

**IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

GEORGIA STATE CONFERENCE OF THE)
NAACP; GEORGIA COALITION FOR THE)
PEOPLE’S AGENDA, INC.; GALEO)
LATINO COMMUNITY DEVELOPMENT)
FUND, INC.,)

Plaintiffs,

v.

STATE OF GEORGIA; BRIAN KEMP, in his)
official capacity as the Governor of the State of)
Georgia; BRAD RAFFENSPERGER, in his)
official capacity as the Secretary of State of)
Georgia,)

Defendants.

Civil Case No. 21-c5338-
ELB-SCJ-SDG

NOTICE OF FILING

Attached as unintentionally omitted exhibits to the Declaration of Jacob Canter in Support of Plaintiffs' Response to Defendants' Motion for Partial Summary Judgment due to technical difficulties during the filing process are the following exhibits:

- Exhibit 2 (separated into 5 parts due to size limitation): A true and correct copy of Dr. Moon Duchin's Expert Report dated January 13, 2023
- Exhibit 25: A true and correct copies of excerpts from the March 2, 2023 Deposition of John Alford
- Exhibit 28: A true and correct copy of Benjamin Schneer's Errata dated April 13, 2023
- Exhibit 29: True and correct copies of excerpts from the February 28, 2023 Deposition of Joseph Bagley

Dated: April 26, 2023

Respectfully submitted,

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LOCAL RULE 7.1(D) CERTIFICATION OF COMPLIANCE

I certify that this pleading has been prepared with Times New Roman font, 14 point, as approved by the Court in L.R. 5.1(C), N.D. Ga.

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Exhibit 2

**IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

GEORGIA STATE CONFERENCE OF)
THE NAACP, et al.)

Plaintiffs,)

v.)

STATE OF GEORGIA, et al.)

Defendants.)

Case No. 1:21-CV-5338-ELB-SCJ-SDG

COMMON CAUSE, et al.,)

Plaintiffs,)

v.)

BRAD RAFFENSPERGER)

Defendant.)

Case No. 1:22-CV-00090-ELB-SCJ-SDG

Expert Report of Dr. Moon Duchin

Analysis of Race and Redistricting in Georgia

Moon Duchin
 Professor of Mathematics, Tufts University
 Senior Fellow, Tisch College of Civic Life

January 13, 2022

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1 Background and qualifications

I am a Professor of Mathematics and a Senior Fellow in the Jonathan M. Tisch College of Civic Life at Tufts University. At Tisch College, I am the director and principal investigator of an interdisciplinary research group called the MGGG Redistricting Lab, focused on geometric and computational aspects of redistricting. My areas of research and teaching include the structure of census data, the history of the U.S. Census, the design and implementation of randomized algorithms for generating districting plans, and the analysis of redistricting more broadly. In 2019, I was awarded a major grant from the National Science Foundation to study *Network Science of Census Data*.

I am compensated at \$400/hour for my work in this case. I have previously written reports and provided testimony by deposition, a hearing, or at trial in North Carolina, Pennsylvania, Wisconsin, Alabama, South Carolina, and Texas.¹ A full copy of my CV is attached to this report.

1.1 Assignment

I have been asked to examine the Congressional, state Senate, and state House districts enacted in Georgia this year in connection with challenges under the Voting Rights Act of 1965 (VRA) and the U.S. Constitution.

¹*NC League of Conservation Voters, et al. v. Hall, et al.* No. 21-cvs-500085 (Wake Cnty. Sup. Ct. 2021); *Carter v. Chapman*, No. 7 MM 2022, 2022 WL 702894 (Pa. Mar. 9, 2022); *Johnson v. Wis. Elections Comm’n*, No. 2021AP1450-OA, 2022 WL 621082 (Wis. Mar. 3, 2022); *Milligan, et al. v. Merrill, et al.*, Case No. 2:21-cv-01530-AMM and *Thomas, et al. v. Merrill, et al.*, Case No. 2:21-cv-01531-AMM (N.D. Ala. 2021); *SC NAACP et al. v. Alexander, et al.*, Case No. 3-21-cv-03302-MBS-TJH-RMG (D.S.C.) (three-judge ct.); *TX NAACP et al. v. Abbott*, Case No. 1:21-CV-00943-RP-JES-JVB.

In particular, I review the maps' conformance with traditional districting principles (§6), then supply demonstration maps for the "Gingles 1" prong of a VRA challenge. Using a notion of district "effectiveness" based on electoral history (§5), I show that it is readily possible to draw additional majority-minority districts, while simultaneously increasing the number of effective districts (§7). These effective districts are shown to be highly likely to provide an opportunity for Black and Latino voters to elect candidates of their choice.

I have also assessed the maps to investigate the possibility of excessively race-conscious line-drawing (§10), especially noting when traditional districting principles have been undermined in a manner that results in "packing" and "cracking"—the related practices of over-concentrating Black and Latino voters on one hand, or splitting communities and dispersing their voters over multiple districts on the other. I have considered whether or not the design of the districts ultimately leads to discernible dilution of voting opportunity for Black voters in Georgia, or for coalitions of Black and Latino voters, and have found ample evidence to support that conclusion.

All work in this report was completed by me and by research assistants working under my direct supervision.

1.2 Materials

Materials consulted in the preparation of this report include the following.

- A major source is Census data, primarily the Decennial Census releases (i.e., the PL 94-171). Other data products from the Census Bureau, including the American Community Survey and the TIGER/Line shapefiles, were also used.
- For priorities and criteria, I consulted the "2021–22 Guidelines for the House Legislative and Congressional Reapportionment Committee." These are reprinted in full in the corresponding publication by the Senate Committee on Reapportionment and Redistricting.
- Shapefiles for the enacted plans are available on the state's redistricting website, hosted at legis.ga.gov.
- A collection of precinct shapefiles with historical election data joined to the shapes was provided by counsel, as well as addresses for incumbent representatives. I was also provided with written transcriptions of oral testimony in public hearings in Georgia about redistricting, and with corresponding written communication.

2 Summary of findings

- Census data shows that the state of Georgia is rapidly diversifying, and in fact now has a population very nearly evenly split between White people and people of color. At the same time, it has shifted to become what we might call "bright purple," with recent elections repeatedly demonstrating that candidates preferred by Black and Latino voters can be elected by simple majority on a statewide basis.
- At a high level, an examination of recent electoral history shows that the enacted plans at all three levels are conspicuously uncompetitive, which has been fueled by acutely race-conscious moves in the recent redistricting. In particular:
 - A Congressional district that had proved to perform for the preferences of Black and Latino voters—CD 6—has been targeted to eliminate electoral opportunity. This was achieved by excising parts of urban counties and adding conservative White counties to the north of the benchmark configuration.
 - In a ripple effect from the reconfiguration of CD 6, a dense, urban, largely Black residential segment of Cobb County has been submerged in CD 14.

- On the western edge of Georgia, CD 3 has been drawn to retain its character as a firewall between racially and politically diverse parts of the state in metro Atlanta and the Southwest region. Meanwhile, CD 13 has been kept highly packed, which is cemented in the enacted plan through race-conscious county splitting.
 - In the enacted Senate map, numerous districts that had trended into diverse and competitive population configurations were targeted for "dismantling," i.e, were re-drawn in a way that splits the population of the benchmark district across numerous new districts. This is especially visible in the reconfiguration of SD 17 and 48, which flouts traditional districting principles and creates districts that lock out opportunity.
 - There is strikingly low core retention in the enacted House plan, with roughly three in every five Georgia residents assigned to a new district today relative to the benchmark plan. This dovetails with a pattern of "dismantling" districts in a way that usually eliminates electoral opportunity for Black and Latino voters, using racially imbalanced transfers of population.
- I have introduced a label of district "effectiveness" in §5: by definition, a district is deemed effective if candidates of choice for Black and Latino voters can frequently win both primary and general elections. To make this concrete, I have used a list of four primary and eight general statewide elections selected as being highly probative for the preferences of Black and Latino Georgians. To be effective, a district must have an electoral history such that the candidate of choice would win in at least 3/4 primary elections and 5/8 general elections from this dataset. I have confirmed that this is well aligned with actual 2022 electoral performance at the Congressional and state legislative level.
 - A review of metrics associated with traditional districting principles (and other principles cited in the state's redistricting guidelines) is presented in §6. My alternative plans are shown to be highly compact, to respect the integrity of counties and cities, and to be far more cognizant of the integrity of state precincts than the enacted plans.
 - I present Gingles 1 alternatives on a regional/district cluster basis in §7. These plans increase both the number of majority-BHVAP districts and the number of majority-BHCVAP districts, relative to the state, while also securing the "effective" label on the basis of electoral history. The modular design of the legislative alternatives will make it easy to mix and match plans from different clusters.
 - If we foreground effectiveness instead of majority demographics, we find that districts can frequently be effective even well under the 50%+1 demographic threshold. This provides helpful examples leading in to a discussion of racial gerrymandering in the following section.
 - Counties are often split in a racially sorted way, beyond what the partisan geography would suggest from a race-neutral process. In many cases this secures a high partisan differential as well; in some cases, the racial differential significantly exceeds the partisan gap.
 - It is extremely frequent for precinct splits to show major racial disparity. If mapmakers were using cast vote history to track partisan lean, as is frequently done around the country, then these splits of state precincts are especially telling, since the vote history can not provide a partisan basis for the decision. These splits are shown to essentially always align with packing and cracking. Again, my alternative maps show that far less precinct splitting is possible.
 - Public input, such as the record of strong pushback against the targeting of CD 6 and the encroachment of CD 14 into Cobb, also explains why the enacted plans are dissonant in terms of shared community interests.

3 Demographics of Georgia

3.1 Regions, counties, and cities

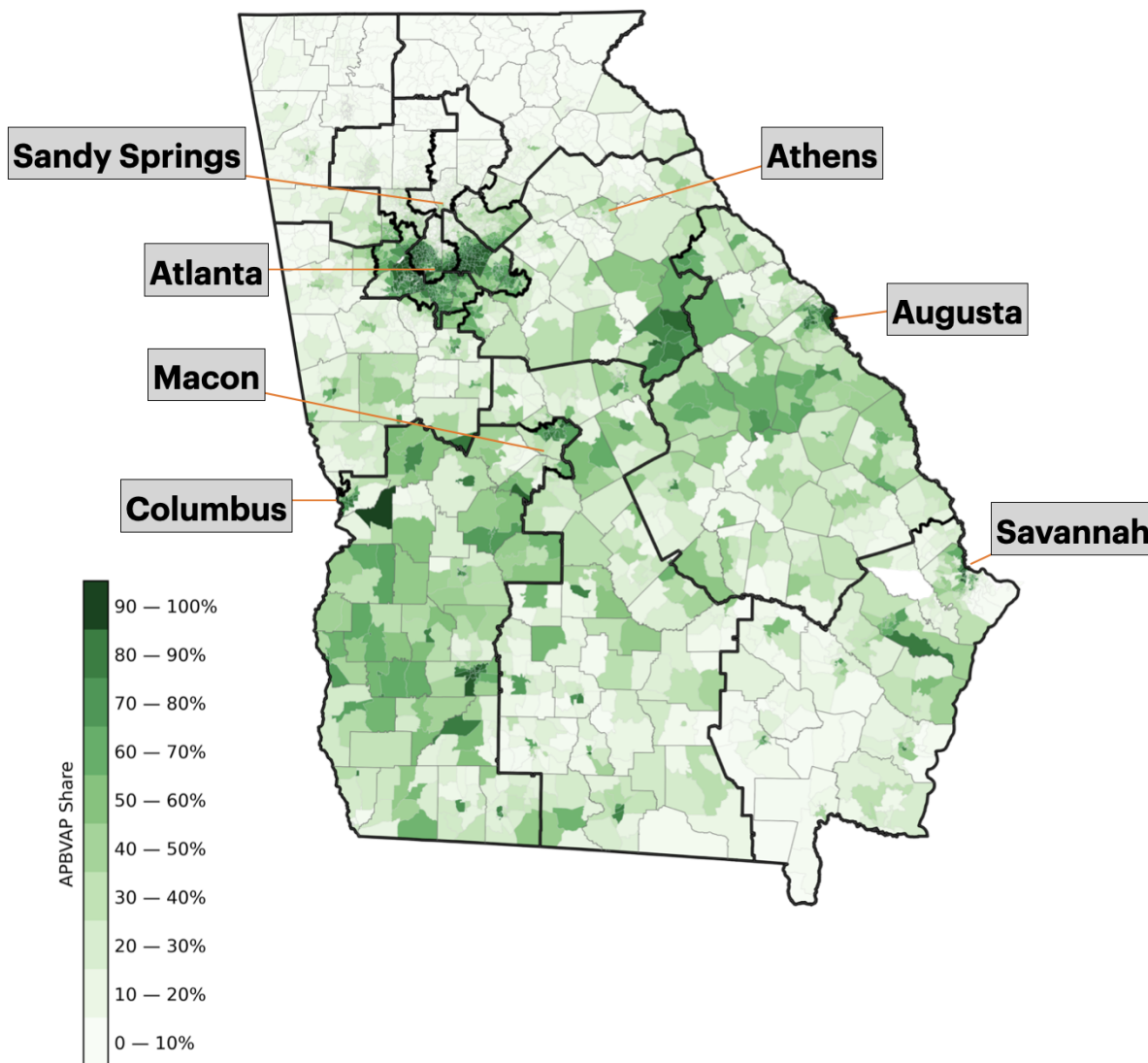


Figure 1: Choropleth of Black voting age population by state precinct, with the enacted Congressional map overlaid. County lines are shown in gray. The Atlanta metro area has dense Black population, while high proportions of Black residents in smaller cities and rural areas can be found in the swath of the state from Columbus to Augusta, broadly called Georgia's "Black Belt" region.

Georgia has 159 counties, the second highest number in the nation (after Texas with 254). Georgia's counties vary in population from Fulton County, with over a million residents, to Taliaferro County, with just 1559 residents, so that they differ by a factor of over 680x. Twenty-two of the counties are majority-Black, from DeKalb (pop. 764,382) to Taliaferro.

In Georgia, the cities proper are not very populous; even Atlanta has under 500,000 people by the 2020 Census numbers, smaller than the ideal Congressional district population of 765,136. However, the Atlanta metro area (formally the "Atlanta–Sandy Springs–Alpharetta, GA Metropolitan Statistical Area") is the eighth largest in the country, with over six million residents (6,089,815), making up nearly 57% of Georgia's total population.

3.2 Sources of population data

Apportionment and redistricting was the fundamental motivation for the establishment of the U.S. Census. The primary source of ground-truth data for redistricting is the Decennial Census tables in the PL94-171 (also called the *redistricting data release*). There are many reasons to rely on the 2020 Decennial data: it is the most recent available, it is based on a more extensive enumeration of the population (rather than a survey), it is available on the smallest geographic units (census blocks), it offers a high level of detail in its categories of race and ethnicity, and it includes both total population (TOTPOP) and voting age population (VAP).

An important secondary source of data, also produced by the Census Bureau, is the American Community Survey, or ACS. This has the advantage of being collected every year rather than at ten-year intervals, and it includes an estimate of citizen voting age population (CVAP), but this trades off with a number of well-known caveats. Since it is survey-based, it is known to have wider error bars on small geography: accordingly, the Bureau only releases single-year estimates at the tract level; 5-year estimates are released at the level of block groups, but this is still not sufficiently detailed to get exact totals on electoral districts. Furthermore, the ACS racial and ethnic categories are significantly simplified relative to the Decennial data, so that for instance it is not possible to tabulate Any-Part Black population with the same set of multiracial categories or even to tabulate Afro-Latino (Black and Hispanic) population. In addition, the use of a 5-year average will mean that the numbers are somewhat out of date, since even the most recent currently available data draws partly from 2016, which is quite a long time ago in a rapidly diversifying state. Finally, the 2020 ACS was so badly compromised by the COVID pandemic that the Bureau has cautioned people to treat the numbers that year as "experimental."²

For these reasons I have chosen to emphasize VAP in discussing the demographics of districts in this report, such as when counting the majority-Black districts in a plan. However, the plaintiffs' claims involve a coalition of Black and Latino voters, and the voting eligibility rate for Latino voters can be significantly lower than other groups, particularly due to a lower rate of citizenship. Therefore litigation involving Latino plaintiffs typically uses a secondary data source to validate that Gingles plans meet the 50%+1 threshold. Below, I will rely on estimated CVAP built from block-level adjusted VAP, where the citizenship rate (CVAP/VAP) for Black, Latino, White, and Other residents is pulled from the 2020 5-year ACS on larger geographies, namely census tracts. I judge this to be significantly more accurate than using the 2016-2020 5-year CVAP numbers directly. For one vivid illustration of why this is important, consider that the total voting age population of Georgia is 8,220,274 in the redistricting data, but only 8,011,265 in the 2016-2020 5-year numbers. That is, there is a shortfall of more than 200,000 adults if we pull from the ACS directly.

A full description of racial categories and of the construction of CVAP for this report can be found in Appendix A. In §8 I will confirm that my alternative plans satisfy the Gingles 1 standard for coalition districts using estimated Black and Hispanic CVAP as well as using VAP.

²"The Census Bureau will not release its standard 2020 ACS 1-year supplemental estimates because of the impact of the COVID-19 pandemic on data collection. Experimental estimates, developed from 2020 ACS 1-year data[,] are available on the ACS Experimental Data page. They will not be available on data.census.gov or the Application Programming Interface (API)." From www.census.gov/data/developers/data-sets/ACS-supplemental-data/2020.html, accessed January 4, 2023.

3.3 Demographic trends

A snapshot of the demographics of Georgia can be extracted from data products by the Census Bureau, as in Table 1.³ Below, I will use the abbreviations B, H, BH, W, and POC to denote the share of population (or VAP, etc.) that is Black, Latino, Black and/or Latino, White, and people of color respectively. Detailed definitions of the racial and ethnic groupings can be found in Appendix A.

	All	Black alone	Black (APB)	Hispanic	BH Coalition	AfroLatino	White alone	POC
TOTPOP	10,711,908	3,278,119 30.60%	3,538,146 33.03%	1,123,457 10.49%	4,578,941 42.75%	82,662 0.77%	5,362,156 50.06%	5,349,752 49.94%
VAP	8,220,274	2,462,933 29.96%	2,607,986 31.73%	742,918 9.04%	3,302,581 40.18%	48,323 0.59%	4,342,333 52.82%	3,877,941 47.18%
CVAP	7,598,787	2,422,569 31.88%	2,537,328 33.39%	429,562 5.65%	2,920,522 38.43%	— —	4,285,394 56.40%	3,313,393 43.60%

Table 1: Demographics overview. The TOTPOP and VAP figures are taken from the 2020 Decennial Census. The CVAP figures use citizenship rates drawn from the most recent 5-year ACS (ending in 2020), applied to decennial VAP.

Georgia's fast growth is entirely due to the expansion in the population of people of color. In fact, the (non-Hispanic) White population of Georgia actually dropped from 2010 to 2020—from 5,413,920 to 5,362,156—while the state overall grew by over a million people. As a result, the population share of Black and Latino residents expanded from 39.75% to 42.75% in the time between the 2010 and the 2020 Census data release, while the White population share dropped markedly from 55.88% to 50.06%. Thus, to within a tenth of a percent, current redistricting data finds Georgia evenly split between White residents and people of color.

The steady diversification is visible in the citizen voting age population as well, for which we can get a snapshot each year from the American Community Survey (Table 2).⁴

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
BCVAP	1,961,750 0.3029	2,008,587 0.3049	2,055,423 0.3071	2,096,295 0.3089	2,140,693 0.3110	2,179,729 0.3123	2,228,551 0.3155	2,276,776 0.3182	2,322,275 0.3201	2,376,110 0.3230
HCVAP	188,878 0.0292	210,412 0.0319	230,724 0.0345	245,517 0.0362	263,787 0.0383	282,158 0.0404	290,840 0.0412	306,713 0.0429	324,368 0.0447	344,182 0.0468
BHCVAP	2,150,628 0.3321	2,218,999 0.3368	2,286,147 0.3415	2,341,812 0.3451	2,404,480 0.3493	2,461,887 0.3528	2,519,391 0.3567	2,583,489 0.3610	2,646,643 0.3648	2,720,292 0.3698
POC CVAP	2,239,082 0.3457	2,299,730 0.3491	2,358,789 0.3524	2,415,907 0.3560	2,477,036 0.3599	2,538,250 0.3637	2,603,198 0.3685	2,671,269 0.3733	2,738,577 0.3775	2,811,677 0.3822
WCVAP	4,237,007 0.6543	4,288,602 0.6509	4,335,200 0.6476	4,369,477 0.6440	4,405,843 0.6401	4,440,410 0.6363	4,460,606 0.6315	4,484,704 0.6267	4,516,116 0.6225	4,544,881 0.6178
total CVAP	6,476,089	6,588,332	6,693,989	6,785,384	6,882,879	6,978,660	7,063,804	7,155,973	7,254,693	7,356,558

Table 2: Georgia has seen significant growth in its citizen adult population, and nearly all of it is from communities of color. This table shows the 1-year ACS figures from 2010 through 2019.

³As noted in the last section, the American Community Survey (ACS) is based on an annual survey, often presented in 5-year rolling averages, where not all of the same racial and ethnic categories from the PL94-171 are available. Since the methodology, categories, and time periods are different between the ACS and the Decennial data, there is no contradiction in observing WCVAP>WVAP, for instance.

⁴As described above, the 2020 ACS was not recommended for standard use on a 1-year basis, which is why it is excluded from Table 2.

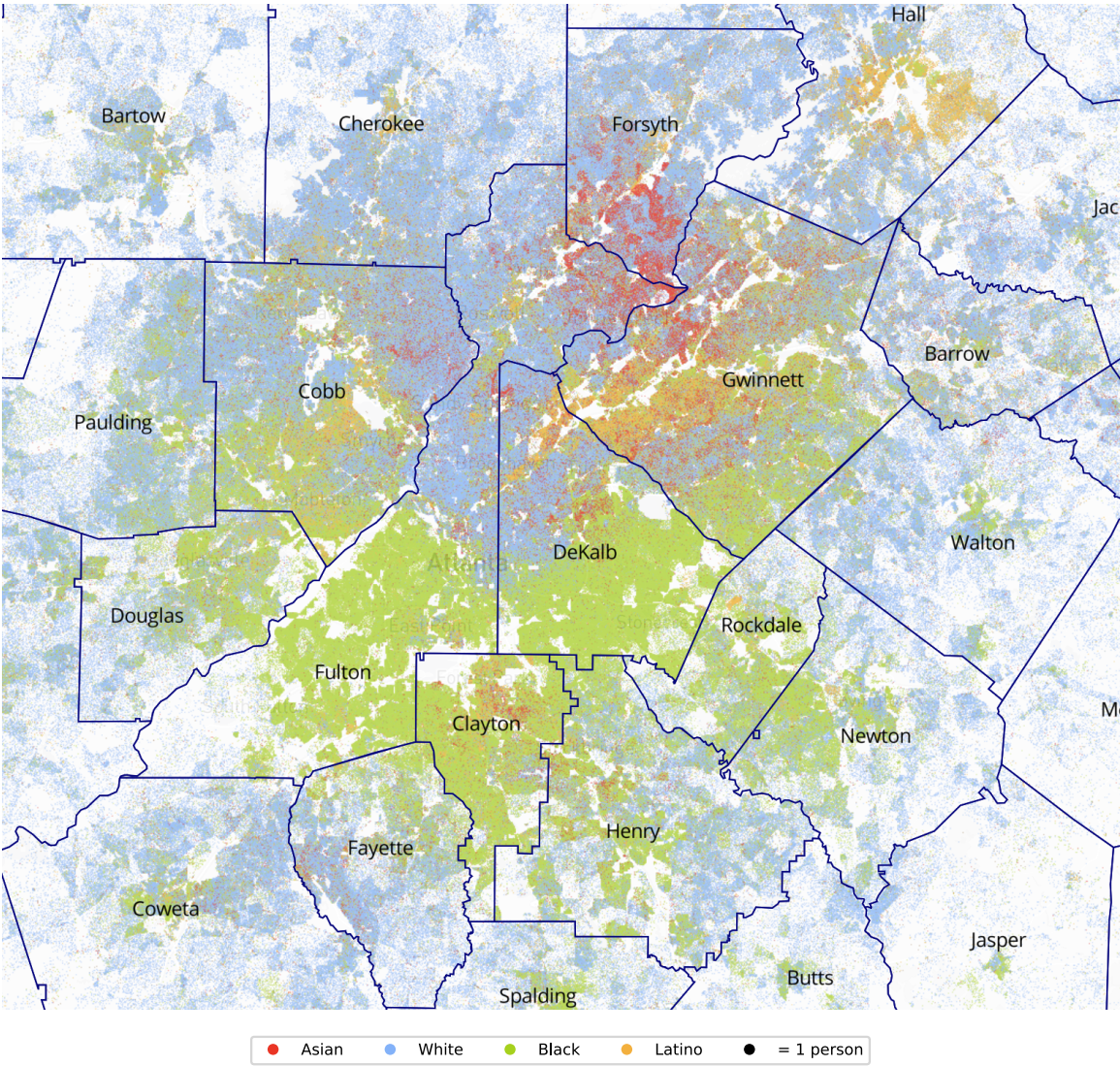


Figure 2: Racial dot density plot in the counties of the Atlanta metro area. Dense concentrations of Black population are visible in Cobb, Douglas, Fulton, Clayton, DeKalb, and southern Gwinnett Counties. Gwinnett is the heart of Georgia’s Latino population, and following the I-85/I-985 corridor north connects to a substantial Latino community in Hall County.

4 Overview of enacted plans for Congress, Senate, and House

4.1 Congress

As discussed in the last section, the last decade has seen substantial growth in the Black and Latino population of Georgia and a reduction in White population. At the same time, and in a climate where the racial polarization between White Georgians and voters of color is essentially undisputed, Black and Latino candidates of choice are now routinely competitive in statewide elections, and now can frequently win outright. Despite this, the newly enacted Congressional plan makes major changes to the benchmark and does so in a way that reduces the number of performing districts for Black- and Latino-preferred candidates from 6 out of 14 (42.9%) to just 5 out of 14 (35.7%).

In 2018, Democratic candidate Lucy McBath won a surprise victory in CD 6, north of Atlanta, unseating Republican Karen Handel. She then defended her seat in 2020. My study of the Congressional plan enacted in Georgia in 2021 is completely consistent with the scenario that line-drawers targeted McBath's district, specifically by removing Black and Hispanic voters from CD 6 and replacing them with White suburban, exurban, and rural voters in Forsyth and Dawson counties. This displacement ripples across CD 11 and ends up submerging Black urban voters in rural CD 14. This is corroborated by the core retention numbers that show that CD 6 was singled out for major reconfiguration (see §10).

Correspondingly, the community of interest narratives supplied to the state in a series of public hearings and communications show that coherent and salient local identities were disregarded in the process: rural, mountainous, and industrial interests in the Northwest counties; metro Atlanta's urban counties with large Black populations and clear shared needs for infrastructure, transit, and housing; and largely suburban Forsyth and Dawson. (See §10.3)

Strikingly, all fourteen new districts had wider than a ten-point margin between Biden and Trump in the 2020 Presidential voting—there are zero remotely competitive districts. In particular, the completely reconfigured CD 6 is now far out of reach for a Black-preferred candidate; Biden had just 42.5% of the major-party vote against Trump in the district. This lean held up in actual Congressional voting under the new lines in 2022, where the closest of the fourteen outcomes was Sanford Bishop's margin of 9.95 percentage points over opponent Chris West in CD 2; every other race was a blowout. The overall effect of the Congressional redistricting in Georgia is the instrumentalization of Black and Latino voters to achieve a profoundly uncompetitive plan in which the line-drawers have gone a long way to locking in the outcomes.

In this section I will show images, and in the following section I will present statistics, for the enacted Congressional plan compared to the benchmark plan from ten years prior. I will also consider a map I have labeled **Duncan-Kennedy**, a draft congressional map released to the public by Lt. Governor Geoff Duncan and Chairman John F. Kennedy on September 27, 2021.

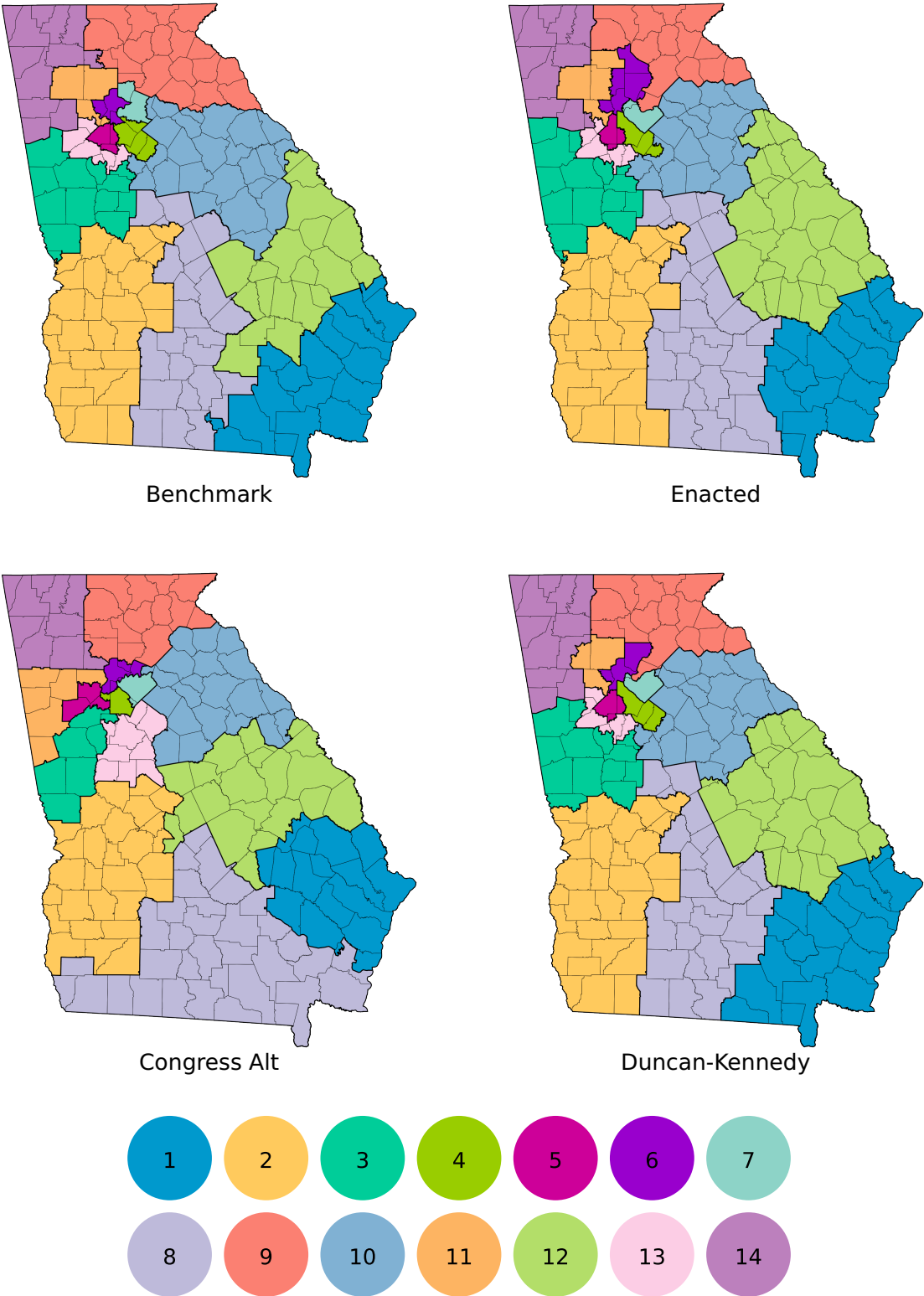


Figure 3: Congressional plans.

4.2 State Senate

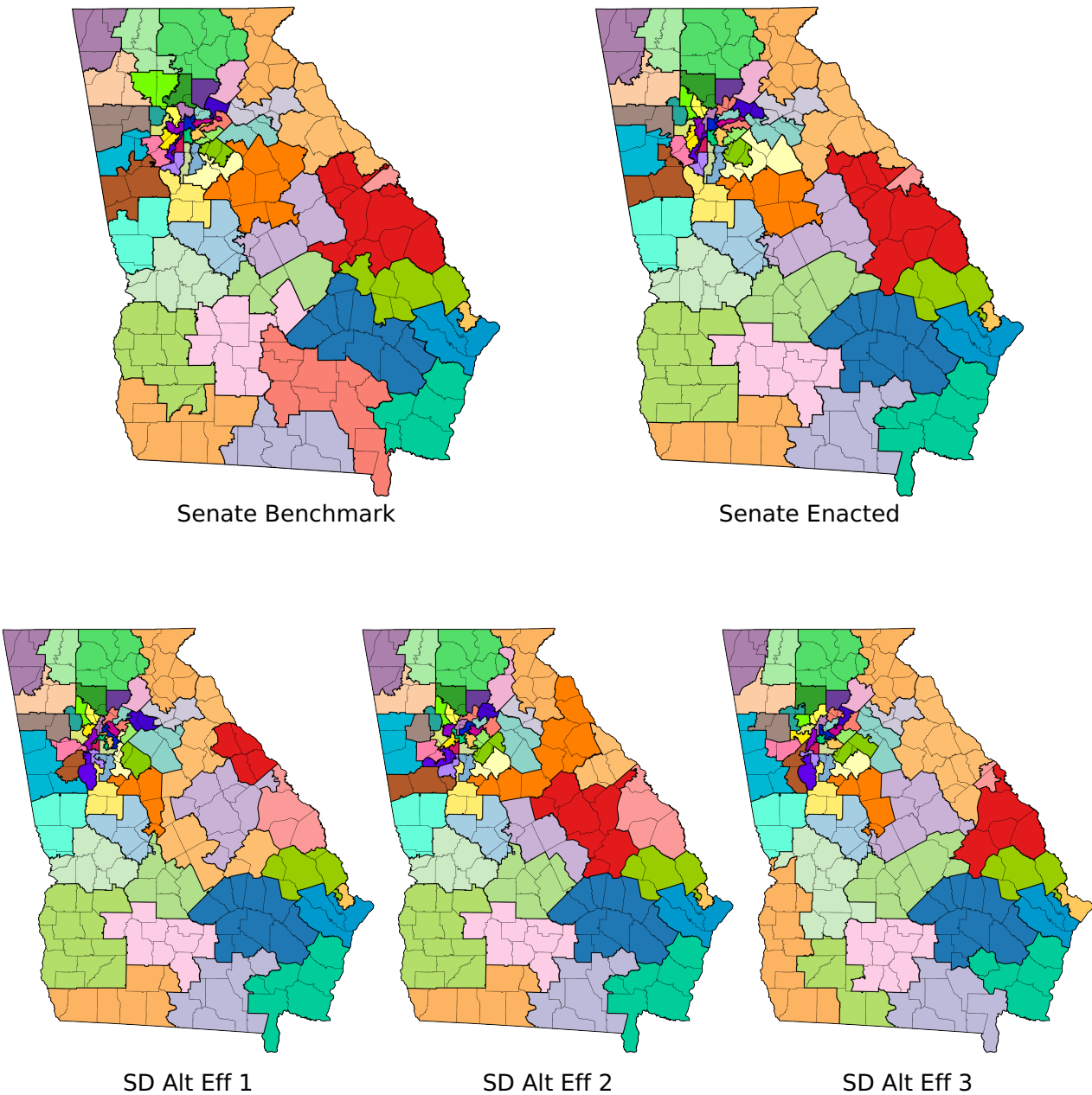


Figure 4: State Senate plans.

The state Senate plan enacted in Georgia is also remarkable in its lack of competitiveness. Despite Georgia’s clear status as a new swing state, only one of the districts (SD 48) would have been within a ten-percentage-point margin (i.e., 55-45 or closer) in the Biden-Trump presidential contest of 2020. And indeed, only two of 56 districts (SD 7 and 14) were within a ten-point margin in the actual legislative voting of 2022. (Note that Georgia state Senators stand for election every two years, as for U.S. House and Georgia’s state House.) More than half of the districts—30 out of 56—were uncontested.

Below, I will propose alternative districts with a *modular* approach, starting by dividing the 56 districts in the enacted plan into six district clusters, shown in Figure 5. In three of the six—Atlanta, Gwinnett, and East Black Belt—I will present alternative "Gingles 1" plans that increase the number of majority-Black and/or the number of majority-coalition districts, while ensuring that new districts are effective at securing electoral opportunity for Black and Latino voters. I will supplement the Gingles plans with regional maps showing improved effectiveness in additional clusters to create plans that span many regions of the state to form SD Alt Eff 1 and SD Alt Eff 2. Finally, I will offer an all-clusters alternative keyed to increased effectiveness alone, called SD Alt Eff 3. (See Table 10.) This is accomplished while maintaining scores for traditional districting principles that are comparable or superior to those of the enacted plan, and while giving great deference to the enacted plan by reconfiguring its own districts in clusters rather than starting from a blank map.

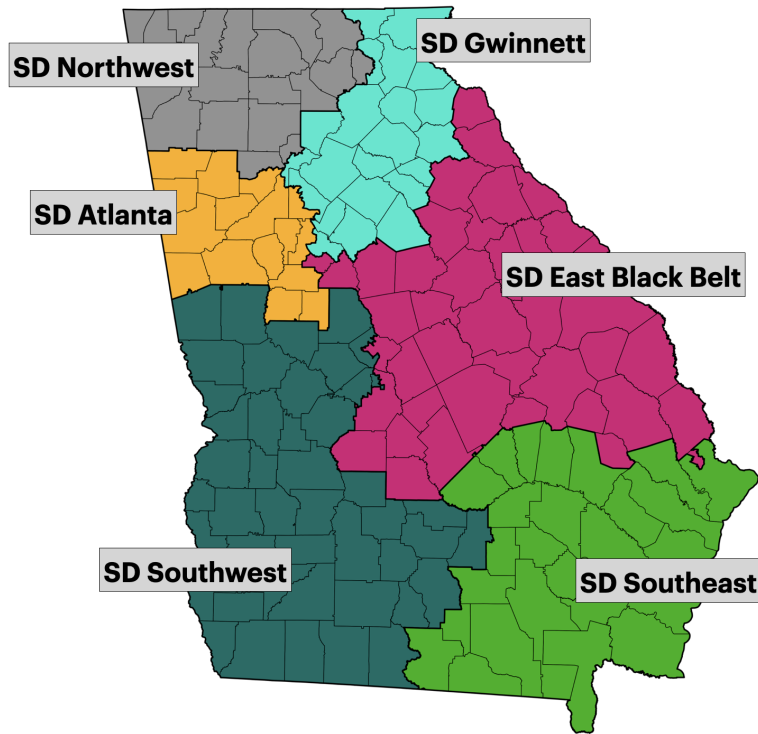


Figure 5: Six "modular" Senate clusters made up of groups of enacted districts. Below, Gingles demonstrative plans will be offered in selected clusters and effectiveness-oriented demonstrative plans will be presented in all six.

Senate Clusters

- SD Atlanta (14 districts): 6, 10, 16, 28, 30, 31, 33, 34, 35, 36, 38, 39, 42, 44
- SD Gwinnett (16 districts): 5, 7, 9, 14, 17, 27, 40, 41, 43, 45, 46, 47, 48, 49, 50, 55
- SD Southwest (6 districts): 11, 12, 13, 15, 18, 29
- SD East Black Belt (7 districts): 4, 20, 22, 23, 24, 25, 26
- SD Southeast (5 districts): 1, 2, 3, 8, 19
- SD Northwest (8 districts): 21, 32, 37, 51, 52, 53, 54, 56

4.3 State House

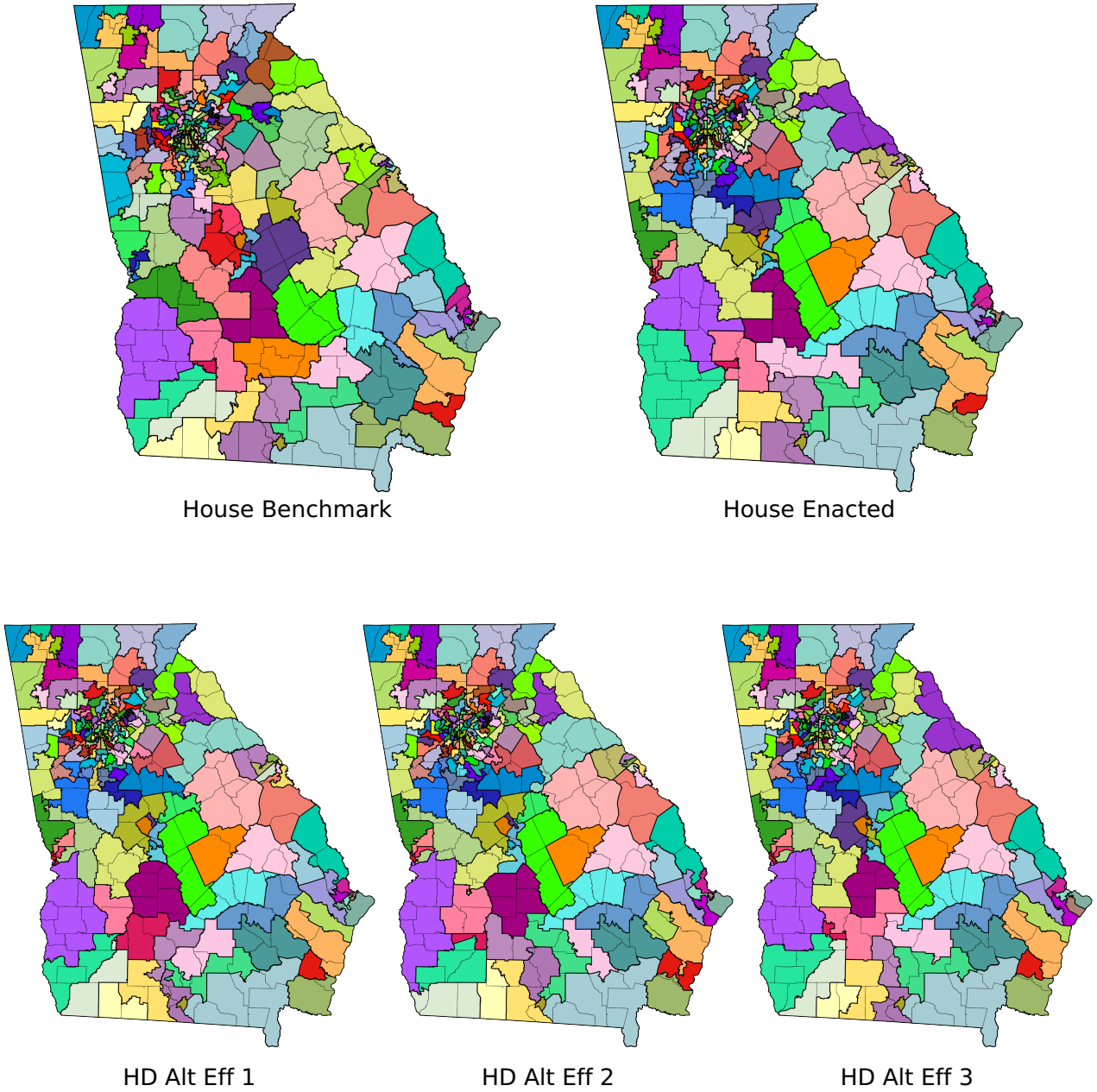


Figure 6: State House plans.

The state House plan repeats the uncompetitive design found in the other levels of redistricting; only fifteen of the 180 districts were within a ten-point margin for Biden-Trump, and only nine (HD 48, 50, 53, 99, 101, 105, 108, 117, and 151) had 2022 legislative outcomes in that range. Like in the Senate, more than half of the House districts—93 out of 180—were uncontested in 2022.

I have extended the modular approach from state Senate to the House, using seven regions formed by clusters of enacted districts, as in Figure 7. Each can be reconfigured to create

additional majority-coalition districts, and I offer up to two demonstration maps per cluster (Alt 1 and Alt 2) as Gingles 1 demonstratives in §7. As overviewed in Table 10, the alternative plans can be completed to highly effective alternatives statewide, which I call HD Alt Eff 1 and HD Alt Eff 2; a third all-clusters effective alternative is also offered, called HD Alt Eff 3.

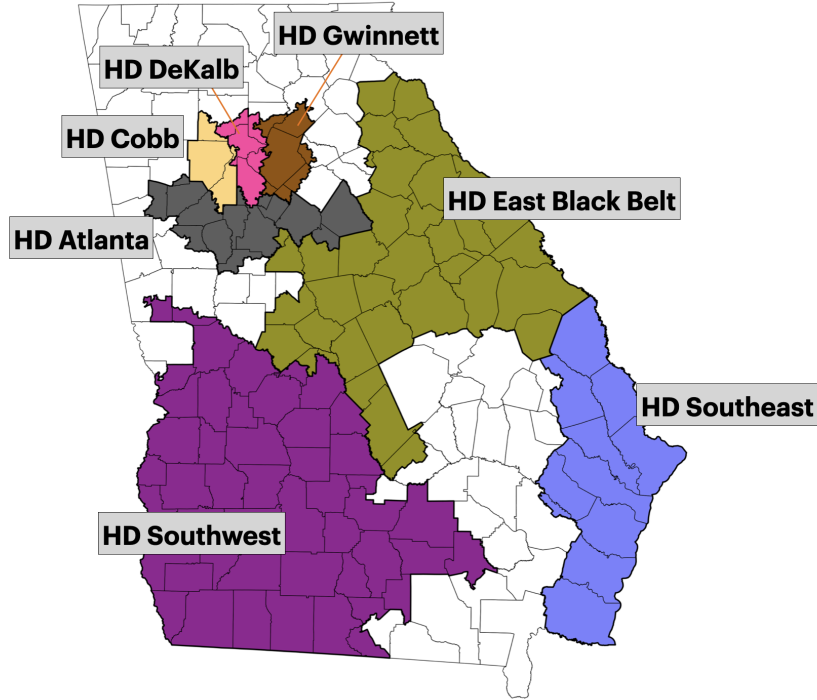


Figure 7: Seven "modular" House clusters made up of groups of enacted districts.

House Clusters

- HD Atlanta (25 districts): 61, 64, 65, 66, 67, 68, 69, 71, 73, 74, 75, 76, 77, 78, 79, 90, 91, 92, 93, 112, 113, 114, 115, 116, 117
- HD Cobb (25 districts): 20, 22, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 53, 54, 55, 56, 57, 58, 59, 60, 62, 63
- HD DeKalb (22 districts): 21, 24, 25, 47, 48, 49, 50, 51, 52, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 96, 97, 98
- HD Gwinnett (18 districts): 26, 29, 30, 94, 95, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111
- HD Southwest (18 districts): 137, 140, 141, 146, 147, 148, 150, 151, 152, 153, 154, 169, 170, 171, 172, 173, 175, 176
- HD East Black Belt (18 districts): 33, 118, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 142, 143, 144, 145, 149
- HD Southeast (12 districts): 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 179, 180

Together, these cover 138 of the 180 districts in the Georgia House. All of my demonstrative plans will leave the other 42 House districts unchanged.

5 Assessing effective opportunity-to-elect districts

The Gingles demonstration maps shown below in Section 7 are presented to satisfy the Gingles 1 condition for use with a Voting Rights Act challenge. In part, they are designed to show that it is (readily) possible to draw additional districts with a majority of Black and Latino adults in many parts of the state of Georgia, and for each of the three levels of districting plan, even while giving great deference to the Legislative enacted plan by only replacing its districts in modular clusters.⁵

In addition to demographic composition, I have offered alternative districts that showcase *effective electoral opportunity*. This shows that the harms to voters can be remedied by better design and, in the context of racial gerrymandering, demonstrates that better performance on traditional districting principles is completely compatible with greater electoral opportunity for Black and Latino voters.

There are many reasons that we should not rely on the 50%+1 line as a predictor of electoral opportunity. Some have argued that the Gingles/Bartlett 50%+1 requirement requires an element of race-consciousness that is in tension with other aspects of best practices in map-making. Additionally, a demographic share alone does not take into account voting eligibility, registration levels, and turnout. It has long been well understood that a majority-minority district is neither necessary nor sufficient to secure electoral opportunity.

Therefore it is critical to use electoral history to gauge whether a district affords a reasonable opportunity for a group to elect a candidate of its choice. I will describe an effectiveness analysis here and will provide demonstration maps emphasizing increased electoral opportunity for Black and Latino voters, without any racial threshold in play, in §9.

5.1 Identifying probative elections

In the voting rights sphere, it is well understood that certain past elections are more probative—that is, provide better and clearer evidence of polarization patterns and preferences—than others. The peer-reviewed literature is certainly clear that some factors flagging probative contests include the following: all other things being equal, elections are more suitable for an effectiveness analysis when they are more recent, when they have a viable POC candidate on the ballot, and when we can make confident statistical inferences about each group's preference. They are less suitable when they are blowouts or, of course, uncontested.

To this end, I have designated the following eight general elections and four Democratic primary elections (Tables 3) to be especially probative for analyzing effective electoral opportunity for Black and Latino voters in Georgia. All are recent statewide elections (held since 2018), most have a Black candidate on the ballot, and most are quite close on a statewide basis.⁶

⁵It is my understanding that the VRA, as clarified in *Bartlett v. Strickland*, requires a demonstration of additional districts that are have at least 50%+1 minority population. The usual standard uses VAP, or voting age population, when Black voters are the main minority group in a challenge; sometimes, CVAP, or citizen voting age population, is used when the principal group of plaintiffs has a large share of immigrants, as for Latino or Asian plaintiffs. In this case, the claims are for a coalition of Black and Latino voters, and I have used both VAP and CVAP, as explained in §3.2.

⁶Even Robinson's primary election, which was won with nearly 63% of the statewide vote, shows substantial district-level variation. By contrast, in the Democratic primary for Governor in 2018, Abrams won with 76.4% and with little regional variation, making it a less informative contest, which explains why it is not included.

Year	Contest	R Candidate	D Candidate	D share
2016	President	Trump-Pence	Clinton-Kaine	.4734
2018	Governor	Brian Kemp	Stacey Abrams (B)	.4930
2018	Super. Pub. Instruc.	Richard Woods	Otha Thornton (B)	.4697
2020	President	Trump-Pence	Biden-Harris (B)	.5013
2020	Public Serv. Commiss.	Lauren McDonald	Daniel Blackman (B)	.4848
2021	Senate Runoff	David Perdue	Jon Ossoff	.5061
2021	Senate Runoff Special	Kelly Loeffler	Raphael Warnock (B)	.5104
2022	Governor	Brian Kemp	Stacey Abrams (B)	.4620

Year	Contest	BH-Preferred Candidate	D share (outcome)
2018	Lt. Governor	Triana Arnold James (B)	.4475 (L)
2018	Super. Primary	Otha Thornton (B)	.4387 (1st of 3)
2018	Super. Runoff	Otha Thornton (B)	.5914 (W)
2018	Insurance Commiss.	Janice Laws Robinson (B)	.6286 (W)

Table 3: Eight general elections and four primaries and primary runoffs are chosen for the score of effectiveness.

5.2 Constructing and evaluating a score of electoral alignment

Using the four primary and eight general elections listed here, I will deem a district to be *effective* if it is electorally aligned with the preferences of Black and Latino voters in at least three out of four primaries and at least five out of eight general elections. This standard ascertains that minority-preferred candidates can be both nominated and elected from the district, and it distinguishes minority preferences from (related, but distinct) Democratic party preferences. This same core idea of measuring district effectiveness—keyed to electoral history, not to demographics of the district—appears frequently in the peer-reviewed literature, for instance in [1].

The enacted plans starkly limit the number of districts that earn the label of effective. Tables 4-6 show that five out of 14 Congressional districts are likely to give Black and Latino voters an effective opportunity to elect candidates of choice.

Similarly, the enacted plans have 19 expected effective districts out of 56 in the Senate, and 68/180 in the House. (For detailed supporting tables, see Appendix B.)

Since elections were conducted under these new districts in 2022, we can review some basic evidence about the success of the classification of "effective" opportunity districts. I have not conducted a racially polarized voting analysis, but we can nonetheless use information about whether each district elected candidates of color as a rough proxy for the preferences of voters of color. Since White and/or Republican candidates can certainly be preferred by voters of color, this is imperfect, but it is at least an indication that can help us assess the labeling mechanism.⁷ Here is what we find for the enacted plans:

- 5/5 Congressional districts marked effective elected POC Democrats (100%);
- 0/9 Congressional districts marked ineffective elected POC Democrats (0%);
- 18/19 Senate districts marked effective elected POC Democrats (94.7%);
- 1/37 Senate districts marked ineffective elected POC Democrats (2.7%);
- 58/68 House districts marked effective elected POC Democrats (85.3%);
- 4/112 House districts marked ineffective elected POC Democrats (3.6%).

CD	Primaries out of 4	Generals out of 8	Effective?
1	3	0	N
2	4	8	Y
3	3	0	N
4	3	8	Y
5	3	8	Y
6	0	0	N
7	3	8	Y
8	3	0	N
9	2	0	N
10	3	0	N
11	3	0	N
12	3	0	N
13	4	8	Y
14	3	0	N

Table 4: By the standard of requiring that the candidate of choice should win at least three out of four primaries and at least five out of eight generals, the enacted plan has five districts that present an effective opportunity: CD 2, 4, 5, 7, and 13.

CD	James18P	Thornton18P	Thornton18R	Robinson18P
overall	0.4475	0.4387	0.5914	0.6286
1	0.4992	0.4997	0.7150	0.6967
2	0.5515	0.4720	0.6379	0.7430
3	0.4177	0.4185	0.5388	0.6178
4	0.4566	0.4444	0.5622	0.6034
5	0.3747	0.4082	0.5611	0.5184
6	0.2815	0.3458	0.4720	0.4789
7	0.4489	0.4515	0.5968	0.6082
8	0.4861	0.4403	0.6273	0.6940
9	0.3411	0.3811	0.5444	0.5560
10	0.4112	0.4294	0.6444	0.5898
11	0.3603	0.4200	0.5276	0.5549
12	0.4928	0.4196	0.6462	0.7626
13	0.5594	0.5089	0.6524	0.7190
14	0.4190	0.3863	0.5049	0.6123

Table 5: Vote shares for the candidate of choice in probative primary and runoff elections. (Note that the Superintendent primary from 2018 (Thornton18P) is a race with three candidates, so a win is recorded if Thornton has the most votes, even if that does not exceed 50% of cast votes.)

⁷Indeed, Nan Orrock of SD 36, the only White Democrat in the Senate to be elected from a district marked effective, is an Associate Member of the Georgia Black Legislative Caucus, suggesting with high likelihood that she is the Black candidate of choice.

CD	Clinton16	Abrams18	Thornton18	Biden20	Blackman20	Ossoff21	Warnock21	Abrams22
overall	0.4734	0.4930	0.4697	0.5013	0.4848	0.5061	0.5104	0.4620
1	0.4149	0.4245	0.4105	0.4322	0.4193	0.4379	0.4386	0.3950
2	0.5463	0.5508	0.5354	0.5524	0.5445	0.5611	0.5624	0.5188
3	0.3168	0.3287	0.3119	0.3476	0.3312	0.3524	0.3564	0.3130
4	0.7692	0.7886	0.7567	0.7917	0.7789	0.7927	0.7982	0.7707
5	0.8352	0.8418	0.7910	0.8366	0.8080	0.8203	0.8287	0.8072
6	0.3603	0.3878	0.3498	0.4250	0.3851	0.4068	0.4151	0.3602
7	0.5727	0.6113	0.5788	0.6307	0.6136	0.6366	0.6421	0.5874
8	0.3430	0.3427	0.3280	0.3604	0.3473	0.3648	0.3664	0.3185
9	0.2650	0.2822	0.2668	0.3081	0.2897	0.3084	0.3129	0.2554
10	0.3510	0.3654	0.3518	0.3814	0.3650	0.3864	0.3903	0.3480
11	0.3708	0.4014	0.3741	0.4223	0.3972	0.4163	0.4233	0.3696
12	0.4324	0.4319	0.4174	0.4487	0.4331	0.4511	0.4526	0.4023
13	0.7790	0.8112	0.7916	0.8048	0.8068	0.8230	0.8261	0.8056
14	0.2767	0.2961	0.2873	0.3105	0.3015	0.3217	0.3234	0.2778

Table 6: Vote shares for the candidate of choice in probative general/runoff elections.

In addition, this method works quite well to distinguish race from party: if we flag districts with 0/4 primary wins and at least 5/8 general wins, these might reasonably be considered likely to elect White-preferred Democrats. There are no such districts in the enacted Congressional map, but the Senate map has three (which elected three White Democrats and one Asian Democrat in November 2022) and the House map has eight (which elected seven White Democrats and one Asian Democrat).

6 Metrics for enacted plans

Georgia has 14 Congressional districts, 56 state Senate districts, and 180 state House districts, making the task of redistricting into an extremely complicated balancing act. The list of substantive criteria for assessing districting plans that was published by each chamber of the Legislature reads as follows, in full:

A. GENERAL PRINCIPLES FOR DRAFTING PLANS

1. Each congressional district should be drawn with a total population of plus or minus one person from the ideal district size.
2. Each legislative district of the General Assembly should be drawn to achieve a total population that is substantially equal as practicable, considering the principles listed below.
3. All plans adopted by the Committee will comply with Section 2 of the Voting Rights Act of 1965, as amended.
4. All plans adopted by the Committee will comply with the United States and Georgia Constitutions.
5. Districts shall be composed of contiguous geography. Districts that connect on a single point are not contiguous.
6. No multi-member districts shall be drawn on any legislative redistricting plan.
7. The Committee should consider:
 - a. The boundaries of counties and precincts;
 - b. Compactness; and
 - c. Communities of interest.
8. Efforts should be made to avoid the unnecessary pairing of incumbents.
9. The identifying of these criteria is not intended to limit the consideration of any other principles or factors that the Committee deems appropriate.

This is unusually terse for a redistricting framework at the state level, declining to specify more detail, for example, about the operative principles of racial fairness, the definition of communities of interest, or even whether to encourage the use of quantitative metrics of compactness.

