

# Attachment 7

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IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

SHAUNA WILLIAMS, et al.,

Plaintiffs,

REPRESENTATIVE DESTIN  
HALL, in his official capacity  
as Chair of the House Standing  
Committee on Redistricting, et al.,

Defendants.

Civil Action No. 23 CV 1057

NORTH CAROLINA STATE CON-  
FERENCE OF THE NAACP, et al.,

Plaintiffs,

v.,

PHILIP BERGER, in his official ca-  
pacity as the President Pro Tempore  
of the North Carolina Senate, et al.,

Defendants.

Civil Action No. 23 CV 1104

EXPERT REPORT OF SEAN P. TRENDE, Ph.D.  
Part II: In Response to Mr. Anthony E. Fairfax

Exhibit #

Trende 4

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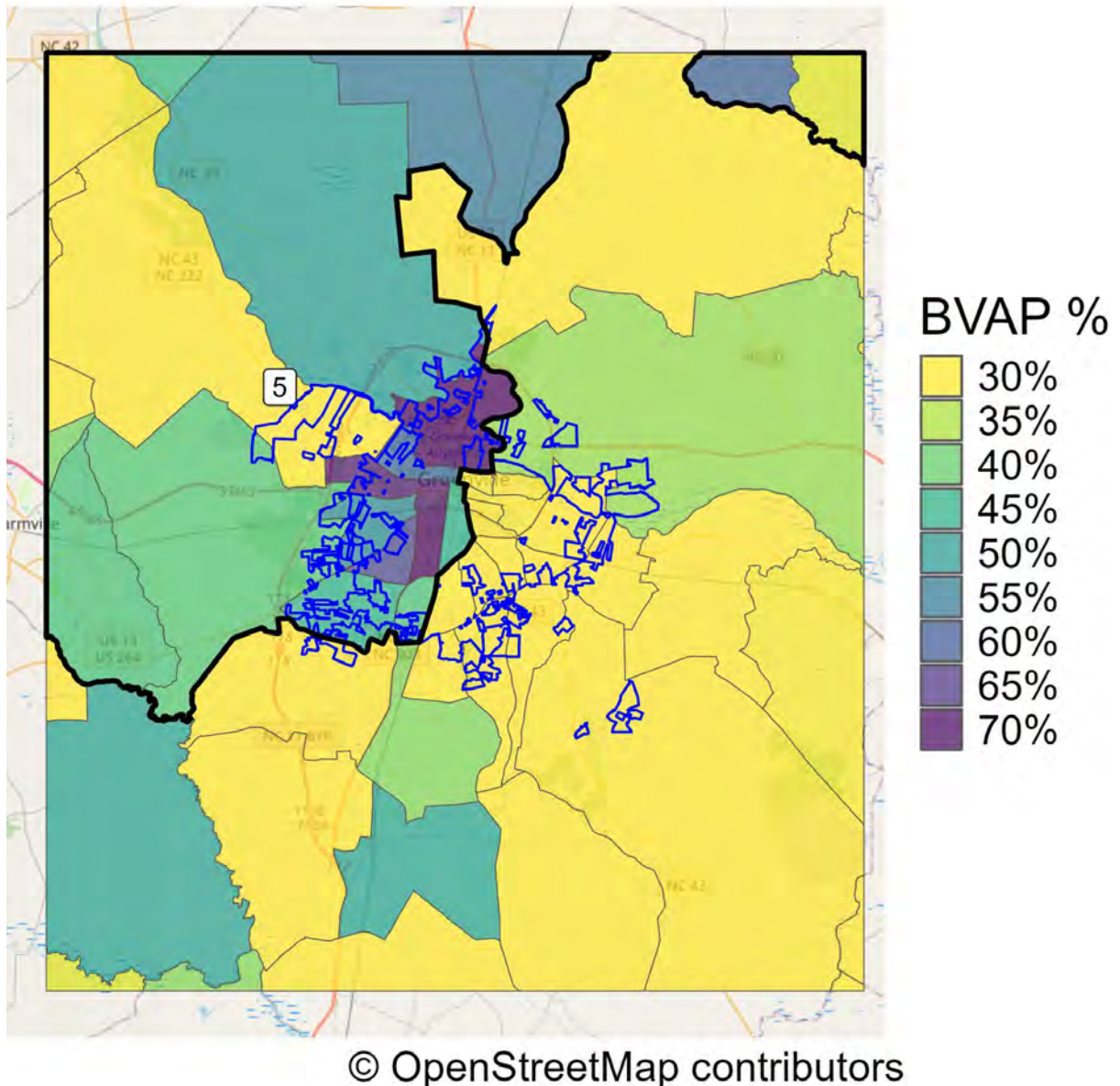
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Figure 44: Fairfax Senate Illustrative Map A District 5 BVAP, Greenville zoom



## 6.2 Illustrative Map A, District 2

As mentioned, Illustrative District 2 is the same on both maps, so it only needs to be discussed once. It, too, features disparate Black populations linked together across a large district. Once again, because the BVAP is so close to 50%, the district is dependent on scattered Black population in otherwise heavily White counties, such as Chowan and



Gates.

