

**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.*

CIVIL ACTION

FILE NO. 1:21-CV-5338-ELB-SCJ-  
SDG

**DEFENDANTS' STATEMENT OF UNDISPUTED MATERIAL FACTS**

Defendants the State of Georgia; Brian Kemp, in his official capacity as the Governor of the State of Georgia; and Brad Raffensperger, in his official capacity as Secretary of State of Georgia (collectively, "Defendants") pursuant to Rule 56 of the Federal Rules of Civil Procedure and Local Rule 56.1 submits this Statement of Material Facts as to Which There is No Genuine Issue to be Tried.

1. The Georgia General Assembly held town hall meetings before redistricting maps were published in 2001, 2011, and 2021. Deposition of Joseph Bagley, Ph.D. [Doc. 128] (Bagley Dep.) 68:15-23, 73:25-74:9.

2. The town hall meetings in 2001, 2011, and 2021 were all “listening sessions” that took community comment without legislators responding to questions. Bagley Dep. 69:25-70:8, 73:25-74:9.

3. Redistricting has historically been conducted in special legislative sessions. Bagley Dep. Exs. 8-10.

4. The timeline for consideration of redistricting plans in 2001, 2011, and 2021 was similar. Bagley Dep. 101:7-101:12, 105:11-15, 138:18-24.

5. The 2021 redistricting process was “generally analogous” to the 2001 and 2011 cycle. Bagley Dep. 140:13-140:17.

6. The 2001, 2011, and 2021 redistricting processes were procedurally and substantively similar to each other. Bagley Dep. 86:25-87:19.

7. The 2020 Census data showed that the increase in the percentage of Black voters in Georgia from 2010 to 2020 was slightly more than two percentage points statewide. Deposition of Moon Duchin, Ph.D. [Doc. 134] (Duchin Dep.) 48:5-12.

8. Following the delayed release of Census data in 2021, the Georgia General Assembly began working on redistricting maps ahead of the November 2021 special session. Bagley Dep. Ex. 5.

9. Both chairs of the House and Senate committees with jurisdiction over redistricting sought to meet with all of their colleagues, both Republican



and Democratic, to gain input on their areas of the state. Deposition of Gina Wright [Doc. 132] (Wright Dep.) 68:17-69:7.

10. For the first time in 2021, the General Assembly created a public comment portal to gather comments. Wright Dep. 252:20-253:4.

11. After holding a committee education day with stakeholder presentations, the committees adopted guidelines to govern the map-drawing process. Deposition of John F. Kennedy [Doc. 129] (Kennedy Dep.) 161:1-4; Deposition of Bonnie Rich [Doc. 131] (Rich Dep.) 214:19-215:7; Bagley Dep. 89:9-18.

12. To draw the congressional map, Ms. Wright worked with a group to finalize a plan based on an earlier draft plan from Sen. Kennedy. Wright Dep. 28:19-30:23.

13. Political considerations were key to drawing the congressional map, including placing portions of Cobb County into District 14 to increase political performance. Wright Dep. 111:16-112:10, 115:8-11, 115:17-24, 158:4-21.

14. Georgia's prior 2011 districts were precleared on the first attempt by the U.S. Department of Justice and were never found by any court to be unlawful or unconstitutional. Bagley Dep. 56:20-57:8, 58:4-11.

15. For the legislative maps, Ms. Wright first drafted “blind” maps for the House and Senate, drawing based on her own knowledge of Georgia and the historic districts. Wright Dep. 45:15-25 (Senate map); 62:17-62:24 (House map).

16. The chairs of the House and Senate committees then met with Ms. Wright to adjust district boundaries based on the input they received. Wright Dep. 54:3-20, 77:2-7 (Senate map); 197:2-6 (House map).

17. Some changes requested by Democrats were included. Wright Dep. 59:5-60:7 (Sen. Rhett); Bagley Dep. 107:3-11.

18. Information about draft maps was also shared with members of the Democratic caucus, and Democratic members were able to work with the joint Reapportionment Office. Wright Dep. 223:14-224:4, 226:11-17; Bagley Dep. 116:1-7.

19. The chairs and Ms. Wright also consulted with counsel about compliance with the Voting Rights Act. Wright Dep. 92:8-20.

20. Although racial data was available, the chairs of each committee focused on past election data to evaluate the partisan impact of the new plans while drawing with awareness of Republican political performance. Wright Dep. 55:25-56:7; 140:3-11; 140:17-19; 257:21-258:1; 258:2-14.

21. When drawing redistricting plans, Ms. Wright never used tools that would color the draft maps by racial themes. Wright Dep. 259:24-260:8.

22. The office included estimated election returns at the Census block level, so political data was available across all layers of geography. Wright Dep. 140:3-11.

23. The past election data was displayed on the screen with other data. Wright Dep. 140:17-19.

24. The chairs evaluated the political performance of draft districts with political goals. Wright Dep. 178:5-22, 191:25-193:3, 206:13-207:16.

25. After releasing draft maps, legislators received public comment at multiple committee meetings. Bagley Dep. 91:8-15, 93:8-10, 94:21-23, 95:14-96:6, 100:8-11, 111:24-112:1, 113:6-10, 115:4-11.

26. Democratic leadership presented alternative plans for Congress, state Senate, and state House that were considered in committee meetings. Bagley Dep. 109:15-110:1 (Congress), 112:18-22 (Congress), 93:2-13 (Senate), 93:21-94:5 (House).

27. After the plans were considered, they were passed by party-line votes in each committee before passing almost completely along party lines on the floor of the Senate and House. Bagley Dep. 93:14-20, 105:16-106:1, 113:22-114:4, 115:12-17, 117:2-4.

28. Dr. Bagley agreed that he couldn't say the 2021 redistricting maps were an abuse of power by Republicans. Bagley Dep. 63:25-64:3.

29. Dr. Duchin said that she was not "criticizing Georgia for not doing enough" in her report. Duchin Dep. 81:25-82:16.

30. The enacted congressional map resulted in five districts that elected Black- and Latino- preferred candidates Report of Moon Duchin, attached as Ex. A (Duchin Report), ¶¶ 4.1, 6.3.

31. The enacted congressional map reduced the number of split counties from the 2011 plan. Duchin Report, ¶¶ 4.1, 6.3.

32. The enacted state Senate map reduced the number of split counties from the prior plan. Duchin Report, ¶¶ 6.3, 6.4; Kennedy Dep. 106:4-11.

33. The enacted state Senate map did not pair incumbents of either party running for re-election. Duchin Report, ¶¶ 6.3, 6.4; Kennedy Dep. 106:4-11.

34. The enacted state Senate map maintained the same number of majority-Black districts as the prior plan. Duchin Report, ¶¶ 6.3, 6.4; Kennedy Dep. 106:4-11.

35. The enacted state House map also reduced the number of split counties from the 2011 plan. Duchin Report, ¶¶ 6.3, 6.4.

36. The enacted state House map increased the number of majority-Black districts from the prior plan. Duchin Report, ¶¶ 6.3, 6.4.

37. One of Plaintiffs' proposed Senate plans increases the number of majority-Black voting age population (VAP) districts by three and another decreases the number of majority-Black VAP districts by six when compared with the enacted plan. Duchin Report, ¶¶ 6.4.

38. Plaintiffs' proposed House plans either increase the number of majority-Black VAP districts by one or decrease them by 12 when compared with the enacted plan. Duchin Report, ¶¶ 6.4; Duchin Dep. 29:15-22; 113:9-114:8.

39. Dr. Duchin's goal in creating the proposed plans was to create districts that "meet a 50 percent plus one threshold" for minority voters. Duchin Dep. 47:10-48:4; 76:2-15.

40. Dr. Duchin's proposed congressional plan does not convert District 6 into a majority-Black district but instead converts District 3 to be majority-Black. Duchin Dep. 119:25-120:11.

41. When describing the process of drawing the congressional plan, Dr. Duchin was unable to identify a reason why she connected various rural and urban areas. Duchin Dep. 58:18-59:13; 71:14-19.

42. Dr. Duchin also could not explain the reasoning behind the various alternative configurations of her Senate and House plans, instead relying on various computer-drawn drafts. Duchin Dep. 64:24-66:20, 71:7-13, 121:13-123:8, 139:10-20, 158:5-14, 163:15-164:3.

43. Some of Dr. Duchin's legislative plans included Senate districts with Black VAP percentages as high as 86.5% and multiple House districts with more than 80% Black VAP, including one over 90%. Duchin Dep. 123:24-127:8, 137:22-139:2, 162:8-22.

44. Dr. Duchin did not consider those districts "packed." Duchin Dep. 123:24-127:8, 137:22-139:2, 162:8-22.

45. All of Dr. Duchin's legislative plans have population deviations higher than the enacted plans. Duchin Dep. 101:18-23 (Senate), 101:24-102:2 (House).

46. Two of the three Senate plans have the same or more county splits than the enacted plan. Duchin Dep. 107:10-15.

47. All of the House plans split the same or more counties than the enacted plan. Duchin Dep. 107:16-21.

48. While all of the compactness scores are generally similar, Dr. Duchin also reviewed compactness reports while drawing her plans and modified them to improve the scores. Duchin Dep. 103:17-105:20, 69:11-16.

49. Dr. Duchin was not able to categorize whether the differences in the various compactness scores were significant. Duchin Dep. 103:17-105:14.

50. The only consistent metric across all of Dr. Duchin's plans is that each one increases Democratic political performance over the comparable enacted plan. Expert Report of John Morgan, attached as Ex. B (Morgan Report), ¶ 12.

51. Those differences run from two additional Democratic-leaning seats on the congressional plan, Morgan Report, Chart 7, to ten additional Democratic-leaning seats on the Senate plan, Morgan Report, Chart 4, to 12 additional Democratic-leaning seats on the House plan, Morgan Report, Chart 1.

52. The Ga. NAACP plaintiffs put forth only one member's name in discovery and could not identify how many members were affected by redistricting. Deposition of Gerald Griggs [Doc. 136] (Griggs Dep.) 79:1-13.

53. The Ga. NAACP never identified any legislative districts in which that member lived and only that testified that the member had previously been in congressional District 6 and now was in District 7. Griggs Dep. 79:1-13.

54. The Georgia Coalition for the Peoples' Agenda plaintiffs designated just one member to establish standing, and provided no information as to that member's residence, their voter-registration status, or a process by

which they determine they had members in all districts named in the Complaint. Deposition of Helen Butler [Doc. 138] (Butler Dep.) 74:7-76:13.

55. The GALEO plaintiffs designated just one member to establish standing, and provided no information as to that member's residence, their voter-registration status, or a process by which they determine they had members in all districts named in the Complaint. Deposition of Geraldo Gonzalez [Doc. 139] (Gonzalez Dep.) 81:6-82:25.

56. The evidence from legislative depositions demonstrates that legislators were concerned about political performance, not race. Wright Dep. 55:25-56:7, 111:16-112:10, 115:8-11, 115:17-24, 140:3-11, 140:17-19, 158:4-21, 257:21-258:1, 258:2-14.

57. Legislators had political data at all levels of geography and regularly evaluated the political performance of districts as they were drawn. Wright Dep. 140:3-11, 178:5-22, 191:25-193:3, 206:13-207:16.

58. For the Congress plan, Plaintiffs only asked about Congressional District 6 (Wright Dep. 111:16-125:25, 130:22-133:17; Kennedy Dep. 176:3-179:13), the boundary between Congressional Districts 4 and 10 (Wright Dep. 133:18-138:1, 143:5-15), Congressional District 13 (Wright Dep. 168:22-171:7, 175:5-11; Kennedy Dep. 180:1-181:21), and Congressional District 14 (Wright



Dep. 152:9-158:21; Kennedy Dep. 182:2-188:1; Rich Dep. 135:13-141:9, 142:3-16).

59. In each case, Ms. Wright or the Chairs testified either unequivocally about race-neutral or political goals for the creation of each district or did not testify as to any racial motivations. *Id.*

60. For the Senate, Plaintiffs only asked about Senate District 17 (Wright Dep. 185:12-187:3; Kennedy Dep. 250:16-253:3) and Senate District 48 (Wright Dep. 188:8-14, 190:21-193:3; Kennedy Dep. 244:7-245:2).

61. In both cases, Ms. Wright or Chairman Kennedy testified either unequivocally about race-neutral or political goals for the creation of each district or did not testify as to any racial motivations. *Id.*

62. For the House, Plaintiffs asked about House District 44 (Wright Dep. 215:16-218:17; Rich Dep. 145:21-148:4), House District 48 (Wright Dep. 213:19-215:15; Rich Dep. 148:5-149:11), House District 49 (Wright Dep. 199:14-205:8; Rich Dep. 149:15-150:6), House District 52 (Rich Dep. 150:7-21), and House District 104 (Wright Dep. 205:19-207:16, 210:7-22; Rich Dep. 150:22-152:12).

63. In each case, Ms. Wright and Chairman Rich testified either unequivocally about race-neutral or political goals for the creation of each district or did not testify as to any racial motivations. *Id.*

64. None of Plaintiffs' experts besides Dr. Duchin provided opinions about district boundaries. Deposition of Peyton McCrary [Doc. 130] (McCrary Dep.) 48:19-21; Bagley Dep. 28:19-29:6; Report of Benjamin Schneer, attached as Ex. C (Schneer Report), ¶¶ 5-8.

65. Dr. Duchin's report evaluates core retention and "racial swaps" only for Congressional Districts 6 and 14; Senate Districts 14, 17, and 48 (with a brief reference to Senate District 7); and House Districts 44, 48, 49, 52, and 104. Duchin Report, ¶ 10.1.

66. Dr. Duchin acknowledges that there were "many other considerations" in play besides core retention. Duchin Dep. 171:22-172:7.

67. Dr. Duchin acknowledged that racial population shifts are not conclusive evidence of racial predominance and that she could not say that the various metrics she reviewed showed racial predominance. Duchin Dep. 180:18-23, 198:6-21 (Congress), 200:11-20 (Congress), 201:8-21 (Senate), 202:24-203:12 (House).

68. Dr. Duchin provides information about what she says are racial splits of counties in Congressional Districts 2, 3, 4, 6, 8, 10, 13, and 14 and what she says are racial splits of precincts in Congressional Districts 4, 6, 10, and 11. Duchin Report, ¶ 10.2.1; Duchin Dep. 167:5-15, 174:9-14, 186:17-23.

69. Dr. Duchin did not look at the political data behind those county splits on the congressional plan. Duchin Report, ¶ 10.2.1; Duchin Dep. 167:5-15, 174:9-14, 186:17-23.

70. The only state Senate districts Dr. Duchin discusses regarding racial splits are Senate Districts 1, 2, 4, and 26. Duchin Report, ¶ 10.2.2.

71. Dr. Duchin does not identify any state House districts with racial splits. Duchin Report, ¶ 10.2.3; Duchin Dep. 189:2-19.

72. Dr. Duchin did not describe any House districts as drawn “primarily” based on race. Duchin Report, ¶ 10.2.3; Duchin Dep. 189:2-19.

73. Dr. Duchin created her draft plans with the goal of drawing majority-minority districts. Duchin Dep. 47:10-48:4, 64:24-66:20, 71:7-13, 76:2-15, 121:13-123:8, 139:10-20, 158:5-14, 163:15-164:3.

74. Dr. Duchin was unable to identify why particular counties were connected on her various plans. Duchin Dep. 47:10-48:4, 64:24-66:20, 71:7-13, 76:2-15, 121:13-123:8, 139:10-20, 158:5-14, 163:15-164:3.

75. When asked about particular district decisions, Dr. Duchin fell back to her maps being “demonstrations.” Duchin Dep. 47:10-48:4, 64:24-66:20, 71:7-13, 76:2-15, 121:13-123:8, 139:10-20, 158:5-14, 163:15-164:3.

76. Dr. Duchin’s plans do not attempt to evaluate traditional redistricting principles beyond the ones she can represent numerically. Duchin

Dep. 47:10-48:4, 64:24-66:20, 71:7-13, 76:2-15, 121:13-123:8, 139:10-20, 158:5-14, 163:15-164:3.

77. Dr. Duchin does not profess to have a knowledge of communities in Georgia. Duchin Dep. 47:10-48:4, 64:24-66:20, 71:7-13, 76:2-15, 121:13-123:8, 139:10-20, 158:5-14, 163:15-164:3.

78. Plaintiffs also offer a variety of plans that *decrease* the number of *majority-Black* districts while increasing the number of *majority-minority* districts, primarily by combining Black and Latino individuals as a “minority” category. Duchin Report, ¶¶ 6.4; Duchin Dep. 29:15-22; 113:9-114:8.

79. Plaintiffs have not offered evidence on polarization from primary elections in Georgia. Schneer Report, ¶ 20.

80. Black voters in Georgia overwhelmingly vote for Democrats. Deposition of Benjamin Schneer [Doc. 135] (Schneer Dep.) 48:14-20.

81. Dr. Schneer’s decision not to review any primary election results in his report undermines the usefulness of the data and analysis he presents as purported evidence of racial polarization in Georgia’s elections. Schneer Report, ¶ 20; Schneer Dep. 60:11-61:20.

82. Dr. Schneer’s data demonstrates two things: The race of the candidate *does not* change voting behavior of Georgia voters; and the party of

the candidate *does*. Report of John Alford, attached as Ex. D (Alford Report), p. 3; Schneer Report, ¶ 21 n.18.

83. The 2021 congressional plan has five districts where Black-preferred candidates succeed. Duchin Report, ¶¶ 4.1.

84. The Any-Part Black VAP for Georgia as a whole is 31.73%. Duchin Report, ¶ 3.3.

85. Both of Georgia’s U.S. senators are Black-preferred candidates because they are Democrats (Sen. Ossoff was elected in 2021 and Sen. Warnock was re-elected in 2022). Schneer Report, p. 78, Table 10.

86. Dr. Bagley found no “obvious discriminatory intent.” Bagley Dep. 27:22-28:1.

87. While Dr. Bagley analyzed the second, third, fourth, and fifth *Arlington Heights* factors, he did not opine that discriminatory intent was the driving factor of the legislature or that there was discriminatory intent in the legislative process of redistricting. Bagley Report, p. 7; Bagley Dep. 27:22-28:1; 123:3-14.

88. Dr. Bagley did not opine that the specific sequence of events leading to the adoption of the plans was discriminatory, but only that it would “lend credence” to a finding of discriminatory intent. Bagley Dep. 122:14-123:1.

89. Dr. Bagley did not opine that the Georgia district lines were drawn to deny voters of color their equitable right to participate in the political process, although he believed a court could make that finding. Bagley Dep. 133:11-20.

90. Dr. Bagley found no procedural or substantive departures in the 2021 redistricting process when compared to the 2001 and 2011 processes and agreed that the process was not rushed when compared to those prior cycles. Bagley Dep. 86:25-87:19, 138:18-24.

91. Dr. Bagley found one contemporary comment that concerned him, when Chair Rich stated in committee that there was not a “magic formula” for compliance with the Voting Rights Act. Bagley Dep. 110:2-111:23, 121:11-122:13.

92. Dr. McCrary did not offer any opinion about discriminatory intent or about the design of the districts. McCrary Dep. 48:9-21.

93. Dr. Duchin did not offer any opinion about discriminatory intent, but rather offered that she could provide “evidence that might be persuasive in terms of discerning intent” but that she could not “make hard and fast conclusions about what was in the hearts and minds of the legislators or . . . staff.” Duchin Dep. 34:11-22; *see also* Duchin Dep. 34:23-35:6.

Respectfully submitted this 27th day of March, 2023.

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**CERTIFICATE OF COMPLIANCE**

Pursuant to L.R. 7.1(D), the undersigned hereby certifies that the foregoing Statement has been prepared in Century Schoolbook 13, a font and type selection approved by the Court in L.R. 5.1(B).

/s/ Bryan P. Tyson

Bryan P. Tyson

# EXHIBIT A

**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

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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.<sup>1</sup> 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.

<sup>1</sup>*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](https://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

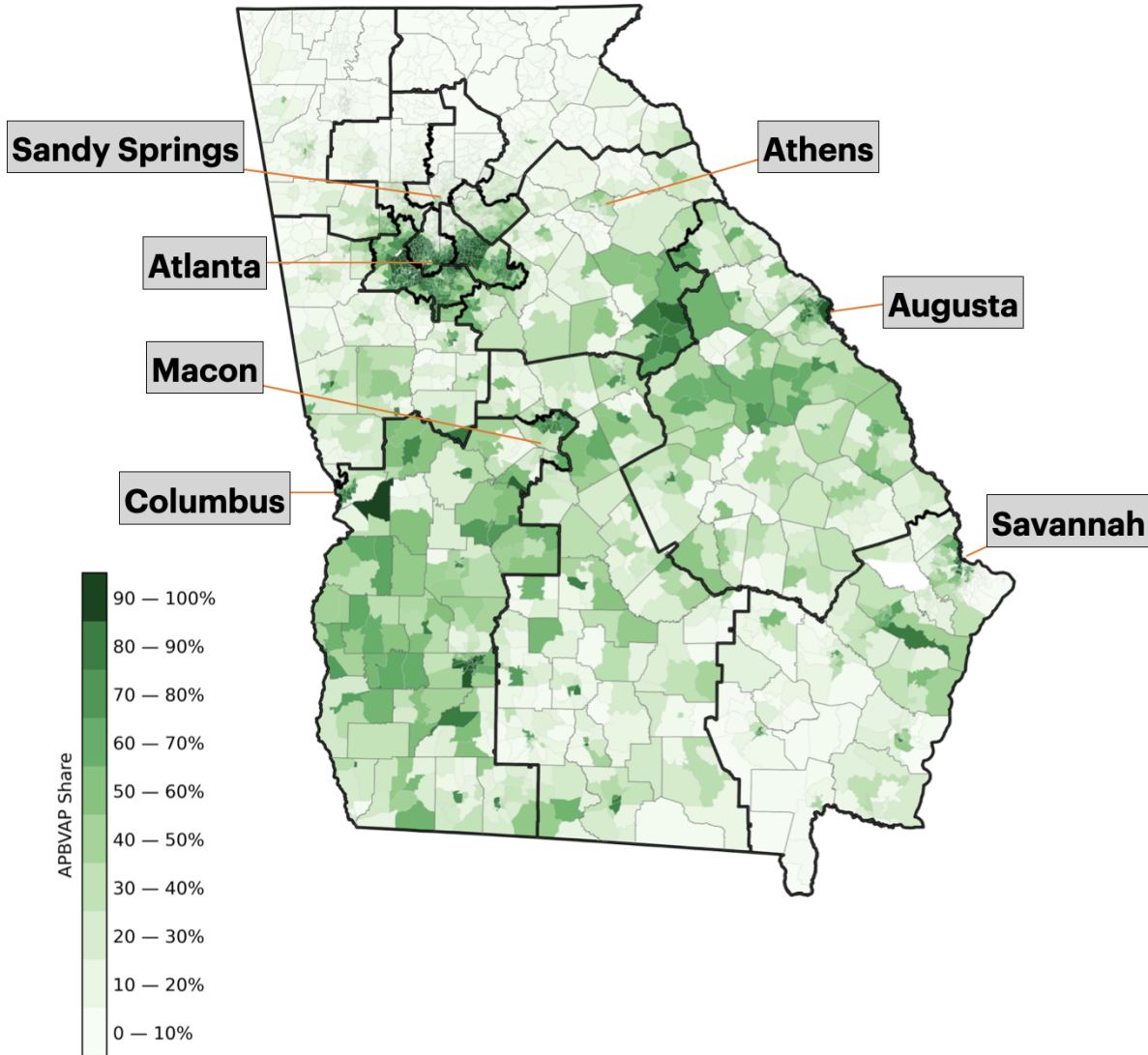


Figure 1: Choropleth of Black voting age population by state precinct, with the enacted Congressional map overlaid. County lines are shown in gray. The Atlanta metro area has dense Black population, while high proportions of Black residents in smaller cities and rural areas can be found in the swath 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."<sup>2</sup>

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.

<sup>2</sup>"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](https://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.<sup>3</sup> 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
<b>TOTPOP</b>	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%
<b>VAP</b>	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%
<b>CVAP</b>	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).<sup>4</sup>

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>BCVAP</b>	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
<b>HCVAP</b>	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
<b>BHCVAP</b>	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
<b>POC CVAP</b>	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
<b>WCVAP</b>	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
<b>total CVAP</b>	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.

<sup>3</sup>As 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.

<sup>4</sup>As 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.

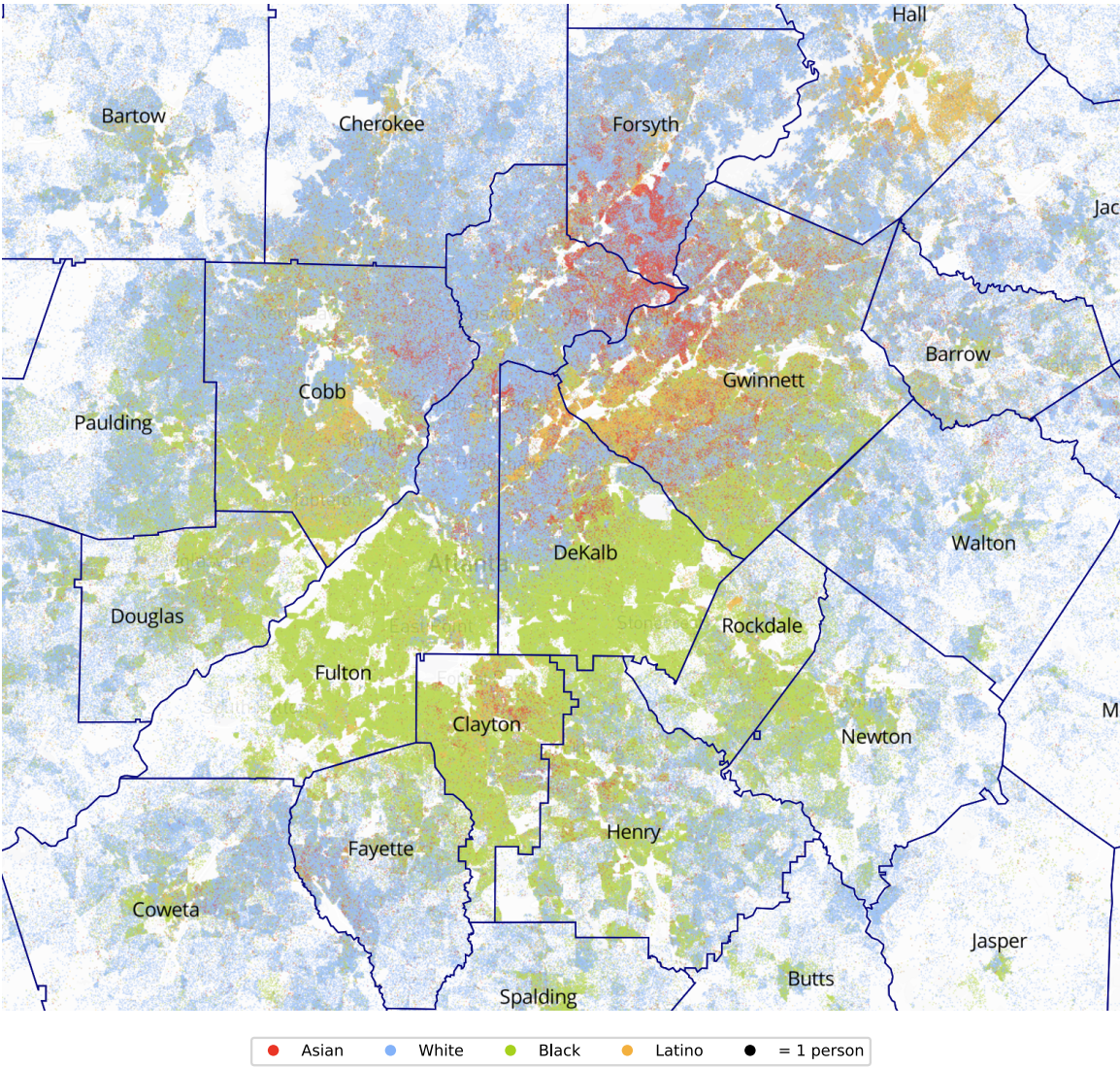


Figure 2: Racial dot density plot in the counties of the Atlanta metro area. Dense concentrations of Black population are visible in Cobb, Douglas, Fulton, Clayton, DeKalb, and southern Gwinnett Counties. Gwinnett is the heart of Georgia’s Latino population, and following the I-85/I-985 corridor north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

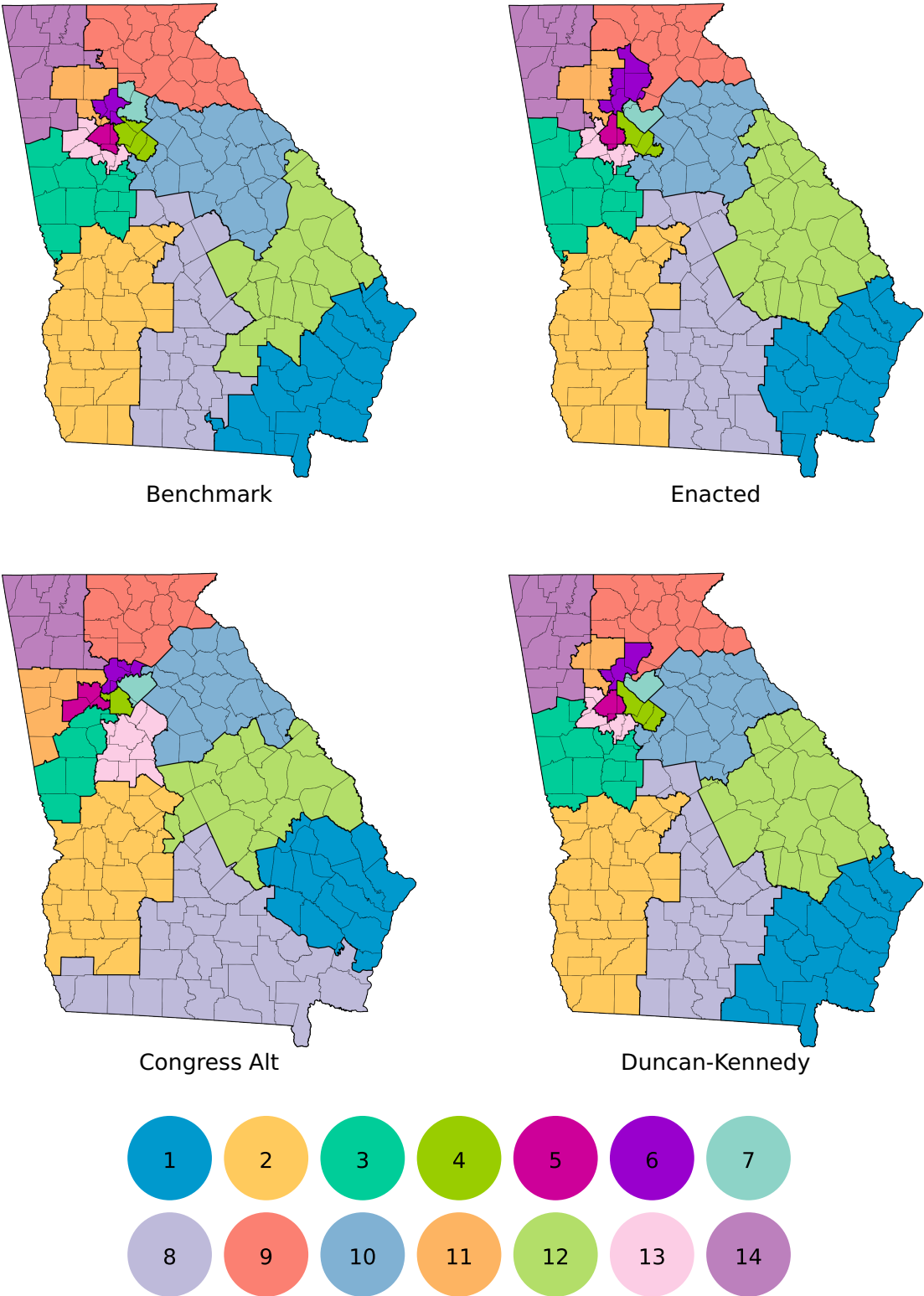


Figure 3: Congressional plans.