All of the plans under consideration are contiguous, and I will systematically discuss the other principles below.

6.1 Population balance

All plans are tightly balanced in population terms, using the Census redistricting data.

	Maximum positive deviation	Maximum negative deviation	Top-to-bottom deviation
EnactedCD	+1	-1	2
DuncanKennedy	+2	-1	3
CD Alt	+1	-1	2
EnactedSD	+1879	-1964	3843 (2.01%)
SD Alt Eff 1	+2457	-2598	5055 (2.64%)
SD Alt Eff 2	+2547	-2490	5037 (2.63%)
SD Alt Eff 3	+3200	-3305	6505 (3.40%)
EnactedHD	+797	-833	1630 (2.74%)
HD Alt Eff 1	+1194	-1176	2370 (3.98%)
HD Alt Eff 2	+1222	-1097	2319 (3.90%)
HD Alt Eff 3	+1173	-1026	2199 (3.70%)

Table 7: Population deviation in each plan.

6.2 Compactness

In redistricting, the notion of *compactness* is connected to the shapes of the districts, where simple boundaries and regular shapes are traditionally thought to indicate a "natural" division of population, while eccentric boundaries and contorted shapes can signal that some other agenda has predominated.

The two most common compactness metrics are the Polsby-Popper score and the Reock score. These are both *contour-based* scores that rely on the outline of the district on a map. *Polsby-Popper* is a ratio formed by comparing the district's area to its perimeter via the formula $4\pi A/P^2$. *Reock* considers how much of the smallest bounding circle is filled out by the district's area. Recently, mathematicians (such as myself) have argued for the use of discrete compactness metrics that de-emphasize the outline and instead consider how the districts are formed from units of census geography. The simplest discrete metric is called (*block*) *cut edges*, found by counting the number of pairs of census blocks that are adjacent to each other in the state, but are assigned to different districts. This assesses the "scissors complexity" of a plan, giving a measure of how many blocks would have to be separated from one another to divide up all the districts.

An advantage of the contour scores is that they are familiar and in wide use. An advantage of discrete scores is that they do not excessively penalize districts for having winding boundaries when those boundaries come from physical geography, like coastlines or rivers.

	avg Polsby-Popper (higher is better)	avg Reock (higher is better)	Block cut edges (lower is better)
BenchmarkCD	0.238	0.452	5775
EnactedCD	0.267	0.441	5075
DuncanKennedy	0.295	0.471	4665
CD Alt	0.287	0.452	4729
BenchmarkSD	0.250	0.421	12,549
EnactedSD	0.287	0.418	11,005
SD Alt Eff 1	0.287	0.427	10,897
SD Alt Eff 2	0.296	0.440	10,349
SD Alt Eff 3	0.295	0.431	10,479
BenchmarkHD	0.244	0.382	24,001
EnactedHD	0.278	0.391	22,014
HD Alt Eff 1	0.275	0.399	21,360
HD Alt Eff 2	0.281	0.406	21,301
HD Alt Eff 3	0.279	0.403	20,917

Table 8: Compactness scores for each plan.

Note that compactness scores should only be used to make relative assessments, comparing plans to others in the same state and at the same level of redistricting.

6.3 Respect for political boundaries

The most populous Georgia counties by 2020 population are Fulton County (pop. 1,066,710), Gwinnett County (pop. 957,062), Cobb County (pop. 766,149), and DeKalb County (pop. 764,382). Both Cobb and DeKalb are within 0.1% of ideal Congressional district size of 765,136, with Cobb slightly larger and DeKalb slightly smaller.⁸

Since there are four times as many Senate as Congressional districts, this also means that Cobb (4.005) and DeKalb (3.996) are ideally suited in population terms to make up four Senate districts; in addition, Gwinnett (5.003) is very nearly five times ideal Senate population. Instead, Cobb touches six Senate districts, DeKalb touches seven, and Gwinnett is split among nine in the enacted Senate plan. This observation spotlights the fact that it is important to consider not only how many counties are split, but into how many pieces, as in Table 9. If a unit is split in two, that adds two to the "pieces" count; likewise, if it is split into three parts, this counts as three "pieces," and so on. Unsplit units do not count toward "pieces." (A forensic look at the nature of the county and precinct splits can be found below in §10.2.) In this table, the "muni" units are Census places with functional status A ("Active government providing primary general-purpose functions").⁹ These primarily include cities and towns.

	County Splits (out of 159)	County Pieces	Muni Splits (out of 538)	Muni Pieces	Precinct Splits (out of 2685)	Precinct Pieces
BenchmarkCD	16	38	67	141	67	134
EnactedCD	15	36	64	136	86	172
DuncanKennedy	15	36	53	114	66	132
CD Alt	13	30	58	127	47	95
BenchmarkSD	37	100	114	269	154	309
EnactedSD	29	89	109	266	144	289
SD Alt Eff 1	33	95	112	275	110	221
SD Alt Eff 2	26	78	108	264	97	196
SD Alt Eff 3	29	84	108	264	106	213
BenchmarkHD	72	284	169	506	303	630
EnactedHD	69	278	166	494	352	724
HD Alt Eff 1	73	276	164	492	279	570
HD Alt Eff 2	69	266	168	494	276	567
HD Alt Eff 3	69	265	165	478	277	567

Table 9: Number of county, muni, and precinct splits and pieces in each plan.

⁸This means that only three Georgia counties are larger than the ideal population of a Congressional district. Twelve Georgia counties are larger than ideal Senate size, and thirty-nine Georgia counties, from Fulton down to Effingham (pop. 64,769) are larger than ideal House size.

⁹<https://www.census.gov/library/reference/code-lists/functional-status-codes.html>

6.4 Racial demographics

Though majority-minority districts are not demanded for compliance with the Voting Rights Act, they nonetheless play a significant role in VRA litigation, especially in the Gingles 1 threshold test. For that purpose, plaintiffs must show maps with additional districts that are at least 50%+1 person composed of members of the specified minority group. Typically, when Black residents are the largest minority group, the basis for measurement is BVAP, or voting age population, as tabulated in the Decennial Census data. For a coalition of Black and Latino voters, we additionally use a secondary basis of population, in this case BHCVAP.

Here, I review the plans discussed in this report and enumerate the number of districts that have a majority of voting age population that is Black by VAP, Black and Latino by VAP, or Black and Latino by CVAP. The final column enumerates the number of districts that, according to their recent electoral history in statewide contests, are likely to provide an effective opportunity for Black and Latino voters to nominate and elect candidates of their choosing. Racial and ethnic categories are described in Appendix A, and the concept of measuring district effectiveness is delineated in §5.

	majority BVAP	majority BHVAP	majority BHCVAP	effective
BenchmarkCD	4	4	4	5
EnactedCD	2	5	4	5
Duncan-Kennedy CD Alt	3	5	4	5
	4	6	6	6
BenchmarkSD	14	17	17	19
EnactedSD	14	17	17	19
SD Alt Eff 1	17	23	22	23
SD Alt Eff 2	15	21	21	23
SD Alt Eff 3	8	17	16	28
BenchmarkHD	46	57	57	62
EnactedHD	49	62	60	68
HD Alt Eff 1	50	77	74	77
HD Alt Eff 2	44	75	71	79
HD Alt Eff 3	37	62	54	83

Table 10: The first three columns report the number of majority-BVAP, majority-BHVAP, and majority-BHCVAP districts, in the plans under discussion in this report. Overall, the state is 31.7% Black by VAP, 40.18% Black and Latino by VAP, and 38.43% Black and Latino by CVAP. The final column reports the number of districts labeled as effective in terms of electoral opportunity for Black and Latino voters.

6.5 Incumbency and core retention

Next, we review the handling of incumbency and the more general issue of reassigning voters to new districts in the plans under consideration. Note that members of Congress do not have to establish residency in the district that they represent, while Georgia law does have a district residency requirement for members of the state legislature.¹⁰ In this section, I am relying on address data for incumbents that was supplied by counsel and there is certainly a strong possibility that it is not fully up-to-date or accurate.

The enacted Congressional plan double-bunked two pairs of incumbents: Nikema Williams (D) and David Scott (D) in CD 5; Jody Hice (R) and Andrew Clyde (R) in CD 10. However, Hice did not run for Congress in 2022, shifting to an unsuccessful run for Secretary of State, and David Scott already lived in CD 5 in the benchmark plan.

The enacted Senate plan also double-bunked two pairs of incumbents: Tyler Harper (R) and Carden Summers (R) in SD 13; Chuck Hufstetler (R) and Bruce Thompson (R) in SD 52. But Harper ran a successful campaign for Agriculture Commissioner, leaving Summers to win SD 13, while Thompson ran a successful campaign for Labor Commissioner, leaving SD 52 for Hufstetler. This leaves no meaningful pairings in the Senate map.

The shifting of incumbents is also apparent in the state House map. The enacted House plan seemingly double-bunks seventeen pairs of incumbents: nine R/R pairs, six D/D pairs, and two R/D pairs.

However, the apparent HD 10 collision is suspect (likely due to an inaccurate address for Lauren "Bubba" McDonald) because McDonald was reelected in HD 26, which contains no incumbent address from our list. Several seeming collisions are not meaningful because one of the Representatives had already retired or resigned: this includes Micah Gravley (now located in HD 19), Wes Cantrell (HD 21), Tommy Benton (HD 31), Matt Dollar (HD 45), Susan Holmes (HD 118), and Dominic LaRiccia (HD 176). The HD 100 collision is real, and Bonnie Rich lost to David Clark in the Republican primary; the HD 149 collision also ended in a primary showdown.

Among Democratic collisions, we note that Matthew Wilson (placed in HD 52) made an unsuccessful primary run for Insurance Commissioner; William Boddie made an unsuccessful run for Labor Commissioner; and David Dreyer (HD 62) did not run. Mitchell and Hutchinson did face off in a primary in HD 106.

Among the R/D collisions, Mickey Stephens (HD 74) died in office; Timothy Barr (HD 101) ran an unsuccessful primary for CD 10; and Winifred Dukes (HD 154) ran an unsuccessful primary for Agriculture Commissioner.

In all, this means that of 17 apparent collisions of incumbents, only three ended in a contest between incumbents. By far most of the others seem to be explained by retirement, resignation, or a run for another office.¹¹

While incumbent pairings were therefore avoided, this is not to say that the new House plan was very favorable to incumbents in other ways. As I will discuss throughout this report, the state's line-drawers clearly placed a low priority on *core retention*, i.e., on maintaining voters in the same districts as they belonged to in the benchmark plan. The enacted plans for Congress and for state Senate each reassign more than two million residents to new districts relative to the prior assignment of their census block. But the House plan is on another level, with 6,135,234 people—roughly three out of every five Georgia residents—voting in a different district than before. This unusually high displacement is certainly permissible under the law, but it reveals that the legislature was willing to accept major changes to the map in pursuit of other goals. Below, in §10.1, I will present a closer look at which districts were particularly targeted for wholesale reconfiguration.

¹⁰See law.georgia.gov/opinions/2001-3-0.

¹¹With the caveat that these numbers may not be highly meaningful without considering who planned to run again, and that they may not be wholly accurate, here are the numbers of districts with more than one incumbent address for the alternative plans. Benchmark CD - 1, SD - 0, HD - 5; Duncan-Kennedy - 3; CD Alt - 3; SD Alt Eff 1 - 11; SD Alt Eff 2 - 8; SD Alt Eff 3- 9; HD Alt Eff 1 - 35; HD Alt Eff 2 - 31; HD Alt Eff 3 - 31.

7 Gingles demonstration plans

7.1 Congressional alternatives

The state's enacted Congressional plan has two majority-BVAP districts (CD 4 and CD 13). Moving to the Black and Latino coalition, three more districts (CD 2, CD 5, and CD 7, by a hair) join these in being majority-BHVAP. However, if we switch the basis of population to CVAP rather than VAP, the number of coalition districts in the state's enacted plan drops to 4, losing CD 7.

Here, I have provided an alternative plan with 4/6/6 majority districts (by BVAP, BHVAP, and BHCVAP, respectively). That is, the six coalition-majority districts (CD 2, 3, 4, 5, 7, and 13) are still BH-majority on the basis of CVAP, making this a gain of two districts over the state. The newcomer to the list is CD 3, which runs along Georgia's western border, connecting the metro Atlanta area to Sanford Bishop's district in the southwest. By the notion of electoral effectiveness outlined in §5 below, all six of these districts offer an effective opportunity for Black and Latino voters to elect candidates of choice (Table 50).

CD	CD Enacted (Statewide)						CD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
1	28.2%	6.8%	35.0%	60.4%	0.285	0.456	30.3%	6.9%	37.2%	58.5%	0.312	0.633
2	49.3%	5.1%	54.4%	42.7%	0.267	0.458	47.7%	4.7%	52.4%	44.5%	0.315	0.494
3	23.3%	5.3%	28.6%	66.8%	0.275	0.461	51.2%	7.2%	58.4%	37.4%	0.278	0.411
4	54.5%	10.1%	64.6%	28.3%	0.246	0.307	50.6%	8.2%	58.8%	33.8%	0.295	0.481
5	49.6%	6.7%	56.3%	37.9%	0.322	0.512	50.1%	11.4%	61.5%	33.4%	0.216	0.424
6	9.9%	9.1%	19.0%	66.6%	0.198	0.424	13.7%	10.9%	24.6%	57.1%	0.232	0.346
7	29.8%	21.3%	51.1%	32.8%	0.386	0.496	34.3%	22.4%	56.7%	29.4%	0.351	0.518
8	30.0%	6.1%	36.1%	60.5%	0.210	0.338	27.3%	6.9%	34.2%	63.0%	0.227	0.377
9	10.4%	12.9%	23.3%	68.3%	0.253	0.380	4.6%	11.5%	16.1%	77.9%	0.403	0.512
10	22.6%	6.5%	29.1%	66.2%	0.284	0.558	17.6%	6.9%	24.5%	69.8%	0.335	0.576
11	17.9%	11.2%	29.1%	64.0%	0.207	0.480	17.6%	7.6%	25.2%	68.1%	0.283	0.364
12	36.7%	4.9%	41.6%	54.6%	0.278	0.502	39.2%	4.6%	43.8%	51.9%	0.181	0.489
13	66.7%	10.5%	77.2%	18.8%	0.157	0.380	52.0%	6.8%	58.8%	37.8%	0.276	0.510
14	14.3%	10.6%	24.9%	71.3%	0.373	0.426	7.6%	11.0%	18.6%	77.0%	0.514	0.484
Avg					0.267	0.441					0.301	0.473

Table 11: VAP statistics and compactness comparison by district for the enacted Congressional plan and an alternative plan. The alternative plan has more majority-minority districts; it is also more compact by all three scores of compactness, including both contour-based scores in the table as well as 4665 rather than 5075 cut edges. The alternative also splits only 13 counties while the enacted plan splits 15. CVAP comparison is shown below in Table 24.

7.2 State Senate alternatives

Overall, the enacted state Senate plan creates majority BVAP/BHVAP/BHCVAP majority districts in the numbers 14/17/17 out of 56. By mixing and matching the options I have provided, my modular alternatives can replace that with a new Senate plan with an additional 1-6 majority districts.

The increase is accomplished while maintaining other traditional principles—like compactness and splitting scores—that are generally comparable to or better than those of the state's enacted plan.

Below, I will review the Gingles demonstration alternatives one cluster at a time, showing the enacted plan and alternatives (which sometimes include both an Alt 1 and an Alt 2) for each cluster. The purpose of showing multiple alternatives is to illustrate the kinds of tradeoffs present in all redistricting problems, and to give a sense of the enormous range of possible directions for satisfying the Gingles 1 threshold test.

7.2.1 SD Atlanta

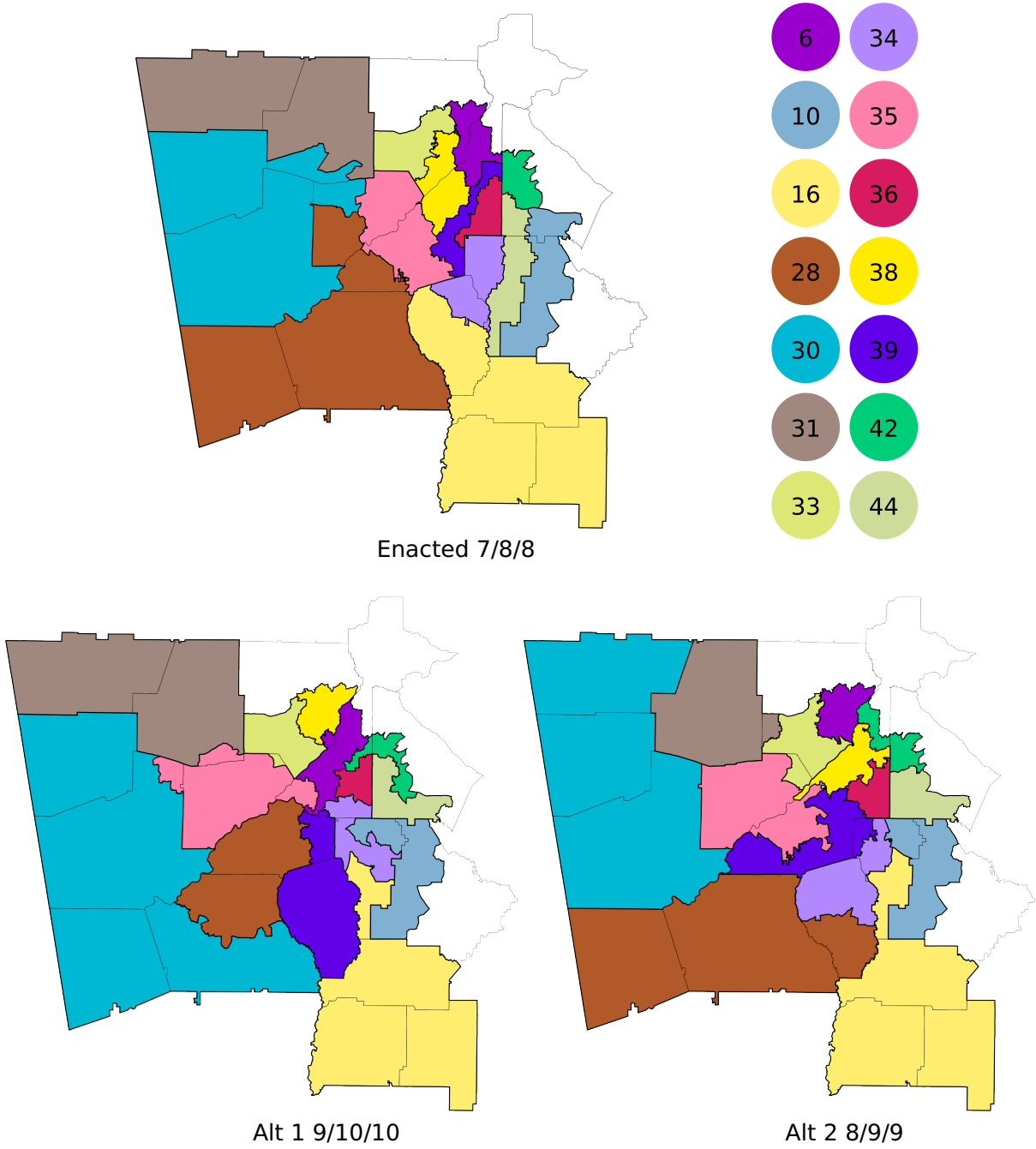


Figure 8: SD Atlanta (14 districts).

SD	SD Atlanta Enacted						SD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
6	23.9%	8.2%	32.1%	57.8%	0.236	0.405	50.1%	6.1%	56.2%	39.8%	0.169	0.246
10	71.5%	5.2%	76.7%	19.6%	0.231	0.281	59.5%	11.0%	70.5%	23.4%	0.238	0.420
16	22.7%	5.0%	27.7%	66.9%	0.314	0.368	50.2%	6.2%	56.4%	40.9%	0.254	0.354
28	19.5%	6.4%	25.9%	69.4%	0.246	0.445	50.6%	6.8%	57.4%	39.3%	0.335	0.489
30	20.9%	6.1%	27.0%	69.4%	0.407	0.597	14.3%	5.1%	19.4%	76.9%	0.286	0.361
31	20.7%	7.4%	28.1%	68.3%	0.379	0.366	19.7%	7.2%	26.9%	69.4%	0.470	0.395
33	43.0%	22.9%	65.9%	30.2%	0.215	0.401	50.4%	18.1%	68.5%	27.9%	0.381	0.528
34	69.5%	12.7%	82.2%	13.4%	0.335	0.451	72.2%	11.6%	83.8%	11.5%	0.163	0.326
35	71.9%	7.5%	79.4%	18.8%	0.263	0.472	50.9%	8.0%	58.9%	38.2%	0.347	0.400
36	51.3%	7.1%	58.4%	36.2%	0.305	0.321	50.0%	5.7%	55.7%	38.8%	0.339	0.452
38	65.3%	8.4%	73.7%	21.9%	0.208	0.361	27.9%	15.4%	43.3%	46.1%	0.271	0.487
39	60.7%	5.6%	66.3%	27.9%	0.128	0.166	51.2%	5.4%	56.6%	38.6%	0.277	0.357
42	30.8%	8.6%	39.4%	51.4%	0.321	0.479	35.8%	9.6%	45.4%	43.5%	0.112	0.289
44	71.3%	8.6%	79.9%	15.3%	0.185	0.180	61.6%	3.6%	65.2%	31.0%	0.237	0.356
Avg					0.270	0.378					0.277	0.390

Table 12: SD Atlanta Alt 1 splits 8 counties within the cluster compared to 7 in the enacted plan and has a better discrete compactness score, with 2017 cut edges rather than 2197, to go with comparable Polsby-Popper and superior Reock compactness.

SD	SD Atlanta Enacted						SD Alt 2					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
6	23.9%	8.2%	32.1%	57.8%	0.236	0.405	28.0%	14.9%	42.9%	46.7%	0.256	0.477
10	71.5%	5.2%	76.7%	19.6%	0.231	0.281	59.7%	9.8%	69.5%	23.3%	0.307	0.416
16	22.7%	5.0%	27.7%	66.9%	0.314	0.368	48.4%	6.1%	54.5%	42.4%	0.258	0.366
28	19.5%	6.4%	25.9%	69.4%	0.246	0.445	15.8%	6.1%	21.9%	72.8%	0.347	0.371
30	20.9%	6.1%	27.0%	69.4%	0.407	0.597	15.7%	6.6%	22.3%	74.2%	0.473	0.508
31	20.7%	7.4%	28.1%	68.3%	0.379	0.366	25.9%	6.7%	32.6%	63.6%	0.591	0.636
33	43.0%	22.9%	65.9%	30.2%	0.215	0.401	50.6%	18.2%	68.8%	27.4%	0.224	0.463
34	69.5%	12.7%	82.2%	13.4%	0.335	0.451	54.4%	11.9%	66.3%	27.9%	0.246	0.381
35	71.9%	7.5%	79.4%	18.8%	0.263	0.472	60.9%	7.5%	68.4%	29.3%	0.206	0.490
36	51.3%	7.1%	58.4%	36.2%	0.305	0.321	54.0%	6.8%	60.8%	33.6%	0.263	0.466
38	65.3%	8.4%	73.7%	21.9%	0.208	0.361	51.0%	5.6%	56.6%	37.6%	0.154	0.260
39	60.7%	5.6%	66.3%	27.9%	0.128	0.166	86.5%	5.5%	92.0%	7.0%	0.118	0.271
42	30.8%	8.6%	39.4%	51.4%	0.321	0.479	17.0%	10.7%	27.7%	61.4%	0.144	0.282
44	71.3%	8.6%	79.9%	15.3%	0.185	0.180	76.3%	3.2%	79.5%	18.7%	0.374	0.456
Avg					0.270	0.378					0.283	0.417

Table 13: SD Atlanta Alt 2 splits 6 counties within the cluster and has just 1985 cut edges, better than the enacted plan's 7 and 2197, while also improving on both contour-based compactness scores.

Exhibit 2a

7.2.2 SD Gwinnett

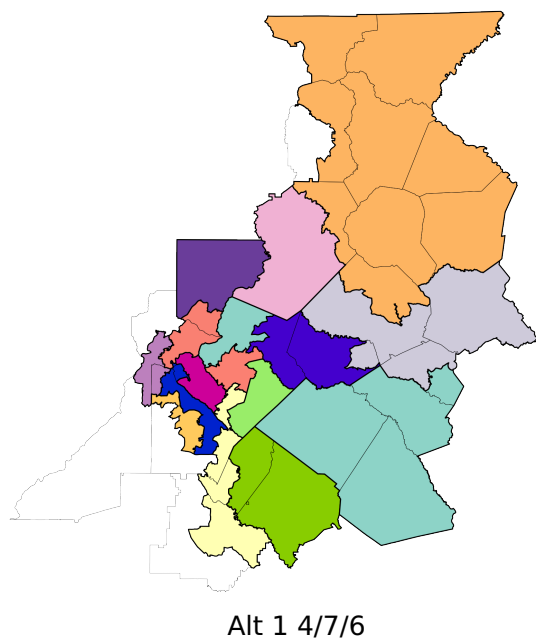
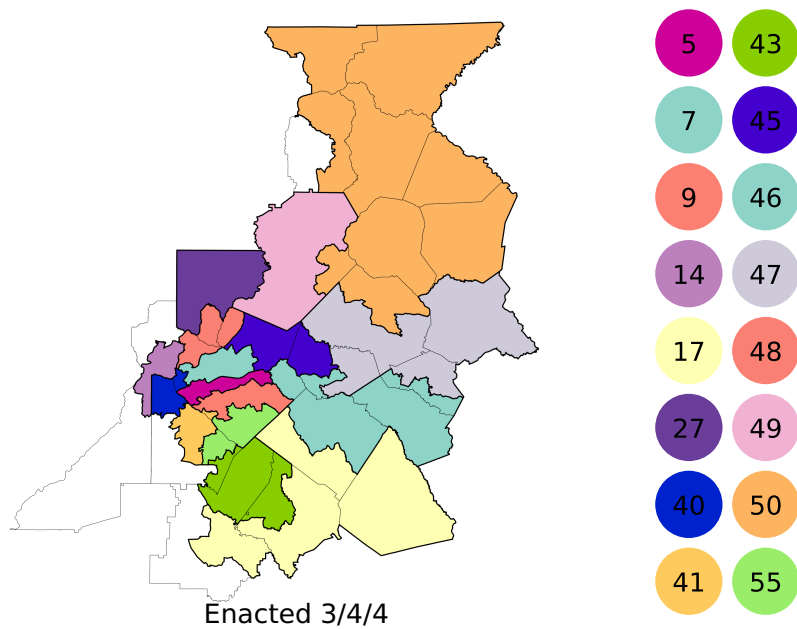


Figure 9: SD Gwinnett (16 districts).

SD	SD Gwinnett Enacted						SD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
5	29.9%	41.7%	71.6%	15.7%	0.207	0.166	20.3%	34.6%	54.9%	28.0%	0.285	0.384
7	21.4%	16.6%	38.0%	37.8%	0.339	0.344	17.1%	14.3%	31.4%	45.5%	0.278	0.401
9	29.5%	18.8%	48.3%	35.8%	0.213	0.233	29.3%	27.0%	56.3%	26.2%	0.234	0.498
14	19.0%	12.1%	31.1%	57.1%	0.242	0.273	18.1%	11.4%	29.5%	57.6%	0.208	0.296
17	32.0%	5.1%	37.1%	59.4%	0.168	0.342	51.1%	6.6%	57.7%	35.9%	0.113	0.188
27	5.0%	10.2%	15.2%	71.5%	0.456	0.499	4.7%	10.2%	14.9%	70.8%	0.500	0.497
40	19.2%	21.6%	40.8%	46.3%	0.345	0.508	50.1%	17.7%	67.8%	25.1%	0.130	0.208
41	62.6%	6.7%	69.3%	21.4%	0.302	0.509	57.3%	10.0%	67.3%	23.3%	0.149	0.279
43	64.3%	6.9%	71.2%	26.5%	0.346	0.635	52.0%	7.0%	59.0%	38.3%	0.420	0.537
45	18.6%	13.1%	31.7%	55.5%	0.305	0.350	19.8%	12.1%	31.9%	58.8%	0.226	0.380
46	16.9%	7.0%	23.9%	69.9%	0.207	0.365	16.5%	5.0%	21.5%	73.4%	0.416	0.514
47	17.4%	9.6%	27.0%	67.5%	0.187	0.353	16.7%	8.7%	25.4%	68.5%	0.176	0.326
48	9.5%	7.0%	16.5%	52.2%	0.342	0.348	10.1%	6.4%	16.5%	54.8%	0.266	0.387
49	8.0%	21.9%	29.9%	65.6%	0.341	0.461	8.1%	24.6%	32.7%	62.8%	0.382	0.573
50	5.6%	8.8%	14.4%	81.5%	0.228	0.450	5.4%	6.1%	11.5%	84.3%	0.232	0.462
55	66.0%	8.7%	74.7%	20.6%	0.271	0.333	50.0%	13.9%	63.9%	30.0%	0.419	0.451
Avg					0.281	0.386					0.277	0.399

Table 14: SD Gwinnett Alt 1 has 9 splits and 2024 cut edges, both better than the enacted plan (10 and 2232). The Polsby-Popper scores are comparable while the alternative plan has a better Reock score.

7.2.3 SD East Black Belt

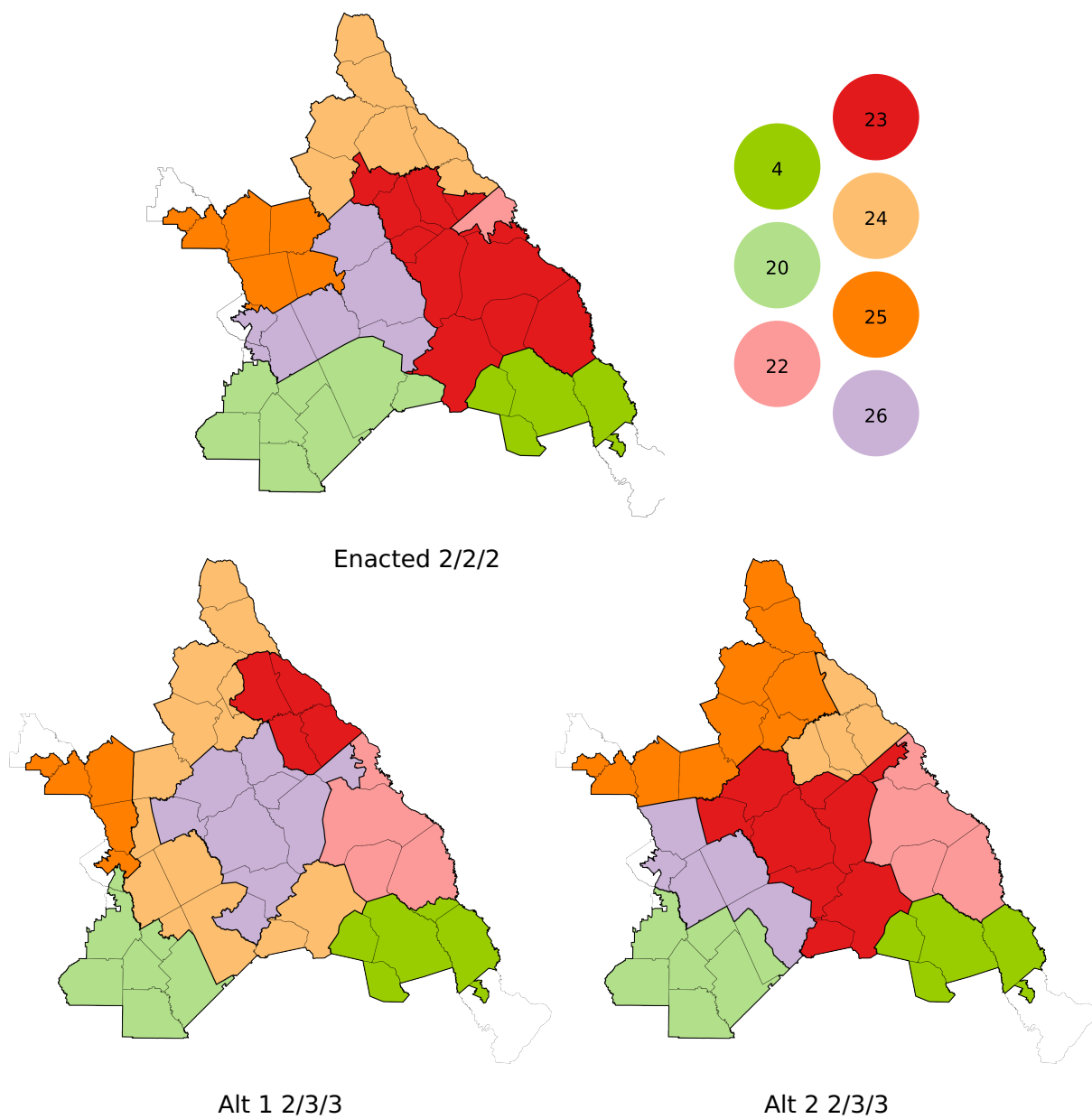


Figure 10: SD East Black Belt (7 districts).

SD	SD East Black Belt Enacted						SD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
4	23.4%	5.5%	28.9%	66.8%	0.265	0.471	23.5%	5.5%	29.0%	66.7%	0.284	0.495
20	31.3%	3.5%	34.8%	61.7%	0.358	0.404	34.4%	5.1%	39.5%	56.5%	0.231	0.498
22	56.5%	5.3%	61.8%	34.4%	0.288	0.404	50.5%	3.8%	54.3%	42.6%	0.241	0.455
23	35.5%	4.5%	40.0%	56.9%	0.164	0.365	23.0%	5.6%	28.6%	64.6%	0.466	0.497
24	19.9%	4.4%	24.3%	69.8%	0.213	0.366	25.0%	3.5%	28.5%	69.1%	0.083	0.229
25	33.5%	3.7%	37.2%	59.9%	0.241	0.386	50.0%	4.0%	54.0%	43.4%	0.174	0.344
26	57.0%	4.2%	61.2%	36.6%	0.203	0.469	50.1%	3.7%	53.8%	43.4%	0.209	0.472
Avg					0.247	0.409					0.241	0.427

Table 15: SD East Black Belt Alt 1 has more cut edges than the state (1301 vs. 1021 from the enacted plan), paired with a comparable Polsby-Popper and a superior Reock score. This alternative plan splits seven counties while the state splits four within the cluster.

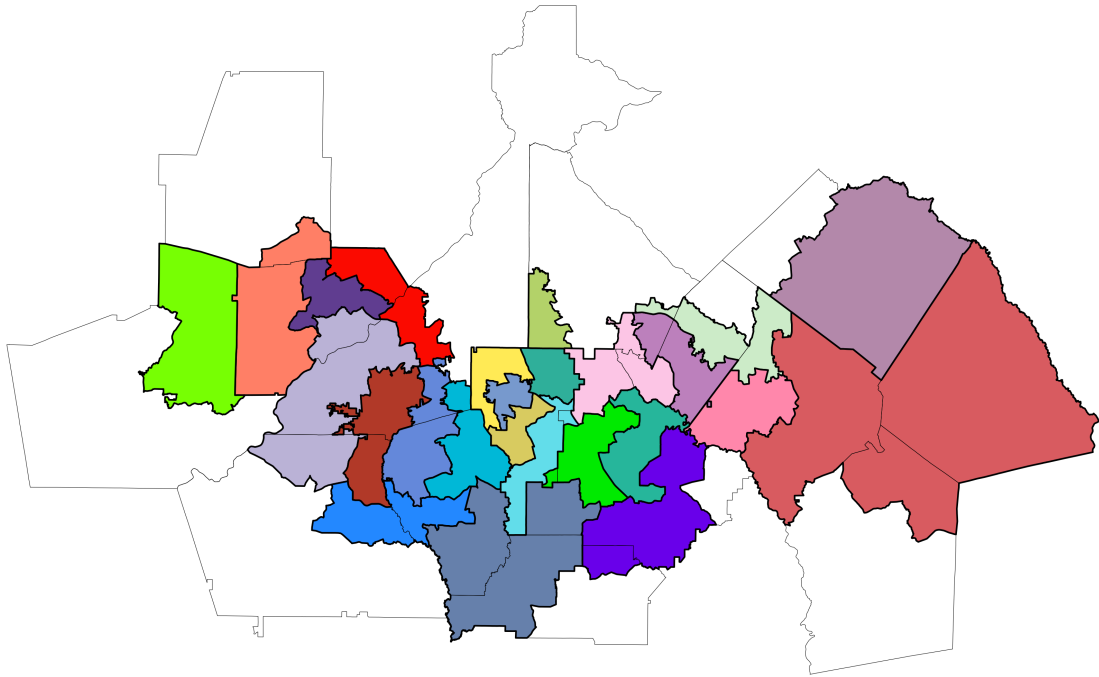
SD	SD East Black Belt Enacted						SD Alt 2					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
4	23.4%	5.5%	28.9%	66.8%	0.265	0.471	23.4%	5.5%	28.9%	66.8%	0.265	0.471
20	31.3%	3.5%	34.8%	61.7%	0.358	0.404	32.5%	4.9%	37.4%	58.7%	0.304	0.586
22	56.5%	5.3%	61.8%	34.4%	0.288	0.404	50.4%	3.5%	53.9%	42.9%	0.264	0.432
23	35.5%	4.5%	40.0%	56.9%	0.164	0.365	47.4%	4.1%	51.5%	45.8%	0.231	0.441
24	19.9%	4.4%	24.3%	69.8%	0.213	0.366	23.1%	5.6%	28.7%	64.5%	0.327	0.458
25	33.5%	3.7%	37.2%	59.9%	0.241	0.386	28.2%	4.5%	32.7%	64.3%	0.176	0.311
26	57.0%	4.2%	61.2%	36.6%	0.203	0.469	51.2%	3.1%	54.3%	43.5%	0.205	0.331
Avg					0.247	0.409					0.253	0.433

Table 16: SD East Black Belt Alt 2 has just two county splits, compared to four in the state's plan. With just 1008 cut edges, it also executes a clean sweep of compactness scores relative to the enacted plan.

7.3 State House alternatives

In the state House, the enacted plan creates majority districts for BVAP/BHVAP/BHCVAP in the numbers 49/62/60 out of 180. Taken together, my modular alternatives can combine to replace that with a new House plan with up to 77 majority-BHVAP districts and up to 74 majority-BHCVAP districts.

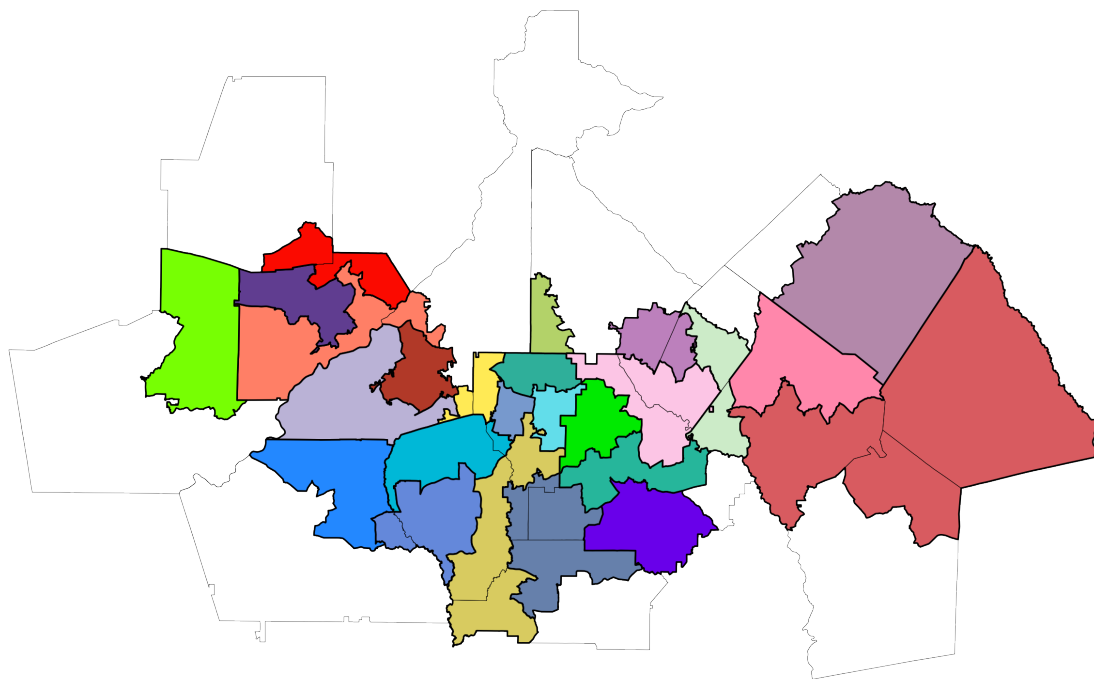
7.3.1 HD Atlanta



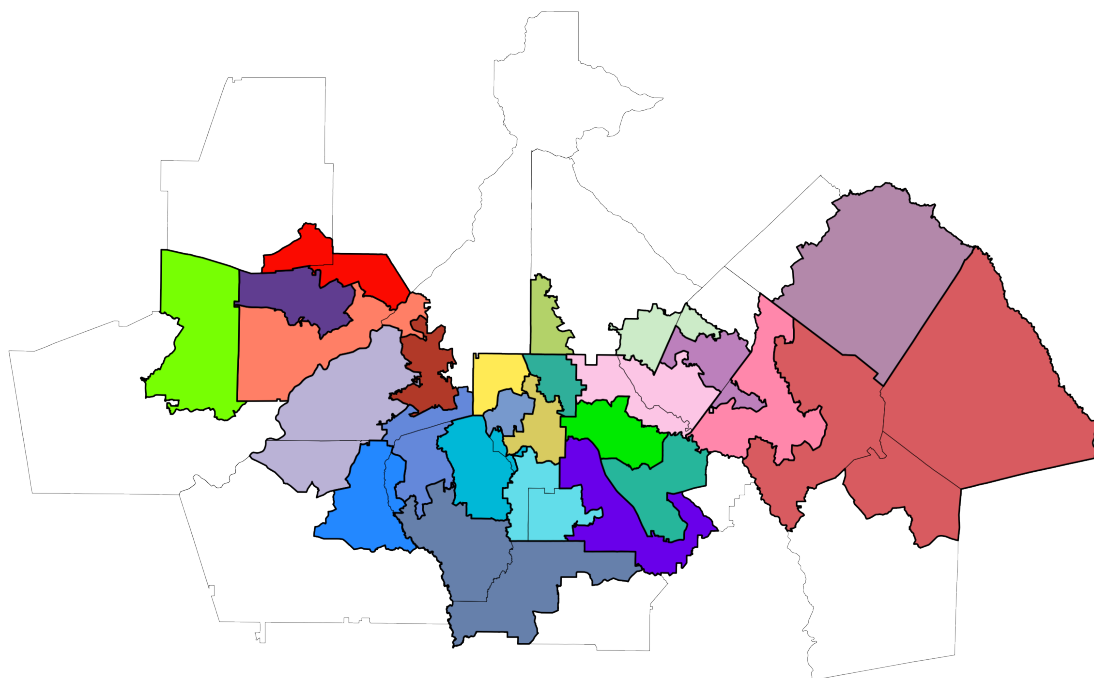
Enacted 18/18/18



Figure 11: HD Atlanta (25 districts).



Alt 1 20/20/20



Alt 2 19/20/20

Figure 12: HD Atlanta (25 districts).

HD	HD Atlanta Enacted						HD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
61	74.3%	7.6%	81.9%	16.8%	0.198	0.247	50.1%	10.0%	60.1%	37.1%	0.229	0.265
64	30.7%	7.4%	38.1%	57.8%	0.361	0.365	50.9%	6.5%	57.4%	40.0%	0.132	0.263
65	62.0%	4.5%	66.5%	31.5%	0.172	0.454	81.7%	4.7%	86.4%	12.5%	0.222	0.350
66	53.4%	9.5%	62.9%	33.9%	0.246	0.356	51.0%	9.0%	60.0%	36.2%	0.256	0.386
67	58.9%	7.8%	66.7%	30.9%	0.122	0.357	89.9%	5.4%	95.3%	4.4%	0.195	0.515
68	55.7%	6.3%	62.0%	33.9%	0.172	0.318	13.7%	6.6%	20.3%	71.5%	0.310	0.518
69	63.6%	5.4%	69.0%	26.9%	0.247	0.403	51.9%	8.8%	60.7%	34.0%	0.339	0.409
71	19.9%	6.2%	26.1%	69.8%	0.352	0.441	19.9%	6.2%	26.1%	69.8%	0.350	0.441
73	12.1%	7.0%	19.1%	72.6%	0.198	0.278	11.8%	6.4%	18.2%	75.9%	0.335	0.417
74	25.5%	5.6%	31.1%	64.4%	0.247	0.496	50.8%	6.9%	57.7%	39.7%	0.205	0.461
75	74.4%	11.3%	85.7%	11.3%	0.285	0.420	54.2%	7.7%	61.9%	34.1%	0.133	0.230
76	67.2%	13.2%	80.4%	10.5%	0.509	0.524	61.6%	20.0%	81.6%	11.2%	0.460	0.409
77	76.1%	12.2%	88.3%	7.6%	0.211	0.396	89.6%	5.0%	94.6%	3.5%	0.211	0.292
78	71.6%	8.9%	80.5%	15.0%	0.194	0.210	64.2%	11.3%	75.5%	15.4%	0.256	0.414
79	71.6%	16.0%	87.6%	7.1%	0.209	0.498	73.3%	14.6%	87.9%	8.0%	0.370	0.444
90	58.5%	4.3%	62.8%	34.0%	0.286	0.359	58.5%	4.3%	62.8%	34.0%	0.286	0.359
91	70.0%	5.9%	75.9%	22.0%	0.202	0.447	50.3%	5.2%	55.5%	40.7%	0.245	0.384
92	68.8%	4.7%	73.5%	24.1%	0.198	0.361	87.6%	3.5%	91.1%	8.3%	0.260	0.543
93	65.4%	9.6%	75.0%	22.9%	0.112	0.260	62.1%	10.4%	72.5%	25.4%	0.160	0.232
112	19.2%	3.3%	22.5%	73.7%	0.522	0.619	19.2%	3.3%	22.5%	73.7%	0.522	0.619
113	59.5%	6.7%	66.2%	31.8%	0.318	0.501	51.0%	5.1%	56.1%	41.2%	0.338	0.425
114	24.7%	3.7%	28.4%	68.8%	0.283	0.502	32.8%	4.4%	37.2%	60.3%	0.267	0.438
115	52.1%	7.0%	59.1%	36.9%	0.226	0.436	50.2%	6.0%	56.2%	38.6%	0.193	0.282
116	58.1%	7.3%	65.4%	27.2%	0.280	0.407	54.8%	8.0%	62.8%	29.6%	0.333	0.478
117	36.6%	5.4%	42.0%	54.5%	0.275	0.408	51.0%	7.2%	58.2%	39.0%	0.409	0.511
Avg					0.257	0.402					0.281	0.403

Table 17: In HD Atlanta, the enacted plan has 10 county splits and 2221 cut edges. Alt 1 maintains 10 county splits and improves to 1988 cut edges.

HD	HD Atlanta Enacted						HD Alt 2					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
61	74.3%	7.6%	81.9%	16.8%	0.198	0.247	47.4%	10.1%	57.5%	39.6%	0.290	0.276
64	30.7%	7.4%	38.1%	57.8%	0.361	0.365	50.5%	6.8%	57.3%	40.0%	0.201	0.271
65	62.0%	4.5%	66.5%	31.5%	0.172	0.454	67.6%	4.1%	71.7%	26.6%	0.302	0.458
66	53.4%	9.5%	62.9%	33.9%	0.246	0.356	51.2%	9.1%	60.3%	36.0%	0.336	0.407
67	58.9%	7.8%	66.7%	30.9%	0.122	0.357	90.4%	5.3%	95.7%	4.0%	0.131	0.428
68	55.7%	6.3%	62.0%	33.9%	0.172	0.318	58.2%	6.8%	65.0%	31.0%	0.168	0.329
69	63.6%	5.4%	69.0%	26.9%	0.247	0.403	54.6%	6.3%	60.9%	34.4%	0.310	0.538
71	19.9%	6.2%	26.1%	69.8%	0.352	0.441	19.9%	6.2%	26.1%	69.8%	0.352	0.441
73	12.1%	7.0%	19.1%	72.6%	0.198	0.278	11.9%	7.0%	18.9%	73.6%	0.373	0.498
74	25.5%	5.6%	31.1%	64.4%	0.247	0.496	12.8%	5.7%	18.5%	75.5%	0.192	0.320
75	74.4%	11.3%	85.7%	11.3%	0.285	0.420	61.4%	12.0%	73.4%	17.6%	0.225	0.404
76	67.2%	13.2%	80.4%	10.5%	0.509	0.524	70.4%	13.2%	83.6%	9.6%	0.352	0.416
77	76.1%	12.2%	88.3%	7.6%	0.211	0.396	77.0%	12.6%	89.6%	7.0%	0.491	0.510
78	71.6%	8.9%	80.5%	15.0%	0.194	0.210	68.6%	8.4%	77.0%	21.0%	0.325	0.540
79	71.6%	16.0%	87.6%	7.1%	0.209	0.498	73.1%	15.5%	88.6%	7.5%	0.357	0.549
90	58.5%	4.3%	62.8%	34.0%	0.286	0.359	58.5%	4.3%	62.8%	34.0%	0.286	0.359
91	70.0%	5.9%	75.9%	22.0%	0.202	0.447	53.0%	5.2%	58.2%	38.4%	0.231	0.369
92	68.8%	4.7%	73.5%	24.1%	0.198	0.361	69.6%	6.9%	76.5%	21.3%	0.174	0.330
93	65.4%	9.6%	75.0%	22.9%	0.112	0.260	85.5%	7.2%	92.7%	7.0%	0.201	0.329
112	19.2%	3.3%	22.5%	73.7%	0.522	0.619	19.2%	3.3%	22.5%	73.7%	0.522	0.619
113	59.5%	6.7%	66.2%	31.8%	0.318	0.501	53.9%	5.6%	59.5%	37.9%	0.153	0.355
114	24.7%	3.7%	28.4%	68.8%	0.283	0.502	24.9%	3.8%	28.7%	68.6%	0.235	0.487
115	52.1%	7.0%	59.1%	36.9%	0.226	0.436	50.3%	6.9%	57.2%	39.8%	0.304	0.475
116	58.1%	7.3%	65.4%	27.2%	0.280	0.407	53.2%	7.9%	61.1%	31.0%	0.382	0.452
117	36.6%	5.4%	42.0%	54.5%	0.275	0.408	50.1%	6.5%	56.6%	38.4%	0.155	0.323
Avg					0.257	0.402					0.282	0.419

Table 18: With 9 county splits and 1995 cut edges, Alt 2 dominates the enacted plan.

7.3.2 HD Southwest

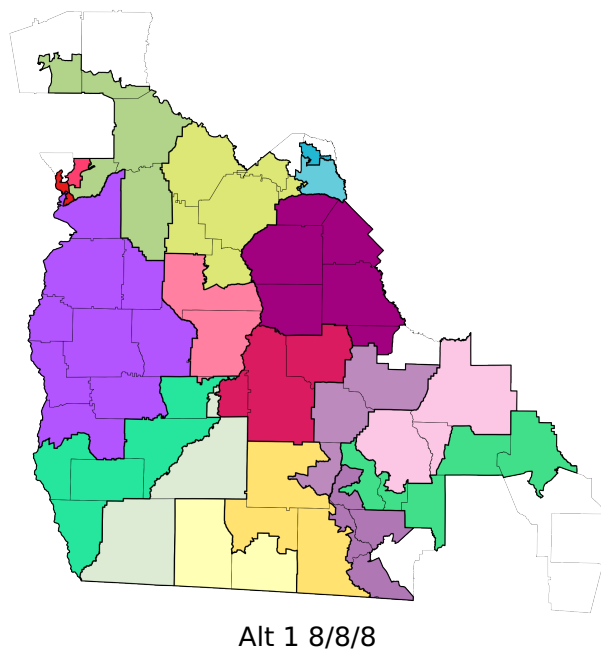
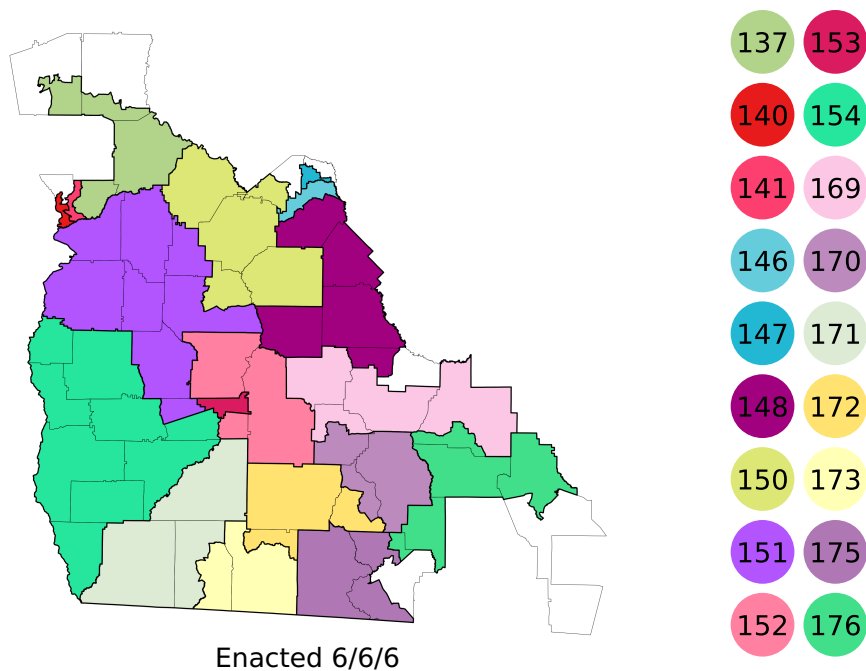


Figure 13: HD Southwest (18 districts).

HD	HD Southwest Enacted						HD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
137	52.1%	4.5%	56.6%	40.8%	0.165	0.328	51.7%	3.7%	55.4%	42.0%	0.143	0.259
140	57.6%	8.0%	65.6%	31.7%	0.192	0.289	57.1%	7.9%	65.0%	32.4%	0.197	0.257
141	57.5%	6.6%	64.1%	31.8%	0.200	0.261	53.6%	6.7%	60.3%	35.5%	0.299	0.423
146	27.6%	4.7%	32.3%	61.8%	0.195	0.257	23.3%	4.9%	28.2%	64.4%	0.208	0.468
147	30.1%	7.2%	37.3%	55.3%	0.261	0.331	31.8%	7.2%	39.0%	55.1%	0.220	0.341
148	34.0%	3.1%	37.1%	60.4%	0.235	0.438	38.6%	3.4%	42.0%	56.1%	0.388	0.590
150	53.6%	6.1%	59.7%	38.3%	0.275	0.439	51.2%	5.3%	56.5%	41.5%	0.250	0.544
151	42.4%	7.3%	49.7%	47.2%	0.222	0.528	51.0%	7.5%	58.5%	38.6%	0.275	0.424
152	26.1%	2.3%	28.4%	67.9%	0.297	0.394	34.2%	3.2%	37.4%	58.7%	0.314	0.473
153	67.9%	2.5%	70.4%	27.7%	0.297	0.298	52.9%	2.7%	55.6%	43.0%	0.400	0.536
154	54.8%	1.7%	56.5%	42.2%	0.332	0.410	50.1%	2.1%	52.2%	45.7%	0.175	0.261
169	29.0%	7.7%	36.7%	61.0%	0.226	0.283	24.0%	9.0%	33.0%	64.6%	0.296	0.456
170	24.2%	8.7%	32.9%	64.2%	0.342	0.531	26.8%	12.5%	39.3%	57.9%	0.223	0.285
171	39.6%	4.6%	44.2%	53.9%	0.368	0.347	51.0%	4.0%	55.0%	43.4%	0.249	0.275
172	23.3%	13.4%	36.7%	61.0%	0.316	0.437	25.1%	9.4%	34.5%	63.1%	0.217	0.375
173	36.3%	5.4%	41.7%	55.7%	0.378	0.564	35.4%	5.6%	41.0%	56.4%	0.412	0.424
175	24.2%	5.0%	29.2%	66.5%	0.374	0.472	21.0%	5.7%	26.7%	68.7%	0.143	0.273
176	22.7%	8.2%	30.9%	66.2%	0.160	0.335	23.8%	6.2%	30.0%	67.1%	0.116	0.227
Avg					0.269	0.386					0.252	0.383

Table 19: HD Southwest Alt 1 splits 12 counties within the cluster, to the state's 10 split counties. Its 2290 cut edges are more than the state's 2094, though the Reock scores are nearly identical.