Figure 45: Fairfax Senate Illustrative Map A District 2 BVAP

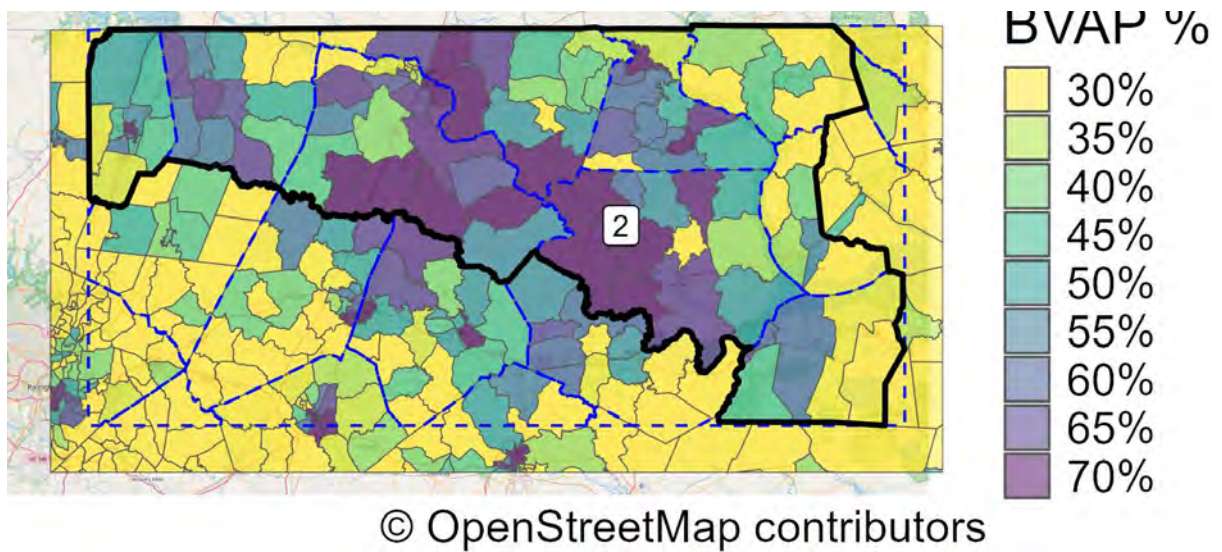
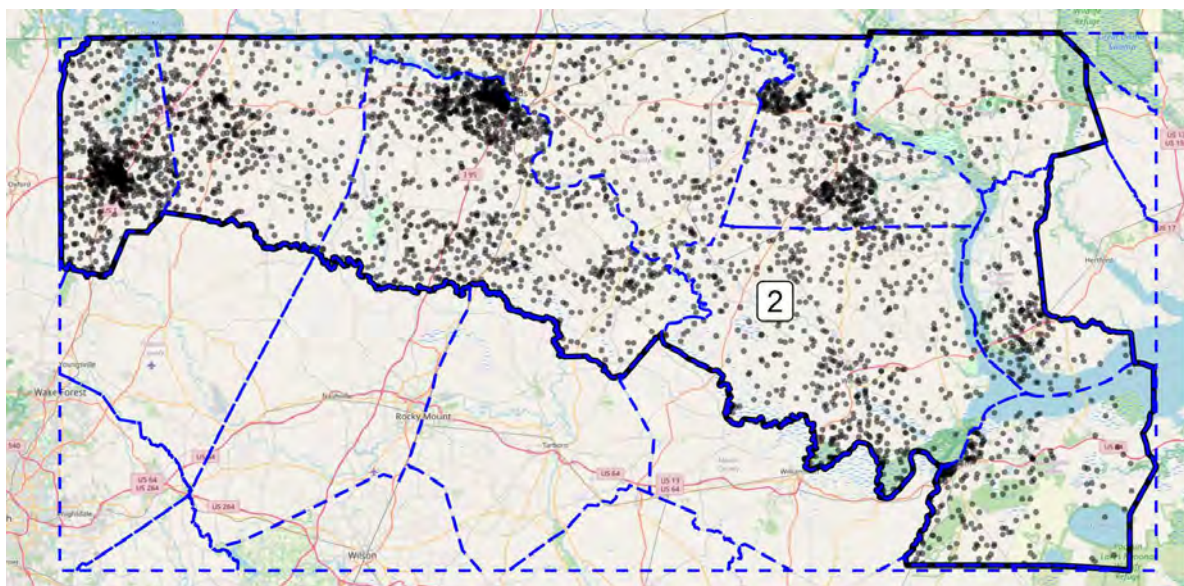
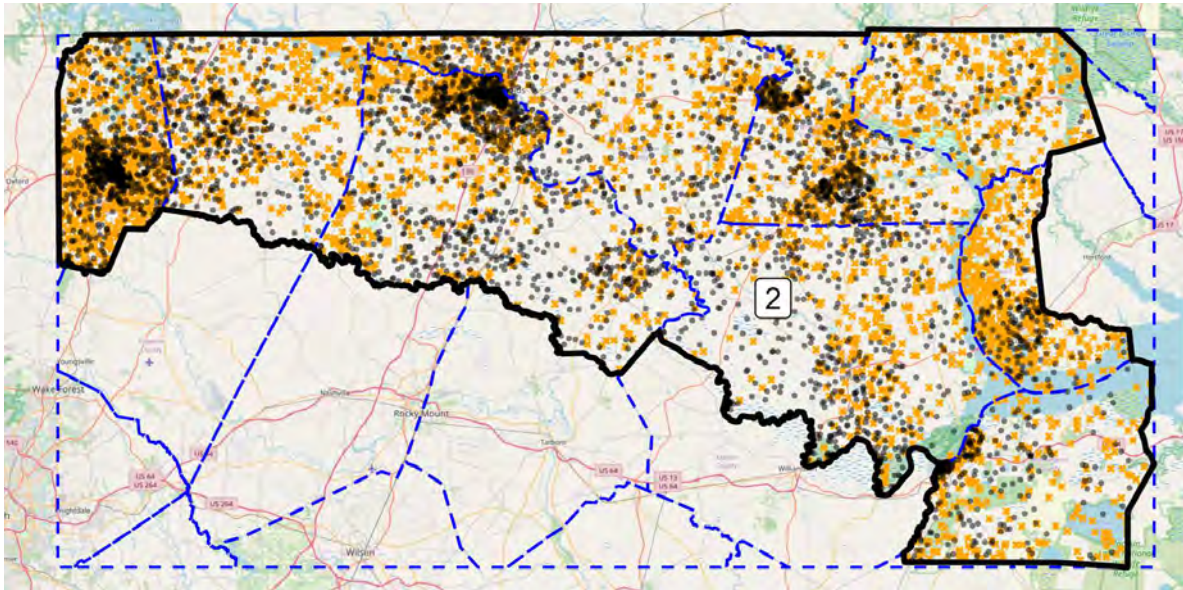


