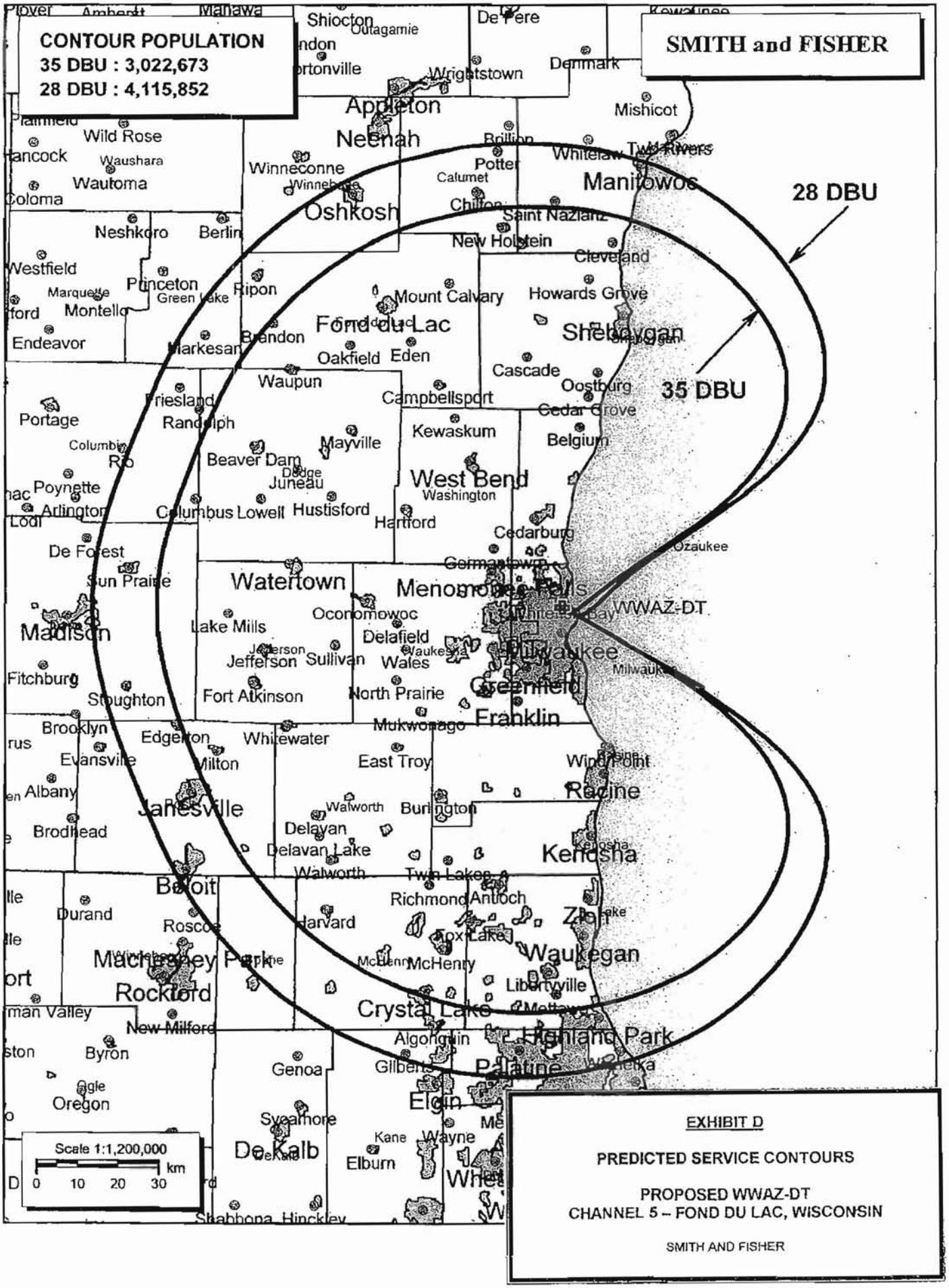
Azim	Rel.FS	ERP [kW]	dBk
0.0	0.844	17.808	12.506
5.0	0.787	15.484	11.899
10.0	0.730	13.322	11.246
15.0	0.662	10.956	10.397
20.0	0.594	8.821	9.455
25.0	0.517	6.682	8.249
30.0	0.441	4.862	6.868
35.0	0.361	3.258	5.130
40.0	0.282	1.988	2.984
45.0	0.204	1.040	0.172
50.0	0.127	0.403	-3.945
55.0	0.064	0.102	-9.897
60.0	0.001	0.000	-46.021
65.0	0.001	0.000	-46.021
70.0	0.001	0.000	-46.021
75.0	0.001	0.000	-46.021
80.0	0.001	0.000	-46.021
85.0	0.001	0.000	-46.021