## 4.2 State Senate

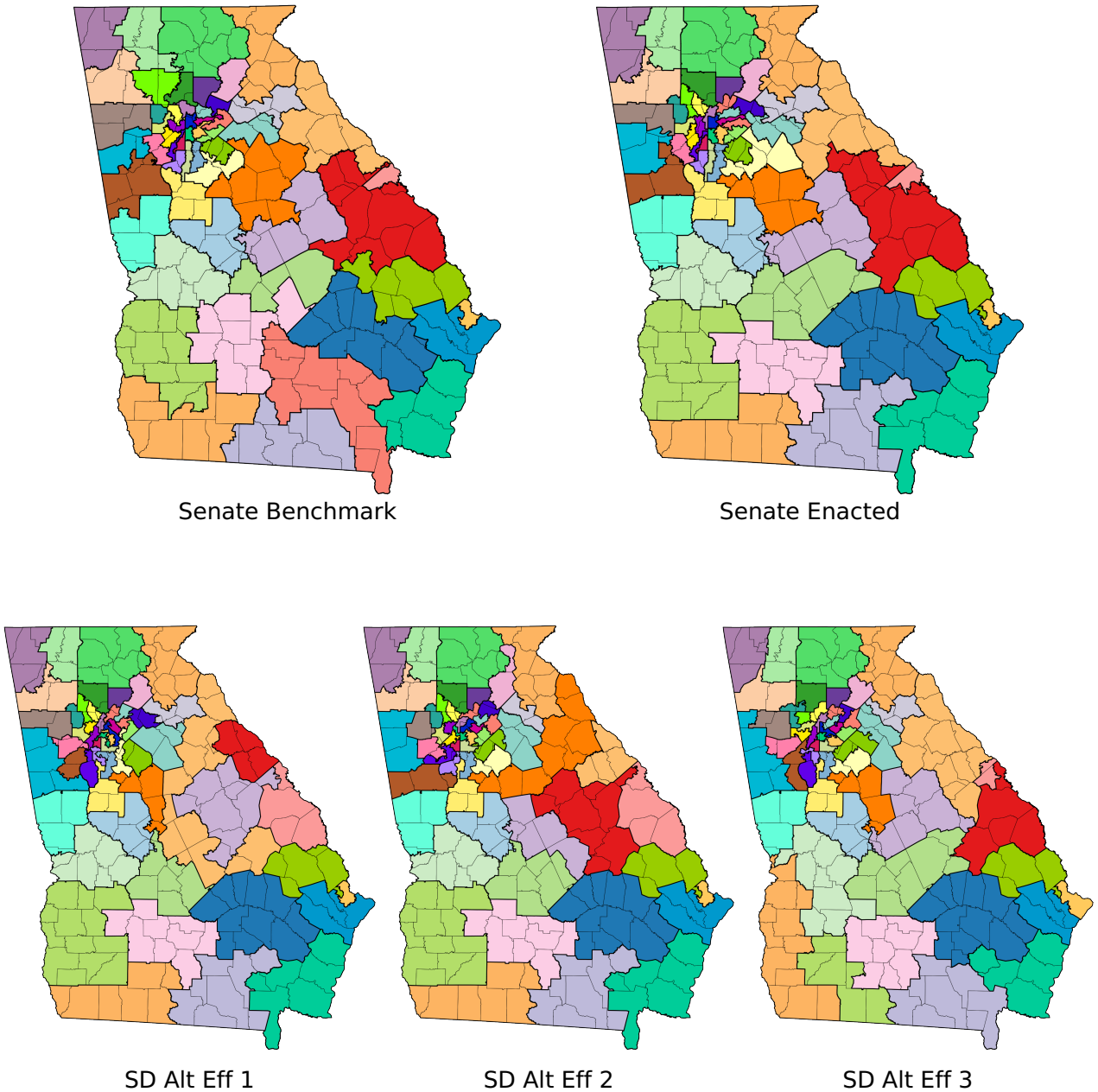


Figure 4: State Senate plans.

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.

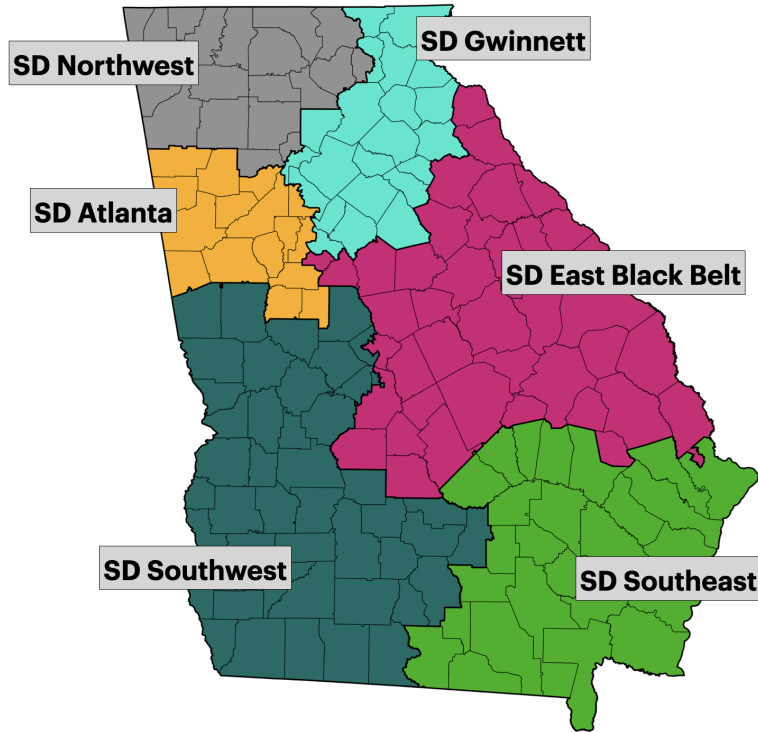


Figure 5: Six "modular" Senate clusters made up of groups of enacted districts. Below, Gingles demonstrative plans will be offered in selected clusters and effectiveness-oriented demonstrative plans will be presented in all six.

**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

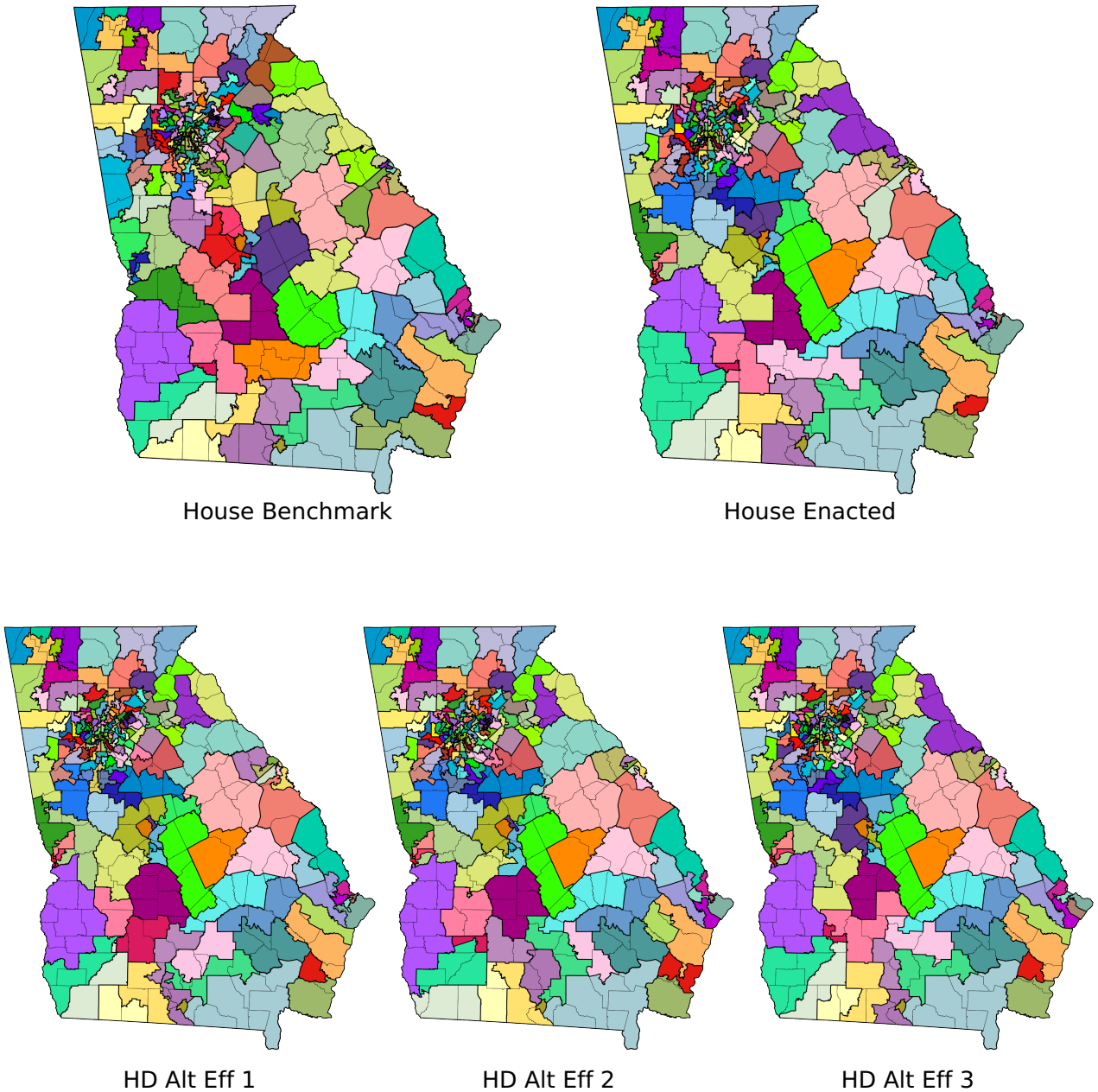


Figure 6: State House plans.

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.

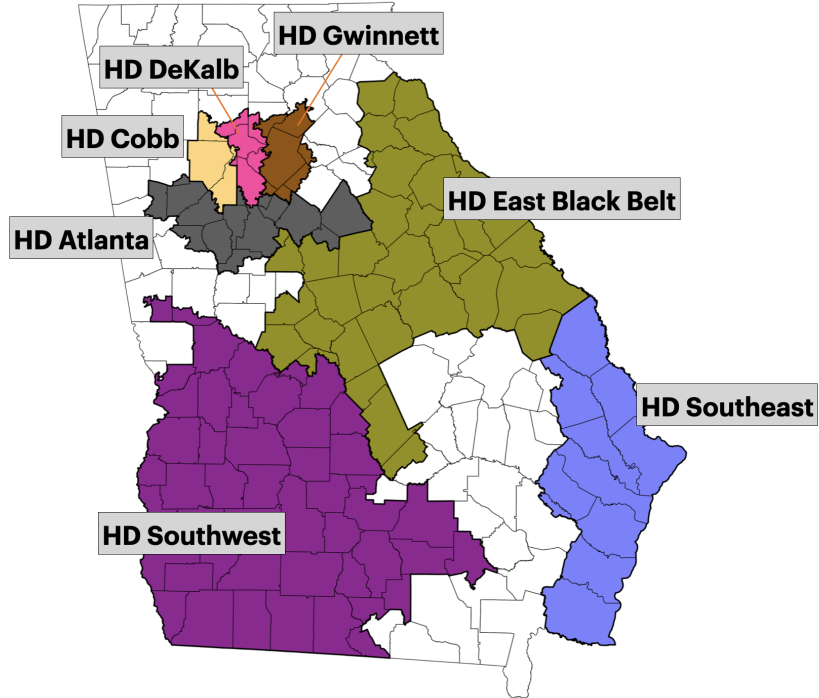


Figure 7: Seven "modular" House clusters made up of groups of enacted districts.

### 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.<sup>5</sup>

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.<sup>6</sup>

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<sup>5</sup>It 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.

<sup>6</sup>Even 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.<sup>7</sup> 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%).

<b>CD</b>	<b>Primaries</b> out of 4	<b>Generals</b> out of 8	<b>Effective?</b>
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.

<b>CD</b>	<b>James18P</b>	<b>Thornton18P</b>	<b>Thornton18R</b>	<b>Robinson18P</b>
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.)

<sup>7</sup>Indeed, 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.

<b>CD</b>	<b>Clinton16</b>	<b>Abrams18</b>	<b>Thornton18</b>	<b>Biden20</b>	<b>Blackman20</b>	<b>Ossoff21</b>	<b>Warnock21</b>	<b>Abrams22</b>
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.

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

	<b>avg Polsby-Popper</b> (higher is better)	<b>avg Reock</b> (higher is better)	<b>Block cut edges</b> (lower is better)
<b>BenchmarkCD</b>	0.238	0.452	5775
<b>EnactedCD</b>	0.267	0.441	5075
<b>DuncanKennedy</b>	0.295	0.471	4665
<b>CD Alt</b>	0.287	0.452	4729
<b>BenchmarkSD</b>	0.250	0.421	12,549
<b>EnactedSD</b>	0.287	0.418	11,005
<b>SD Alt Eff 1</b>	0.287	0.427	10,897
<b>SD Alt Eff 2</b>	0.296	0.440	10,349
<b>SD Alt Eff 3</b>	0.295	0.431	10,479
<b>BenchmarkHD</b>	0.244	0.382	24,001
<b>EnactedHD</b>	0.278	0.391	22,014
<b>HD Alt Eff 1</b>	0.275	0.399	21,360
<b>HD Alt Eff 2</b>	0.281	0.406	21,301
<b>HD Alt Eff 3</b>	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.<sup>8</sup>

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").<sup>9</sup> These primarily include cities and towns.

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

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

<sup>8</sup>This 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.

<sup>9</sup><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
<b>BenchmarkCD</b>	4	4	4	5
<b>EnactedCD</b>	2	5	4	5
<b>Duncan-Kennedy CD Alt</b>	3	5	4	5
	4	6	6	6
<b>BenchmarkSD</b>	14	17	17	19
<b>EnactedSD</b>	14	17	17	19
<b>SD Alt Eff 1</b>	17	23	22	23
<b>SD Alt Eff 2</b>	15	21	21	23
<b>SD Alt Eff 3</b>	8	17	16	28
<b>BenchmarkHD</b>	46	57	57	62
<b>EnactedHD</b>	49	62	60	68
<b>HD Alt Eff 1</b>	50	77	74	77
<b>HD Alt Eff 2</b>	44	75	71	79
<b>HD Alt Eff 3</b>	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.<sup>10</sup> 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.<sup>11</sup>

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.

<sup>10</sup>See [law.georgia.gov/opinions/2001-3-0](http://law.georgia.gov/opinions/2001-3-0).

<sup>11</sup>With 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 and 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

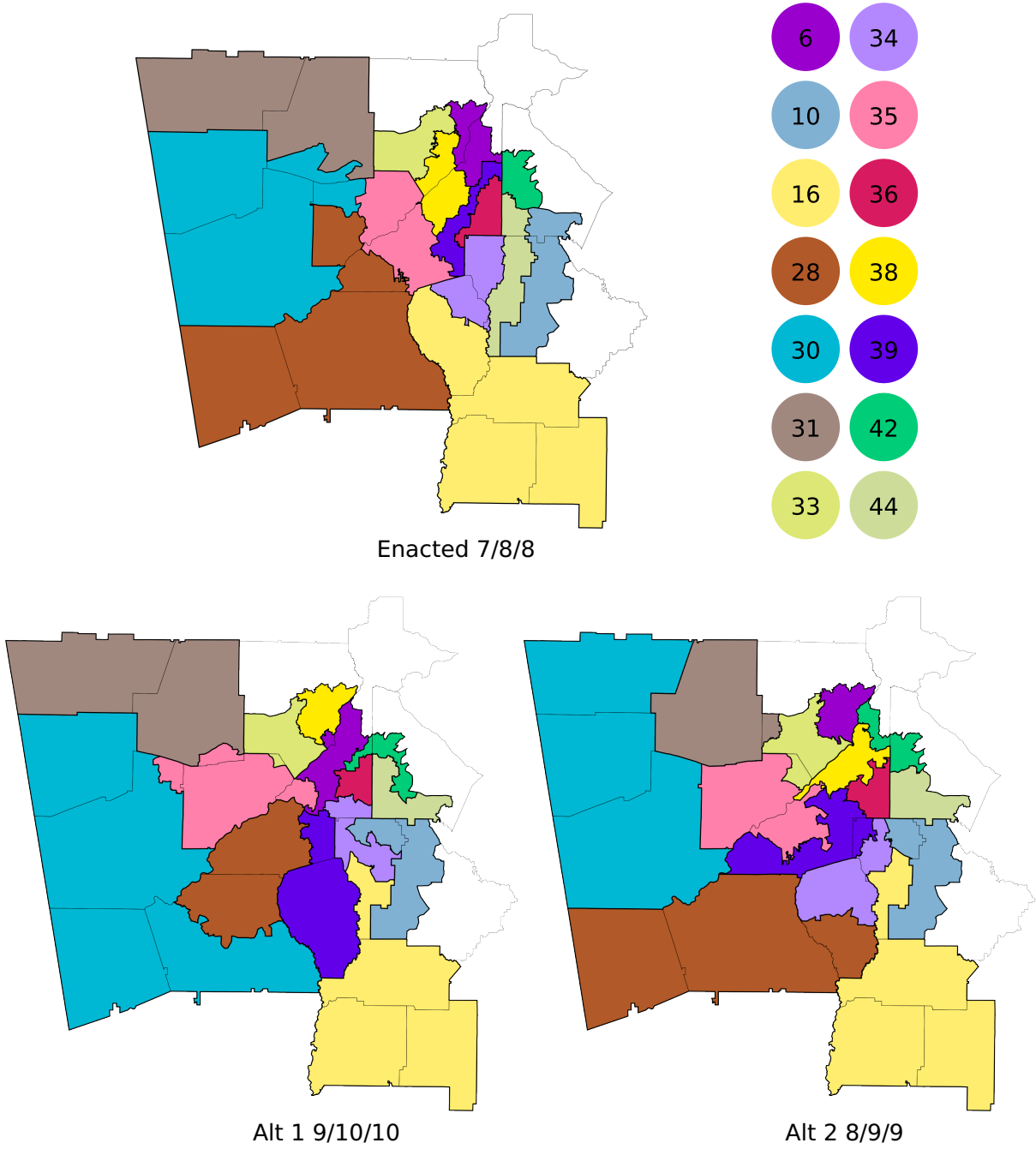


Figure 8: SD Atlanta (14 districts).

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.

7.2.2 SD Gwinnett

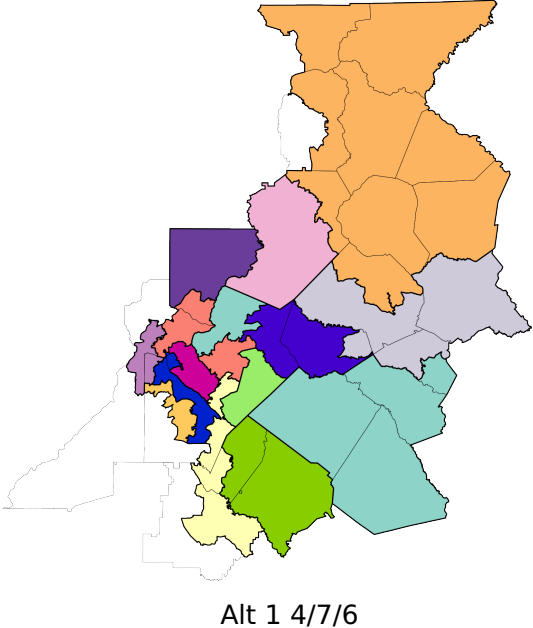
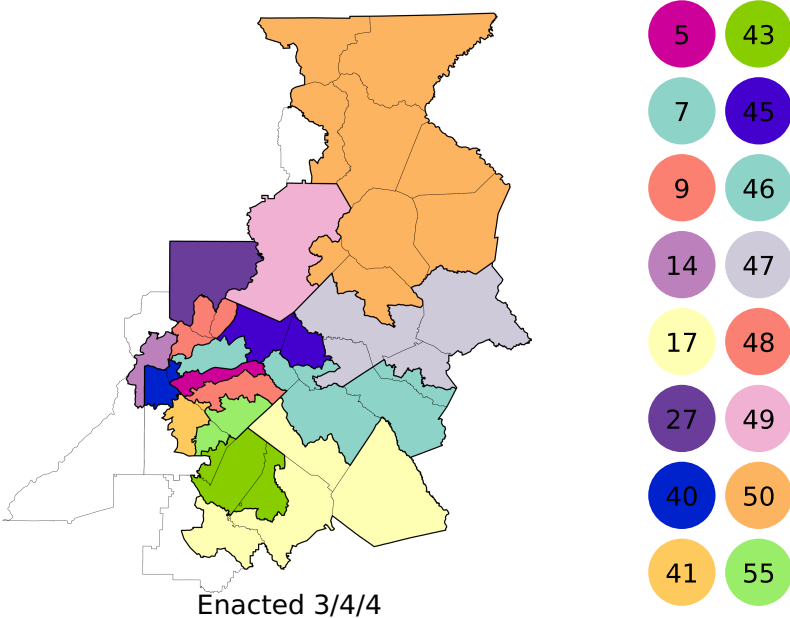


Figure 9: SD Gwinnett (16 districts).

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

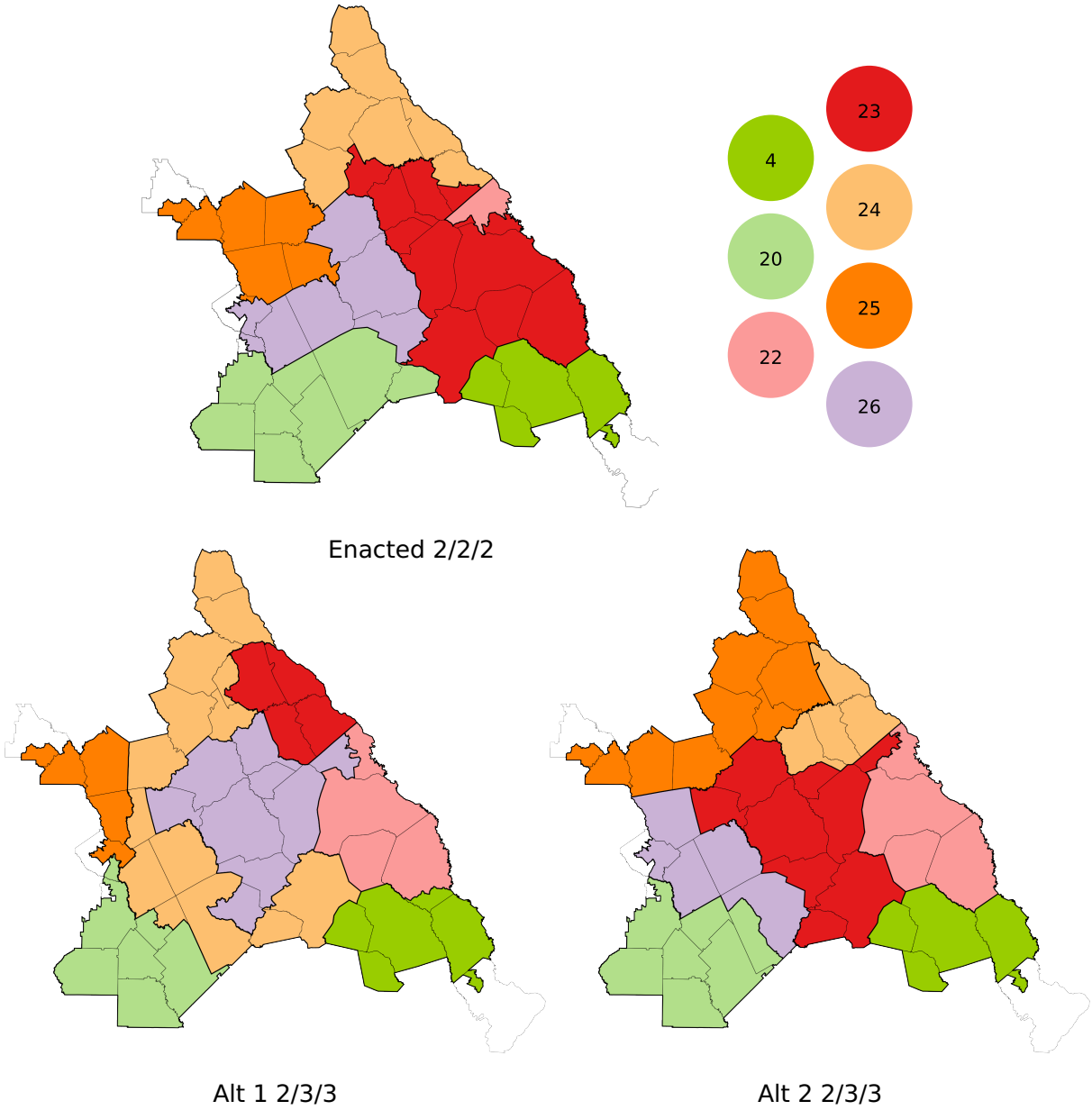


Figure 10: SD East Black Belt (7 districts).



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.