7.3.3 HD East Black Belt

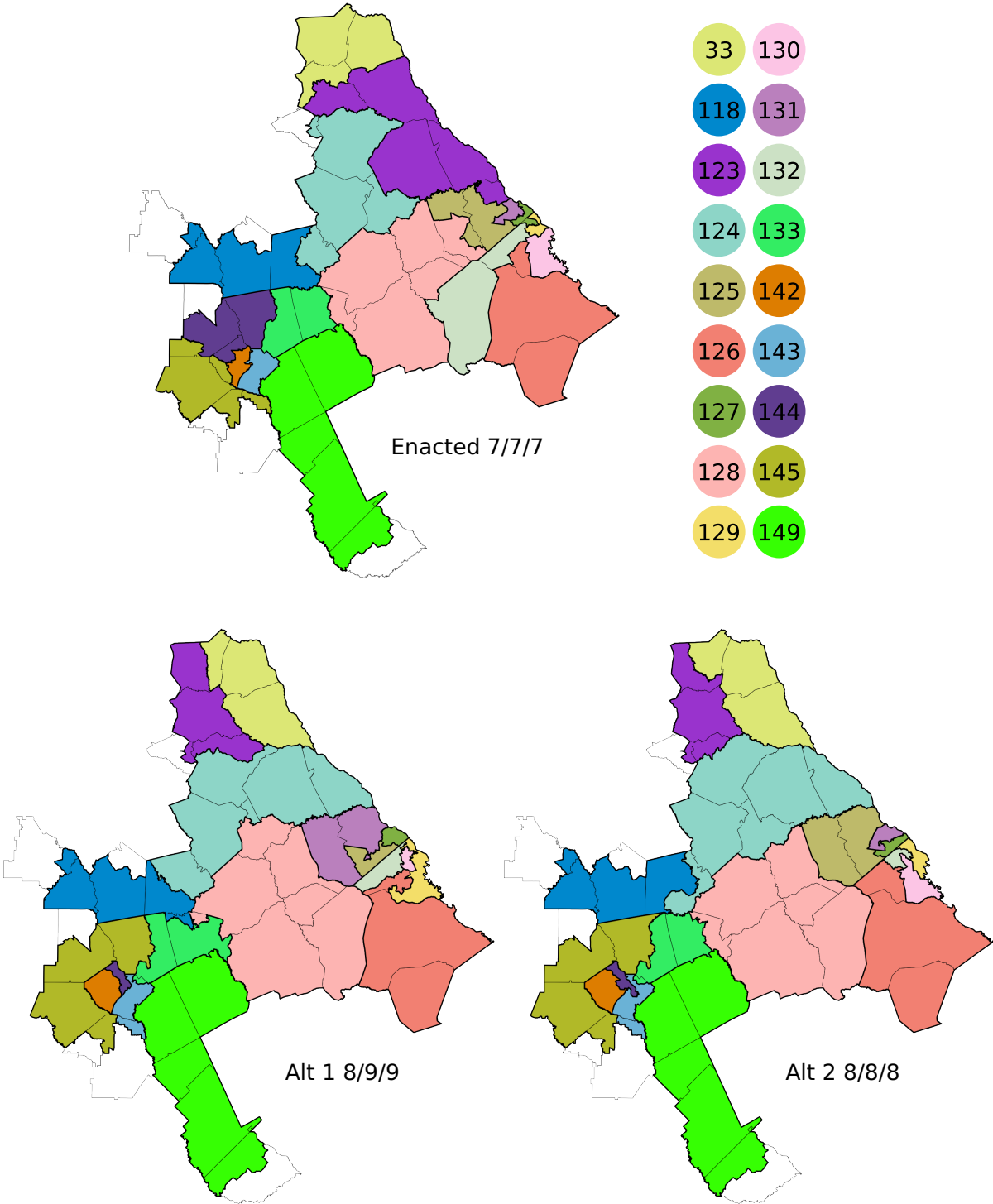


Figure 14: HD East Black Belt (18 districts).

HD	HD East Black Belt Enacted						HD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
33	11.2%	3.1%	14.3%	82.3%	0.371	0.487	18.7%	3.8%	22.5%	74.6%	0.405	0.343
118	23.6%	3.7%	27.3%	69.7%	0.223	0.350	23.2%	3.1%	26.3%	70.6%	0.218	0.329
123	24.3%	4.3%	28.6%	68.1%	0.178	0.295	13.3%	5.8%	19.1%	76.3%	0.281	0.357
124	25.6%	6.2%	31.8%	65.0%	0.233	0.442	28.4%	4.7%	33.1%	64.4%	0.224	0.362
125	23.7%	7.7%	31.4%	63.0%	0.173	0.409	24.1%	8.0%	32.1%	61.5%	0.255	0.328
126	54.5%	3.2%	57.7%	40.0%	0.414	0.516	52.5%	3.5%	56.0%	41.6%	0.322	0.534
127	18.5%	4.8%	23.3%	68.1%	0.201	0.351	14.6%	4.9%	19.5%	70.1%	0.585	0.546
128	50.4%	1.7%	52.1%	46.5%	0.319	0.601	50.1%	1.6%	51.7%	46.7%	0.357	0.628
129	54.9%	4.3%	59.2%	37.2%	0.254	0.482	51.9%	3.5%	55.4%	40.7%	0.108	0.314
130	59.9%	3.9%	63.8%	33.7%	0.255	0.508	54.4%	4.3%	58.7%	38.7%	0.253	0.451
131	17.6%	5.9%	23.5%	68.2%	0.283	0.377	27.1%	5.1%	32.2%	63.3%	0.285	0.604
132	52.3%	7.8%	60.1%	35.6%	0.296	0.270	53.6%	8.2%	61.8%	33.1%	0.293	0.243
133	36.8%	2.1%	38.9%	58.4%	0.415	0.543	48.7%	2.0%	50.7%	47.2%	0.178	0.385
142	59.5%	3.7%	63.2%	34.8%	0.229	0.353	50.8%	3.7%	54.5%	42.3%	0.539	0.605
143	60.8%	4.7%	65.5%	32.3%	0.299	0.502	52.4%	6.3%	58.7%	38.4%	0.176	0.332
144	29.3%	2.6%	31.9%	63.0%	0.325	0.510	50.4%	4.3%	54.7%	41.3%	0.299	0.298
145	35.7%	5.9%	41.6%	55.1%	0.194	0.376	23.1%	2.8%	25.9%	71.1%	0.204	0.422
149	32.1%	5.7%	37.8%	61.0%	0.223	0.325	32.1%	5.7%	37.8%	61.0%	0.223	0.325
Avg					0.271	0.428					0.289	0.411

Table 20: The Alt 1 map has 10 split counties within the HD East Black Belt cluster, while the enacted plan has 9. Its 1775 cut edges improves on the state’s 1887, while also being more compact by Polsby-Popper.

HD	HD East Black Belt Enacted						HD Alt 2					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
33	11.2%	3.1%	14.3%	82.3%	0.371	0.487	18.3%	3.5%	21.8%	75.2%	0.370	0.323
118	23.6%	3.7%	27.3%	69.7%	0.223	0.350	27.0%	4.1%	31.1%	65.9%	0.229	0.342
123	24.3%	4.3%	28.6%	68.1%	0.178	0.295	13.7%	6.0%	19.7%	75.8%	0.293	0.395
124	25.6%	6.2%	31.8%	65.0%	0.233	0.442	25.5%	3.8%	29.3%	68.1%	0.234	0.381
125	23.7%	7.7%	31.4%	63.0%	0.173	0.409	30.2%	6.1%	36.3%	60.1%	0.396	0.670
126	54.5%	3.2%	57.7%	40.0%	0.414	0.516	50.7%	4.2%	54.9%	42.3%	0.394	0.494
127	18.5%	4.8%	23.3%	68.1%	0.201	0.351	17.6%	6.2%	23.8%	67.2%	0.267	0.264
128	50.4%	1.7%	52.1%	46.5%	0.319	0.601	50.2%	1.5%	51.7%	46.8%	0.409	0.672
129	54.9%	4.3%	59.2%	37.2%	0.254	0.482	50.4%	3.6%	54.0%	41.8%	0.248	0.323
130	59.9%	3.9%	63.8%	33.7%	0.255	0.508	57.1%	4.7%	61.8%	35.4%	0.231	0.325
131	17.6%	5.9%	23.5%	68.2%	0.283	0.377	17.6%	5.7%	23.3%	67.8%	0.318	0.373
132	52.3%	7.8%	60.1%	35.6%	0.296	0.270	54.4%	7.1%	61.5%	34.1%	0.219	0.278
133	36.8%	2.1%	38.9%	58.4%	0.415	0.543	46.6%	2.1%	48.7%	49.0%	0.296	0.438
142	59.5%	3.7%	63.2%	34.8%	0.229	0.353	50.1%	3.8%	53.9%	42.9%	0.436	0.605
143	60.8%	4.7%	65.5%	32.3%	0.299	0.502	52.9%	6.3%	59.2%	38.0%	0.143	0.316
144	29.3%	2.6%	31.9%	63.0%	0.325	0.510	51.0%	4.2%	55.2%	40.8%	0.226	0.243
145	35.7%	5.9%	41.6%	55.1%	0.194	0.376	23.1%	2.8%	25.9%	71.1%	0.190	0.359
149	32.1%	5.7%	37.8%	61.0%	0.223	0.325	32.1%	5.7%	37.8%	61.0%	0.223	0.325
Avg					0.271	0.428					0.285	0.396

Table 21: Alt 2 eliminates one county split relative to the enacted plan and has a sharply improved 1604 cut edges.

7.3.4 HD Southeast

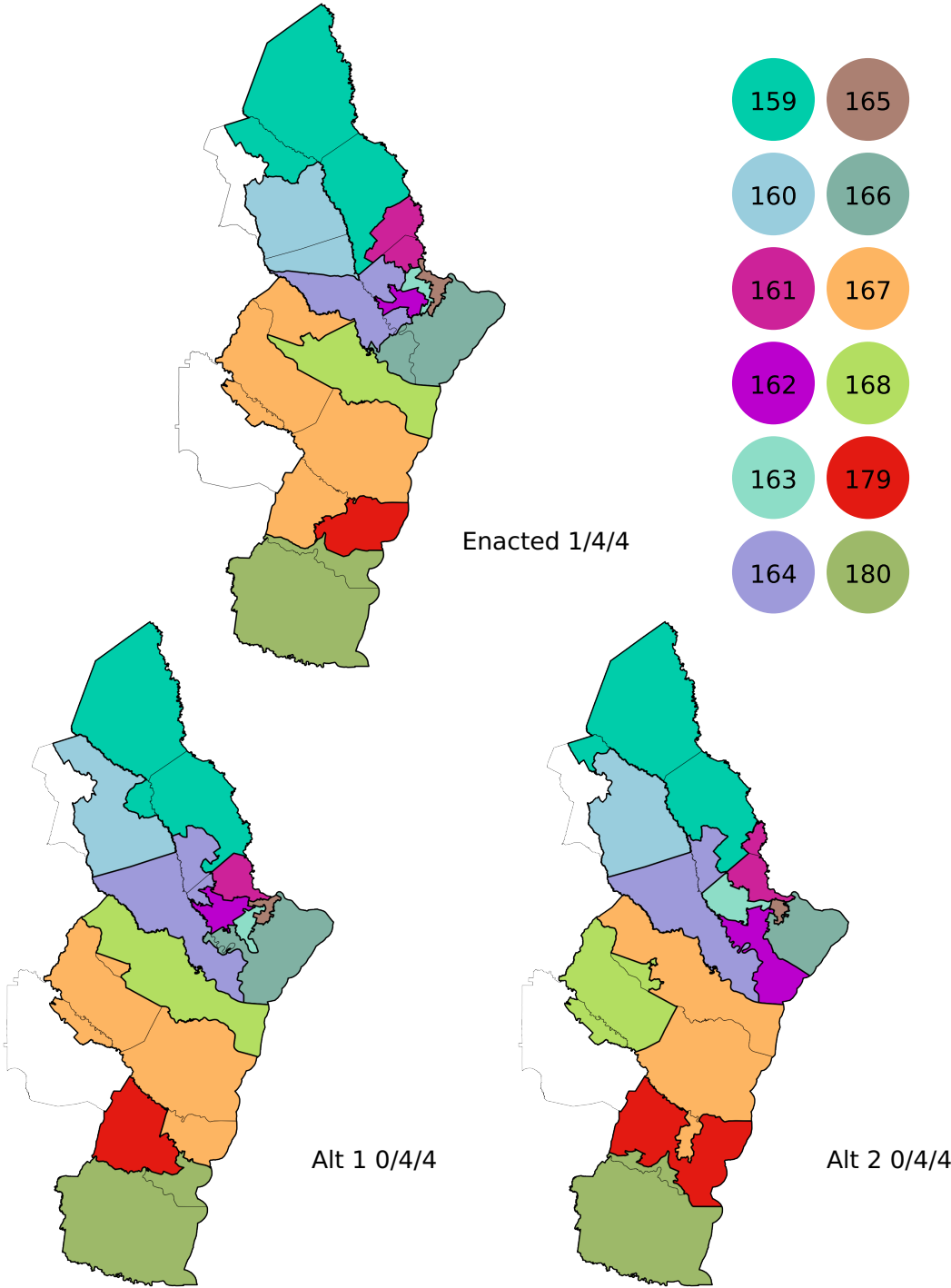


Figure 15: HD Southeast (12 districts).

HD	HD Southeast Enacted						HD Alt 1					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
159	24.5%	2.9%	27.4%	69.4%	0.219	0.345	22.2%	3.7%	25.9%	70.5%	0.204	0.358
160	22.6%	5.0%	27.6%	68.5%	0.369	0.483	26.6%	5.1%	31.7%	64.7%	0.242	0.373
161	27.1%	6.8%	33.9%	60.2%	0.306	0.511	42.1%	8.8%	50.9%	42.7%	0.359	0.475
162	43.7%	9.6%	53.3%	40.6%	0.211	0.366	39.9%	10.5%	50.4%	42.6%	0.147	0.372
163	45.5%	7.4%	52.9%	41.9%	0.175	0.271	44.0%	6.9%	50.9%	43.7%	0.244	0.335
164	23.5%	8.5%	32.0%	60.6%	0.167	0.299	12.9%	5.1%	18.0%	76.5%	0.143	0.309
165	50.3%	5.3%	55.6%	39.2%	0.162	0.230	47.3%	4.7%	52.0%	42.9%	0.189	0.380
166	5.7%	4.1%	9.8%	84.7%	0.364	0.429	7.2%	4.7%	11.9%	82.4%	0.245	0.459
167	22.3%	7.4%	29.7%	66.0%	0.192	0.417	20.0%	6.2%	26.2%	70.1%	0.266	0.327
168	46.3%	10.3%	56.6%	39.3%	0.258	0.243	45.9%	10.7%	56.6%	39.2%	0.236	0.246
179	27.0%	6.4%	33.4%	63.7%	0.417	0.451	32.0%	7.5%	39.5%	56.9%	0.433	0.539
180	18.2%	5.6%	23.8%	71.2%	0.396	0.606	17.0%	5.4%	22.4%	72.8%	0.348	0.594
Avg					0.270	0.388					0.255	0.397

Table 22: HD Southeast Alt 1 has fewer county splits (5 vs. 6) and a better cut edges score (1122 vs. 1245) than the enacted plan.

HD	HD Southeast Enacted						HD Alt 2					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
159	24.5%	2.9%	27.4%	69.4%	0.219	0.345	22.0%	3.6%	25.6%	70.7%	0.192	0.356
160	22.6%	5.0%	27.6%	68.5%	0.369	0.483	26.3%	5.1%	31.4%	64.9%	0.333	0.515
161	27.1%	6.8%	33.9%	60.2%	0.306	0.511	41.6%	10.0%	51.6%	42.2%	0.180	0.332
162	43.7%	9.6%	53.3%	40.6%	0.211	0.366	43.0%	8.5%	51.5%	42.5%	0.191	0.341
163	45.5%	7.4%	52.9%	41.9%	0.175	0.271	42.7%	7.7%	50.4%	43.1%	0.282	0.411
164	23.5%	8.5%	32.0%	60.6%	0.167	0.299	13.4%	5.5%	18.9%	75.6%	0.168	0.290
165	50.3%	5.3%	55.6%	39.2%	0.162	0.230	45.5%	5.0%	50.5%	44.4%	0.229	0.501
166	5.7%	4.1%	9.8%	84.7%	0.364	0.429	7.2%	4.1%	11.3%	83.0%	0.391	0.653
167	22.3%	7.4%	29.7%	66.0%	0.192	0.417	36.5%	7.4%	43.9%	52.5%	0.204	0.331
168	46.3%	10.3%	56.6%	39.3%	0.258	0.243	40.9%	10.8%	51.7%	44.3%	0.327	0.555
179	27.0%	6.4%	33.4%	63.7%	0.417	0.451	18.7%	6.0%	24.7%	71.6%	0.196	0.454
180	18.2%	5.6%	23.8%	71.2%	0.396	0.606	18.6%	5.7%	24.3%	70.7%	0.346	0.577
Avg					0.270	0.388					0.253	0.443

Table 23: Alt 2 also has just 5 county splits, to go with 1263 cut edges.

8 Secondary population estimates for coalition districts

Above, in §3.2, I described my construction of an estimated citizen voting age population for the state of Georgia. In this section, I confirm that nearly all of the majority-BHVAP districts in my alternative plans are still majority districts by BHCVAP.

CD	CD enacted		CD	CD Alt	
	BH VAP	BH CVAP		BH VAP	BH CVAP
1	34.5%	33.4%	1	36.6%	35.6%
2	54.0%	53.5%	2	51.8%	51.6%
3	28.3%	27.2%	3	57.7%	57.1%
4	63.9%	63.3%	4	58.0%	57.7%
5	55.6%	55.8%	5	60.6%	59.8%
6	18.7%	16.6%	6	24.0%	21.6%
7	50.2%	46.6%	7	55.5%	52.4%
8	35.8%	34.5%	8	33.8%	32.0%
9	23.0%	18.2%	9	15.9%	11.0%
10	28.8%	27.2%	10	24.2%	22.5%
11	28.7%	25.1%	11	24.7%	22.6%
12	41.2%	40.7%	12	43.2%	43.1%
13	76.3%	76.0%	13	57.9%	57.0%
14	24.6%	20.5%	14	18.3%	13.9%

Table 24: The enacted Congressional plan has 5 majority-BHVAP districts, but only four majority districts by BHCVAP. My alternative Congressional plan has 6 majority-BH districts by both either basis of population.

Next, I will present the statistics for the Alt Eff 1 and Alt Eff 2 plans in Senate and House, which use the Alt 1 and Alt 2 Gingles demonstrative plans above and add more modular effectiveness-boosting changes.

SD enacted			SD Alt Eff 1			SD Alt Eff 2		
SD	BH VAP	BH CVAP	SD	BH VAP	BH CVAP	SD	BH VAP	BH CVAP
1	31.9%	31.2%	1	31.8%	31.2%	1	31.8%	31.2%
2	53.8%	54.0%	2	53.7%	54.0%	2	53.7%	54.0%
3	27.1%	24.8%	3	26.9%	24.8%	3	26.9%	24.8%
4	28.6%	27.1%	4	28.6%	27.2%	4	28.5%	27.1%
5	70.4%	65.7%	5	53.9%	45.2%	5	58.6%	52.2%
6	31.5%	30.3%	6	55.5%	55.4%	6	42.0%	39.8%
7	37.2%	34.7%	7	30.6%	28.6%	7	46.2%	43.2%
8	36.3%	35.4%	8	36.2%	35.4%	8	36.2%	35.4%
9	47.4%	44.4%	9	55.1%	51.6%	9	53.1%	50.5%
10	75.7%	75.8%	10	69.4%	68.9%	10	68.5%	68.5%
11	38.4%	36.2%	11	38.4%	36.2%	11	38.4%	36.2%
12	61.2%	60.7%	12	61.1%	60.7%	12	61.1%	60.7%
13	32.8%	31.2%	13	32.8%	31.2%	13	32.8%	31.2%
14	30.5%	26.8%	14	28.8%	26.0%	14	26.5%	24.6%
15	59.8%	59.8%	15	59.7%	59.8%	15	59.7%	59.8%
16	27.5%	26.7%	16	55.6%	54.6%	16	53.7%	52.7%
17	36.6%	35.4%	17	56.8%	56.4%	17	51.2%	50.3%
18	34.6%	33.8%	18	34.5%	33.8%	18	34.5%	33.8%
19	33.7%	31.2%	19	33.6%	31.2%	19	33.6%	31.2%
20	34.5%	34.2%	20	39.1%	38.4%	20	37.0%	36.4%
21	16.0%	13.5%	21	15.9%	13.5%	21	15.9%	13.5%
22	61.2%	61.3%	22	53.6%	53.8%	22	53.3%	53.5%
23	39.6%	39.0%	23	28.0%	27.7%	23	51.1%	51.2%
24	24.0%	23.4%	24	28.3%	27.5%	24	28.1%	27.8%
25	36.8%	36.3%	25	53.5%	53.5%	25	32.4%	31.4%
26	60.8%	60.6%	26	53.4%	53.5%	26	53.9%	53.9%
27	15.0%	11.6%	27	14.7%	11.4%	27	15.0%	11.6%
28	25.6%	24.3%	28	56.7%	56.1%	28	21.6%	20.3%
29	31.0%	30.8%	29	31.0%	30.8%	29	31.0%	30.8%
30	26.6%	24.8%	30	19.2%	17.3%	30	22.0%	19.4%
31	27.7%	25.4%	31	26.4%	24.3%	31	32.0%	30.3%
32	24.9%	21.8%	32	24.8%	21.8%	32	24.8%	21.8%
33	65.1%	61.5%	33	67.5%	65.0%	33	67.7%	65.4%
34	81.2%	80.9%	34	82.6%	83.2%	34	65.4%	64.4%
35	78.5%	78.3%	35	58.0%	56.8%	35	67.4%	66.8%
36	57.7%	57.6%	36	54.9%	55.3%	36	59.9%	60.5%
37	27.5%	24.7%	37	27.4%	24.7%	37	27.4%	24.7%
38	72.9%	73.3%	38	42.4%	40.2%	38	55.8%	56.4%
39	65.6%	67.1%	39	55.9%	56.1%	39	90.9%	91.5%
40	40.2%	33.0%	40	66.6%	64.4%	40	44.9%	35.6%
41	68.5%	69.1%	41	66.4%	66.3%	41	69.8%	70.6%
42	38.9%	37.4%	42	44.6%	44.3%	42	27.0%	23.7%
43	70.5%	69.8%	43	58.2%	57.2%	43	61.0%	60.3%
44	79.0%	79.3%	44	64.5%	65.2%	44	78.6%	79.0%
45	31.1%	28.7%	45	31.3%	28.8%	45	27.2%	24.9%
46	23.6%	22.0%	46	21.2%	19.8%	46	21.2%	19.5%
47	26.8%	24.0%	47	25.2%	23.0%	47	27.2%	24.7%
48	16.1%	16.1%	48	16.1%	15.4%	48	19.3%	17.7%
49	29.6%	20.2%	49	32.4%	22.2%	49	30.7%	20.6%
50	14.3%	10.5%	50	11.4%	8.9%	50	12.6%	10.3%
51	5.5%	3.9%	51	5.5%	3.9%	51	5.5%	3.9%
52	21.1%	18.1%	52	21.1%	18.1%	52	21.1%	18.1%
53	8.2%	6.7%	53	8.2%	6.7%	53	8.2%	6.7%
54	26.2%	16.7%	54	26.2%	16.7%	54	26.2%	16.7%
55	73.6%	73.2%	55	62.6%	60.9%	55	64.9%	64.7%
56	15.0%	13.2%	56	14.9%	13.2%	56	14.9%	13.2%

Table 25: The enacted Senate plan has 17 coalition districts, whether by VAP or CVAP. Both alternative plans add numerous districts, finding additional majority districts in several areas of the state.

HD	HD enacted	
	BH VAP	BH CVAP
1	6.2%	5.7%
2	10.6%	7.4%
3	6.2%	4.7%
4	49.2%	34.8%
5	17.0%	11.1%
6	13.4%	7.8%
7	6.1%	3.7%
8	4.1%	2.9%
9	6.2%	4.9%
10	13.6%	9.2%
11	6.0%	4.8%
12	15.7%	12.6%
13	29.8%	25.8%
14	12.6%	10.4%
15	23.6%	21.3%
16	20.1%	16.7%
17	29.4%	27.4%
18	10.3%	9.4%
19	30.4%	28.8%
20	18.1%	14.5%
21	12.3%	10.0%
22	26.2%	22.6%
23	20.5%	14.1%
24	17.1%	14.1%
25	10.8%	11.0%
26	14.6%	11.0%
27	13.2%	9.5%
28	15.2%	10.6%
29	52.9%	37.6%
30	24.0%	18.9%
31	26.3%	19.6%
32	12.7%	10.7%
33	14.3%	13.4%
34	23.2%	20.2%
35	38.7%	34.8%
36	23.1%	21.6%
37	46.1%	41.2%
38	65.9%	64.0%
39	73.2%	70.6%
40	38.1%	38.6%
41	67.2%	63.0%
42	50.2%	47.9%
43	39.9%	38.6%
44	22.1%	20.2%
45	9.9%	9.1%
46	15.1%	14.0%
47	17.8%	18.2%
48	23.8%	20.0%
49	14.8%	13.5%
50	18.3%	18.4%
51	36.4%	30.0%
52	23.0%	24.5%
53	21.5%	19.6%
54	27.7%	23.8%
55	59.7%	60.2%
56	50.7%	53.6%
57	25.6%	23.8%
58	67.5%	67.9%
59	73.8%	73.9%
60	68.3%	68.1%

HD	HD Alt Eff 1	
	BH VAP	BH CVAP
1	6.2%	5.7%
2	10.6%	7.4%
3	6.2%	4.7%
4	49.2%	34.8%
5	17.0%	11.1%
6	13.4%	7.8%
7	6.1%	3.7%
8	4.1%	2.9%
9	6.2%	4.9%
10	13.6%	9.2%
11	6.0%	4.8%
12	15.7%	12.6%
13	29.8%	25.8%
14	12.6%	10.4%
15	23.5%	21.3%
16	20.0%	16.7%
17	29.3%	27.4%
18	10.2%	9.4%
19	30.2%	28.8%
20	14.4%	11.7%
21	12.3%	10.1%
22	34.4%	31.3%
23	20.4%	14.1%
24	12.9%	10.8%
25	11.5%	11.8%
26	14.2%	11.6%
27	13.2%	9.5%
28	15.2%	10.6%
29	54.8%	39.4%
30	21.8%	16.7%
31	26.2%	19.6%
32	12.7%	10.7%
33	22.4%	21.7%
34	19.5%	17.2%
35	31.9%	29.3%
36	26.5%	24.8%
37	52.9%	47.2%
38	51.9%	50.3%
39	61.7%	58.8%
40	50.7%	50.5%
41	52.5%	50.3%
42	54.9%	50.5%
43	51.0%	51.1%
44	27.5%	22.5%
45	12.7%	11.5%
46	14.0%	13.0%
47	23.0%	23.9%
48	17.9%	16.2%
49	11.3%	10.1%
50	19.2%	19.3%
51	43.3%	36.2%
52	19.5%	19.2%
53	26.3%	22.5%
54	23.0%	20.8%
55	56.0%	58.6%
56	50.7%	52.4%
57	25.2%	23.8%
58	57.2%	57.6%
59	93.5%	93.5%
60	64.5%	64.6%

HD	HD Alt Eff 2	
	BH VAP	BH CVAP
1	6.2%	5.7%
2	10.6%	7.4%
3	6.2%	4.7%
4	49.2%	34.8%
5	17.0%	11.1%
6	13.4%	7.8%
7	6.1%	3.7%
8	4.1%	2.9%
9	6.2%	4.9%
10	13.6%	9.2%
11	6.0%	4.8%
12	15.7%	12.6%
13	29.8%	25.8%
14	12.6%	10.4%
15	23.5%	21.3%
16	20.0%	16.7%
17	29.3%	27.4%
18	10.2%	9.4%
19	30.2%	28.8%
20	15.3%	11.6%
21	12.3%	10.1%
22	36.0%	32.4%
23	20.4%	14.1%
24	14.8%	12.6%
25	10.6%	10.6%
26	14.1%	11.6%
27	13.2%	9.5%
28	15.2%	10.6%
29	52.8%	37.6%
30	22.4%	17.0%
31	26.2%	19.6%
32	12.7%	10.7%
33	21.7%	21.1%
34	16.7%	14.9%
35	34.1%	30.8%
36	23.3%	19.5%
37	56.2%	50.6%
38	53.4%	51.3%
39	60.7%	58.3%
40	51.0%	50.8%
41	52.6%	50.6%
42	54.6%	50.3%
43	51.7%	50.7%
44	25.1%	24.5%
45	10.5%	10.0%
46	13.8%	13.2%
47	22.9%	23.6%
48	18.9%	16.8%
49	11.3%	10.1%
50	18.4%	18.2%
51	40.6%	34.0%
52	20.7%	21.0%
53	27.8%	23.5%
54	20.6%	18.5%
55	95.7%	95.9%
56	50.5%	52.6%
57	26.1%	25.0%
58	52.6%	54.3%
59	64.4%	64.8%
60	55.7%	55.7%

HD	HD enacted	
	BH VAP	BH CVAP
61	81.0%	80.4%
62	78.2%	78.3%
63	77.8%	77.3%
64	37.6%	36.2%
65	65.7%	65.8%
66	62.0%	60.6%
67	66.1%	65.3%
68	61.4%	61.5%
69	68.2%	68.2%
70	35.4%	33.4%
71	25.8%	23.6%
72	27.4%	24.9%
73	18.8%	17.9%
74	30.6%	29.2%
75	84.5%	84.9%
76	79.6%	80.9%
77	87.3%	87.4%
78	79.4%	79.2%
79	86.5%	86.7%
80	36.6%	28.0%
81	42.1%	34.5%
82	23.2%	22.2%
83	43.0%	28.0%
84	75.7%	76.6%
85	67.9%	71.9%
86	78.5%	80.9%
87	78.8%	79.0%
88	72.5%	73.5%
89	65.3%	65.6%
90	62.2%	62.2%
91	75.0%	74.7%
92	72.7%	72.4%
93	74.1%	73.2%
94	75.3%	75.8%
95	74.0%	73.5%
96	58.1%	52.9%
97	45.0%	42.0%
98	74.8%	68.4%
99	22.9%	23.0%
100	19.6%	18.1%
101	41.6%	39.4%
102	57.8%	53.8%
103	33.0%	29.2%
104	27.8%	25.3%
105	44.9%	42.5%
106	46.7%	45.3%
107	59.6%	55.6%
108	35.9%	30.2%
109	67.4%	64.6%
110	56.7%	55.0%
111	30.6%	28.2%
112	22.3%	21.9%
113	65.5%	64.6%
114	28.1%	26.8%
115	58.2%	57.0%
116	64.4%	64.2%
117	41.5%	40.7%
118	27.1%	26.0%
119	23.6%	21.0%
120	21.2%	19.3%

HD	HD Alt Eff 1	
	BH VAP	BH CVAP
61	59.3%	57.1%
62	88.0%	88.6%
63	65.4%	64.8%
64	56.6%	55.9%
65	85.5%	86.8%
66	58.9%	58.1%
67	94.2%	94.5%
68	19.9%	19.2%
69	59.7%	58.8%
70	35.3%	33.4%
71	25.7%	23.6%
72	27.4%	24.9%
73	17.9%	17.0%
74	56.7%	55.1%
75	60.9%	60.2%
76	80.5%	80.4%
77	93.4%	94.0%
78	74.3%	75.6%
79	86.6%	87.1%
80	60.6%	50.4%
81	51.6%	40.1%
82	16.9%	15.9%
83	22.6%	21.7%
84	80.0%	80.5%
85	58.2%	60.3%
86	94.3%	94.4%
87	63.3%	64.8%
88	68.1%	67.6%
89	68.8%	69.6%
90	62.0%	62.2%
91	54.9%	54.1%
92	90.1%	90.5%
93	71.4%	70.4%
94	85.0%	85.2%
95	56.4%	55.6%
96	52.2%	50.1%
97	58.5%	50.7%
98	68.8%	63.7%
99	24.5%	24.6%
100	20.5%	18.6%
101	37.4%	35.3%
102	54.7%	52.1%
103	30.0%	26.3%
104	26.7%	24.2%
105	52.8%	50.2%
106	57.5%	53.1%
107	54.4%	50.2%
108	53.5%	51.3%
109	56.0%	51.2%
110	52.6%	50.9%
111	31.2%	29.5%
112	22.3%	21.9%
113	55.3%	54.3%
114	36.7%	35.4%
115	55.2%	54.9%
116	61.8%	61.6%
117	57.2%	56.6%
118	26.1%	25.2%
119	23.5%	21.0%
120	21.1%	19.3%

HD	HD Alt Eff 2	
	BH VAP	BH CVAP
61	56.7%	54.2%
62	87.5%	88.1%
63	70.8%	70.5%
64	56.5%	55.8%
65	70.9%	71.4%
66	59.2%	58.2%
67	94.6%	95.0%
68	64.3%	64.4%
69	59.9%	59.6%
70	35.3%	33.4%
71	25.7%	23.6%
72	27.4%	24.9%
73	18.6%	17.6%
74	18.1%	17.0%
75	72.3%	73.0%
76	82.6%	83.5%
77	88.2%	88.6%
78	75.6%	75.0%
79	87.2%	87.6%
80	58.5%	50.1%
81	51.1%	36.6%
82	18.4%	17.6%
83	25.4%	23.5%
84	78.2%	79.2%
85	71.3%	75.0%
86	64.5%	65.9%
87	92.8%	93.2%
88	59.8%	57.8%
89	67.7%	68.8%
90	62.0%	62.2%
91	57.4%	56.7%
92	75.4%	74.9%
93	91.6%	92.0%
94	84.8%	85.0%
95	58.0%	57.3%
96	54.0%	50.0%
97	53.5%	47.3%
98	68.8%	63.7%
99	26.3%	26.2%
100	27.9%	26.4%
101	54.7%	50.4%
102	53.0%	50.6%
103	24.4%	19.5%
104	30.3%	28.2%
105	42.3%	41.4%
106	51.8%	50.7%
107	54.3%	50.4%
108	56.2%	50.4%
109	55.1%	50.4%
110	51.8%	50.4%
111	22.9%	20.4%
112	22.3%	21.9%
113	58.7%	58.1%
114	28.3%	27.0%
115	56.1%	55.6%
116	60.0%	59.8%
117	55.6%	55.2%
118	30.9%	29.9%
119	23.5%	21.0%
120	21.1%	19.3%

HD enacted			HD Alt Eff 1			HD Alt Eff 2		
HD	BH VAP	BH CVAP	HD	BH VAP	BH CVAP	HD	BH VAP	BH CVAP
121	15.0%	13.8%	121	14.9%	13.8%	121	14.9%	13.8%
122	39.9%	36.6%	122	39.8%	36.6%	122	39.8%	36.6%
123	28.4%	27.9%	123	19.0%	17.0%	123	19.5%	17.6%
124	31.6%	29.3%	124	32.9%	31.6%	124	29.1%	27.9%
125	30.6%	29.6%	125	31.2%	29.9%	125	35.6%	35.0%
126	57.2%	57.2%	126	55.5%	55.6%	126	54.4%	54.4%
127	22.9%	22.1%	127	19.1%	19.2%	127	23.2%	22.5%
128	51.9%	51.9%	128	51.5%	51.6%	128	51.5%	51.6%
129	58.5%	58.9%	129	54.7%	55.2%	129	53.2%	53.7%
130	63.2%	63.1%	130	58.0%	58.0%	130	61.1%	61.0%
131	23.0%	23.1%	131	31.5%	31.5%	131	22.7%	22.7%
132	59.5%	59.5%	132	60.8%	61.1%	132	60.6%	61.1%
133	38.7%	38.7%	133	50.4%	50.5%	133	48.4%	48.4%
134	37.1%	36.5%	134	37.0%	36.5%	134	37.0%	36.5%
135	25.4%	24.9%	135	25.4%	24.9%	135	25.4%	24.9%
136	32.2%	32.0%	136	32.1%	32.0%	136	32.1%	32.0%
137	55.9%	56.1%	137	54.9%	55.1%	137	51.4%	51.5%
138	22.4%	21.9%	138	22.4%	21.9%	138	22.4%	21.9%
139	26.2%	25.8%	139	26.1%	25.8%	139	26.1%	25.8%
140	64.8%	64.9%	140	64.0%	64.5%	140	70.8%	71.4%
141	63.1%	63.6%	141	59.1%	59.4%	141	55.0%	55.3%
142	62.6%	62.4%	142	53.9%	53.9%	142	53.3%	53.4%
143	65.1%	65.0%	143	58.2%	57.6%	143	58.6%	58.0%
144	31.7%	31.6%	144	54.2%	54.4%	144	54.7%	54.9%
145	41.2%	40.3%	145	25.6%	25.2%	145	25.7%	25.2%
146	32.0%	32.0%	146	27.8%	27.5%	146	29.4%	29.2%
147	36.9%	36.1%	147	38.4%	37.8%	147	37.2%	36.5%
148	36.9%	36.3%	148	41.7%	41.1%	148	43.9%	43.2%
149	37.1%	34.2%	149	37.0%	34.2%	149	37.0%	34.2%
150	59.5%	58.7%	150	56.2%	55.6%	150	56.9%	56.3%
151	49.4%	47.5%	151	58.0%	56.9%	151	52.6%	51.2%
152	28.3%	27.9%	152	37.1%	36.6%	152	36.2%	35.7%
153	70.2%	70.2%	153	55.3%	54.9%	153	63.9%	63.9%
154	56.2%	56.1%	154	51.9%	51.7%	154	64.1%	63.7%
155	37.9%	37.8%	155	37.8%	37.8%	155	37.8%	37.8%
156	37.0%	35.1%	156	36.9%	35.1%	156	36.9%	35.1%
157	33.4%	30.9%	157	33.4%	30.9%	157	33.4%	30.9%
158	35.5%	34.3%	158	35.4%	34.3%	158	35.4%	34.3%
159	27.2%	26.8%	159	25.6%	24.9%	159	25.3%	24.6%
160	27.3%	25.4%	160	31.2%	29.6%	160	30.9%	29.3%
161	33.4%	32.2%	161	50.1%	50.0%	161	50.9%	50.0%
162	52.6%	52.6%	162	49.7%	49.6%	162	50.8%	50.6%
163	52.5%	52.5%	163	50.3%	50.1%	163	49.8%	50.5%
164	31.4%	30.4%	164	17.6%	16.8%	164	18.4%	17.7%
165	55.2%	55.7%	165	51.5%	52.5%	165	49.9%	50.7%
166	9.6%	8.4%	166	11.6%	10.5%	166	11.2%	10.0%
167	29.2%	28.2%	167	25.6%	25.1%	167	43.1%	42.5%
168	55.2%	55.3%	168	55.0%	55.2%	168	50.2%	50.1%
169	36.5%	34.9%	169	32.9%	30.3%	169	35.6%	34.2%
170	32.7%	30.2%	170	39.1%	35.7%	170	35.2%	33.4%
171	44.0%	42.8%	171	54.8%	54.1%	171	40.1%	37.7%
172	36.6%	32.3%	172	34.3%	31.4%	172	39.0%	35.8%
173	41.4%	39.6%	173	40.7%	38.8%	173	34.4%	33.1%
174	25.2%	21.3%	174	24.7%	21.3%	174	24.7%	21.3%
175	29.0%	28.5%	175	26.3%	25.8%	175	22.5%	21.7%
176	30.7%	28.2%	176	29.8%	28.3%	176	32.2%	29.6%
177	59.4%	59.4%	177	59.4%	59.4%	177	59.4%	59.4%
178	19.7%	18.2%	178	19.7%	18.2%	178	19.7%	18.2%
179	33.1%	30.8%	179	39.0%	36.8%	179	24.4%	22.3%
180	23.5%	22.1%	180	22.0%	20.6%	180	23.9%	22.5%

Table 26: Overall, the enacted House plan has 62 majority-BHVAP districts, dropping to 60 majority districts by BHCVAP. Both Gingles 1 demonstrative alternatives add to the count significantly.

9 Effectiveness-oriented demonstration plans

In §7 above, I presented a number of alternative plans as Gingles 1 demonstrative maps. Each of these plans increases the number of majority districts for the coalition of Black and Latino Georgians, while simultaneously ensuring that traditional districting principles are highly respected and that the new majority districts are likely to provide effective opportunity-to-elect.

In this section, I will offer an additional set of alternative plans—one new example per legislative cluster—that illustrate that my notion of effectiveness is capable of identifying opportunity districts short of the Gingles 1 demographic threshold of 50%+1. Indeed, the existence of crossover support for Black and Latino candidates of choice by Asian-American, White, and other voters is a certainty. The ease of finding alternative plans that draw on broader voting coalitions will bolster the racial gerrymandering discussion below in §10. That is, in the enacted plans, the state has not just avoided majority districts but has even conspicuously limited the number of districts providing effective opportunity-to-elect well below the level that is easily attainable from a race-neutral mapping process.

9.1 Congressional effectiveness

As a matter of mapmaking, it is extremely easy to improve on the very limited number of effective districts—just five—in the state’s enacted plan (see Table 4). To do this involves relieving the packing and cracking from the enacted plan.

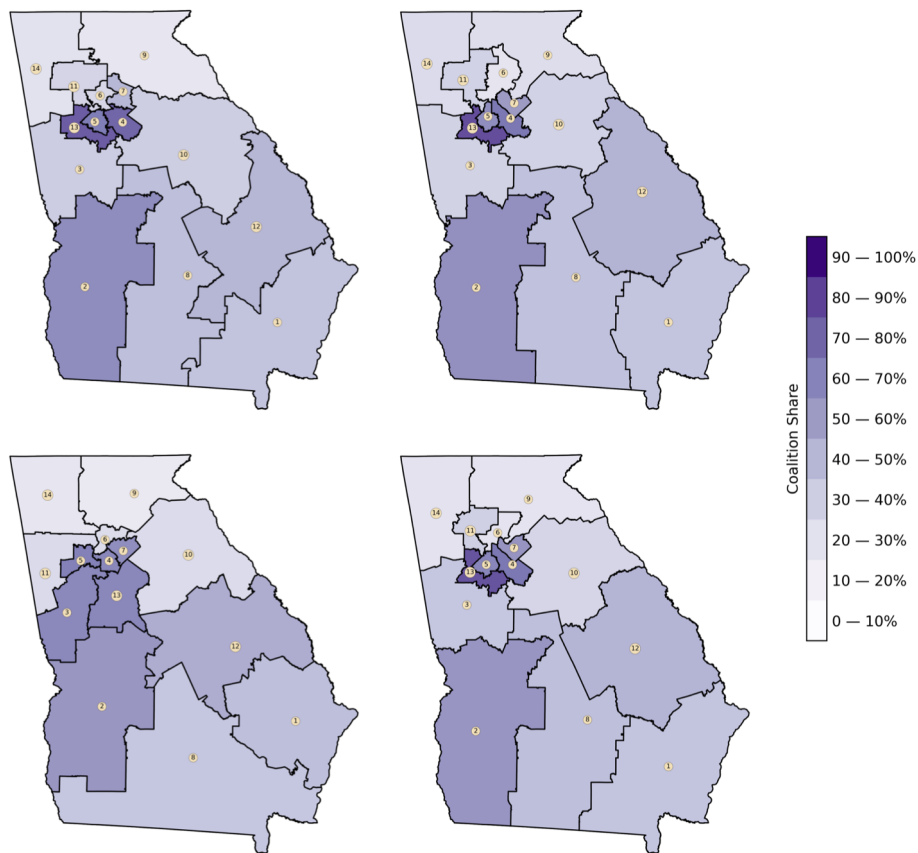


Figure 16: The benchmark plan (top left), the enacted plan (top right), and the Duncan-Kennedy plan (bottom right) all exhibit a pronounced pattern of packing and cracking relative to the alternative Congressional plan presented here (CD Alt, bottom left).

9.2 State Senate alternatives

The "Alt Eff 3" plans shown here are another set of effective alternatives; these cover the entire state, working modularly in the clusters from Atlanta, Gwinnett, Southwest, East Black Belt, Southeast, and Northwest Georgia.

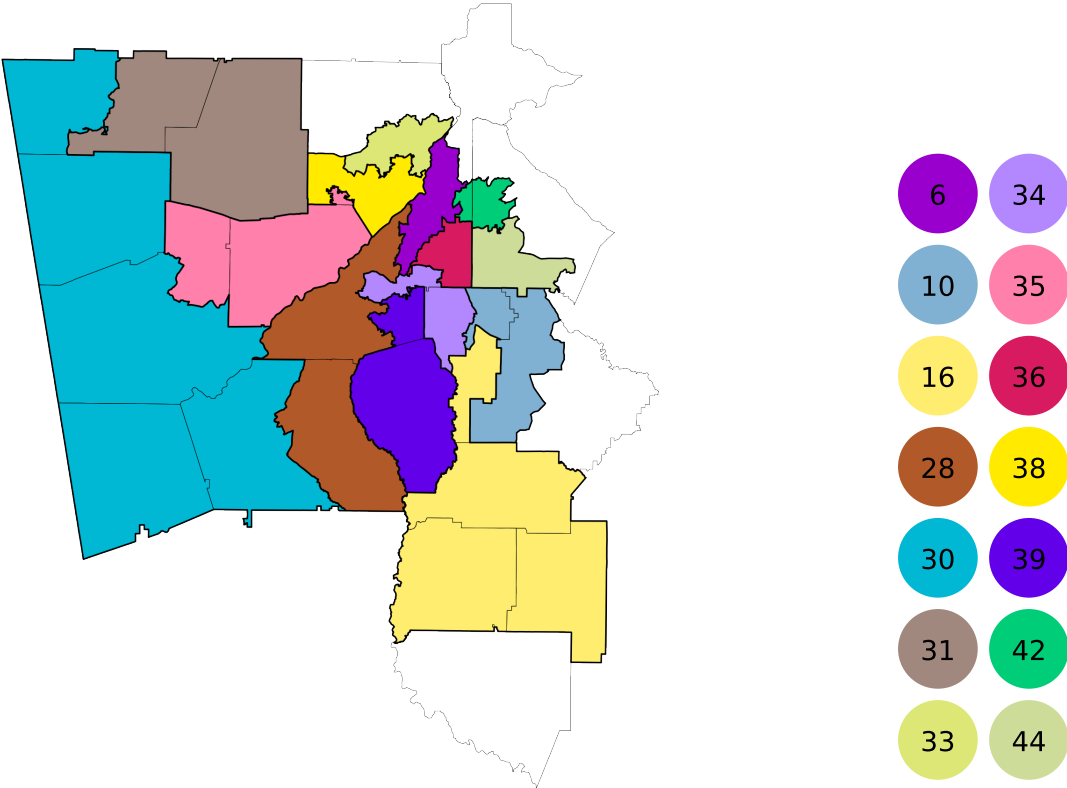


Figure 17: SD Atlanta alternative effective plan.

SD Atlanta Enacted					SD Atlanta Alt Eff 3				
SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
6	23.9%	32.1%	0	8	6	43.8%	50.3%	3	8
10	71.5%	76.7%	4	8	10	60.7%	70.3%	4	8
16	22.7%	27.7%	3	0	16	47.5%	53.4%	4	8
28	19.5%	25.9%	2	0	28	51.9%	57.5%	4	8
30	20.9%	27.0%	2	0	30	17.3%	24.2%	1	0
31	20.7%	28.1%	3	0	31	21.6%	27.6%	3	0
33	43.0%	65.9%	4	8	33	30.3%	50.2%	3	8
34	69.5%	82.2%	4	8	34	76.8%	88.7%	4	8
35	71.9%	79.4%	4	8	35	42.8%	51.4%	4	8
36	51.3%	58.4%	3	8	36	60.1%	66.4%	3	8
38	65.3%	73.7%	4	8	38	46.3%	59.2%	3	8
39	60.7%	66.3%	3	8	39	49.7%	55.6%	3	8
42	30.8%	39.4%	0	8	42	17.2%	27.3%	0	8
44	71.3%	79.9%	4	8	44	76.9%	80.1%	3	8

Table 27: SD Atlanta (14 districts).

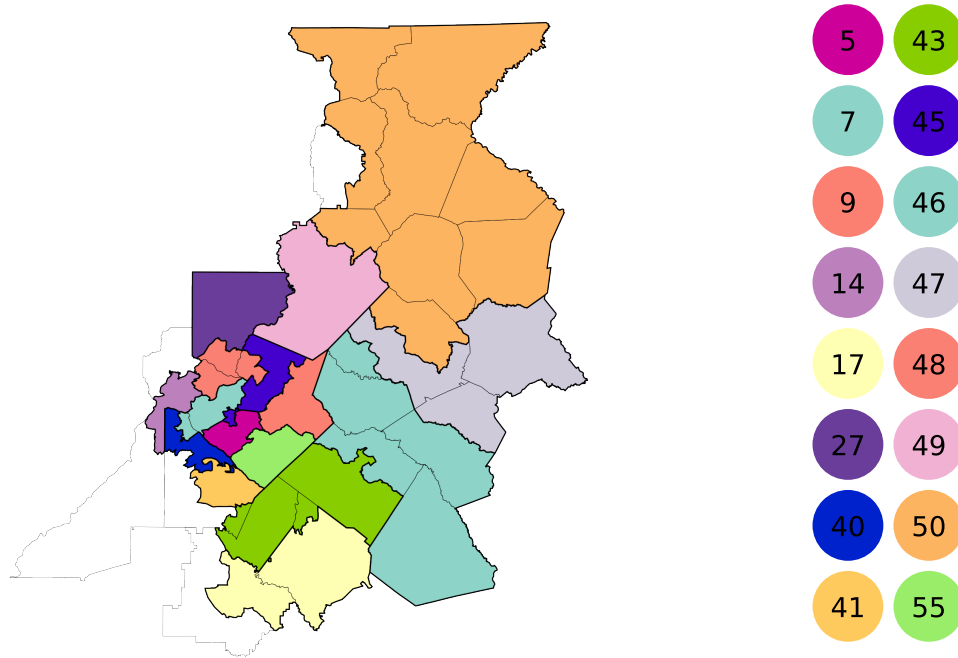


Figure 18: SD Gwinnett alternative effective plan.

SD Gwinnett Enacted					SD Gwinnett Alt Eff 3				
SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
5	29.9%	71.6%	3	8	5	25.2%	61.5%	3	8
7	21.4%	38.0%	3	8	7	20.2%	46.4%	3	8
9	29.5%	48.3%	3	8	9	32.1%	49.2%	3	6
14	19.0%	31.1%	0	8	14	19.0%	31.1%	0	8
17	32.0%	37.1%	3	0	17	46.9%	52.7%	4	7
27	5.0%	15.2%	0	0	27	4.7%	14.9%	0	0
40	19.2%	40.8%	0	8	40	25.6%	39.1%	0	8
41	62.6%	69.3%	3	8	41	84.8%	89.6%	4	8
43	64.3%	71.2%	4	8	43	45.4%	51.8%	4	7
45	18.6%	31.7%	3	0	45	22.4%	42.0%	3	5
46	16.9%	23.9%	1	0	46	12.0%	19.4%	1	0
47	17.4%	27.0%	3	0	47	18.8%	27.5%	2	7
48	9.5%	16.5%	1	0	48	9.9%	16.3%	2	0
49	8.0%	29.9%	1	0	49	8.2%	32.8%	1	0
50	5.6%	14.4%	1	0	50	5.3%	11.3%	1	0
55	66.0%	74.7%	4	8	55	44.0%	54.8%	4	8

Table 28: SD Gwinnett (16 districts).

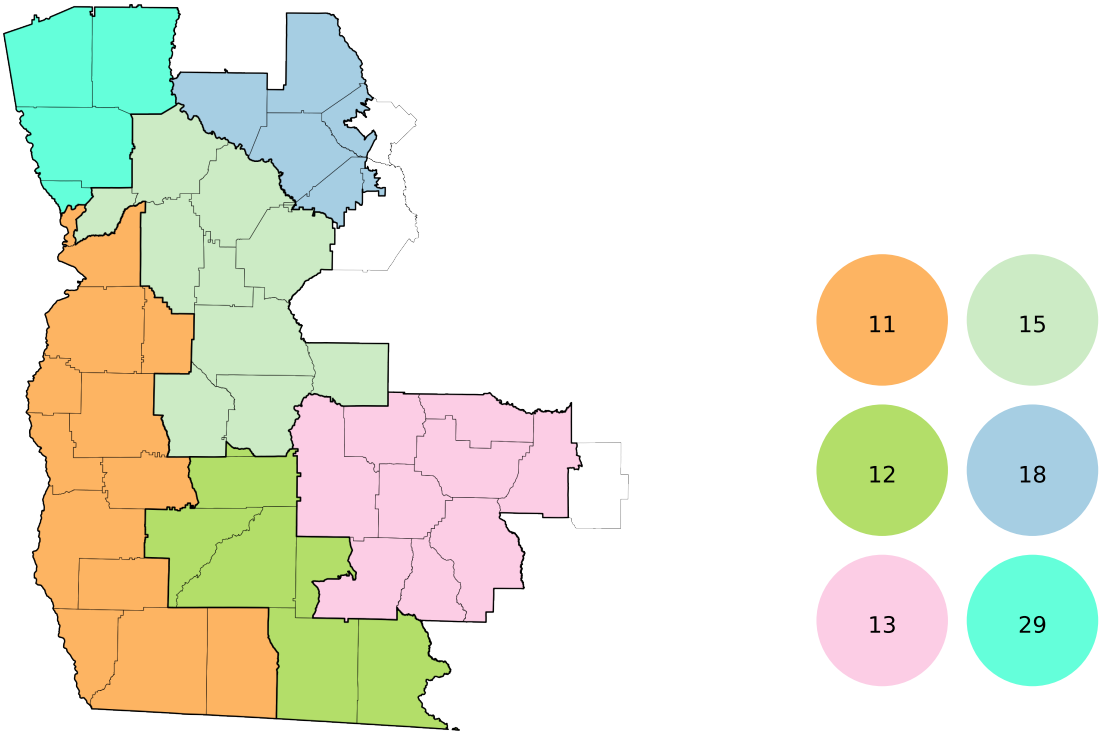


Figure 19: SD Southwest alternative effective plan.

SD Southwest Enacted					SD Alt Eff 3				
SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
11	31.0%	38.6%	4	0	11	44.0%	50.9%	4	6
12	58.0%	61.5%	4	8	12	50.1%	53.4%	4	7
13	27.0%	33.0%	4	0	13	25.6%	34.7%	4	0
15	54.0%	60.6%	4	8	15	50.4%	54.7%	4	8
18	30.4%	34.9%	3	0	18	30.4%	34.9%	3	0
29	26.9%	31.4%	3	0	29	27.3%	31.9%	3	0

Table 29: SD Southwest (6 districts).

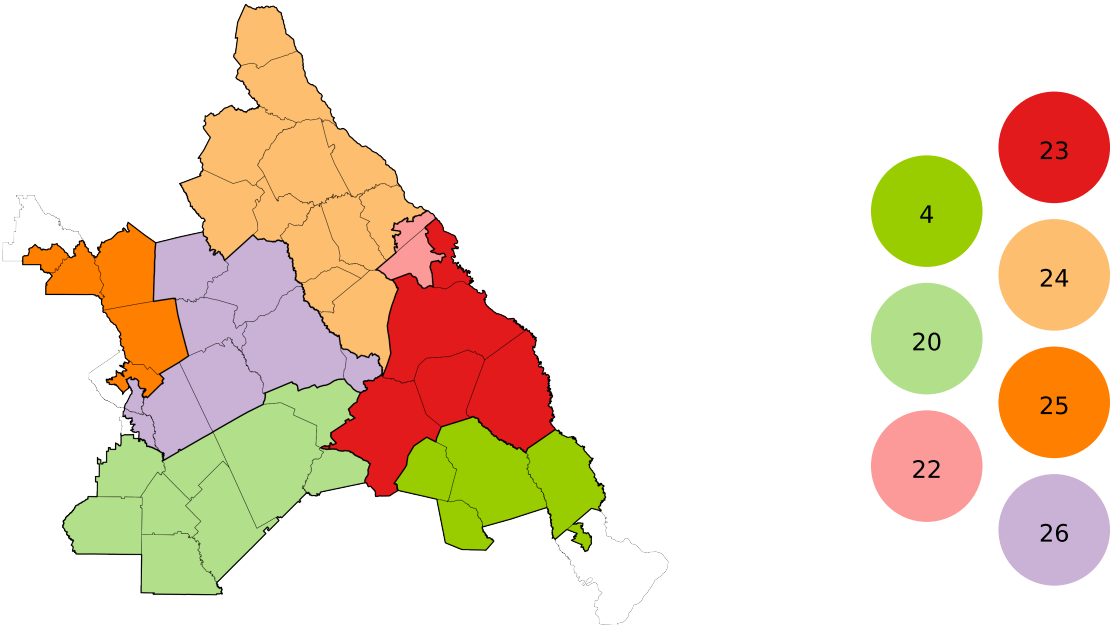


Figure 20: SD East Black Belt alternative effective plan.

SD East Black Belt Enacted					SD East Black Belt Alt Eff 3				
SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
4	23.4%	28.9%	3	0	4	23.4%	28.9%	3	0
20	31.3%	34.8%	3	0	20	32.0%	35.3%	3	0
22	56.5%	61.8%	4	8	22	39.1%	46.1%	4	8
23	35.5%	40.0%	3	0	23	46.1%	49.6%	3	7
24	19.9%	24.3%	3	0	24	26.5%	30.3%	3	0
25	33.5%	37.2%	3	0	25	45.7%	49.6%	3	8
26	57.0%	61.2%	3	8	26	44.0%	48.2%	3	5

Table 30: SD East Black Belt (7 districts).

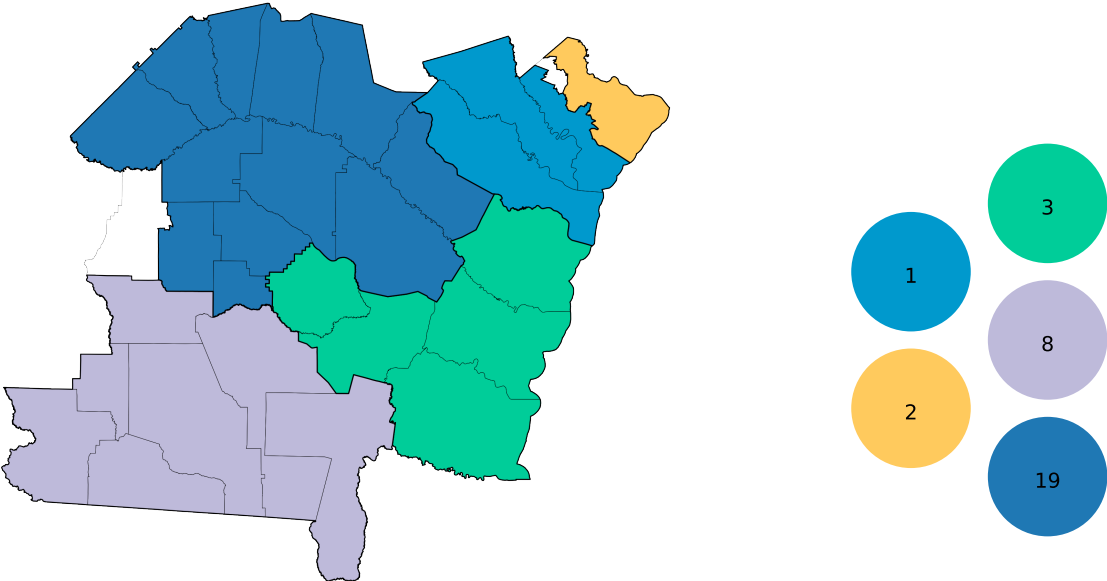


Figure 21: SD Southeast alternative effective plan.