Azim	Rel.FS	ERP [kW]	dBk
90.0	0.001	0.000	-46.021
95.0	0.001	0.000	-46.021
100.0	0.001	0.000	-46.021
105.0	0.001	0.000	-46.021
110.0	0.001	0.000	-46.021
115.0	0.001	0.000	-46.021
120.0	0.001	0.000	-46.021
125.0	0.064	0.102	-9.897
130.0	0.127	0.403	-3.945
135.0	0.204	1.040	0.172
140.0	0.282	1.988	2.984
145.0	0.361	3.258	5.130
150.0	0.441	4.862	6.868
155.0	0.517	6.682	8.249
160.0	0.594	8.821	9.455
165.0	0.662	10.956	10.397
170.0	0.730	13.322	11.246
175.0	0.787	15.484	11.899

Azim	Rel.FS	ERP [kW]	dBk
180.0	0.844	17.808	12.506
185.0	0.886	19.625	12.928
190.0	0.929	21.576	13.340
195.0	0.955	22.801	13.579
200.0	0.982	24.108	13.822
205.0	0.991	24.552	13.901
210.0	1.000	25.000	13.979
215.0	0.991	24.552	13.901
220.0	0.982	24.108	13.822
225.0	0.955	22.801	13.579
230.0	0.929	21.576	13.340
235.0	0.886	19.625	12.928
240.0	0.844	17.808	12.506
245.0	0.824	16.974	12.298
250.0	0.805	16.201	12.095
255.0	0.828	17.140	12.340
260.0	0.851	18.105	12.578
265.0	0.867	18.792	12.740

Azim	Rel.FS	ERP [kW]	dBk
270.0	0.883	19.492	12.899
275.0	0.867	18.792	12.740
280.0	0.851	18.105	12.578
285.0	0.828	17.140	12.340
290.0	0.805	16.201	12.095
295.0	0.824	16.974	12.298
300.0	0.844	17.808	12.506
305.0	0.886	19.625	12.928
310.0	0.929	21.576	13.340
315.0	0.955	22.801	13.579
320.0	0.982	24.108	13.822
325.0	0.991	24.552	13.901
330.0	1.000	25.000	13.979
335.0	0.991	24.552	13.901
340.0	0.982	24.108	13.822
345.0	0.955	22.801	13.579
350.0	0.929	21.576	13.340
355.0	0.886	19.625	12.928