Figure 46: Dot Density Map of Fairfax Senate Illustrative Map A District 2



(a) One black dot = 20 Black residents of voting age

Figure 47: Dot Density Map of Fairfax Senate Illustrative Map A District 2



(a) One black dot = 20 Black residents of voting age. One orange x = 20 non-Black residents of voting age

Finally, Mr. Fairfax's data suggest that the Black communities included in this district have important socioeconomic dissimilarities. For example, Black residents of Gates County have higher incomes than Black residents elsewhere in the district, are much more likely to have a high school degree, are less likely to lack health insurance, are less likely to rent their house, and live in higher values homes.



Figure 48: Demographics of counties in Fairfax Illustrative Map A, Senate District 2

County	% High School Degree	Med. Inc.	% No Health Ins.	Med. Home Val	% Renting
Bertie	76.96%	\$32,522	13.29%	\$74,700	29.84%
Gates	88.66%	\$45,467	5.69%	\$121,100	14.01%
Halifax	77.39%	\$30,508	8.78%	\$86,100	46.94%
Hertford	81.44%	\$39,834	9.12%	\$96,500	40.51%
Northampton	79.34%	\$38,140	11.03%	\$80,900	33.28%
Vance	81.58%	\$39,836	11.40%	\$110,900	54.26%
Warren	81.77%	\$32,469	13.40%	\$85,900	44.02%

## 7 The county envelopes suggest that Mr. Fairfax's Illustrative Districts are racial gerrymanders

As described in my response to Dr. Rodden, I do not believe that there is any value in the county envelope approach. I do not believe it should be used in the Congressional or in the Legislative cases. However, the panel may disagree. In the event that the panel disagrees and finds that the county envelope approach has value, such value would likely be maximized in a format, such as state legislative seats in North Carolina, where county splits are to be minimized.<sup>4</sup>

To that end, I have applied the county envelope approach to Mr. Fairfax's maps. For every district that he redraws, I have taken the counties he includes in that district, calculated the district centroid, calculated the centroid of each VTD and its distance to the district centroid, and calculated the BVAPs. I have then performed a logistic regression analysis on whether or not the precinct is included in the district, with distance to the centroid and BVAP as the independent variables. Using this approach, half of Mr.

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<sup>4</sup>That is because it would eliminate the concern, raised in the Rodden Report response, that the county envelope approach arbitrarily ignores precincts near the district center, but in a different county.

Fairfax's districts are racially motivated gerrymanders, including districts 7, 12, 24, 23, and 5.

Figure 49: p-values for racial variables using county envelope regression Fairfax Map A

District	BVAP Coef.	p-value
12	0.123	0.0002
7	-0.118	0.0003
24	0.067	0.0003
4	-0.064	0.0014
23	0.086	0.0066
10	-0.057	0.0070
13	-0.063	0.0103
5	-0.041	0.0198
32	0.068	0.0945
8	-0.031	0.1170
1	-0.330	0.1687
25	0.012	0.4311
3	0.045	0.5049
27	0.012	0.5110
79	-0.010	0.5900
9	-0.001	0.9419

Likewise, running the county envelope approach on Map B flags districts 5, 7, 12, 13, 23 and 24 as racial gerrymanders.

Figure 50: p-values for racial variables using county envelope regression Fairfax Map B

District	BVAP Coef.	p-value
12	0.123	0.0002
7	-0.118	0.0003
24	0.067	0.0003
23	0.086	0.0066
13	-0.063	0.0103
5	-0.041	0.0198
32	0.068	0.0945
8	-0.031	0.1170
1	-0.330	0.1687
25	0.012	0.4311
3	0.045	0.5049
27	0.012	0.5110
79	-0.010	0.5900
9	-0.001	0.9419