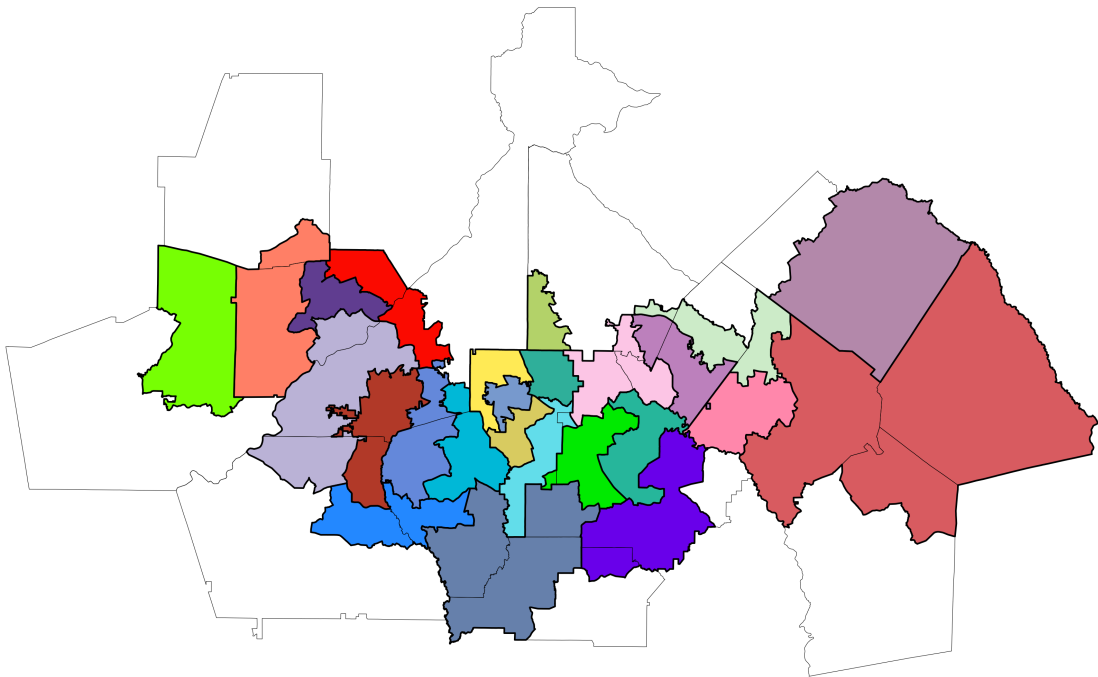
SD	SD East Black Belt Enacted						SD Alt 2					
	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock	Black VAP	Hisp VAP	BH VAP	White VAP	Polsby Popper	Reock
4	23.4%	5.5%	28.9%	66.8%	0.265	0.471	23.4%	5.5%	28.9%	66.8%	0.265	0.471
20	31.3%	3.5%	34.8%	61.7%	0.358	0.404	32.5%	4.9%	37.4%	58.7%	0.304	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.

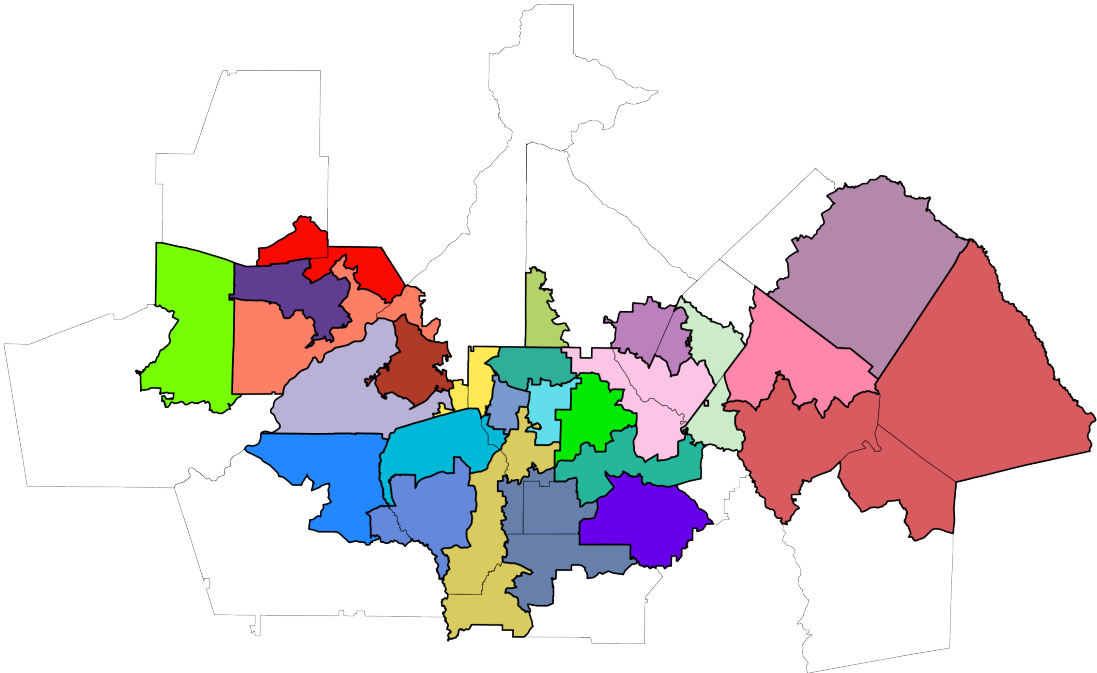
#### 7.3.1 HD Atlanta



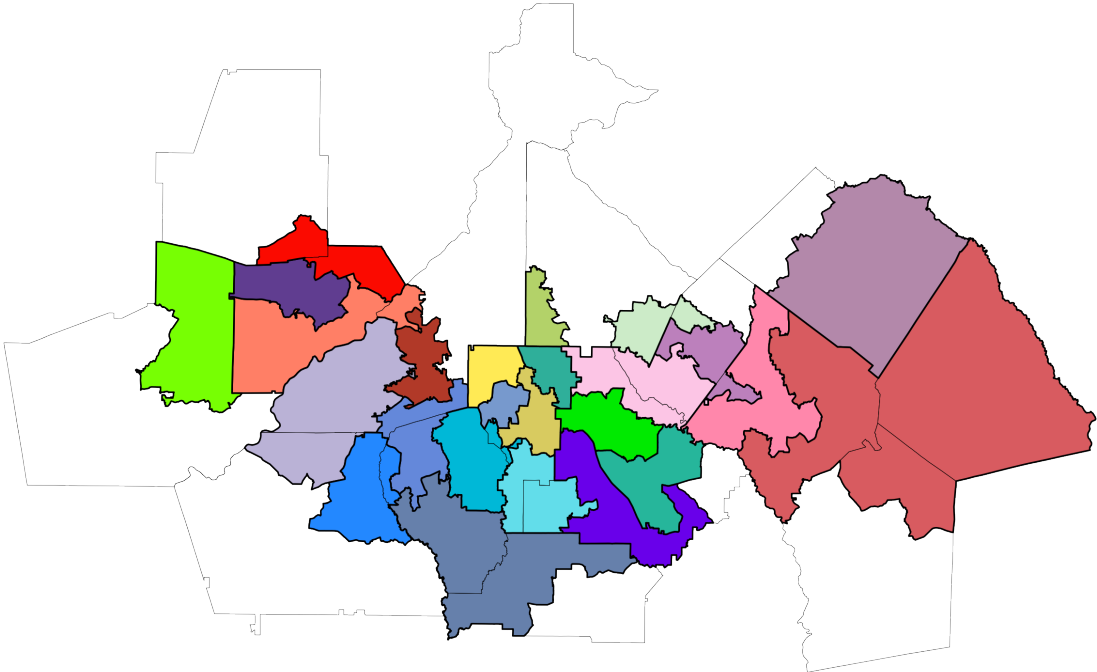
Enacted 18/18/18



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

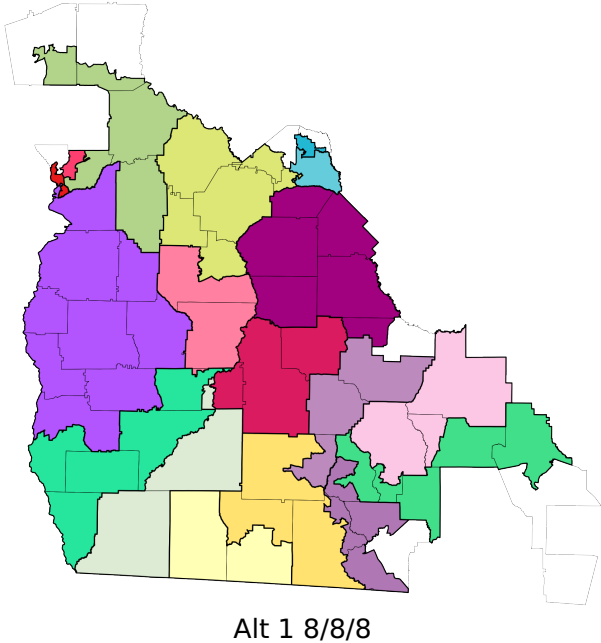
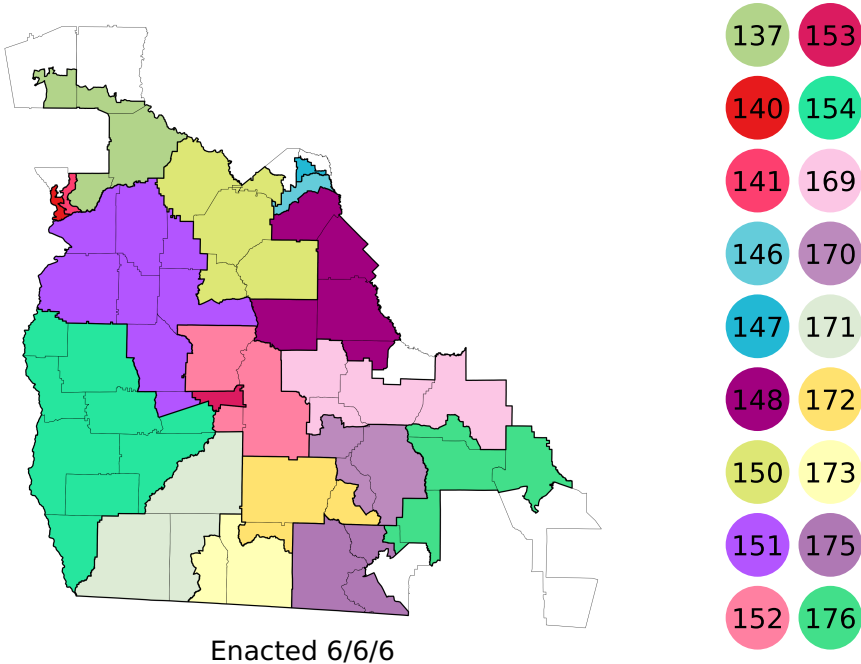


Figure 13: HD Southwest (18 districts).

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

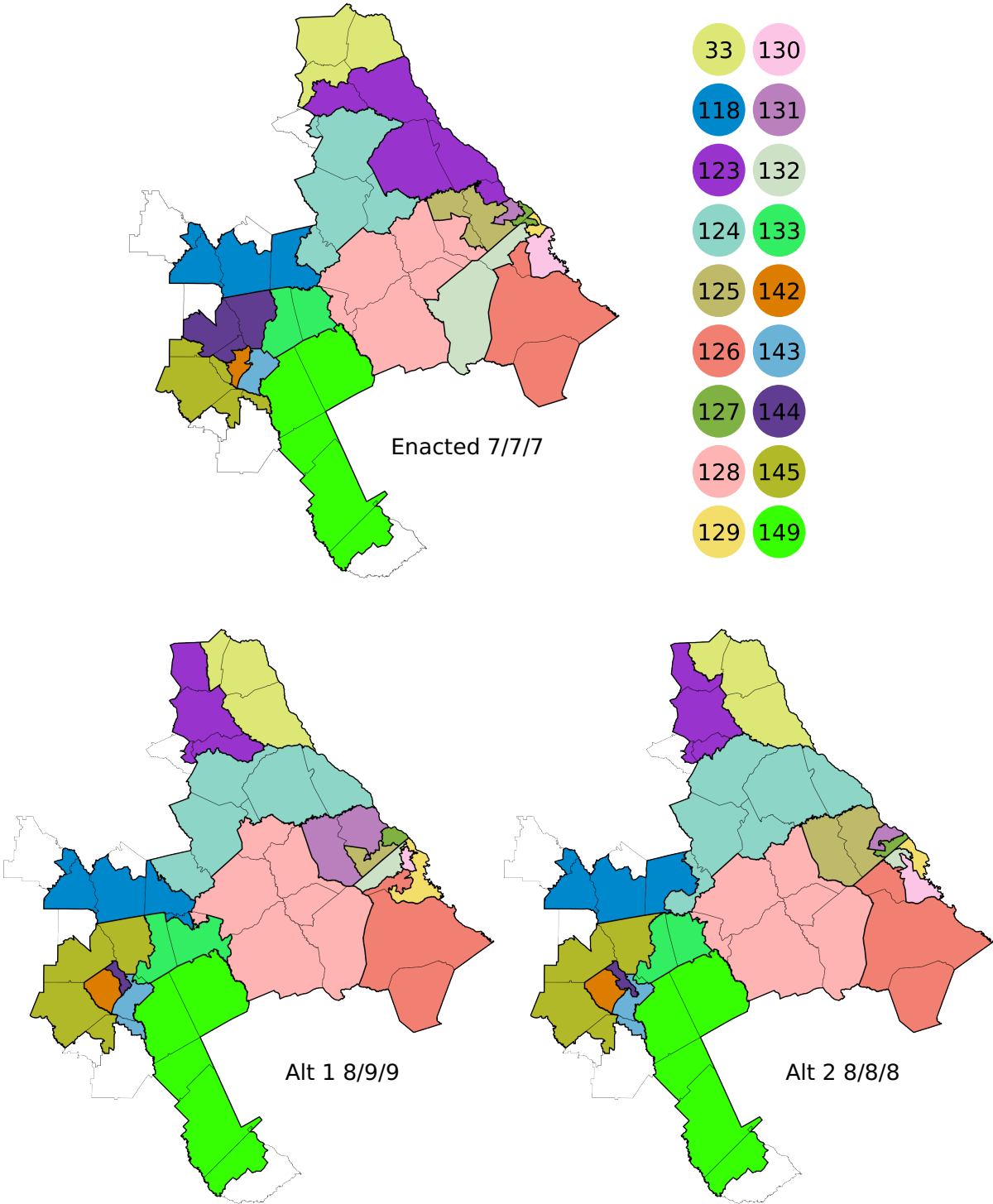


Figure 14: HD East Black Belt (18 districts).

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

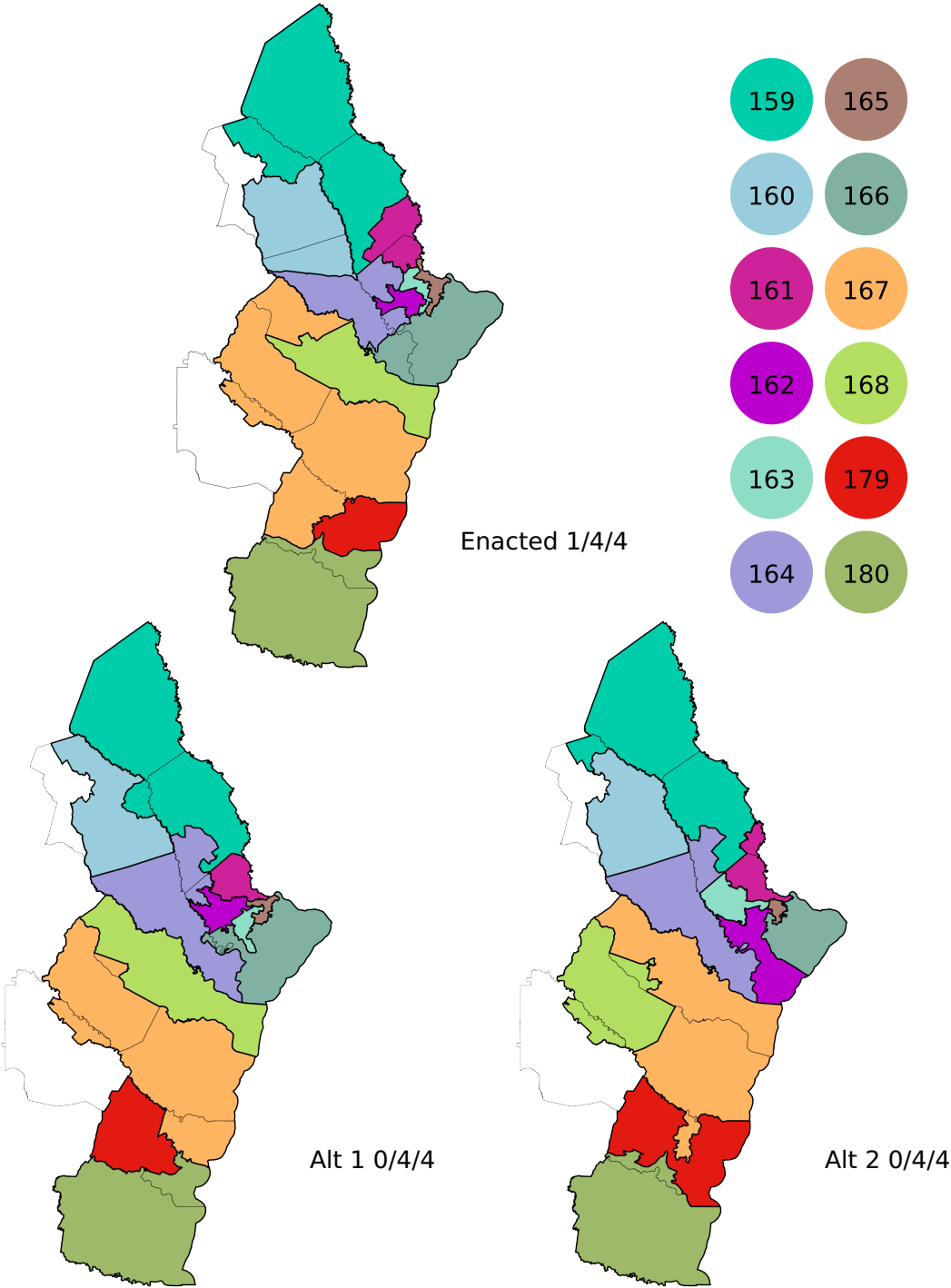


Figure 15: HD Southeast (12 districts).

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.

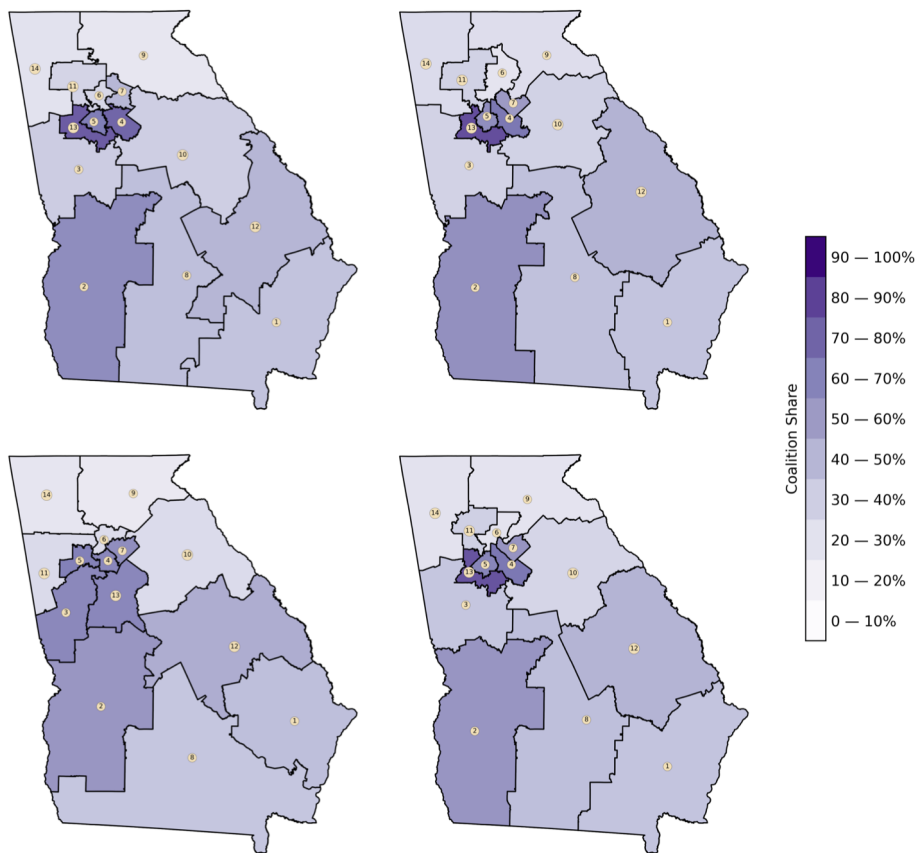


Figure 16: The benchmark plan (top left), the enacted plan (top right), and the Duncan-Kennedy plan (bottom right) all exhibit a pronounced pattern of packing and cracking relative to the alternative Congressional plan presented here (CD Alt, bottom left).



### 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.

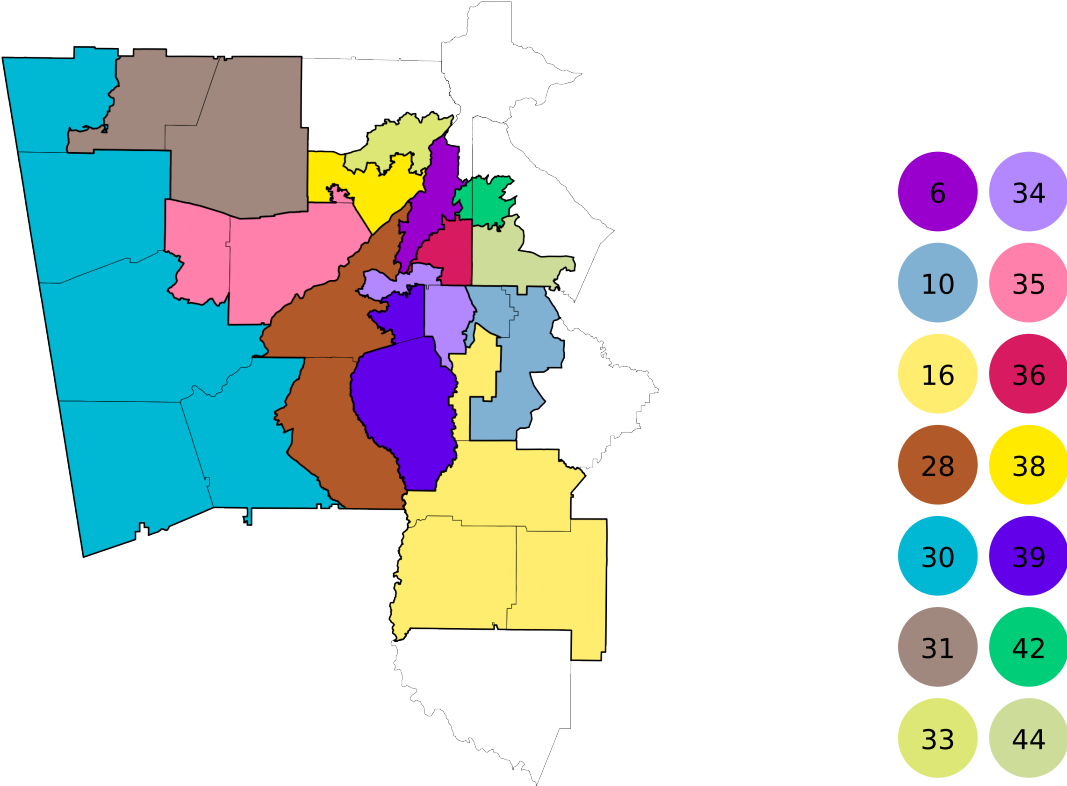


Figure 17: SD Atlanta alternative effective plan.

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).

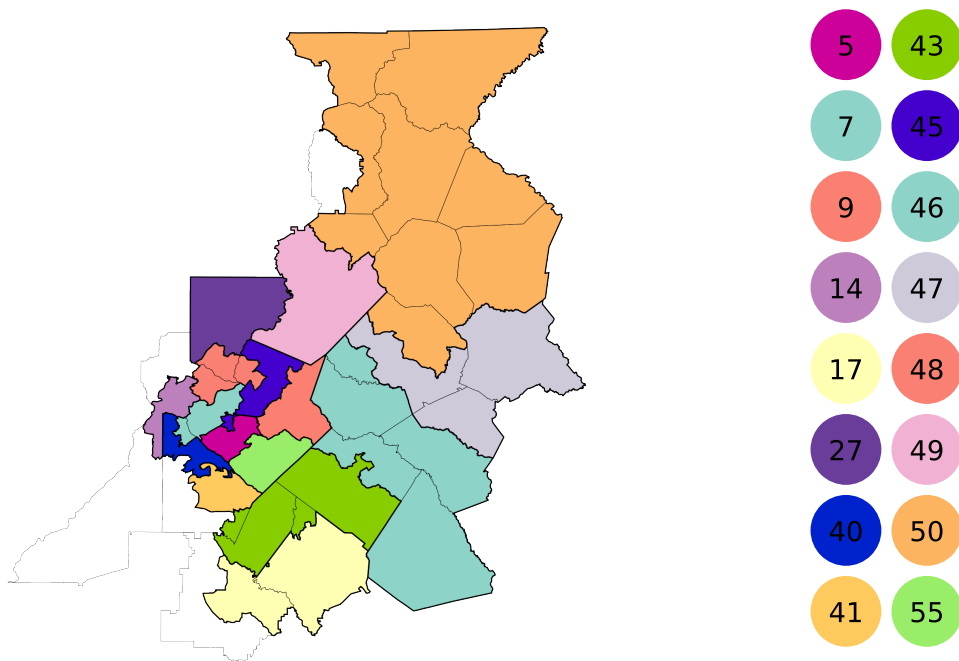


Figure 18: SD Gwinnett alternative effective plan.

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).

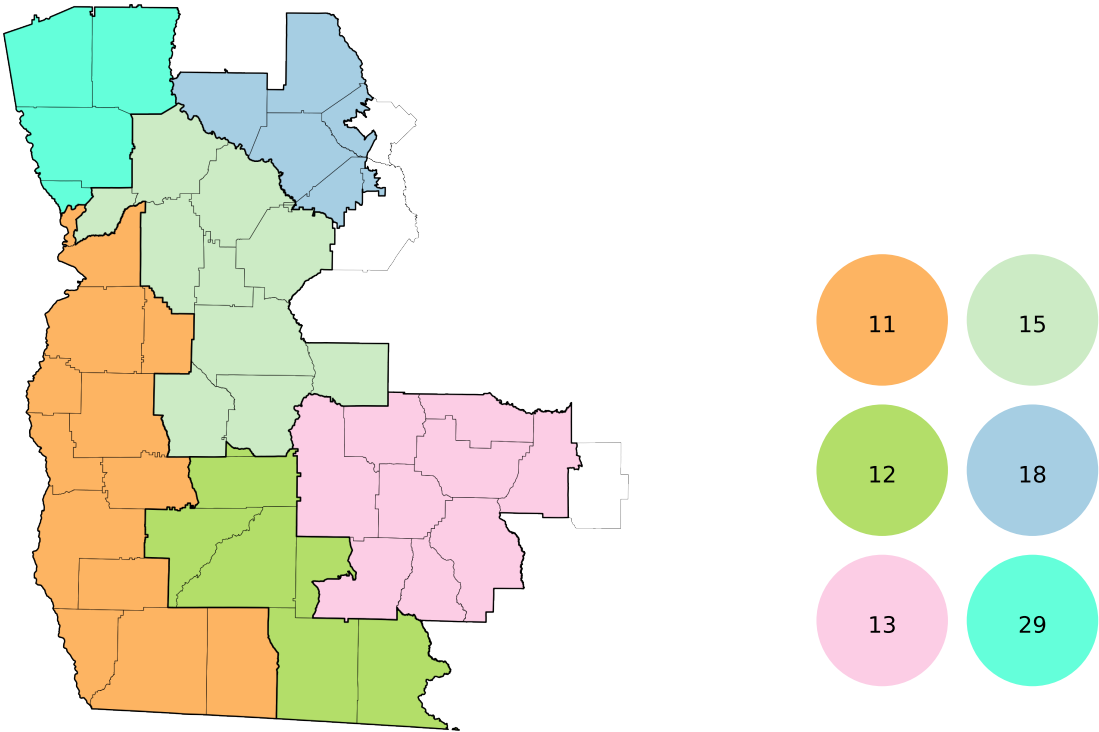


Figure 19: SD Southwest alternative effective plan.

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).

