

Rebuttal Report for Wise v. State Plaintiffs in Response to Expert Report of Sean P. Trendelenburg, Ph.D.

John B. Cromartie, Ph.D.

I was asked to provide a response to the January 7, 2026 Expert Report of Sean P. Trende, Ph.D. in *Wise v. State*. On page 30 of that report, Dr. Trende briefly touches on my analysis, noting that I “appear[] to draw some type of conclusion by the fact that the Enacted Map includes districts combining very different types of counties and extending into different metropolitan areas.” My assessment of population trends at the county-level is informative in assessing the growth patterns of Metro, Metro-Outlying, and Non-Metro areas included in CDs 4 and 5. However, considering just the types of *counties* included in a map, as Dr. Trende does, will not provide the same picture of rural-urban diversity as my analysis, because my analysis of the territories included within CDs 4 and 5 was not done at the county level. The analysis of the territory within the assessed districts was carried out at the census-tract level which provides a much more detailed portrait of the distribution of rural and urban territory in CDs 4 and 5.

On page 30 of his report, Dr. Trende stated that “It is unclear how Boone County would be classified, but one assumes it is Metro Core.” In my initial report I stated, “I refer to the area I assess, which covers the areas included in either the 2022 or 2025 CDs 4 and 5, as ‘western Missouri.’ This includes the following counties: Barton, Bates, Benton, Boone, Camden, Cass, Cedar, Clay, Cole, Cooper, Dade, Dallas, Henry, Hickory, Howard, Jackson, Johnson, Laclede, Lafayette, Maries, Miller, Moniteau, Morgan, Osage, Pettis, Polk, Pulaski, Randolph, Saline, St. Clair, Vernon, and Webster.” As shown in Figure 1 in my initial report, I did not include Boone County, which is classified as Metro Core, in my county-level assessment of population change.

Boone, Clay, and Webster counties were not fully part of the 2022 and 2025 CDs 4 and 5. For my initial report’s analysis of population change, which required using county-level data, I chose to include Clay and Webster counties because the types of territory in those counties that were included in CDs 4 and 5 in the 2022 and 2025 maps largely correspond with those counties’ OMB designations (Metro Core for Clay and Metro Outlying for Webster). I chose to exclude Boone County because, in both the 2022 and 2025 maps, the majority of the Metro Core areas of Boone County are outside the study area.

However, as demonstrated by Table 3 below, which shows the county-level assessment of population change in the study area including Boone County, the inclusion only further supports the overall patterns of population growth relevant to my analysis.