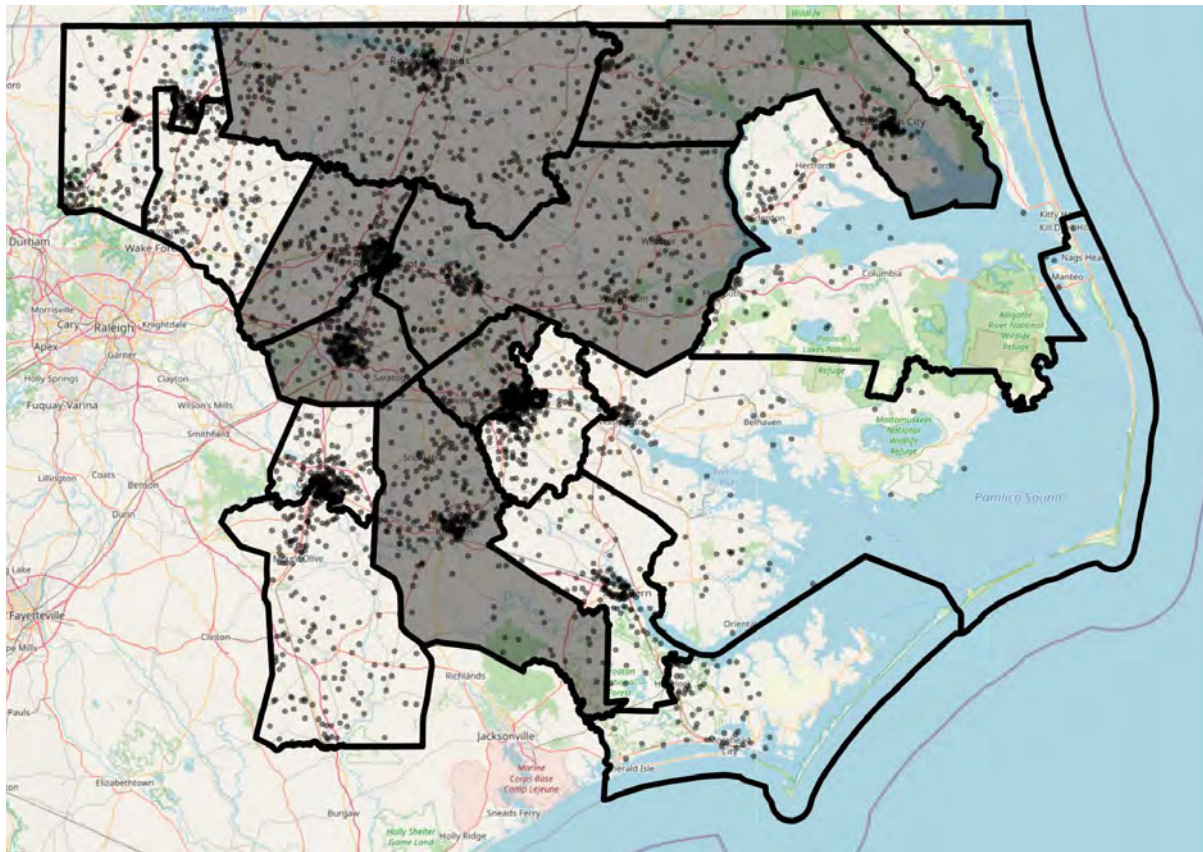
Again, to reiterate, I do not think this approach has validity regardless of who wields it. But if the Court is inclined to disagree, an application to Mr. Fairfax's maps identifies a number of districts where race predominated in the drawing.

## **8 Mr. Fairfax's House maps do show signs of the racial gerrymandering that Dr. Rodden describes in his report**

Finally, in Dr. Rodden's report he employs maps and charts to illustrate the supposed racial gerrymandering there. The problem is that those maps are at the very least equally consistent with politics as an explanation. However, applying them to Mr. Fairfax's report, where he disclaims reliance upon politics, shows striking patterns that Dr. Rodden flags in his report.

For example, consider the following map, which shows the distribution of registered Black voters in the districts that Mr. Fairfax redraws in the Enacted Map. Districts that Mr. Fairfax transforms into majority BVAP districts in either Map A or Map B are shaded grey.

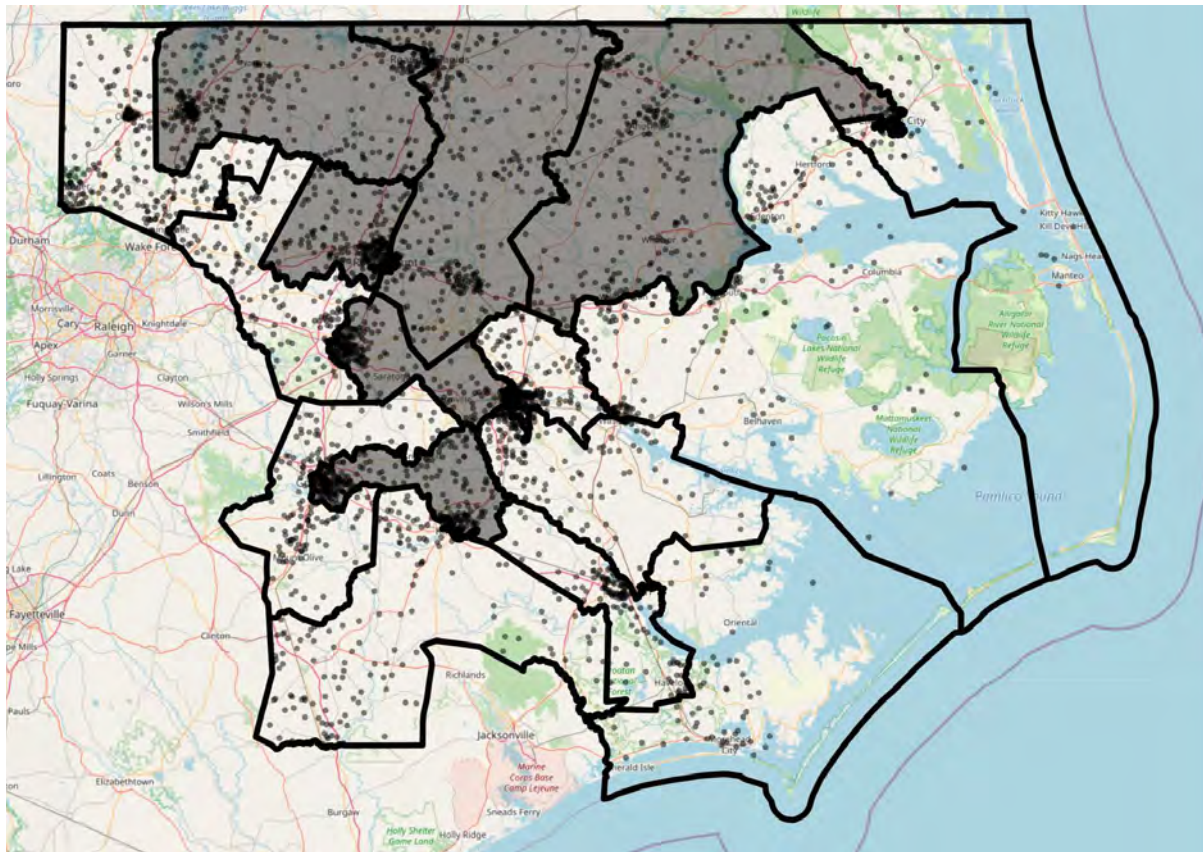
Figure 51: Location of Black registered voters, NE North Carolina, with Enacted Map boundaries



Compare this to House Map A. It is quickly apparent how the map carves out every cluster of Black residents to place them in one of his majority Black districts.



