

STATE OF NORTH CAROLINA
COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE
SUPERIOR COURT DIVISION
Case No. 18 CVS 014001

COMMON CAUSE, *et al.*

Plaintiffs,

v.

DAVID R. LEWIS, *et al.*

Defendants.

Supplemental Expert Report of Dr. M.V. Hood III.

Pursuant to the North Carolina Rules of Civil Procedure and the Case Management Orders of the Court in the above-captioned matter, I, M.V. (Trey) Hood III, provide the following written report:

I. SCOPE

In this supplemental report I was asked by counsel for the Defendants to answer the following questions:

1. What was the incumbency reelection rate, by party, for the 2018 House and Senate elections?
2. Does the inclusion of 2016 election data alter any previous findings concerning North Carolina's political geography?
3. What was the partisan distribution of the state House and Senate following the 2010 and 2018 election-cycles?

II. INCUMBENCY AND THE 2018 ELECTIONS

In this section I record the number of incumbents who were reelected in 2018.¹ I define an incumbent as any officeholder elected in 2016 who is running for a seat in the same chamber in 2018.² Table 1 examines the incumbent reelection rate for the state House in 2018. In this election-cycle there were a total of 35 Democratic incumbents. Thirty-three, or 94%, were reelected in 2018. In total, eight of sixty-four Republican incumbents lost their reelection bids in 2018 making the return rate for GOP incumbents 88%. The remaining 21 seats did not feature an incumbent in 2018. Of these, one-third were won by a Republican candidate and two-thirds by a Democrat.

Table 1. House Incumbent Reelection Rate, 2018

| Winning Party | Democrat | Republican | Open | Totals |
|----------------------|-----------------|-------------------|---------------|---------------|
| Democrat | 94.3% [33] | 12.5% [8] | 66.7% [14] | 55 |
| Republican | 5.7% [2] | 87.5% [56] | 33.3% [7] | 65 |
| | 35 | 64 | 21 | 120 |

Table 2 performs the same analysis for the state Senate in 2018. In this case all thirteen Democratic incumbents won reelection in 2018, compared to three-quarters (76%) of GOP incumbents. In 2018, the Democrats were able to pick off seven districts occupied by a Republican incumbent. Of the eight open seats in this election-cycle, the Democrats won one (14%) and the Republicans seven (86%).

Table 2. Senate Incumbent Reelection Rate, 2018

| Winning Party | Democrat | Republican | Open | Totals |
|----------------------|-----------------|-------------------|--------------|---------------|
| Democrat | 100% [13] | 24.1% [7] | 14.3% [1] | 21 |
| Republican | 0% [0] | 75.9% [22] | 85.7% [7] | 29 |
| | 13 | 29 | 8 | 50 |

¹Source: North Carolina State Board of Elections (<https://www.ncsbe.gov/index.html>).

²Note that some incumbents ran in a different House or Senate district in 2018.

III. POLITICAL GEOGRAPHY UPDATE

Here I update the political geography section of my previous report by making use of VTD-election data from the 2016 election-cycle.³ I again created a partisan index using five, statewide two-party contested elections from 2016: U.S. President, U.S. Senate, Governor, Lieutenant Governor, and Attorney General. Using these races, I calculated the Republican share of the two-party vote at the VTD-level.⁴ I then partitioned this index into the following categories: Strong Democrat (0.0%-24.9%); Democrat (25.0%-49.9%); Republican (50.0%-74.9%); and strong Republican (75.0% to 100%). These categorizations are presented as a statewide map in Figure 1, which is attached to the end of this report.

The map based on the 2016 vote index reveals very similar patterns to those based on the 2010-2014 vote index in my initial report in this matter. A side-by-side comparison reveals a map in the latter time period with an even larger spread of red-shaded VTDs. Blue VTDs are primarily confined to urban areas (e.g. Asheville; Charlotte; Raleigh-Durham) and to the northern third of the coastal plain region. Geographically speaking, Republicans have a much larger footprint in North Carolina. Republican VTDs occupy 77.0% of North Carolina's land area (in square miles), compared to Democratic VTDs which comprise 23.0% of the state.