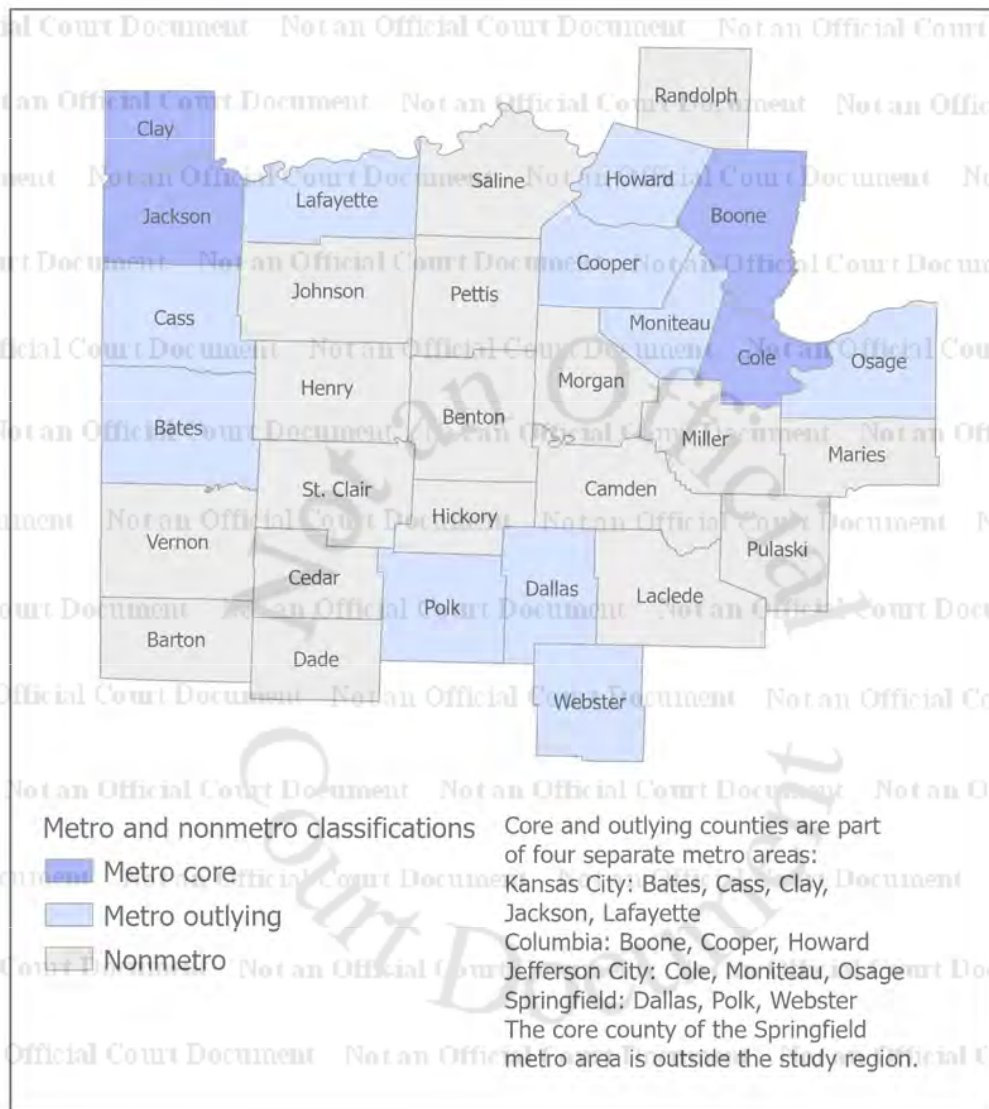
Table 3: Population Change in Western Missouri (with Boone County), 1950-2020 and 2010-2020

| | 1950 - 2020 | | | 2010 - 2020 | | |
|-----------------|---------------------------|------------------------------|--|---------------------------|------------------------------|--|
| | Numeric Population Growth | Percentage Population Growth | Percentage of All Growth in Western Missouri | Numeric Population Growth | Percentage Population Growth | Percentage of All Growth in Western Missouri |
| Metro | 707,539 | 85.8% | 80.3% | 105,971 | 8.4% | 100.0% |
| Core | 561,276 | 83.8% | 63.7% | 96,699 | 10.8% | 91.3% |
| Outlying | 146,263 | 94.8% | 16.6% | 9,272 | 3.2% | 8.7% |
| Nonmetro | 173,071 | 63.9% | 19.7% | -2,157 | -0.5% | 0.0% |

In the course of reviewing my data to respond to Dr. Trende, I discovered that my initial analysis miscoded Cole County as Metro Outlying instead of Metro Core. Updated Figure 1A, Table 1A, and Figure 3A below (numbered to correspond with the figures and tables in my initial report) show the correct coding and statistics accounting for the classification of Cole County as Metro Core. Table 3 above also reflects the corrected coding of Cole County. The changes in the statistics shown do not impact my ultimate conclusion, in particular because they strengthen rather than contradict the conclusions about differential growth in urban and rural areas drawn in my report.

Neither the Boone nor the Cole County adjustment in the county-level analysis in any way impacts the RUCA-code, census-tract level analysis included in my initial report.