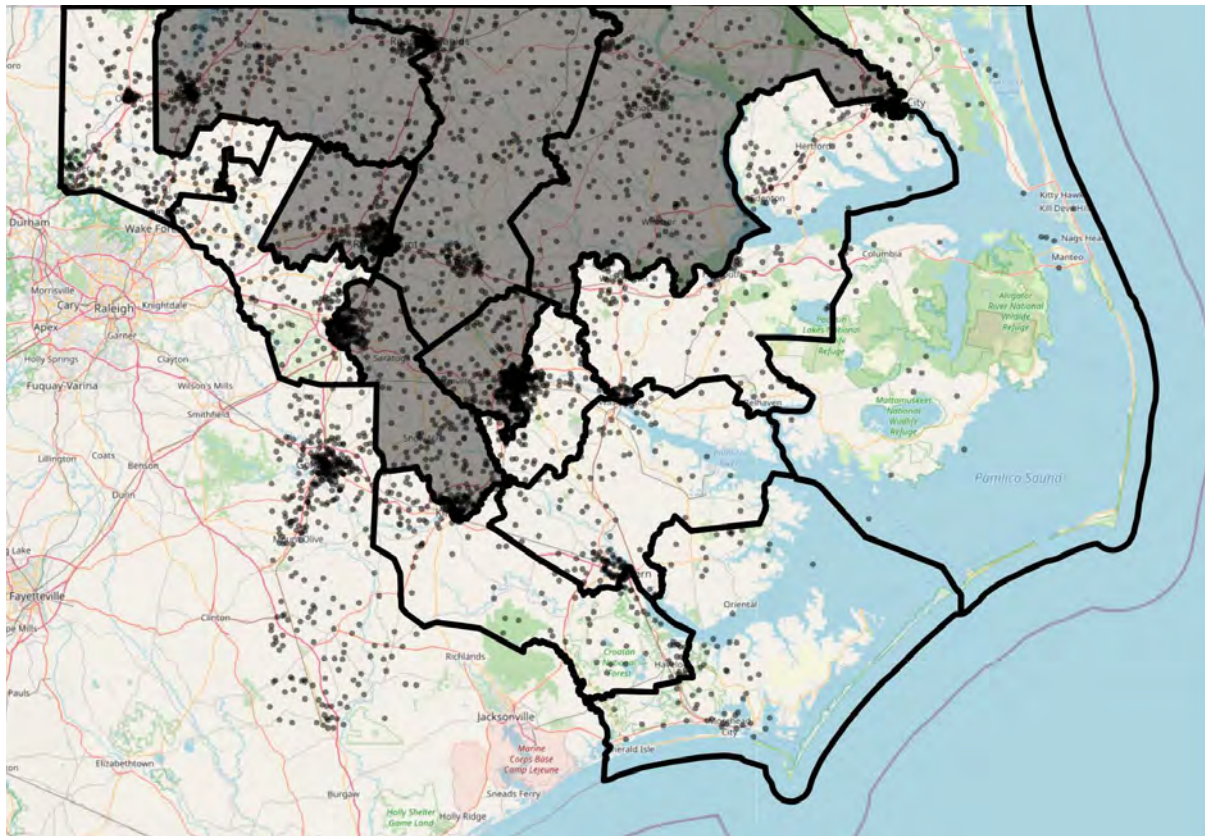
Figure 52: Location of Black registered voters, NE North Carolina, with Illustrative Map A boundaries



The same is true for Map B, although it leaves out the Black population in Goldsboro (where he maintains the district format from the Enacted Map).



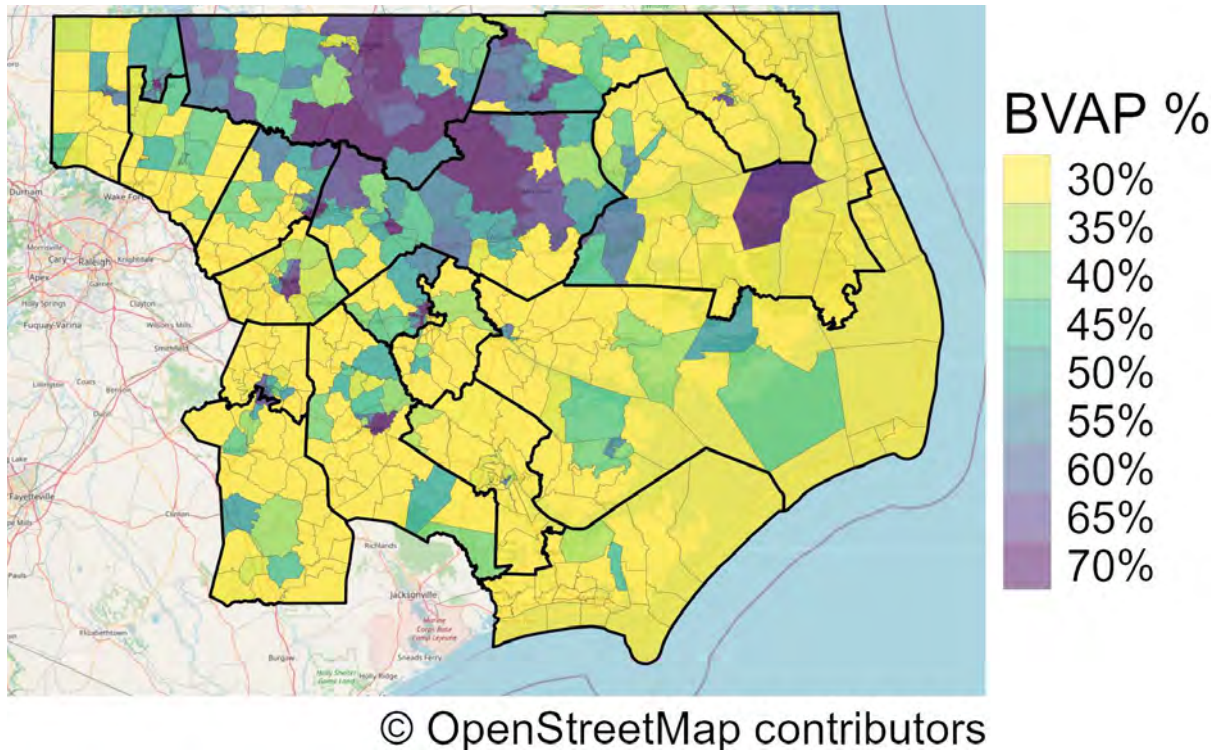
Figure 53: Location of Black registered voters, NE North Carolina, with Illustrative Map B boundaries