SD Southeast Enacted					SD Southeast Alt Eff 3				
SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	25.1%	32.6%	3	0	1	34.8%	43.7%	4	6
2	46.9%	54.4%	4	8	2	37.4%	43.6%	3	8
3	21.2%	27.4%	3	0	3	19.1%	24.3%	3	0
8	30.4%	36.6%	4	0	8	32.5%	39.7%	4	0
19	25.7%	34.1%	4	0	19	25.5%	33.8%	4	0

Table 31: SD Southeast (5 districts).

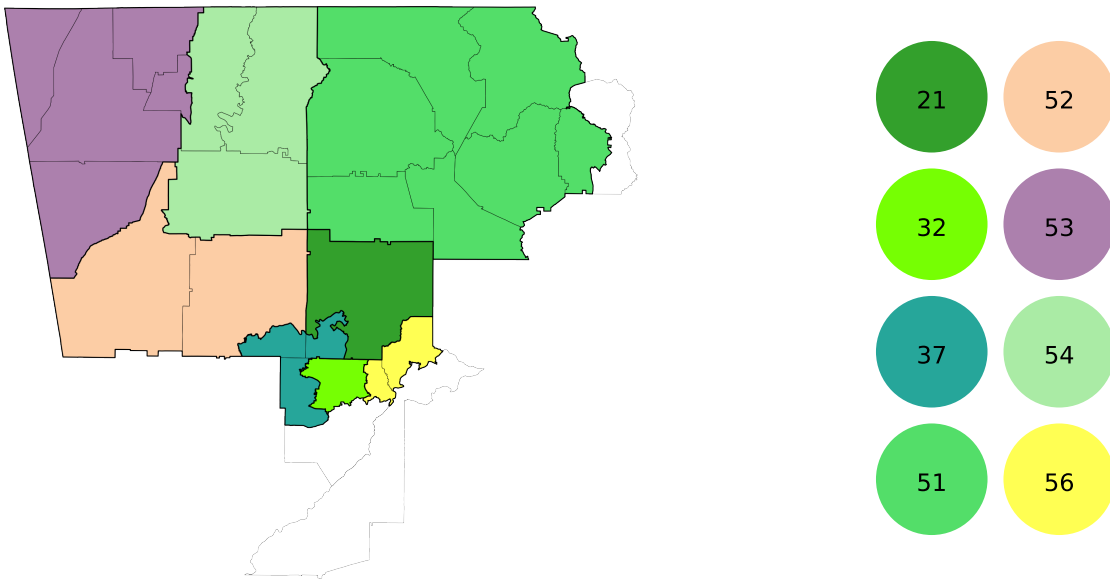


Figure 22: SD Northwest alternative plan that increases effectiveness by creating a competitive SD 32 that is well aligned with Black and Latino preferences in primary elections.

SD Northwest Enacted					SD Northwest Alt Eff 3				
SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	SD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
21	7.5%	16.3%	2	0	21	6.5%	16.5%	1	0
32	14.9%	25.4%	3	0	32	21.0%	31.2%	3	3
37	19.3%	28.0%	3	0	37	13.1%	22.1%	3	0
51	1.2%	5.5%	0	0	51	1.2%	5.5%	0	0
52	13.0%	21.2%	1	0	52	13.3%	22.0%	1	0
53	5.1%	8.3%	1	0	53	4.6%	7.5%	1	0
54	3.8%	26.4%	1	0	54	3.8%	26.6%	1	0
56	7.6%	15.3%	0	0	56	8.3%	14.6%	0	0

Table 32: SD Northwest (8 districts).

9.3 State House alternatives

The "Alt Eff" (alternative effective) districts in the House cover all of the regional clusters listed above: Atlanta, Cobb, DeKalb, Gwinnett, Southwest, East Black Belt, and Southeast Georgia.

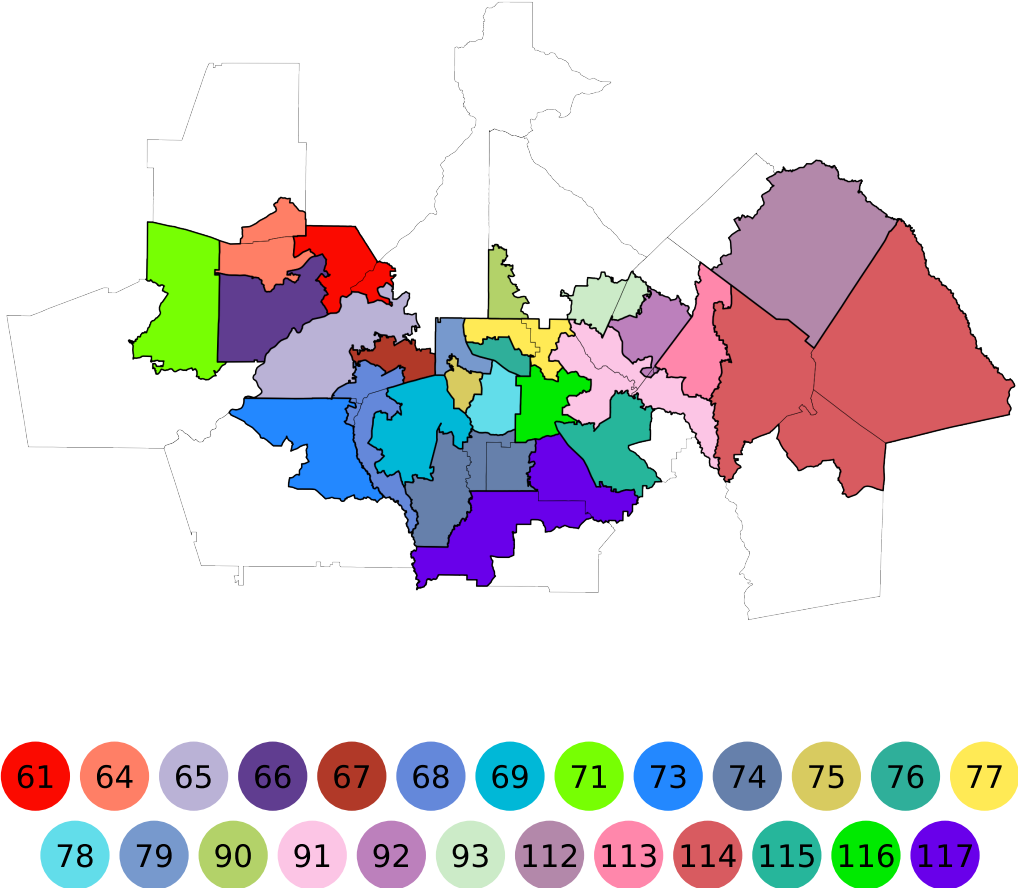


Figure 23: HD Atlanta Alt Eff 3 plan.

HD Atlanta Enacted					HD Atlanta Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
61	74.3%	81.9%	4	8	61	64.9%	74.5%	4	8
64	30.7%	38.1%	3	0	64	43.7%	52.4%	4	7
65	62.0%	66.5%	4	8	65	87.0%	90.2%	4	8
66	53.4%	62.9%	4	8	66	40.5%	48.1%	4	5
67	58.9%	66.7%	4	8	67	89.1%	94.7%	4	8
68	55.7%	62.0%	4	8	68	36.7%	44.4%	3	5
69	63.6%	69.0%	4	8	69	33.6%	40.3%	3	6
71	19.9%	26.1%	3	0	71	19.9%	26.1%	3	0
73	12.1%	19.1%	2	0	73	11.5%	17.9%	2	0
74	25.5%	31.1%	3	0	74	48.5%	54.7%	4	8
75	74.4%	85.7%	4	8	75	78.7%	90.0%	4	8
76	67.2%	80.4%	4	8	76	59.5%	76.4%	4	8
77	76.1%	88.3%	4	8	77	66.1%	80.0%	4	8
78	71.6%	80.5%	4	8	78	70.6%	79.9%	4	8
79	71.6%	87.6%	4	8	79	80.7%	91.3%	4	8
90	58.5%	62.8%	2	8	90	58.5%	62.8%	2	8
91	70.0%	75.9%	4	8	91	43.2%	48.3%	4	6
92	68.8%	73.5%	4	8	92	64.4%	71.2%	4	8
93	65.4%	75.0%	4	8	93	85.1%	92.0%	4	8
112	19.2%	22.5%	1	0	112	19.2%	22.5%	1	0
113	59.5%	66.2%	4	8	113	61.1%	66.9%	4	8
114	24.7%	28.4%	3	0	114	26.0%	30.0%	3	0
115	52.1%	59.1%	4	8	115	47.3%	53.9%	4	5
116	58.1%	65.4%	4	8	116	57.3%	65.3%	4	8
117	36.6%	42.0%	3	0	117	39.6%	45.8%	4	5

Table 33: HD Atlanta (25 districts).

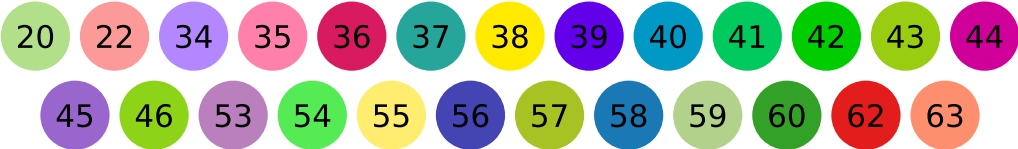
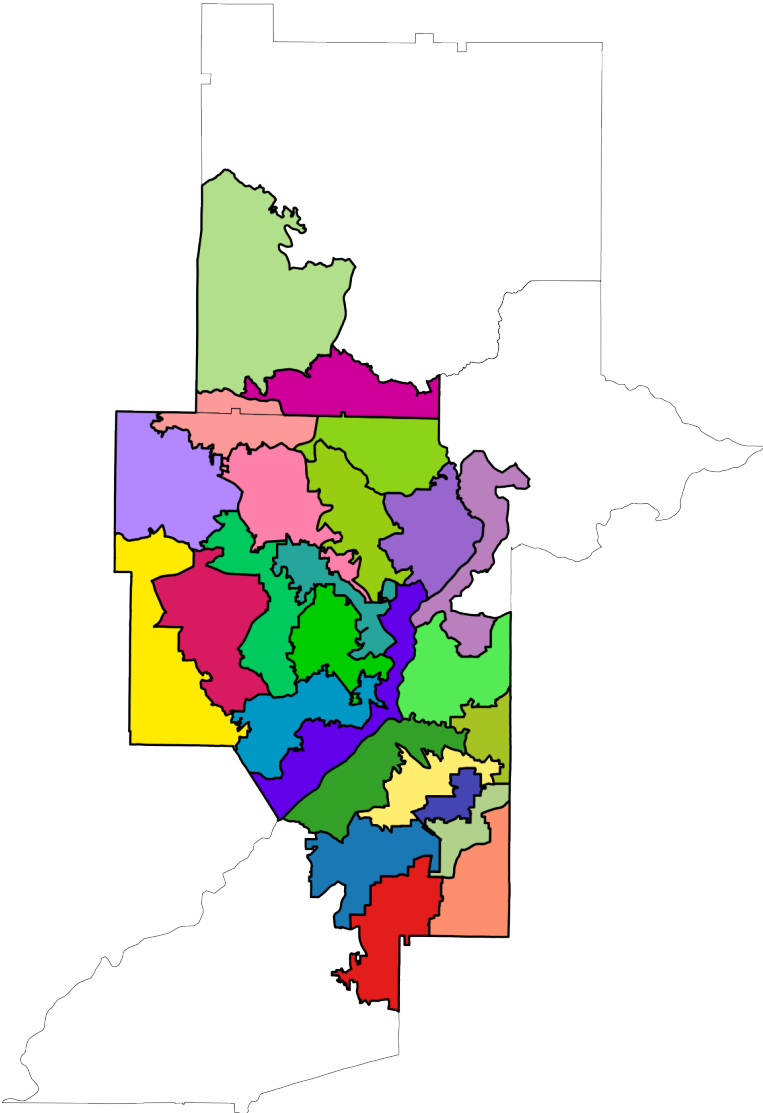


Figure 24: HD Cobb Alt Eff 3 plan.

Exhibit 2b

HD Cobb Enacted					HD Cobb Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
20	9.3%	18.5%	1	0	20	6.9%	14.5%	1	0
22	15.1%	26.7%	3	0	22	22.9%	34.3%	3	5
34	15.7%	23.5%	3	0	34	15.5%	24.2%	3	0
35	28.4%	39.6%	3	8	35	31.2%	44.9%	3	8
36	17.0%	23.5%	3	0	36	38.9%	50.9%	3	8
37	28.2%	46.8%	3	8	37	33.7%	51.8%	3	8
38	54.2%	66.8%	4	8	38	41.9%	51.6%	3	8
39	55.3%	74.0%	4	8	39	45.5%	56.6%	3	8
40	33.0%	38.9%	3	8	40	39.9%	53.3%	3	8
41	39.4%	68.0%	4	8	41	32.3%	52.3%	3	8
42	33.7%	51.1%	3	8	42	28.4%	51.1%	3	8
43	26.5%	40.6%	3	8	43	16.2%	25.9%	3	5
44	12.0%	22.5%	2	0	44	11.2%	24.7%	1	0
45	5.3%	10.2%	0	0	45	5.0%	9.8%	0	0
46	8.1%	15.5%	0	0	46	9.2%	16.6%	0	0
53	14.5%	21.9%	0	1	53	17.5%	32.1%	0	7
54	15.5%	28.3%	0	7	54	12.4%	17.5%	0	1
55	55.4%	60.4%	3	8	55	50.6%	56.1%	3	8
56	45.5%	51.3%	3	8	56	44.2%	51.0%	3	8
57	18.1%	26.1%	0	8	57	18.9%	27.1%	0	8
58	63.0%	68.1%	3	8	58	93.1%	95.3%	4	8
59	70.1%	74.5%	3	8	59	51.2%	56.1%	3	8
60	63.9%	69.0%	3	8	60	57.0%	63.1%	3	8
62	72.3%	79.1%	3	8	62	81.5%	88.7%	3	8
63	69.3%	78.6%	3	8	63	61.6%	70.8%	3	8

Table 34: HD Cobb (25 districts).

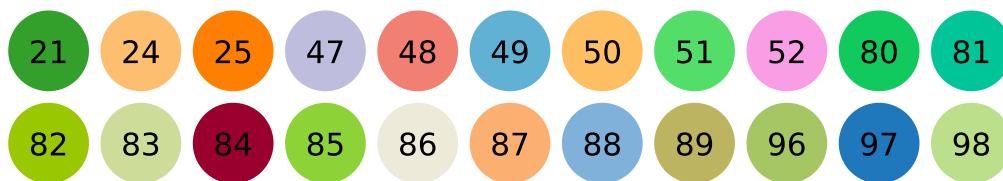
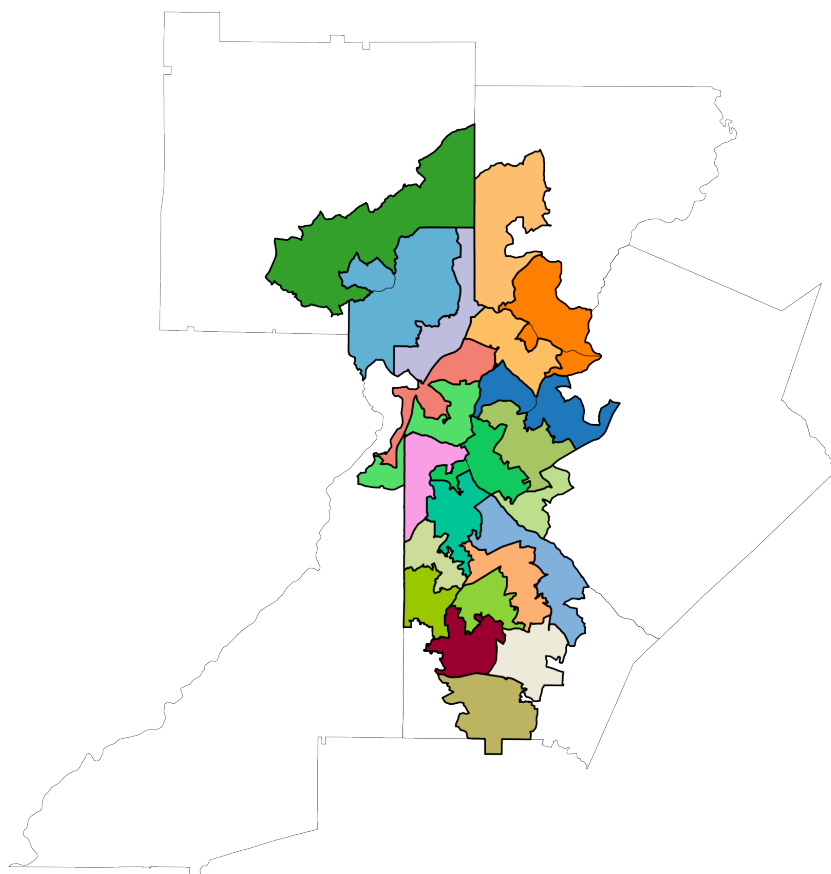


Figure 25: HD DeKalb Alt Eff 3 plan.

HD DeKalb Enacted					HD DeKalb Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
21	5.1%	12.5%	1	0	21	5.1%	12.4%	1	0
24	7.0%	17.3%	1	0	24	7.0%	17.3%	1	0
25	5.9%	11.0%	0	0	25	5.9%	10.7%	0	0
47	10.7%	18.1%	2	0	47	15.7%	31.4%	3	5
48	11.8%	24.2%	0	1	48	20.8%	32.2%	3	8
49	8.4%	15.1%	0	0	49	5.8%	11.0%	0	0
50	12.4%	18.8%	2	8	50	12.6%	19.7%	2	7
51	23.7%	37.0%	0	8	51	16.1%	24.4%	0	6
52	16.0%	23.4%	0	8	52	10.9%	16.4%	0	7
80	14.2%	37.3%	0	8	80	27.2%	60.1%	3	8
81	21.8%	42.7%	0	8	81	16.0%	49.2%	0	8
82	16.8%	23.6%	0	8	82	16.9%	23.2%	0	8
83	15.1%	43.6%	0	8	83	15.0%	36.5%	0	8
84	73.7%	76.7%	3	8	84	62.6%	67.7%	3	8
85	62.7%	68.6%	3	8	85	54.8%	59.4%	3	8
86	75.1%	79.4%	3	8	86	90.8%	94.5%	4	8
87	73.1%	79.8%	4	8	87	60.6%	68.7%	3	8
88	63.3%	73.3%	3	8	88	45.9%	59.3%	3	8
89	62.5%	65.9%	2	8	89	94.7%	97.0%	4	8
96	23.0%	59.0%	3	8	96	20.5%	50.2%	3	8
97	26.8%	46.0%	3	8	97	19.0%	32.8%	3	8
98	23.2%	76.0%	3	8	98	24.4%	71.2%	3	8

Table 35: HD DeKalb (22 districts).

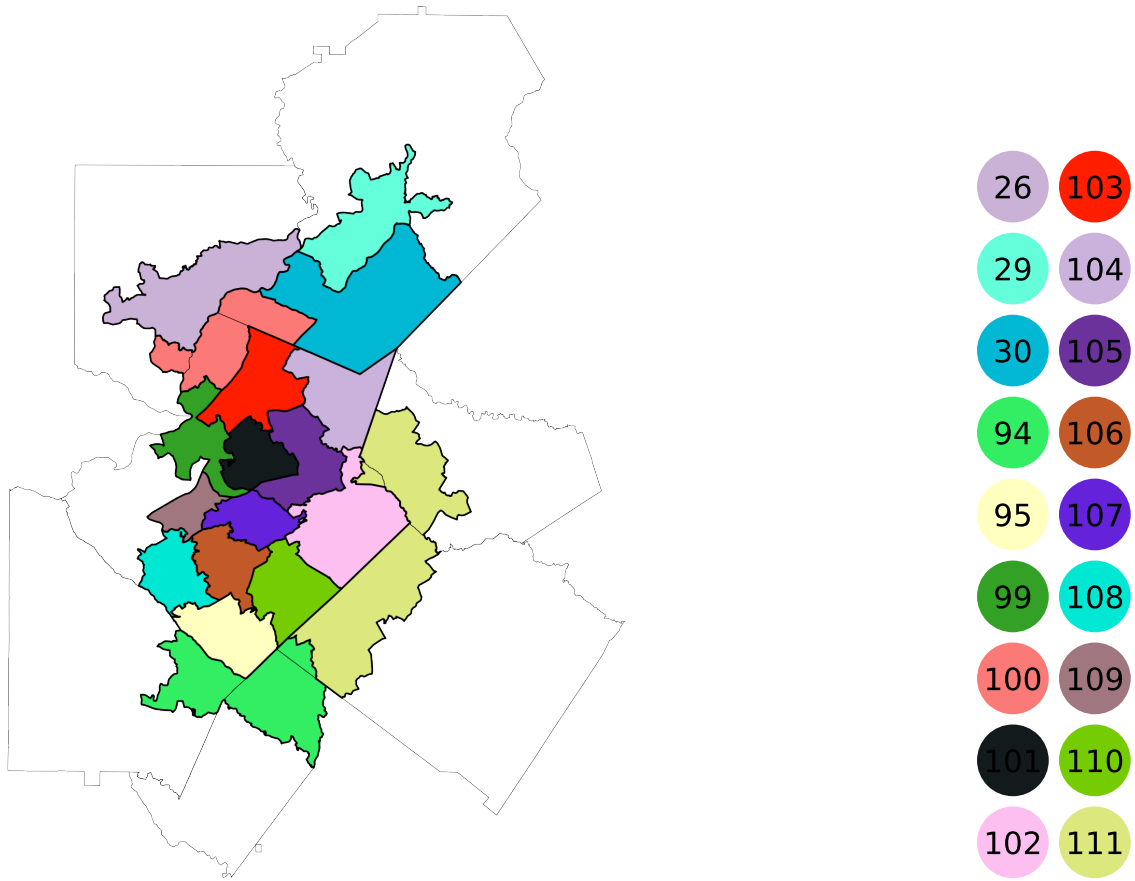


Figure 26: HD Gwinnett Alt Eff 3 plan.

HD Gwinnett Enacted					HD Gwinnett Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
26	4.0%	14.8%	0	0	26	4.1%	14.8%	0	0
29	13.6%	53.3%	2	0	29	13.6%	53.3%	2	0
30	8.1%	24.2%	0	0	30	6.6%	22.7%	0	0
94	69.0%	76.3%	4	8	94	79.8%	84.3%	4	8
95	67.2%	75.1%	4	8	95	59.7%	71.1%	4	8
99	14.7%	23.4%	3	3	99	16.9%	27.3%	3	5
100	10.0%	20.0%	1	0	100	10.1%	21.3%	2	0
101	24.2%	42.4%	3	7	101	24.4%	41.9%	3	7
102	37.6%	58.9%	3	8	102	40.2%	53.3%	4	7
103	16.8%	33.7%	3	0	103	19.5%	35.8%	3	3
104	17.0%	28.1%	3	0	104	18.9%	29.3%	3	0
105	29.0%	45.8%	3	6	105	33.2%	53.2%	3	8
106	36.3%	47.4%	3	7	106	25.4%	40.4%	3	6
107	29.6%	60.7%	3	8	107	30.2%	55.7%	3	8
108	18.4%	36.6%	3	6	108	19.8%	39.6%	3	6
109	32.5%	68.6%	3	8	109	33.5%	72.2%	4	8
110	47.2%	57.7%	4	8	110	47.5%	58.8%	4	8
111	22.3%	31.1%	3	0	111	14.1%	23.0%	3	0

Table 36: HD Gwinnett (18 districts).

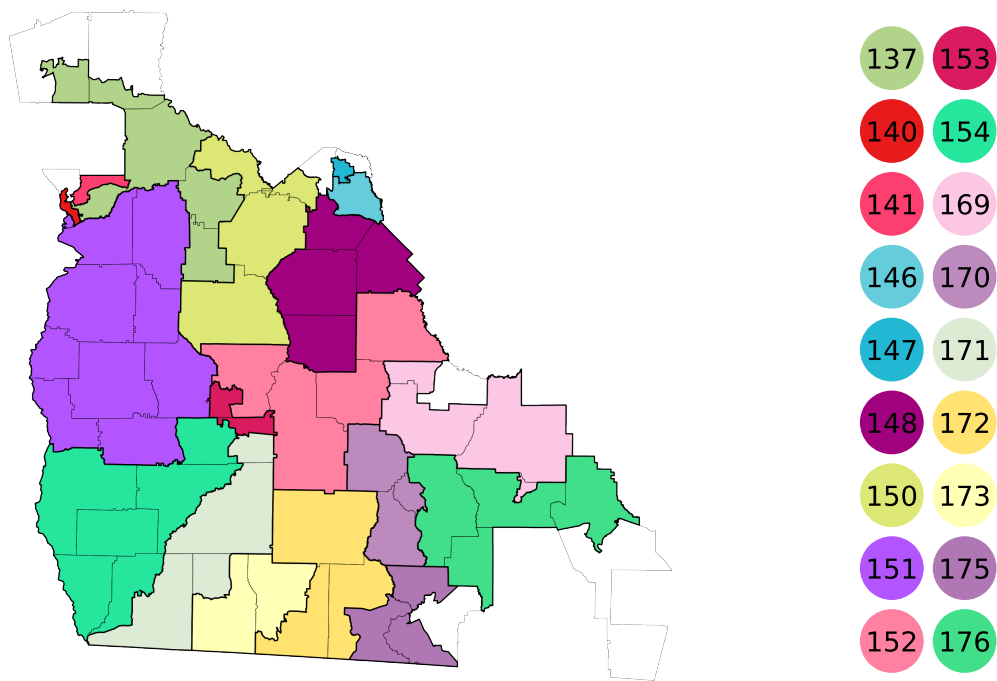


Figure 27: HD Southwest Alt Eff 3 plan.

HD Southwest Enacted					HD Southwest Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
137	52.1%	56.6%	4	8	137	55.2%	58.4%	4	8
140	57.6%	65.6%	4	8	140	59.3%	66.9%	4	8
141	57.5%	64.1%	4	8	141	49.2%	56.1%	4	8
146	27.6%	32.3%	4	0	146	23.9%	29.4%	4	0
147	30.1%	37.3%	4	0	147	31.2%	38.0%	4	0
148	34.0%	37.1%	4	0	148	39.2%	42.4%	4	0
150	53.6%	59.7%	4	8	150	55.0%	60.9%	4	8
151	42.4%	49.7%	4	0	151	45.7%	54.0%	4	7
152	26.1%	28.4%	4	0	152	28.3%	30.7%	4	0
153	67.9%	70.4%	4	8	153	60.3%	62.8%	4	8
154	54.8%	56.5%	4	7	154	50.7%	52.9%	4	6
169	29.0%	36.7%	3	0	169	27.2%	37.2%	3	0
170	24.2%	32.9%	3	0	170	27.7%	36.6%	2	0
171	39.6%	44.2%	4	0	171	47.5%	51.8%	4	0
172	23.3%	36.7%	4	0	172	23.2%	36.2%	4	0
173	36.3%	41.7%	4	0	173	34.5%	39.9%	4	0
175	24.2%	29.2%	4	0	175	24.1%	29.5%	4	0
176	22.7%	30.9%	4	0	176	20.3%	25.7%	4	0

Table 37: HD Southwest (18 districts).

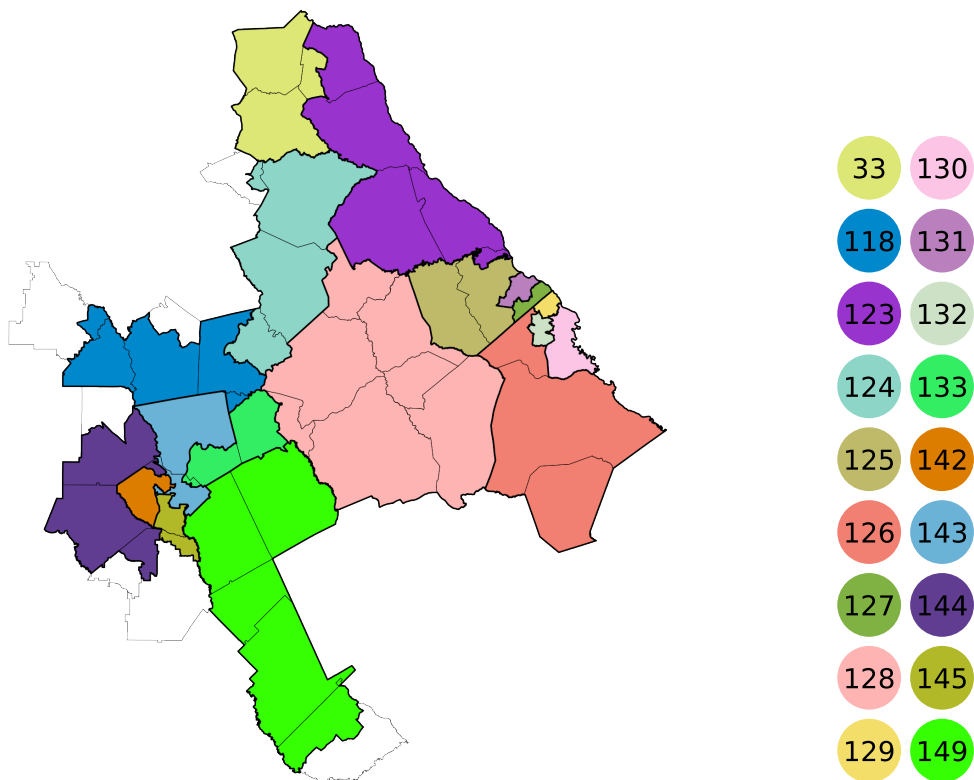


Figure 28: HD East Black Belt Alt Eff 3 plan.

HD East Black Belt Enacted					HD East Black Belt Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
33	11.2%	14.3%	3	0	33	9.3%	13.8%	3	0
118	23.6%	27.3%	3	0	118	22.8%	26.2%	3	0
123	24.3%	28.6%	3	0	123	25.5%	28.5%	3	0
124	25.6%	31.8%	2	0	124	25.3%	31.7%	2	0
125	23.7%	31.4%	3	0	125	30.7%	36.6%	3	0
126	54.5%	57.7%	4	8	126	41.0%	47.5%	4	8
127	18.5%	23.3%	3	0	127	17.2%	23.4%	3	0
128	50.4%	52.1%	2	4	128	51.9%	53.4%	2	7
129	54.9%	59.2%	3	8	129	38.2%	43.1%	3	5
130	59.9%	63.8%	4	8	130	60.6%	63.9%	4	8
131	17.6%	23.5%	3	0	131	18.0%	24.0%	3	0
132	52.3%	60.1%	4	8	132	74.7%	79.5%	4	8
133	36.8%	38.9%	3	0	133	45.4%	47.6%	3	8
142	59.5%	63.2%	3	8	142	42.1%	45.1%	3	6
143	60.8%	65.5%	3	8	143	54.8%	58.7%	3	8
144	29.3%	31.9%	3	0	144	26.0%	29.3%	3	0
145	35.7%	41.6%	3	0	145	55.1%	62.0%	4	8
149	32.1%	37.8%	2	0	149	32.1%	37.8%	2	0

Table 38: HD East Black Belt (18 districts).

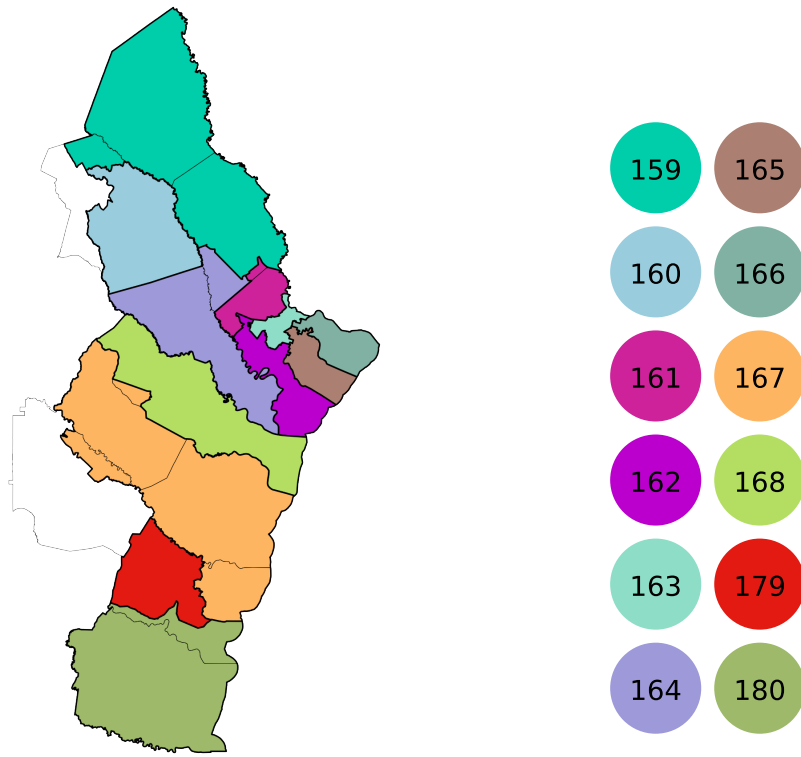


Figure 29: HD Southeast Alt Eff 3 plan.

HD Southeast Enacted					HD Southeast Alt Eff 3				
HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8	HD	BVAP	BHVAP	Primaries out of 4	Generals out of 8
159	24.5%	27.4%	2	0	159	22.3%	25.8%	3	0
160	22.6%	27.6%	2	0	160	26.4%	31.5%	1	0
161	27.1%	33.9%	4	0	161	34.1%	42.7%	4	6
162	43.7%	53.3%	4	8	162	38.9%	47.3%	4	8
163	45.5%	52.9%	3	8	163	50.0%	59.4%	4	8
164	23.5%	32.0%	3	0	164	13.6%	19.2%	3	0
165	50.3%	55.6%	4	8	165	27.1%	32.2%	3	5
166	5.7%	9.8%	3	0	166	29.9%	33.7%	3	8
167	22.3%	29.7%	3	0	167	18.7%	24.5%	3	0
168	46.3%	56.6%	4	8	168	45.9%	56.6%	4	8
179	27.0%	33.4%	3	0	179	31.8%	39.4%	4	0
180	18.2%	23.8%	3	0	180	18.2%	23.8%	3	0

Table 39: HD Southeast (12 districts).

10 Racial gerrymandering

10.1 Retention, displacement, and district disruption

In this section, I will examine the *core retention*, or conversely, the *population displacement*, of the districts in the enacted plan—that is, how much of the population retains the same district assignment before and after the redistricting? I will pay particular attention to the tendency to use racially imbalanced transfers of population in rebalancing the districts, and to the impact on the districts’ effectiveness for electing Black and Latino candidates of choice.

10.1.1 Congress

In Congress, the ideal district population is 765,136. Of the fourteen districts, twelve are at least reasonably similar to their benchmark configuration, i.e., at least 2/3 of their population had been assigned to the same district before redistricting. The two with more than one-in-three new voters are districts 6 and 7.

District 6 was nearly at ideal size before the redistricting, having 771,431 residents enumerated in the Census—less than seven thousand off from the target size. However, it was subjected to major reconfiguration, with at least 40,000 people from the benchmark district reassigned to each of districts 4, 5, 7, and 11, while at least 40,000 different people were drawn in from each of districts 7, 9, and 11. In all, this represents reassignment of several hundred thousand people.

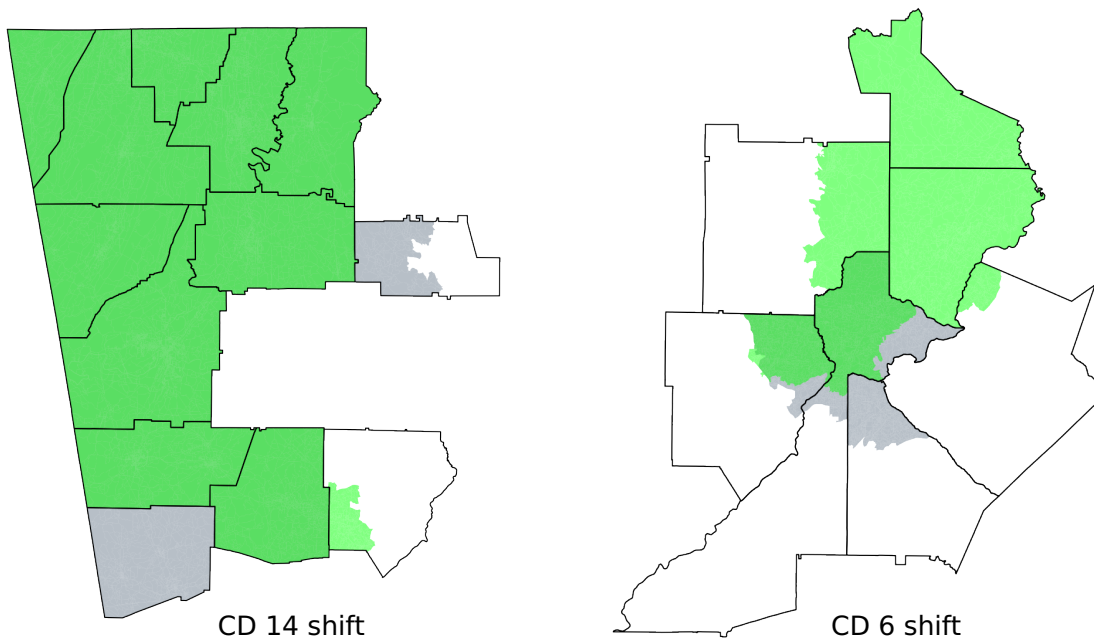


Figure 30: These before-and-after plots show benchmark configurations in gray, while new district placement is in light green. We can see that CD 14 made a new incursion into Cobb County while shedding rural Haralson and part of Pickens County. Meanwhile, CD 6 went sharply the other way, withdrawing from its metro Atlanta coverage and picking up rural counties to the north. Compare to Figure [31](#).

These swaps transfer more urban, more Black and Hispanic neighborhoods out of CD 6, while bringing in Whiter suburban areas. For instance, the largest reassignment out of the district goes from CD 6 to CD 4, and the largest reassignment into the district goes from CD 7 to CD 6—each of those moves roughly 200,000 Georgians to a new district, which is a massive shift. But the CD 6 to CD 4 transfer is 37.5% Black or Latino Georgians; by contrast, the CD 7 to CD 6 transfer is 16.1% Black or Latino. Since CD 6 was a performing district for the coalition of Black and Latino voters before its transformation, and none of the transfers improves representational prospects in non-performing districts, this transition looks to be plainly dilutive of voting power.

Meanwhile, the changes to CD 14 are smaller in terms of land area but are distinctive in terms of density and racial composition. CD 14 has expanded into Cobb to include two majority-Black cities—Powder Springs and Austell. Besides the further fracturing of Cobb County, Figure 31 makes it clear that the movement of those areas of Cobb into the district can't be justified in terms of compactness or respect for urban/rural communities of interest. (See §10.3 for references to the public record of community testimony.)

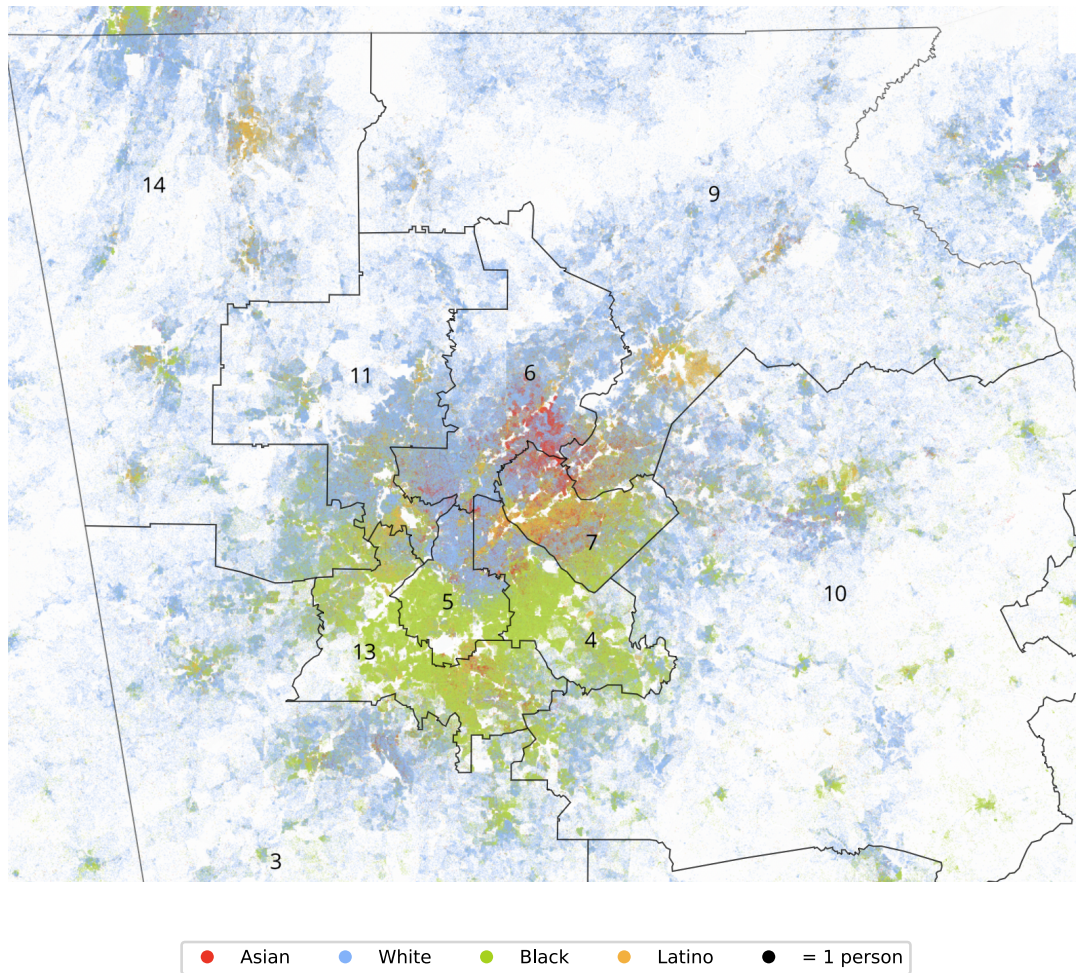


Figure 31: This dot density plot makes it clear—through thicker arrangement of dots, with green dots predominating—that dense African-American neighborhoods in Cobb were brought in at the southern tip of CD 14. These voters were therefore submerged among more numerous, dissimilar communities from CD 14. Meanwhile, the changes to district 6 added suburban/exurban/rural areas—seen with the sparsity at the north of CD 6 in the the dot density plot—unlike the bulk of the district.

This incursion of CD 14 into Cobb is emphatically not required by adherence to traditional districting principles. For one vivid illustration of that, consider the comparison between the Duncan-Kennedy draft map and the map that was ultimately enacted. The benchmark plan from ten years ago had split Pickens County and included Haralson County in its construction of CD 14. Duncan-Kennedy retains Haralson, keeps Pickens whole in CD 9, and splits (low-density, mostly White) Bartow County to achieve population balance. Thus the shift in the final enacted plan—submerging a dense, majority-Black segment of Cobb in CD 14—was not necessary to balance population while keeping Pickens intact.

10.1.2 State Senate

When we move to smaller and more numerous districts in the Senate (ideal population 191,284), we might reasonably expect somewhat less core retention as line-drawers balance the traditional principles. However, the disruption in some cases is more than we would expect if retention were a highly prioritized goal. In the Senate, SD 7 and SD 14 have zero overlap with their previous population in the Benchmark configuration, and four other districts—SD 6, 32, 48, and 56—have less than half of their population retained.

New SD 14 is largely composed of benchmark SD 56, which was represented by Republican John Albers. The previous SD 56, which had become competitive over time (with four Republican victories and four Democratic victories across the elections in our probative dataset), was completely moved off of itself, to a new position that gave Biden only 43.7% support. Thus Albers could stay in the district numbered 56, facing largely new but very Republican-leaning voters, and win easily. This was achieved by racially imbalanced shifts: 56 → 14 has 35.5% BHVAP (substantial but still failing to secure electoral alignment in SD 14 with Black and Latino candidates of choice), while each group moved into SD 56 has under 19% BHVAP.

Another consequential district disruption occurred in benchmark district 48, which was represented by Democrat Michelle Au. Roughly two-thirds of the previous population of SD 48 was reassigned into SD 7 (see Figure 32 for geographical displacement). But the 7th district was already Democratic-controlled and was now facing the candidacy of progressive Nabilah Islam, who had been endorsed by civil rights groups including GALEO. The new SD 48 was built to be highly ineffective for Black and Latino preferences (aligned in only one of four primaries and zero of eight general elections from our probative dataset). Rather than run in the new district, Au switched to a run for the lower chamber, ultimately winning HD 50 in 2022. This district makeover was carried out with highly racially imbalanced transfers of population. Of more than 130,000 people moved from SD 48 to SD 7, 37.8% are Black and Latino, while the retained population has only 17.8% BHVAP share; and no territory reassigned into the district has BHVAP share exceeding 23.5%.

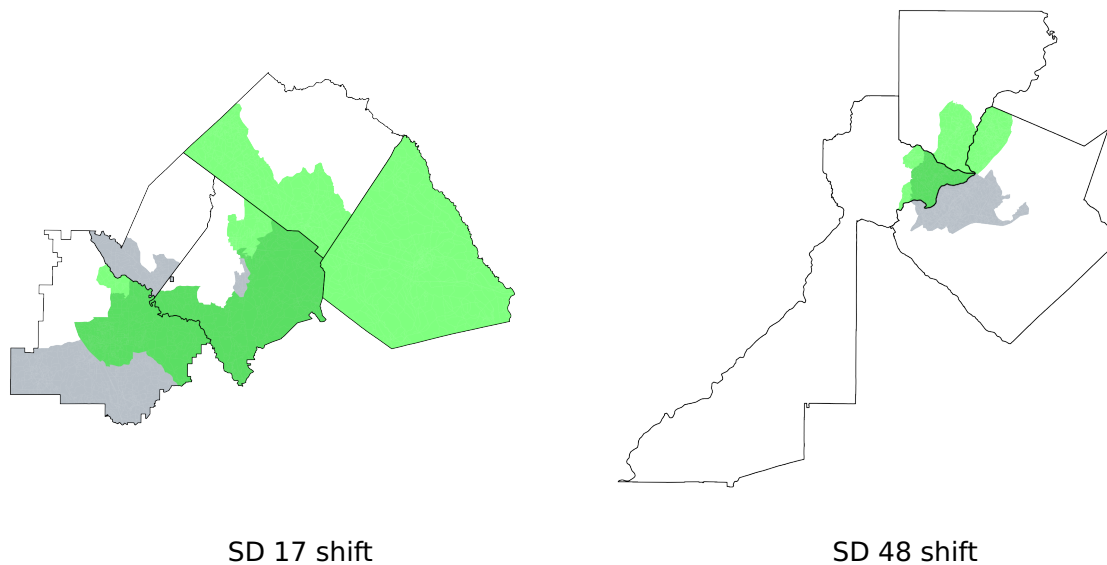


Figure 32: These before-and-after plots show benchmark configurations in gray, while new district placement is in light green. The new configurations are clearly not made to improve compactness, and they increase the number of county traversals.

SD 17 also underwent a makeover: the district had become mildly overpopulated but was changed much more than needed, retaining only about half of its residents. (See, again, Figure 32.) Meanwhile, the district was transformed from effective (4/4 primaries, 5/8 generals) to ineffective (3/4 primaries, 0/8 generals). Outgoing population was roughly half Black and Latino (17 → 10 has 52.6% BHVAP, 17 → 25 has 49.0%, and 17 → 43 has 51.3%) while the significant incoming reassignments have much lower shares (25 → 17 has 20.9% and 46 → 17 has 23.8%). Notably, none of the districts that received population from SD 17 thereby became effective.

10.1.3 State House

At the House level, the ideal district size of just 59,511 necessitates substantial shifts to the districts, but once again the state's enacted map is highly disruptive, well beyond what is required. Fully 57 districts out of 180 were moved to positions completely disjoint from their benchmark locations. Furthermore, a startling 32 districts were not only moved or relabeled but effectively *dismantled*, with fewer than 30,000 prior residents assigned to any single district, so that no candidate can have the usual benefits of incumbency in terms of familiarity to their voters.

One notable category within these "dismantled" districts is those for which the ten-year demographic shifts had made the benchmark districts amenable to political swings, so that candidates from each major party would have won 2-6 out of 8 general contests in the dataset of probative elections. This includes seven districts: HD 35, 44, 48, 49, 52, 104, and 109. *Zero* of these remain in this "swinging" category after redrawing. Yet five are rebuilt to be ineffective for Black and Latino voters, while only two are made effective. Those that are rebuilt to be ineffective are subjected to racially imbalanced population transfers.

Benchmark HD	Outward	Inward
44	.425 (to HD 35)	.226 (from HD 20)
48	.464 (to HD 51)	.201 (from HD 49)
49	.227 (to HD 47)	.127 (from HD 48)
52	.436 (to HD 54)	.245 (from HD 79)
104	.715 (to HD 102)	.363 (from HD 103)

Table 40: This table records the BHVAP share of the largest district-to-district reassignment for the five "dismantled" House districts that were formerly swingy, now made ineffective. Compare Figure 33.

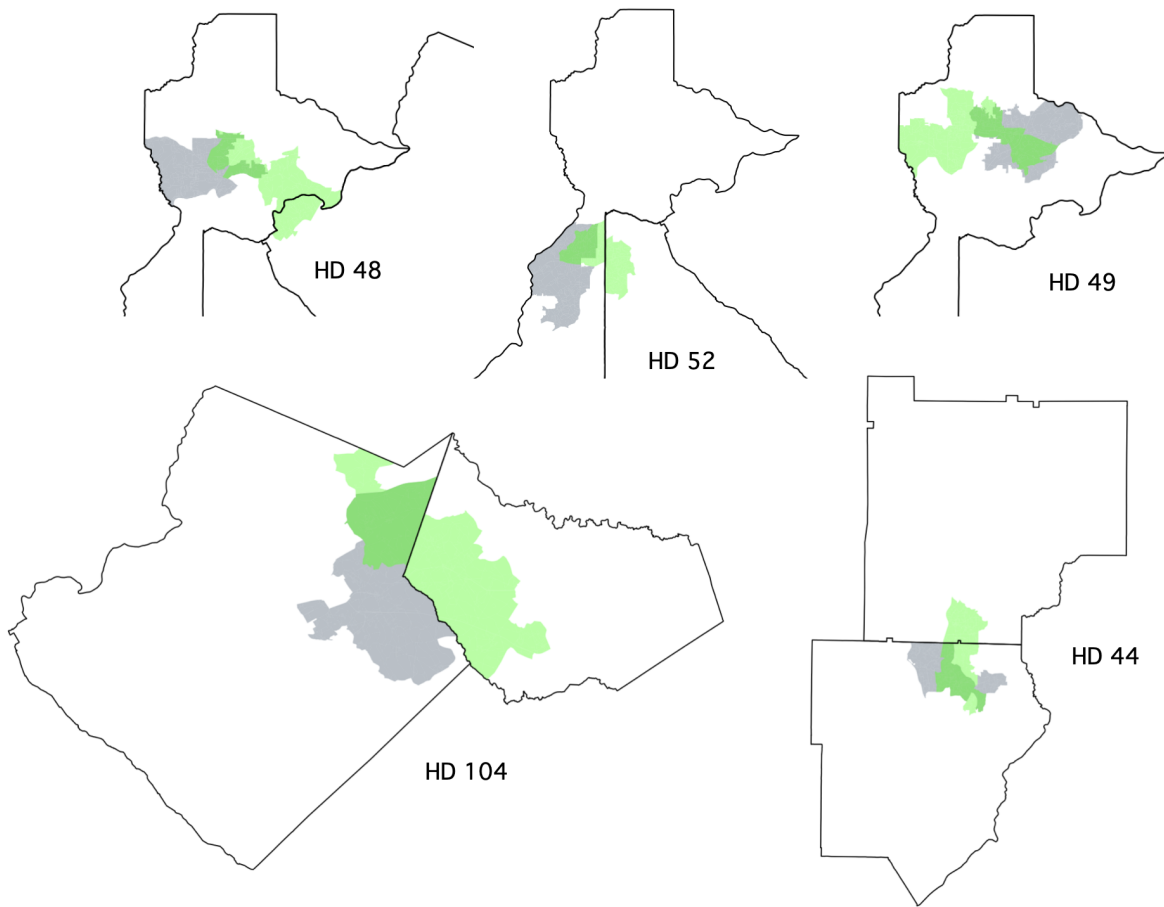


Figure 33: Each of these "dismantled" House districts from the metro Atlanta area (Table 40) was moved in such a way that the previous residents are scattered across multiple districts in the new plan. These districts had become politically swingy in the time since the last Census but are now rebuilt to be likely out of reach for Black and Latino voters' candidates of choice. The images make it clear that the shifts are not explained by traditional districting principles like compactness or respect for county lines. They is not explained by respect for municipal boundaries, as the new locations split small and midsized cities.

10.2 Splitting of geographical units

10.2.1 Congress

Most counties that are split in the enacted plan show marked racial disparity across the pieces. For instance, Cobb County is split across four districts, with CD 13 and 14 receiving parts of Cobb that are collectively over 60% Black and Latino by voting age population, while CD 6 contains a part of Cobb that is about 18.5% BHVAP—consistent with a packing and cracking strategy. Fayette, Fulton, Douglas, Newton, Gwinnett, Muscogee, and Bibb are likewise all split in a way that puts pieces into different districts with at least 20 percentage points disparity in BHVAP across the split.

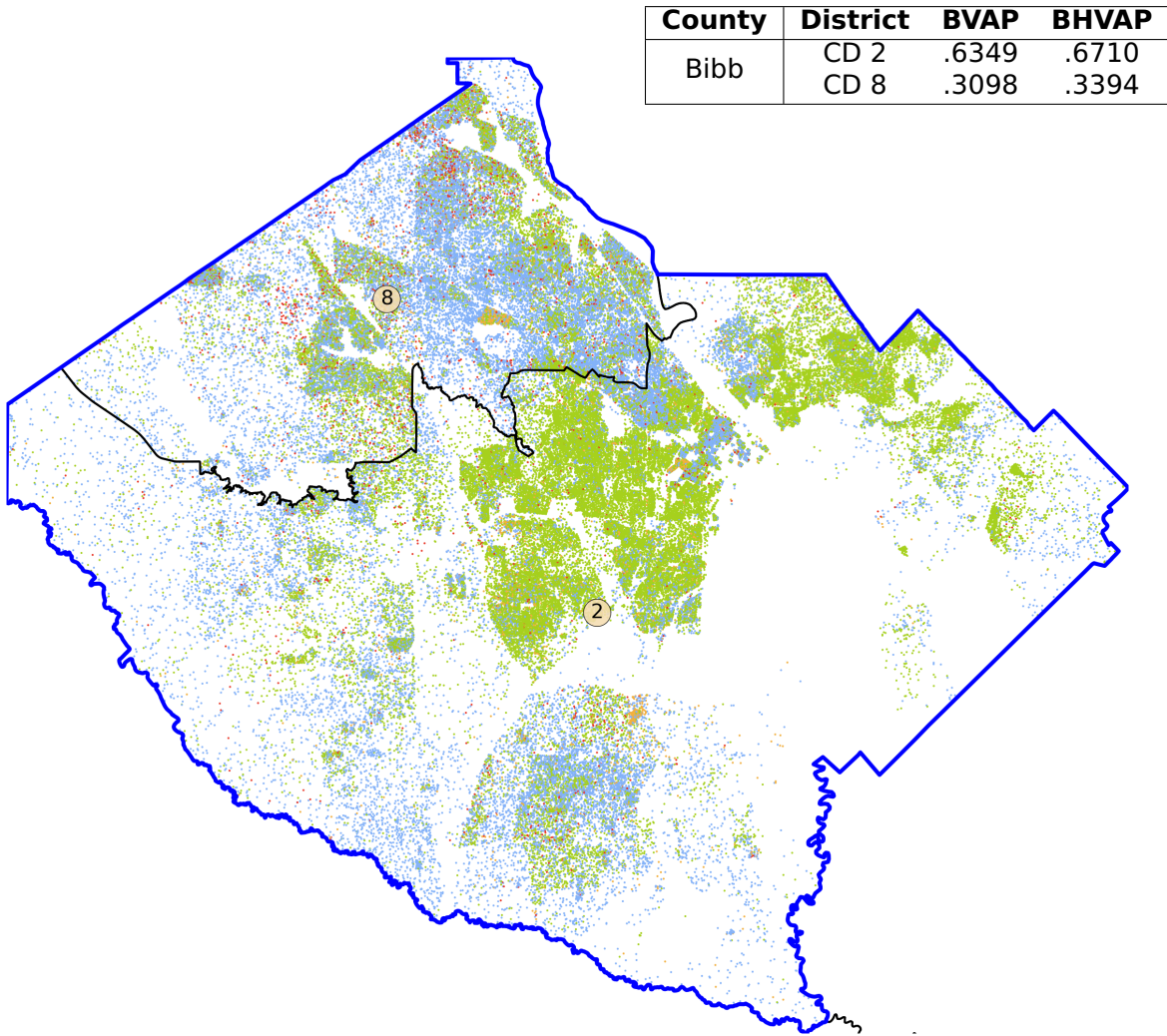


Figure 34: Minutely race-conscious decisions are evident along the boundary of CD 2 and CD 8 in Bibb County.