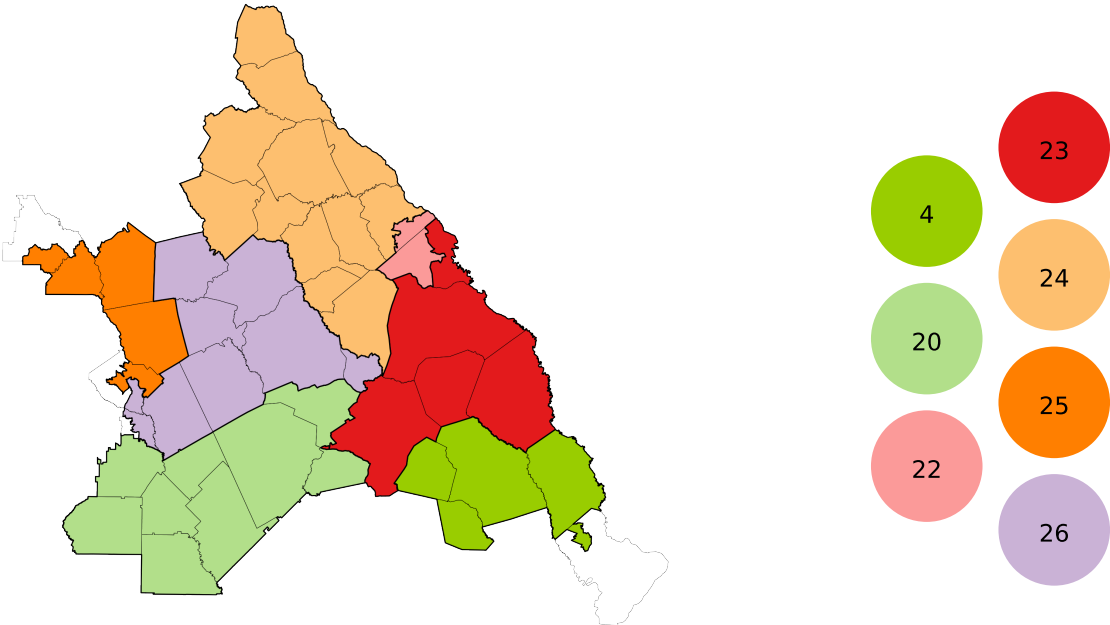


Figure 20: SD East Black Belt alternative effective plan.

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).

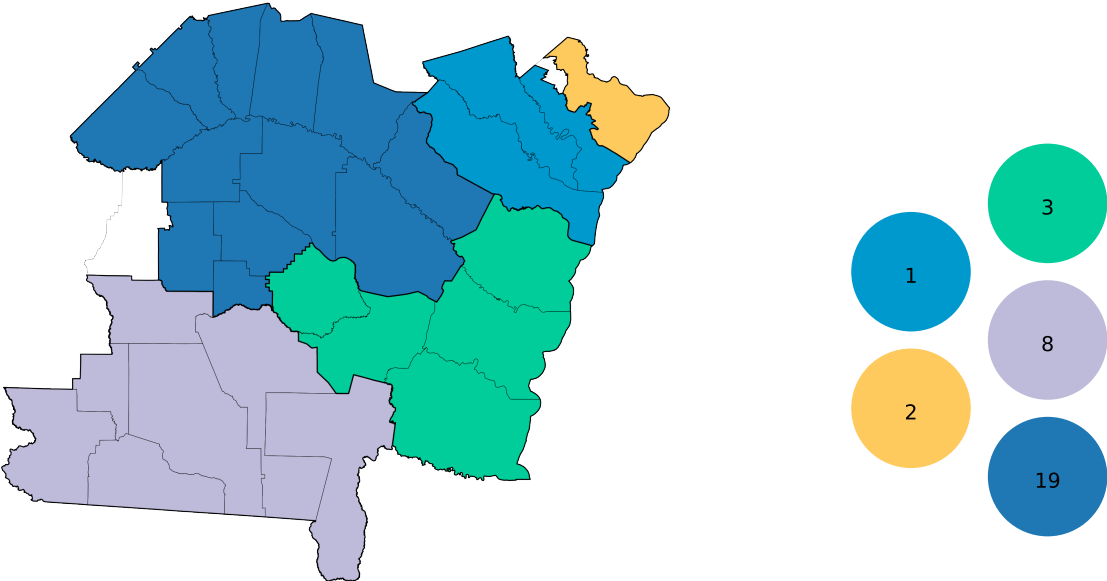


Figure 21: SD Southeast alternative effective plan.

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).

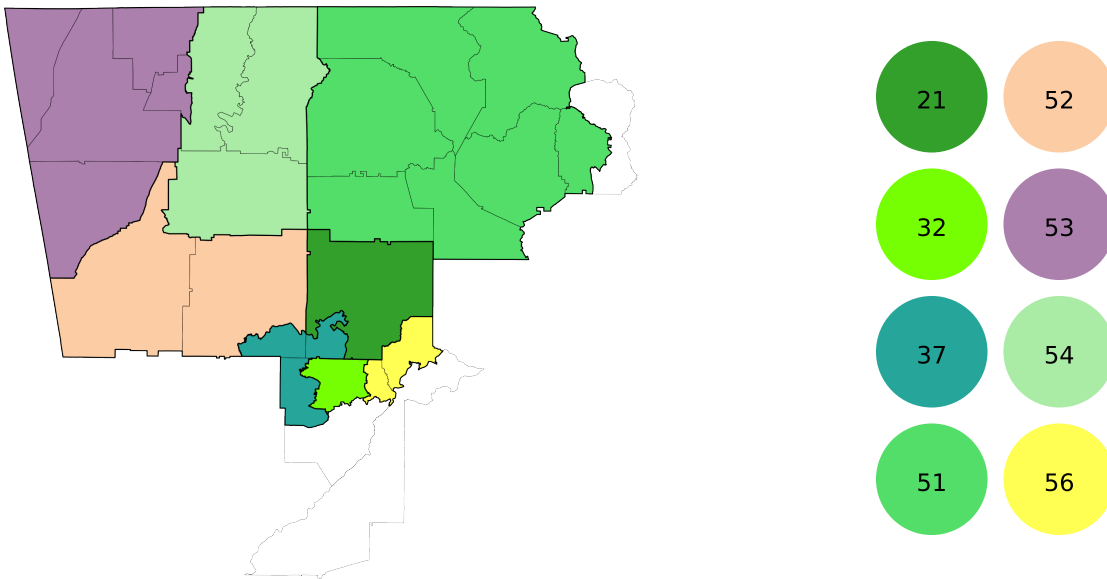


Figure 22: SD Northwest alternative plan that increases effectiveness by creating a competitive SD 32 that is well aligned with Black and Latino preferences in primary elections.

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.

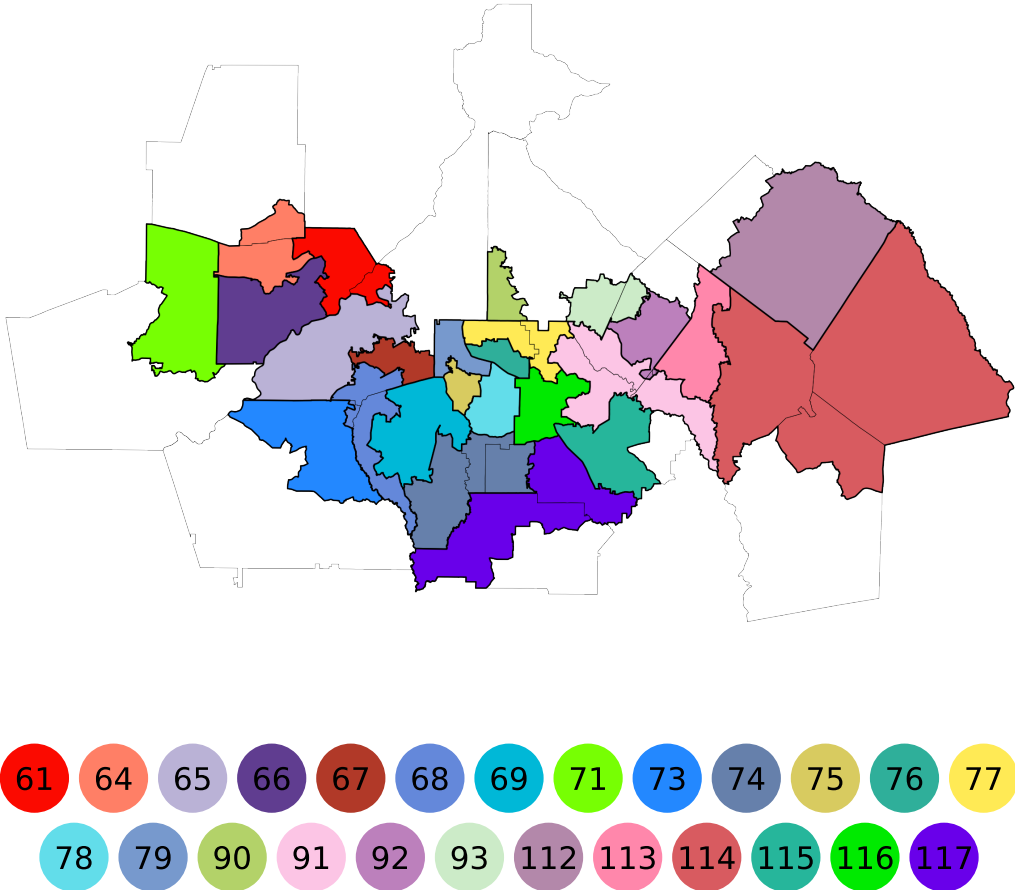


Figure 23: HD Atlanta Alt Eff 3 plan.



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).

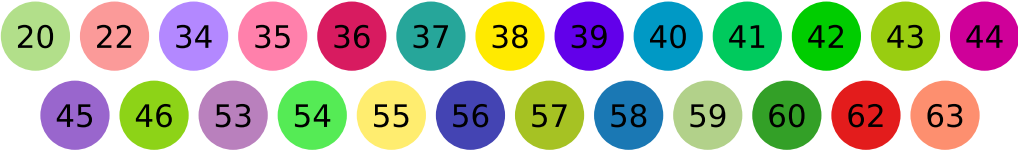
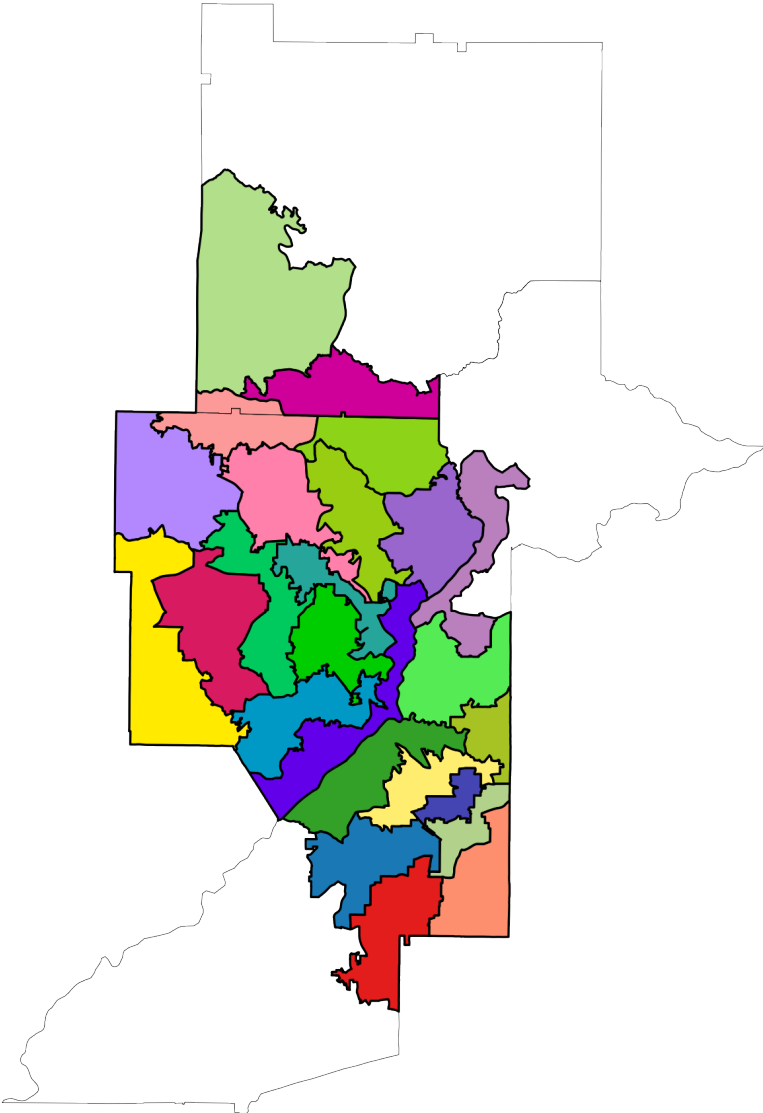


Figure 24: HD Cobb Alt Eff 3 plan.

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).

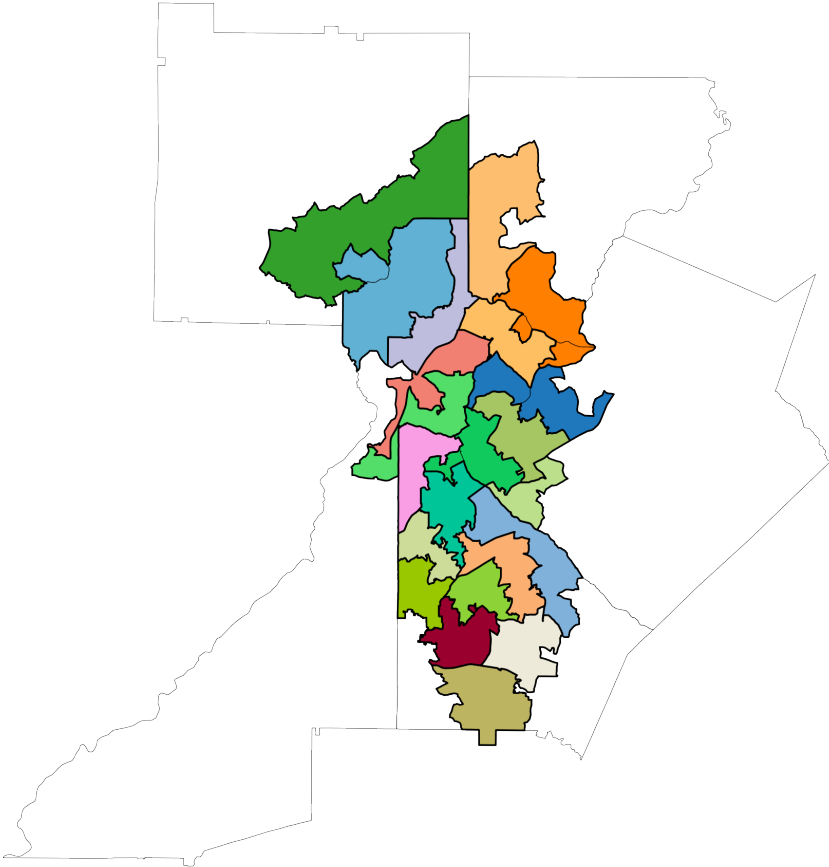


Figure 25: HD DeKalb Alt Eff 3 plan.

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).

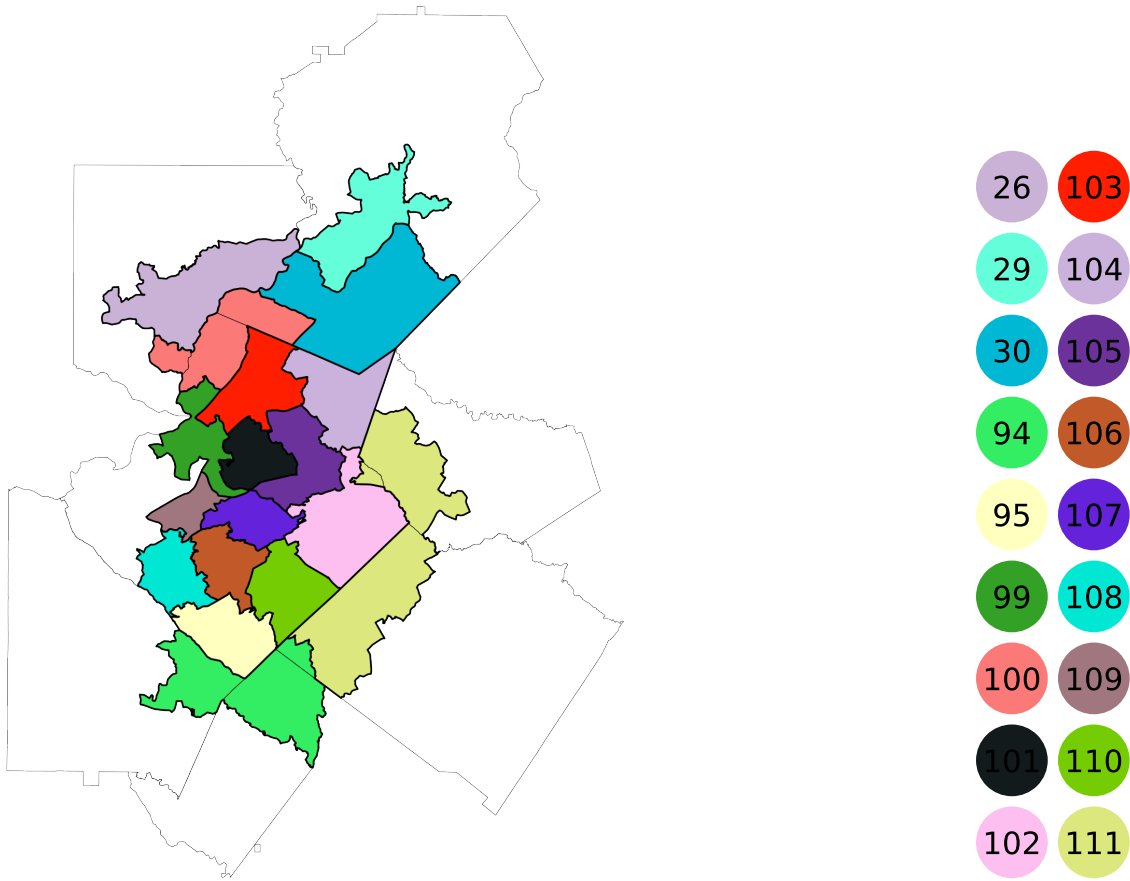


Figure 26: HD Gwinnett Alt Eff 3 plan.

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).

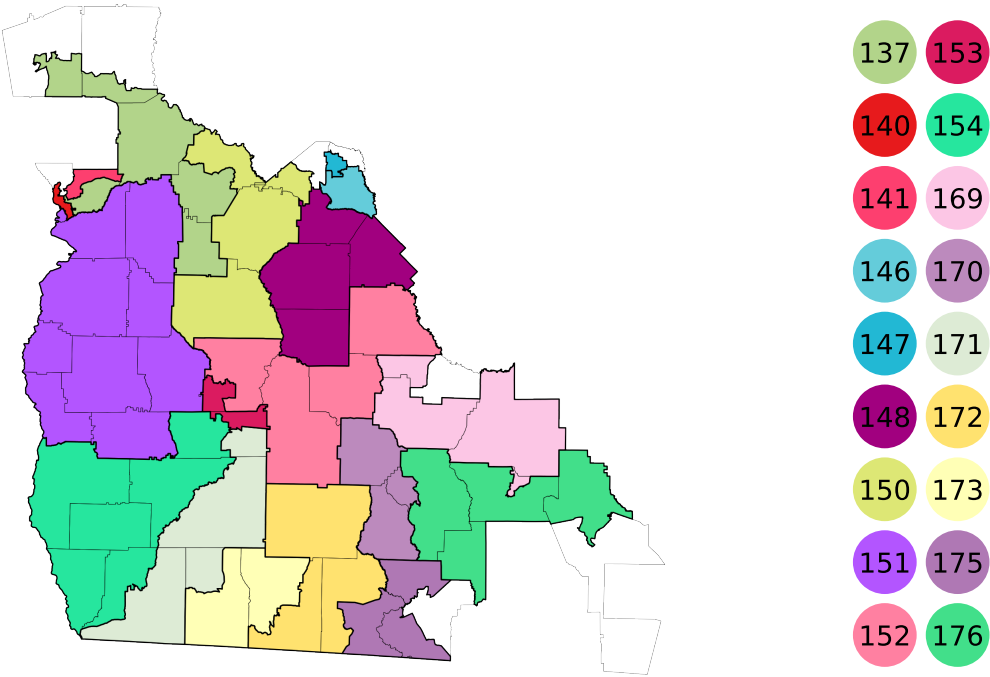


Figure 27: HD Southwest Alt Eff 3 plan.



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).

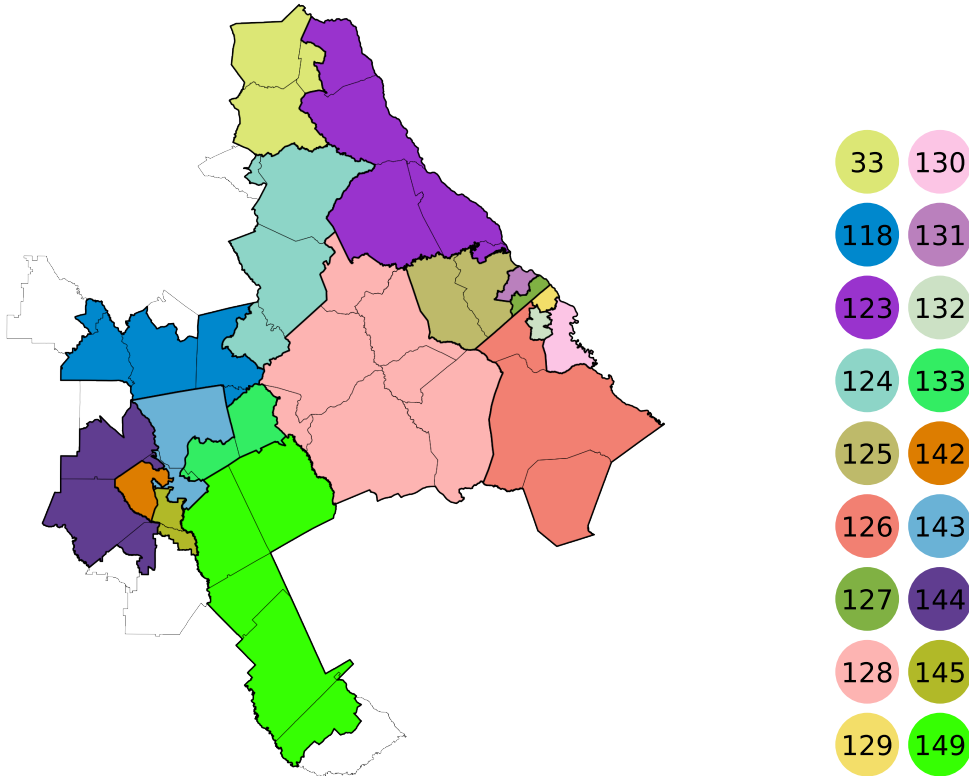


Figure 28: HD East Black Belt Alt Eff 3 plan.

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).

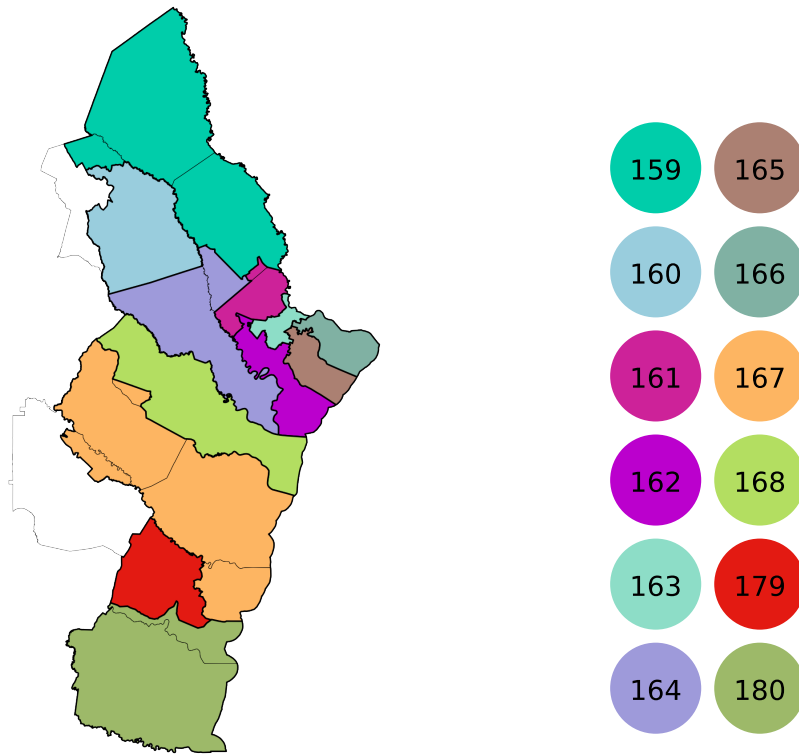


Figure 29: HD Southeast Alt Eff 3 plan.

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.

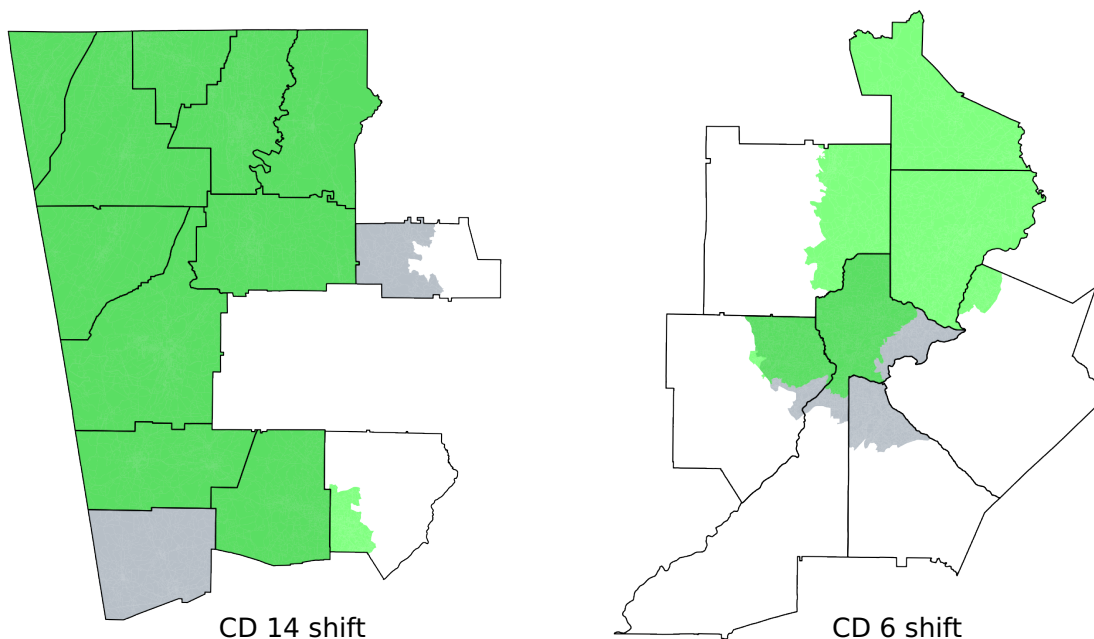


Figure 30: These before-and-after plots show benchmark configurations in gray, while new district placement is in light green. We can see that CD 14 made a new incursion into Cobb County while shedding rural Haralson and part of Pickens County. Meanwhile, CD 6 went sharply the other way, withdrawing 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.)

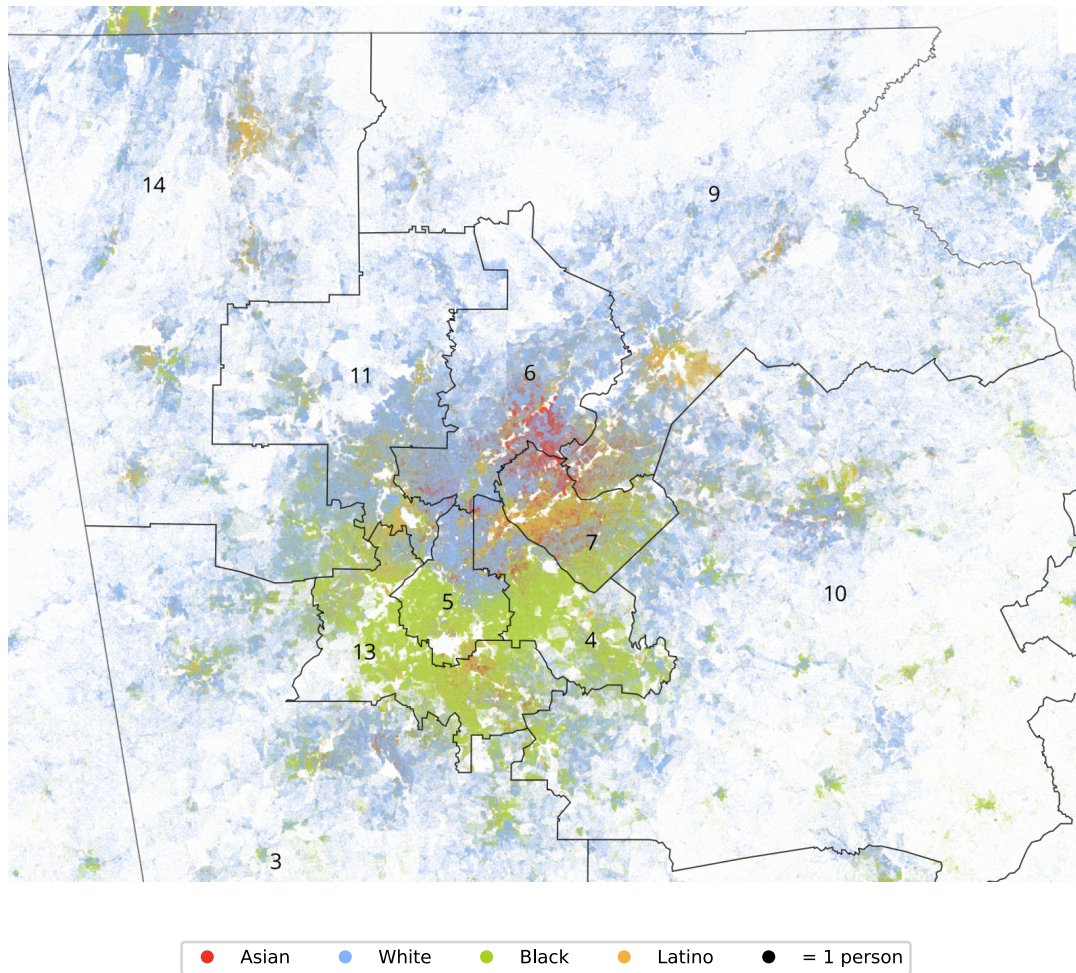


Figure 31: This dot density plot makes it clear—through thicker arrangement of dots, with green dots predominating—that dense African-American neighborhoods in Cobb were brought in at the southern tip of CD 14. These voters were therefore submerged among more numerous, dissimilar communities from CD 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%.