We can also view this using choropleth maps, described above. While we've used them in isolation, viewing how these districts are drawn in Maps A and B really is an example of the whole being greater than the sum of the parts.

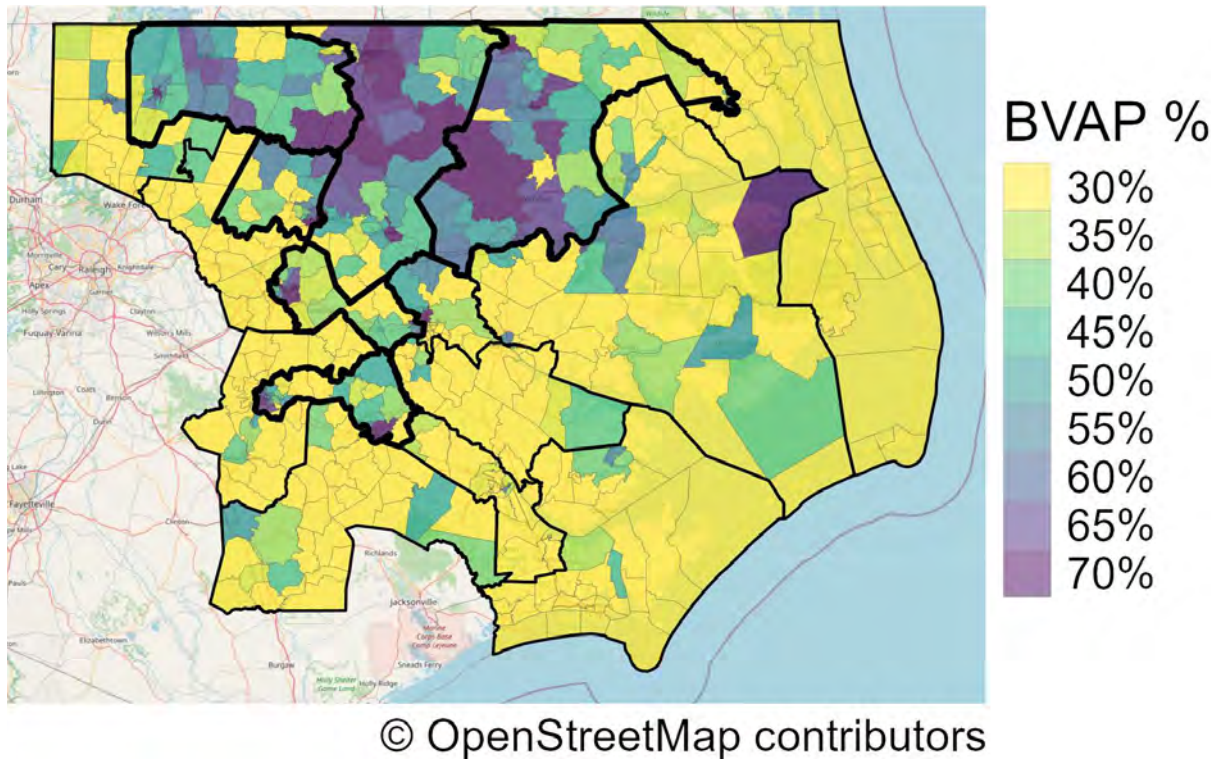
We can start with the Enacted Map, where district shapes and splits are largely driven by the Stephenson groupings mandated by the North Carolina Constitution:

Figure 54: Choropleth Maps by BVAP, Enacted Map



We compare this to Map A, and can see how almost every available Black precinct is packed into Mr. Fairfax's six Black-majority districts (outlined with a thicker boundary).

