Kessler and Gehman Associates
Consultants • Broadcast • Wireless

WDVM-TV SITE CHANGE POPULATION LOSS CALCULATIONS AND METHODOLOGY

CALL SIGN: WDVM-TV
FACILITY ID: 25045
LOCATION: HAGERSTOWN, MD
LICENSEE: NEXSTAR MEDIA INC.

Prepared For:

Nexstar Media, Inc.
545 E. John Carpenter Freeway
Suite 700
Irving, TX 75062

Prepared By:

Ryan Wilhour
Consulting Engineering
Kessler and Gehman Associates
507 NW 60th Street, Suite D
Gainesville, FL 32607-2055
352-332-3157 Extension 3
ryan@kesslerandgehman.com

December 16, 2023

1.0 EXECUTIVE SUMMARY

WDVM-TV possesses a license[1] and a construction permit[2] which authorizes a change in location of the transmitter site. The applicant recently learned that the authorized WDVM-TV facility is unable to obtain three-phase power at the permitted. Three-phase power is required for the high-power transmitter; therefore, WDVM-TV must move to another site that can accommodate the power requirements. It has been confirmed that the proposed site has three-phase power and can accommodate the WDVM-TV facility.

The construction permit was granted based upon a showing that the population loss due to the site change affected less than 556 people[3]. Population is considered lost when the proposed station no longer covers an area, and the area is covered by less than five full-service/Class A facilities. Nexstar proposes to modify the construction permit to a new transmitter site and hereby demonstrates compliance with the same 556 bright-line population analysis using identical methodology as presented in the construction permitted application.

The following prediction methodology is based upon TVStudy output and demonstrates that the population predicted to receive service from less than five full-service/Class A facilities due to the proposed site change is only 504 people which is well below the 556 bright-line threshold.

[1] FCC File No.: 0000080408
[2] FCC File No.: 0000203840
[3] *De Minimis* population hardline loss figured established in *WSET, Incorporated (WSET-TV),* FCC 80-471 Released August 12, 1980

2.0 METHODOLOGY

The FCC allows TVStudy Longley Rice noise and terrain limited coverage[4] to demonstrate lack of population loss in regions where the licensed station contour covers, but the proposed station contour does not. This contour loss region is demonstrated by the shaded area in Figure 1. Using TVStudy, the coverage areas of both the licensed and proposed facilities are analyzed in a 2 km grid within the shaded region. All grid points that are NOT covered by the licensed facility are removed from this region since they are not considered "loss" by definition.

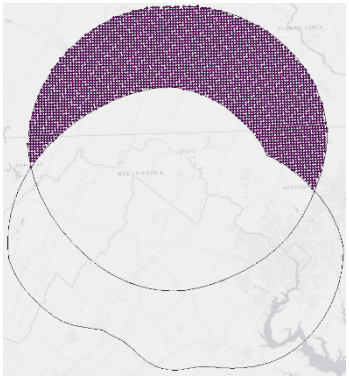


Figure 1 - Lost Contour Area

All grid points that are covered by both the licensed facility and the proposed facility are removed since they also are not considered "loss" by definition. What remains are grid point locations that the licensed facility covers but the proposed facility does NOT cover and is displayed in Figure 2. These points serve as a point selection mask for the points that need to be analyzed to determine the quantity of licensed full-service and/or Class A stations predicted to cover each masked point. This analysis requires the culling of all licensed TV and Class A stations that could potentially serve the mask region displayed in Figure 2.

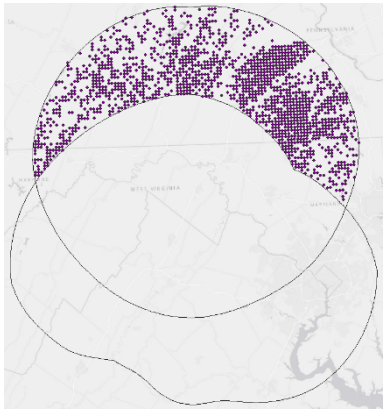


Figure 2 - Lost Coverage Area Mask

[4] TVStudy calculates the following result codes:

1 = Interference-free service
2 = Interference
3 = No service
11 = Interference-free service, but encountered a warning flag
12 = Interference, but encountered a warning flag
13 = No service, but encountered a warning flag

"Coverage" is considered result code 1 and 11, other result codes are thrown out.

