

**RE: FM Reimbursement Eligibility – Additional information request regarding WUWM auxiliary sites.**

WUWM constructed and licensed a new auxiliary broadcast site (FCC File No: BXLED-20180607AAH) in anticipation of TV tower repack work at its primary (main) transmission site, which is on a multi-tenant tower.

WUWM's pre-existing auxiliary site (FCC File No: BXLED-20020917AAZ) is an old aux site licensed back in 2002 and at a prior studio location for WUWM. WUWM continues to maintain this old aux site (for very short-term emergency operation purposes) even though WUWM moved its studios to a different building some nine (9) years ago.

When the transition to digital broadcast television (DTV) occurred and affected WUWM's ability to operate from its main tower site, WUWM used the pre-existing aux site (FCC File No: BXLED-20020917AAZ) to facilitate operations during the DTV conversion because WUWM had no other site available for an aux at that time. During the DTV conversion era, WUWM used its old aux site for over a month due to a prolonged outage at its main site for DTV conversion work. Service from the pre-existing aux site proved to be extremely inadequate, with all most half of the broadcast contour spread over the lake to the east and very little penetration outside the main city of Milwaukee, WI. Thus, when WUWM was notified by WITI that significant repack work on the tower would be forthcoming and that WUWM might be off-air at its main site for another prolonged period (i.e., at least one full month), WUWM determined to construct a new auxiliary broadcast site that could provide better coverage to its community of license and, in particular, to the population immediately to the west of the main city of Milwaukee. Finding a better auxiliary site proved to be a challenge for WUWM, but WUWM was ultimately able to secure an arrangement with another public broadcaster for use of its tower on the roof of a building.

As the contour map of both auxiliary sites show, the newer aux site (FCC File No: 20180607AAH) covers more areas to the west, north, and northwest than did the pre-existing auxiliary site. In terms of population, the new auxiliary site serves more than 149,000 more people than the old auxiliary site

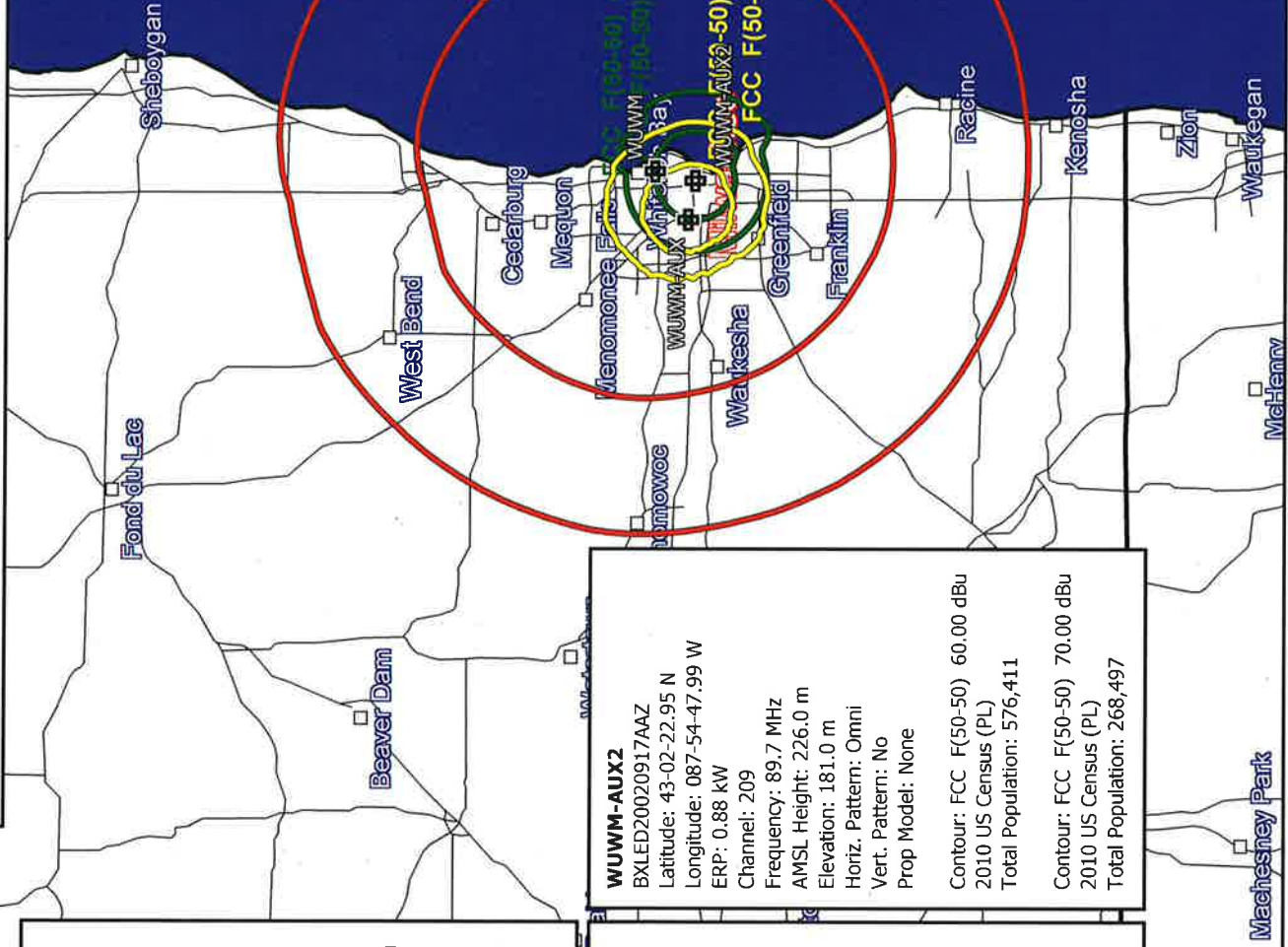
The FCC's Order states that upgraded auxiliary facilities are eligible for reimbursement if the broadcaster is forced to construct new interim facilities during repack work for "interim facilities that (1) are operating during the time the station's main facility is off-air or operating at reduced power due to repack-related construction for a television station, and (2) provide greater signal coverage than existing facilities can provide during such construction." As the contour map demonstrates, WUWM's interim aux facility for which reimbursement is sought provides greater population and area coverage than the its old auxiliary facility.