County	District	BVAP	BHVAP
Cherokee	CD 6	.0304	.0814
	CD 11	.0817	.1902
Clayton	CD 5	.7280	.8649
	CD 13	.7190	.8266
Cobb	CD 6	.1092	.1848
	CD 11	.2654	.3850
	CD 13	.4458	.6271
	CD 14	.4646	.5644
Douglas	CD 3	.2970	.3719
	CD 13	.5762	.6647
Fayette	CD 3	.2094	.2720
	CD 13	.5762	.6647
Fulton	CD 5	.4769	.5379
	CD 6	.1574	.2568
	CD 7	.1175	.1777
	CD 13	.8829	.9171
Gwinnett	CD 6	.1336	.2645
	CD 7	.3234	.5450
	CD 9	.2061	.3433
Henry	CD 3	.4678	.5259
	CD 10	.4414	.4948
	CD 13	.5710	.6324
Muscogee	CD 2	.5262	.5851
	CD 3	.1909	.2578

Table 41: All county splits involving CD 3, 6, 13, and 14. With the exception of the Clayton split, which is unremarkable in demographic terms, each of these is consistent with an overall pattern of cracking in CD 3 and CD 6, packing in CD 13, and submerging a small and diverse urban community in CD 14. See Appendix [C](#) for a complete list of county splits.

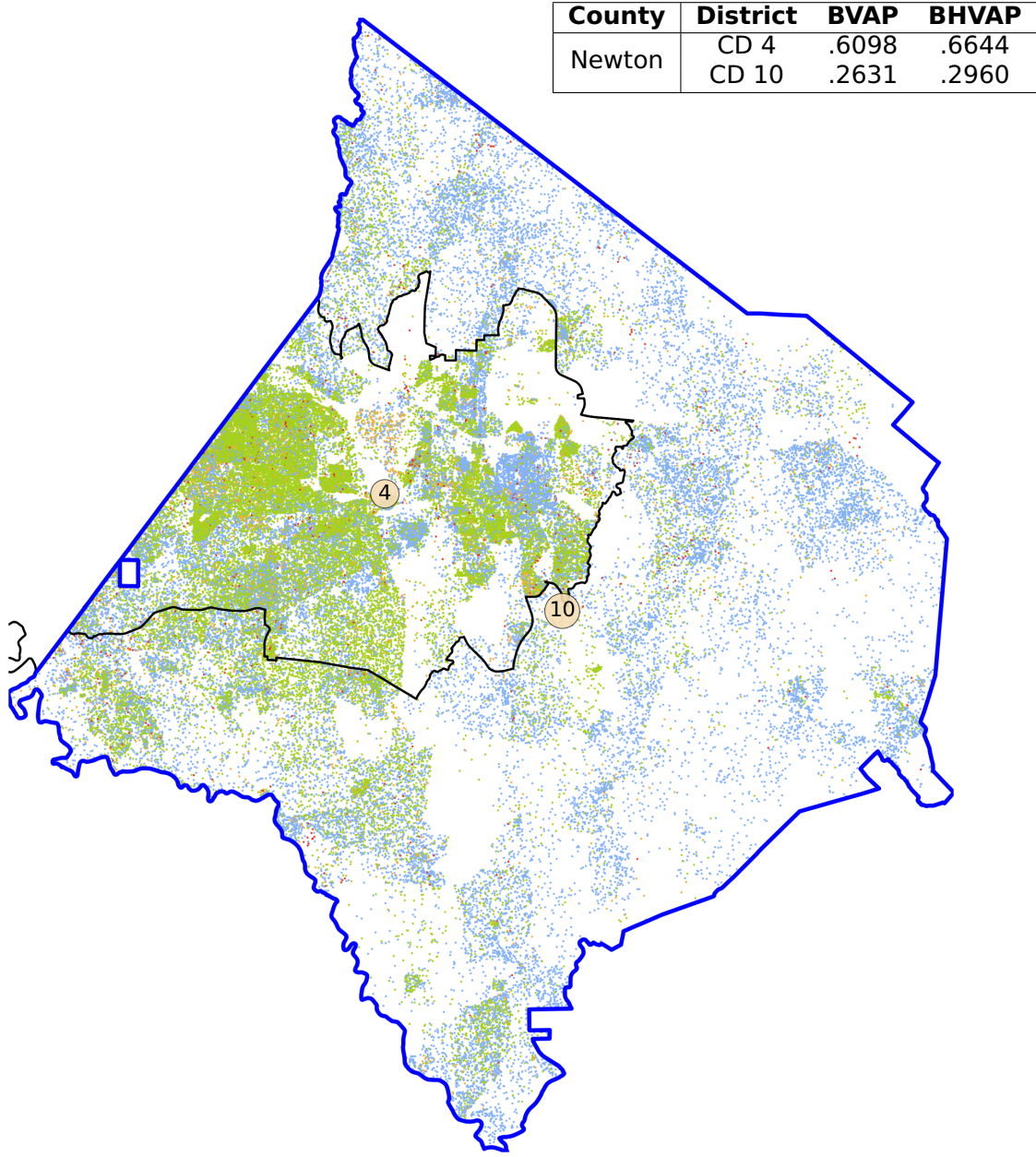


Figure 35: In Newton County, CD 4 and CD 10 are divided by a line that is consistent with packing the former district and cracking the latter.

For the purposes of investigating racial gerrymandering, the splits to state precincts can be especially revealing: these are the units at which cast votes are reported, so finer divisions are usually made in view of demographics but not voting behavior—that is, these highlight the predominance of race over even partisan concerns.¹²

Several pairs of bordering districts show significant demographic disparity across precinct splits in the Congressional plan, especially on the border of CD 4 and CD 10 (in Newton County, as in Figure 35), and on the border of CD 6 and CD 11 (in Cobb and Cherokee counties).

In particular, each precinct split with a sizeable demographic gap on the CD 6/11 border is consistent with the overall theme that CD 6 was targeted to reduce electoral opportunity for Black and Latino voters—and for Black voters, in particular.

State precinct	District	BVAP	BHVAP
MARIETTA 5A	CD 6	.1975	.4938
	CD 11	.4232	.5803
MARIETTA 6A	CD 6	.1391	.6607
	CD 11	.4738	.5464
SEWELL MILL 03	CD 6	.2225	.3042
	CD 11	.4064	.5548

Table 42: Three examples of split precincts on the CD 6 / CD 11 border that show significant racial disparity, consistent with an effort to diminish the electoral effectiveness of CD 6 for Black voters. (Note that CD 6 receives a higher share of BHVAP in Marietta 6A, but a far lower share of BVAP.)

Though the disparity in numbers is suggestive, the previous splits are geographically unremarkable. By contrast, several precinct splits on the CD 4 / CD 10 border stand out both in demographic and geographic terms.

State precinct	District	BVAP	BHVAP
ALCOVY	CD 4	.4010	.4499
	CD 10	.0512	.0620
CITY POND	CD 4	.5912	.6554
	CD 10	.3923	.4192
OXFORD	CD 4	.6444	.6932
	CD 10	.0929	.1213
DOWNS	CD 4	.6429	.7024
	CD 10	.4429	.4930

Table 43: Four examples of split precincts on the CD 4 / CD 10 border, all consistent with packing of CD 4 and cracking of CD 10.

¹²Of course, it is possible to incorporate registered voter data at the block level or to purchase commercial products with partisan modeling, but official state mappers frequently claim not to use this more fine-grained data.

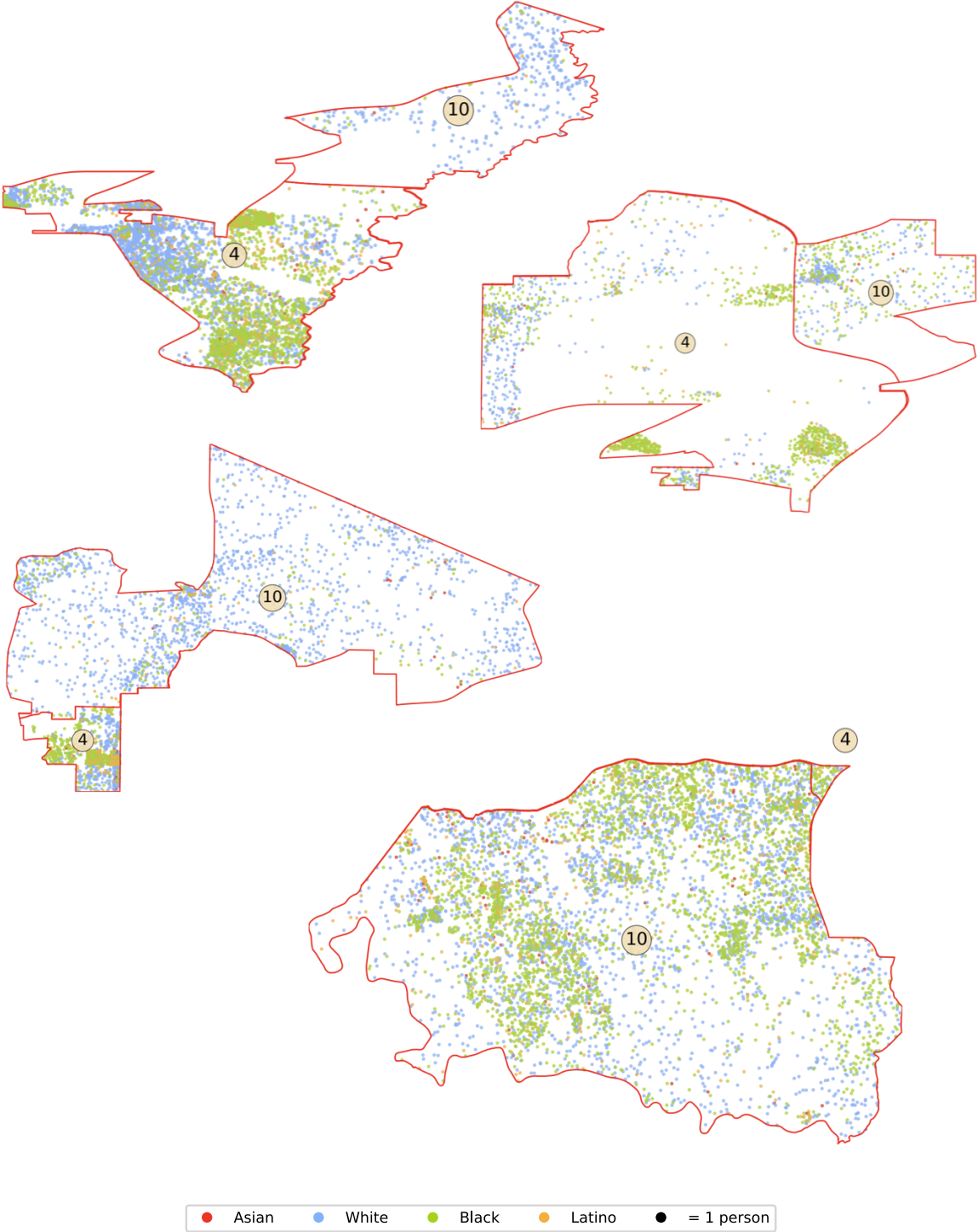


Figure 36: Split precincts on the CD 4 / CD 10 border.

10.2.2 State Senate

Similarly, numerous counties are split into unnecessarily many pieces in the Senate plan. Fourteen counties have at least a 20-point disparity in the BHVAP across the splits: Fulton (10 pieces), Gwinnett (9 pieces), DeKalb (7 pieces), Cobb (6 pieces), Bibb, Chatham, Douglas, and Houston (3 pieces each), and Newton, Clarke, Hall, Muscogee, Fayette, and Richmond (2 pieces each). Thirteen state precincts are split with a significant racial disparity between the pieces placed in different districts.

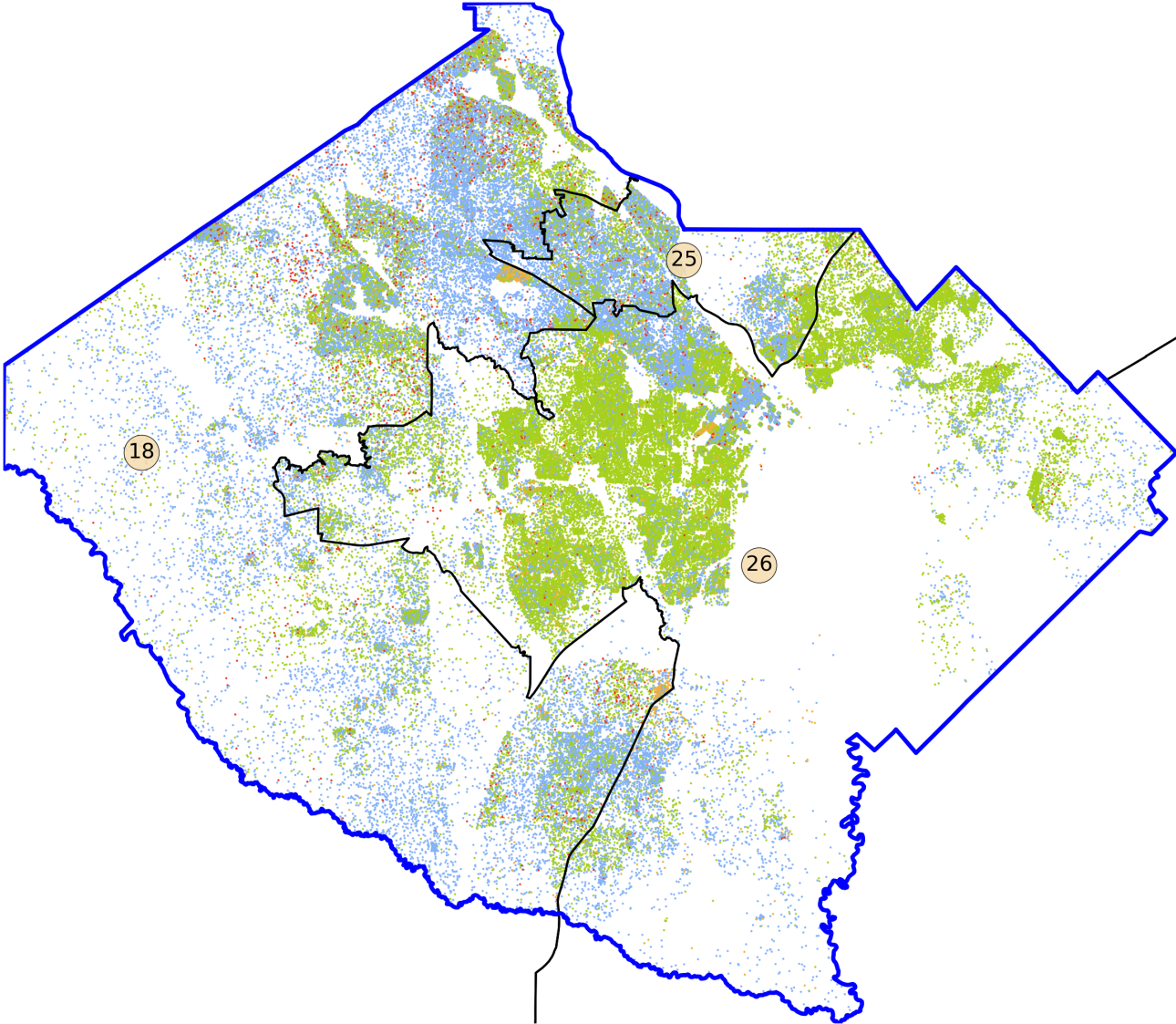


Figure 37: This figure shows the separation of Bibb County in a way that packs SD 26.

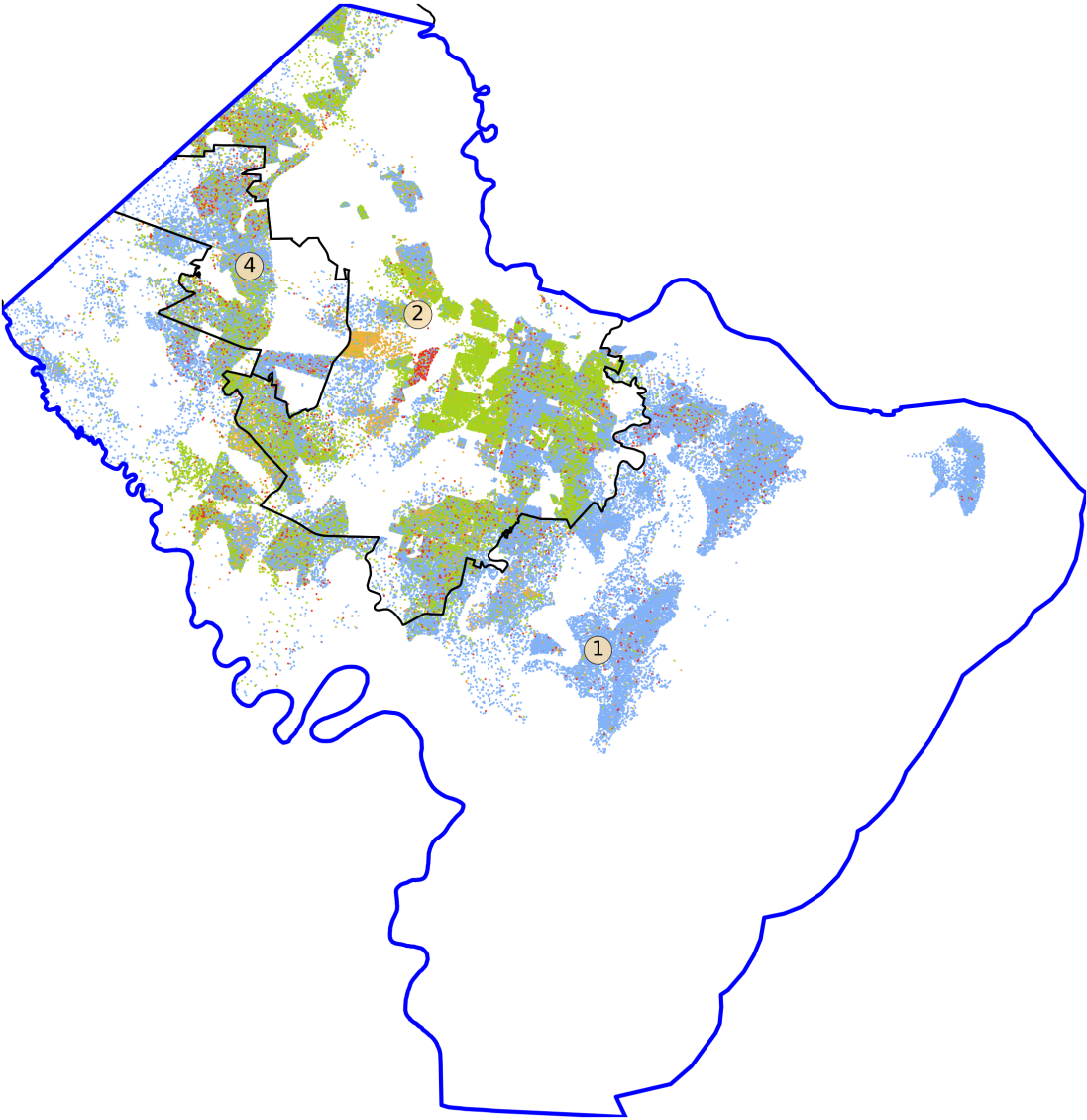


Figure 38: The pieces of Chatham County look to be clearly racially sorted into Senate districts in a way that ensures that Black and Latino voters can only have effective influence in one of the constituent districts. Indeed, SD 2 is an effective district, while SD 1 and SD 4 are not.

10.2.3 State House

In the enacted House plan, thirty counties are fractured in a racially sorted way. Besides the large counties that take the brunt of the splitting—Fulton (22 pieces), Gwinnett (21 pieces), DeKalb (17 pieces), Cobb (14 pieces)—there are also Chatham, Henry, Muscogee, Richmond, Hall, Paulding, Houston, Bibb, Coweta, Douglas, Fayette, Lowndes, Newton, Whitfield, Floyd, Rockdale, Carroll, Dougherty, Troup, Thomas, Tift, Peach, Gradie, McDuffie, Lamar, and Telfair, each with 2-7 pieces.

A striking number of state precincts—47 of them—are split with a heavy racial disparity across the division. In the case of dividing up state precincts, legislators can't use cast votes to choose a splitting optimized for partisan performance, so racially distinctive precinct splits provide particularly strong evidence that race has predominated over other principles in the creation of the map.

10.3 Community narratives

There was voluminous public input into the record when it comes to the communities of interest around the state and the impacts of redistricting decisions on their access to effective representation.

At the highest level, **County** identity and **Urban** versus **Rural** interests were the most frequent themes of the testimony, with thousands of mentions in the record. Geographically delimited regions that received frequent mention included the **Mountain** region in the Northwest and the **Black Belt** across the state's middle. Less specific geographic terms like **Lake** and **River** recur as well. **University** (or **College**) and specifically **HBCU** get plentiful mentions, and **Language** (in the sense of language accessibility) is a frequent concern.

Other frequent keywords recur in patterns that largely disaggregate by urban/suburban/rural focus. Here is a sample of terms that occur ten or more times and fall largely along lines of that classification.

- Urban: Rent/Renters, Affordable, Housing, Utilities (esp. Water)
- Urban: Poverty, Healthcare, Safety
- Urban: MARTA, Transit
- Suburban/Exurban: Corridor, Car
- Suburban/Exurban: Family, Diversity, Immigrant
- Suburban/Exurban: Park, Church, Restaurant
- Rural: Agriculture, Poultry/Chicken, Onion (incl. Vidalia, Onion Belt)
- Rural: Manufacturing, Carpet, Flooring, Industry
- Rural: Hospital, Internet, Elderly

These community testimonials are helpful for clarifying the issues around the changes to CD 6 and CD 14 that have received considerable attention above. New areas brought in to CD 6 on its north side (all of Forsyth and Dawson counties and half of Cherokee) cite interests frequently cited in suburban areas, blending to rural. By contrast, CD 6 shed population from Fulton and the northern tip of DeKalb County.

- Forsyth, Cherokee, Dawson: road infrastructure, Lake Lanier, Army Corps of Engineers, immigration (esp. Asian) and language, rural identity
- Fulton, DeKalb: public transportation, MARTA, safety net, COVID disparities, food insecurity

As we have seen, the shift in CD 14 is arguably a ripple effect from the targeting of CD 6, and residents of the new district are likewise vocal, with a sharp split between the narrative elements in the core of CD 14 and in its new protrusion into Cobb.

- Northwest counties: mountain, rural, flooring, agriculture, manufacturing
- Western Cobb: urban, metro Atlanta, housing, living wage

These community testimonies make it clear that the changes to CD 6 and CD 14 lack justification by community-of-interest reasoning, in addition to the shortfalls in other traditional districting principles detailed above.

References

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- [2] Erin Chambers, Moon Duchin, Ranthony Edmonds, Parker Edwards, JN Matthews, Anthony Pizzimenti, Chanel Richardson, Parker Rule, and Ari Stern, *Aggregating Community Maps*. **ACM Conference on Advances in Geographic Information Systems (SIGSPATIAL)**, 2022.
- [3] Daryl DeFord, Moon Duchin, and Justin Solomon, *Recombination: A family of Markov chains for redistricting*. **Harvard Data Science Review**, Issue 3.1, Winter 2021.
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- [5] Moon Duchin and Doug Spencer, *Models, Race, and the Law*. **Yale Law Journal Forum**, Volume 130 (March 2021), 744–797.
- [6] MGGG Redistricting Lab, *GerryChain Python Library*. GitHub Repository. github.com/mggg/gerrychain

A Race, ethnicity, and citizenship

In this report, I have used the abbreviation BVAP to denote the share of voting age population that is Black alone or in combination, sometimes called "Any Part Black" (or APB). I have similarly used BHVAP for the share of VAP that is Black and/or Latino, which corresponds to the coalition of Black and Hispanic voters (sometimes called the "BH Coalition") identified in the Georgia NAACP complaint. WVAP refers to non-Hispanic single-race White population, and POCVAP is the broader designation for people of color, i.e., the complement of WVAP.

To be precise, I construct use two data columns directly from the Table P4 of the 2020 Decennial PL 94-171 block-level summary files and construct two more data columns as combinations. Hispanic voting age population ("HVAP") and non-Hispanic single-race White voting age population ("WVAP") are directly found in the P4. The combination columns are non-Hispanic (Any Part) Black VAP ("BVAP") and Other VAP, i.e., VAP not covered by any of these other categories ("OVAP"). By construction, these columns are exhaustive and non-overlapping: they sum to total VAP on each geographic unit.

- HVAP: P4_002N
- WVAP: P4_005N
- BVAP: P4_006N, P4_013N, P4_018N, P4_019N, P4_020N, P4_021N, P4_029N, P4_030N, P4_031N, P4_032N, P4_039N, P4_040N, P4_041N, P4_042N, P4_043N, P4_044N, P4_050N, P4_051N, P4_052N, P4_053N, P4_054N, P4_055N, P4_060N, P4_061N, P4_062N, P4_063N, P4_066N, P4_067N, P4_068N, P4_069N, P4_071N, P4_073N
- OVAP: P4_007N, P4_008N, P4_009N, P4_010N, P4_014N, P4_015N, P4_016N, P4_017N, P4_022N, P4_023N, P4_024N, P4_025N, P4_026N, P4_027N, P4_033N, P4_034N, P4_035N, P4_036N, P4_037N, P4_038N, P4_045N, P4_046N, P4_047N, P4_048N, P4_056N, P4_057N, P4_058N, P4_059N, P4_064N, P4_070N

To provide the best available estimate of 2020 citizen voting age population (CVAP) at the Census block level, I am using a method based combining 2020 Decennial block-level data and 2016–2020 American Community Survey (ACS) tract-level data. Any use of CVAP with block-based districting plans will require some process of estimation and disaggregation, since no ACS data product is released at that fine of a geographical resolution.

To estimate CVAP within each census block, I have applied a fractional ratio to each of these VAP columns using the citizenship rate pulled from the ACS data on the tract containing that block. Because the ACS race and ethnicity categories are different from the PL, computing this ratio requires the use of slightly different categories. All of this is done at the tract level.

- Black citizenship ratios are computed by dividing Black-alone VAP from Table B01001B by Black-alone CVAP from Table B05003B.
- Hispanic citizenship ratios are computed by dividing Hispanic VAP from Table B03002 by Black-alone CVAP from Table B05003I.
- White citizenship ratios are computed by dividing non-Hispanic White-alone VAP obtained from Table B01001H by non-Hispanic White-alone CVAP from Table B05003H.
- Citizenship ratios for the remaining ("Other") population are computed by dividing VAP from Tables B01001C (American Indian and Alaska Native alone), B01001D (Asian alone), B01001E (Native Hawaiian and Other Pacific Islander alone), B01001F (some other race alone), and B01001G (two or more races) by CVAP from Tables B05003C (American Indian and Alaska Native alone), B05003D (Asian alone), B05003E (Native Hawaiian and Other Pacific Islander alone), B05003F (some other race alone), and B05003G (two or more races).

B Electoral alignment in enacted legislative districts

SD overall	James18P	Thornton18P	Thornton18R	Robinson18P
	0.4475	0.4387	0.5914	0.6286
1	0.4433	0.4957	0.7139	0.6752
2	0.5568	0.5374	0.7615	0.7245
3	0.4584	0.4566	0.6166	0.6647
4	0.4623	0.4170	0.6421	0.6800
5	0.4936	0.4604	0.6270	0.6329
6	0.2972	0.3624	0.4717	0.4602
7	0.3938	0.4327	0.5822	0.5709
8	0.5279	0.4223	0.6146	0.7182
9	0.4538	0.4486	0.6139	0.6232
10	0.5598	0.5108	0.6838	0.7221
11	0.5288	0.4219	0.5478	0.7098
12	0.5799	0.4771	0.6412	0.7634
13	0.5179	0.4354	0.6145	0.6956
14	0.3038	0.3703	0.4698	0.4570
15	0.5986	0.4502	0.5850	0.7338
16	0.4067	0.3965	0.5079	0.6065
17	0.4657	0.4581	0.6708	0.6715
18	0.4640	0.4891	0.6682	0.6932
19	0.5054	0.3997	0.6575	0.7214
20	0.4927	0.4921	0.6914	0.7050
21	0.2963	0.3435	0.5124	0.5157
22	0.5166	0.4377	0.6833	0.8227
23	0.4968	0.4249	0.6008	0.7456
24	0.4130	0.4463	0.7078	0.6693
25	0.4637	0.4260	0.6856	0.6932
26	0.4774	0.4439	0.6412	0.7312
27	0.2496	0.3162	0.4106	0.4904
28	0.4009	0.4143	0.4920	0.6198
29	0.4688	0.4364	0.5429	0.6639
30	0.3894	0.4034	0.4942	0.5762
31	0.4240	0.4460	0.5191	0.6237
32	0.3194	0.3952	0.5222	0.5230
33	0.5027	0.5156	0.6489	0.6470
34	0.5442	0.4912	0.6096	0.7214
35	0.6049	0.5417	0.7203	0.7344
36	0.3695	0.4134	0.5483	0.5050
37	0.3844	0.4495	0.5609	0.5796
38	0.5098	0.5168	0.7062	0.6948
39	0.4440	0.4444	0.6169	0.6187
40	0.2682	0.3327	0.4241	0.4099
41	0.4428	0.4385	0.5589	0.5968
42	0.2535	0.3351	0.4253	0.3403
43	0.5653	0.5018	0.6758	0.7202
44	0.5251	0.4527	0.5758	0.6902
45	0.4180	0.4387	0.6042	0.6031
46	0.3485	0.3946	0.5390	0.4958
47	0.3936	0.4419	0.6317	0.5378
48	0.3193	0.3488	0.5000	0.5144
49	0.2888	0.3402	0.4099	0.5269
50	0.2810	0.3220	0.4726	0.5497
51	0.2086	0.2667	0.3339	0.4437
52	0.3299	0.3271	0.4704	0.5792
53	0.3509	0.2385	0.3498	0.5729
54	0.3703	0.2679	0.3982	0.5208
55	0.5590	0.5016	0.6908	0.6938
56	0.2273	0.3277	0.4283	0.4432

Table 44: Vote shares for the minority candidate of choice across enacted Senate districts, in probative primary and primary runoff elections.

SD overall	Clinton16 0.4734	Abrams18 0.4930	Thornton18 0.4697	Biden20 0.5013	Blackman20 0.4848	Ossoff21 0.5061	Warnock21 0.5104	Abrams22 0.4620
1	0.3977	0.4165	0.3963	0.4339	0.4099	0.4311	0.4331	0.3858
2	0.7278	0.7447	0.7248	0.7304	0.7221	0.7420	0.7434	0.7147
3	0.3229	0.3285	0.3163	0.3399	0.3273	0.3382	0.3379	0.2963
4	0.3117	0.3132	0.2988	0.3342	0.3181	0.3377	0.3379	0.2911
5	0.7486	0.7767	0.7503	0.7347	0.7395	0.7698	0.7727	0.7034
6	0.5632	0.5785	0.5153	0.6174	0.5559	0.5662	0.5799	0.5438
7	0.5212	0.5621	0.5250	0.5855	0.5618	0.5848	0.5909	0.5308
8	0.3339	0.3362	0.3253	0.3520	0.3407	0.3507	0.3507	0.3009
9	0.5277	0.5723	0.5426	0.6035	0.5873	0.6158	0.6215	0.5702
10	0.7684	0.8024	0.7852	0.7981	0.8013	0.8195	0.8220	0.8060
11	0.3484	0.3360	0.3236	0.3526	0.3418	0.3512	0.3511	0.3039
12	0.5805	0.5771	0.5618	0.5816	0.5746	0.5894	0.5903	0.5448
13	0.2836	0.2791	0.2623	0.2964	0.2821	0.3023	0.3036	0.2581
14	0.5421	0.5624	0.5077	0.6012	0.5528	0.5666	0.5763	0.5314
15	0.6650	0.6714	0.6544	0.6680	0.6621	0.6801	0.6822	0.6461
16	0.3199	0.3332	0.3126	0.3586	0.3371	0.3568	0.3615	0.3225
17	0.3337	0.3650	0.3507	0.3978	0.3870	0.4080	0.4110	0.3883
18	0.3656	0.3743	0.3608	0.3893	0.3766	0.3965	0.3990	0.3559
19	0.2458	0.2345	0.2314	0.2516	0.2459	0.2568	0.2574	0.2109
20	0.3251	0.3238	0.3122	0.3437	0.3311	0.3499	0.3523	0.3094
21	0.2865	0.3041	0.2721	0.3369	0.3009	0.3235	0.3316	0.2773
22	0.6911	0.7080	0.6884	0.7123	0.7013	0.7168	0.7189	0.6855
23	0.4069	0.4078	0.3962	0.4254	0.4125	0.4307	0.4322	0.3864
24	0.3010	0.2990	0.2907	0.3274	0.3034	0.3240	0.3249	0.2740
25	0.3816	0.3938	0.3806	0.4089	0.3982	0.4205	0.4234	0.3818
26	0.6410	0.6479	0.6326	0.6434	0.6399	0.6560	0.6585	0.6157
27	0.2306	0.2612	0.2360	0.3076	0.2768	0.2975	0.3039	0.2511
28	0.2846	0.2997	0.2817	0.3250	0.3060	0.3286	0.3331	0.2939
29	0.3501	0.3549	0.3378	0.3749	0.3569	0.3773	0.3798	0.3372
30	0.2961	0.3061	0.2948	0.3150	0.3076	0.3274	0.3314	0.2807
31	0.2768	0.3101	0.3029	0.3328	0.3244	0.3459	0.3490	0.3132
32	0.3634	0.4061	0.3744	0.4355	0.4082	0.4287	0.4363	0.3836
33	0.6767	0.7146	0.6898	0.7124	0.7092	0.7252	0.7293	0.6895
34	0.8201	0.8472	0.8304	0.8271	0.8331	0.8498	0.8518	0.8280
35	0.7785	0.8159	0.7983	0.8186	0.8210	0.8382	0.8411	0.8255
36	0.9069	0.9164	0.8686	0.8962	0.8771	0.8925	0.8996	0.8846
37	0.3742	0.4120	0.3838	0.4453	0.4177	0.4387	0.4462	0.4002
38	0.8220	0.8415	0.8121	0.8282	0.8156	0.8320	0.8379	0.8082
39	0.8862	0.8936	0.8506	0.8816	0.8621	0.8753	0.8824	0.8574
40	0.5980	0.6152	0.5592	0.6483	0.5997	0.6141	0.6255	0.5808
41	0.8169	0.8319	0.8047	0.8254	0.8228	0.8350	0.8393	0.8062
42	0.8317	0.8430	0.7839	0.8482	0.8179	0.8295	0.8377	0.8234
43	0.6835	0.7249	0.7088	0.7349	0.7364	0.7558	0.7580	0.7420
44	0.8673	0.8878	0.8682	0.8702	0.8751	0.8906	0.8928	0.8748
45	0.3367	0.3775	0.3525	0.4139	0.3932	0.4170	0.4229	0.3773
46	0.3751	0.3889	0.3666	0.4078	0.3816	0.4034	0.4088	0.3555
47	0.3959	0.4052	0.3904	0.4072	0.3912	0.4156	0.4199	0.3668
48	0.4010	0.4363	0.3920	0.4836	0.4411	0.4685	0.4762	0.4131
49	0.2335	0.2530	0.2350	0.2763	0.2523	0.2718	0.2773	0.2211
50	0.1716	0.1672	0.1626	0.1855	0.1710	0.1867	0.1898	0.1443
51	0.1568	0.1558	0.1503	0.1751	0.1617	0.1759	0.1790	0.1420
52	0.2450	0.2550	0.2437	0.2659	0.2519	0.2723	0.2767	0.2241
53	0.1837	0.1858	0.1826	0.2012	0.1916	0.2054	0.2045	0.1628
54	0.2193	0.2168	0.2098	0.2346	0.2247	0.2371	0.2374	0.1745
55	0.7579	0.7925	0.7743	0.7945	0.7936	0.8113	0.8143	0.7873
56	0.3639	0.3944	0.3503	0.4373	0.3894	0.4108	0.4210	0.3738

Table 45: Vote shares for the minority candidate of choice across enacted Senate districts, in probative general and general runoff elections.

SD	Primaries out of 4	Generals out of 8	Effective?
1	3	0	N
2	4	8	Y
3	3	0	N
4	3	0	N
5	3	8	Y
6	0	8	N
7	3	8	Y
8	4	0	N
9	3	8	Y
10	4	8	Y
11	4	0	N
12	4	8	Y
13	4	0	N
14	0	8	N
15	4	8	Y
16	3	0	N
17	3	0	N
18	3	0	N
19	4	0	N
20	3	0	N
21	2	0	N
22	4	8	Y
23	3	0	N
24	3	0	N
25	3	0	N
26	3	8	Y
27	0	0	N
28	2	0	N
29	3	0	N
30	2	0	N
31	3	0	N
32	3	0	N
33	4	8	Y
34	4	8	Y
35	4	8	Y
36	3	8	Y
37	3	0	N
38	4	8	Y
39	3	8	Y
40	0	8	N
41	3	8	Y
42	0	8	N
43	4	8	Y
44	4	8	Y
45	3	0	N
46	1	0	N
47	3	0	N
48	1	0	N
49	1	0	N
50	1	0	N
51	0	0	N
52	1	0	N
53	1	0	N
54	1	0	N
55	4	8	Y
56	0	0	N

Table 46: By the standard of requiring that the candidate of choice could win or advance in at least three out of four primaries and win or advance in at least five out of eight generals, the enacted plan has 19 districts that present an effective opportunity.

Exhibit 2d

SD	Primaries out of 4	Generals out of 8	Effective?
1	3	0	N
2	4	8	Y
3	3	0	N
4	3	0	N
5	3	8	Y
6	0	8	N
7	3	8	Y
8	4	0	N
9	3	8	Y
10	4	8	Y
11	4	0	N
12	4	8	Y
13	4	0	N
14	0	8	N
15	4	8	Y
16	3	0	N
17	3	0	N
18	3	0	N
19	4	0	N
20	3	0	N
21	2	0	N
22	4	8	Y
23	3	0	N
24	3	0	N
25	3	0	N
26	3	8	Y
27	0	0	N
28	2	0	N
29	3	0	N
30	2	0	N
31	3	0	N
32	3	0	N
33	4	8	Y
34	4	8	Y
35	4	8	Y
36	3	8	Y
37	3	0	N
38	4	8	Y
39	3	8	Y
40	0	8	N
41	3	8	Y
42	0	8	N
43	4	8	Y
44	4	8	Y
45	3	0	N
46	1	0	N
47	3	0	N
48	1	0	N
49	1	0	N
50	1	0	N
51	0	0	N
52	1	0	N
53	1	0	N
54	1	0	N
55	4	8	Y
56	0	0	N

Table 46: By the standard of requiring that the candidate of choice could win or advance in at least three out of four primaries and win or advance in at least five out of eight generals, the enacted plan has 19 districts that present an effective opportunity.

HD overall	James18P 0.4475	Thornton18P 0.4387	Thornton18R 0.5914	Robinson18P 0.6286
1	0.3468	0.2773	0.4029	0.5806
2	0.3558	0.2650	0.3670	0.5476
3	0.3294	0.2937	0.3945	0.5330
4	0.3601	0.2721	0.5187	0.5229
5	0.3824	0.2760	0.4076	0.5266
6	0.3668	0.2496	0.3206	0.5430
7	0.2157	0.2572	0.3352	0.4173
8	0.2022	0.2644	0.3595	0.4717
9	0.1832	0.2701	0.3345	0.4496
10	0.2252	0.3163	0.4472	0.5031
11	0.2662	0.2961	0.3401	0.4568
12	0.3671	0.1692	0.3117	0.6227
13	0.3179	0.3260	0.4630	0.5670
14	0.3256	0.3317	0.5040	0.5218
15	0.3293	0.3518	0.4445	0.5811
16	0.3558	0.3730	0.5240	0.6086
17	0.4020	0.4363	0.4991	0.6145
18	0.3103	0.3091	0.5047	0.5511
19	0.4618	0.4869	0.5659	0.6279
20	0.2834	0.3785	0.3855	0.5275
21	0.2883	0.3326	0.3384	0.5194
22	0.3529	0.4129	0.5129	0.5635
23	0.2889	0.3204	0.3621	0.5709
24	0.2767	0.3541	0.4194	0.5259
25	0.2764	0.2928	0.4603	0.4945
26	0.2398	0.2986	0.4209	0.4735
27	0.2327	0.3044	0.2517	0.5148
28	0.2492	0.3220	0.3758	0.4683
29	0.3352	0.3795	0.5442	0.5610
30	0.3077	0.3530	0.4525	0.4958
31	0.3087	0.3400	0.4837	0.5963
32	0.3446	0.3195	0.5192	0.6330
33	0.3395	0.4244	0.6565	0.5794
34	0.3583	0.4446	0.5187	0.5655
35	0.3881	0.4507	0.5930	0.5815
36	0.4031	0.4559	0.5856	0.5964
37	0.3663	0.4527	0.5860	0.5523
38	0.5367	0.5168	0.6730	0.6903
39	0.5356	0.5345	0.7106	0.6796
40	0.4201	0.4639	0.6151	0.5695
41	0.5164	0.5317	0.6492	0.6384
42	0.4493	0.4890	0.6054	0.5755
43	0.3315	0.4079	0.5049	0.5117
44	0.3052	0.3869	0.5337	0.5195
45	0.1732	0.3021	0.3752	0.3676
46	0.2382	0.3411	0.4515	0.4440
47	0.3159	0.3542	0.5339	0.5053
48	0.2947	0.3582	0.4743	0.4679
49	0.2675	0.3343	0.4887	0.4863
50	0.3267	0.3767	0.5004	0.5151
51	0.3394	0.3852	0.4882	0.4737
52	0.2679	0.3387	0.4328	0.4053
53	0.2273	0.3048	0.4342	0.3910
54	0.2550	0.3444	0.4524	0.4081
55	0.4218	0.4596	0.6718	0.6275
56	0.4356	0.4518	0.6229	0.6142
57	0.2056	0.3076	0.3972	0.2914
58	0.4452	0.4517	0.6291	0.6105
59	0.4683	0.4632	0.6531	0.6383
60	0.4578	0.4647	0.6671	0.6606

HD overall	James18P	Thornton18P	Thornton18R	Robinson18P
	0.4475	0.4387	0.5914	0.6286
61	0.5937	0.5530	0.7215	0.7307
62	0.4559	0.4616	0.6297	0.6200
63	0.4227	0.4396	0.5712	0.6002
64	0.4859	0.4774	0.5232	0.6528
65	0.5996	0.5377	0.7249	0.7187
66	0.5615	0.5117	0.6402	0.7097
67	0.5783	0.5225	0.7261	0.7275
68	0.5142	0.5104	0.6439	0.6898
69	0.5196	0.5166	0.6831	0.7079
70	0.4308	0.4351	0.5046	0.6431
71	0.3445	0.4125	0.5560	0.5556
72	0.3181	0.3598	0.4040	0.5030
73	0.3412	0.3844	0.4659	0.5790
74	0.4855	0.4752	0.6443	0.6397
75	0.5667	0.4732	0.5439	0.7273
76	0.5726	0.4532	0.5774	0.7483
77	0.5372	0.4834	0.6259	0.7376
78	0.5592	0.4792	0.5407	0.7231
79	0.5561	0.4554	0.5713	0.7240
80	0.2507	0.3075	0.3904	0.4083
81	0.2273	0.3192	0.4007	0.3411
82	0.1811	0.2948	0.3296	0.2414
83	0.2499	0.3328	0.4322	0.4258
84	0.4411	0.4548	0.6076	0.5958
85	0.4561	0.4392	0.5883	0.6138
86	0.4939	0.4612	0.6058	0.6512
87	0.5020	0.4629	0.5948	0.6599
88	0.4783	0.4613	0.6055	0.6211
89	0.3875	0.4030	0.5645	0.4889
90	0.3812	0.3969	0.5629	0.5003
91	0.5621	0.5012	0.7033	0.7132
92	0.5777	0.5069	0.6954	0.7293
93	0.5503	0.5024	0.6621	0.7124
94	0.5467	0.4912	0.6849	0.6899
95	0.5813	0.5091	0.7039	0.7160
96	0.4407	0.4533	0.6048	0.5762
97	0.3851	0.4260	0.5636	0.5440
98	0.4638	0.4516	0.6475	0.5829
99	0.3827	0.4466	0.5993	0.5637
100	0.3268	0.3356	0.4947	0.5489
101	0.4195	0.4367	0.5873	0.6026
102	0.4902	0.4578	0.6445	0.6531
103	0.3989	0.4094	0.5857	0.5902
104	0.4202	0.4445	0.5931	0.6166
105	0.4694	0.4604	0.6632	0.6422
106	0.4768	0.4844	0.6458	0.6273
107	0.4858	0.4463	0.6147	0.6542
108	0.3738	0.4246	0.5554	0.5502
109	0.4988	0.4650	0.5979	0.6304
110	0.5429	0.5042	0.6857	0.7014
111	0.4343	0.4549	0.6179	0.6180
112	0.3802	0.3856	0.4628	0.6032
113	0.5592	0.4986	0.6538	0.7211
114	0.3566	0.3820	0.5553	0.6116
115	0.5470	0.5100	0.6995	0.7163
116	0.5613	0.5113	0.6805	0.7260
117	0.4806	0.4765	0.6946	0.6856
118	0.4420	0.3747	0.5819	0.6716
119	0.3654	0.3998	0.4785	0.5577
120	0.3310	0.3982	0.5499	0.5099

HD overall	James18P	Thornton18P	Thornton18R	Robinson18P
	0.4475	0.4387	0.5914	0.6286
121	0.3056	0.3610	0.4634	0.4318
122	0.4470	0.4828	0.7316	0.5336
123	0.4482	0.4759	0.8210	0.6795
124	0.3929	0.3945	0.5134	0.6158
125	0.4979	0.4484	0.5532	0.7290
126	0.5713	0.4653	0.7136	0.8431
127	0.3885	0.4146	0.5601	0.6759
128	0.4836	0.3572	0.6819	0.7292
129	0.4788	0.4262	0.6829	0.7876
130	0.5291	0.4322	0.6676	0.8300
131	0.4561	0.4564	0.6071	0.6988
132	0.5114	0.4534	0.7072	0.8308
133	0.4708	0.4428	0.7327	0.7101
134	0.4537	0.3415	0.4744	0.6571
135	0.4414	0.3509	0.4942	0.6575
136	0.4119	0.4498	0.5770	0.6639
137	0.5831	0.4497	0.6210	0.7196
138	0.4087	0.4060	0.4642	0.6087
139	0.4801	0.3999	0.4545	0.6473
140	0.6020	0.4426	0.5277	0.7298
141	0.6424	0.4599	0.5801	0.7533
142	0.4658	0.4625	0.6520	0.7214
143	0.4642	0.4872	0.6748	0.7412
144	0.4126	0.4350	0.6166	0.6729
145	0.4565	0.5158	0.6740	0.7167
146	0.5166	0.5594	0.7649	0.6930
147	0.5096	0.5585	0.7068	0.6984
148	0.5185	0.4879	0.6815	0.6956
149	0.4570	0.3824	0.5110	0.6894
150	0.5420	0.5120	0.7376	0.7507
151	0.5465	0.4851	0.6725	0.7150
152	0.5542	0.4701	0.6164	0.7292
153	0.6069	0.4804	0.6392	0.7999
154	0.5679	0.4636	0.6112	0.7543
155	0.4790	0.4310	0.6517	0.6845
156	0.5283	0.4362	0.6620	0.7356
157	0.4885	0.3890	0.6939	0.7202
158	0.4889	0.3914	0.6253	0.7098
159	0.4596	0.3947	0.6056	0.6965
160	0.4117	0.3911	0.5455	0.6332
161	0.5543	0.5195	0.7135	0.7036
162	0.6043	0.5636	0.7874	0.7517
163	0.4945	0.5148	0.7413	0.6811
164	0.4995	0.5290	0.7585	0.6963
165	0.5689	0.5359	0.7661	0.7381
166	0.2755	0.4103	0.6313	0.5219
167	0.4840	0.4765	0.6980	0.7241
168	0.5505	0.5425	0.7834	0.7886
169	0.5063	0.3686	0.5592	0.6991
170	0.4510	0.4272	0.5020	0.6678
171	0.5049	0.4272	0.5864	0.7274
172	0.5519	0.4134	0.5872	0.6544
173	0.5511	0.4509	0.6016	0.7408
174	0.5238	0.3752	0.5566	0.6716
175	0.5392	0.3988	0.5253	0.7350
176	0.5464	0.4061	0.6065	0.7292
177	0.5448	0.4450	0.6370	0.7407
178	0.4627	0.4045	0.6920	0.6940
179	0.4151	0.4621	0.5945	0.6310
180	0.4609	0.4587	0.6255	0.6534

Table 47: Vote shares for the minority candidate of choice across enacted House districts, in probative primary and primary runoff elections.

HD overall	Clinton16 0.4734	Abrams18 0.4930	Thornton18 0.4697	Biden20 0.5013	Blackman20 0.4848	Ossoff21 0.5061	Warnock21 0.5104	Abrams22 0.4620
1	0.1933	0.1964	0.1938	0.2104	0.2009	0.2160	0.2146	0.1736
2	0.1696	0.1670	0.1635	0.1901	0.1768	0.1895	0.1876	0.1425
3	0.1908	0.2018	0.1943	0.2221	0.2099	0.2233	0.2222	0.1816
4	0.3589	0.3633	0.3440	0.3835	0.3672	0.3806	0.3808	0.2906
5	0.1716	0.1733	0.1685	0.1855	0.1785	0.1926	0.1950	0.1482
6	0.1564	0.1457	0.1481	0.1641	0.1586	0.1679	0.1671	0.1177
7	0.1661	0.1629	0.1575	0.1807	0.1687	0.1815	0.1850	0.1469
8	0.1659	0.1600	0.1576	0.1819	0.1701	0.1815	0.1840	0.1422
9	0.1473	0.1523	0.1457	0.1695	0.1522	0.1705	0.1732	0.1391
10	0.1672	0.1675	0.1588	0.1859	0.1688	0.1864	0.1913	0.1485
11	0.1461	0.1550	0.1446	0.1868	0.1694	0.1863	0.1912	0.1552
12	0.1978	0.1895	0.1887	0.1945	0.1906	0.2069	0.2083	0.1607
13	0.3298	0.3437	0.3215	0.3537	0.3310	0.3571	0.3629	0.3015
14	0.1708	0.1768	0.1703	0.1916	0.1809	0.1941	0.1984	0.1604
15	0.2542	0.2749	0.2634	0.2863	0.2749	0.2949	0.2993	0.2417
16	0.2016	0.2083	0.2047	0.2237	0.2152	0.2305	0.2332	0.1941
17	0.2784	0.3264	0.3170	0.3580	0.3498	0.3747	0.3780	0.3411
18	0.1598	0.1479	0.1441	0.1598	0.1563	0.1653	0.1678	0.1314
19	0.3142	0.3525	0.3443	0.3762	0.3661	0.3887	0.3918	0.3614
20	0.2608	0.2975	0.2696	0.3349	0.3055	0.3261	0.3332	0.2815
21	0.2096	0.2398	0.2148	0.2772	0.2455	0.2657	0.2720	0.2304
22	0.3498	0.4004	0.3760	0.4163	0.3967	0.4206	0.4264	0.3756
23	0.2017	0.2210	0.2039	0.2563	0.2340	0.2535	0.2591	0.2129
24	0.2901	0.3324	0.2988	0.3727	0.3386	0.3622	0.3678	0.2989
25	0.3541	0.3882	0.3448	0.4409	0.3962	0.4224	0.4298	0.3655
26	0.2422	0.2709	0.2435	0.3235	0.2896	0.3113	0.3189	0.2710
27	0.1564	0.1633	0.1496	0.1884	0.1667	0.1841	0.1893	0.1452
28	0.1767	0.1985	0.1815	0.2357	0.2110	0.2273	0.2329	0.1893
29	0.3920	0.4240	0.3990	0.4239	0.4015	0.4255	0.4307	0.3557
30	0.2252	0.2501	0.2331	0.2841	0.2603	0.2785	0.2838	0.2300
31	0.2004	0.2126	0.2029	0.2409	0.2226	0.2442	0.2488	0.1925
32	0.1592	0.1546	0.1529	0.1702	0.1564	0.1731	0.1750	0.1345
33	0.1991	0.1743	0.1765	0.1948	0.1799	0.1959	0.1953	0.1486
34	0.3454	0.3777	0.3462	0.4205	0.3864	0.4055	0.4157	0.3698
35	0.5063	0.5603	0.5316	0.5726	0.5567	0.5802	0.5855	0.5361
36	0.3216	0.3596	0.3321	0.4022	0.3696	0.3928	0.3994	0.3632
37	0.5623	0.5933	0.5531	0.6113	0.5847	0.5981	0.6078	0.5507
38	0.6765	0.7229	0.7053	0.7243	0.7253	0.7453	0.7473	0.7174
39	0.7614	0.7930	0.7682	0.7876	0.7846	0.7991	0.8049	0.7703
40	0.6071	0.6417	0.5949	0.6673	0.6238	0.6387	0.6495	0.6207
41	0.6887	0.7199	0.6951	0.7105	0.7106	0.7256	0.7296	0.6856
42	0.6871	0.7282	0.6885	0.7158	0.6889	0.7108	0.7182	0.6714
43	0.5624	0.5885	0.5483	0.6073	0.5730	0.5827	0.5927	0.5436
44	0.3820	0.4236	0.3907	0.4598	0.4305	0.4536	0.4613	0.4096
45	0.4039	0.4203	0.3637	0.4792	0.4134	0.4354	0.4477	0.3997
46	0.3774	0.4098	0.3682	0.4495	0.4039	0.4254	0.4351	0.3895
47	0.3868	0.4048	0.3595	0.4440	0.3963	0.4171	0.4276	0.3688
48	0.4381	0.4625	0.4120	0.5147	0.4624	0.4779	0.4885	0.4344
49	0.4092	0.4330	0.3806	0.4801	0.4246	0.4420	0.4538	0.4029
50	0.5185	0.5558	0.5026	0.5939	0.5521	0.5784	0.5861	0.5154
51	0.5509	0.5728	0.5274	0.6082	0.5683	0.5811	0.5899	0.5407
52	0.5759	0.5938	0.5291	0.6361	0.5801	0.5957	0.6081	0.5697
53	0.4972	0.4992	0.4281	0.5478	0.4745	0.4843	0.4998	0.4548
54	0.5540	0.5641	0.4946	0.6104	0.5455	0.5555	0.5673	0.5443
55	0.8132	0.8121	0.7562	0.8169	0.7764	0.7909	0.8021	0.7662
56	0.9113	0.9249	0.8807	0.8971	0.8775	0.8976	0.9038	0.8875
57	0.7942	0.8025	0.7157	0.8092	0.7539	0.7714	0.7843	0.7610
58	0.9398	0.9511	0.9154	0.9213	0.9117	0.9269	0.9321	0.9165
59	0.9503	0.9603	0.9291	0.9337	0.9292	0.9425	0.9466	0.9307
60	0.8139	0.8069	0.7617	0.8065	0.7758	0.7868	0.7968	0.7698