Figure 3 displays the TVStudy options chosen to cull stations for analysis around the WDVM-TV licensed facility. A radius of 300 km is chosen since it is the maximum culling distance TVStudy uses for various scenarios. By default, the "Study Area Mode" is set to calculate coverage only within the noise limited contour; however, it was changed to "Study Area Mode" and "unrestricted" in order to predict coverage inside and outside each station's protected noise limited service contour since real coverage does not stop at contours. The resulting grid is plotted and areas outside the Figure 1 region are discarded as well as points without a result code of 1 or 11. Figure 4 displays the results of the overlapping points. Each point shown in the grid is associated with one or more stations that provide coverage[5]. In this case all the grid points have one or more stations that provide coverage, therefore, there are no missing points. However, we are ONLY concerned with the points in the selection mask shown in Figure 2; therefore, all points that are shown in Figure 4 that do not overlap with

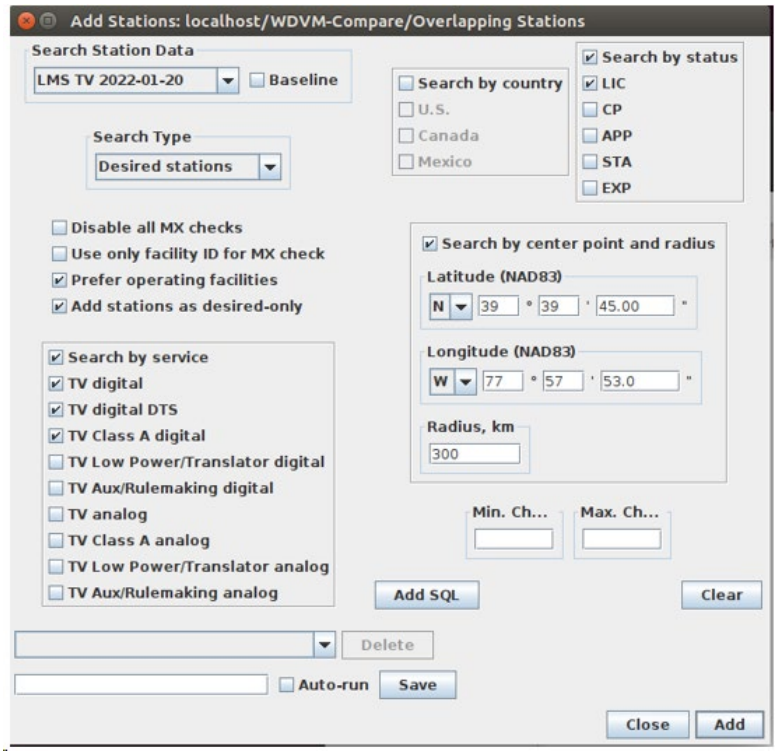


Figure 3 - TVStudy Station Culling

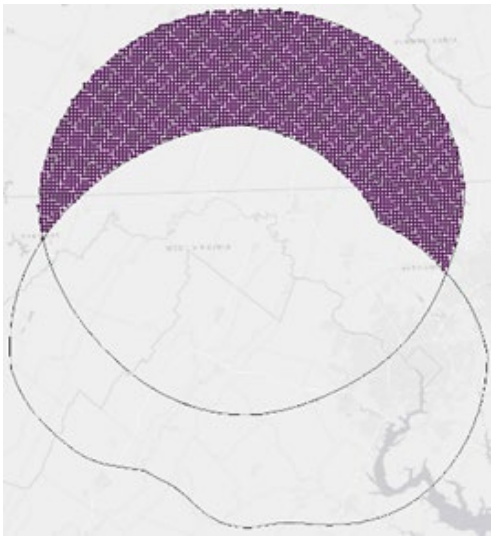


Figure 4 – Coverage from Other Stations

[5] But does not include coverage from the licensed or proposed WDVM facility

the points in the selection mask shown in Figure 2 are discarded making a map which is identical to Figure 2. Accordingly, the appropriate metadata associated with each point is now captured in order to determine what and how many other stations cover each point besides WDVM-TV.

3.0 STUDY RESULTS

When a station moves its facility to a new location and coverage within the protected noise limited service contour is predicted to be lost, the Commission does not consider the loss area significant in its decision to grant the pending application if five or more other full-service/Class A stations are covering the area of loss. Moving WDVM-TV from its licensed location to the proposed location utilizing a maximized antenna pattern produces a map as demonstrated in Appendix A using the methodology described above. As demonstrated in Appendix A, there are only four locations (red cells in map) within the WDVM licensed protected noise limited contour that would be served by less than five full-service/Class A stations. The four points contain a total population loss of only 504 people which is well below the 556-person bright-line absolute threshold established by the FCC's decision Report and Order to grant WSET-TV's minor modification[6]. Table 1 demonstrates that each of the four points (red cells) are served by four full-service stations.

[6] FCC File No.: BPCT-5001

Table 1 – Lost Coverage Areas for Overlaps Less Than 5 Stations

Latitude Longitude	Population of Cell	Callsigns Covering Point	FCC File Number
40.16296149 -77.97218367	58	WWPB WKBS-TV WTAJ-TV WATM-TV	0000114259 0000084211 0000079898 0000105303
40.20104335 -77.35619982	81	WHTM-TV WHP-TV WITF-TV WGAL	0000176940 0000080028 0000039358 0000129691
39.897652 -77.549747	365	WWPB WMJF-CD WGAL WWPX-TV	0000114259 0000116949 0000129691 0000117578
40.30902778 -77.71597222	0	WMDT WBOC-TV WKBS-TV WTAJ-TV	0000125726 0000079962 0000084211 0000079898

The proposed maximized pattern is displayed in Appendix B. Referring to Appendix B, it can be seen that the proposed F(50,90) 39.66 dBu protected noise limited service contour (blue contour) will serve a much larger area (green shaded areas) than the construction permitted F(50,90) 39.66 dBu protected noise limited service contour (red contour). In particular, the maximized antenna pattern will significantly improve coverage in several counties.