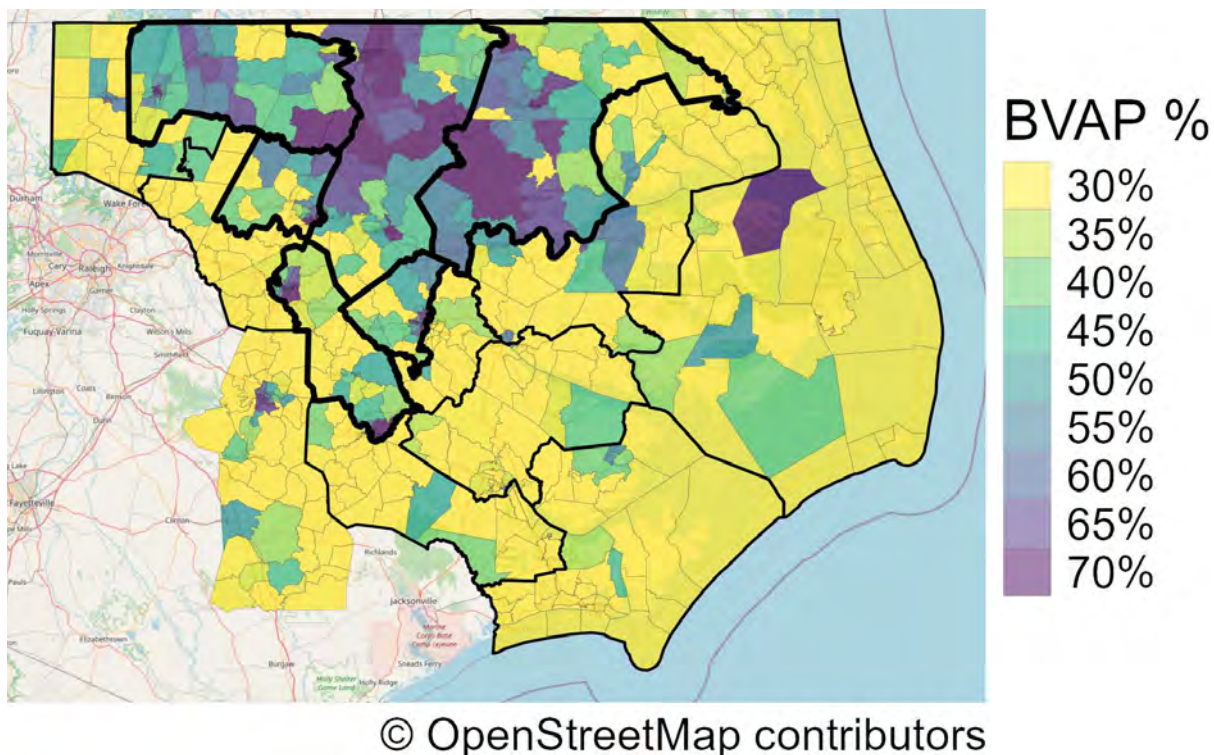
Figure 55: Choropleth Maps by BVAP, Illustrative Map A



Map B is less severe, but we still see the same effect:

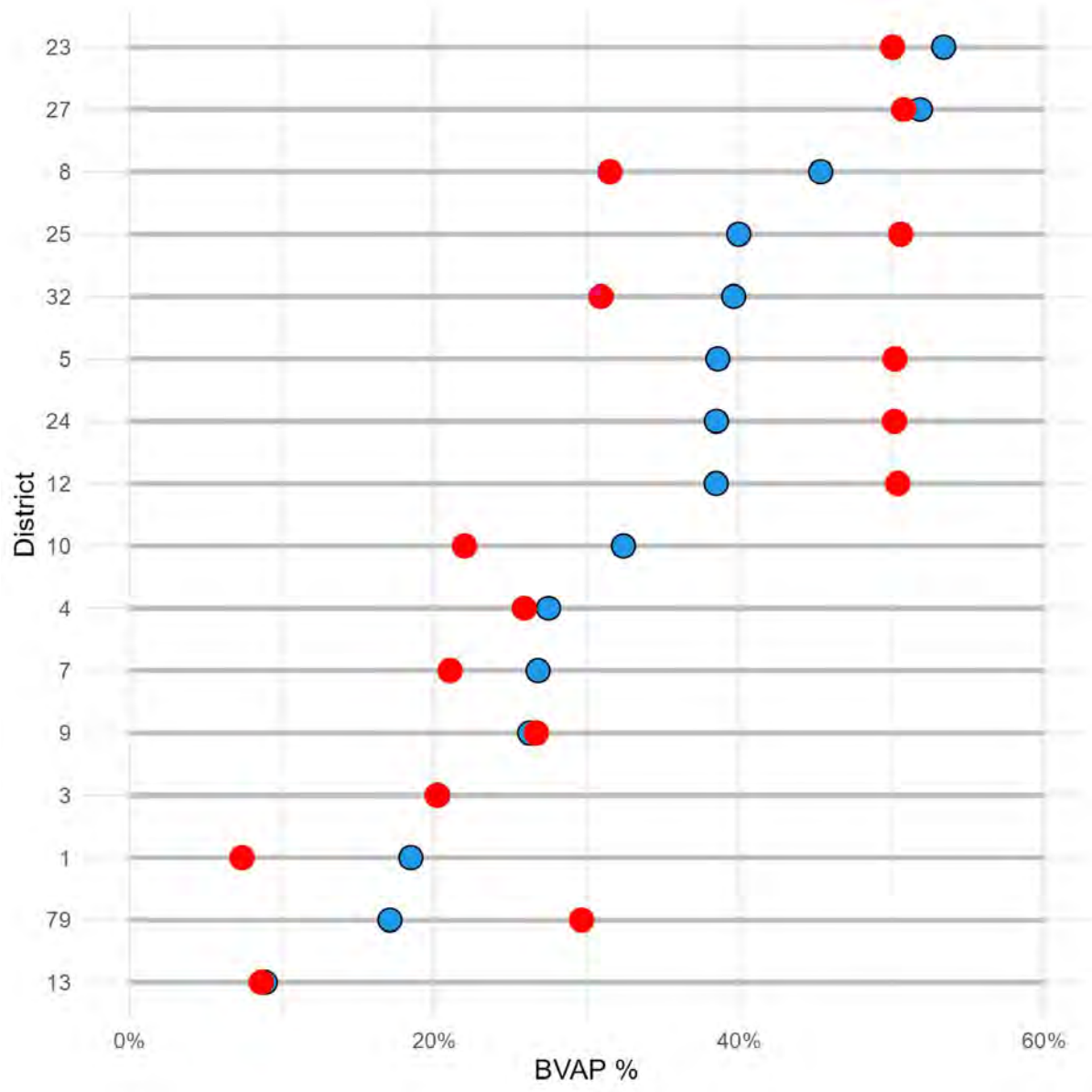


Figure 56: Choropleth Maps by BVAP, Illustrative Map B



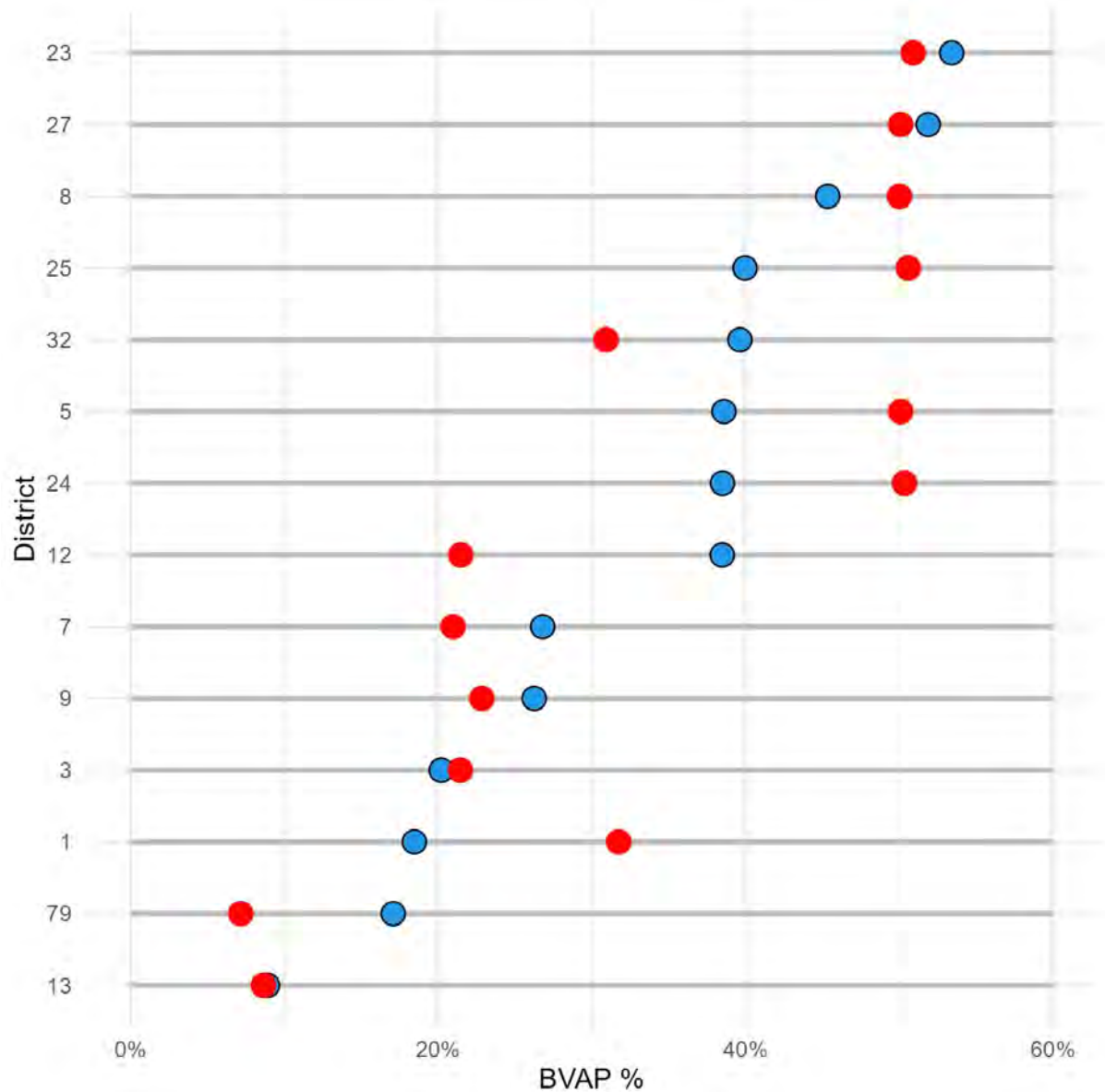
This “bleaching” of the surrounding districts is perhaps most readily revealed through our dotplots from the Rodden Response. Here, the BVAPs for the Enacted Map are shown in Blue, while the BVAPs for Map A are in red. Again, the BVAPs for the Enacted Map are largely dictated by the Stephenson groupings required by the North Carolina Constitution:

Figure 57: Dotplot of District BVAP, Enacted Map vs. Illustrative Map A



But you can see how districts 5, 12, 23, 24, 25, and 27 are all drawn carefully to just over 50% BVAP. The remaining districts, however, generally see their BVAPs lowered, sometimes substantially. The same is true for Map B:

Figure 58: Dotplot of District BVAP, Enacted Map vs. Illustrative Map B



The line between being “aware of race” and “racial predominance” or “subverting traditional redistricting criteria to race” is a blurry one. But taken together, this appears to be a clear example of ignoring state constitutional criteria, reducing district compactness, and splitting major cities in order to achieve a racial target.

## 9 Conclusion

Several of Mr. Fairfax's Illustrative Districts do not contain compact minority populations capable of being 50% of the population in their districts. Several of Mr. Fairfax's Illustrative Districts show evidence of traditional redistricting principles being subverted to race. And Mr. Fairfax's Illustrative Districts are generally less compact than the Enacted Map.

I declare under penalty of perjury under the laws of the State of Ohio that the foregoing is true and correct to the best of my knowledge and belief. Executed on 26 September, 2024 in Delaware, Ohio.

*Sean Trende*

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Sean P. Trende