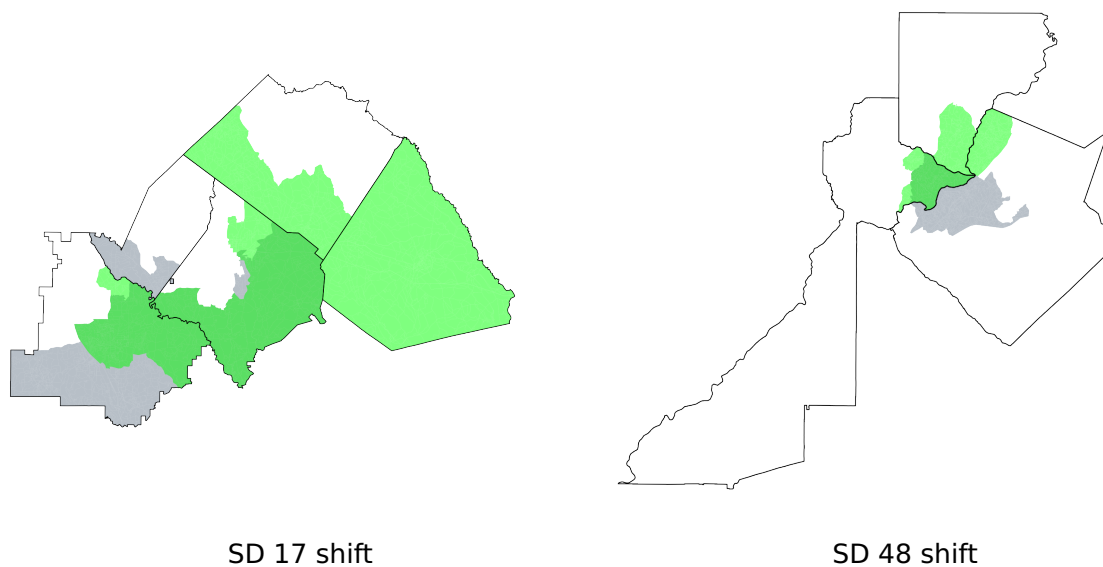


Figure 32: These before-and-after plots show benchmark configurations in gray, while new district placement is in light green. The new configurations are clearly not made to improve compactness, and they increase the number of county traversals.

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.

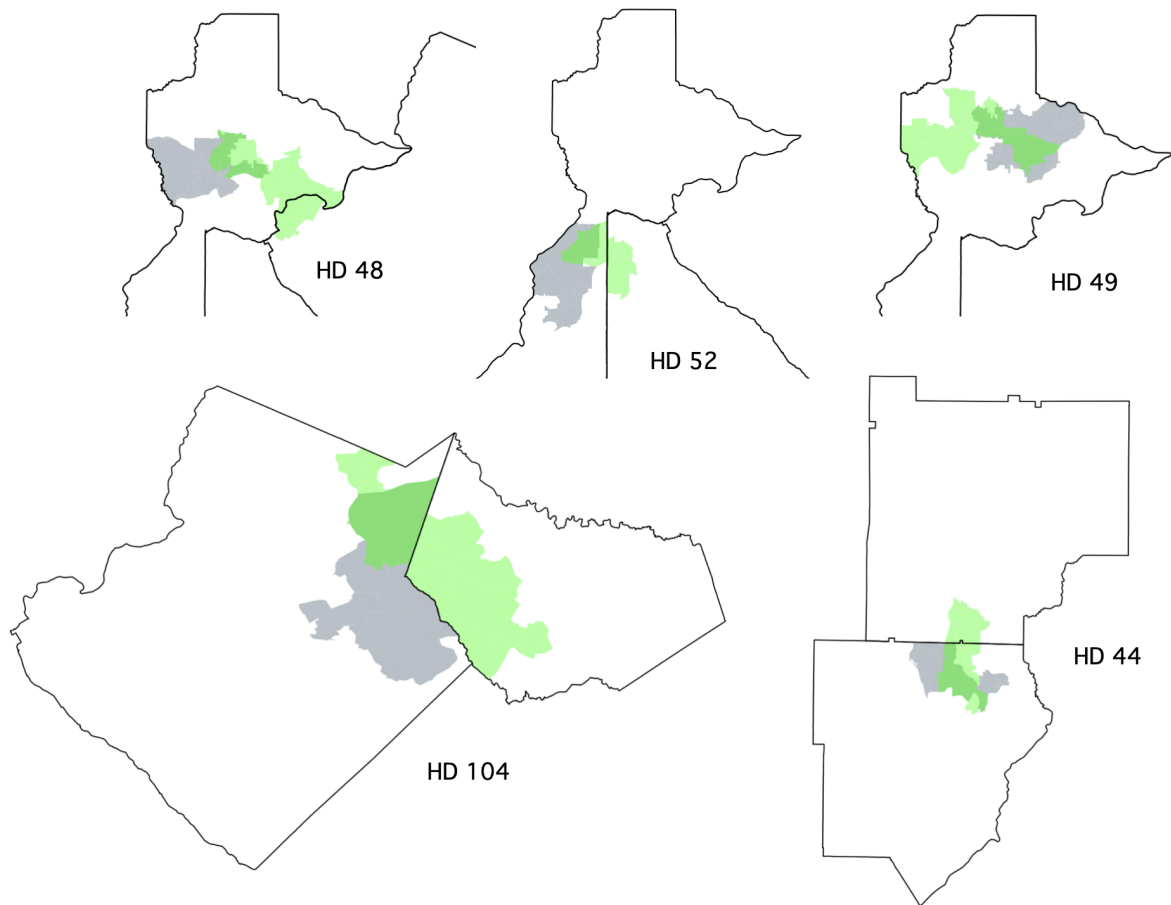


Figure 33: Each of these "dismantled" House districts from the metro Atlanta area (Table 40) was moved in such a way that the previous residents are scattered across multiple districts in the new plan. These districts had become politically swingy in the time since the last Census but are now rebuilt 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.

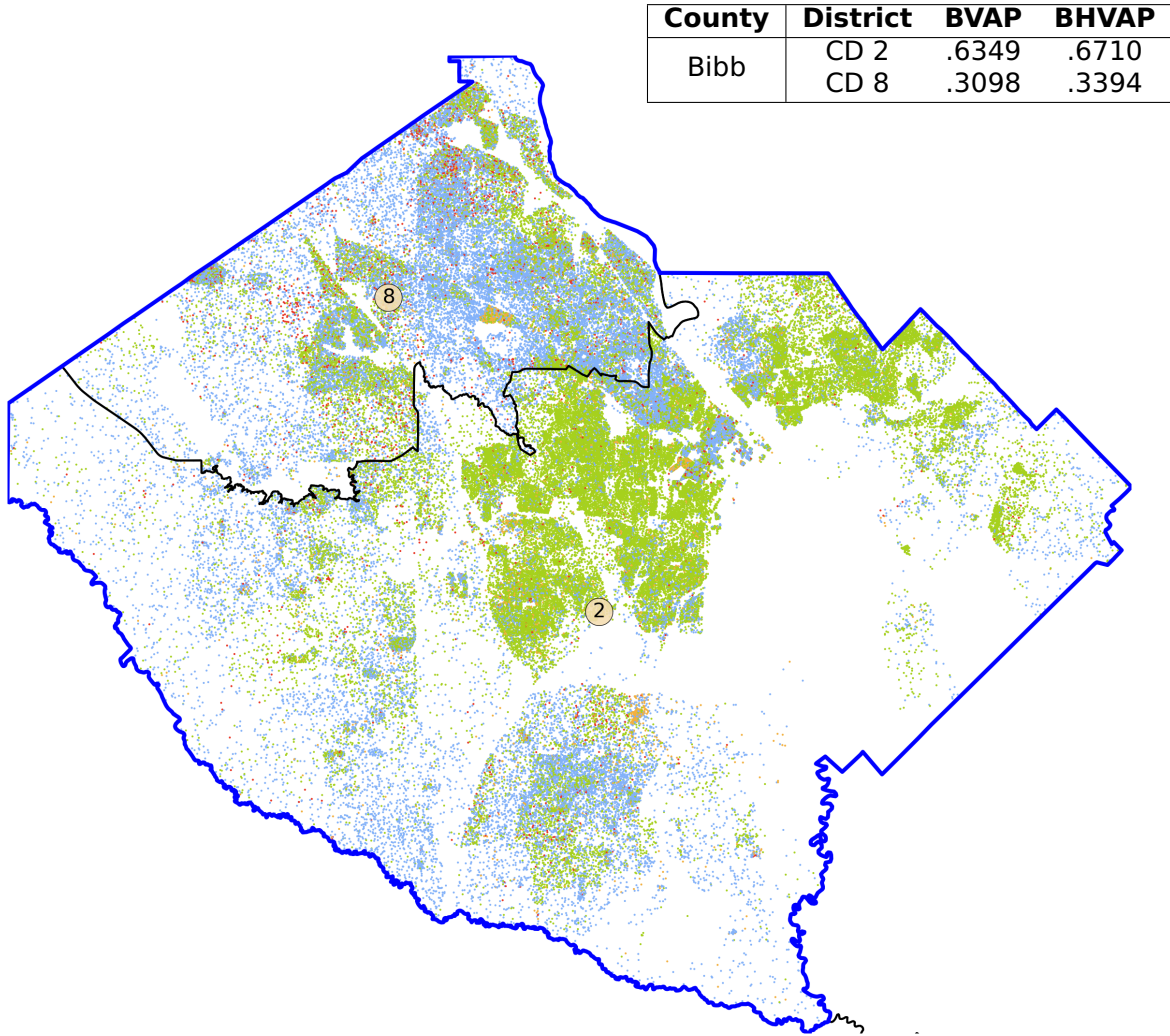


Figure 34: Minutely race-conscious decisions are evident along the boundary of CD 2 and CD 8 in Bibb County.

<b>County</b>	<b>District</b>	<b>BVAP</b>	<b>BHVAP</b>
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.

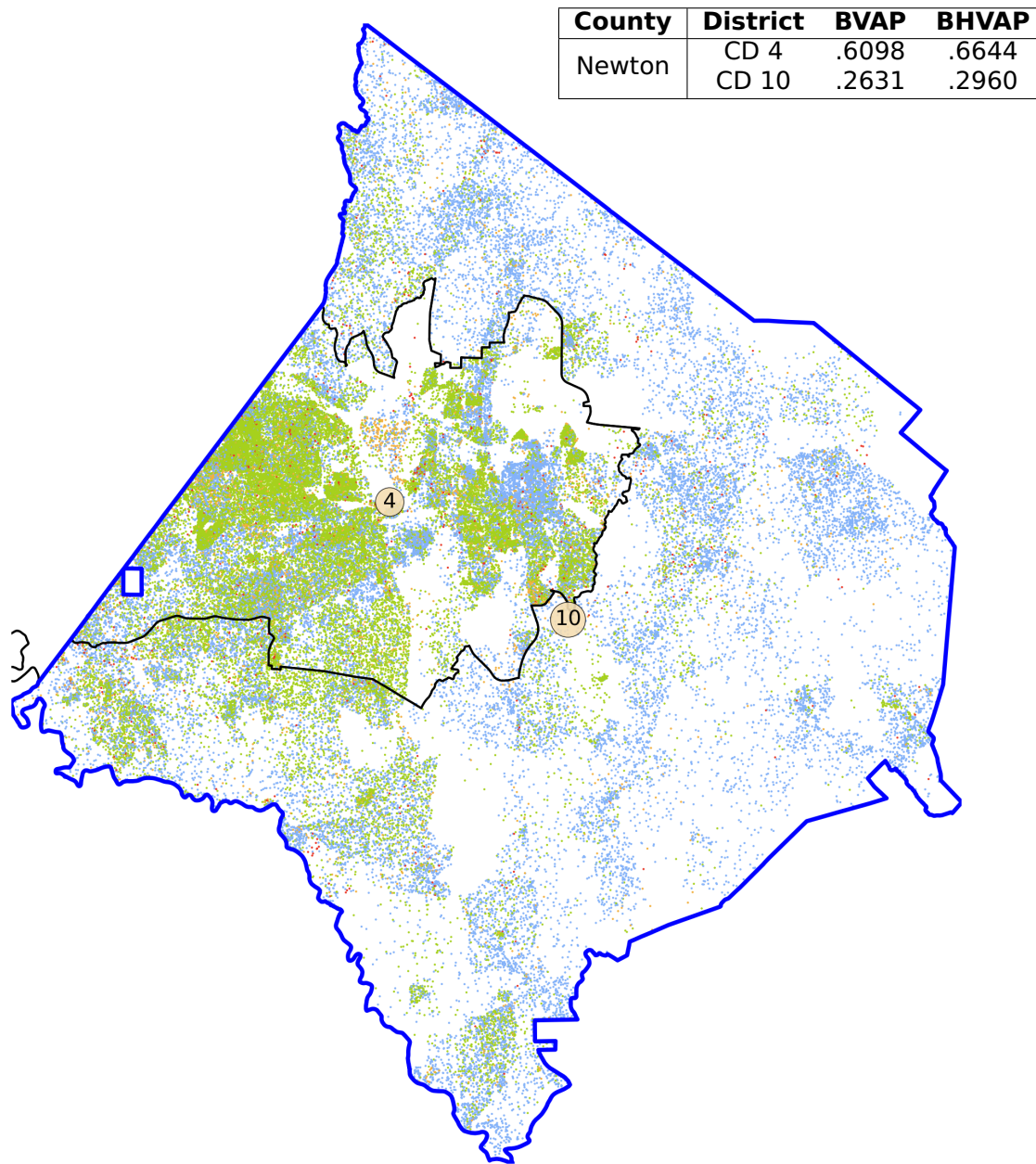


Figure 35: In Newton County, CD 4 and CD 10 are divided by a line that is consistent with packing the former district and cracking the latter.

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.<sup>12</sup>

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.

<sup>12</sup>Of 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.

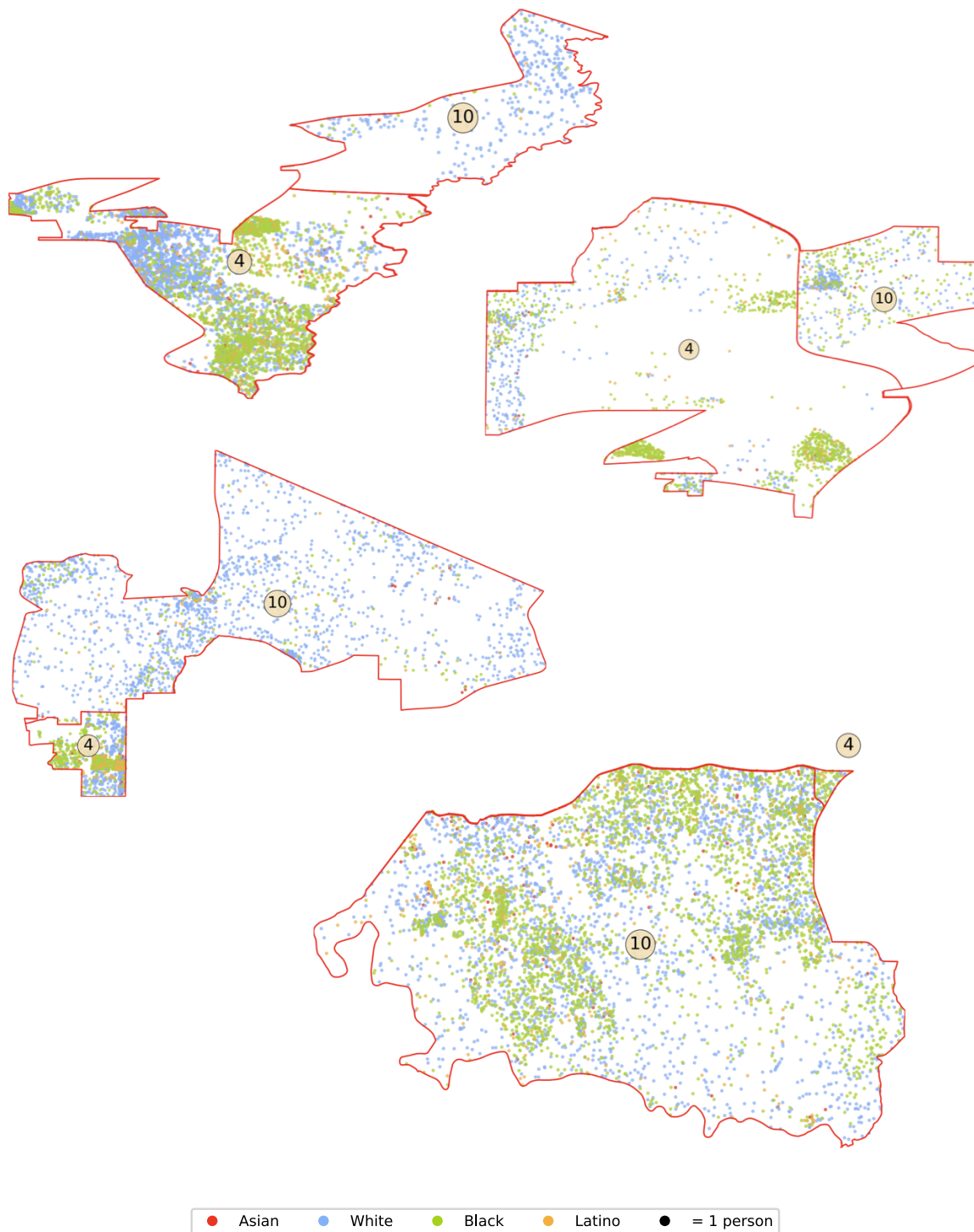


Figure 36: Split precincts on the CD 4 / CD 10 border.



### 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.

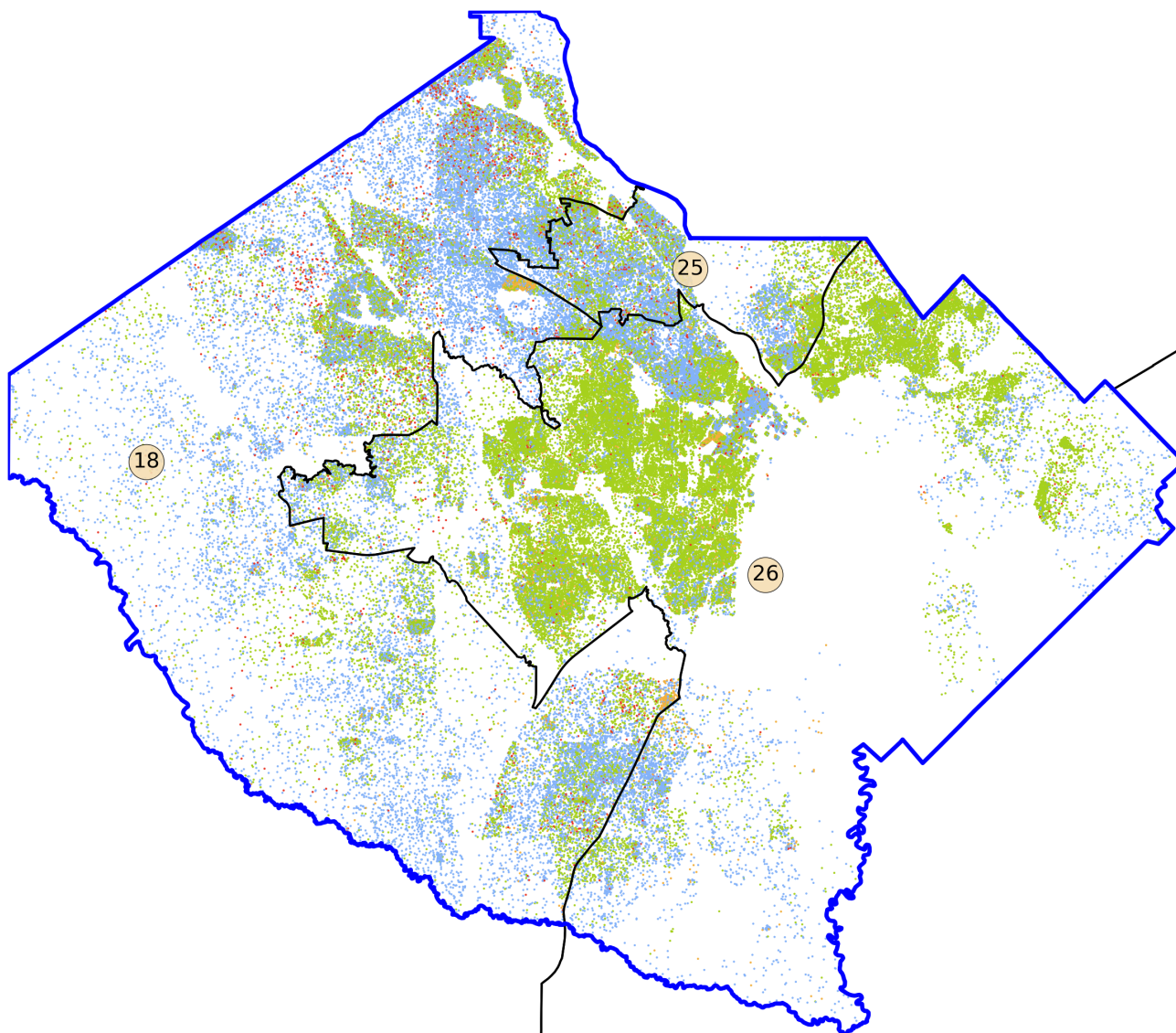


Figure 37: This figure shows the separation of Bibb County in a way that packs SD 26.

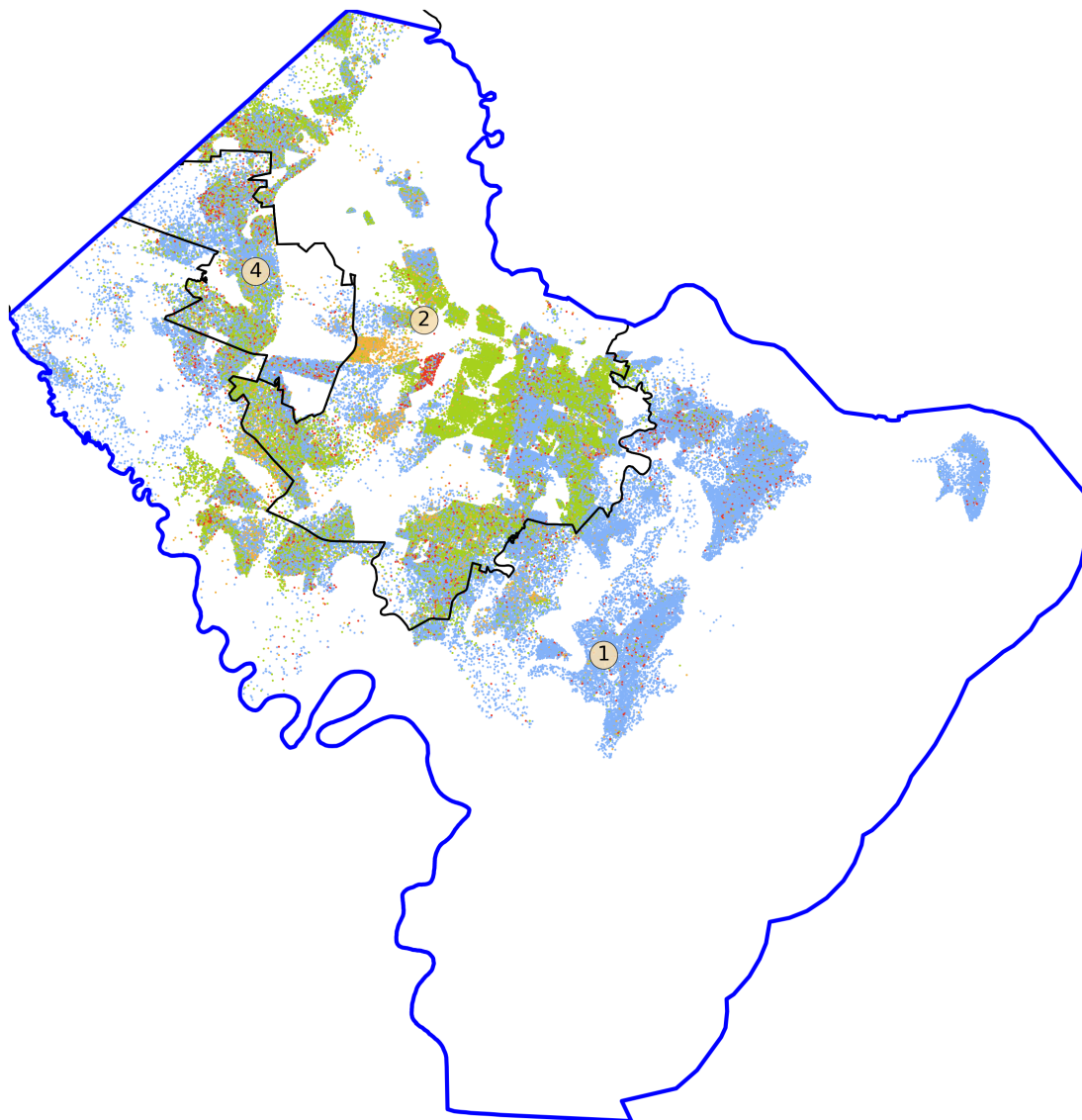


Figure 38: The pieces of Chatham County look to be clearly racially sorted into Senate districts in a way that ensures that Black and Latino voters can only have effective influence in one of the constituent districts. Indeed, SD 2 is an effective district, while SD 1 and SD 4 are not.



### 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.

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- [4] Daryl DeFord, Moon Duchin, and Justin Solomon, *A computational approach to measuring vote elasticity and competitiveness*. **Statistics and Public Policy**. Vol 7, No. 1 (2020), 69–86.
- [5] Moon Duchin and Doug Spencer, *Models, Race, and the Law*. **Yale Law Journal Forum**, Volume 130 (March 2021), 744–797.
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## 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**

<b>SD overall</b>	<b>James18P</b>	<b>Thornton18P</b>	<b>Thornton18R</b>	<b>Robinson18P</b>
	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.

<b>SD overall</b>	<b>Clinton16</b> 0.4734	<b>Abrams18</b> 0.4930	<b>Thornton18</b> 0.4697	<b>Biden20</b> 0.5013	<b>Blackman20</b> 0.4848	<b>Ossoff21</b> 0.5061	<b>Warnock21</b> 0.5104	<b>Abrams22</b> 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.

<b>SD</b>	<b>Primaries out of 4</b>	<b>Generals out of 8</b>	<b>Effective?</b>
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.

<b>HD overall</b>	<b>James18P</b> 0.4475	<b>Thornton18P</b> 0.4387	<b>Thornton18R</b> 0.5914	<b>Robinson18P</b> 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

<b>HD overall</b>	<b>James18P</b>	<b>Thornton18P</b>	<b>Thornton18R</b>	<b>Robinson18P</b>
	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



<b>HD overall</b>	<b>James18P</b>	<b>Thornton18P</b>	<b>Thornton18R</b>	<b>Robinson18P</b>
	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.