Beyond the visual representation of the distribution of partisans in North Carolina, I again make use of the Moran's I statistic as a test of partisan clustering (see Table 3). The results in Table 3 indicate that there is statistical evidence to support the conclusion that partisan clustering is present in North Carolina as well as the four geographic subregions. In fact, the Moran's I values using the 2016 vote index are higher than the Moran's I values using the 2010-2014 vote index. This is an indication that partisan clustering is even more pronounced in this latter time period. Finally, I also reaggregated the 2016 partisanship index statewide and by subregion. The results in Table 3 indicate increased levels of Republicanism across these geographic areas as compared to 2010-2014, with the exception of the Piedmont area which was essentially unchanged. Statewide, the 2016 index reports a GOP majority at 51.6%.

Table 3. GOP Vote Index by Geographic Region, 2016

| Area | Percent Republican | Moran's I |
|---------------|--------------------|-----------|
| State | 51.6% | .70* |
| Mountain | 55.2% | .84* |
| Piedmont | 50.3% | .66* |
| Coastal Plain | 50.0% | .42* |
| Tidewater | 60.4% | .32* |

*Significant at $p < .01$.

³Data source: North Carolina General Assembly, Redistricting Office.

⁴The exact formula I used is as follows: $[(R) \text{ Votes for 2016 U.S. President} / \text{Total Votes for 2016 President} + (R) \text{ Votes for 2016 U.S. Senate} / \text{Total Votes for 2016 U.S. Senate} + (R) \text{ Votes for 2016 Governor} / \text{Total Votes for 2016 Governor} + (R) \text{ Votes for 2016 Lieutenant Governor} / \text{Total Votes for 2016 Lieutenant Governor} + (R) \text{ Votes for 2016 Attorney General} / \text{Total Votes for 2016 Attorney General}] / 5$.

Table 4 replicates work performed in my original report which examined the relationship between urban areas and Democratic partisanship using the 2016 vote index. The OLS model results are housed in Table 4.⁵ Using the 2016 vote index confirms my findings from my previous report: the relationship between population density and Democratic partisanship is positive and statistically significant. Stated otherwise, Democrats are more likely to be located in urban areas.

Table 4. Explaining Democratic Partisanship, 2016

| | Coefficient | Standard Error |
|--------------------|-------------|----------------|
| Population Density | .0001* | .000006 |
| Constant | .3787* | .0043 |
| R ² | .34 | |
| N | 2,692 | |

*p<.001

In summary, the geographic patterns uncovered in my previous report are again confirmed by the use of more recent election data from 2016. In fact, these patterns are even more pronounced in 2016. There is significant spatial clustering of partisans in North Carolina. Democratic VTDs are highly likely to be found in close proximity to other Democratic VTDs and Republican VTDs tend to be located next to other Republican VTDs.

⁵Alternative model specifications using the logged value of population density and weighting observations by VAP revealed the same pattern as that presented in Table 4.

IV. PARTISAN SEAT SHARE COMPARISONS

In this section I examine the share of seats won by each party following the 2010 and 2018 election-cycles. The results are found in Table 5. The 2010 elections for the General Assembly were held under Democratic-drawn plans for the House and Senate. Following the election, the Republicans held 67 seats, or 56% of the total. In 2010, Democrats won 43% of the seats in the House. In the Senate, the GOP won 62% of seats, compared to 38% for the Democrats.

The 2018 elections were held under a Republican districting plan in which the GOP captured 65 total seats in the House, or 54% of the total. The Democrats won 55 seats (46%). In the Senate, the GOP won 58% of seats, while the Republicans won 42%. Interestingly, the Republicans were able to win more seats under a Democratic-drawn map and, conversely, Democrats fared better under a GOP-drawn map. In fact, in 2010 the Republican Party won a majority of seats in both chambers. Clearly, other factors (e.g. candidates, campaigns, and elections) in addition to district boundaries also play a part in determining the share of seats won by a party.