Figure 1A. OMB Metropolitan Designations of Western Missouri



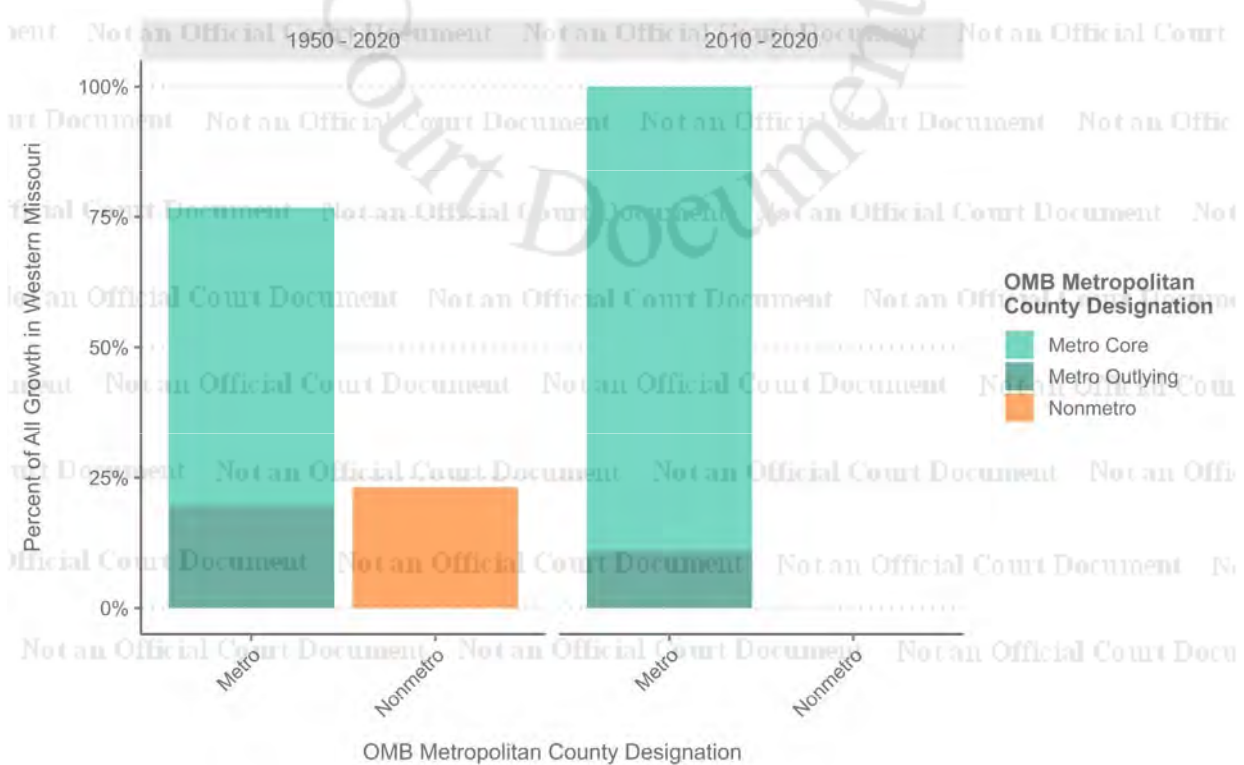
Source: U.S. Census Bureau

Table 1A. Population Change in Western Missouri, 1950-2020 and 2010-2020

| | 1950 - 2020 | | | 2010 - 2020 | | |
|-----------------|---------------------------|------------------------------|--|---------------------------|------------------------------|--|
| | Numeric Population Growth | Percentage Population Growth | Percentage of All Growth in Western Missouri | Numeric Population Growth | Percentage Population Growth | Percentage of All Growth in Western Missouri |
| Metro | 572,361 | 73.8% | 76.8% | 85,003 | 6.7% | 100.0% |
| Core | 426,098 | 68.5% | 57.2% | 75,731 | 8.5% | 89.1% |
| Outlying | 146,263 | 94.8% | 19.6% | 9,272 | 3.2% | 10.9% |
| Nonmetro | 173,071 | 63.9% | 23.2% | -2,157 | -0.5% | 0.0% |

Source: U.S. Census Bureau

Figure 3A. Percent of Population Change in Western Missouri, 1950-2020 and 2010-2020



Source: U.S. Census Bureau

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