HD overall	Clinton16 0.4734	Abrams18 0.4930	Thornton18 0.4697	Biden20 0.5013	Blackman20 0.4848	Ossoff21 0.5061	Warnock21 0.5104	Abrams22 0.4620
61	0.8241	0.8575	0.8407	0.8504	0.8538	0.8683	0.8707	0.8555
62	0.9354	0.9434	0.9127	0.9254	0.9223	0.9341	0.9382	0.9188
63	0.9197	0.9279	0.8967	0.9085	0.9071	0.9182	0.9243	0.9017
64	0.3449	0.3899	0.3757	0.4259	0.4177	0.4440	0.4476	0.4247
65	0.6646	0.6994	0.6807	0.6976	0.6952	0.7127	0.7158	0.6883
66	0.6077	0.6610	0.6389	0.6899	0.6851	0.7115	0.7159	0.6952
67	0.6289	0.6633	0.6473	0.6617	0.6560	0.6770	0.6798	0.6488
68	0.5991	0.6305	0.6067	0.6502	0.6395	0.6468	0.6521	0.6215
69	0.7034	0.7388	0.7190	0.7409	0.7350	0.7550	0.7586	0.7380
70	0.3758	0.3878	0.3663	0.3830	0.3655	0.3904	0.3953	0.3484
71	0.3046	0.3209	0.3107	0.3286	0.3192	0.3466	0.3510	0.3045
72	0.2982	0.2866	0.2703	0.2858	0.2713	0.2873	0.2928	0.2350
73	0.2814	0.3012	0.2764	0.3612	0.3306	0.3509	0.3572	0.3125
74	0.3228	0.3558	0.3379	0.3842	0.3665	0.3878	0.3907	0.3604
75	0.8667	0.8906	0.8739	0.8644	0.8755	0.8929	0.8952	0.8733
76	0.8631	0.8796	0.8639	0.8499	0.8607	0.8808	0.8811	0.8610
77	0.9074	0.9236	0.9083	0.8944	0.9071	0.9221	0.9225	0.9037
78	0.7907	0.8215	0.8039	0.8163	0.8228	0.8375	0.8394	0.8223
79	0.8973	0.9123	0.8980	0.8806	0.8897	0.9056	0.9076	0.8831
80	0.5608	0.5777	0.5197	0.6162	0.5677	0.5827	0.5954	0.5473
81	0.6692	0.6877	0.6319	0.7157	0.6752	0.6884	0.6986	0.6678
82	0.7751	0.7927	0.7267	0.8052	0.7682	0.7819	0.7896	0.7828
83	0.6124	0.6329	0.5664	0.6586	0.5979	0.6178	0.6302	0.5951
84	0.9388	0.9450	0.9161	0.9332	0.9290	0.9364	0.9400	0.9210
85	0.9148	0.9267	0.9000	0.9007	0.9017	0.9161	0.9205	0.8964
86	0.9067	0.9202	0.9000	0.8970	0.9028	0.9143	0.9164	0.8891
87	0.8855	0.8969	0.8781	0.8808	0.8870	0.8973	0.9008	0.8691
88	0.8094	0.8265	0.8039	0.8184	0.8179	0.8302	0.8349	0.8024
89	0.9211	0.9255	0.8819	0.9191	0.9027	0.9116	0.9178	0.8978
90	0.9421	0.9516	0.9131	0.9405	0.9290	0.9385	0.9436	0.9290
91	0.7506	0.7869	0.7695	0.7855	0.7884	0.8036	0.8059	0.7915
92	0.6898	0.7382	0.7204	0.7609	0.7621	0.7773	0.7799	0.7717
93	0.7088	0.7398	0.7225	0.7465	0.7464	0.7659	0.7673	0.7439
94	0.7994	0.8186	0.8009	0.8198	0.8178	0.8312	0.8348	0.8076
95	0.7589	0.7961	0.7794	0.7942	0.7960	0.8103	0.8128	0.7867
96	0.6513	0.6831	0.6515	0.6687	0.6620	0.6836	0.6874	0.6247
97	0.6033	0.6323	0.5956	0.6397	0.6211	0.6376	0.6447	0.5854
98	0.7760	0.7949	0.7669	0.7465	0.7543	0.7825	0.7838	0.7174
99	0.4465	0.4861	0.4466	0.5278	0.4934	0.5205	0.5277	0.4671
100	0.3134	0.3485	0.3175	0.3988	0.3652	0.3912	0.3971	0.3392
101	0.4962	0.5465	0.5164	0.5636	0.5501	0.5769	0.5820	0.5249
102	0.5983	0.6426	0.6164	0.6569	0.6486	0.6771	0.6822	0.6240
103	0.3596	0.4033	0.3775	0.4331	0.4076	0.4308	0.4375	0.3809
104	0.2771	0.3149	0.2929	0.3617	0.3402	0.3650	0.3717	0.3332
105	0.4671	0.5206	0.4938	0.5442	0.5317	0.5602	0.5643	0.5130
106	0.4991	0.5508	0.5231	0.5940	0.5767	0.6043	0.6103	0.5715
107	0.6770	0.7132	0.6840	0.6943	0.6943	0.7215	0.7255	0.6621
108	0.4720	0.5095	0.4750	0.5523	0.5274	0.5540	0.5613	0.5046
109	0.7727	0.7966	0.7724	0.7461	0.7521	0.7864	0.7876	0.7234
110	0.5260	0.5994	0.5794	0.6408	0.6309	0.6597	0.6628	0.6410
111	0.2454	0.2958	0.2852	0.3471	0.3360	0.3544	0.3570	0.3372
112	0.2275	0.2296	0.2196	0.2397	0.2282	0.2442	0.2475	0.2099
113	0.6532	0.6987	0.6850	0.6957	0.6991	0.7251	0.7280	0.7106
114	0.2932	0.2988	0.2835	0.3142	0.2978	0.3200	0.3230	0.2860
115	0.5282	0.5709	0.5501	0.6104	0.6051	0.6234	0.6266	0.6147
116	0.6253	0.6895	0.6709	0.7015	0.7027	0.7221	0.7253	0.7196
117	0.3607	0.4204	0.4064	0.4769	0.4683	0.4937	0.4975	0.4951
118	0.2642	0.2664	0.2585	0.2726	0.2618	0.2850	0.2880	0.2507
119	0.2336	0.2457	0.2336	0.2721	0.2574	0.2797	0.2837	0.2422
120	0.4324	0.4353	0.4134	0.4490	0.4169	0.4440	0.4503	0.3964

HD overall	Clinton16	Abrams18	Thornton18	Biden20	Blackman20	Ossoff21	Warnock21	Abrams22
	0.4734	0.4930	0.4697	0.5013	0.4848	0.5061	0.5104	0.4620
121	0.4383	0.4382	0.4077	0.4598	0.4194	0.4425	0.4503	0.3852
122	0.7829	0.7982	0.7689	0.7877	0.7720	0.7958	0.8010	0.7655
123	0.3145	0.3023	0.3153	0.3195	0.3085	0.3193	0.3201	0.2736
124	0.3911	0.3841	0.3675	0.3980	0.3772	0.3936	0.3977	0.3395
125	0.3124	0.3380	0.3252	0.3750	0.3549	0.3784	0.3799	0.3423
126	0.6195	0.6212	0.6115	0.6197	0.6170	0.6298	0.6306	0.5894
127	0.3225	0.3389	0.3158	0.3749	0.3415	0.3649	0.3670	0.3174
128	0.5105	0.4989	0.4858	0.5025	0.4954	0.5098	0.5121	0.4545
129	0.6726	0.6733	0.6496	0.6856	0.6669	0.6835	0.6858	0.6342
130	0.6627	0.6813	0.6665	0.6839	0.6797	0.6947	0.6961	0.6730
131	0.2932	0.3217	0.2997	0.3670	0.3357	0.3639	0.3641	0.3232
132	0.6975	0.7065	0.6918	0.7024	0.6986	0.7175	0.7190	0.6724
133	0.4584	0.4527	0.4383	0.4561	0.4454	0.4705	0.4721	0.4204
134	0.3675	0.3622	0.3475	0.3672	0.3605	0.3794	0.3828	0.3402
135	0.2684	0.2653	0.2567	0.2640	0.2550	0.2713	0.2743	0.2254
136	0.3509	0.3549	0.3395	0.3499	0.3372	0.3571	0.3602	0.3056
137	0.5805	0.5883	0.5698	0.5897	0.5831	0.5999	0.6011	0.5656
138	0.2761	0.2729	0.2548	0.2985	0.2726	0.2949	0.2984	0.2546
139	0.3343	0.3473	0.3308	0.3915	0.3689	0.3872	0.3890	0.3475
140	0.7512	0.7692	0.7519	0.7471	0.7411	0.7654	0.7690	0.7451
141	0.7217	0.7419	0.7220	0.7370	0.7310	0.7494	0.7512	0.7280
142	0.6564	0.6705	0.6484	0.6687	0.6552	0.6724	0.6763	0.6316
143	0.7177	0.7223	0.7033	0.7099	0.7054	0.7228	0.7259	0.6915
144	0.3572	0.3620	0.3428	0.3923	0.3715	0.3905	0.3925	0.3457
145	0.4030	0.4083	0.3992	0.4182	0.4120	0.4290	0.4312	0.3886
146	0.3306	0.3558	0.3402	0.3840	0.3693	0.3930	0.3953	0.3570
147	0.3990	0.4414	0.4271	0.4662	0.4544	0.4793	0.4812	0.4429
148	0.3283	0.3167	0.2980	0.3276	0.3106	0.3286	0.3313	0.2913
149	0.3423	0.3256	0.3176	0.3348	0.3292	0.3441	0.3469	0.2964
150	0.5595	0.5496	0.5339	0.5455	0.5386	0.5543	0.5562	0.5107
151	0.4838	0.4720	0.4577	0.4809	0.4740	0.4877	0.4887	0.4452
152	0.2738	0.2855	0.2758	0.3017	0.2909	0.3123	0.3129	0.2793
153	0.6728	0.6798	0.6597	0.6825	0.6741	0.6887	0.6899	0.6593
154	0.5464	0.5383	0.5280	0.5377	0.5321	0.5504	0.5500	0.4931
155	0.3457	0.3279	0.3206	0.3489	0.3391	0.3541	0.3561	0.3130
156	0.2945	0.2829	0.2767	0.2976	0.2881	0.3012	0.3035	0.2486
157	0.2481	0.2370	0.2320	0.2511	0.2443	0.2572	0.2571	0.2076
158	0.3531	0.3412	0.3271	0.3492	0.3342	0.3512	0.3518	0.3047
159	0.3003	0.2928	0.2800	0.3045	0.2930	0.3104	0.3109	0.2651
160	0.3265	0.3052	0.2884	0.3178	0.2973	0.3121	0.3135	0.2560
161	0.3246	0.3679	0.3595	0.4068	0.3958	0.4200	0.4201	0.3897
162	0.6504	0.6870	0.6742	0.6721	0.6678	0.6893	0.6901	0.6576
163	0.7214	0.7313	0.7059	0.7266	0.7115	0.7291	0.7314	0.7008
164	0.3635	0.4190	0.4034	0.4286	0.4113	0.4347	0.4347	0.4062
165	0.7896	0.7899	0.7685	0.7803	0.7735	0.7851	0.7863	0.7540
166	0.3116	0.3135	0.2834	0.3470	0.3045	0.3300	0.3332	0.2844
167	0.3045	0.3125	0.3004	0.3268	0.3189	0.3377	0.3379	0.3008
168	0.6098	0.6350	0.6245	0.6225	0.6212	0.6460	0.6479	0.6024
169	0.2743	0.2641	0.2464	0.2767	0.2666	0.2806	0.2818	0.2370
170	0.2733	0.2610	0.2441	0.2846	0.2676	0.2881	0.2895	0.2362
171	0.3926	0.3819	0.3710	0.3957	0.3904	0.3953	0.3957	0.3469
172	0.2734	0.2564	0.2462	0.2732	0.2611	0.2760	0.2768	0.2273
173	0.4058	0.4008	0.3840	0.4191	0.4031	0.4133	0.4130	0.3706
174	0.2137	0.1984	0.1977	0.2076	0.2026	0.2085	0.2081	0.1994
175	0.3533	0.3524	0.3397	0.3565	0.3446	0.3541	0.3540	0.3100
176	0.2848	0.2806	0.2734	0.2866	0.2793	0.2936	0.2944	0.2505
177	0.5211	0.5375	0.5169	0.5718	0.5553	0.5697	0.5701	0.4892
178	0.1589	0.1447	0.1453	0.1585	0.1527	0.1624	0.1611	0.1272
179	0.3945	0.3937	0.3756	0.4203	0.4002	0.4030	0.4039	0.3524
180	0.3210	0.3373	0.3262	0.3423	0.3286	0.3438	0.3420	0.2955

Table 48: Vote shares for the minority candidate of choice across enacted House districts, in probative general and general runoff elections.

HD	Pri (4)	Gen (8)	Eff?
1	1	0	N
2	1	0	N
3	1	0	N
4	2	0	N
5	1	0	N
6	1	0	N
7	0	0	N
8	0	0	N
9	0	0	N
10	1	0	N
11	0	0	N
12	1	0	N
13	1	0	N
14	2	0	N
15	2	0	N
16	3	0	N
17	2	0	N
18	2	0	N
19	3	0	N
20	1	0	N
21	1	0	N
22	3	0	N
23	1	0	N
24	1	0	N
25	0	0	N
26	0	0	N
27	1	0	N
28	0	0	N
29	2	0	N
30	0	0	N
31	1	0	N
32	2	0	N
33	3	0	N
34	3	0	N
35	3	8	Y
36	3	0	N
37	3	8	Y
38	4	8	Y
39	4	8	Y
40	3	8	Y
41	4	8	Y
42	3	8	Y
43	3	8	Y
44	2	0	N
45	0	0	N
46	0	0	N
47	2	0	N
48	0	1	N
49	0	0	N
50	2	8	N
51	0	8	N
52	0	8	N
53	0	1	N
54	0	7	N
55	3	8	Y
56	3	8	Y
57	0	8	N
58	3	8	Y
59	3	8	Y
60	3	8	Y
61	4	8	Y
62	3	8	Y
63	3	8	Y
64	3	0	N
65	4	8	Y
66	4	8	Y
67	4	8	Y
68	4	8	Y
69	4	8	Y
70	3	0	N
71	3	0	N
72	1	0	N
73	2	0	N
74	3	0	N
75	4	8	Y
76	4	8	Y
77	4	8	Y
78	4	8	Y
79	4	8	Y
80	0	8	N
81	0	8	N
82	0	8	N
83	0	8	N
84	3	8	Y
85	3	8	Y
86	3	8	Y
87	4	8	Y
88	3	8	Y
89	2	8	N
90	2	8	N
91	4	8	Y
92	4	8	Y
93	4	8	Y
94	4	8	Y
95	4	8	Y
96	3	8	Y
97	3	8	Y
98	3	8	Y
99	3	3	N
100	1	0	N
101	3	7	Y
102	3	8	Y
103	3	0	N
104	3	0	N
105	3	6	Y
106	3	7	Y
107	3	8	Y
108	3	6	Y
109	3	8	Y
110	4	8	Y
111	3	0	N
112	1	0	N
113	4	8	Y
114	3	0	N
115	4	8	Y
116	4	8	Y
117	3	0	N
118	3	0	N
119	2	0	N
120	2	0	N
121	0	0	N
122	3	8	Y
123	3	0	N
124	2	0	N
125	3	0	N
126	4	8	Y
127	3	0	N
128	2	4	N
129	3	8	Y
130	4	8	Y
131	3	0	N
132	4	8	Y
133	3	0	N
134	1	0	N
135	1	0	N
136	3	0	N
137	4	8	Y
138	2	0	N
139	2	0	N
140	4	8	Y
141	4	8	Y
142	3	8	Y
143	3	8	Y
144	3	0	N
145	3	0	N
146	4	0	N
147	4	0	N
148	4	0	N
149	2	0	N
150	4	8	Y
151	4	0	N
152	4	0	N
153	4	8	Y
154	4	7	Y
155	3	0	N
156	4	0	N
157	3	0	N
158	2	0	N
159	2	0	N
160	2	0	N
161	4	0	N
162	4	8	Y
163	3	8	Y
164	3	0	N
165	4	8	Y
166	3	0	N
167	3	0	N
168	4	8	Y
169	3	0	N
170	3	0	N
171	4	0	N
172	4	0	N
173	4	0	N
174	3	0	N
175	4	0	N
176	4	0	N
177	4	7	Y
178	3	0	N
179	3	0	N
180	3	0	N

Table 49: Of 180 enacted House districts, 69 are rated as providing an effective opportunity to elect coalition candidates of choice.

CD	CD Alt			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	30.3%	37.2%	3	0
2	47.7%	52.4%	4	8
3	51.2%	58.4%	4	8
4	50.6%	58.8%	3	8
5	50.1%	61.5%	3	8
6	13.7%	24.6%	0	3
7	34.3%	56.7%	3	8
8	27.3%	34.2%	4	0
9	4.6%	16.1%	0	0
10	17.6%	24.5%	3	0
11	17.6%	25.2%	2	0
12	39.2%	43.8%	3	0
13	52.0%	58.8%	4	8
14	7.6%	18.6%	1	0

Table 50: CD Alt effectiveness.

SD	SD Alt Eff 1			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	25.1%	32.6%	3	0
2	46.9%	54.4%	4	8
3	21.2%	27.4%	3	0
4	23.5%	29.0%	3	0
5	20.3%	54.9%	3	8
6	50.1%	56.2%	3	8
7	17.1%	31.4%	3	3
8	30.4%	36.6%	4	0
9	29.3%	56.3%	3	8
10	59.5%	70.5%	4	8
11	31.0%	38.6%	4	0
12	58.0%	61.5%	4	8
13	27.0%	33.0%	4	0
14	18.1%	29.5%	0	8
15	54.0%	60.6%	4	8
16	50.2%	56.4%	4	8
17	51.1%	57.7%	4	8
18	30.4%	34.9%	3	0
19	25.7%	34.1%	4	0
20	34.4%	39.5%	3	0
21	7.5%	16.3%	2	0
22	50.5%	54.3%	4	8
23	23.0%	28.6%	3	0
24	25.0%	28.5%	3	0
25	50.0%	54.0%	3	8
26	50.1%	53.8%	4	8
27	4.7%	14.9%	0	0
28	50.6%	57.4%	4	8
29	26.9%	31.4%	3	0
30	14.3%	19.4%	1	0
31	19.7%	26.9%	3	0
32	14.9%	25.4%	3	0
33	50.4%	68.5%	4	8
34	72.2%	83.8%	4	8
35	50.9%	58.9%	4	8
36	50.0%	55.7%	1	8
37	19.3%	28.0%	3	0
38	27.9%	43.3%	3	8
39	51.2%	56.6%	4	8
40	50.1%	67.8%	3	8
41	57.3%	67.3%	3	8
42	35.8%	45.4%	0	8
43	52.0%	59.0%	4	8
44	61.6%	65.2%	3	8
45	19.8%	31.9%	3	0
46	16.5%	21.5%	2	0
47	16.7%	25.4%	3	0
48	10.1%	16.5%	0	1
49	8.1%	32.7%	1	0
50	5.4%	11.5%	1	0
51	1.2%	5.5%	0	0
52	13.0%	21.2%	1	0
53	5.1%	8.3%	1	0
54	3.8%	26.4%	1	0
55	50.0%	63.9%	4	8
56	7.6%	15.3%	0	0

Table 51: Effectiveness in SD Alt Eff 1, which includes the Alt 1 Gingles maps.

SD	SD Alt Eff 2			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	25.1%	32.6%	3	0
2	46.9%	54.4%	4	8
3	21.2%	27.4%	3	0
4	23.4%	28.9%	3	0
5	29.9%	71.6%	3	8
6	23.9%	32.1%	0	8
7	21.4%	38.0%	3	8
8	30.4%	36.6%	4	0
9	29.5%	48.3%	3	8
10	71.5%	76.7%	4	8
11	31.0%	38.6%	4	0
12	58.0%	61.5%	4	8
13	27.0%	33.0%	4	0
14	19.0%	31.1%	0	8
15	54.0%	60.6%	4	8
16	22.7%	27.7%	3	0
17	32.0%	37.1%	3	0
18	30.4%	34.9%	3	0
19	25.7%	34.1%	4	0
20	31.3%	34.8%	3	0
21	7.5%	16.3%	2	0
22	56.5%	61.8%	4	8
23	35.5%	40.0%	3	0
24	19.9%	24.3%	3	0
25	33.5%	37.2%	3	0
26	57.0%	61.2%	3	8
27	5.0%	15.2%	0	0
28	19.5%	25.9%	2	0
29	26.9%	31.4%	3	0
30	20.9%	27.0%	2	0
31	20.7%	28.1%	3	0
32	14.9%	25.4%	3	0
33	43.0%	65.9%	4	8
34	69.5%	82.2%	4	8
35	71.9%	79.4%	4	8
36	51.3%	58.4%	3	8
37	19.3%	28.0%	3	0
38	65.3%	73.7%	4	8
39	60.7%	66.3%	3	8
40	19.2%	40.8%	0	8
41	62.6%	69.3%	3	8
42	30.8%	39.4%	0	8
43	64.3%	71.2%	4	8
44	71.3%	79.9%	4	8
45	18.6%	31.7%	3	0
46	16.9%	23.9%	1	0
47	17.4%	27.0%	3	0
48	9.5%	16.5%	1	0
49	8.0%	29.9%	1	0
50	5.6%	14.4%	1	0
51	1.2%	5.5%	0	0
52	13.0%	21.2%	1	0
53	5.1%	8.3%	1	0
54	3.8%	26.4%	1	0
55	66.0%	74.7%	4	8
56	7.6%	15.3%	0	0

Table 52: Effectiveness in SD Alt Eff 2, which includes the Alt 2 Gingles maps.

SD	HD Alt Eff 1 Part 1			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	4.2%	6.3%	1	0
2	3.2%	10.8%	1	0
3	3.4%	6.4%	1	0
4	5.4%	49.5%	2	0
5	4.6%	17.2%	1	0
6	1.5%	13.5%	1	0
7	0.6%	6.1%	0	0
8	1.4%	4.1%	0	0
9	1.6%	6.3%	0	0
10	3.7%	13.7%	1	0
11	1.8%	6.0%	0	0
12	9.7%	15.9%	1	0
13	19.2%	30.0%	1	0
14	6.8%	12.7%	2	0
15	14.2%	23.9%	2	0
16	11.7%	20.3%	3	0
17	23.0%	29.9%	2	0
18	8.0%	10.4%	2	0
19	24.1%	30.9%	3	0
20	9.3%	18.5%	1	0
21	5.1%	12.5%	1	0
22	15.1%	26.7%	3	0
23	6.5%	20.7%	1	0
24	7.0%	17.3%	1	0
25	5.9%	11.0%	0	0
26	4.0%	14.8%	0	0
27	3.7%	13.3%	1	0
28	3.9%	15.3%	0	0
29	13.6%	53.3%	2	0
30	8.1%	24.2%	0	0
31	7.6%	26.5%	1	0
32	8.0%	12.9%	2	0
33	11.2%	14.3%	3	0
34	15.7%	23.5%	3	0
35	28.4%	39.6%	3	8
36	17.0%	23.5%	3	0
37	28.2%	46.8%	3	8
38	54.2%	66.8%	4	8
39	55.3%	74.0%	4	8
40	33.0%	38.9%	3	8
41	39.4%	68.0%	4	8
42	33.7%	51.1%	3	8
43	26.5%	40.6%	3	8
44	12.0%	22.5%	2	0
45	5.3%	10.2%	0	0
46	8.1%	15.5%	0	0
47	10.7%	18.1%	2	0
48	11.8%	24.2%	0	1
49	8.4%	15.1%	0	0
50	12.4%	18.8%	2	8
51	23.7%	37.0%	0	8
52	16.0%	23.4%	0	8
53	14.5%	21.9%	0	1
54	15.5%	28.3%	0	7
55	55.4%	60.4%	3	8
56	45.5%	51.3%	3	8
57	18.1%	26.1%	0	8
58	63.0%	68.1%	3	8
59	70.1%	74.5%	3	8
60	63.9%	69.0%	3	8

SD	HD Alt Eff 1 Part 2			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
61	74.3%	81.9%	4	8
62	72.3%	79.1%	3	8
63	69.3%	78.6%	3	8
64	30.7%	38.1%	3	0
65	62.0%	66.5%	4	8
66	53.4%	62.9%	4	8
67	58.9%	66.7%	4	8
68	55.7%	62.0%	4	8
69	63.6%	69.0%	4	8
70	27.8%	35.8%	3	0
71	19.9%	26.1%	3	0
72	20.9%	27.8%	1	0
73	12.1%	19.1%	2	0
74	25.5%	31.1%	3	0
75	74.4%	85.7%	4	8
76	67.2%	80.4%	4	8
77	76.1%	88.3%	4	8
78	71.6%	80.5%	4	8
79	71.6%	87.6%	4	8
80	14.2%	37.3%	0	8
81	21.8%	42.7%	0	8
82	16.8%	23.6%	0	8
83	15.1%	43.6%	0	8
84	73.7%	76.7%	3	8
85	62.7%	68.6%	3	8
86	75.1%	79.4%	3	8
87	73.1%	79.8%	4	8
88	63.3%	73.3%	3	8
89	62.5%	65.9%	2	8
90	58.5%	62.8%	2	8
91	70.0%	75.9%	4	8
92	68.8%	73.5%	4	8
93	65.4%	75.0%	4	8
94	69.0%	76.3%	4	8
95	67.2%	75.1%	4	8
96	23.0%	59.0%	3	8
97	26.8%	46.0%	3	8
98	23.2%	76.0%	3	8
99	14.7%	23.4%	3	3
100	10.0%	20.0%	1	0
101	24.2%	42.4%	3	7
102	37.6%	58.9%	3	8
103	16.8%	33.7%	3	0
104	17.0%	28.1%	3	0
105	29.0%	45.8%	3	6
106	36.3%	47.4%	3	7
107	29.6%	60.7%	3	8
108	18.4%	36.6%	3	6
109	32.5%	68.6%	3	8
110	47.2%	57.7%	4	8
111	22.3%	31.1%	3	0
112	19.2%	22.5%	1	0
113	59.5%	66.2%	4	8
114	24.7%	28.4%	3	0
115	52.1%	59.1%	4	8
116	58.1%	65.4%	4	8
117	36.6%	42.0%	3	0
118	23.6%	27.3%	3	0
119	13.5%	23.9%	2	0
120	14.3%	21.4%	2	0

SD	HD Alt Eff 1 Part 3			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
121	9.6%	15.2%	0	0
122	28.4%	40.1%	3	8
123	24.3%	28.6%	3	0
124	25.6%	31.8%	2	0
125	23.7%	31.4%	3	0
126	54.5%	57.7%	4	8
127	18.5%	23.3%	3	0
128	50.4%	52.1%	2	4
129	54.9%	59.2%	3	8
130	59.9%	63.8%	4	8
131	17.6%	23.5%	3	0
132	52.3%	60.1%	4	8
133	36.8%	38.9%	3	0
134	33.6%	37.3%	1	0
135	23.8%	25.6%	1	0
136	28.7%	32.3%	3	0
137	52.1%	56.6%	4	8
138	19.3%	22.6%	2	0
139	20.3%	26.7%	2	0
140	57.6%	65.6%	4	8
141	57.5%	64.1%	4	8
142	59.5%	63.2%	3	8
143	60.8%	65.5%	3	8
144	29.3%	31.9%	3	0
145	35.7%	41.6%	3	0
146	27.6%	32.3%	4	0
147	30.1%	37.3%	4	0
148	34.0%	37.1%	4	0
149	32.1%	37.8%	2	0
150	53.6%	59.7%	4	8
151	42.4%	49.7%	4	0
152	26.1%	28.4%	4	0
153	67.9%	70.4%	4	8
154	54.8%	56.5%	4	7
155	35.9%	38.1%	3	0
156	30.3%	37.2%	4	0
157	24.7%	33.7%	3	0
158	31.2%	35.7%	2	0
159	24.5%	27.4%	2	0
160	22.6%	27.6%	2	0
161	27.1%	33.9%	4	0
162	43.7%	53.3%	4	8
163	45.5%	52.9%	3	8
164	23.5%	32.0%	3	0
165	50.3%	55.6%	4	8
166	5.7%	9.8%	3	0
167	22.3%	29.7%	3	0
168	46.3%	56.6%	4	8
169	29.0%	36.7%	3	0
170	24.2%	32.9%	3	0
171	39.6%	44.2%	4	0
172	23.3%	36.7%	4	0
173	36.3%	41.7%	4	0
174	17.4%	25.4%	3	0
175	24.2%	29.2%	4	0
176	22.7%	30.9%	4	0
177	53.9%	60.0%	4	7
178	14.8%	19.9%	3	0
179	27.0%	33.4%	3	0
180	18.2%	23.8%	3	0

Table 53: Effectiveness in HD Alt Eff 1, which includes the Alt 1 Gingles maps.

Exhibit 2d

SD	Primaries out of 4	Generals out of 8	Effective?
1	3	0	N
2	4	8	Y
3	3	0	N
4	3	0	N
5	3	8	Y
6	0	8	N
7	3	8	Y
8	4	0	N
9	3	8	Y
10	4	8	Y
11	4	0	N
12	4	8	Y
13	4	0	N
14	0	8	N
15	4	8	Y
16	3	0	N
17	3	0	N
18	3	0	N
19	4	0	N
20	3	0	N
21	2	0	N
22	4	8	Y
23	3	0	N
24	3	0	N
25	3	0	N
26	3	8	Y
27	0	0	N
28	2	0	N
29	3	0	N
30	2	0	N
31	3	0	N
32	3	0	N
33	4	8	Y
34	4	8	Y
35	4	8	Y
36	3	8	Y
37	3	0	N
38	4	8	Y
39	3	8	Y
40	0	8	N
41	3	8	Y
42	0	8	N
43	4	8	Y
44	4	8	Y
45	3	0	N
46	1	0	N
47	3	0	N
48	1	0	N
49	1	0	N
50	1	0	N
51	0	0	N
52	1	0	N
53	1	0	N
54	1	0	N
55	4	8	Y
56	0	0	N

Table 46: By the standard of requiring that the candidate of choice could win or advance in at least three out of four primaries and win or advance in at least five out of eight generals, the enacted plan has 19 districts that present an effective opportunity.

HD overall	James18P	Thornton18P	Thornton18R	Robinson18P
	0.4475	0.4387	0.5914	0.6286
1	0.3468	0.2773	0.4029	0.5806
2	0.3558	0.2650	0.3670	0.5476
3	0.3294	0.2937	0.3945	0.5330
4	0.3601	0.2721	0.5187	0.5229
5	0.3824	0.2760	0.4076	0.5266
6	0.3668	0.2496	0.3206	0.5430
7	0.2157	0.2572	0.3352	0.4173
8	0.2022	0.2644	0.3595	0.4717
9	0.1832	0.2701	0.3345	0.4496
10	0.2252	0.3163	0.4472	0.5031
11	0.2662	0.2961	0.3401	0.4568
12	0.3671	0.1692	0.3117	0.6227
13	0.3179	0.3260	0.4630	0.5670
14	0.3256	0.3317	0.5040	0.5218
15	0.3293	0.3518	0.4445	0.5811
16	0.3558	0.3730	0.5240	0.6086
17	0.4020	0.4363	0.4991	0.6145
18	0.3103	0.3091	0.5047	0.5511
19	0.4618	0.4869	0.5659	0.6279
20	0.2834	0.3785	0.3855	0.5275
21	0.2883	0.3326	0.3384	0.5194
22	0.3529	0.4129	0.5129	0.5635
23	0.2889	0.3204	0.3621	0.5709
24	0.2767	0.3541	0.4194	0.5259
25	0.2764	0.2928	0.4603	0.4945
26	0.2398	0.2986	0.4209	0.4735
27	0.2327	0.3044	0.2517	0.5148
28	0.2492	0.3220	0.3758	0.4683
29	0.3352	0.3795	0.5442	0.5610
30	0.3077	0.3530	0.4525	0.4958
31	0.3087	0.3400	0.4837	0.5963
32	0.3446	0.3195	0.5192	0.6330
33	0.3395	0.4244	0.6565	0.5794
34	0.3583	0.4446	0.5187	0.5655
35	0.3881	0.4507	0.5930	0.5815
36	0.4031	0.4559	0.5856	0.5964
37	0.3663	0.4527	0.5860	0.5523
38	0.5367	0.5168	0.6730	0.6903
39	0.5356	0.5345	0.7106	0.6796
40	0.4201	0.4639	0.6151	0.5695
41	0.5164	0.5317	0.6492	0.6384
42	0.4493	0.4890	0.6054	0.5755
43	0.3315	0.4079	0.5049	0.5117
44	0.3052	0.3869	0.5337	0.5195
45	0.1732	0.3021	0.3752	0.3676
46	0.2382	0.3411	0.4515	0.4440
47	0.3159	0.3542	0.5339	0.5053
48	0.2947	0.3582	0.4743	0.4679
49	0.2675	0.3343	0.4887	0.4863
50	0.3267	0.3767	0.5004	0.5151
51	0.3394	0.3852	0.4882	0.4737
52	0.2679	0.3387	0.4328	0.4053
53	0.2273	0.3048	0.4342	0.3910
54	0.2550	0.3444	0.4524	0.4081
55	0.4218	0.4596	0.6718	0.6275
56	0.4356	0.4518	0.6229	0.6142
57	0.2056	0.3076	0.3972	0.2914
58	0.4452	0.4517	0.6291	0.6105
59	0.4683	0.4632	0.6531	0.6383
60	0.4578	0.4647	0.6671	0.6606

HD overall	James18P	Thornton18P	Thornton18R	Robinson18P
	0.4475	0.4387	0.5914	0.6286
61	0.5937	0.5530	0.7215	0.7307
62	0.4559	0.4616	0.6297	0.6200
63	0.4227	0.4396	0.5712	0.6002
64	0.4859	0.4774	0.5232	0.6528
65	0.5996	0.5377	0.7249	0.7187
66	0.5615	0.5117	0.6402	0.7097
67	0.5783	0.5225	0.7261	0.7275
68	0.5142	0.5104	0.6439	0.6898
69	0.5196	0.5166	0.6831	0.7079
70	0.4308	0.4351	0.5046	0.6431
71	0.3445	0.4125	0.5560	0.5556
72	0.3181	0.3598	0.4040	0.5030
73	0.3412	0.3844	0.4659	0.5790
74	0.4855	0.4752	0.6443	0.6397
75	0.5667	0.4732	0.5439	0.7273
76	0.5726	0.4532	0.5774	0.7483
77	0.5372	0.4834	0.6259	0.7376
78	0.5592	0.4792	0.5407	0.7231
79	0.5561	0.4554	0.5713	0.7240
80	0.2507	0.3075	0.3904	0.4083
81	0.2273	0.3192	0.4007	0.3411
82	0.1811	0.2948	0.3296	0.2414
83	0.2499	0.3328	0.4322	0.4258
84	0.4411	0.4548	0.6076	0.5958
85	0.4561	0.4392	0.5883	0.6138
86	0.4939	0.4612	0.6058	0.6512
87	0.5020	0.4629	0.5948	0.6599
88	0.4783	0.4613	0.6055	0.6211
89	0.3875	0.4030	0.5645	0.4889
90	0.3812	0.3969	0.5629	0.5003
91	0.5621	0.5012	0.7033	0.7132
92	0.5777	0.5069	0.6954	0.7293
93	0.5503	0.5024	0.6621	0.7124
94	0.5467	0.4912	0.6849	0.6899
95	0.5813	0.5091	0.7039	0.7160
96	0.4407	0.4533	0.6048	0.5762
97	0.3851	0.4260	0.5636	0.5440
98	0.4638	0.4516	0.6475	0.5829
99	0.3827	0.4466	0.5993	0.5637
100	0.3268	0.3356	0.4947	0.5489
101	0.4195	0.4367	0.5873	0.6026
102	0.4902	0.4578	0.6445	0.6531
103	0.3989	0.4094	0.5857	0.5902
104	0.4202	0.4445	0.5931	0.6166
105	0.4694	0.4604	0.6632	0.6422
106	0.4768	0.4844	0.6458	0.6273
107	0.4858	0.4463	0.6147	0.6542
108	0.3738	0.4246	0.5554	0.5502
109	0.4988	0.4650	0.5979	0.6304
110	0.5429	0.5042	0.6857	0.7014
111	0.4343	0.4549	0.6179	0.6180
112	0.3802	0.3856	0.4628	0.6032
113	0.5592	0.4986	0.6538	0.7211
114	0.3566	0.3820	0.5553	0.6116
115	0.5470	0.5100	0.6995	0.7163
116	0.5613	0.5113	0.6805	0.7260
117	0.4806	0.4765	0.6946	0.6856
118	0.4420	0.3747	0.5819	0.6716
119	0.3654	0.3998	0.4785	0.5577
120	0.3310	0.3982	0.5499	0.5099

HD overall	James18P	Thornton18P	Thornton18R	Robinson18P
	0.4475	0.4387	0.5914	0.6286
121	0.3056	0.3610	0.4634	0.4318
122	0.4470	0.4828	0.7316	0.5336
123	0.4482	0.4759	0.8210	0.6795
124	0.3929	0.3945	0.5134	0.6158
125	0.4979	0.4484	0.5532	0.7290
126	0.5713	0.4653	0.7136	0.8431
127	0.3885	0.4146	0.5601	0.6759
128	0.4836	0.3572	0.6819	0.7292
129	0.4788	0.4262	0.6829	0.7876
130	0.5291	0.4322	0.6676	0.8300
131	0.4561	0.4564	0.6071	0.6988
132	0.5114	0.4534	0.7072	0.8308
133	0.4708	0.4428	0.7327	0.7101
134	0.4537	0.3415	0.4744	0.6571
135	0.4414	0.3509	0.4942	0.6575
136	0.4119	0.4498	0.5770	0.6639
137	0.5831	0.4497	0.6210	0.7196
138	0.4087	0.4060	0.4642	0.6087
139	0.4801	0.3999	0.4545	0.6473
140	0.6020	0.4426	0.5277	0.7298
141	0.6424	0.4599	0.5801	0.7533
142	0.4658	0.4625	0.6520	0.7214
143	0.4642	0.4872	0.6748	0.7412
144	0.4126	0.4350	0.6166	0.6729
145	0.4565	0.5158	0.6740	0.7167
146	0.5166	0.5594	0.7649	0.6930
147	0.5096	0.5585	0.7068	0.6984
148	0.5185	0.4879	0.6815	0.6956
149	0.4570	0.3824	0.5110	0.6894
150	0.5420	0.5120	0.7376	0.7507
151	0.5465	0.4851	0.6725	0.7150
152	0.5542	0.4701	0.6164	0.7292
153	0.6069	0.4804	0.6392	0.7999
154	0.5679	0.4636	0.6112	0.7543
155	0.4790	0.4310	0.6517	0.6845
156	0.5283	0.4362	0.6620	0.7356
157	0.4885	0.3890	0.6939	0.7202
158	0.4889	0.3914	0.6253	0.7098
159	0.4596	0.3947	0.6056	0.6965
160	0.4117	0.3911	0.5455	0.6332
161	0.5543	0.5195	0.7135	0.7036
162	0.6043	0.5636	0.7874	0.7517
163	0.4945	0.5148	0.7413	0.6811
164	0.4995	0.5290	0.7585	0.6963
165	0.5689	0.5359	0.7661	0.7381
166	0.2755	0.4103	0.6313	0.5219
167	0.4840	0.4765	0.6980	0.7241
168	0.5505	0.5425	0.7834	0.7886
169	0.5063	0.3686	0.5592	0.6991
170	0.4510	0.4272	0.5020	0.6678
171	0.5049	0.4272	0.5864	0.7274
172	0.5519	0.4134	0.5872	0.6544
173	0.5511	0.4509	0.6016	0.7408
174	0.5238	0.3752	0.5566	0.6716
175	0.5392	0.3988	0.5253	0.7350
176	0.5464	0.4061	0.6065	0.7292
177	0.5448	0.4450	0.6370	0.7407
178	0.4627	0.4045	0.6920	0.6940
179	0.4151	0.4621	0.5945	0.6310
180	0.4609	0.4587	0.6255	0.6534

Table 47: Vote shares for the minority candidate of choice across enacted House districts, in probative primary and primary runoff elections.

HD overall	Clinton16 0.4734	Abrams18 0.4930	Thornton18 0.4697	Biden20 0.5013	Blackman20 0.4848	Ossoff21 0.5061	Warnock21 0.5104	Abrams22 0.4620
1	0.1933	0.1964	0.1938	0.2104	0.2009	0.2160	0.2146	0.1736
2	0.1696	0.1670	0.1635	0.1901	0.1768	0.1895	0.1876	0.1425
3	0.1908	0.2018	0.1943	0.2221	0.2099	0.2233	0.2222	0.1816
4	0.3589	0.3633	0.3440	0.3835	0.3672	0.3806	0.3808	0.2906
5	0.1716	0.1733	0.1685	0.1855	0.1785	0.1926	0.1950	0.1482
6	0.1564	0.1457	0.1481	0.1641	0.1586	0.1679	0.1671	0.1177
7	0.1661	0.1629	0.1575	0.1807	0.1687	0.1815	0.1850	0.1469
8	0.1659	0.1600	0.1576	0.1819	0.1701	0.1815	0.1840	0.1422
9	0.1473	0.1523	0.1457	0.1695	0.1522	0.1705	0.1732	0.1391
10	0.1672	0.1675	0.1588	0.1859	0.1688	0.1864	0.1913	0.1485
11	0.1461	0.1550	0.1446	0.1868	0.1694	0.1863	0.1912	0.1552
12	0.1978	0.1895	0.1887	0.1945	0.1906	0.2069	0.2083	0.1607
13	0.3298	0.3437	0.3215	0.3537	0.3310	0.3571	0.3629	0.3015
14	0.1708	0.1768	0.1703	0.1916	0.1809	0.1941	0.1984	0.1604
15	0.2542	0.2749	0.2634	0.2863	0.2749	0.2949	0.2993	0.2417
16	0.2016	0.2083	0.2047	0.2237	0.2152	0.2305	0.2332	0.1941
17	0.2784	0.3264	0.3170	0.3580	0.3498	0.3747	0.3780	0.3411
18	0.1598	0.1479	0.1441	0.1598	0.1563	0.1653	0.1678	0.1314
19	0.3142	0.3525	0.3443	0.3762	0.3661	0.3887	0.3918	0.3614
20	0.2608	0.2975	0.2696	0.3349	0.3055	0.3261	0.3332	0.2815
21	0.2096	0.2398	0.2148	0.2772	0.2455	0.2657	0.2720	0.2304
22	0.3498	0.4004	0.3760	0.4163	0.3967	0.4206	0.4264	0.3756
23	0.2017	0.2210	0.2039	0.2563	0.2340	0.2535	0.2591	0.2129
24	0.2901	0.3324	0.2988	0.3727	0.3386	0.3622	0.3678	0.2989
25	0.3541	0.3882	0.3448	0.4409	0.3962	0.4224	0.4298	0.3655
26	0.2422	0.2709	0.2435	0.3235	0.2896	0.3113	0.3189	0.2710
27	0.1564	0.1633	0.1496	0.1884	0.1667	0.1841	0.1893	0.1452
28	0.1767	0.1985	0.1815	0.2357	0.2110	0.2273	0.2329	0.1893
29	0.3920	0.4240	0.3990	0.4239	0.4015	0.4255	0.4307	0.3557
30	0.2252	0.2501	0.2331	0.2841	0.2603	0.2785	0.2838	0.2300
31	0.2004	0.2126	0.2029	0.2409	0.2226	0.2442	0.2488	0.1925
32	0.1592	0.1546	0.1529	0.1702	0.1564	0.1731	0.1750	0.1345
33	0.1991	0.1743	0.1765	0.1948	0.1799	0.1959	0.1953	0.1486
34	0.3454	0.3777	0.3462	0.4205	0.3864	0.4055	0.4157	0.3698
35	0.5063	0.5603	0.5316	0.5726	0.5567	0.5802	0.5855	0.5361
36	0.3216	0.3596	0.3321	0.4022	0.3696	0.3928	0.3994	0.3632
37	0.5623	0.5933	0.5531	0.6113	0.5847	0.5981	0.6078	0.5507
38	0.6765	0.7229	0.7053	0.7243	0.7253	0.7453	0.7473	0.7174
39	0.7614	0.7930	0.7682	0.7876	0.7846	0.7991	0.8049	0.7703
40	0.6071	0.6417	0.5949	0.6673	0.6238	0.6387	0.6495	0.6207
41	0.6887	0.7199	0.6951	0.7105	0.7106	0.7256	0.7296	0.6856
42	0.6871	0.7282	0.6885	0.7158	0.6889	0.7108	0.7182	0.6714
43	0.5624	0.5885	0.5483	0.6073	0.5730	0.5827	0.5927	0.5436
44	0.3820	0.4236	0.3907	0.4598	0.4305	0.4536	0.4613	0.4096
45	0.4039	0.4203	0.3637	0.4792	0.4134	0.4354	0.4477	0.3997
46	0.3774	0.4098	0.3682	0.4495	0.4039	0.4254	0.4351	0.3895
47	0.3868	0.4048	0.3595	0.4440	0.3963	0.4171	0.4276	0.3688
48	0.4381	0.4625	0.4120	0.5147	0.4624	0.4779	0.4885	0.4344
49	0.4092	0.4330	0.3806	0.4801	0.4246	0.4420	0.4538	0.4029
50	0.5185	0.5558	0.5026	0.5939	0.5521	0.5784	0.5861	0.5154
51	0.5509	0.5728	0.5274	0.6082	0.5683	0.5811	0.5899	0.5407
52	0.5759	0.5938	0.5291	0.6361	0.5801	0.5957	0.6081	0.5697
53	0.4972	0.4992	0.4281	0.5478	0.4745	0.4843	0.4998	0.4548
54	0.5540	0.5641	0.4946	0.6104	0.5455	0.5555	0.5673	0.5443
55	0.8132	0.8121	0.7562	0.8169	0.7764	0.7909	0.8021	0.7662
56	0.9113	0.9249	0.8807	0.8971	0.8775	0.8976	0.9038	0.8875
57	0.7942	0.8025	0.7157	0.8092	0.7539	0.7714	0.7843	0.7610
58	0.9398	0.9511	0.9154	0.9213	0.9117	0.9269	0.9321	0.9165
59	0.9503	0.9603	0.9291	0.9337	0.9292	0.9425	0.9466	0.9307
60	0.8139	0.8069	0.7617	0.8065	0.7758	0.7868	0.7968	0.7698

HD overall	Clinton16 0.4734	Abrams18 0.4930	Thornton18 0.4697	Biden20 0.5013	Blackman20 0.4848	Ossoff21 0.5061	Warnock21 0.5104	Abrams22 0.4620
61	0.8241	0.8575	0.8407	0.8504	0.8538	0.8683	0.8707	0.8555
62	0.9354	0.9434	0.9127	0.9254	0.9223	0.9341	0.9382	0.9188
63	0.9197	0.9279	0.8967	0.9085	0.9071	0.9182	0.9243	0.9017
64	0.3449	0.3899	0.3757	0.4259	0.4177	0.4440	0.4476	0.4247
65	0.6646	0.6994	0.6807	0.6976	0.6952	0.7127	0.7158	0.6883
66	0.6077	0.6610	0.6389	0.6899	0.6851	0.7115	0.7159	0.6952
67	0.6289	0.6633	0.6473	0.6617	0.6560	0.6770	0.6798	0.6488
68	0.5991	0.6305	0.6067	0.6502	0.6395	0.6468	0.6521	0.6215
69	0.7034	0.7388	0.7190	0.7409	0.7350	0.7550	0.7586	0.7380
70	0.3758	0.3878	0.3663	0.3830	0.3655	0.3904	0.3953	0.3484
71	0.3046	0.3209	0.3107	0.3286	0.3192	0.3466	0.3510	0.3045
72	0.2982	0.2866	0.2703	0.2858	0.2713	0.2873	0.2928	0.2350
73	0.2814	0.3012	0.2764	0.3612	0.3306	0.3509	0.3572	0.3125
74	0.3228	0.3558	0.3379	0.3842	0.3665	0.3878	0.3907	0.3604
75	0.8667	0.8906	0.8739	0.8644	0.8755	0.8929	0.8952	0.8733
76	0.8631	0.8796	0.8639	0.8499	0.8607	0.8808	0.8811	0.8610
77	0.9074	0.9236	0.9083	0.8944	0.9071	0.9221	0.9225	0.9037
78	0.7907	0.8215	0.8039	0.8163	0.8228	0.8375	0.8394	0.8223
79	0.8973	0.9123	0.8980	0.8806	0.8897	0.9056	0.9076	0.8831
80	0.5608	0.5777	0.5197	0.6162	0.5677	0.5827	0.5954	0.5473
81	0.6692	0.6877	0.6319	0.7157	0.6752	0.6884	0.6986	0.6678
82	0.7751	0.7927	0.7267	0.8052	0.7682	0.7819	0.7896	0.7828
83	0.6124	0.6329	0.5664	0.6586	0.5979	0.6178	0.6302	0.5951
84	0.9388	0.9450	0.9161	0.9332	0.9290	0.9364	0.9400	0.9210
85	0.9148	0.9267	0.9000	0.9007	0.9017	0.9161	0.9205	0.8964
86	0.9067	0.9202	0.9000	0.8970	0.9028	0.9143	0.9164	0.8891
87	0.8855	0.8969	0.8781	0.8808	0.8870	0.8973	0.9008	0.8691
88	0.8094	0.8265	0.8039	0.8184	0.8179	0.8302	0.8349	0.8024
89	0.9211	0.9255	0.8819	0.9191	0.9027	0.9116	0.9178	0.8978
90	0.9421	0.9516	0.9131	0.9405	0.9290	0.9385	0.9436	0.9290
91	0.7506	0.7869	0.7695	0.7855	0.7884	0.8036	0.8059	0.7915
92	0.6898	0.7382	0.7204	0.7609	0.7621	0.7773	0.7799	0.7717
93	0.7088	0.7398	0.7225	0.7465	0.7464	0.7659	0.7673	0.7439
94	0.7994	0.8186	0.8009	0.8198	0.8178	0.8312	0.8348	0.8076
95	0.7589	0.7961	0.7794	0.7942	0.7960	0.8103	0.8128	0.7867
96	0.6513	0.6831	0.6515	0.6687	0.6620	0.6836	0.6874	0.6247
97	0.6033	0.6323	0.5956	0.6397	0.6211	0.6376	0.6447	0.5854
98	0.7760	0.7949	0.7669	0.7465	0.7543	0.7825	0.7838	0.7174
99	0.4465	0.4861	0.4466	0.5278	0.4934	0.5205	0.5277	0.4671
100	0.3134	0.3485	0.3175	0.3988	0.3652	0.3912	0.3971	0.3392
101	0.4962	0.5465	0.5164	0.5636	0.5501	0.5769	0.5820	0.5249
102	0.5983	0.6426	0.6164	0.6569	0.6486	0.6771	0.6822	0.6240
103	0.3596	0.4033	0.3775	0.4331	0.4076	0.4308	0.4375	0.3809
104	0.2771	0.3149	0.2929	0.3617	0.3402	0.3650	0.3717	0.3332
105	0.4671	0.5206	0.4938	0.5442	0.5317	0.5602	0.5643	0.5130
106	0.4991	0.5508	0.5231	0.5940	0.5767	0.6043	0.6103	0.5715
107	0.6770	0.7132	0.6840	0.6943	0.6943	0.7215	0.7255	0.6621
108	0.4720	0.5095	0.4750	0.5523	0.5274	0.5540	0.5613	0.5046
109	0.7727	0.7966	0.7724	0.7461	0.7521	0.7864	0.7876	0.7234
110	0.5260	0.5994	0.5794	0.6408	0.6309	0.6597	0.6628	0.6410
111	0.2454	0.2958	0.2852	0.3471	0.3360	0.3544	0.3570	0.3372
112	0.2275	0.2296	0.2196	0.2397	0.2282	0.2442	0.2475	0.2099
113	0.6532	0.6987	0.6850	0.6957	0.6991	0.7251	0.7280	0.7106
114	0.2932	0.2988	0.2835	0.3142	0.2978	0.3200	0.3230	0.2860
115	0.5282	0.5709	0.5501	0.6104	0.6051	0.6234	0.6266	0.6147
116	0.6253	0.6895	0.6709	0.7015	0.7027	0.7221	0.7253	0.7196
117	0.3607	0.4204	0.4064	0.4769	0.4683	0.4937	0.4975	0.4951
118	0.2642	0.2664	0.2585	0.2726	0.2618	0.2850	0.2880	0.2507
119	0.2336	0.2457	0.2336	0.2721	0.2574	0.2797	0.2837	0.2422
120	0.4324	0.4353	0.4134	0.4490	0.4169	0.4440	0.4503	0.3964

HD overall	Clinton16	Abrams18	Thornton18	Biden20	Blackman20	Ossoff21	Warnock21	Abrams22
	0.4734	0.4930	0.4697	0.5013	0.4848	0.5061	0.5104	0.4620
121	0.4383	0.4382	0.4077	0.4598	0.4194	0.4425	0.4503	0.3852
122	0.7829	0.7982	0.7689	0.7877	0.7720	0.7958	0.8010	0.7655
123	0.3145	0.3023	0.3153	0.3195	0.3085	0.3193	0.3201	0.2736
124	0.3911	0.3841	0.3675	0.3980	0.3772	0.3936	0.3977	0.3395
125	0.3124	0.3380	0.3252	0.3750	0.3549	0.3784	0.3799	0.3423
126	0.6195	0.6212	0.6115	0.6197	0.6170	0.6298	0.6306	0.5894
127	0.3225	0.3389	0.3158	0.3749	0.3415	0.3649	0.3670	0.3174
128	0.5105	0.4989	0.4858	0.5025	0.4954	0.5098	0.5121	0.4545
129	0.6726	0.6733	0.6496	0.6856	0.6669	0.6835	0.6858	0.6342
130	0.6627	0.6813	0.6665	0.6839	0.6797	0.6947	0.6961	0.6730
131	0.2932	0.3217	0.2997	0.3670	0.3357	0.3639	0.3641	0.3232
132	0.6975	0.7065	0.6918	0.7024	0.6986	0.7175	0.7190	0.6724
133	0.4584	0.4527	0.4383	0.4561	0.4454	0.4705	0.4721	0.4204
134	0.3675	0.3622	0.3475	0.3672	0.3605	0.3794	0.3828	0.3402
135	0.2684	0.2653	0.2567	0.2640	0.2550	0.2713	0.2743	0.2254
136	0.3509	0.3549	0.3395	0.3499	0.3372	0.3571	0.3602	0.3056
137	0.5805	0.5883	0.5698	0.5897	0.5831	0.5999	0.6011	0.5656
138	0.2761	0.2729	0.2548	0.2985	0.2726	0.2949	0.2984	0.2546
139	0.3343	0.3473	0.3308	0.3915	0.3689	0.3872	0.3890	0.3475
140	0.7512	0.7692	0.7519	0.7471	0.7411	0.7654	0.7690	0.7451
141	0.7217	0.7419	0.7220	0.7370	0.7310	0.7494	0.7512	0.7280
142	0.6564	0.6705	0.6484	0.6687	0.6552	0.6724	0.6763	0.6316
143	0.7177	0.7223	0.7033	0.7099	0.7054	0.7228	0.7259	0.6915
144	0.3572	0.3620	0.3428	0.3923	0.3715	0.3905	0.3925	0.3457
145	0.4030	0.4083	0.3992	0.4182	0.4120	0.4290	0.4312	0.3886
146	0.3306	0.3558	0.3402	0.3840	0.3693	0.3930	0.3953	0.3570
147	0.3990	0.4414	0.4271	0.4662	0.4544	0.4793	0.4812	0.4429
148	0.3283	0.3167	0.2980	0.3276	0.3106	0.3286	0.3313	0.2913
149	0.3423	0.3256	0.3176	0.3348	0.3292	0.3441	0.3469	0.2964
150	0.5595	0.5496	0.5339	0.5455	0.5386	0.5543	0.5562	0.5107
151	0.4838	0.4720	0.4577	0.4809	0.4740	0.4877	0.4887	0.4452
152	0.2738	0.2855	0.2758	0.3017	0.2909	0.3123	0.3129	0.2793
153	0.6728	0.6798	0.6597	0.6825	0.6741	0.6887	0.6899	0.6593
154	0.5464	0.5383	0.5280	0.5377	0.5321	0.5504	0.5500	0.4931
155	0.3457	0.3279	0.3206	0.3489	0.3391	0.3541	0.3561	0.3130
156	0.2945	0.2829	0.2767	0.2976	0.2881	0.3012	0.3035	0.2486
157	0.2481	0.2370	0.2320	0.2511	0.2443	0.2572	0.2571	0.2076
158	0.3531	0.3412	0.3271	0.3492	0.3342	0.3512	0.3518	0.3047
159	0.3003	0.2928	0.2800	0.3045	0.2930	0.3104	0.3109	0.2651
160	0.3265	0.3052	0.2884	0.3178	0.2973	0.3121	0.3135	0.2560
161	0.3246	0.3679	0.3595	0.4068	0.3958	0.4200	0.4201	0.3897
162	0.6504	0.6870	0.6742	0.6721	0.6678	0.6893	0.6901	0.6576
163	0.7214	0.7313	0.7059	0.7266	0.7115	0.7291	0.7314	0.7008
164	0.3635	0.4190	0.4034	0.4286	0.4113	0.4347	0.4347	0.4062
165	0.7896	0.7899	0.7685	0.7803	0.7735	0.7851	0.7863	0.7540
166	0.3116	0.3135	0.2834	0.3470	0.3045	0.3300	0.3332	0.2844
167	0.3045	0.3125	0.3004	0.3268	0.3189	0.3377	0.3379	0.3008
168	0.6098	0.6350	0.6245	0.6225	0.6212	0.6460	0.6479	0.6024
169	0.2743	0.2641	0.2464	0.2767	0.2666	0.2806	0.2818	0.2370
170	0.2733	0.2610	0.2441	0.2846	0.2676	0.2881	0.2895	0.2362
171	0.3926	0.3819	0.3710	0.3957	0.3904	0.3953	0.3957	0.3469
172	0.2734	0.2564	0.2462	0.2732	0.2611	0.2760	0.2768	0.2273
173	0.4058	0.4008	0.3840	0.4191	0.4031	0.4133	0.4130	0.3706
174	0.2137	0.1984	0.1977	0.2076	0.2026	0.2085	0.2081	0.1994
175	0.3533	0.3524	0.3397	0.3565	0.3446	0.3541	0.3540	0.3100
176	0.2848	0.2806	0.2734	0.2866	0.2793	0.2936	0.2944	0.2505
177	0.5211	0.5375	0.5169	0.5718	0.5553	0.5697	0.5701	0.4892
178	0.1589	0.1447	0.1453	0.1585	0.1527	0.1624	0.1611	0.1272
179	0.3945	0.3937	0.3756	0.4203	0.4002	0.4030	0.4039	0.3524
180	0.3210	0.3373	0.3262	0.3423	0.3286	0.3438	0.3420	0.2955

Table 48: Vote shares for the minority candidate of choice across enacted House districts, in probative general and general runoff elections.