Table 5. Partisan Seats held in North Carolina General Assembly

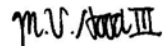
| | House | | Senate | |
|-------------------|---------------|---------------|---------------|---------------|
| | Republican | Democrat | Republican | Democrat |
| 2018 | 54.1% [65] | 45.8% [55] | 58.0% [29] | 42.0% [21] |
| 2010 ⁶ | 55.8% [67] | 43.3% [52] | 62.0% [31] | 38.0% [19] |
| | 120 | | 50 | |

⁶One member was elected to the state House in 2010 as an Independent.

V. DECLARATION

I certify that the statements and opinions provided in this report are true and accurate to the best of my knowledge, information, and belief.

Executed on May 7, 2019.



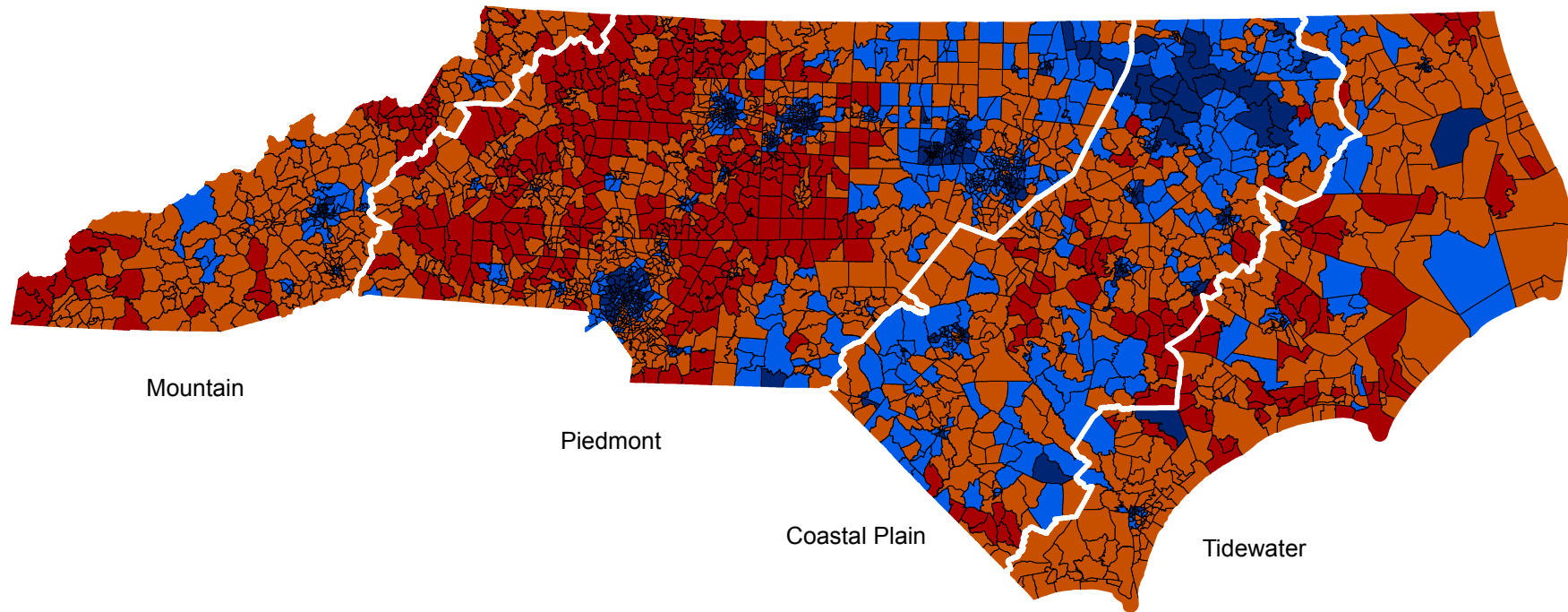
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Figure 1. North Carolina Partisan Distribution, 2016



VTD Partisan Classification