TVStudy demonstrates that the proposed facility would not cause impermissible interference to any stations and Nexstar would accept the received interference.

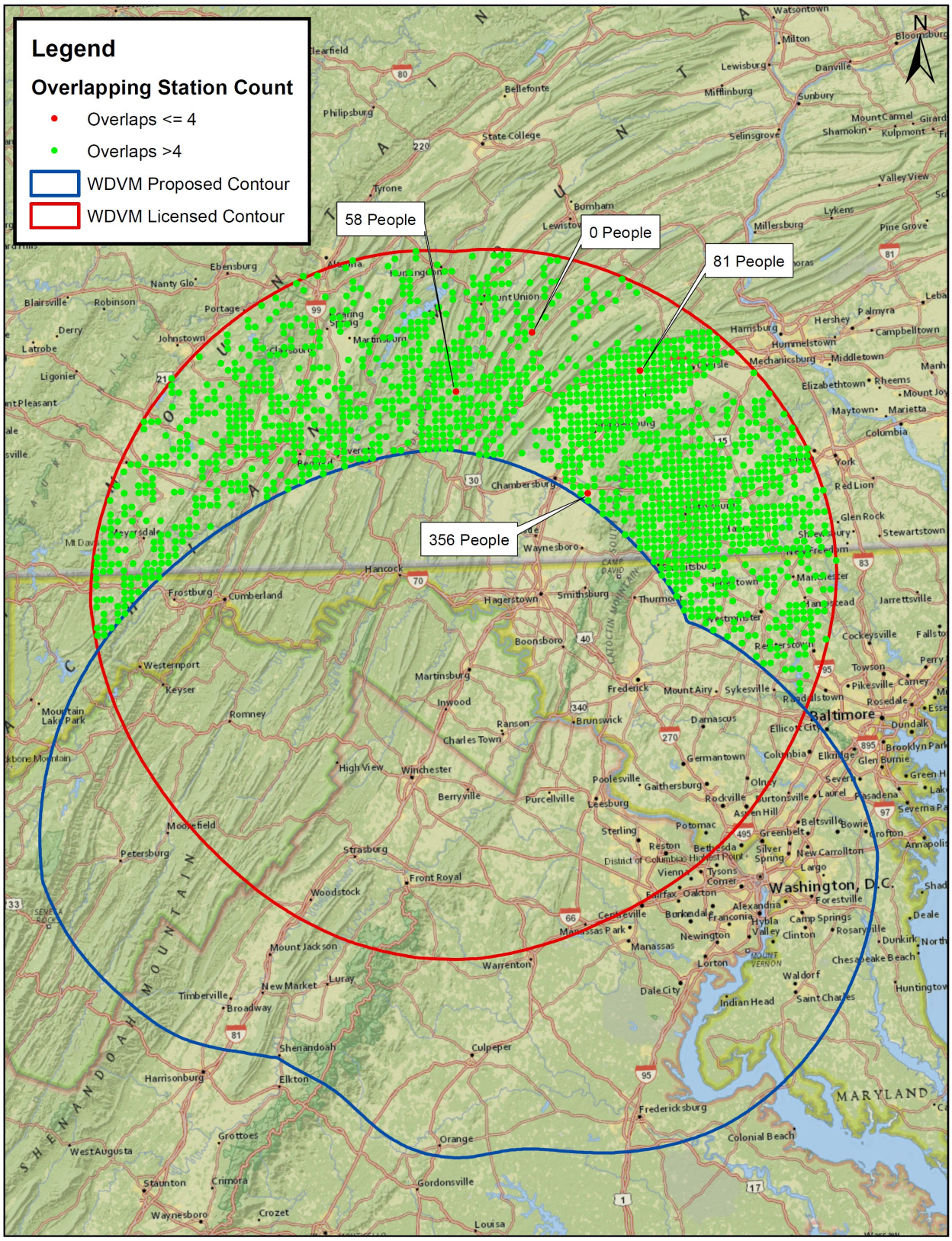
4.0 CERTIFICATION

I, Ryan Wilhour, am an engineering associate of Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and have been working in the field of radio and television broadcast consulting since 1996. I am a graduate of the University of Florida with a Bachelor of Science degree in electrical engineering. The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge.

Ryan Wilhour

Ryan Wilhour December 16, 2023
Kessler and Gehman Associates, Inc.
Consulting Engineers

APPENDIX A – POPULATION LOSS SITE ANALYSIS



APPENDIX B – CONTOUR MAP (LICENSE/CONSTRUCTION PERMIT/PROPOSED)