<b>HD overall</b>	<b>Clinton16</b> 0.4734	<b>Abrams18</b> 0.4930	<b>Thornton18</b> 0.4697	<b>Biden20</b> 0.5013	<b>Blackman20</b> 0.4848	<b>Ossoff21</b> 0.5061	<b>Warnock21</b> 0.5104	<b>Abrams22</b> 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

<b>HD overall</b>	<b>Clinton16</b> 0.4734	<b>Abrams18</b> 0.4930	<b>Thornton18</b> 0.4697	<b>Biden20</b> 0.5013	<b>Blackman20</b> 0.4848	<b>Ossoff21</b> 0.5061	<b>Warnock21</b> 0.5104	<b>Abrams22</b> 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

<b>HD overall</b>	<b>Clinton16</b>	<b>Abrams18</b>	<b>Thornton18</b>	<b>Biden20</b>	<b>Blackman20</b>	<b>Ossoff21</b>	<b>Warnock21</b>	<b>Abrams22</b>
	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

HD Alt Eff 1 Part 3				
SD	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

HD	HD Alt Eff 2 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

HD Alt Eff 2 Part 3				
HD	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 54: Effectiveness in HD Alt Eff 2, which includes the Alt 2 Gingles maps.

## C Splits of geographical units

County	CD	TOTPOP	VAP	BVAP	BHVAP	Biden20	Abrams18
Bibb	2	108371	82489	0.6349	0.6710	0.7139	0.7250
Bibb	8	48975	38413	0.3098	0.3394	0.4596	0.4202
Cherokee	6	40881	31202	0.0304	0.0814	0.2172	0.1862
Cherokee	11	225739	171726	0.0817	0.1902	0.3233	0.2905
Clayton	5	37919	27885	0.7280	0.8649	0.8849	0.9200
Clayton	13	259676	192693	0.7190	0.8266	0.8548	0.8773
Cobb	6	165925	125728	0.1092	0.1848	0.4913	0.4476
Cobb	11	397281	313106	0.2654	0.3850	0.5535	0.5309
Cobb	13	125029	94104	0.4458	0.6271	0.7316	0.7310
Cobb	14	77914	58910	0.4646	0.5644	0.6421	0.6263
DeKalb	4	601451	465661	0.5316	0.6302	0.8171	0.8166
DeKalb	5	162931	129615	0.5145	0.5480	0.9148	0.9203
Douglas	3	42970	32601	0.2970	0.3719	0.4220	0.3803
Douglas	13	101267	75827	0.5762	0.6647	0.7230	0.7055
Effingham	1	47208	34272	0.1276	0.1756	0.2462	0.2167
Effingham	12	17561	13023	0.1887	0.2129	0.2608	0.2521
Fayette	3	102685	78539	0.2094	0.2720	0.4272	0.3914
Fayette	13	16509	13259	0.5492	0.6082	0.6394	0.6271
Fulton	5	564287	464015	0.4769	0.5379	0.8077	0.8108
Fulton	6	245494	190172	0.1574	0.2568	0.5433	0.5069
Fulton	7	92558	69229	0.1175	0.1777	0.5527	0.5060
Fulton	13	164371	123766	0.8829	0.9171	0.9291	0.9474
Gwinnett	6	34755	25061	0.1336	0.2645	0.4320	0.3889
Gwinnett	7	672579	497705	0.3234	0.5450	0.6487	0.6332
Gwinnett	9	249728	186718	0.2061	0.3433	0.5045	0.4697
Henry	3	23975	17964	0.4678	0.5259	0.5731	0.5484
Henry	10	118452	86869	0.4414	0.4948	0.5093	0.4413
Henry	13	98285	75140	0.5710	0.6324	0.7013	0.6898
Houston	2	48521	36233	0.4321	0.5075	0.5511	0.5393
Houston	8	115112	85885	0.2788	0.3276	0.3996	0.3741
Muscogee	2	175155	132158	0.5262	0.5851	0.6625	0.6625
Muscogee	3	31767	24894	0.1909	0.2578	0.3973	0.3371
Newton	4	70114	52306	0.6098	0.6644	0.7470	0.7502
Newton	10	42369	32442	0.2631	0.2960	0.3764	0.3546
Wilkes	10	1802	1491	0.3273	0.3628	0.3556	0.3607
Wilkes	12	7763	6160	0.4193	0.4481	0.4191	0.3810

Table 55: All county splits in the enacted Congressional map.

County	SD	TOTPOP	VAP	BVAP	BHVAP	Biden20	Abrams18
Bibb	18	53182	42225	0.3079	0.3413	0.4239	0.3967
Bibb	25	15513	12080	0.4120	0.4384	0.5678	0.5256
Bibb	26	88651	66597	0.6951	0.7309	0.7939	0.8072
Chatham	1	81408	65586	0.1486	0.2032	0.3982	0.3743
Chatham	2	190408	150843	0.4686	0.5368	0.7304	0.7447
Chatham	4	23475	18286	0.2596	0.3331	0.4748	0.4463
Clarke	46	52016	45312	0.1485	0.2062	0.6611	0.6499
Clarke	47	76655	61518	0.2933	0.4111	0.7355	0.7329
Cobb	6	92249	75423	0.2527	0.3229	0.5988	0.5665
Cobb	32	101467	80689	0.1946	0.2934	0.5310	0.5013
Cobb	33	192694	146415	0.4296	0.6488	0.7124	0.7146
Cobb	37	181541	138961	0.2018	0.2812	0.4547	0.4203
Cobb	38	108305	83807	0.4264	0.5438	0.7289	0.7235
Cobb	56	89893	66553	0.0706	0.1257	0.4685	0.4177
DeKalb	10	75906	58884	0.9500	0.9605	0.9600	0.9783
DeKalb	40	164997	127423	0.1719	0.3807	0.6490	0.6138
DeKalb	41	183560	139591	0.6449	0.7009	0.8404	0.8492
DeKalb	42	190940	153952	0.3078	0.3875	0.8487	0.8451
DeKalb	43	32212	24150	0.9135	0.9384	0.9394	0.9582
DeKalb	44	51049	40820	0.7415	0.7714	0.9490	0.9654
DeKalb	55	65718	50456	0.9248	0.9473	0.9511	0.9698
Douglas	28	25889	19664	0.2400	0.3042	0.3485	0.3050
Douglas	30	23454	17242	0.5045	0.5920	0.6386	0.6270
Douglas	35	94894	71522	0.5587	0.6479	0.7084	0.6871
Fayette	16	87134	66132	0.1605	0.2249	0.4142	0.3812
Fayette	34	32060	25666	0.5111	0.5670	0.6424	0.6262
Fulton	6	99152	80358	0.2261	0.3060	0.6333	0.5887
Fulton	14	192533	155340	0.1897	0.3044	0.6012	0.5624
Fulton	21	83538	62497	0.1058	0.1749	0.4711	0.4310
Fulton	28	6963	5456	0.4646	0.5403	0.6541	0.6506
Fulton	35	97945	73153	0.8757	0.9161	0.9293	0.9449
Fulton	36	192282	161385	0.5134	0.5749	0.8962	0.9164
Fulton	38	84850	64560	0.9472	0.9672	0.9589	0.9831
Fulton	39	191500	156022	0.6070	0.6549	0.8816	0.8935
Fulton	48	83219	61631	0.1140	0.1697	0.5609	0.5128
Fulton	56	34728	26780	0.0764	0.1341	0.4753	0.4280
Gwinnett	5	191921	139394	0.2994	0.7018	0.7503	0.7914
Gwinnett	7	189709	147425	0.2144	0.3714	0.5941	0.5728
Gwinnett	9	192915	142054	0.2953	0.4730	0.6008	0.5667
Gwinnett	40	25547	19577	0.3258	0.5294	0.6840	0.6640
Gwinnett	41	7463	5687	0.1662	0.2427	0.5323	0.4821
Gwinnett	45	151475	110999	0.2039	0.3351	0.4571	0.4167
Gwinnett	46	27298	19469	0.3273	0.4631	0.4781	0.4201
Gwinnett	48	46297	33367	0.1244	0.2355	0.4312	0.3849
Gwinnett	55	124437	91512	0.5135	0.6159	0.7078	0.6833
Hall	49	189355	144123	0.0796	0.2954	0.2832	0.2646
Hall	50	13781	9721	0.0637	0.5322	0.4380	0.4661
Houston	18	42875	32630	0.2983	0.3609	0.4437	0.4176
Houston	20	74275	54626	0.2606	0.3022	0.3680	0.3405
Houston	26	46483	34862	0.4485	0.5232	0.5831	0.5711
Muscogee	15	142205	107284	0.5931	0.6521	0.7443	0.7508
Muscogee	29	64717	49768	0.2144	0.2771	0.4287	0.3868
Newton	17	45536	34660	0.3080	0.3453	0.3845	0.3582
Newton	43	66947	50088	0.5941	0.6466	0.7456	0.7531
Richmond	22	193163	150450	0.5650	0.6105	0.6912	0.6838
Richmond	23	13444	10449	0.2795	0.3129	0.3975	0.3659

Table 56: Counties with more than 15 points BHVAP differential across Senate districts.

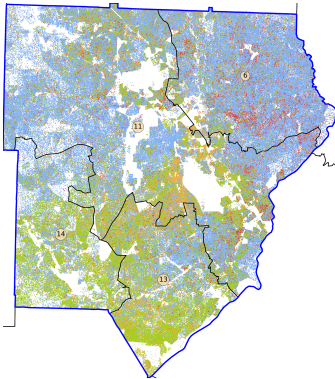


<b>County</b>	<b>HD</b>	<b>TOTPOP</b>	<b>VAP</b>	<b>BVAP</b>	<b>BHVAP share</b>	<b>Biden20</b>	<b>Abrams18</b>
Bibb	142	59608	44584	0.5952	0.6249	0.6687	0.6705
Bibb	143	59469	46390	0.6079	0.6501	0.7099	0.7223
Bibb	144	33948	26547	0.3263	0.3545	0.4642	0.4220
Bibb	145	4321	3381	0.2576	0.2828	0.3445	0.3323
Carroll	18	18789	14467	0.1147	0.1479	0.1918	0.1808
Carroll	70	2854	2259	0.0469	0.0668	0.1414	0.1308
Carroll	71	59538	44582	0.1992	0.2572	0.3247	0.3170
Carroll	72	37967	29688	0.2419	0.3312	0.3361	0.3285
Chatham	161	28269	21359	0.3988	0.4739	0.6095	0.6037
Chatham	162	60308	46733	0.4373	0.5246	0.6721	0.6870
Chatham	163	60123	48461	0.4549	0.5242	0.7266	0.7313
Chatham	164	38681	30732	0.2607	0.3401	0.4644	0.4676
Chatham	165	59978	48247	0.5033	0.5506	0.7803	0.7899
Chatham	166	47932	39183	0.0481	0.0851	0.3527	0.3205
Clarke	120	30095	25090	0.1937	0.2693	0.6432	0.6235
Clarke	121	26478	22991	0.1359	0.1979	0.7010	0.6934
Clarke	122	59632	48840	0.2842	0.3977	0.7990	0.8078
Clarke	124	12466	9909	0.2940	0.3941	0.7018	0.6980
Cobb	22	28586	22350	0.2048	0.2980	0.5020	0.4894
Cobb	34	59875	45758	0.1567	0.2306	0.4198	0.3770
Cobb	35	59889	48312	0.2840	0.3856	0.5726	0.5603
Cobb	36	59994	44911	0.1698	0.2300	0.4022	0.3596
Cobb	37	59176	46223	0.2818	0.4599	0.6113	0.5933
Cobb	38	59317	44839	0.5423	0.6568	0.7243	0.7229
Cobb	39	59381	44436	0.5529	0.7293	0.7876	0.7930
Cobb	40	59044	47976	0.3298	0.3798	0.6673	0.6417
Cobb	41	60122	45271	0.3935	0.6699	0.7105	0.7199
Cobb	42	59620	48525	0.3370	0.5014	0.7158	0.7282
Cobb	43	59464	47033	0.2653	0.3973	0.6073	0.5885
Cobb	44	38013	29631	0.1281	0.2176	0.4855	0.4445
Cobb	45	59738	44023	0.0528	0.0988	0.4788	0.4200
Cobb	46	43930	32560	0.0782	0.1348	0.4656	0.4206
Coweta	65	13008	9714	0.1225	0.1650	0.3213	0.2874
Coweta	67	17272	13061	0.0763	0.1352	0.2416	0.2057
Coweta	70	56267	42990	0.2904	0.3678	0.4376	0.5036
Coweta	73	31608	24269	0.1336	0.2015	0.4070	0.3136
Coweta	136	28003	21121	0.1081	0.1469	0.2325	0.2141
DeKalb	52	28300	21991	0.1398	0.1987	0.6358	0.5815
DeKalb	80	59461	44784	0.1418	0.3654	0.6100	0.5681
DeKalb	81	59007	46259	0.2183	0.4191	0.7180	0.6918
DeKalb	82	59724	50238	0.1683	0.2309	0.8035	0.7923
DeKalb	83	59416	46581	0.1512	0.4284	0.6572	0.6316
DeKalb	84	59862	47350	0.7366	0.7561	0.9324	0.9440
DeKalb	85	59373	46308	0.6271	0.6765	0.8981	0.9246
DeKalb	86	59205	44614	0.7505	0.7832	0.8931	0.9160
DeKalb	87	59709	45615	0.7308	0.7866	0.8798	0.8936
DeKalb	88	47844	37310	0.7117	0.7652	0.8359	0.8377
DeKalb	89	59866	46198	0.6254	0.6519	0.9214	0.9284
DeKalb	90	59812	48015	0.5849	0.6205	0.9401	0.9508
DeKalb	91	19700	14941	0.9586	0.9683	0.9581	0.9793
DeKalb	92	15607	11794	0.9309	0.9453	0.9403	0.9581
DeKalb	93	11690	8476	0.9040	0.9412	0.9411	0.9598
DeKalb	94	31207	23817	0.9289	0.9513	0.9523	0.9703
DeKalb	95	14599	10985	0.8971	0.9250	0.9413	0.9607
Dougherty	151	6268	4791	0.5917	0.6022	0.6466	0.6213
Dougherty	152	6187	4906	0.4855	0.5298	0.5372	0.5517
Dougherty	153	59299	45692	0.6795	0.7010	0.7454	0.7566
Dougherty	154	14036	10877	0.8612	0.8694	0.8896	0.9081

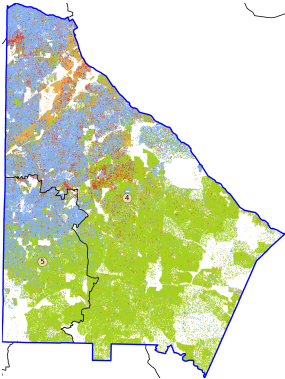
County	HD	TOTPOP	VAP	BVAP	BHVAP share	Biden20	Abrams18
Douglas	61	30206	23160	0.5396	0.6574	0.6995	0.6949
Douglas	64	35576	26860	0.2958	0.3662	0.4137	0.3741
Douglas	65	19408	14130	0.6572	0.7146	0.7568	0.7413
Douglas	66	59047	44278	0.5341	0.6181	0.6899	0.6610
Fayette	68	29719	22798	0.2259	0.3098	0.4218	0.3753
Fayette	69	37303	29554	0.4700	0.5270	0.5903	0.5574
Fayette	73	28428	21467	0.1070	0.1718	0.3793	0.3349
Fayette	74	23744	17979	0.1329	0.1724	0.3872	0.3373
Floyd	5	5099	4048	0.0336	0.0684	0.1566	0.1349
Floyd	12	34335	27071	0.0836	0.1607	0.2351	0.2152
Floyd	13	59150	45176	0.1918	0.2979	0.3687	0.3564
Fulton	25	13280	9828	0.1043	0.1651	0.5348	0.4723
Fulton	47	55235	40829	0.1130	0.1834	0.4647	0.4241
Fulton	48	43976	33385	0.1231	0.2615	0.5322	0.4840
Fulton	49	59153	45263	0.0842	0.1480	0.4815	0.4342
Fulton	50	59523	43940	0.1240	0.1826	0.5939	0.5558
Fulton	51	58952	47262	0.2368	0.3623	0.6082	0.5728
Fulton	52	31511	26534	0.1765	0.2543	0.6372	0.6074
Fulton	53	59953	46944	0.1453	0.2143	0.5485	0.4998
Fulton	54	60083	50338	0.1547	0.2766	0.6104	0.5641
Fulton	55	59971	49255	0.5538	0.5960	0.8169	0.8121
Fulton	56	58929	52757	0.4548	0.5055	0.8971	0.9249
Fulton	57	59969	52097	0.1806	0.2543	0.8092	0.8025
Fulton	58	59057	50514	0.6304	0.6732	0.9213	0.9511
Fulton	59	59434	49179	0.7009	0.7332	0.9337	0.9603
Fulton	60	59709	45490	0.6388	0.6820	0.8065	0.8069
Fulton	61	29096	22287	0.9541	0.9658	0.9654	0.9789
Fulton	62	59450	46426	0.7226	0.7807	0.9254	0.9434
Fulton	63	59381	45043	0.6933	0.7761	0.9085	0.9279
Fulton	65	27048	20542	0.8293	0.8473	0.8952	0.9088
Fulton	67	41863	31238	0.8036	0.8785	0.8985	0.9164
Fulton	68	29758	22037	0.9004	0.9274	0.9278	0.9482
Fulton	69	21379	15994	0.9415	0.9655	0.9561	0.9811
Grady	171	8115	6461	0.1696	0.2131	0.2238	0.2074
Grady	173	18121	13501	0.3394	0.4507	0.4454	0.4338
Gwinnett	30	8620	6301	0.1584	0.2484	0.3775	0.3234
Gwinnett	48	15027	11394	0.1026	0.1660	0.4955	0.4395
Gwinnett	88	11845	8763	0.3005	0.5402	0.7198	0.7597
Gwinnett	94	28004	20992	0.4197	0.5235	0.6869	0.6571
Gwinnett	95	34221	25212	0.6639	0.7452	0.8115	0.8122
Gwinnett	96	59515	44671	0.2300	0.5797	0.6579	0.6661
Gwinnett	97	59072	46339	0.2677	0.4490	0.6617	0.6608
Gwinnett	98	59998	42734	0.2325	0.7459	0.7610	0.8075
Gwinnett	99	59850	45004	0.1471	0.2279	0.5261	0.4833
Gwinnett	100	35204	25378	0.1307	0.2425	0.4252	0.3789
Gwinnett	101	59938	46584	0.2419	0.4143	0.5632	0.5431
Gwinnett	102	58959	42968	0.3762	0.5767	0.6626	0.6503
Gwinnett	103	51691	38022	0.1879	0.3607	0.4796	0.4471
Gwinnett	104	35117	25457	0.2096	0.3042	0.3993	0.3442
Gwinnett	105	59344	43474	0.2905	0.4482	0.5553	0.5328
Gwinnett	106	59112	43890	0.3627	0.4648	0.5858	0.5390
Gwinnett	107	59702	44509	0.2963	0.5937	0.6884	0.6965
Gwinnett	108	59577	44308	0.1835	0.3578	0.5536	0.5107
Gwinnett	109	59630	44140	0.3251	0.6708	0.7711	0.8246
Gwinnett	110	59951	43226	0.4719	0.5645	0.6405	0.5965
Gwinnett	111	22685	16118	0.3307	0.4520	0.4726	0.4142
Hall	27	54508	42712	0.0386	0.1354	0.1804	0.1550
Hall	28	8108	6799	0.0284	0.1772	0.2527	0.2270
Hall	29	59200	43131	0.1359	0.5284	0.4485	0.4704
Hall	30	50646	39113	0.0685	0.2374	0.2707	0.2393
Hall	31	14349	9789	0.1036	0.6834	0.4858	0.5209
Hall	100	7819	5923	0.0653	0.1867	0.2453	0.2134
Hall	103	8506	6377	0.0486	0.1396	0.2653	0.2319

County	HD	TOTPOP	VAP	BVAP	BHVAP share	Biden20	Abrams18
Henry	74	18397	13441	0.4742	0.5356	0.5834	0.5642
Henry	78	3847	2965	0.6921	0.7292	0.8470	0.8768
Henry	91	35569	27415	0.5887	0.6628	0.7223	0.7183
Henry	115	60174	44807	0.5213	0.5797	0.6153	0.5443
Henry	116	55759	42471	0.5808	0.6380	0.6848	0.6669
Henry	117	54737	40246	0.3841	0.4324	0.4416	0.3759
Henry	118	12229	8628	0.1868	0.2258	0.2874	0.2449
Houston	145	28132	20686	0.5239	0.6021	0.6151	0.6114
Houston	146	60203	44589	0.2761	0.3192	0.3840	0.3558
Houston	147	59178	44902	0.3012	0.3678	0.4662	0.4414
Houston	148	16120	11941	0.2453	0.2778	0.3271	0.3070
Lamar	134	5026	3864	0.0970	0.1198	0.1786	0.1839
Lamar	135	13474	10677	0.3411	0.3603	0.3798	0.3906
Lowndes	174	9770	7472	0.1453	0.1935	0.2019	0.1828
Lowndes	175	43692	31957	0.2018	0.2494	0.3784	0.4034
Lowndes	176	4797	3588	0.2717	0.3743	0.4485	0.4632
Lowndes	177	59992	46014	0.5388	0.5936	0.5139	0.5285
McDuffie	125	4748	3805	0.1198	0.1532	0.2199	0.1901
McDuffie	128	16884	12810	0.4660	0.4938	0.4365	0.4312
Muscogee	137	30443	22797	0.6269	0.6746	0.6665	0.6618
Muscogee	138	12190	9628	0.1224	0.1692	0.3389	0.2796
Muscogee	139	45976	35539	0.2128	0.2770	0.4306	0.3842
Muscogee	140	59294	44411	0.5763	0.6468	0.7471	0.7692
Muscogee	141	59019	44677	0.5746	0.6305	0.7368	0.7428
Newton	93	15515	12080	0.5094	0.5404	0.5824	0.5743
Newton	113	60053	44538	0.5953	0.6533	0.7534	0.7636
Newton	114	36915	28130	0.2760	0.3104	0.3491	0.3299
Paulding	16	16549	11771	0.0981	0.1406	0.2447	0.2194
Paulding	17	59120	42761	0.2302	0.2934	0.3580	0.3264
Paulding	18	10627	7838	0.1069	0.1355	0.1902	0.1750
Paulding	19	58955	44299	0.2415	0.3025	0.3762	0.3525
Paulding	64	23410	17329	0.3249	0.3881	0.4450	0.4147
Peach	145	14093	11209	0.2211	0.2688	0.3275	0.3039
Peach	150	13888	10902	0.6643	0.7715	0.7004	0.7216
Richmond	126	25990	19714	0.6887	0.7181	0.7709	0.7804
Richmond	127	19152	15842	0.2599	0.2945	0.4192	0.3905
Richmond	129	58829	46873	0.5487	0.5835	0.6537	0.6344
Richmond	130	59203	44019	0.5991	0.6308	0.6388	0.6298
Richmond	132	43433	34451	0.5267	0.6146	0.7759	0.7966
Rockdale	91	4781	3817	0.4923	0.5179	0.5997	0.5626
Rockdale	92	44666	34757	0.6054	0.6511	0.7185	0.6871
Rockdale	93	32913	24178	0.6379	0.7670	0.8062	0.8013
Rockdale	95	11210	8751	0.4101	0.4845	0.5276	0.4859
Spalding	74	16815	13276	0.1990	0.2531	0.3220	0.3121
Spalding	117	5393	4727	0.2128	0.2520	0.4014	0.3618
Spalding	134	45098	34120	0.4063	0.4443	0.4206	0.4157
Telfair	149	9486	7884	0.3950	0.5747	0.3762	0.3533
Telfair	156	2991	2306	0.3001	0.3157	0.4131	0.4024
Thomas	172	4176	3246	0.1497	0.1753	0.2050	0.2061
Thomas	173	41622	31791	0.3726	0.3977	0.4351	0.4150
Tift	169	6730	5219	0.1129	0.1590	0.1807	0.1494
Tift	170	34614	26005	0.3220	0.4365	0.3806	0.3429
Troup	72	10281	7843	0.2076	0.2372	0.2844	0.3005
Troup	136	17913	13414	0.5139	0.5540	0.5738	0.6049
Troup	137	16144	12084	0.3974	0.4346	0.3855	0.3868
Troup	138	25088	19240	0.2535	0.2783	0.3040	0.2878
Whitfield	2	27861	21447	0.0331	0.1741	0.2209	0.1926
Whitfield	4	59070	42798	0.0538	0.4915	0.3551	0.3367
Whitfield	6	15933	12017	0.0280	0.1597	0.2017	0.1727

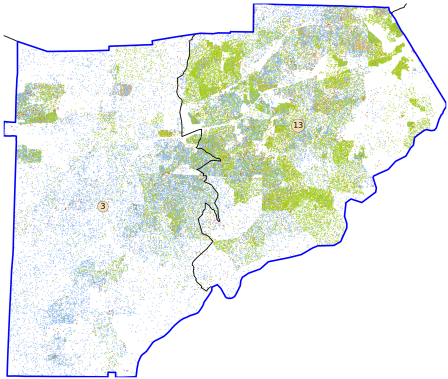
Table 57: Counties with more than 15 points BHVAP differential across House districts (table in three parts).



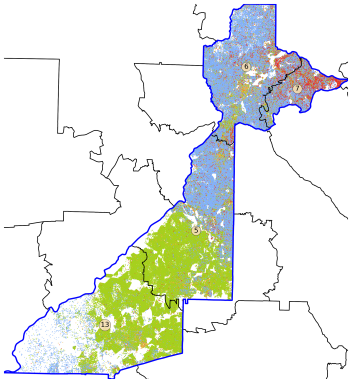
Cobb



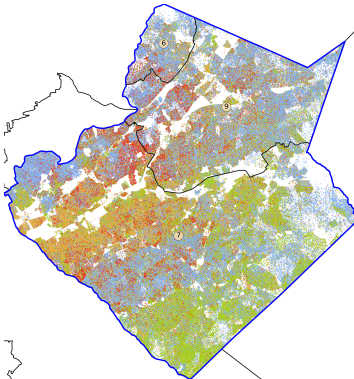
DeKalb



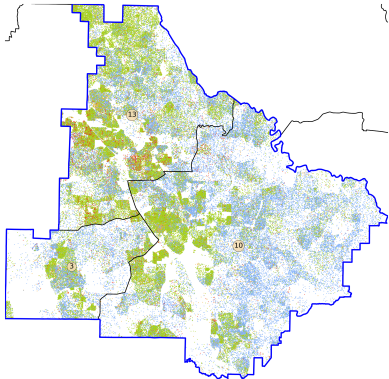
Douglas



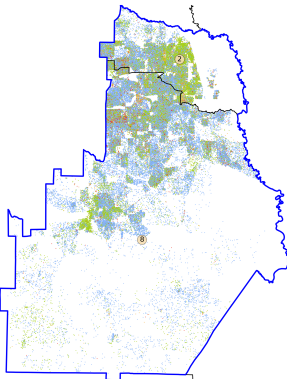
Fulton



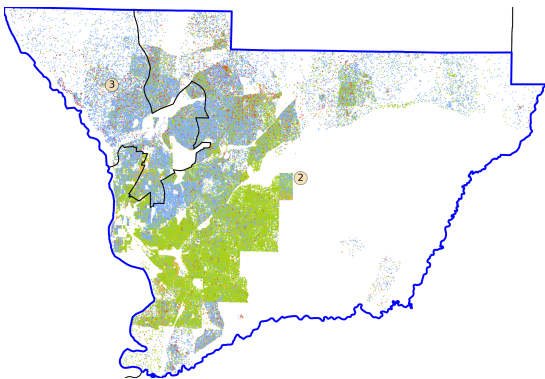
Gwinnett



Henry



Houston



Muscogee

Figure 39: Additional county splits in the enacted Congressional plan with racially distinctive patterns at the boundary lines.