HD	Pri (4)	Gen (8)	Eff?
1	1	0	N
2	1	0	N
3	1	0	N
4	2	0	N
5	1	0	N
6	1	0	N
7	0	0	N
8	0	0	N
9	0	0	N
10	1	0	N
11	0	0	N
12	1	0	N
13	1	0	N
14	2	0	N
15	2	0	N
16	3	0	N
17	2	0	N
18	2	0	N
19	3	0	N
20	1	0	N
21	1	0	N
22	3	0	N
23	1	0	N
24	1	0	N
25	0	0	N
26	0	0	N
27	1	0	N
28	0	0	N
29	2	0	N
30	0	0	N
31	1	0	N
32	2	0	N
33	3	0	N
34	3	0	N
35	3	8	Y
36	3	0	N
37	3	8	Y
38	4	8	Y
39	4	8	Y
40	3	8	Y
41	4	8	Y
42	3	8	Y
43	3	8	Y
44	2	0	N
45	0	0	N
46	0	0	N
47	2	0	N
48	0	1	N
49	0	0	N
50	2	8	N
51	0	8	N
52	0	8	N
53	0	1	N
54	0	7	N
55	3	8	Y
56	3	8	Y
57	0	8	N
58	3	8	Y
59	3	8	Y
60	3	8	Y

HD	Pri (4)	Gen (8)	Eff?
61	4	8	Y
62	3	8	Y
63	3	8	Y
64	3	0	N
65	4	8	Y
66	4	8	Y
67	4	8	Y
68	4	8	Y
69	4	8	Y
70	3	0	N
71	3	0	N
72	1	0	N
73	2	0	N
74	3	0	N
75	4	8	Y
76	4	8	Y
77	4	8	Y
78	4	8	Y
79	4	8	Y
80	0	8	N
81	0	8	N
82	0	8	N
83	0	8	N
84	3	8	Y
85	3	8	Y
86	3	8	Y
87	4	8	Y
88	3	8	Y
89	2	8	N
90	2	8	N
91	4	8	Y
92	4	8	Y
93	4	8	Y
94	4	8	Y
95	4	8	Y
96	3	8	Y
97	3	8	Y
98	3	8	Y
99	3	3	N
100	1	0	N
101	3	7	Y
102	3	8	Y
103	3	0	N
104	3	0	N
105	3	6	Y
106	3	7	Y
107	3	8	Y
108	3	6	Y
109	3	8	Y
110	4	8	Y
111	3	0	N
112	1	0	N
113	4	8	Y
114	3	0	N
115	4	8	Y
116	4	8	Y
117	3	0	N
118	3	0	N
119	2	0	N
120	2	0	N

HD	Pri (4)	Gen (8)	Eff?
121	0	0	N
122	3	8	Y
123	3	0	N
124	2	0	N
125	3	0	N
126	4	8	Y
127	3	0	N
128	2	4	N
129	3	8	Y
130	4	8	Y
131	3	0	N
132	4	8	Y
133	3	0	N
134	1	0	N
135	1	0	N
136	3	0	N
137	4	8	Y
138	2	0	N
139	2	0	N
140	4	8	Y
141	4	8	Y
142	3	8	Y
143	3	8	Y
144	3	0	N
145	3	0	N
146	4	0	N
147	4	0	N
148	4	0	N
149	2	0	N
150	4	8	Y
151	4	0	N
152	4	0	N
153	4	8	Y
154	4	7	Y
155	3	0	N
156	4	0	N
157	3	0	N
158	2	0	N
159	2	0	N
160	2	0	N
161	4	0	N
162	4	8	Y
163	3	8	Y
164	3	0	N
165	4	8	Y
166	3	0	N
167	3	0	N
168	4	8	Y
169	3	0	N
170	3	0	N
171	4	0	N
172	4	0	N
173	4	0	N
174	3	0	N
175	4	0	N
176	4	0	N
177	4	7	Y
178	3	0	N
179	3	0	N
180	3	0	N

Table 49: Of 180 enacted House districts, 69 are rated as providing an effective opportunity to elect coalition candidates of choice.

CD	CD Alt			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	30.3%	37.2%	3	0
2	47.7%	52.4%	4	8
3	51.2%	58.4%	4	8
4	50.6%	58.8%	3	8
5	50.1%	61.5%	3	8
6	13.7%	24.6%	0	3
7	34.3%	56.7%	3	8
8	27.3%	34.2%	4	0
9	4.6%	16.1%	0	0
10	17.6%	24.5%	3	0
11	17.6%	25.2%	2	0
12	39.2%	43.8%	3	0
13	52.0%	58.8%	4	8
14	7.6%	18.6%	1	0

Table 50: CD Alt effectiveness.

SD	SD Alt Eff 1			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	25.1%	32.6%	3	0
2	46.9%	54.4%	4	8
3	21.2%	27.4%	3	0
4	23.5%	29.0%	3	0
5	20.3%	54.9%	3	8
6	50.1%	56.2%	3	8
7	17.1%	31.4%	3	3
8	30.4%	36.6%	4	0
9	29.3%	56.3%	3	8
10	59.5%	70.5%	4	8
11	31.0%	38.6%	4	0
12	58.0%	61.5%	4	8
13	27.0%	33.0%	4	0
14	18.1%	29.5%	0	8
15	54.0%	60.6%	4	8
16	50.2%	56.4%	4	8
17	51.1%	57.7%	4	8
18	30.4%	34.9%	3	0
19	25.7%	34.1%	4	0
20	34.4%	39.5%	3	0
21	7.5%	16.3%	2	0
22	50.5%	54.3%	4	8
23	23.0%	28.6%	3	0
24	25.0%	28.5%	3	0
25	50.0%	54.0%	3	8
26	50.1%	53.8%	4	8
27	4.7%	14.9%	0	0
28	50.6%	57.4%	4	8
29	26.9%	31.4%	3	0
30	14.3%	19.4%	1	0
31	19.7%	26.9%	3	0
32	14.9%	25.4%	3	0
33	50.4%	68.5%	4	8
34	72.2%	83.8%	4	8
35	50.9%	58.9%	4	8
36	50.0%	55.7%	1	8
37	19.3%	28.0%	3	0
38	27.9%	43.3%	3	8
39	51.2%	56.6%	4	8
40	50.1%	67.8%	3	8
41	57.3%	67.3%	3	8
42	35.8%	45.4%	0	8
43	52.0%	59.0%	4	8
44	61.6%	65.2%	3	8
45	19.8%	31.9%	3	0
46	16.5%	21.5%	2	0
47	16.7%	25.4%	3	0
48	10.1%	16.5%	0	1
49	8.1%	32.7%	1	0
50	5.4%	11.5%	1	0
51	1.2%	5.5%	0	0
52	13.0%	21.2%	1	0
53	5.1%	8.3%	1	0
54	3.8%	26.4%	1	0
55	50.0%	63.9%	4	8
56	7.6%	15.3%	0	0

Table 51: Effectiveness in SD Alt Eff 1, which includes the Alt 1 Gingles maps.

SD	SD Alt Eff 2			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	25.1%	32.6%	3	0
2	46.9%	54.4%	4	8
3	21.2%	27.4%	3	0
4	23.4%	28.9%	3	0
5	29.9%	71.6%	3	8
6	23.9%	32.1%	0	8
7	21.4%	38.0%	3	8
8	30.4%	36.6%	4	0
9	29.5%	48.3%	3	8
10	71.5%	76.7%	4	8
11	31.0%	38.6%	4	0
12	58.0%	61.5%	4	8
13	27.0%	33.0%	4	0
14	19.0%	31.1%	0	8
15	54.0%	60.6%	4	8
16	22.7%	27.7%	3	0
17	32.0%	37.1%	3	0
18	30.4%	34.9%	3	0
19	25.7%	34.1%	4	0
20	31.3%	34.8%	3	0
21	7.5%	16.3%	2	0
22	56.5%	61.8%	4	8
23	35.5%	40.0%	3	0
24	19.9%	24.3%	3	0
25	33.5%	37.2%	3	0
26	57.0%	61.2%	3	8
27	5.0%	15.2%	0	0
28	19.5%	25.9%	2	0
29	26.9%	31.4%	3	0
30	20.9%	27.0%	2	0
31	20.7%	28.1%	3	0
32	14.9%	25.4%	3	0
33	43.0%	65.9%	4	8
34	69.5%	82.2%	4	8
35	71.9%	79.4%	4	8
36	51.3%	58.4%	3	8
37	19.3%	28.0%	3	0
38	65.3%	73.7%	4	8
39	60.7%	66.3%	3	8
40	19.2%	40.8%	0	8
41	62.6%	69.3%	3	8
42	30.8%	39.4%	0	8
43	64.3%	71.2%	4	8
44	71.3%	79.9%	4	8
45	18.6%	31.7%	3	0
46	16.9%	23.9%	1	0
47	17.4%	27.0%	3	0
48	9.5%	16.5%	1	0
49	8.0%	29.9%	1	0
50	5.6%	14.4%	1	0
51	1.2%	5.5%	0	0
52	13.0%	21.2%	1	0
53	5.1%	8.3%	1	0
54	3.8%	26.4%	1	0
55	66.0%	74.7%	4	8
56	7.6%	15.3%	0	0

Table 52: Effectiveness in SD Alt Eff 2, which includes the Alt 2 Gingles maps.

SD	HD Alt Eff 1 Part 1			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	4.2%	6.3%	1	0
2	3.2%	10.8%	1	0
3	3.4%	6.4%	1	0
4	5.4%	49.5%	2	0
5	4.6%	17.2%	1	0
6	1.5%	13.5%	1	0
7	0.6%	6.1%	0	0
8	1.4%	4.1%	0	0
9	1.6%	6.3%	0	0
10	3.7%	13.7%	1	0
11	1.8%	6.0%	0	0
12	9.7%	15.9%	1	0
13	19.2%	30.0%	1	0
14	6.8%	12.7%	2	0
15	14.2%	23.9%	2	0
16	11.7%	20.3%	3	0
17	23.0%	29.9%	2	0
18	8.0%	10.4%	2	0
19	24.1%	30.9%	3	0
20	9.3%	18.5%	1	0
21	5.1%	12.5%	1	0
22	15.1%	26.7%	3	0
23	6.5%	20.7%	1	0
24	7.0%	17.3%	1	0
25	5.9%	11.0%	0	0
26	4.0%	14.8%	0	0
27	3.7%	13.3%	1	0
28	3.9%	15.3%	0	0
29	13.6%	53.3%	2	0
30	8.1%	24.2%	0	0
31	7.6%	26.5%	1	0
32	8.0%	12.9%	2	0
33	11.2%	14.3%	3	0
34	15.7%	23.5%	3	0
35	28.4%	39.6%	3	8
36	17.0%	23.5%	3	0
37	28.2%	46.8%	3	8
38	54.2%	66.8%	4	8
39	55.3%	74.0%	4	8
40	33.0%	38.9%	3	8
41	39.4%	68.0%	4	8
42	33.7%	51.1%	3	8
43	26.5%	40.6%	3	8
44	12.0%	22.5%	2	0
45	5.3%	10.2%	0	0
46	8.1%	15.5%	0	0
47	10.7%	18.1%	2	0
48	11.8%	24.2%	0	1
49	8.4%	15.1%	0	0
50	12.4%	18.8%	2	8
51	23.7%	37.0%	0	8
52	16.0%	23.4%	0	8
53	14.5%	21.9%	0	1
54	15.5%	28.3%	0	7
55	55.4%	60.4%	3	8
56	45.5%	51.3%	3	8
57	18.1%	26.1%	0	8
58	63.0%	68.1%	3	8
59	70.1%	74.5%	3	8
60	63.9%	69.0%	3	8

SD	HD Alt Eff 1 Part 2			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
61	74.3%	81.9%	4	8
62	72.3%	79.1%	3	8
63	69.3%	78.6%	3	8
64	30.7%	38.1%	3	0
65	62.0%	66.5%	4	8
66	53.4%	62.9%	4	8
67	58.9%	66.7%	4	8
68	55.7%	62.0%	4	8
69	63.6%	69.0%	4	8
70	27.8%	35.8%	3	0
71	19.9%	26.1%	3	0
72	20.9%	27.8%	1	0
73	12.1%	19.1%	2	0
74	25.5%	31.1%	3	0
75	74.4%	85.7%	4	8
76	67.2%	80.4%	4	8
77	76.1%	88.3%	4	8
78	71.6%	80.5%	4	8
79	71.6%	87.6%	4	8
80	14.2%	37.3%	0	8
81	21.8%	42.7%	0	8
82	16.8%	23.6%	0	8
83	15.1%	43.6%	0	8
84	73.7%	76.7%	3	8
85	62.7%	68.6%	3	8
86	75.1%	79.4%	3	8
87	73.1%	79.8%	4	8
88	63.3%	73.3%	3	8
89	62.5%	65.9%	2	8
90	58.5%	62.8%	2	8
91	70.0%	75.9%	4	8
92	68.8%	73.5%	4	8
93	65.4%	75.0%	4	8
94	69.0%	76.3%	4	8
95	67.2%	75.1%	4	8
96	23.0%	59.0%	3	8
97	26.8%	46.0%	3	8
98	23.2%	76.0%	3	8
99	14.7%	23.4%	3	3
100	10.0%	20.0%	1	0
101	24.2%	42.4%	3	7
102	37.6%	58.9%	3	8
103	16.8%	33.7%	3	0
104	17.0%	28.1%	3	0
105	29.0%	45.8%	3	6
106	36.3%	47.4%	3	7
107	29.6%	60.7%	3	8
108	18.4%	36.6%	3	6
109	32.5%	68.6%	3	8
110	47.2%	57.7%	4	8
111	22.3%	31.1%	3	0
112	19.2%	22.5%	1	0
113	59.5%	66.2%	4	8
114	24.7%	28.4%	3	0
115	52.1%	59.1%	4	8
116	58.1%	65.4%	4	8
117	36.6%	42.0%	3	0
118	23.6%	27.3%	3	0
119	13.5%	23.9%	2	0
120	14.3%	21.4%	2	0

SD	HD Alt Eff 1 Part 3			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
121	9.6%	15.2%	0	0
122	28.4%	40.1%	3	8
123	24.3%	28.6%	3	0
124	25.6%	31.8%	2	0
125	23.7%	31.4%	3	0
126	54.5%	57.7%	4	8
127	18.5%	23.3%	3	0
128	50.4%	52.1%	2	4
129	54.9%	59.2%	3	8
130	59.9%	63.8%	4	8
131	17.6%	23.5%	3	0
132	52.3%	60.1%	4	8
133	36.8%	38.9%	3	0
134	33.6%	37.3%	1	0
135	23.8%	25.6%	1	0
136	28.7%	32.3%	3	0
137	52.1%	56.6%	4	8
138	19.3%	22.6%	2	0
139	20.3%	26.7%	2	0
140	57.6%	65.6%	4	8
141	57.5%	64.1%	4	8
142	59.5%	63.2%	3	8
143	60.8%	65.5%	3	8
144	29.3%	31.9%	3	0
145	35.7%	41.6%	3	0
146	27.6%	32.3%	4	0
147	30.1%	37.3%	4	0
148	34.0%	37.1%	4	0
149	32.1%	37.8%	2	0
150	53.6%	59.7%	4	8
151	42.4%	49.7%	4	0
152	26.1%	28.4%	4	0
153	67.9%	70.4%	4	8
154	54.8%	56.5%	4	7
155	35.9%	38.1%	3	0
156	30.3%	37.2%	4	0
157	24.7%	33.7%	3	0
158	31.2%	35.7%	2	0
159	24.5%	27.4%	2	0
160	22.6%	27.6%	2	0
161	27.1%	33.9%	4	0
162	43.7%	53.3%	4	8
163	45.5%	52.9%	3	8
164	23.5%	32.0%	3	0
165	50.3%	55.6%	4	8
166	5.7%	9.8%	3	0
167	22.3%	29.7%	3	0
168	46.3%	56.6%	4	8
169	29.0%	36.7%	3	0
170	24.2%	32.9%	3	0
171	39.6%	44.2%	4	0
172	23.3%	36.7%	4	0
173	36.3%	41.7%	4	0
174	17.4%	25.4%	3	0
175	24.2%	29.2%	4	0
176	22.7%	30.9%	4	0
177	53.9%	60.0%	4	7
178	14.8%	19.9%	3	0
179	27.0%	33.4%	3	0
180	18.2%	23.8%	3	0

Table 53: Effectiveness in HD Alt Eff 1, which includes the Alt 1 Gingles maps.

HD	HD Alt Eff 2 Part 1			
	BVAP	BHVAP	Primaries out of 4	Generals out of 8
1	4.2%	6.3%	1	0
2	3.2%	10.8%	1	0
3	3.4%	6.4%	1	0
4	5.4%	49.5%	2	0
5	4.6%	17.2%	1	0
6	1.5%	13.5%	1	0
7	0.6%	6.1%	0	0
8	1.4%	4.1%	0	0
9	1.6%	6.3%	0	0
10	3.7%	13.7%	1	0
11	1.8%	6.0%	0	0
12	9.7%	15.9%	1	0
13	19.2%	30.0%	1	0
14	6.8%	12.7%	2	0
15	14.2%	23.9%	2	0
16	11.7%	20.3%	3	0
17	23.0%	29.9%	2	0
18	8.0%	10.4%	2	0
19	24.1%	30.9%	3	0
20	9.3%	18.5%	1	0
21	5.1%	12.5%	1	0
22	15.1%	26.7%	3	0
23	6.5%	20.7%	1	0
24	7.0%	17.3%	1	0
25	5.9%	11.0%	0	0
26	4.0%	14.8%	0	0
27	3.7%	13.3%	1	0
28	3.9%	15.3%	0	0
29	13.6%	53.3%	2	0
30	8.1%	24.2%	0	0
31	7.6%	26.5%	1	0
32	8.0%	12.9%	2	0
33	11.2%	14.3%	3	0
34	15.7%	23.5%	3	0
35	28.4%	39.6%	3	8
36	17.0%	23.5%	3	0
37	28.2%	46.8%	3	8
38	54.2%	66.8%	4	8
39	55.3%	74.0%	4	8
40	33.0%	38.9%	3	8
41	39.4%	68.0%	4	8
42	33.7%	51.1%	3	8
43	26.5%	40.6%	3	8
44	12.0%	22.5%	2	0
45	5.3%	10.2%	0	0
46	8.1%	15.5%	0	0
47	10.7%	18.1%	2	0
48	11.8%	24.2%	0	1
49	8.4%	15.1%	0	0
50	12.4%	18.8%	2	8
51	23.7%	37.0%	0	8
52	16.0%	23.4%	0	8
53	14.5%	21.9%	0	1
54	15.5%	28.3%	0	7
55	55.4%	60.4%	3	8
56	45.5%	51.3%	3	8
57	18.1%	26.1%	0	8
58	63.0%	68.1%	3	8
59	70.1%	74.5%	3	8
60	63.9%	69.0%	3	8

Exhibit 25

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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA

Georgia State Conference of NAACP, et
al.,

Plaintiffs,

vs. C.A. NO:

1:21-cv-5338-ELB-SCJ-SDG

State of Georgia, et al.,

Defendants.

VIDEOTAPED TELECONFERENCE

DEPOSITION OF: John R. Alford, Ph.D.

DATE: March 2, 2023

TIME: 8:41 a.m. CST

LOCATION: Virtual -- Zoom

TAKEN BY: Counsel for the Plaintiffs

REPORTED BY: Roxanne Easterwood, RPR

VIDEOGRAPHER: Leo Mileman

1 three experts in three different cases, all
2 related to the same matters. So I -- at this
3 point, I would have a -- I'm not sure I could sort
4 out what relates to this case specifically, as
5 opposed to this set of cases. So how much of it
6 is related specifically to the response to
7 Dr. Schmeer's report, I don't know.

8 Q. Okay. And just to back up, so I can
9 make sure that I'm clear: So the materials you
10 received was Dr. Schmeer's report and the
11 materials that he had disclosed. Were there any
12 materials that you did not have access to that you
13 would have -- that you needed?

14 A. Not that -- not essential materials.
15 I guess I would have preferred that there was an
16 appendix with actual results or that the disclosed
17 data would include the actual results, as opposed
18 to the graphics. But it wasn't necessarily --
19 I'll say be nice, but not necessary. And given
20 the -- given the time, I didn't think it was worth
21 pressing for.

22 Q. Okay. And you only submitted one
23 report in this case, right?

24 A. That's correct.

25 Q. Okay. And did you draft your own

1 report?

2 A. Yes.

3 Q. Did you maintain drafts of your
4 report?

5 A. Maintain drafts?

6 Q. Yes, previous drafts?

7 A. No. I just work in a single report.

8 Q. Okay. And did you consult with any
9 other experts when drafting your report?

10 MR. JACOUTOT: Object to the form.

11 THE WITNESS: I think I probably would
12 have talked to Professor Stevenson, who I've
13 worked with on a variety of cases for 15 years or
14 so. We worked together in doing the EI analysis.

15 I don't think that there's anything
16 here that's related directly to anything he would
17 have done with regard to the Schneer report. But,
18 you know, we were discussing issues related to the
19 reports in the -- in the other related cases. So
20 there may have been some mention of the Schneer
21 report, but I don't -- there wasn't any analysis
22 related to the Schneer report.

23 BY MS. BERRY:

24 Q. So you said you spoke with Professor
25 Stevenson when you were preparing the report in

1 this case?

2 A. I've -- so I have spoken to him
3 throughout this process, including when I was
4 preparing this report, because I was also
5 preparing -- preparing other reports
6 simultaneously. So there may have been some
7 mention of the Schneer report, maybe just in the
8 sense of whether I needed or felt that I was going
9 to be doing any independent analysis. But I don't
10 recall specifically, and -- and I don't think --
11 but there wasn't any independent analysis for the
12 for this report, so...

13 Q. You said there was not?

14 A. No, there is not. It simply relies on
15 the results provided by Dr. Schneer.

16 Q. Okay. And did Professor Stevenson
17 provide you with any input for this report?

18 A. No, I don't believe so. No.

19 Q. And just so that I'm clear, who is
20 Professor Stevenson?

21 A. He is a professor at Rice, comparative
22 politics methodology specialist. Typically, if
23 there's going to be additional EI analysis beyond
24 what's already been provided by the plaintiffs, I
25 typically work with him on that. So he works

1 under my direction and does the programming to
2 provide that analysis.

3 He doesn't work on the report itself.
4 So he had no contribution to the report that I
5 filed here. I'm not even sure if he ever would
6 even have seen the Schmeer report. Given that
7 he's not doing analysis for it, I wouldn't think
8 he would have.

9 Q. Okay. Did you speak to anyone else
10 while you were preparing your report, other than
11 counsel?

12 A. No.

13 Q. Okay. Did you speak with Dr. Thomas
14 Brunell?

15 A. Who?

16 Q. Thomas Brunell.

17 A. I don't believe so, no.

18 Q. Okay. Gina Wright?

19 A. No.

20 Q. Okay. Did you speak with anyone from
21 the state of Georgia, including any legislators,
22 when you were preparing this report?

23 A. No.

24 Q. And so do you intend to do any
25 additional work or research in this case after

1 So we have a control group, if you
2 want to think of it that way, as an experimental
3 group. And, again, what we see is consistent
4 across all of those elections. We have a partisan
5 cue. So if -- if we want evidence of the partisan
6 cue, it's clear here. It's clear when the
7 elections are racially contested and when they are
8 not. But the other thing we can see is that in
9 the elections where there is no racial cue for
10 candidates, the results are the same as they are,
11 essentially, for when there is a racial cue,
12 suggesting that the partisan cue is -- performs
13 consistently whether the election is racially
14 contested or not.

15 And as Dr. Schneer indicates in his
16 report, the point of having the racially-contested
17 elections is that they can be helpful to indicate
18 whether, in fact, the race of the candidates is
19 having an effect on the behavior of voters. And
20 here that is clearly the case that that is -- the
21 polarization we're seeing is not related to the
22 race of the candidate.

23 Q. Okay. You had -- you said quite a few
24 things that I want to break down. So, first, is
25 it your opinion that race has no relationship with

1 partisanship?

2 A. No.

3 Q. Okay. So what is your understanding
4 of that relationship?

5 A. Race is involved in -- as are a number
6 of other factors, in either descriptively or some
7 other fashion, is related to -- to -- can be
8 related to partisanship.

9 I guess I'm -- I'm not -- I'm not
10 studying partisanship here. I don't have any
11 data or -- I'm sorry, Dr. Schneer doesn't provide
12 any analysis related to the partisanship of
13 voters. That's not -- that's not the issue I'm
14 dealing with. He provides data on the -- on the
15 ballot partisan label of candidates.

16 Q. So, but you're -- you said that the
17 voting patterns clearly show that voting is
18 polarized in Georgia, correct?

19 A. Correct.

20 Q. Okay. And you said minority voters
21 consistently vote for Democrats, correct?

22 A. Right.

23 Q. Okay. You said non-Hispanic white
24 voters consistently vote Republican?

25 A. Correct.

1 Q. Correct. And so with that data, you
2 don't find that there is -- voting is racially
3 polarized because black voters are not voting for,
4 consistently, black candidates, regardless of
5 party affiliation?

6 MR. JACOUTOT: Object to form.

7 THE WITNESS: So, again, you asked
8 earlier about partisanship, and as -- as
9 indicated, where -- to the extent there's
10 partisanship here, it's the partisanship of the
11 candidates. So the candidates -- and the
12 candidates provide a partisan signal because
13 they're labeled as Democrats or Republicans on the
14 ballot, and the race of the candidates itself
15 provide a signal voters can respond to.

16 And I'm just -- because it happens, at
17 least in my reading of the -- this discussion,
18 Dr. Schneer agrees with me that -- that one way of
19 looking at the effect of race on the behavior of
20 voters is to look at racially-contested elections
21 and contrast them. In this case he's contrasting
22 them with non-racially-contested elections, and
23 they show what they show.

24 I -- but I don't know what the source
25 of that is. But I'm just saying it's his argument

1 Q. Okay. Has any court in Georgia ever
2 endorsed your partisan polarization theory?

3 MR. JACOUTOT: Objection.

4 THE WITNESS: I have no idea, but I
5 would say it's -- I don't think it's -- when you
6 say it's my partisan polarization theory, I don't
7 think it's my theory. I don't think it's a
8 theory. I'm just -- this is -- this is what I've
9 said is what -- just in simple language, what
10 Dr. Schneer has demonstrated here and what
11 Dr. Palmer and Dr. Handley have demonstrated here.

12 It's not a theory. It's just, right,
13 what's been demonstrated, and beyond that --
14 right. So you can't say -- for example, you could
15 not conclude based on any of this analysis that
16 black voters typically vote for black candidates
17 and white voters typically vote for white
18 candidates. That's just not true. So it's not a
19 theory. It's just a statement of what the facts
20 are, and they're -- they're in evidence here.

21 (Exhibit 5, Pendergrass, et al. v.
22 Raffensperger, et al., marked for identification.)

23 BY MS. BERRY:

24 Q. Okay. If you go to Exhibit Share, I
25 have uploaded a new exhibit, which should be an

1 order from Judge Jones in the preliminary
2 injunction here in the Pendergrass case, where I
3 believe you testified. And let me know when you
4 see it. It may take a minute to load.

5 A. It's spinning. It stopped spinning.
6 We're there.

7 Q. Oh, okay.

8 A. Yeah, that's a good thing. I didn't
9 mean to suggest that it was...

10 Q. I thought we were in trouble. Okay.

11 A. No. I'm looking at what looks to be
12 Coakley Pendergrass, et cetera, et cetera, et
13 cetera.

14 Q. Okay. And you recall testifying as an
15 expert during this preliminary injunction hearing?

16 A. Yes.

17 Q. Okay. So I wanted to turn your
18 attention to Page 8 of the PDF. And if you're
19 there, it should say: "Plaintiffs have shown that
20 voting in Georgia is racially polarized."

21 And let me know when you see it.

22 A. Yes, Heading B.

23 Q. Okay. And the court states under B:
24 "Defendants questioned the findings of Dr. Maxwell
25 Palmer, who clearly demonstrated that black

1 Georgians are politically cohesive, that white
2 Georgians engage in bloc voting to defeat
3 black-preferred candidates, and that voting in
4 Georgia is racially polarized. By suggesting that
5 partisanship explains the polarization better than
6 race."

7 Do you see that?

8 A. Yes.

9 Q. Okay. And move -- going on, it says:
10 Defendants once again tried to move the goalpost.
11 The 11th Circuit has never held that Section 2
12 requires a determination that voters are motivated
13 by race when evaluating the existence of racially
14 polarized voting."

15 Do you see that?

16 A. Yes.

17 Q. "In fact, it has indicated the
18 opposite, reversing a district court's insistence
19 that a Section 2 plaintiff indicate that race was
20 an overriding or primary consideration in the
21 election of a candidate."

22 Do you see that?

23 A. Yes.

24 Q. Do you disagree with Judge Jones's
25 opinion?

1 A. Whether it's application of law or the
2 opinion of what's the law in the 11th Circuit, I
3 have no idea whether it's accurate.

4 Q. Well, in determining what is
5 considered for Section 2 when considering racially
6 polarized voting?

7 A. She's presenting a typical legal
8 argument, suggesting that in the 11th Circuit,
9 based on the cases she cited, this is not a
10 consideration for polarization.

11 I don't know if that's -- if she's
12 correct in that argument or incorrect. I don't
13 know anything about what she's citing. But
14 she's -- again, I think that reflects her -- the
15 judge's opinion about what the law is in the 11th
16 Circuit.

17 I'm not a lawyer. I'm not a federal
18 judge. But I say both because I'm not a federal
19 judge or a lawyer, I can't tell you whether she's
20 right in that opinion, but that's the opinion as
21 expressed in this discussion. It's a discussion
22 about what the -- about what the standard is in
23 the 11th Circuit. And apparently, she --
24 that's -- this is establishing a position based on
25 a legal argument. If it's correct or not, in --

1 in the 11th Circuit or beyond, I don't know.

2 Q. Okay. And the opinions that you drew
3 in this case are similar to the one -- in that
4 case, the Pendergrass case, are similar to the
5 ones that you draw in this case?

6 A. Yes.

7 Q. Okay. We can put that away.

8 So what's your understanding of what
9 Congress intended when Congress included racially
10 polarized voting in Senate Factor 2? What -- what
11 is -- what is your understanding of what it meant?

12 MR. JACOUTOT: Object to form.

13 THE WITNESS: I'm not an expert on
14 legislative intent. In fact, I strongly suspect
15 there is not such a thing as an expert on
16 legislative intent. I'm not even sure I agree
17 that legislative intent exists in the sense that
18 it's often used colloquially.

19 So I don't know what the intent of
20 Congress was. Again, I'm not sure there is such a
21 thing as an intent of Congress. It's a collegial
22 and collective body, maybe not as collegial as
23 collective. And the idea that it has -- it means
24 something when you put together a majority
25 coalition in favor of something, I guess I -- it's

1 an interesting area -- creative area of inquiry,
2 but it's not one that I deal with either as a
3 scholarly matter or otherwise.

4 BY MS. BERRY:

5 Q. Okay. If I'm not mistaken, earlier in
6 your deposition I think you mentioned LULAC versus
7 Clements?

8 A. Yes.

9 Q. Is that accurate?

10 Okay. And is it your understanding
11 that that case controls here?

12 MR. JACOUTOT: I'm going to object to
13 form. It just basically requires a legal
14 conclusion. And Dr. Alford can certainly testify
15 as to -- in his personal beliefs or knowledge.
16 But, you know, these are legal questions, I think,
17 that are being posed to him.

18 MS. BERRY: Well, I'll -- I'll try to
19 rephrase.

20 BY MS. BERRY:

21 Q. So when you were instructed to draft
22 your opinions in this case, were you instructed
23 that LULAC -- LULAC versus Clements controls in
24 this case?

25 A. No.

1 Q. Okay. So what is your understanding
2 of Gingles 3?

3 A. So I've established Gingles 1, that
4 there is a sufficient compact population to create
5 a natural political community. And then Gingles 2
6 is that that community votes and acts politically
7 with a level of -- a yet to be determined level of
8 cohesion, probably minimally 60 percent, but maybe
9 something much higher than that.

10 The other question is whether, with
11 those two factors in place, whether the -- given
12 the structure of elections, the -- the majority
13 can -- can and does effectively block the
14 preference of minority voters through cohesion
15 voting on the part of the majority voters.

16 Q. Okay. And you said block the
17 preference of a minority voter. So the preferred
18 candidate -- well, the candidate just has to be a
19 preferred candidate; it doesn't have -- the
20 candidate doesn't have to be a black candidate, if
21 we're talking about black voters?

22 MR. JACOUTOT: Objection.

23 THE WITNESS: Correct.

24 BY MS. BERRY:

25 Q. Great. Okay. And so if you recall in

1 Dr. Schneer's report, he talks about the 2018
2 gubernatorial election. Do you recall reading
3 that?

4 A. I do not specifically recall that.

5 Q. That's fine. I think we already
6 marked his -- let's see. Maybe we have not. We
7 have not.

8 MS. BERRY: Okay. Give me a second.
9 I'll mark it, and this should show up in a second.

10 (Exhibit 6, Benjamin Schneer Expert
11 Report, marked for identification.)

12 BY MS. BERRY:

13 Q. I just introduced what's marked as
14 Exhibit 6, which is the expert report for
15 Dr. Benjamin Schneer. It's 92 pages. So it may
16 take a while to load, but let me know when you see
17 it.

18 A. All right. It has appeared.

19 Q. I want to draw your attention to
20 Paragraph 26, which is Page 16. And you can take
21 a moment to read it, if you like.

22 (The witness reviews the document, as
23 requested.)

24 THE WITNESS: Yes, I read it.

25 BY MS. BERRY:

1 Q. Okay. And so you see where he says
2 that 99 percent of black voters supported Stacey
3 Abrams as a minority candidate?

4 A. Yes.

5 Q. Okay. And then if we -- if you
6 continue down to -- towards the bottom, and he's
7 referring to the black voter support for minority
8 candidates running against non-minority
9 candidates, and he -- he mentions Barack Obama in
10 2012, where the minority support was 98 percent.
11 Do you see that?

12 A. Correct. Yes.

13 Q. And then Connie Stokes in 2014,
14 minority support was 98 percent?

15 A. Correct.

16 Q. And Doreen Carter in 2014, minority
17 support was 98 percent?

18 A. Correct.

19 Q. And Otha Thornton in 2018, minority
20 support was 99 percent?

21 A. Correct.

22 Q. And Raph Warnock in 2021, minority
23 report -- support was 99 percent?

24 A. Correct.

25 MR. JACOUTOT: I'll just object. I

1 don't think that says minority support is 99
2 percent. It says black support is 99 percent.
3 All of the percentages on all of those are
4 reflective of black support, not minority.

5 MS. BERRY: Fair. Sorry. I won't
6 re-read all of that. But yes, black support.

7 BY MS. BERRY:

8 Q. So what percentage these are -- these
9 are -- we see 98 and 99 percent. So what would
10 meet the percentage for there to be racially
11 polarized voting when you see that majority --
12 overwhelming majority of black voters are
13 supporting particular candidates?

14 A. Yes. This is -- this shows clear --
15 clearly cohesive support on the part of black
16 voters. And again, my point is just that you can
17 take out the -- the same minority candidates is --
18 is superfluous here in terms of the point we make.
19 You can replace all of these names with white
20 Democratic candidates and you'll have the same
21 highly cohesive voting.

22 So, yes, voting is -- black voters
23 vote highly cohesive fashion for Democratic
24 candidates, including Democratic candidates that
25 happen to be black.

1 Q. Okay. So are you familiar with
2 Chairman John Kennedy?

3 A. No.

4 Q. Are you aware he testified in his --
5 well, did -- I think -- so earlier you said you
6 have not received any deposition testimony or
7 anything like that in this case; the only document
8 you received was Dr. Schneer's report?

9 A. That's correct.

10 MS. BERRY: Give me one moment. I'm
11 going to add another exhibit.

12 (Exhibit 7, 1/20/23 John Kennedy
13 Deposition Transcript re: Georgia State
14 Conference of NAACP, et al., v. State of Georgia,
15 et al., marked for identification.)

16 BY MS. BERRY:

17 Q. So John Kennedy was the chair of the
18 Reapportionment Committee in the Senate, and he
19 testified in this case. And I just marked a new
20 exhibit, which is Exhibit 7, which is the
21 deposition of John Kennedy.

22 A. Let me get back to -- all right, I'm
23 waiting for it to load.

24 Q. Are you aware that he testified that
25 racially polarized voting exists in Georgia?

1 A. I'm unaware of anything in his
2 testimony.

3 Q. Would it surprise you to know that he
4 stated that racially polarized voting exists in
5 Georgia?

6 A. No.

7 Q. Why?

8 A. As I've said -- I think, as we have
9 established, there are -- people can mean a lot of
10 different things by that. Again, if it means
11 simply that blacks and whites vote for different
12 parties, then it's -- I don't know if he means it
13 in -- or -- or provides evidence for it in a legal
14 sense, whatever, but if he's just -- if he's just
15 saying racially polarized voting as in blacks and
16 whites vote differently in elections, I think we
17 all agree that that's true. So it's both just a
18 term and a term of art. And -- and what we're
19 talking about is what we have evidence of here in
20 the Schneer report.

21 And so -- I mean, Schneer says that,
22 and I think I know what he means by that. In
23 fact, I don't think it's a conclusion. I think
24 it's just a -- it's a term that can refer to -- as
25 I think Brennan makes fairly clear, can refer to a

1 number of different things, so...

2 I guess I would want to know what
3 Mr. Kenney means by that. I mean, if that's clear
4 from his testimony, then I would be happy to read
5 it.

6 Q. Sure. Let's -- I'll draw your
7 attention. You can start with the beginning of
8 199. And it goes: Fifth, we laid out our
9 guidelines on -- on August, the 30th, when most of
10 the members came and met here that would govern
11 the drawing of the maps. Those guidelines
12 focussed on the constitutional requirements of
13 equal protection, compliance with the Voting
14 Rights Act, including a recognition of racially
15 polarized voting, and the importance of
16 jurisdictional boundaries prioritizing communities
17 of interest, compactness, and contiguity."

18 If you continue to Page 211, he's
19 asked: "Okay. Now, going back to that video that
20 was played, you stated that there is racially --
21 you recognize racially polarized voting; is that
22 right?"

23 "I think I was speaking -- not me, but
24 I think I was speaking that the process that we
25 undertook in the work of the committee with my

1 polarized voting if they are of different racial
2 groups. That's not the court's standard --

3 BY MS. BERRY:

4 Q. You said that's -- you said that's a
5 colloquial term?

6 A. It can be -- that could be
7 colloquially. I've seen it used by experts. It's
8 not the court's determination of what's racially
9 polarized voting, which is, obviously, a more
10 extensive process. But my point is, it's -- it's
11 a term that's thrown around in a variety of
12 contexts.

13 He seems to have simply adopted it on
14 the basis of what he heard from counsel. I don't
15 know what counsel meant by it, but it's clear that
16 he doesn't mean anything in particular by it. And
17 he backs away very quickly by suggesting that he
18 doesn't know -- I mean, how he could know in a
19 technical sense he's endorsing the court's
20 standard for the evidence of racially polarized
21 voting in Georgia when he says, "I'm not an
22 election expert. I'm not a redistricting expert.
23 I just did this on advice of counsel."

24 I don't think he's contributing much
25 in the way of factual assessment of racially

1 polarized voting in Georgia.

2 Q. Okay. You mentioned earlier that
3 Dr. Thomas Brunell sounded -- I think you said the
4 name was vague -- vaguely familiar or something.
5 Do you recall that?

6 A. Yes.

7 Q. Okay. Do you know that Dr. Thomas
8 Brunell is an expert in the field of racially
9 polarized voting?

10 A. I believe that's correct, but I --
11 again, I only just recognize his name. I would
12 have to see something else to be certain of that.

13 Q. Okay. Are you aware that Bryan Tyson
14 secured -- well, Bryan Tyson hired him to provide
15 a report to Chairman Kennedy --

16 A. I'm not.

17 Q. -- about racially polarized voting?

18 A. I am not.

19 Q. Okay. So I imagine you have not seen
20 the report either?

21 A. No.

22 Q. Okay. And so he -- he reached
23 conclusions in this -- that report. And would you
24 be surprised to know that he found racially
25 polarized voting in Georgia?

1 MR. JACOUTOT: Object to the form.

2 THE WITNESS: Again, I would want to
3 see the report and see what the basis was for
4 that. But if he's basically concluded, as
5 Dr. Schneer, again, on the basis of his report,
6 and as we have discussed, you could easily
7 conclude if you just view it as two racial groups
8 voting differently, then it wouldn't surprise me
9 at all.

10 I mean, Dr. Schneer reaches the same
11 conclusion. I reach the same conclusion with
12 regard to if -- if the standard is simply that two
13 racial groups are voting in opposite directions,
14 then it's abundantly clear from everything that's
15 in evidence in this case. So it wouldn't surprise
16 me at all.

17 Again, I assume Dr. Brunell is not
18 reaching a legal conclusion. I assume he's
19 talking about a factual conclusion. And I would
20 want to see in his report, what his definition --
21 his empirical definition is of that.

22 MS. BERRY: Can we take -- can we go
23 off the record, take maybe a five-minute break,
24 please.

25 VIDEOGRAPHER: Off the record at

1 12:03 p.m.

2 (A recess was taken.)

3 VIDEOGRAPHER: Back on the video record
4 at 12:09.

5 BY MS. BERRY:

6 Q. Dr. Alford, earlier when you mentioned
7 LULAC, why did you mention that case?

8 A. It was the first case that I was
9 familiar with where the court discussed the issue
10 of partisanship versus race -- race or ethnicity
11 in voting patterns.

12 Q. Okay. And did you apply the reasoning
13 from LULAC in reaching your opinions in this case?

14 A. No.

15 Q. Do you apply that standard in any of
16 your other cases that are not in the 5th Circuit?

17 MR. JACOUTOT: Object to form.

18 THE WITNESS: I don't apply the
19 reasoning in any cases.

20 MS. BERRY: I think that's all the
21 questions that I have.

22 MR. JACOUTOT: I just have a little bit
23 or one, I think, clarifying follow-up here.

24 EXAMINATION

25 BY MR. JACOUTOT:

1 Q. Dr. Alford, I believe counsel for the
2 plaintiffs asked you if the opinions in your
3 report are limited to Gingles 2 and -- Gingles 2,
4 second and third factors, and I believe you
5 answered in the affirmative; is that correct?

6 A. I believe that's correct, and I guess,
7 so that would mean Gingles 2 and 3, and then more
8 broadly the totality of circumstance that reflects
9 racially polarized voting.

10 Q. Okay. So your report does go into the
11 racially polarized and that voting analysis that's
12 present in the totality of circumstance factors as
13 well?

14 A. Yes. What I meant to inartfully
15 exclude was that I wasn't looking at Gingles 1,
16 and I wasn't looking at other enhancing factors.

17 MR. JACOUTOT: Okay. I just wanted to
18 make sure that was clear. I think it came out in
19 the record, but I wanted to be sure. So thank
20 you. That's all the questions I have.

21 VIDEOGRAPHER: Anyone else have
22 questions?

23 MS. BERRY: We can close it.

24 VIDEOGRAPHER: Thank you. This is the
25 end of the deposition. Going off the video record

1 at 12:11 p.m.

2 MR. JACOUTOT: We'll read and sign,
3 yes.

4 MS. BERRY: We'll take a rough draft.

5 (The deposition was concluded at 12:11
6 CST p.m.)

7 (The witness, after having been advised
8 of the right to read and sign this transcript,
9 does not waive that right.)

10

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CERTIFICATE OF REPORTER

I, Roxanne M. Easterwood, Registered Professional Reporter and Notary Public for the State of South Carolina at Large, do hereby certify that the foregoing transcript is a true, accurate, and complete record.

I further certify that I am neither related to nor counsel for any party to the cause pending or interested in the events thereof.

Witness my hand, I have hereunto affixed my official seal this 8th day of March 2023 at Charleston, Charleston County, South Carolina.



Roxanne M. Easterwood, RPR
My Commission expires
February 1, 2025

Exhibit 28

Signature and Errata Sheet
March 14, 2023 Deposition of Dr. Benjamin Schneer
Georgia State Conference of the NAACP, et al v. State of Georgia, et al

I, Dr. Benjamin Schneer, have reviewed the attached transcript of my March 14, 2023 deposition testimony and certify, pursuant 28 U.S.C. § 1746 that the attached transcript is my true and correct testimony during that deposition, subject to the corrections shown below.

Page/Line	Now Reads	Correction	Reason
8:21	call	pull	Clarification
18:11	Yeah. All	Yeah, all	Clarification
24:1	enact and studied	enact and we studied	Clarification
30:12	for	of	Clarification
30:25	just is the majority	just: is the majority	Clarification
31:2	candidates of choice.	candidates of choice?	Typographical error
33:19	assumption is that	assumption, is that	Typographical error
35:15	of elections is true	of elections, it is true	Clarification
36:9	elections given	elections. Given	Typographical error
36:11	probative. And	probative, and	Clarification
43:3	election is	election: is	Typographical error
43:4	or not.	or not?	Typographical error
47:14	sought out to do in terms	set out to do, in terms	Clarification
52:3	matters.	matters?	Typographical error
58:13	precinct which	precinct, which	Typographical error
61:7	interested in this	interested in in this	Clarification
67:11	higher	prior	Correction
72:5	incertainty	uncertainty	Typographical error
76:5	election,	election, the	Clarification

78:2	voting	voting.	Clarification
78:3	because	Because	Clarification
78:6	using, racially -- you know,	using --	Clarification
89:17	less	more	Correction

Executed on April 13, 2023, at Chicago, IL.

LS/ Ben Schuer

Exhibit 29

Georgia State Conference of The NAACP, et al. v. S

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA GEORGIA

GEORGIA STATE CONFERENCE)
OF THE NAACP, et al.,)
Plaintiffs,)
) Case No:
vs.)
) 1:21-CV-5338-ELB-SCJ-SDG
)
STATE OF GEORGIA, et al.,)
Defendants.)

COMMON CAUSE, et al.,)
Plaintiffs,)
) Case No:
vs.)
) 1:22-CV-00090-ELB-SCJ-SDG
BRAD RAFFENSPERGER)
Defendant.)

DEPOSITION OF
JOSEPH BAGLEY, PH.D.

February 28, 2023
10:04 a.m.

Taylor English Duma, LLP
1600 Parkwood Circle, SE
Suite 200
Atlanta, Georgia

Reported by: Marsi Koehl, CCR-B-2424

1 A. Yes, including Chairwoman Rich.

2 (Reporter asks for clarification.)

3 BY MR. TYSON:

4 Q. And you're aware the speaker pro tem of the
5 Georgia House is a Republican woman?

6 A. Yes. Jones.

7 Q. And you're aware that the chair of the
8 Public Service Commission is a statewide elected
9 Republican woman?

10 A. Right.

11 Q. You then reference Republicans in the
12 General Assembly routinely invoked the Democrats'
13 abuse of power in the 2001 redistricting cycle as an
14 excuse for their own potential abuse of power in the
15 current cycle.

16 Are you opining that the 2021 maps were an
17 abuse of power?

18 A. What I mean there is that when they are
19 confronted by members of the public at the town halls
20 at the public hearings, these people are expressing
21 their opinion that these same sort of things are
22 occurring. And the response from leadership very
23 often to those comments was, well, the Democrats did
24 it in 2001.

25 Q. And so is it your opinion that the 2021

1 redistricting maps in Georgia were an abuse of power
2 by Republican legislatures?

3 A. I couldn't say that outright. No.

4 Q. And you'd agree that in Georgia, race and
5 politics tends to be coextensive; right?

6 MR. DAVIS: Objection. You may answer.

7 THE WITNESS: I'm not sure I would say
8 "coextensive." Obviously, as a historian, I
9 appreciate that they are deeply intertwined
10 historically. So, yeah, I...

11 BY MR. TYSON:

12 Q. Do you believe it's possible to separate
13 racial goals from political goals by elected
14 officials in Georgia?

15 A. Could you restate?

16 Q. Yeah. Do you believe that it's possible to
17 determine if a legislator is motivated by
18 partisanship or by racial goals?

19 A. It's difficult to get into the heart or the
20 mind of anyone, particularly a specific legislator.
21 And, again, as a historian, you appreciate that,
22 historically speaking, race and politics in a state
23 like Georgia have a very long history.

24 In an inquiry like this, however, you
25 consider political motivations. You consider

1 potential racial motivations. And I think it is
2 possible at the end of the day to separate those out.

3 Q. And do you have a particular method by which
4 you're separating out political motivations and
5 racial motivations in this report?

6 A. Sure. And I think it goes back to the
7 Arlington Heights framework. And we look at what the
8 Court is asking us to examine under that framework.

9 And for me, of course, it begins with the
10 history. And so if you are considering a potential
11 strictly political motivation, you ask yourself: Is
12 there a history in Georgia of, say, political
13 gerrymandering completely irrespective of race? And
14 the answer is, of course, no.

15 At the same time: Is there this very robust
16 history of manipulation of the electoral process to
17 the detriment of black voters? And that involves
18 both political parties in the state, historically
19 speaking.

20 And so the weight of history from the
21 beginning is largely on this -- and that's only one
22 component of it. Right?

23 So then we look at the process and do we see
24 people of color and their allies routinely throughout
25 the process saying, We believe there are racial

1 motivations here that are acting to our detriment.

2 Does that continue after the maps have been

3 published? Yes.

4 And then finally, if lawmakers, in this
5 case, and the leadership were motivated strictly by
6 politics, then the process afforded them the ability
7 to say that. In my review of the process, I don't
8 recall a lot of times anyone saying, Well, you know,
9 this is -- this is a political gerrymander, which
10 would be perfectly acceptable as many of the people
11 involved in the process, including members of the
12 public, understand is -- under the current juris
13 prudence is -- would pass muster.

14 So those are among the things that I
15 consider if I'm trying to weigh if this is just
16 straight politics or not, if that answers your
17 question.

18 Q. That helps. So you mention one of the
19 factors being people of color and allies saying that
20 these particular actions are to the detriment of
21 their political views.

22 In a state where people of color are largely
23 of one political party that is not Republican, how do
24 you then determine that a statement of detriment to a
25 particular racial group is not motivated by detriment

1 to the political interest of most of the members of
2 that racial group?

3 A. Sure. Well, first, they're not necessarily
4 just saying this is detrimental to, you know, my
5 politics and, you know, what I consider good
6 lawmaking or legislation. I think what you hear is,
7 We believe that you are manipulating black, brown and
8 Asian American voters in the process.

9 So in their mind, it's not, sort of, what
10 you would call a lack of responsiveness on the part
11 of lawmakers. It's the process itself that they're
12 targeting as well.

13 Q. So in the process itself there, it refers,
14 I'm assuming, to the maps themselves?

15 A. Right.

16 Q. So is it fair to say that your opinion in
17 this section is in that last -- almost last part of
18 the conclusion: Black voters have been the pawns
19 manipulated since the enactment of the VRA gave them
20 the true right to vote. The party in power and the
21 degree of racial polarization are the only things
22 that have changed.

23 Is it fair to say that's, kind of, your
24 opinion in Section 4 of your report?

25 A. Yes.

1 Q. And when you say the degree of racial
2 polarization has changed, you'd agree that racial
3 polarization has increased since the '90s in Georgia;
4 right?

5 A. That's probably fair to say.

6 Q. You'd agree that partisan polarization has
7 also increased in Georgia since the 1990s?

8 A. Right.

9 Q. So let's move next to the sequence of events
10 for the 2021 redistricting cycle.

11 And in the first bullet there, you say that:
12 The public was critical -- widely critical, I'm
13 sorry, of holding the meetings before the release of
14 the census data and the publication of the maps.

15 Do you know if any town hall meetings in
16 Georgia were held in the 2001 or 2011 redistricting
17 cycles after maps were published?

18 A. I don't believe so.

19 Q. And so it wasn't unusual for Georgia to hold
20 town hall meetings prior to the publication of maps
21 based on prior redistricting cycles; right?

22 A. Based on prior redistricting cycles, yeah,
23 that's the way it was done before.

24 Q. And you reference calls for a more
25 transparent process.

1 What do you take a more transparent process
2 to mean from those public comments?

3 A. That was the number one concern. That was
4 voiced by people over and over at the town halls and
5 at the, you know, publicly opened committee hearings.

6 And from what I understand people's concerns
7 to be was that not only is the process of actual map
8 drawing occurring behind the scenes, as it were, but
9 that in their view, rushing through the process once
10 the actual maps in terms of the versions that were
11 actually enacted were put forward was a deliberate
12 attempt to truncate feedback on those.

13 And so those were among the things that they
14 would be concerned about when they are saying that we
15 want a more transparent process.

16 Q. And the word "truncate" would, to me,
17 necessarily imply a shorter timeline?

18 A. Right.

19 Q. You next -- the next bullet at the top of
20 42, you reference that the Republican members of the
21 committee wanted more of a dialogue than a one-way
22 street of taking community comments at hearings;
23 right?

24 A. Yes.

25 Q. Do you know if the hearings that were held

1 in 2001 and 2011 were also a one-way street of taking
2 community comment without dialogue?

3 A. They were.

4 Q. So the 2021 cycle utilized the same process
5 for the town halls themselves, in terms of taking
6 testimony, as was used in 2001 and 2011; right?

7 A. Right. And so people continued to express
8 their frustration with that as before, yeah.

9 Q. The next bullet references that the members
10 of the public asking for hearings to be held in the
11 most populous areas of the state where they should
12 have been. Do you see that?

13 A. I do.

14 Q. And why should they have been held in the
15 most populous areas of the state?

16 A. According to people who raised those
17 concerns, if you were really committed to, as I
18 believe the committee set forth in their press
19 releases and guidelines, hearing from as many people
20 as possible, then it would stand to reason that you
21 would want to hold those hearings where they were the
22 most accessible to the most amount of people.

23 Q. Did you review where prior redistricting
24 cycle public hearings were held across the state?

25 A. Yes. Although, I couldn't recount to you

1 right now each and every location of the past two
2 cycles.

3 Q. Were the locations of the hearings in 2021
4 similar to the locations where hearings were held in
5 2001 and 2011?

6 A. Again, I'm having a hard time recalling
7 exactly where all they were held in the last cycle,
8 but it's possible that it's roughly analogous.

9 I think among the concerns that people of
10 this particular cycle would be -- for example,
11 obviously Metropolitan Atlanta is where the vast
12 majority of population is in the state of Georgia.
13 Yes, the committee held -- excuse me -- two hearings
14 at the capital in downtown. And I believe the only
15 other one in Metro was in Forsyth.

16 And so I think people expressed their
17 frustration. I don't have to tell you how hard it is
18 to get down the connector and get downtown from far
19 flung parts of the Metro, conversely, to get up 400
20 to Forsyth.

21 So I think they would have liked to have
22 seen hearings in Cobb, here where we are in DeKalb
23 and Gwinnett, possibly even in Rockdale, Douglas,
24 Henry and so on.

25 And then others were concerned, for example,

1 you have a large city like Savannah, Chatham, where
2 there was no hearings held. So these were among the
3 concerns that people had in that regard.

4 Q. Do you believe the committee should have
5 held fewer hearings in rural Georgia and more
6 hearings in Metropolitan Atlanta?

7 A. That was a concern expressed by people.
8 Although, I don't know that they necessarily were
9 critical of the hearings that were held in more rural
10 areas just that they would have liked to have seen
11 additional hearings within the Metro...

12 Q. And --

13 A. I'm sorry. For example, there's a guy who
14 comes to mind that drove down to -- I don't know if
15 it was the hearing held in the Macon area or another
16 one that was in south Georgia somewhere and said, I
17 just heard about this. I didn't hear about the two
18 hearings at the capital. And he had come down from
19 Stone Mountain, for example.

20 So, you know, for a guy like that, a hearing
21 in DeKalb or even in southeast Gwinnett would have
22 been preferable.

23 Q. And you referenced in response to my
24 question what people were asking for.

25 In this section of your report, is it fair

1 to say you're reporting what people asked for instead
2 of offering your own opinions about the process?

3 A. I am reporting what people have said in
4 large part in this portion. Although, it's part of
5 performing my own opinion in the broader report.

6 And so when I see a chorus of views or a
7 view to me that continues throughout this process
8 even after maps are published and that dovetails with
9 the other pieces of the report, then that rises to me
10 to a level of significance.

11 Q. So would it be fair to say that Section 5 of
12 your report, you're not offering opinions, but you're
13 explaining the parts of the process that helped form
14 your opinions in the case?

15 A. That's fair.

16 Q. Next paragraph on 42, you reference the
17 public's concerns regarding the nature of the town
18 hall hearings. And then as a hyphen, they're being
19 held before data and maps were published and the
20 input only format constitute procedural departures
21 from, if not past practice, then certainly from the
22 mass of the public -- what the mass of the public
23 viewed as best practices and good governance; right?

24 A. Yes.

25 Q. And we discussed, since the town hall format

1 was identical to the 2001 and 2011 hearings and the
2 timing before maps were introduced was the same as
3 the 2001 and 2011 hearings, you'd agree that the 2021
4 hearings were consistent with past practice in
5 Georgia; right?

6 A. Yes. And that wasn't necessarily the public
7 coming forth and saying, Why are you doing it
8 differently? It's saying, We still don't understand
9 why it's being done this way.

10 Q. You also say that the committee ignored the
11 vast majority of the input at that end of that
12 section; is that right?

13 A. Yes.

14 Q. And so what methodology did you use to
15 determine that the committee ignored the vast
16 majority of the input from the public?

17 A. None of that in terms of what we see moving
18 forward in this process -- well, it does not appear
19 that their commentary was taken to heart in terms of
20 any actual changes to the process.

21 For example, multiple people said, This
22 turnaround after the maps have been published is far,
23 far too short. Give us two weeks. Give us a week.
24 Give us whatever amount of time to analyze these
25 plans, to offer feedback on the plans themselves, on

1 the actual maps as opposed to just giving you input
2 on communities of interest, for example. And that
3 kind of feedback was not acted upon.

4 Q. So when you referring to ignoring a vast
5 majority of the input here on page 42, that's the
6 input about how the process should be conducted, not
7 input about the maps; right?

8 A. Well, there actually was very little input
9 in terms of -- well, I won't say "very little."
10 There was comparatively little input in terms of line
11 drawing. Although, there was that as well. And I
12 think some of that was ignored, too, in terms of
13 specific communities saying, Don't put us here, put
14 us there, so...

15 Q. So that goes back to my question. In term
16 of -- what methodology did you use to determine that
17 input about specific line drawings is not reflected
18 on the enacted plans?

19 A. Well, again, I would say that most of the
20 feedback here is not about specific line drawing.
21 Most of it is about the process.

22 And so even though these hearings are, you
23 know, purportedly held to glean this mass of
24 information about communities of interest and where
25 lines ought to be drawn, that's -- there's not a lot

1 of that feedback given.

2 Q. So, again -- so when you're saying
3 that there is ignored the vast majority of the input
4 that was the committee's action, you're saying that's
5 primarily input about the process and some input
6 about the lines themselves but that there was very
7 little input on the lines themselves?

8 A. Right.

9 Q. And what methodology did you use to
10 determine that the little input on the lines
11 themselves were ignored in the enacted plans?

12 A. I didn't analyze systemically the maps
13 themselves as a political scientist would. I
14 performed more of a -- a delicate analysis in that
15 regard. What I can tell you is that people continued
16 to come forward with the exact same concerns once the
17 maps were published.

18 MR. TYSON: We're at the hour and-a-half
19 mark. This might be a good time to -- let's
20 take a break --

21 THE WITNESS: Okay. Sure.

22 THE VIDEOGRAPHER: Off the video record
23 at 11:32 a.m.

24 (Recess from 11:32 a.m. to 11:44 a.m.)

25 THE VIDEOGRAPHER: Back on the video

1 record at 11:44 a.m.