In conclusion, WUWM is requesting reimbursement for eligible expenses relating to the construction of its new auxiliary site (FCC File No: BXLED-20180607AAH) due to the fact the pre-existing auxiliary site has a very limited coverage, proved to be inadequate during the DTV conversion, and remains in service only as short-term, temporary, emergency backup option when the main and new auxiliary are both out of service. The repack impacted WUWM for more than a month, which would have deprived more than 149,000 persons of WUWM's public radio service if WUWM had been forced to use its old aux site. The contour map attached shows that the newly constructed auxiliary site offers WUWM the ability to reach a larger population and more area than the old auxiliary site.

# WUMN Main and Two Auxiliary Sites - Contours and Population Study

Munn-Reese.com

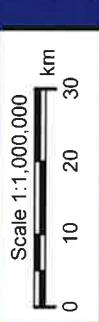
- WUWM-AUX (209)
- WUWM (209)
- WUWM-AUX2 (209)



**WUWM**  
 BLED20060419ACI  
 Latitude: 43-05-26 N  
 Longitude: 087-53-50 W  
 ERP: 13.50 kW  
 Channel: 209  
 Frequency: 89.7 MHz  
 AMSL Height: 484.0 m  
 Elevation: 192.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: No  
 Prop Model: None  
 Contour: FCC F(50-50) 60.00 dBu  
 2010 US Census (PL)  
 Total Population: 1,737,513  
 Contour: FCC F(50-50) 70.00 dBu  
 2010 US Census (PL)  
 Total Population: 1,300,078

**WUWM-AUX**  
 BXL20180607AAH  
 Latitude: 43-02-55 N  
 Longitude: 087-58-48 W  
 ERP: 0.34 kW  
 Channel: 209  
 Frequency: 89.7 MHz  
 AMSL Height: 279.0 m  
 Elevation: 217.7 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: No  
 Prop Model: None  
 Contour: FCC F(50-50) 60.00 dBu  
 2010 US Census (PL)  
 Total Population: 725,627  
 Contour: FCC F(50-50) 70.00 dBu  
 2010 US Census (PL)  
 Total Population: 373,709

**WUWM-AUX2**  
 BXL20020917AAZ  
 Latitude: 43-02-22.95 N  
 Longitude: 087-54-47.99 W  
 ERP: 0.88 kW  
 Channel: 209  
 Frequency: 89.7 MHz  
 AMSL Height: 226.0 m  
 Elevation: 181.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: No  
 Prop Model: None  
 Contour: FCC F(50-50) 60.00 dBu  
 2010 US Census (PL)  
 Total Population: 576,411  
 Contour: FCC F(50-50) 70.00 dBu  
 2010 US Census (PL)  
 Total Population: 268,497



Scale 1:1,000,000  
 W. Scott Communications, LLC 2010