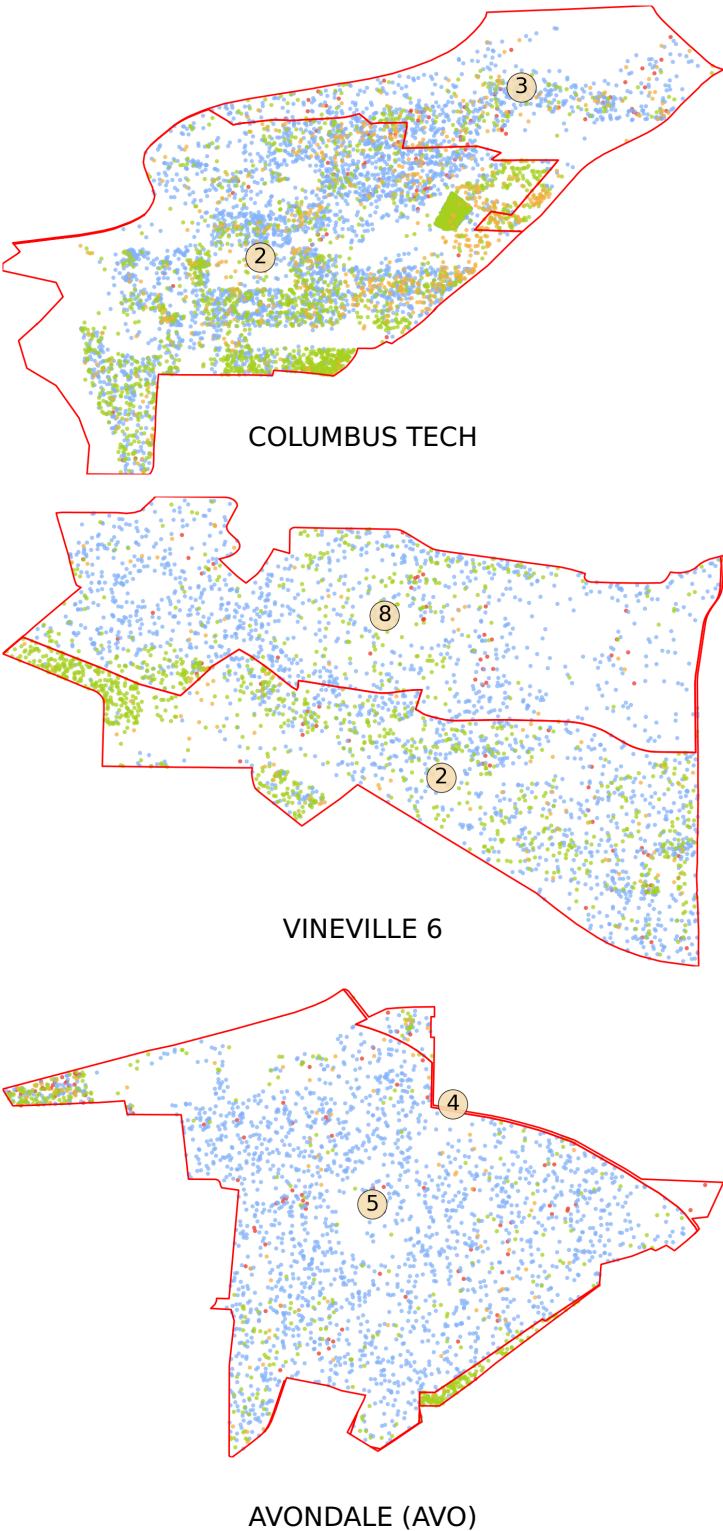


Figure 40: Illustrative precinct splits in the enacted Congressional plan showing racially distinctive patterns at the boundary lines.

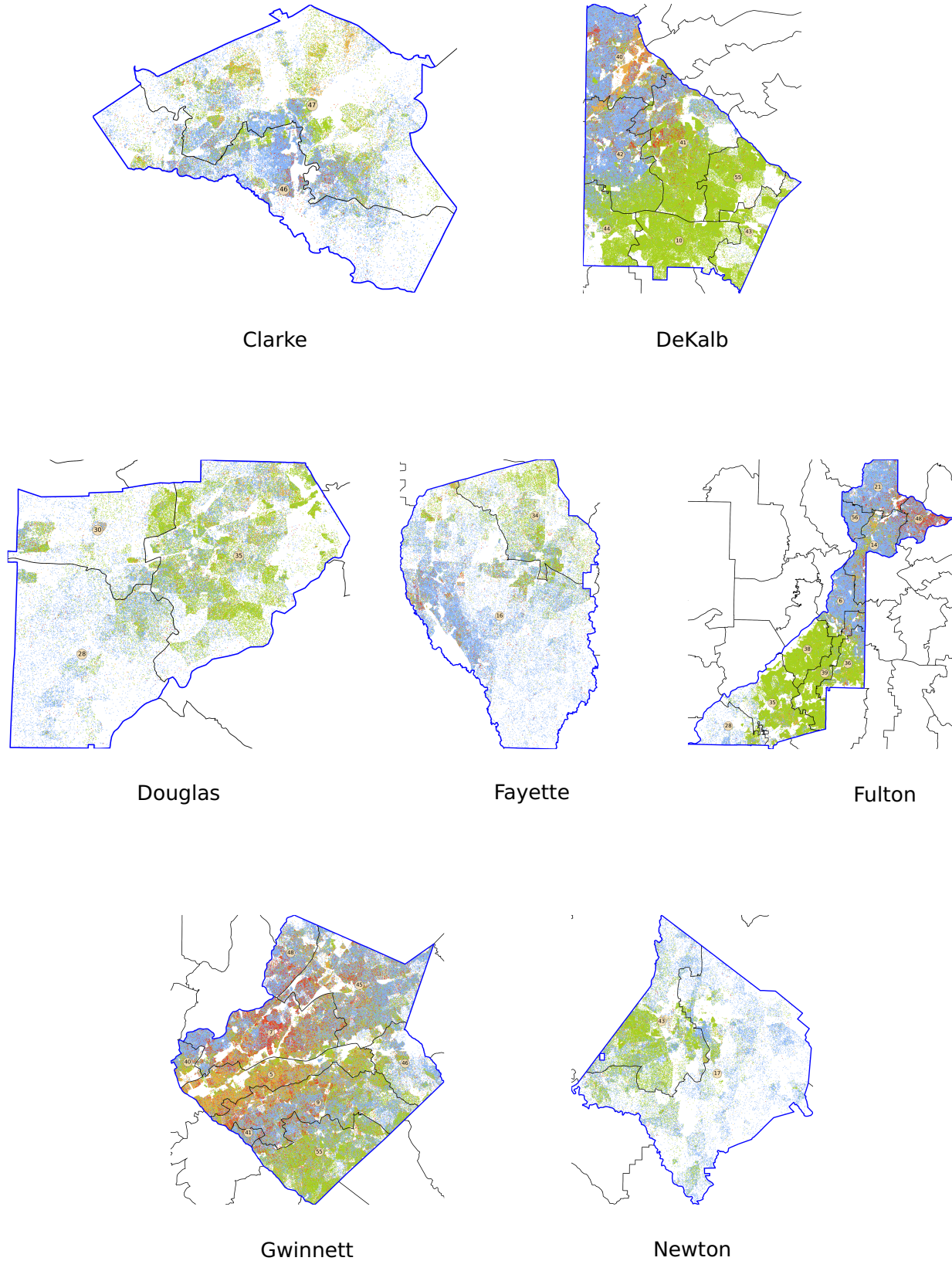
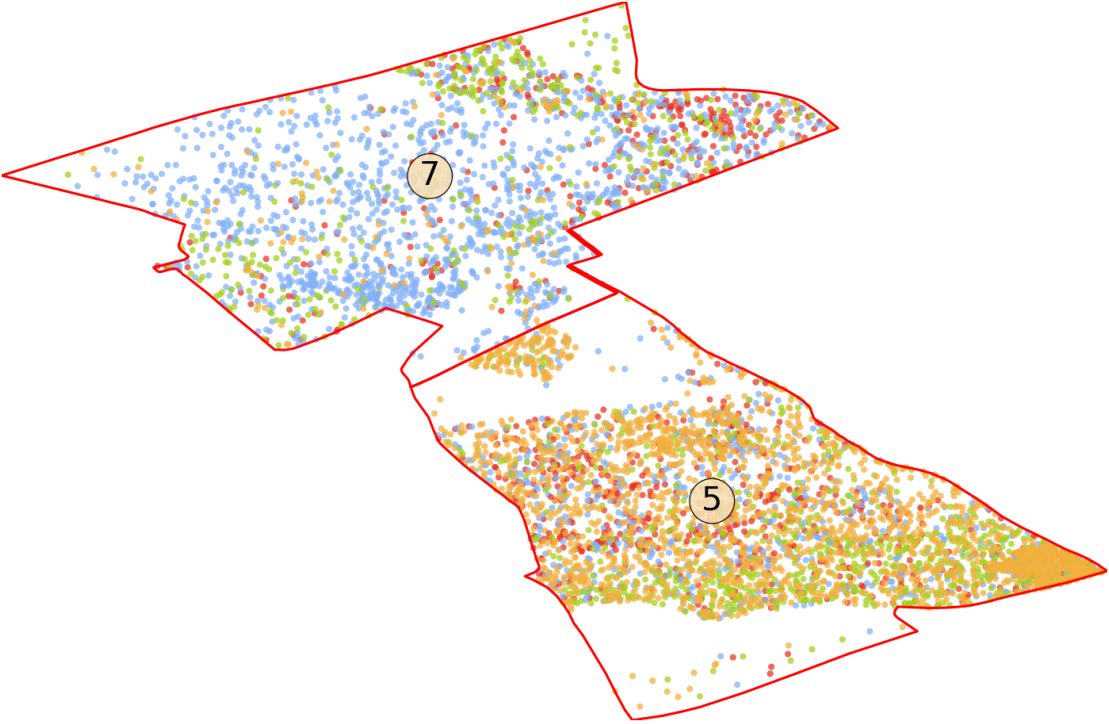


Figure 41: Additional county splits in the enacted Senate plan with racially distinctive patterns at the boundary lines.



PINCKNEYVILLE W

Figure 42: An illustrative precinct split in the enacted Senate plan showing a racially distinctive pattern at the boundary lines.

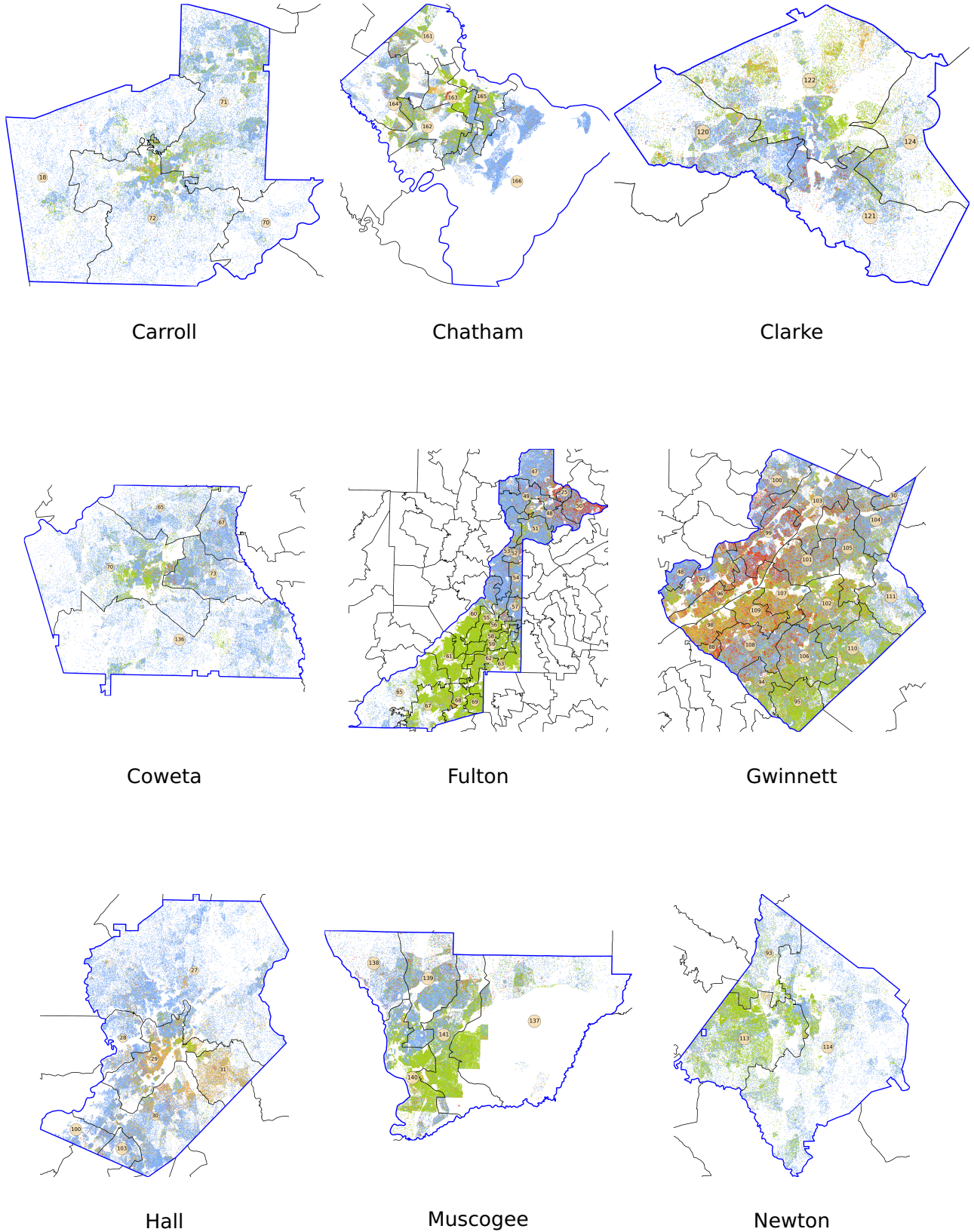
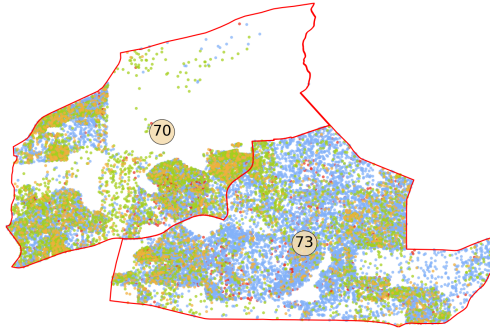
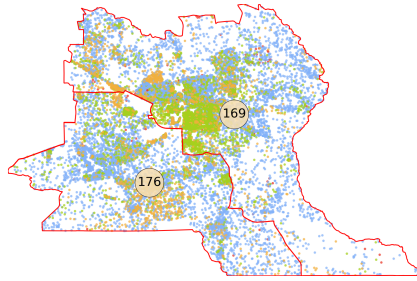


Figure 43: Illustrative county splits in the enacted House plan with racially distinctive patterns at the boundary lines.

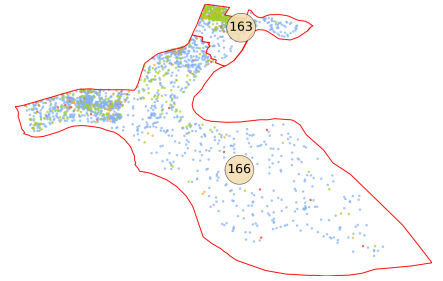




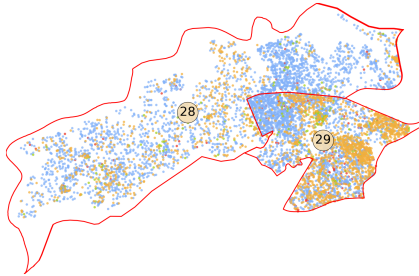
THE NEWMAN CENTRE



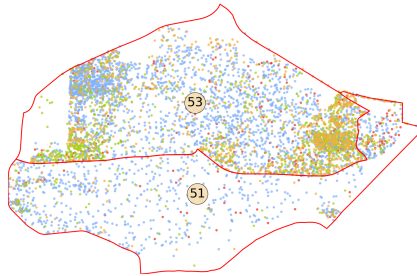
DOUGLAS



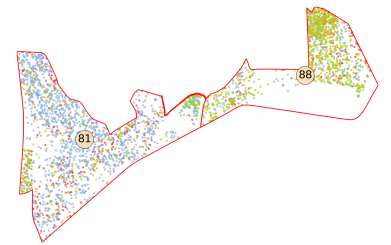
WINDSOR FOREST  
BAPTIST CHURCH SCHOOL



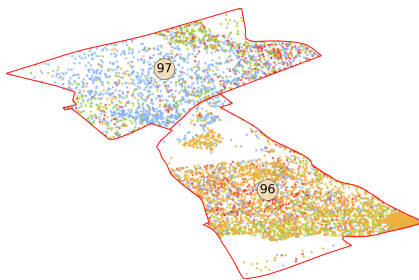
WILSON



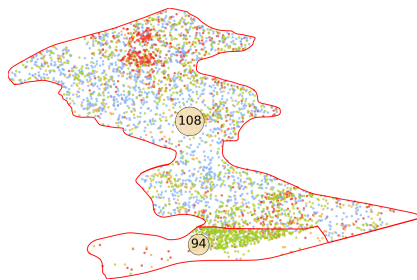
RW03



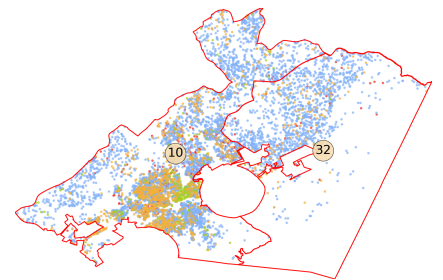
TUCKER



PINCKNEYVILLE W



CATES J



HABERSHAM SOUTH

Figure 44: Illustrative precinct splits in the enacted House plan with racially distinctive patterns at the boundary lines.

I reserve the right to continue to supplement my report in light of additional facts, testimony and/or materials that may come to light. Pursuant to 28 U.S.C. 1746, I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct according to the best of my knowledge, information, and belief.

Executed this 13th day of January, 2023.

A handwritten signature in black ink, appearing to read 'Moon Duchin', written over a horizontal line.

Moon Duchin

# EXHIBIT B

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

GEORGIA STATE CONFERENCE OF	)	
THE NAACP, et al.,	)	
	)	
Plaintiffs,	)	CASE NO. 1:21-CV-5338-
	)	ELB-SCJ-SDG
v.	)	
	)	
STATE OF GEORGIA, et al.,	)	
	)	
Defendants	)	
_____	)	
	)	
COMMON CAUSE, et al.,	)	
	)	
Plaintiffs,	)	CASE NO. 1:22-CV-00090-
	)	ELB-SCJ-SDG
v.	)	
	)	
BRAD RAFFENSPERGER,	)	
	)	
Defendant.	)	

**EXPERT REPORT OF JOHN B. MORGAN**

Pursuant to 28 U.S.C. § 1746, Fed. R. Civ. P. 26, and F.R.E. 702 and 703, I, JOHN B. MORGAN, make the following declaration:

1. My name is John B. Morgan. I am over the age of 21 years, and I am under no legal disability which would prevent me from giving this declaration. If called to testify, I would testify under oath to these facts.

2. I hold a B.A. in History from the University of Chicago. As detailed in my CV, attached as Exhibit 1, I have extensive experience over many years in the field of redistricting. I have worked on redistricting plans in the redistricting efforts following the 1990 Census, the 2000 Census, the 2010 Census and the 2020 Census. I have testified as an expert witness in demographics and redistricting.

3. I am being compensated at a rate of \$325 per hour for my services in this case.

4. The redistricting geographic information system (GIS) software package used for this analysis is Maptitude for Redistricting 2021 from Caliper Corporation. The redistricting software was loaded with the census PL94-171 data from the Census Bureau and the census geography for Georgia. I was also provided with election data files used by the Georgia General Assembly during the redistricting process. The full suite of census geography was available, including counties, places, voting districts, water bodies, and roads, as well as census blocks, which are the lowest level of geography for which the Census Bureau reports population counts.

5. I have been asked to review the congressional, House of Representatives and State Senate plans considered and adopted by the Georgia General Assembly and compare them to the proposed congressional, House and Senate plans drawn by Dr. Moon Duchin and offer opinions regarding my analysis.

I was also provided with plans labeled “unity” plans from Dr. Duchin’s data, which I also analyzed.

6. As a result of this analysis, it is my opinion that each of the plans submitted in Dr. Duchin’s report and the unity plans has a significant increase in Democratic performance when compared to the enacted plans.

7. In preparing this analysis, I was given the block-equivalency files of the Duchin plans and the unity plans as well as the block-equivalency files of the 2021 adopted plans and incumbent databases used by the Georgia General Assembly during the redistricting process. The incumbent databases list the address locations and districts of the Representatives and Senators serving under the existing House (2015-enacted) and Senate (2014-enacted) plans prior to the election of 2022.

8. I loaded the 2021 House and 2021 Senate plans enacted by the Georgia General Assembly into the Maptitude for Redistricting software using the block-equivalency files provided. I loaded the Duchin Congressional, Senate and House plans and the Unity plans into the Maptitude for Redistricting software using the block-equivalency files provided. I loaded the prior congressional (2012), House (2015-enacted) and Senate (2014-enacted) plans into the Maptitude for Redistricting software using files provided with software. I loaded the associated incumbent databases provided.

9. Using the Maptitude for Redistricting software, I ran eight report and summaries for each of the Duchin plans, the Unity plans and the enacted plans:

- 1- Measures of compactness report,
- 2- Districts & incumbents report, (not run for congressional plans)
- 3- Population summary report,
- 4- Political subdivision splits report,
- 5- Plan component report,
- 6- Core constituency report compared to prior enacted plan,
- 7- Core constituency report compared to Enacted 2021 plan
- 8- District summary with election data

10. Each of these reports and summaries for each plan is included in the appendices to this report. I summarized highlights of this information in a table for each plan. An index with exhibit numbers for all of these reports and summaries is included at the end of the written report.

**Chart 1. HD-Eff-Jan11 and Enacted 2021 House Plan comparisons**

<b>Plan metrics</b>	<b>HD Eff Jan11</b>	<b>House Enacted</b>
County splits	69	69
Voting precinct splits	307	184
Mean compactness - Reock	0.41	0.39
Mean compactness - Polsby Popper	0.28	0.28
# Paired incumbents	62	20
Deviation relative range	-1.72% to 1.97%	-1.40% to 1.34%
Deviation overall range	3.70%	2.74%
# Districts won by: Biden (D-Pres20)	95	83
# Districts won by: Trump (R-Pres20)	85	97
# Districts won by: Bryant (D-PSC 20)	88	79
# Districts won by: Shaw (R-PSC 20)	92	101
# Seats 18+_AP_Blk% is: over 90%	3	0
# Seats 18+_AP_Blk% is: 80% to 90%	5	0
# Seats 18+_AP_Blk% is: 70% to 80%	4	11
# Seats 18+_AP_Blk% is: 60% to 70%	9	15
# Seats 18+_AP_Blk% is: 55% to 60%	9	5
# Seats 18+_AP_Blk% is: 52% to 55%	3	5
# Seats 18+_AP_Blk% is: 50% to 52%	5	2
<b># Seats majority 18+_AP_Blk%</b>	<b>38</b>	<b>49</b>
# Seats 18+_AP_Blk% is: 45% to 50%	10	4
# Seats 18+_AP_Blk% is: 40% to 45%	8	2



**Chart 2. HD-Alt1-Jan11 and Enacted 2021 House Plan comparisons**

<b>Plan metrics</b>	<b>HD Alt1 Jan11</b>	<b>House Enacted</b>
County splits	73	69
Voting precinct splits	330	184
Mean compactness - Reock	0.39	0.39
Mean compactness - Polsby Popper	0.26	0.28
# Paired incumbents	68	20
Deviation relative range	-2.00% to 2.09%	-1.40% to 1.34%
Deviation overall range	4.08%	2.74%
# Districts won by: Biden (D-Pres20)	92	83
# Districts won by: Trump (R-Pres20)	88	97
# Districts won by: Bryant (D-PSC 20)	86	79
# Districts won by: Shaw (R-PSC 20)	94	101
# Seats 18+_AP_Blk% is: over 90%	2	0
# Seats 18+_AP_Blk% is: 80% to 90%	6	0
# Seats 18+_AP_Blk% is: 70% to 80%	2	11
# Seats 18+_AP_Blk% is: 60% to 70%	5	15
# Seats 18+_AP_Blk% is: 55% to 60%	5	5
# Seats 18+_AP_Blk% is: 52% to 55%	11	5
# Seats 18+_AP_Blk% is: 50% to 52%	19	2
<b># Seats majority 18+_AP_Blk%</b>	<b>50</b>	<b>49</b>
# Seats 18+_AP_Blk% is: 45% to 50%	6	4
# Seats 18+_AP_Blk% is: 40% to 45%	5	2

**Chart 3. HD-Alt2-Jan11 and Enacted 2021 House Plan comparisons**

<b>Plan metrics</b>	<b>HD Alt2 Jan11</b>	<b>House Enacted</b>
County splits	70	69
Voting precinct splits	310	184
Mean compactness - Reock	0.4	0.39
Mean compactness - Polsby Popper	0.26	0.28
# Paired incumbents	65	20
Deviation relative range	-3.22% to 2.51%	-1.40% to 1.34%
Deviation overall range	5.73%	2.74%
# Districts won by: Biden (D-Pres20)	93	83
# Districts won by: Trump (R-Pres20)	87	97
# Districts won by: Bryant (D-PSC 20)	89	79
# Districts won by: Shaw (R-PSC 20)	91	101
# Seats 18+_AP_Blk% is: over 90%	3	0
# Seats 18+_AP_Blk% is: 80% to 90%	3	0
# Seats 18+_AP_Blk% is: 70% to 80%	4	11
# Seats 18+_AP_Blk% is: 60% to 70%	11	15
# Seats 18+_AP_Blk% is: 55% to 60%	4	5
# Seats 18+_AP_Blk% is: 52% to 55%	9	5
# Seats 18+_AP_Blk% is: 50% to 52%	9	2
<b># Seats majority 18+_AP_Blk%</b>	<b>43</b>	<b>49</b>
# Seats 18+_AP_Blk% is: 45% to 50%	9	4
# Seats 18+_AP_Blk% is: 40% to 45%	10	2

**Chart 4. SD-Eff-Jan11 and Enacted 2021 Senate Plan comparisons**

<b>Plan metrics</b>	<b>SD Eff Jan11</b>	<b>Senate Enacted</b>
County splits	31	29
Voting precinct splits	129	47
Mean compactness - Reock	0.43	0.42
Mean compactness - Polsby Popper	0.29	0.29
# Paired incumbents	22	4
Deviation relative range	-1.73% to 1.67%	-1.03% to +0.98%
Deviation overall range	3.40%	2.01%
# Districts won by: Biden (D-Pres20)	33	23
# Districts won by: Trump (R-Pres20)	23	33
# Districts won by: Bryant (D-PSC 20)	30	23
# Districts won by: Shaw (R-PSC 20)	26	33
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	1	0
# Seats 18+_AP_Blk% is: 70% to 80%	2	3
# Seats 18+_AP_Blk% is: 60% to 70%	2	6
# Seats 18+_AP_Blk% is: 55% to 60%	0	3
# Seats 18+_AP_Blk% is: 52% to 55%	0	1
# Seats 18+_AP_Blk% is: 50% to 52%	3	1
<b># Seats majority 18+_AP_Blk%</b>	<b>8</b>	<b>14</b>
# Seats 18+_AP_Blk% is: 45% to 50%	7	1
# Seats 18+_AP_Blk% is: 40% to 45%	5	1

**Chart 5. SD-Alt1-Jan11 and Enacted 2021 Senate Plan comparisons**

<b>Plan metrics</b>	<b>SD Alt1 Jan11</b>	<b>Senate Enacted</b>
County splits	34	29
Voting precinct splits	120	47
Mean compactness - Reock	0.43	0.42
Mean compactness - Polsby Popper	0.29	0.29
# Paired incumbents	21	4
Deviation relative range	-1.36% to 1.28%	-1.03% to +0.98%
Deviation overall range	2.64%	2.01%
# Districts won by: Biden (D-Pres20)	28	23
# Districts won by: Trump (R-Pres20)	28	33
# Districts won by: Bryant (D-PSC 20)	26	23
# Districts won by: Shaw (R-PSC 20)	30	33
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	0	0
# Seats 18+_AP_Blk% is: 70% to 80%	1	3
# Seats 18+_AP_Blk% is: 60% to 70%	1	6
# Seats 18+_AP_Blk% is: 55% to 60%	3	3
# Seats 18+_AP_Blk% is: 52% to 55%	2	1
# Seats 18+_AP_Blk% is: 50% to 52%	13	1
<b># Seats majority 18+_AP_Blk%</b>	<b>20</b>	<b>14</b>
# Seats 18+_AP_Blk% is: 45% to 50%	1	1
# Seats 18+_AP_Blk% is: 40% to 45%	0	1

**Chart 6. SD-Alt2-Jan11 and Enacted 2021 Senate Plan comparisons**

<b>Plan metrics</b>	<b>SD Alt2 Jan11</b>	<b>Senate Enacted</b>
County splits	26	29
Voting precinct splits	98	47
Mean compactness - Reock	0.44	0.42
Mean compactness - Polsby Popper	0.3	0.29
# Paired incumbents	20	4
Deviation relative range	-1.30% to 1.33%	-1.03% to +0.98%
Deviation overall range	2.63%	2.01%
# Districts won by: Biden (D-Pres20)	28	23
# Districts won by: Trump (R-Pres20)	28	33
# Districts won by: Bryant (D-PSC 20)	26	23
# Districts won by: Shaw (R-PSC 20)	30	33
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	1	0
# Seats 18+_AP_Blk% is: 70% to 80%	1	3
# Seats 18+_AP_Blk% is: 60% to 70%	2	6
# Seats 18+_AP_Blk% is: 55% to 60%	4	3
# Seats 18+_AP_Blk% is: 52% to 55%	3	1
# Seats 18+_AP_Blk% is: 50% to 52%	6	1
<b># Seats majority 18+_AP_Blk%</b>	<b>17</b>	<b>14</b>
# Seats 18+_AP_Blk% is: 45% to 50%	4	1
# Seats 18+_AP_Blk% is: 40% to 45%	0	1