2 BY MR. TYSON:

3 Q. Dr. Bagley, we're going to keep working
4 through your report here. Page 42 talks about the
5 committees and who all was involved in the 2021
6 redistricting process.

7 And you'd agree that both the House and
8 Senate committees included Democrats and individuals
9 of color; right?

10 A. Yes.

11 Q. You're aware that the census data in 2021
12 for redistricting was delayed from its normal release
13 from other decennial censuses; right?

14 A. It was.

15 Q. And you say in the middle of page 43:
16 Leadership insisted that the delay in obtaining
17 census data was going to truncate the process.

18 Do you see that?

19 A. I do.

20 Q. And so you'd agree that the legislative
21 leadership was clear about the fact that the census
22 timeline was going to affect the redistricting
23 process in 2021; right?

24 A. Yes. I think everyone understood that was
25 going to be the case to a degree.

1 Q. When you reviewed the public input that was
2 provided in the various town hall meetings, did you
3 observe how much of the public input was provided by
4 groups that are now suing the state over its
5 redistricting maps?

6 A. There were some individuals representing
7 those groups. Yes.

8 Q. Have you viewed the video that was created
9 by the legislative and congressional Reapportionment
10 Office that was shown at the vid- -- beginning of
11 each town hall meeting?

12 A. I have.

13 Q. And did you find that video to be accurate?

14 A. I don't recall everything that was in there,
15 but I don't -- I don't think there was anything in
16 there I would characterize as inaccurate. No.

17 Q. So let's work our way through the various
18 discussions of the different meetings.

19 So for the Atlanta meeting on June the 15th,
20 that was the first town hall meeting; right?

21 A. Yes.

22 Q. And the first individual we talk about on
23 page 44 is Mr. Lawler from the Fair Districts
24 Project?

25 A. Right.

1 Q. And you say that he shared his view -- at
2 the end of that paragraph -- that the assembly had
3 backed off of this effort in 2017 because of a
4 federal lawsuit.

5 That's not correct; is it?

6 A. That was the suite that we discussed earlier
7 that was dismissed.

8 Q. And so Mr. Lawler's view that the General
9 Assembly changed its effort in 2017 because of that
10 lawsuit aren't accurate; right?

11 A. Not exactly.

12 Q. Okay. How are they accurate?

13 A. In that he's pointing out that there was a
14 challenge made to the districting in Henry in 2015.

15 Q. Is that the only accurate piece about his
16 view of the motivation of the General Assembly?

17 A. That's the penultimate sentence. Yes.

18 Q. Now you, obviously, through here have
19 selected several different speakers that spoke at
20 this hearing.

21 You didn't summarize every single individual
22 who testified at the hearing; right?

23 A. Not every single one. Although, I think I
24 came relatively close.

25 Q. Did you use a particular methodology to

1 determine whose comments you'd report and whose
2 comments you wouldn't?

3 A. I tried to focus on those individuals whose
4 commentary was reflective of the massive commentary.
5 Although, I certainly didn't leave out individuals
6 with different views and tried to be as exhaustive as
7 possible.

8 Q. Do you include comments from individuals who
9 supported the redistricting process?

10 A. There really weren't hardly any of those
11 individuals, but I did not exclude anyone on that
12 basis.

13 Q. And in this section about the Atlanta
14 hearing, you're not offering any opinions. You're
15 just summarizing what happened at the hearing.

16 Is that fair?

17 A. This would come back to what we talked about
18 earlier in that I'm summarizing this information, but
19 it, as a whole, informs my opinion.

20 Q. So that would be true of all the summaries
21 of the public hearings up through the end of this
22 section of your report on page 56 --

23 A. Yes.

24 Q. -- correct?

25 You're aware that Chairman Rich urged all

1 members to meet with her before the special session
2 about their redistricting maps; right?

3 A. She did say that. Yes.

4 Q. Do you know if any democratic members of the
5 General Assembly met with her?

6 A. I believe she referenced at one point that
7 some had. Yes.

8 Q. Turning to Section E on page 51, you
9 reference comments from Ms. Fountain with the ACLU
10 and Ms. Franklin with Common Cause Georgia; right?

11 A. Yes.

12 Q. And you're aware that Common Cause is suing
13 the State?

14 A. I am.

15 Q. And you're aware that the ACLU is
16 representing groups that are suing the State over the
17 redistricting plans?

18 A. Yes.

19 Q. Did you conduct any analysis of whether
20 those groups provided comments in order to set up
21 these lawsuits?

22 A. All I was able to review -- and given what I
23 was asked to do -- are these -- is this testimony, so
24 I didn't, for example, go interview Ms. Fountain or
25 Ms. Franklin.

1 And I would add that these are not the only
2 individuals. Yes, there are individuals from groups
3 who are engaged in litigation currently, but there
4 are plenty of other people who spoke up with the same
5 concerns.

6 Q. Turning over to page 54, you reference
7 comments from -- at the end of -- right before the
8 Augusta section, at the end of the Macon section:
9 Cathy Cox, the dean of Mercer Law School.

10 A. Yes.

11 Q. You'd agree. Ms. Cox wasn't a plaintiff in
12 the Larios case; she was the defendant in that
13 case --

14 A. Ah, yes. That's an error.

15 Q. And she was the one defending the 2001 plans
16 in that litigation?

17 A. Correct.

18 Q. Going down to the Augusta hearing, you
19 discuss at the bottom of page 54 but at the top of 55
20 an individual named Carlton Howard.

21 And Mr. Howard urged the committee not to
22 include black people in Augusta with surrounding
23 rural white counties; right?

24 A. Let me skim that paragraph.

25 MR. TYSON: Sure.

1 (Witness reviews document.)

2 THE WITNESS: Okay.

3 BY MR. TYSON:

4 Q. So do you agree Mr. Howard was urging the
5 committee not to include the voices of black people
6 in Augusta with surrounding rural white counties in
7 drawing districts?

8 A. Yes.

9 Q. And do you know if the legislature followed
10 that guidance in the drawing of the redistricting
11 plans?

12 A. In terms of congressional House and Senate,
13 I can't recall specifically as to all three in
14 that -- that -- in the drawing of those districts.
15 It is possible that some of those are self-contained.
16 Yes.

17 Q. And Ms. Brown with the League of Women
18 Voters is the next individual you reference?

19 A. Yes.

20 Q. And the League of Women Voters is also a
21 plaintiff in the lawsuit against the State about
22 redistricting?

23 A. Yes.

24 Q. And skip over a paragraph to Mr. Lofton with
25 Alpha Phi Alpha Fraternity, Incorporated. And Alpha

1 Phi Alpha Fraternity is also a plaintiff in the
2 redistricting lawsuits against the State; right?

3 A. Correct.

4 Q. So let's move to Section No. 6: Sequence of
5 events, the legislative history.

6 And you indicate that you have reviewed the
7 public legislative history. Can you tell me what you
8 looked at to review the public legislative history?

9 A. The General Assembly has videoed these
10 committee hearings published online.

11 Q. And did you review the timeline of
12 introduction of bills to the conclusion of the bills?

13 A. The timeline? Could you be more specific?

14 Q. So did you review publicly available
15 information about when bills were introduced, when
16 votes were taken and when they were sent to the
17 governor?

18 A. I believe so.

19 Q. And so in this section you say you were able
20 to review pleas and concerns that reflect what the
21 public and certain members of the Assembly had
22 already expressed in the committee meetings and town
23 halls.

24 In this section of your report, are you also
25 reporting your review of what happened or are you

1 offering opinions about the process?

2 A. Similarly to before, this is a review of the
3 process that itself informs my broader opinion.

4 Q. In this section, specifically, you're just
5 reporting your view of the process, not offering any
6 opinions; right?

7 A. Again, it informs my opinion, but yes.

8 Q. Moving to the paragraph after the bulleted
9 list on page 57, you say: Ignoring the calls for
10 transparency and time constitutes a substantive
11 departure insofar as the committee claims to be
12 deeply concerned with obtaining public input. And
13 these are the top -- top two concerns and they
14 favored a different decision than the one ultimately
15 made to ignore that input.

16 Do you see that?

17 A. I do.

18 Q. And when you're saying that the committee
19 ignored the calls and that was a substantive
20 departure, you're not saying it was a departure from
21 the process used in prior redistricting in Georgia;
22 right?

23 A. No. I'm saying that the committee in its
24 own guidelines insist that it's deeply concerned with
25 obtaining public input and then turns around and, in

1 my review of the process, seems to not act upon the
2 major issues that were conveyed by way of that input.

3 Q. The next sentence says using the 2001
4 process as an excuse for elements of the current
5 process is both a procedural and substantive
6 departure.

7 Did I read that right?

8 A. Yes.

9 Q. So what do you mean by using the 2001
10 process as an excuse?

11 A. There were times where -- well, there were
12 many, many times people repeatedly saying, Why can't
13 with we have more time, particularly post-publication
14 of maps to analyze these plans, review these plans,
15 provide feedback on these plans.

16 And Chairman Kennedy, in particular, but
17 others would say, Well, this is analogous to the way
18 the Democrats did it in 2001, or at one point says,
19 Well, I look back and wouldn't you know it, there was
20 a vote held within three days, or whatever it may
21 have been.

22 And yet it -- there seems to be nothing that
23 would commit the committee to, you know, fashion its
24 process in that way based upon that.

25 Q. And so when you say in this sentence that

1 using the 2001 process is both a procedural and
2 substantive departure, what do you mean by a
3 procedural and substantive departure?

4 A. So, substantively, there's, again, nothing
5 in the guidelines that would con- -- again, constrain
6 the committee or the assembly to strictly fashion its
7 behavior based upon previous cycles, which is a
8 procedural issue, as well, of course.

9 Q. But you'd agree that the 2001, 2011 and 2021
10 processes were all procedurally similar; right?

11 A. In major elements of the process, yes.

12 Q. And were they substantively similar across
13 those three cycles, as well?

14 A. Yes. So when I say substantively and
15 procedurally, it's not necessarily in comparison to
16 previous cycles.

17 Q. So a departure isn't a departure from
18 previous cycles; right?

19 A. Not necessarily, right.

20 Q. What is it a departure from?

21 A. It's a departure from what the committee
22 itself purports to be holding itself to, which is to
23 receive and act upon public input and not necessarily
24 to be bound by the strictures of previous cycles.

25 Q. So let's work through process here.

1 So you reference the call of the special
2 session on September 23rd, 2021. Do you know if the
3 governor's call in 2021 was substantively or
4 procedurally different from the call for the 2011
5 redistricting session?

6 A. I don't believe so.

7 Q. Did you review the 2011 or 2021 calls?

8 A. I'm not sure if I read that particular -- or
9 either of those particular calls. Possibly at some
10 point.

11 MR. TYSON: I'll show you what I'll mark
12 as Exhibit 4.

13 (Defendant's Exhibit 4 was marked for
14 identification.)

15 BY MR. TYSON:

16 Q. I represent that this is a call for the
17 special session in 2021.

18 Did you review this document at any point in
19 the preparation of your report?

20 A. Not this document specifically, no. I'm
21 aware of the governor's call and press coverage,
22 thereof, but not specifically the proclamation
23 itself.

24 MR. TYSON: Let me hand you what I'll
25 mark as Exhibit 5.

1 (Defendant's Exhibit 5 was marked for
2 identification.)

3 BY MR. TYSON:

4 Q. This is the call for the 2011 special
5 session.

6 Did you review the call for the 2011 special
7 session in analyzing or preparing your report at all?

8 A. Not this specific proclamation, no.

9 Q. You're aware that the committees both
10 held committee education days on August the 30th
11 prior to the special session; right?

12 A. Yes.

13 Q. And have you watched that video?

14 A. Yes. I did.

15 Q. And you're aware that a variety of different
16 groups spoke to the committee and presented their
17 view of redistricting?

18 A. That's right.

19 Q. Are you aware that the House committee
20 adopted its redistricting guidelines following that
21 August 30th meeting?

22 A. I believe that's correct. It would be in
23 the report somewhere.

24 Q. And the Senate committee had a meeting on
25 August 30th about the guidelines, but are you aware

1 they were unable to adopt the guidelines because they
2 were out of session and, thus, prohibited from doing
3 so by Senate rules?

4 A. Yes. I believe Senator Kennedy at one point
5 refers to they're being unofficially adopted at one
6 time and then subsequently officially adopted.

7 Q. And so the committee guidelines were adopted
8 well before there was any release of any maps and in
9 close proximity to the census data release; right?

10 A. Right.

11 Q. Are you aware that the Georgia Legislative
12 Black Caucus held its on public hearings before the
13 special session?

14 A. I am.

15 Q. And are you aware that the Georgia
16 Legislative Black Caucus refused to share what it
17 learned with the House and Senate reapportionment
18 committees?

19 A. I remember this coming up during the various
20 meetings and hearings, that they had decided to keep
21 that internal with their -- their -- with experts of
22 their own that they had retained.

23 Q. Have you been able to review any of the
24 Georgia Legislative Black Caucus' public hearings?

25 A. I have not been able to see that. No.

1 Q. So in Section C you, cover the November 4th,
2 2021 hearing. And like the other sections we've
3 talked about, you're not offering opinions in this
4 report -- this section. You're summarizing the
5 meeting, but it hasn't had some bearing on your
6 ultimate opinion; right?

7 A. That's correct.

8 Q. And you'd agree that the Senate committee
9 took public comment at this meeting on November 4th;
10 right?

11 A. They did.

12 Q. And that was after districts were released;
13 right?

14 A. Let me see.

15 Yeah. This is immediately thereafter.

16 Q. And at the end of this meeting, page 62,
17 Democratic Leader Butler asked the chairman to
18 postpone a meeting for tomorrow before the
19 presentation of her map; right?

20 A. Yes.

21 Q. And the chair advised her that the map was
22 going to -- the meeting was going to go forward
23 tomorrow and she could present her map at that point;
24 right?

25 A. Right.

1 Q. So leading into Section D, November 5th
2 meeting. This is the meeting where Democratic Leader
3 Butler was able to present the democratic Senate
4 plan; correct?

5 A. That's correct.

6 Q. And just ask kind of a -- so I don't have to
7 ask this after each section.

8 For the entirety of this section through
9 page No. 84 where you're providing the narrative
10 around the different meetings, this is like the prior
11 sections where you're recounting what happened, not
12 offering any opinions in those sections, but the
13 facts of what happened influenced your opinions; is
14 that right?

15 A. This is the sort of meat, if you will, that
16 is part of the basis of my overall opinions.

17 Q. So in this section, are you offering -- from
18 pages 63 to 84, any opinions or is this just the meat
19 of what makes up your opinions?

20 A. It would be the basis for my opinions.

21 Q. So not offering opinions, but it is the
22 basis for -- part of the basis for your opinions?

23 A. Right.

24 MR. DAVIS: Objection. Asked and
25 answered, but you may answer.

1 BY MR. TYSON:

2 Q. So in this November 5th Senate committee
3 meeting, Leader Butler answered questions about her
4 proposal like Senator Kennedy had the opportunity to
5 answer questions about his proposal for district
6 maps; right?

7 A. Yes.

8 Q. And you'd agree that the committee, again,
9 took public comments at this meeting; right?

10 A. They did.

11 Q. And at the end, there was no motion about
12 the democratic Senate map; correct?

13 A. That is correct. At that time, yes.

14 Q. And then Senator Kennedy's bill was passed
15 out of committee by a nine-four vote?

16 A. Right.

17 Q. And when you say, All black members voted
18 against the bill, that's the same as saying all
19 Democrats in the committee voted against it; right?

20 A. Yes. In this particular committee, yes.

21 Q. So in Section E, you then have a November
22 5th meeting of the House committee where Chairman
23 Rich presented the majority State House plan and
24 Democratic Leader Beverly presented the democratic
25 caucus' plan; right?

1 A. Right.

2 Q. And so you'd agree the democratic leader was
3 able to present its plan and answer questions about
4 it from the committee; right?

5 A. Yes. He at that time, yes.

6 Q. And moving to Section F, November 8 meeting,
7 that was three days later; right?

8 A. Yes.

9 Q. And at this meeting, a Republican
10 representative opposed the Republican plan but didn't
11 have his request for changes agreed to by the
12 committee; right?

13 A. Representative Singleton is to whom you
14 refer?

15 Q. Yes.

16 A. Yes.

17 Q. And so the committee declined to accept
18 Representative Singleton's proposed changes to the
19 map?

20 A. Correct.

21 Q. And then public comments was taken at this
22 committee meeting as well; right?

23 A. There was some. Yes.

24 Q. And no vote was taken at the conclusion of
25 this meeting?

1 A. I believe that's correct. Yes.

2 Q. And you reference the removal of a Ms. Jones
3 from the meeting.

4 What relevance is that to the redistricting
5 plans and the process that happened here?

6 A. This woman was extremely upset and had to be
7 removed from the meeting. It just shows you, I
8 guess, the fervor that some people have in their
9 disagreement with the process.

10 Q. You're not saying Ms. Jones' removal was
11 motivated by racist actions by Chairman Rich --

12 A. No.

13 Q. -- are you?

14 Moving to Section G, this is another meeting
15 of the House committee on November 9th; right?

16 A. Yes.

17 Q. And more public commentary was allowed at
18 this meeting as well?

19 A. Yes.

20 Q. And -- so you'd agree that in both the House
21 and the Senate committees there were opportunities
22 for public input after draft plans were released;
23 right?

24 A. Yes. But I think if you listen to what
25 people are saying that a lot of times during this

1 process -- well, not just a lot of times, every time
2 that a map is published, the turnaround is very, very
3 short. So it's not to say that there was zero
4 ability to comment on the maps once they were out.
5 It's that the timeline was far too rushed according
6 to a great number of people.

7 Q. Do you know the cost to the state of Georgia
8 for the General Assembly to be session each day of a
9 special session?

10 A. No.

11 Q. So at the end of this section on page 69,
12 you reference that the majority of the plan was voted
13 out favorably with all black members of the committee
14 voting no; is that right?

15 A. Yes.

16 Q. And that's the same as saying all the
17 Democrats in the House committee voted no; right?

18 A. In this case, yes.

19 Q. When you were summarizing these various
20 committee meetings, did you include every committee
21 meeting that was held by the House and Senate
22 committees during this special session at this -- up
23 to this point?

24 A. I don't believe every single one. There may
25 have been some shorter minor committee meetings that

1 I didn't review.

2 Q. Are you familiar with the Georgia General
3 Assembly's website? Have you read it before, I guess
4 I should say?

5 A. Yes.

6 (Defendant's Exhibit 6 was marked for
7 identification.)

8 BY MR. TYSON:

9 Q. I hand you what's been marked as Exhibit 6.
10 Have you seen this page from the General
11 Assembly's website before?

12 A. I have.

13 Q. And is this, to your understanding, a list
14 of all the committee meetings that were held by the
15 House reapportionment committee, in I guess, 2022
16 back through 2011?

17 A. That's my understanding.

18 Q. And the General Assembly was in special
19 session in August of 2011 to draw redistricting maps;
20 is that right?

21 A. I believe that's correct.

22 Q. And looking back on the second page, the
23 only committee meetings listed in August were August
24 16, 2011; August 20 -- 22, 2011; and August 24th and
25 30th 2011; right?

1 A. Yes.

2 Q. Did you as part of your review determine if
3 more or fewer committee meetings were held in the
4 2021 session than were held in prior redistricting
5 sessions in Georgia?

6 A. No. And I think what most people are saying
7 is not necessarily based upon the previous cycle.

8 So it's -- you know, for a lot of people who
9 are upset about the process, it's not necessarily
10 that it deviates or correlates with the previous
11 cycle or not.

12 Q. As a historian analyzing Arlington Heights
13 factors, do you find how Georgia has previously
14 handled redistricting cycles to be relevant to your
15 consideration?

16 A. Certainly, it's relevant. Yes.

17 Q. But you didn't review number and scope of
18 committee meetings from prior committee redistricting
19 special sessions in preparing your report?

20 A. I would have liked to have gone through all
21 of that, but, you know, even with significantly more
22 time, I don't know that that would have been possible
23 to understand take in a systematic manner.

24 Q. Just to complete this piece, are you
25 familiar that House and Senate -- or Senate

1 committees maintain minutes of their meetings when
2 they meet?

3 A. Yes.

4 (Defendant's Exhibit 7 was marked for
5 identification.)

6 BY MR. TYSON:

7 Q. I hand you what I've marked as Exhibit 7.
8 I'll represent to you this is a collection of minutes
9 downloaded from the reapportionment -- I mean, the
10 Senate reapportionment or redistricting committee's
11 website covering various meetings held during the
12 2021 special session.

13 And then -- and so similar to the House
14 committee, you didn't cover every meeting of the
15 Senate committee in your summaries in your report; is
16 that right?

17 A. I tried to cover most of them, as many as I
18 could.

19 Q. So when the Senate committee met, for
20 example, on November the 11th, 2021, to consider the
21 House plan, that wasn't a meeting that I saw included
22 in your report except for just one sentence on
23 page 69; is that right?

24 A. On which page?

25 Q. Page 69. There's one reference to the

1 November 11th Senate committee meeting.

2 A. Okay.

3 Q. And you didn't cover that meeting in any
4 more detail than that sentence; right?

5 A. That certainly would have been something
6 that I reviewed. But, yes, I don't see a specific
7 section on that.

8 Q. And are you aware that the Senate committee
9 allowed public comment on the House plan before
10 voting on the map on November 11th in that meeting?

11 A. Yes.

12 Q. You can set those to the side and move to
13 floor debate.

14 Section I of your report begins with debate
15 on the floor of the State Senate; right?

16 A. Yes.

17 Q. And in terms of the presentation, you didn't
18 summarize Senator Kennedy's presentation of the bill.
19 You only summarized the interactions he had with
20 other senators asking questions. Is that fair to
21 say?

22 A. That's fair to say. Of course, I remember
23 his going through the plan as with Chairman Rich on
24 the House side. They established, you know, how many
25 county splits are there, increasing the splits and

1 say this plan complies with the Voting Rights Act and
2 sort of check off all those boxes.

3 Q. Did Senator Kennedy include discussions of
4 various communities of interest as part of his
5 presentation?

6 A. I believe so. There are a few.

7 Q. Are you opining that a floor vote on a
8 Senate plan on November 9th, 2021, was a rushed or
9 truncated process compared to prior redistricting
10 special sessions?

11 A. Not necessarily compared to prior sessions
12 or cycles.

13 Q. So what I wanted to do is just walk through
14 some of those prior sessions.

15 So you're aware that when the General
16 Assembly -- when you pull a bill on the General
17 Assembly's website, it includes a list of events that
18 happened around the passage of that bill; right?

19 A. Sure.

20 (Defendant's Exhibit 8 was marked for
21 identification.)

22 BY MR. TYSON:

23 Q. I'm going to hand you what I've marked as
24 Defendant's Exhibit 8. And I'll represent to you
25 this is a collection of the bills for the final maps

1 adopted in the 2001 special sessions for Congress,
2 House and Senate. And they run in reverse order
3 here.

4 So for the first page on the congressional
5 plan, it was first, when you look at the bottom
6 there, read and referred on the 22nd of August 2001?
7 Do you see that on the second page since this is
8 running in reverse order?

9 A. I see it.

10 Q. And that was reported out of committee by
11 substitute on August 28th, 2021; right?

12 A. Correct.

13 Q. And then, ultimately, Senate passed --
14 adopted by substitute was on September the 7th, 2001;
15 correct?

16 A. I see that.

17 Q. Going to the next set of documents, it's
18 SB1EX1 2001. And that shows an introduction date of
19 August 1st, 2001, read and referred and reported out
20 of committee on August 6th; right?

21 A. I see that. Yes.

22 Q. And for the House, introduction of the bill
23 on August 27th, 2001, and reported out of committee
24 on August 28th, 2001; right?

25 A. Yes.

1 Q. And for vote on August 29th, 2001; is that
2 right?

3 A. Yes.

4 MR. TYSON: I'm going to mark as
5 Exhibit 9 similar reports from the General
6 Assembly's website for the 2011
7 redistricting cycle.

8 (Defendant's Exhibit 9 was marked for
9 identification.)

10 BY MR. TYSON:

11 Q. And these similarly report where the House
12 first read on August 22nd for the congressional plan
13 in 2011. Reported out of committee on August 24th,
14 2011, and passed on the House floor on August 25th,
15 2011; right?

16 A. Yes.

17 Q. And for the Senate plan, introduced on
18 August 15th -- or read and referred August 15th,
19 reported out of committee August 17th and passed on
20 the floor of the Senate August 18th, 2011; right?

21 A. Correct.

22 Q. And for the House plan, first read on
23 August 15th, reported out of committee August 16th,
24 and passed on the House floor on August 18th, 2011;
25 correct?

1 A. Correct.

2 MR. TYSON: And last round here, I'll
3 mark as Exhibit 10.

4 (Defendant's Exhibit 10 was marked for
5 identification.)

6 BY MR. TYSON:

7 Q. Same documents from the 2021 special
8 session.

9 And for the 2021 special session, we have
10 for congressional introduction on August -- I'm
11 sorry, I mean November the 3rd, reported out of
12 committee November 18th and passed on the Senate
13 floor on November 19th; right?

14 A. Right.

15 Q. And for SB1EX, the Senate plan introduction,
16 read and referred on August 3rd, 2021, reported out
17 of committee August 8th, 2021, and passed on the
18 Senate floor on -- I'm sorry -- November 3rd,
19 November 8th and November 9th for passage in 2021;
20 right?

21 A. Right.

22 Q. And for the House plan in 2021, we have
23 first read on November 3rd, reported out of committee
24 November 9th and passed on the House floor
25 November 10th, 2021?

1 A. Right.

2 Q. So did you review any of that information
3 about the timeline of past redistricting special
4 sessions when you were preparing your report?

5 A. I'm generally aware of it and it's something
6 I considered. What I will tell you is that I don't,
7 again, think that when people are voicing a lot of
8 these concerns, it's necessarily that they're saying
9 it's a deviation from past practice. I think they
10 would also disagree with that past practice as well.

11 Q. But you're not opining that the
12 redistricting session in 2021 -- or the process was
13 rushed compared to the prior two redistricting cycles
14 in Georgia; right?

15 A. Not compared to those two.

16 Q. At the end of Section -- this is section on
17 page 71, you say: The bill passed 34/21 with no
18 black members voting in favor.

19 And that was because it was a party line
20 vote; right?

21 A. There are no current -- well, there were no
22 black members at the time in the other party.
23 Correct.

24 Q. So all the Republicans voted yes and all the
25 Democrats voted no on the Senate plan?

1 A. Yes.

2 Q. Going to subsection J and the floor debate
3 for the House plan, similarly to the Senate plan, you
4 didn't present Representative Rich's presentation of
5 the plan; correct?

6 A. Right. It's the same sort of rundown as
7 with Senator Kennedy.

8 Q. At the end after Leader Beverly's speech on
9 page 73, you report that Chairman Rich said that some
10 democratic members had met with her but, apparently,
11 others had been advised not to do so.

12 Do you know if Democrats were advised not to
13 meet with Senator Rich?

14 A. I believe some were advised in that way.
15 Yes.

16 Q. Is that relevant to your assessment of the
17 process if Democratic members refuse to meet with the
18 chair of the committee?

19 A. It's relevant. Yes.

20 Q. And does it change any of your conclusions
21 about the process if democratic members refuse to
22 participate in the process?

23 A. No. In fact, given the sort of totality of
24 these circumstances here, it would indicate to me
25 that, perhaps, they saw it as futile; perhaps, they

1 didn't feel like it necessarily would be in their
2 interest at that time for whatever reason.

3 Q. Do you know if either the House or Senate
4 plan included changes requested by democratic members
5 in the final map after the draft was release?

6 A. In terms of drawing lines, I know there were
7 at least some.

8 Q. So when democratic members made suggestions,
9 at least in some cases, the Republican majority took
10 those suggestions; right?

11 A. In some cases, yes.

12 Q. And there were times when the Republican
13 majority refused Republican requests for changes like
14 Representative Singleton; right?

15 A. In that one instance. Although, I think in
16 his case, he had run afoul of the late speaker.

17 Q. Then you say the plan voted on the House
18 floor by a vote of 99 to 79 with no black members
19 voting yes.

20 You'd agree that no Democrats voted in favor
21 of the plan; right?

22 A. Yes, sir.

23 Q. And most of the Republicans voted for the
24 plan; right?

25 A. Correct.

1 Q. Then we move to our section on congress.
2 And in the congressional plan, there was a draft plan
3 released in late September shortly after the governor
4 called the special session; is that right?

5 A. Yes.

6 Q. And in the meeting you report in Section H:
7 Public comment was, again, allowed on the
8 congressional map; correct?

9 A. At that -- is this -- let me just skim this
10 very briefly.

11 MR. TYSON: Certainly. Take your time.

12 (Witness reviews document.)

13 THE WITNESS: Yes. So this is -- a new
14 map was published. And then I believe this
15 is only hours before that meeting and then,
16 yes, they took commentary on that new one.

17 BY MR. TYSON:

18 Q. And that was a revised draft that bore some
19 similarities of the original draft released in
20 September; right?

21 A. It was a revised draft. Yes.

22 Q. Have you reviewed how similar or different
23 the draft was to the plan that was released and
24 discussed in the November 17th meeting?

25 A. I did. I could not, as I sit here right

1 now, tell you exactly what was different. But I can
2 tell you that people who spoke at the meeting were
3 under the impression significant differences.

4 Q. And in Section I, you discuss the House
5 committee meeting to consider the Congressional plan;
6 right?

7 A. Yes.

8 Q. And in both this discussion of the
9 November 17th Senate meeting and November 17th House
10 meeting, again, you're recounting what happened
11 there, which informed your opinions but are not
12 offering any opinions; right?

13 A. This is the basis. This is part of the
14 basis for my overall opinions. Yes.

15 Q. And in this House meeting on November 17th,
16 the democratic caucus was able to present a
17 congressional redistricting plan through Democratic
18 Leader Beverly; right?

19 A. Which meeting? I'm sorry, which subsection?

20 Q. I'm on page 75, subsection I, November 17th
21 House --

22 A. Oh, yes.

23 Q. And so Leader Beverly was able to present
24 the democratic proposed congressional plan at that
25 meeting?

1 A. Right.

2 Q. And you reference Chairman Rich replying:
3 There's not a magic formula or standard or equation
4 where we find that there are areas where we can draw
5 the voting rights districts and we do that.

6 Did I quote that correctly?

7 A. You did.

8 Q. And you mentioned, I think, earlier in your
9 report comments made about the Voting Rights Act.
10 Is.

11 This a comment about the Voting Rights Act
12 that is part of your analysis of the redistricting
13 process in Georgia?

14 MR. DAVIS: Objection to form. You may
15 answer.

16 THE WITNESS: This comment is
17 significant to me insofar as it -- if
18 racially polarized analysis is done, then
19 there actually is a formula or a standard
20 that would be followed and -- but
21 Representative Rich and Senator Kennedy said
22 repeatedly had conducted such an analysis,
23 but I don't think ever shared the specific
24 results of that and certainly not in the
25 case of individual districts.

1 BY MR. TYSON:

2 Q. And so your view of Representative Rich's
3 comment here is that it was not accurate?

4 MR. DAVIS: Objection to the extent it
5 calls for a legal conclusion, but you may
6 answer.

7 THE WITNESS: No. I just think in terms
8 of this whole mosaic, I think it's
9 indicative of the kinds of comments you
10 would get from leadership about the Voting
11 Rights Act that are sort of vague and
12 potentially misleading.

13 BY MR. TYSON:

14 Q. You're not saying --

15 A. I'm not saying that Representative Rich
16 doesn't understand the Voting Rights Act.

17 Q. You're not saying her comment was
18 inaccurate -- let me put it this way -- let me ask
19 this: Why specifically did you include this comment
20 on page 75 of your report?

21 A. It's just part of the back and forth that,
22 again, I think is indicative of the kinds of
23 exchanges that you see between leadership and others.

24 Q. Going over to Section J, November 18th, 2021
25 House committee.

1 A. Yes.

2 Q. Again, this was a meeting that allowed
3 public comment on the map; right?

4 A. Yes. And I can't remember -- this is within
5 a day or two of a plan being published, but yes.

6 Q. In a second paragraph, you reference a
7 residence of the area of Cobb County named Leroy
8 Hutchins. Do you see that?

9 A. I do.

10 Q. Are you aware that Mr. Hutchins is an
11 elected Democrat in Cobb County, Georgia?

12 A. I was not aware of that, but I would say
13 that's not uncommon for those people to come forward
14 in these meetings.

15 Q. And there was no vote held on the
16 November 18th House committee meeting; correct?

17 A. That's correct.

18 Q. Subsection K, we move to another Senate
19 committee meeting. And you'd agree at this meeting
20 Senator Butler was allowed to present the democratic
21 proposed congressional plan; right?

22 A. He did.

23 Q. And I think we've already discussed this.
24 But this is the point where Senator Butler refused to
25 share information from the Legislative Black Caucus'

1 tour of the state about redistricting; right?

2 A. I believe it came up. And I don't know that
3 at that time he refused. I think it was noted that
4 that information had not been shared up to that
5 point.

6 Q. And do you agree the committee took public
7 comment again on the map?

8 A. Yes. This is the same day as the
9 previous -- or, yes, the same day as the House
10 committee meeting we were just talking about.

11 Q. And the first individual you reference in
12 the middle of page 77 for public comment is a man
13 named David Garcia?

14 A. Yes. I see it.

15 Q. And are you aware that Mr. Garcia works for
16 one of the organizations that's suing the State about
17 its redistricting maps?

18 A. I am.

19 Q. And there was ultimately a vote on Leader
20 Butler's plan in the committee meeting; right?

21 A. That's correct.

22 Q. And you say the vote was along racial lines,
23 but that's the same thing as saying in this
24 committee, it was along party lines; right?

25 A. In this -- yes. In this committee, that's

1 correct.

2 Q. And then the map Senator Kennedy proposed
3 also passed along party lines; right?

4 A. Correct.

5 Q. Subsection K, we move to the floor debate on
6 the congressional plan in the Senate. And,
7 similarly, here you don't present Senator Kennedy's
8 presentation of the plan. You begin with Senator
9 Parent's criticisms of the plan; right?

10 A. Right. This -- those presentations are kind
11 of pro forma, checking off certain boxes. So it was
12 easier just to summarize that and move forward.

13 Q. And in looking through this section, the
14 only comment I saw in favor of the plan was the next
15 to the last paragraph where Senator Kennedy responded
16 about the issue.

17 Did you quote anybody else who spoke in
18 support of the plan?

19 A. I can tell you I didn't deliberately leave
20 out anyone who spoke in favor of the plan. I can
21 tell you on balance at these floor debates committee
22 meetings and hearings, the vast majority of comments
23 were in opposition.

24 Q. And then the vote took place. And you'd
25 agree even though it says, No black members voting

1 aye, that this was a party line vote in favor of the
2 plan; right?

3 A. It was.

4 Q. And next we move to a November 20th
5 committee meeting that was held via Zoom; right?

6 A. Right.

7 Q. And this was both held on a Saturday and
8 allowed public comment; is that right?

9 A. Yes. Although, I think a lot of these --
10 the people that spoke would have characterized it as
11 sort of an 11th-hour meeting, but yes.

12 Q. And at the end of this meeting when the bill
13 passed through the committee with a favorable vote
14 and no black member voted aye, that's the same as
15 saying it passed on a party line vote for this
16 committee; right?

17 A. That's correct.

18 Q. Then Section M, we have the floor debate on
19 the congressional plan.

20 Do you know if the reapportionment office
21 was close to Leader Beverly in terms of redrawing
22 redistricting maps?

23 A. I believe they actually went with their map
24 to Ms. Wright in terms of some technical adjustments
25 and that sort of thing at some point.

1 Q. So the reapportionment office was able to
2 work with Leader Beverly to facility the introduction
3 of his plans?

4 A. That's a fair characterization in terms of
5 some technical stuff after their plan was created
6 that just sort of brought that in line and helped him
7 in that regard technically.

8 Q. Do you know if Ms. Wright had worked with
9 Leader Beverly or his staff at all on any other plans
10 apart from the technical review?

11 A. I'm not sure of the exact details of that
12 interaction.

13 Q. Going to the middle of page 83, you move to
14 Chairman Rich closing the debate beginning with her
15 concerns about CD6, saying that although it only
16 needed to add 657 people -- and I'm going to
17 summarize, the other districts around it --

18 A. Yes.

19 Q. -- needed to be changed; right?

20 A. Yes.

21 Q. And have you reviewed the democratic
22 congressional plan?

23 A. In general, yes.

24 Q. Are you aware that it significantly redrew
25 District 6, as well?

1 A. Yes.

2 Q. And then, ultimately, the vote on page 84
3 was a party line vote as well; right?

4 A. That's right.

5 Q. So it looks to me this is the end of the
6 section on the Arlington Heights analysis because
7 we're moving into Senate Factor 6 on the next page;
8 is that right?

9 A. Correct.

10 Q. So what opinions are you offering about
11 Arlington Heights in light of what we've discussed in
12 these prior pages in Sections, I guess, 3 through 6?

13 A. So that constitutes a review of the process
14 under Arlington Heights. And as I point out in the
15 beginning of that section, it shows to me significant
16 departures in terms of having this flurry of input
17 before and after the maps are published that does not
18 seem to have that addressed.

19 And so if the committee says they are very
20 concerned with taking in public input -- which they
21 did take in public input at numerous times -- then
22 you would tend to see then, them acting upon that.
23 And to me, you really don't see that with the
24 process.

25 Q. So are you opining that the specific

1 sequence of events leading up to the passage of the
2 plans was a departure from the normal procedural
3 sequence used for redistricting in Georgia?

4 A. I'm not undertaking a systematic comparison
5 of it compared to 2001 or 2010. To me a departure
6 from what you would -- what would be considered
7 substantively, procedurally normal would be taking in
8 public comment. A mass of it weighs one way. And if
9 you were generally concerned with acting upon that,
10 then you would. So in this case, I don't see that
11 that is -- that is what we have.

12 Q. So the departures in -- that you're
13 referencing in your opinions in this report,
14 reference departures from what the public commentary
15 requested; is that right?

16 A. That is a large portion of it. Yes.

17 Q. What is the other portion that's not part of
18 that?

19 A. Again, if you go back to the beginning of
20 that section, we're talking about this being -- these
21 are not concerns that have come out of nowhere;
22 right? And so these concerns are relevant to me to
23 the history that proceeded this section; right?

24 And so it's not in and of it departures from
25 what the public would like to see. It's departures

1 from what the public would like to see in the context
2 of the public having these same concerns in previous
3 decades and not just the last two and specifically
4 members of the public who are people of color.

5 Q. Is there a connection between the historical
6 account that you gave in Section 3 and Section 4 of
7 your report with the conclusions you're drawing about
8 the redistricting process in 2021?

9 A. That's kind of what it was just speaking to.
10 Again, these are not concerns that people are
11 bringing up out of the blue that have never been
12 concerns before that have no historical precedence.
13 I think they are speaking to concerns with deep
14 historical roots that you can see in the first
15 section of the report.

16 Q. You're aware that Georgia in recent history
17 is regularly sued about various voting practices it
18 undertakes; right?

19 A. Of course.

20 Q. And you're aware that when this special
21 session occurred in 2021, that there were already
22 multiple lawsuits pending against the State related
23 to Senate Bill 202; right?

24 A. Yes.

25 Q. And there was an upcoming trial in the Fair

1 Fight Action case in the summer of 2022?

2 A. Right. This is -- that's actually part of
3 the mosaic, that we continue to see voters of color
4 feeling incumbent or necessary to use the court
5 system to achieve what they see as a measure of
6 equity.

7 Q. So how as a historian do you separate public
8 comments that could be used to set up future
9 litigation from genuine public comments about the
10 process and the maps themselves?

11 MR. DAVIS: Objection to form. You may
12 answer.

13 THE WITNESS: So -- so, for example, if
14 I reviewed this process and the only people
15 who were expressing a certain amount of
16 concern or a certain kind of concern were
17 people who were connected to organizations
18 that were engaged in this litigation, that
19 is obviously a red flag.

20 But, whereas, they are present as you
21 pointed in a number of these hearings, they
22 were not the only ones expressing those
23 concerns.

24 And so looking at it as a whole, I
25 don't -- I wouldn't come to the same

1 conclusion where it's only those individuals
2 who are expressing these concerns, if that
3 makes sense.

4 BY MR. TYSON:

5 Q. Would it be relevant whether the individuals
6 expressing concerns were engaged in other litigation
7 against the State but not the redistricting
8 litigation?

9 A. I suppose, although I would imagine it would
10 be litigation like that against SB 202.

11 Q. Are you opining that any of the contemporary
12 statements made by legislatures evidenced racial
13 intent during the 2021 process?

14 MR. DAVIS: Objection to the extent it
15 calls for any kind of legal conclusion, but
16 you may answer.

17 THE WITNESS: I believe the only thing I
18 discuss in here that -- in that regard --
19 and let me actually back up and say we're
20 long since passed the day and age in which
21 anyone would plainly say with any sort of
22 racial intent.

23 But there are occasionally items that
24 are perhaps telling, again, within the
25 context of this entire report. And so when

1 you have a leader of a committee suggest
2 that, perhaps, the application of the Voting
3 Rights Act is unfair, that to me raises a
4 flag.

5 BY MR. TYSON:

6 Q. So is that the only comment that you
7 identify that raises a flag of contemporary
8 statements made by legislatures?

9 A. That's the one that I found most
10 significant.

11 Q. And that's the comment on page 75 by
12 Chairman Rich?

13 A. Correct.

14 Q. Are you offering the opinion that this
15 specific sequence of events leading up to the
16 adoption of the 2021 redistricting plans was racially
17 discriminatory?

18 MR. DAVIS: Objection to the extent it
19 calls for a legal conclusion, but you may
20 answer.

21 THE WITNESS: It's my opinion that the
22 sequence of events along with the history of
23 discrimination that I discuss in the report
24 and as part of this report as a whole would
25 tend to lend credence to a finding of

1 discriminatory intent in the process.

2 BY MR. TYSON:

3 Q. So it's your opinion that someone could find
4 that there was discriminatory intent in the process,
5 but you're not saying there was discriminatory intent
6 in the process; right?

7 A. I'm not drawing the legal conclusion which
8 is left for the Court to do.

9 Q. So just so we're completely clear on this,
10 you are not offering the opinion that there was
11 discriminatory intent in the process. You're
12 offering the opinion that evidence would support a
13 finding of discriminatory intent?

14 A. Correct.

15 Q. So aside from the conclusion of your report
16 at the very end, have we -- is it correct that the
17 pages from page 8 where you begin historical
18 background section through page 84 is the entirety of
19 your opinions about the Arlington Heights factors in
20 your report?

21 A. Yes.

22 Q. And barring new facts -- I want to set aside
23 additional facts. But if there are no other new
24 facts that arise, you are not planning to offer any
25 further expert opinions about the Arlington Heights

1 factors that are not included in this report; right?

2 A. That is correct.

3 MR. TYSON: So if we can go off the
4 record for just a minute.

5 THE VIDEOGRAPHER: Off the video record
6 at 12:46 p.m.

7 (Recess from 12:46 p.m. to 1:14 p.m.)

8 THE VIDEOGRAPHER: Back on the video
9 record at 1:14 p.m.

10 BY MR. TYSON:

11 Q. Dr. Bagley, we're going to be moving to
12 page 84 of your report next. The factor on -- your
13 analysis of Senate Factor 6 on racial appeals.

14 So are you offering the opinion that
15 campaigns in Georgia are characterized by subtle and
16 over racial appeals.

17 A. Subtle and over racial appeals are present.

18 Q. And are you offering the opinions that
19 they're present or that campaigns are characterized
20 by those appeals?

21 A. I would say that their being present would
22 be a characterization of appeals in the state.

23 Q. So your methodology in determining racial
24 appeals when they characterized campaigns was to
25 determine if those racial appeals are present in

1 Georgia campaigns?

2 A. More or less, yes. I don't take that to
3 mean -- that Senate factor to mean that all campaigns
4 are characterized by racial appeals but more or less.
5 Are there -- you know, not just one, but are there
6 campaigns in which there are racial appeals.

7 Q. And I didn't see any racial appeals from
8 congressional racists that were in your report.

9 Did you identify any racial appeals from
10 Georgia congressional races?

11 A. I don't believe so in this report. No.

12 Q. Did you identify any racial appeals in state
13 legislative races in this report?

14 A. Let me just skim back through here and
15 remind myself.

16 (Witness reviews document.)

17 THE WITNESS: These don't seem to
18 include state legislative elections.

19 BY MR. TYSON:

20 Q. And in terms of what you relied on for this
21 section of your report, are the footnote -- the news
22 stories in footnotes 124 through 131 the sources of
23 the racial appeals that you're identifying in
24 these -- I'm sorry. Let me ask that -- the news
25 stories aren't the sources of the appeals.

1 A. I see what you mean. These --

2 Q. If you -- let me ask my question again just
3 to set it up.

4 In terms of sources you relied on for this
5 section of your report on racial appeals, are the
6 news stories in footnotes 124 through 131 the sources
7 you relied upon?

8 A. Yes.

9 Q. Are there any other sources you relied on
10 for purposes of the racial appeals portion of your
11 report that are not included in those footnotes?

12 A. No.

13 Q. So let's talk through the different
14 advertisements that you identify. First, you talk
15 about appeals targeting AAPI voters.

16 And I know we know that refers to, but that
17 refers to Asian American and Pacific islander voters;
18 right?

19 A. Yes.

20 Q. And do you know what entity ran the
21 advertisement that you've referencing on page 84?

22 A. I believe it was an organization associated
23 with Stephen Miller, if I'm not mistaken.

24 Q. Was it called Citizens for Sanity?

25 A. That sounds correct.

1 Q. Do you know if anybody affiliated with
2 Citizens for Sanity is based in Georgia?

3 A. I don't know that. No.

4 Q. Do you know where the ads that were run --
5 well, do you know who the recipients of the mailers
6 accusing the Biden administration that you reference
7 in page 84 were?

8 A. The specific recipients? No, I don't have a
9 list of exactly who all those individuals were.

10 Q. Do you know approximately how many of those
11 mailers were sent to voters in Georgia?

12 A. I don't off the top of my head. No.

13 Q. And you reference television ads that ran at
14 the same time.

15 Do you know the number of points that were
16 purchased for those particular television ads?

17 A. No. I don't.

18 Q. Do you know where those television ads were
19 run geographically?

20 A. Other than in the state of Georgia, I'm not
21 sure specifically where.

22 Q. And those ads tried to get Asian voters to
23 vote for Republicans or at the very least vote
24 against Democrats. Is that fair to say?

25 A. That seems to be the angle. Yes.

1 Q. And I didn't see any others in the report,
2 but are you aware of any other examples from other
3 elections regarding appeals that targeted AAPI
4 voters?

5 A. Those are the only ones that I've included
6 here.

7 Q. Are you aware of any other examples from any
8 other election regarding appeals targeting AAPI
9 voters in Georgia?

10 A. Not at this time.

11 Q. Next, it looks like you moved to a
12 discussion of ads targeting Latin X people in
13 Georgia; is that right?

14 A. It is.

15 Q. And you reference Mr. Williams' deportation
16 bus; correct?

17 A. I do.

18 Q. And are you aware that Mr. Williams finished
19 in last place in the 2018 Republican primary for
20 governor?

21 A. I did know that. Yes.

22 Q. And you say in the same primary, candidate
23 David Perdue accused Democratic candidate Stacey
24 Abrams of demeaning her own race and suggested that
25 she go back where she came from.

1 But that wasn't the same primary; was it?

2 A. No. I guess not.

3 Q. That was the '22 primary --

4 A. Correct. Yes.

5 Q. And you'd agree that Mr. Perdue lost by -- I
6 guess, by 50 points to Governor Kemp in that primary;
7 right?

8 A. He did lose. Yes.

9 Q. And you reference Governor Kemp's ads
10 involving his pickup truck.

11 How is that popular ad a racial appeal in
12 your estimation?

13 A. In the quotation there, that he's going to
14 round up criminal illegals and take them home.
15 Encourages vigilante action against immigrants and
16 suggests that all immigrants -- and by proxy brown
17 people, if you will -- are illegal.

18 Q. Do you have a definition that you're using
19 for a racial appeal in this part of your report?

20 A. Sure. To me racial appeal is an appeal that
21 would motivate people by race to vote as a block.

22 Q. And so is an appeal that resonates with
23 voters where the voters are inspired by racial
24 feelings?

25 A. It's an appeal that's designed to resonate

1 with people because of their race.

2 Q. You next reference Governor Kemp running ads
3 in the 2022 election darkening the skin tone of
4 Stacey Abrams, his opponent.

5 What ads were those? Did you review them?

6 A. Yes. They would be footnoted there in 129.
7 That's a story from 11Alive.

8 Q. So you relied on the story from 11Alive for
9 locating the anti-Abrams ads referenced here?

10 A. That's the source cited. Yes.

11 Q. And you don't know how many times those ads
12 ran; right?

13 A. No.

14 Q. And what geographically the audience was?

15 A. I don't have that information. No.

16 Q. Is it your belief that voters in Georgia
17 were not aware that Ms. Abrams is a black woman?

18 A. That is not my opinion. No. But this
19 process of making someone darker is not -- it's been
20 identified elsewhere as something to appeal to white
21 voters to see someone that is darker skinned and to
22 have a negative feeling associated with that.

23 Q. And you reference next Senator Loeffler and
24 her campaign for Senate.

25 She also lost her election to Senator

1 Warnock; didn't she?

2 A. She did.

3 Q. And are you saying that labeling a candidate
4 as a radical socialist is racial appeal?

5 A. It could be construed that way. And if you
6 notice, the next thing in that sentence is this would
7 echo accusations that were labeled at -- not just
8 Dr. King but others in the movement at that time who
9 were civil rights activists, to label them socialist
10 in the context of Cold War would be a way of saying,
11 We don't like these Civil Rights activists without
12 saying it in so many term.

13 Q. In your mind, is labeling someone a
14 socialist the same as labeling them a communist?

15 A. That's an interesting distinction. I feel
16 like many people who use both of those words don't
17 know what either one of them means. I think it could
18 be used in that way, but I think in our modern
19 lexicon, it's been used as a sort of more broad-based
20 accusation than specifically, capital C, Communist.

21 Q. And I apologize. I asked you earlier about
22 congressional races and I had left this one off my
23 list. You referenced Congresswoman Green.

24 Is the statement that Congresswoman Green
25 made here, was it made in the context of a campaign?

1 A. That -- that could have been after -- yeah,
2 she was already a Congresswoman at that time, so --
3 but, I mean, in my opinion politicians are always on
4 the campaign trail. So if you're at a rally, for
5 example, making a speech, to me that's part of
6 ongoing campaign, if you will.

7 Q. So for an incumbent member, at least, any
8 comment made anywhere could be a racial appeal in a
9 campaign. It's not limited to a specific campaign
10 activity?

11 A. I wouldn't say any comment anywhere, but I
12 would consider -- I believe the one in question was
13 at a rally, so for me I would include that.

14 Q. Are there any other racial appeals that
15 you're relying on for your opinion about racial
16 appeals in Georgia in this report that we have not
17 discussed on pages 84 and 85?

18 A. No, sir.

19 Q. And you'd agree that Senator Warnock has
20 won, I guess, four different elections at this point
21 to hold his seat in the U.S. Senate?

22 A. He has won elections and run-offs. Yes.

23 Q. So let's move to your conclusions statement
24 on page 86. And you start by saying: The Court will
25 determine whether or not the General Assembly was

1 motivated by discriminatory intent when it passed the
2 bills in question.

3 So you don't view that as your job to offer
4 an opinion on the General Assembly's motivation;
5 right?

6 A. It's not my job to reach the final legal
7 conclusion, I don't think.

8 Q. And your determination is that there's
9 enough evidence for the Court to determine the lines
10 were drawn to deny voters their equitable right to
11 participate in the political process. But you are
12 not saying the lines were drawn to deny voters of
13 color their equitable right to participate in the
14 political process; right?

15 A. I would say that I am -- it is my opinion
16 that the evidence is there for the Court to find
17 that -- to make that final determination.

18 Q. But to be clear, you are not making that
19 final determination?

20 A. Correct.

21 Q. You also reference the nature of the report
22 is to present a mosaic of a continuum. I know we
23 talked a little bit about mosaic and continuums
24 earlier, but can you walk me through what you mean by
25 that phrase in the conclusion?

1 A. Sure. So for me that kind of cuts to what
2 the Arlington Heights framework is asking us to do.
3 And as a historian, that's to build a foundation, the
4 historical background, in this case discrimination,
5 and to walk that on up to the present day sequence of
6 events and to identify if there are elements of the
7 current process that could be seen as part of that
8 broader mosaic or continuum that would tend to
9 connect it to that past discrimination.

10 Q. And the methodology you're using to make
11 that connection in the mosaic of a continuum is your
12 historical research and work and explaining what
13 those processes are?

14 A. I would say that's part of it. It would
15 also include examining this sequence as we would
16 examine something in the more distant past. Right?

17 And so it is intended to be, you know, an
18 organic inquiry, an organic piece that makes those
19 connections.

20 Q. When you say "organic inquiry," is there a
21 particular methodology that you use in the historical
22 field to reach those conclusions?

23 A. It's to look at diverse sources and to weigh
24 those against one another and to, obviously, in this
25 case, weigh the sequence against the history and, of

1 course, use what multiple sources that we can and to
2 see what is substantiated and what is not.

3 Q. Do you use specialized knowledge to weigh
4 out those various stories and narratives?

5 A. Of course.

6 Q. And what is that specialized knowledge?

7 A. In this case, it's the knowledge of the
8 history of the state of Georgia, the history of
9 discrimination, the history of the civil rights
10 movement, the history of the struggle for voting
11 rights in the United States and so on.

12 Q. Did you require a specialized knowledge to
13 report on the committee meetings and the floor debate
14 that you did in your report or was that more just a
15 narrative?

16 A. I don't think it's a narrative that any
17 individual off the streets could come in and present
18 in the way that I did. I think I come at it as
19 someone armed with the knowledge of history who is
20 able to identify significant elements of that and to
21 determine what is useful to the Court in making its
22 determination.

23 Q. So your methodology is you're armed with
24 history. You can review what happened in a committee
25 meeting and know what's relevant to that history

1 based on your training?

2 A. I would hope so.

3 Q. Further down in that paragraph you say, It
4 is telling that Republican legislators have so often
5 evoked 2001 when white men largely in the democratic
6 party attempted to manipulate the size of districts
7 to hold on to power.

8 Then you go on to say: With the demographic
9 changes in Georgia that citizen after citizen and
10 lawmaker after lawmaker evoked during this process,
11 one cannot help but think the motivation on the other
12 side is much the same as the electorate has grown
13 more diverse.

14 Are you saying that the motivation of the
15 Republicans in 2021 was the same as the motivation of
16 Democrats in 2001?

17 A. I'm saying that there could be significant
18 similarities in that consider the Democrats hold on
19 power in the 2000 cycle was obviously very tenuous by
20 that time. Going back to the enactment of the VRA
21 and the Civil Rights Act in '64 with myriad
22 defections to the Republican party. And you can see
23 that in Georgia's congressional delegation with
24 Republicans getting elected steadily more and more
25 and with the make-up of the General Assembly changing

1 on up to that point.

2 And so there was a measure of desperation.
3 For me, that's significant in comparing it to now in
4 that the -- perhaps, the Republicans hold on power in
5 the General Assembly or this congressional delegation
6 is getting more tenuous as voters of color are
7 exercising their right to vote more and more and
8 more.

9 And so my point is that there could be a
10 similar sort of desperate clinging to power if we're
11 making that connection. And it is the connection I
12 would, again, point out the Republican lawmakers
13 themselves are making sort of a justification for
14 elements of their own process.

15 Q. So, again, you're not saying that
16 definitely -- you're not saying for sure the
17 motivation was the same in 2021 and 2001, but it
18 could be the same?

19 A. I would say that, yes, it could be the same.

20 Q. Then looking at the next paragraph, you
21 reference procedural and substantive departures in
22 the legislative process, and then you have a list of
23 items after that dash.

24 Is that list what you're opining is the
25 procedural and substantive departures from the

1 legislative process?

2 A. Yes. Failing to account for public comment
3 after the maps are published, refusal to allow access
4 to the map drawing process and rushing the process in
5 general and so on.

6 Q. So when you say failing to make time for
7 public comments after maps were published at the last
8 minute, you'd agree there was -- there were multiple
9 committee meetings that allowed comments after the
10 maps were published; right?

11 A. There were, but I would say those were in a
12 very, very tight window of time where in some cases
13 maps are published the day of and commentary is taken
14 the day of, possibly the day after. So what people
15 were asking for is a much larger window of time to be
16 able to really systematically analyze those maps and
17 provide substantive feedback.

18 Q. And you reference rushing the process. But
19 you'd agree that the process was not rushed when
20 compared to the 2001 and 2011 redistricting cycles;
21 right?

22 A. Yes. But that would indicate to me it was
23 also rushed in those cycles, as well, insofar voters
24 want more time with the publication of maps.

25 Q. You say failing to account for minority

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CERTIFICATE

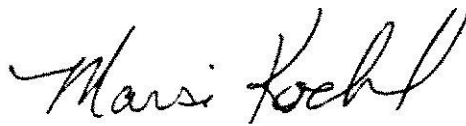
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COUNTY OF FULTON:

I hereby certify that the foregoing transcript was taken down, as stated in the caption, and the colloquies, questions, and answers were reduced to typewriting under my direction; that the transcript is a true and correct record of the evidence given upon said proceeding.

I further certify that I am not a relative or employee or attorney of any party, nor am I financially interested in the outcome of this action.

This the 20th day of March, 2023.



Marsi Koehl, CCR-B-2424

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DISCLOSURE

STATE OF GEORGIA:

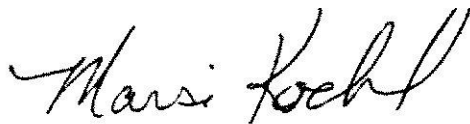
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Deposition of JOSEPH BAGLEY, PH.D.

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Marsi Koehl, CCR-B-2424

Date: 3/20/23