EXHIBIT 3

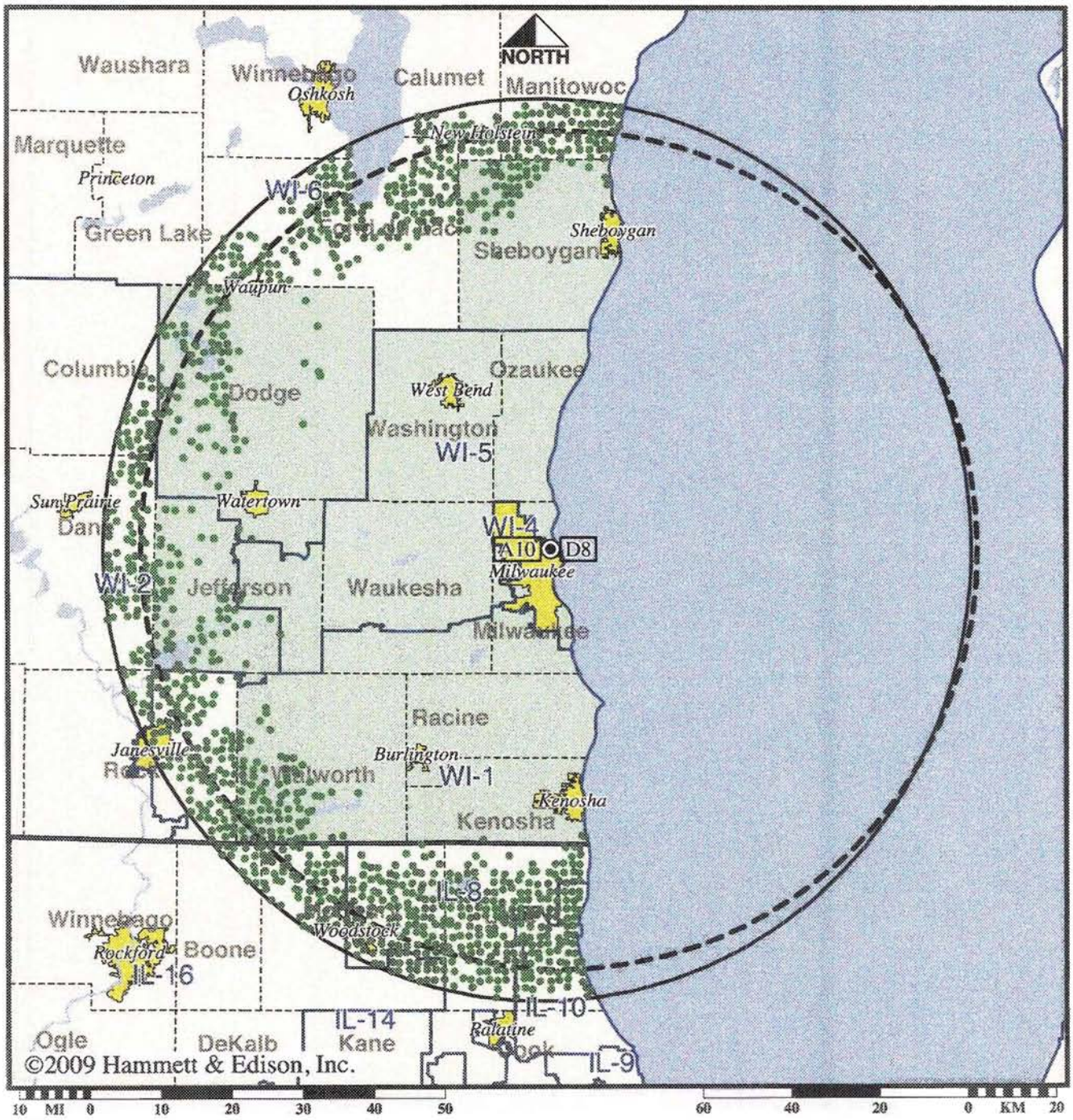

CONTOUR POPULATION
35 DBU : 3,022,673
28 DBU : 4,115,852
SMITH and FISHER
28 DBU
35 DBU
WWAZ-DT
Scale 1:1,200,000
km
0 10 20 30
EXHIBIT D
PREDICTED SERVICE CONTOURS
PROPOSED WWAZ-DT
CHANNEL 5 – FOND DU LAC, WISCONSIN
SMITH AND FISHER

TV Station WMVS • Analog Channel 10, DTV Channel 8 • Milwaukee, WI

Approved Post-Transition Operation: Licensed

Digital License (solid): 25.0 kW ERP at 354 m HAAT, Network: PBS
vs. Analog (dashed): 223 kW ERP at 338 m HAAT, Network: PBS

Market: Milwaukee, WI



● Coverage gained after DTV transition
No symbol = no change in coverage

Analog service	2,193,246 persons
Digital service	3,016,007
Analog loss	0
Digital gain	822,761
Net gain	822,761

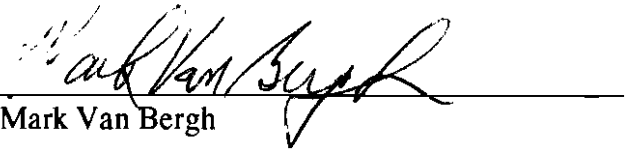
Map set 2

BLEDT-20041207AAL
WMVS Digital License

CERTIFICATE OF SERVICE

I, Mark Van Bergh, hereby certify that I have this 24th day of July 2009, sent by first class mail, postage prepaid, a copy of the foregoing "Comments in Opposition to NPRM," to the following parties listed below.

Kathleen Victory, Esquire
Fletcher, Heald & Hildreth, PLC
1300 North 17th Street, 11th Floor
Arlington, VA 22209
(Counsel to WWAZ License, LLC)



Mark Van Bergh