**Chart 7. CD-Jan11 and Enacted 2021 congressional Plan comparisons**

<b>Plan metrics</b>	<b>CD-Alt1- Jan11</b>	<b>CD Enacted</b>
County splits	17	15
Voting precinct splits	46	47
Mean compactness - Reock	0.47	0.44
Mean compactness - Polsby Popper	0.3	0.27
# Paired incumbents	no data	no data
Deviation relative range	-1 to 1	-1 to 1
Deviation overall range	0.00% to 0.00%	0.00% to 0.00%
# Districts won by: Biden (D-Pres20)	7	5
# Districts won by: Trump (R-Pres20)	7	9
# Districts won by: Bryant (D-PSC 20)	6	5
# Districts won by: Shaw (R-PSC 20)	8	9
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	0	0
# Seats 18+_AP_Blk% is: 70% to 80%	0	0
# Seats 18+_AP_Blk% is: 60% to 70%	0	1
# Seats 18+_AP_Blk% is: 55% to 60%	0	0
# Seats 18+_AP_Blk% is: 52% to 55%	0	1
# Seats 18+_AP_Blk% is: 50% to 52%	4	0
<b># Seats majority 18+_AP_Blk%</b>	<b>4</b>	<b>2</b>
# Seats 18+_AP_Blk% is: 45% to 50%	1	2
# Seats 18+_AP_Blk% is: 40% to 45%	0	0

**Chart 8. HD-Unity and Enacted 2021 House Plan comparisons**

<b>Plan metrics</b>	<b>HD Unity</b>	<b>House Enacted</b>
County splits	79	69
Voting precinct splits	99	184
Mean compactness - Reock	0.36	0.39
Mean compactness - Polsby Popper	0.23	0.28
# Paired incumbents	73	20
Deviation relative range	-0.62% to 0.58%	-1.40% to 1.34%
Deviation overall range	1.20%	2.74%
# Districts won by: Biden (D-Pres20)	99	83
# Districts won by: Trump (R-Pres20)	81	97
# Districts won by: Bryant (D-PSC 20)	96	79
# Districts won by: Shaw (R-PSC 20)	84	101
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	0	0
# Seats 18+_AP_Blk% is: 70% to 80%	0	11
# Seats 18+_AP_Blk% is: 60% to 70%	12	15
# Seats 18+_AP_Blk% is: 55% to 60%	15	5
# Seats 18+_AP_Blk% is: 52% to 55%	17	5
# Seats 18+_AP_Blk% is: 50% to 52%	13	2
<b># Seats majority 18+_AP_Blk%</b>	<b>57</b>	<b>49</b>
# Seats 18+_AP_Blk% is: 45% to 50%	9	4
# Seats 18+_AP_Blk% is: 40% to 45%	8	2

**Chart 9. SD-Unity and Enacted 2021 Senate Plan comparisons**

<b>Plan metrics</b>	<b>SD Unity</b>	<b>Senate Enacted</b>
County splits	46	29
Voting precinct splits	27	47
Mean compactness - Reock	0.37	0.42
Mean compactness - Polsby Popper	0.22	0.29
# Paired incumbents	22	4
Deviation relative range	-0.14% to 0.19%	-1.03% to +0.98%
Deviation overall range	0.33%	2.01%
# Districts won by: Biden (D-Pres20)	31	23
# Districts won by: Trump (R-Pres20)	25	33
# Districts won by: Bryant (D-PSC 20)	30	23
# Districts won by: Shaw (R-PSC 20)	26	33
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	0	0
# Seats 18+_AP_Blk% is: 70% to 80%	0	3
# Seats 18+_AP_Blk% is: 60% to 70%	0	6
# Seats 18+_AP_Blk% is: 55% to 60%	0	3
# Seats 18+_AP_Blk% is: 52% to 55%	11	1
# Seats 18+_AP_Blk% is: 50% to 52%	9	1
<b># Seats majority 18+_AP_Blk%</b>	<b>20</b>	<b>14</b>
# Seats 18+_AP_Blk% is: 45% to 50%	2	1
# Seats 18+_AP_Blk% is: 40% to 45%	0	1



**Chart 10. CD-Urity and Enacted 2021 congressional Plan comparisons**

<b>Plan metrics</b>	<b>CD-Urity</b>	<b>CD Enacted</b>
County splits	21	15
Voting precinct splits	31	47
Mean compactness - Reock	0.36	0.44
Mean compactness - Polsby Popper	0.23	0.27
# Paired incumbents	no data	no data
Deviation relative range	0 to 1	-1 to 1
Deviation overall range	0.00% to 0.00%	0.00% to 0.00%
# Districts won by: Biden (D-Pres20)	7	5
# Districts won by: Trump (R-Pres20)	7	9
# Districts won by: Bryant (D-PSC 20)	7	5
# Districts won by: Shaw (R-PSC 20)	7	9
# Seats 18+_AP_Blk% is: over 90%	0	0
# Seats 18+_AP_Blk% is: 80% to 90%	0	0
# Seats 18+_AP_Blk% is: 70% to 80%	0	0
# Seats 18+_AP_Blk% is: 60% to 70%	0	1
# Seats 18+_AP_Blk% is: 55% to 60%	0	0
# Seats 18+_AP_Blk% is: 52% to 55%	1	1
# Seats 18+_AP_Blk% is: 50% to 52%	3	0
<b># Seats majority 18+_AP_Blk%</b>	<b>4</b>	<b>2</b>
# Seats 18+_AP_Blk% is: 45% to 50%	1	2
# Seats 18+_AP_Blk% is: 40% to 45%	1	0

11. As an experienced map drawer, I am often asked by elected officials and redistricting stakeholders to review the political performance of districts within a plan and compare that to other plans. When I conduct those analyses, I generally use statewide elections to assess the overall partisan makeup of plans. In the tables above, two elections are included - the presidential election of 2020 (Biden-D vs.

Trump-R) and the Public Service Commissioner election of 2020 (Bryant-D vs. Shaw-R). I understand that these are some of the elections that legislators used when drawing the 2021 enacted plans.

12. Having reviewed these election results, it is my opinion that each of the plans submitted in Dr. Duchin's report has a significant increase in Democratic performance when compared to the enacted plans. It is also my opinion that each of the unity plans has a significant increase in Democratic performance when compared to the enacted plans.

13. The index of exhibits attached to this report is as follows:

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2. CD Enacted Core Constituencies to 2012 Congressional Plan
3. CD Enacted District Election Summary
4. CD Enacted Measures of Compactness
5. CD Enacted Plan Components with Population Detail
6. CD Enacted Political Subdivision Splits – VTD
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9. CD-Alt1-Jan11 Core Constituencies to 2021 Congressional Plan
10. CD-Alt1-Jan11 District Election Summary
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99. SD-Unity Population Summary

[Signature on next page]

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 15th day of February, 2023.

  
\_\_\_\_\_  
JOHN B. MORGAN

# EXHIBIT C



**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

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COMMON CAUSE, et al., )

*Plaintiffs,* )

v. )

BRAD RAFFENSPERGER )

*Defendant.* )

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

Served on behalf of the Georgia State Conf. of the NAACP Plaintiffs

**Expert Report of Dr. Benjamin Schneer**

# Racially Polarized Voting Analysis: Georgia

Benjamin Schneer

January 13, 2023

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## Introduction

1. My name is Benjamin Schneer and I am an Assistant Professor of Public Policy at the Harvard Kennedy School. I joined Harvard's faculty in 2018, after working for two years as an Assistant Professor of Political Science at Florida State University. In 2016 I completed my Ph.D in Political Science in the Department of Government at Harvard University, where my dissertation won the Richard J. Hernstein Prize. At the Harvard Kennedy School, I teach a course on Empirical Methods and a course on Data Science for Politics.

2. My research is focused on American politics, particularly elections, political representation, and redistricting. I have published research articles in several leading peer-reviewed academic journals including *Science*, *American Journal of Political Science*, *Journal of Politics*, *Quarterly Journal of Political Science*, *Political Behavior*, *Studies in American Political Development*, and *Legislative Studies Quarterly*. My work received the annual Best Paper Award from the *American Journal of Political Science* in 2018, and other research of mine has received media coverage in outlets including *The New York Times*, *The Washington Post*, *The Los Angeles Times*, and *The Economist*.

3. I have worked as a consultant on several matters related to voting rights and redistricting. I co-authored, along with Professor Gary King, the analyses of the Arizona Independent Redistricting Commission Congressional and Legislative District maps submitted on behalf of the commission to the Department of Justice in 2012 – resulting in maps that were pre-cleared on the first attempt

for the first time in Arizona's history. I also have worked as a consultant on the Racially Polarized Voting Analysis prepared for the Virginia Redistricting Commission in 2021.

4. I have been retained to analyze the extent of legally significant racially polarized voting in Georgia's congressional, State Senate and State House district maps passed by the General Assembly in the 2021 redistricting cycle. In this report, I estimate voting behavior in these districts, examine the extent of racially polarized voting, and make an assessment of the performance of these districts in terms of the ability of minority groups to elect their candidates of choice. Then, I consider new illustrative districts proposed by the plaintiffs, again examining the extent of racially polarized voting and the ability of minority groups to elect their candidates of choice in the illustrative districts.

## **Executive Summary**

5. Based on my analysis, I find that there is evidence of racially polarized voting in Georgia overall as well as for specific congressional districts (CDs), state Senate districts (SDs), and state House districts (LDs). Black and Hispanic voters tend to vote cohesively and White voters tend to oppose them. I have primarily analyzed racially polarized voting between Black and White voters; in a handful of districts identified by the plaintiffs, I have analyzed racially polarized voting between Black and Hispanic voters on the one hand and White voters on the other hand.

6. Based on my analysis, I view the voter behavior that I have examined

in the state of Georgia to be consistent with racially polarized voting between minority and majority racial groups in (1) all enacted CDs other than CD 5, (2) in all Illustrative Map CDs other than CD 4, (3) in enacted SDs 6, 9, 16, 17, 22, 23, 25, 26, 28, 34, 35, 38, 40, 43, 44, and 55, (4) in all Illustrative Map SDs I analyze (with the possible exception of Illustrative Map 1 SD 40, which is borderline), (5) in enacted LDs 61, 65, 74, 78, 115, 116, 117, 142, 143, 151, 154, 161, 163, 165 and 171, (6) and in all Illustrative Map LDs I analyze.

7. In terms of minority groups' ability to elect their candidates of choice in the enacted congressional, state Senate and state House districts that I examine, revised maps could clearly result in greater minority representation. Furthermore, some districts with meaningful minority population levels nonetheless offer minority groups a limited ability to elect their candidates of choice based on past elections.

8. The Illustrative Maps drawn by the plaintiffs' map-drawing expert Moon Duchin offer an increased ability to elect the minority-preferred candidates in the districts I have been asked to examine. When looking across statewide elections since 2012 where minority candidates ran against non-minority candidates, in the Illustrative Congressional District Map minority candidates won these elections more than half the time in 6 of the 14 districts (43%); this contrasts with the enacted Congressional District Map, where minority candidates won more than half the time in such elections in 5 of the 14 districts (36%). In the Illustrative State Senate Maps, minority candidates won more than half the time in such elections in 5 of the 5 districts that I examined in Illustrative

Map 1 (100%) and in 2 of the 2 districts that I examined in Illustrative Map 2 (100%). This performance contrasts with the enacted Senate Districts I have examined, where minority candidates won more than half the time in 67% of districts. The Illustrative Maps for the State House outperform the enacted map in terms of ability to elect minority candidates as well.

## Methodological Approach

### Identifying Racially Polarized Voting

9. Racially polarized voting (RPV) occurs when the majority group and a minority racial group vote differently. To identify instances of RPV in Georgia, I examine (1) whether members of a minority group of interest appear to be *cohesive* in their electoral support for a candidate of choice (Specifically, does more than half of a given minority group support the same candidate?); and, (2) whether White voters oppose this candidate (Specifically, do more than half of White voters oppose the minority candidate of choice?).<sup>1</sup>

10. To make these determinations, I analyze historical voting behavior from Georgia elections since 2012. The Georgia Secretary of State tracks turnout data by racial group in each precinct, along with aggregate vote totals for each candidate in each precinct. While elections from 2012 to 2021 were conducted

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<sup>1</sup>For a detailed discussion of cohesion, see Bernard Grofman, Lisa Handley, and Richard G. Niemi, *Minority representation and the quest for voting equality*, Cambridge University Press, 1992. The authors note that courts have concluded that cohesiveness “is to be measured with reference to voting patterns” (p. 68), and that “minority groups are politically cohesive if they vote together for minority candidates” (p. 73).

under the previous district maps, I focus primarily on elections for which changes in district lines are unlikely to affect vote choice. Specifically, I use historical national and state-wide elections to evaluate congressional, state House and state Senate districts. I discuss in more detail the specific elections I have selected to study, and the rationale for my choices, in the next section.

11. Because elections are conducted under a secret ballot, it is not possible to tally vote choice directly for each racial group in order to assess voter behavior in each enacted district. Instead, I estimate racial-group-level vote totals based on the precinct-level election data, producing estimates for each racial group's vote share in support of each candidate.<sup>2</sup>

12. To do this, I employ a standard approach in the political science literature and in redistricting litigation when one must estimate the voting behavior of specific racial groups based on aggregate vote totals: ecological inference (EI).<sup>3</sup> Ecological inference makes use of (1) the statistical information captured by how strongly a candidate's level of support varies in tandem with variation in each racial group's population share across precincts, and (2) deterministic information captured in precincts that consist primarily of one racial group. For example, if a precinct is relatively homogeneous, one can place bounds on the range of possible voting behaviors for a racial group in that precinct, with the

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<sup>2</sup>On the value of both statewide elections and precinct-level data, see Gary King, *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data*, Princeton University Press, 1997. King writes: "For electoral applications, choosing data in which all geographic units have the same candidates (such as precincts from the same district or counties form the same statewide election) is advisable so that election effects are controlled" (p. 28).

<sup>3</sup>King, 1997.



most extreme version of this occurring when a precinct is entirely homogeneous.<sup>4</sup> The key advantage of EI is that it combines both the statistical and deterministic information I have just described. Technical summaries of the EI approach can be found in a variety of sources, including King, Rosen and Tanner (2004).<sup>5</sup> In this report, I use the RxC method of ecological inference, allowing me to identify voting patterns across all the primary racial groups in Georgia at once. This approach is based upon the hierarchical model described in Rosen, Jiang, King and Tanner (2001),<sup>6</sup> and the draws from this model's posterior distribution are obtained using a Metropolis-within-Gibbs sampling algorithm.<sup>7</sup> Previous research comparing approaches including ecological regression, 2x2 ecological inference and the Rosen et al. (2001) method has found that these approaches tend to yield similar results, with Rosen et al. (2001) having a slight edge in instances with more than two racial groups.<sup>8</sup> Additionally, a variety of published research and legal cases have made use of this method.<sup>9</sup>

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<sup>4</sup>Otis Dudley Duncan and Beverly Davis, "An alternative to ecological correlation," *American Sociological Review* (1953).

<sup>5</sup>Gary King, Ori Rosen, and Martin A. Tanner, "Information in ecological inference: An introduction," In *Ecological Inference: New Methodological Strategies*, pp. 1-12, Cambridge University Press, 2004.

<sup>6</sup>Ori Rosen, Wenxin Jiang, Gary King, and Martin A. Tanner, "Bayesian and frequentist inference for ecological inference: The  $R \times C$  case," *Statistica Neerlandica* 55, no. 2 (2001): 134-156.

<sup>7</sup>Olivia Lau, Ryan T. Moore, and Michael Kellermann, "eiPack:  $R \times C$  ecological inference and higher-dimension data management," *New Functions for Multivariate Analysis* 7, no. 1 (2007): 43, Available at <https://cran.r-project.org/web/packages/eiPack/index.html>.

<sup>8</sup>Justin de Benedictis-Kessner, "Evidence in voting rights act litigation: Producing accurate estimates of racial voting patterns," *Election Law Journal* 14, no. 4 (2015): 361-381.

<sup>9</sup>Research articles making use of this approach include: Michael C. Herron and Jasjeet S. Sekhon, "Black candidates and black voters: Assessing the impact of candidate race on uncounted vote rates," *The Journal of Politics* 67, no. 1 (2005): 154-177. Matt Barreto, Loren Collingwood, Sergio Garcia-Rios, and Kassra AR Oskooii. "Estimating candidate support in Voting Rights Act cases: Comparing iterative EI and EI- $R \times C$  methods." *Sociological Methods & Research* 51, no. 1 (2022): 271-304. Legal cases where experts have presented opinions

## Measuring District Performance

13. I also examine the performance of the districts being challenged along with newly proposed districts to assess if they allow minority groups to elect candidates of choice. I again use historical elections re-aggregated to the new districts to make this assessment, and I focus on several related questions: (1) What is the minority share of the electorate in the newly enacted districts? (2) In what share of past elections would the minority candidate of choice have won in these historical elections? (3) Given the results for the previous two questions, does the district as drawn constitute sufficient minority voting strength for minority voters to elect candidates of choice?<sup>10</sup>

## Data Sources

14. To perform the analyses in this report, I rely on elections data from the Georgia Secretary of State's office and the Georgia General Assembly's Legislative and Congressional Reapportionment Office. Georgia, unlike many other states, records turnout data by race for all elections. As a result, there is no uncertainty about the turnout of different racial groups in Georgia and ecological inference analysis only needs to be used to determine voter preferences by race.

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making use of RxC ecological inference include: *League of Women Voters of Ohio, et al. v. Ohio Redistricting Commission*, *Caster v. Merrill*, *Milligan v. Merrill*, and previous filings in this case among others.

<sup>10</sup>See Grofman, Handley and Niemi, 1992. They write: "What is clearly established by *Gingles* is that white bloc voting is legally significant, regardless of the actual percentages of whites voting against minority-preferred candidates, when it usually results in the defeat of the minority-preferred candidates" (p. 73).

15. The state has produced reapportionment reports that contained precinct-level voter registration and turnout by race<sup>11</sup> along with precinct-level vote totals for all general elections between 2014 and 2020. I also requested the data from the 2012 reapportionment report but the state did not provide it; as a result, I instead used 2012 reapportionment report data that I received directly from the Lawyers' Committee for Civil Rights. For the 2022 election, I received data on turnout from the Secretary of State's office but I did not receive precinct-level election totals. As a result, I again used data received from the Lawyers' Committee for Civil Rights.<sup>12</sup>

16. To analyze the 2018 and 2021 runoff elections, I used data compiled by the Voting and Election Science Team (VEST).<sup>13</sup> These files include precinct-level general election results and turnout data.

## Maps

17. To use past election data to understand potential voter behavior in newly-drawn districts, I assign precincts to the enacted congressional and legislative

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<sup>11</sup>Georgia includes the following options for voters to select as their race and/or ethnicity: American Indian, Asian/Pacific Islander, Black, Hispanic/Latino, Other, and White. For the purposes of this report, I focus on the behavior of Black, Hispanic/Latino, and White voters and I combine all other categories into the Other category. When analyzing RPV between Black, Hispanic and White voters I estimate vote shares for each of these four categories but only report the Black, Hispanic and White vote shares. When analyzing RPV between Black and White voters only I include Hispanic voters in the Other category.

<sup>12</sup>The precinct-level election results for the 2022 data were downloaded from the Secretary of State's website at [https://sos.ga.gov/index.php/elections/federalgeneral\\_election\\_runoff\\_turnout\\_by\\_demographics\\_january\\_2021](https://sos.ga.gov/index.php/elections/federalgeneral_election_runoff_turnout_by_demographics_january_2021) and compiled by the Lawyer's Committee for Civil Rights.

<sup>13</sup>Voting and Election Science Team. "2020 Precinct-Level Election Results", Harvard Dataverse V29, 2020, <https://doi.org/10.7910/DVN/K7760H>.

district boundaries as well as the illustrative boundaries. In order to accomplish this, I downloaded GIS shape files from the Legislative and Congressional Reapportionment Office page on the Georgia General Assembly website.<sup>14</sup> These included shape files for the passed map of congressional districts, the passed map of state House districts, the passed map of state Senate districts, and precinct shape files for 2012, 2014, 2016, 2018 and 2020. For 2022, I used precinct shape files provided to me by the Lawyers Committee for Civil Rights. For the illustrative maps presented by the plaintiffs, I received data assigning each census block in the state to a district, which I converted into district-level shape files. I then spatially joined precincts for each election year to the enacted and illustrative districts.<sup>15</sup> In practice, the spatial join amounts to finding which precincts are contained within congressional, state Senate and state House districts and then assigning them to the new districts.

## Elections

18. I estimate EI models using statewide general elections occurring between 2012 and 2022.<sup>16</sup> These consist of: US Presidential Elections in 2012, 2016

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<sup>14</sup>Available at <https://www.legis.ga.gov/joint-office/reapportionment>.

<sup>15</sup>Specifically, the join is based on a point within the interior of the precinct boundaries and towards the middle of the precinct. I do not use the centroid of the precinct because a centroid can be located outside the boundary of a precinct for non-convex precinct shapes. Split precincts occur rarely; in 2022, for example, 1.18% of precincts in congressional districts, 1.22% of precincts in state Senate districts, and 5.83% of precincts in state House districts were split such that more than 5% of their area was contained in multiple districts.

<sup>16</sup>I omit any elections without a candidate from each of the major political parties as well as the 2020 US Senate special election. This election occurred between multiple candidates of different parties, including Raphael Warnock (D), Kelly Loeffler (R), Doug Collins (R), Deborah Jackson (D) and Matt Lieberman (D). This election is qualitatively different from the others as it presents an expanded choice set of candidates, multiple minority candidates, and no candidate

and 2020; US Senatorial Elections in 2014, 2016, 2020, 2021 (Runoff), and 2022 (General and Runoff); State Gubernatorial Elections in 2014, 2018 and 2022; State Lieutenant Governor Elections in 2014, 2018 and 2022; Secretary of State Elections in 2014, 2018 (General and Runoff) and 2022; State Agriculture Commissioner Elections in 2014, 2018 and 2022, State Attorney General Elections in 2014, 2018 and 2022; State Insurance Commissioner Elections in 2014, 2018 and 2022; State Labor Commissioner Elections in 2014, 2018 and 2022; State Superintendent of Public Instruction Elections in 2014, 2018 and 2022; and, State Public Service Commissioner Elections in 2014, 2018 (General and Runoff), 2020 and 2021 (Runoff).

20. When studying the extent of legally significant racially polarized voting in general elections, I estimate ecological inference results for general elections but not for primaries. Primary elections can be of use in an RPV analysis, but in my view studying them is not necessary or sufficient for drawing conclusions about racially polarized voting in Georgia general elections. For example, if racially polarized voting occurs in a Georgia primary election it does not necessarily imply that racially polarized voting will occur in the general election, and vice versa. The primary electorate is often considerably different than the electorate in a general election. Indeed, political science research has found “consistent support for the argument that primary and general electorates diverge in their policy ideology.”<sup>17</sup> Thus, in my judgment, it is sufficient in this case to examine

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receiving a majority of votes. Due to these factors, the election poses a less clear test of racially polarized voting, and I do not attempt to draw any conclusions from it at the statewide level or in my subsequent analysis of voting behavior within specific districts.

<sup>17</sup>See Seth J. Hill, “Institution of nomination and the policy ideology of primary electorates,”

behavior in general elections in order to determine the extent of racially polarized voting in Georgia general elections.

21. While I estimate RPV results for all statewide general elections since 2012, I rely on those elections in which a minority candidate was one of the two major party candidates running for office as most probative for making inferences about racially polarized voting.<sup>18</sup> In Georgia between 2012 and 2022, among the statewide elections that I examine, a minority candidate ran against a non-minority candidate in the following instances:

- 2012 Presidential Election, Barack Obama (D)
- 2014 Insurance Commissioner Election, Liz Johnson (D)
- 2014 Labor Commissioner Election, Robbin Shipp (D)
- 2014 Lt. Governor Election, Connie Stokes (D)
- 2014 Secretary of State Election, Doreen Carter (D)
- 2014 Superintendent of Public Instruction, Valarie Wilson (D)
- 2014 Public Service Commissioner 4 Election, Daniel Blackman (D)
- 2018 Gubernatorial Election, Stacey Abrams (D)
- 2018 Insurance Commissioner Election, Janice Laws Robinson (D)
- 2018 Superintendent of Public Instruction Election, Otha Thornton (D)
- 2020 Public Service Commissioner 1 Election, Robert Bryant (D)

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*Quarterly Journal of Political Science* 10, no. 4 (2015), p. 480.

<sup>18</sup>An election between a minority and a non-minority candidate provides variation in the race of the candidate and therefore offers a test of whether race might matter in vote choice among different voter groups. Some past cases have also placed more weight on elections between a minority and non-minority candidate: “Elections between white and minority candidates are the most probative in determining the existence of legally significant white bloc voting.” See *Old Person v. Cooney*, 230 F.3d 1113, 112324 (9th Cir. 2000).

- 2020 Public Service Commissioner 4 Election, Daniel Blackman (D)
- 2020 US Senator Special Election, Raphael Warnock (D)
- 2021 Public Service Commissioner 4 Runoff, Daniel Blackman (D)
- 2021 US Senator Special Election Runoff, Raphael Warnock (D)
- 2022 Gubernatorial Election, Stacey Abrams (D)
- 2022 Secretary of State Election, Bee Nguyen (D)
- 2022 Agriculture Commissioner Election, Nakita Hemingway (D)
- 2022 Insurance Commissioner Election, Janice Laws Robinson (D)
- 2022 Labor Commissioner Election, William Boddie (D)
- 2022 Superintendent of Public Instruction Election, Alisha Searcy (D)

22. In addition to these elections, I also include elections in which no minority candidate ran or two minority candidates ran as major party candidates. These are useful for establishing a general pattern of vote choice for different racial groups, even if elections with a single minority candidate are most probative for determining the extent of RPV. In all of my subsequent RPV analysis, I examine the vote shares cast in support of the statewide minority-preferred candidate for a given election. I define the statewide minority-preferred candidate as the candidate who garnered the majority of votes cast by minority voters according to statewide EI estimates.<sup>19</sup>

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<sup>19</sup>Note that for any given election it must still be determined whether the statewide minority-preferred candidate is supported cohesively by the minority groups considered in this report. But, whether or not this occurs, by definition there will always be one candidate who received a majority of votes cast by minority voters.

## EI Analysis of Enacted Districts

### Statewide

23. I begin by analyzing the extent of RPV that has occurred overall in historical statewide elections. At the state level, elections in Georgia exhibit an unambiguous and consistent pattern of racially polarized voting. I make this determination by examining the vote choices of racial groups across past elections.

24. Figure 1 plots the EI estimates for the set of statewide elections under consideration, which were held from 2012 to 2022. The labels on the left side of the plot indicate the specific elections considered. Elections for which one minority candidate ran against a non-minority candidate are indicated with a star. In the plot, the point estimates illustrating the level of support for a candidate are marked with a circle. In this and in all subsequent analyses, these circles represent my estimate of two-party vote share for the minority-preferred candidate (e.g., the votes cast for the preferred major party candidate divided by the sum of the votes cast for the candidates of both major parties) for a given election. The point estimates can be understood in this context as the vote shares that were most likely to have generated the pattern of data (e.g., votes cast for candidates and turnout among different racial groups) that occurred across precincts in a given election. Additionally, the horizontal lines emanating from either side of the circles indicate the bounds of the 95% confidence intervals. The 95% intervals reflect the uncertainty of each estimate; specifically, for the



EI model, they mark the interval for which there is a 95% probability that the true vote share is contained within the lower and upper bounds.<sup>20</sup> In instances where no confidence interval is visible, the intervals are narrow and not visible to the eye (though they still exist).

25. I will explain and interpret these plots in two steps.<sup>21</sup> First, the points clustered on the right side of the plot indicate large majorities of Black and Hispanic voters all supported minority candidates in each election in which they ran between 2012 and 2022 and were opposed by non-minority candidates. In elections without a minority candidate, these voters still acted cohesively to support other minority-preferred candidates.<sup>22</sup>

26. For example, in the 2018 gubernatorial election, I estimate that about 99% of Black voters supported Stacey Abrams, a minority candidate. This overwhelming level of support among Black voters for minority candidates running against non-minority candidates is similar across all other elections as well, including for Barack Obama in 2012 (98%), Connie Stokes in 2014 (98%), Doreen Carter in 2014 (98%), Otha Thornton in 2018 (99%) and Raphael Warnock in 2021 (99%).

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<sup>20</sup>See Guido W. Imbens, “Statistical significance, p-values, and the reporting of uncertainty,” *Journal of Economic Perspectives* 35, no. 3 (2021): 157-74. Also see Andrew Gelman, John B. Carlin, Hal S. Stern, and Donald B. Rubin, *Bayesian data analysis*, Chapman and Hall/CRC, 1995. Note that this interpretation of a 95% interval is in subtle contrast with a non-Bayesian or frequentist interpretation of the confidence intervals, which is that if this estimation were repeated for numerous iterations of a given election, the calculated 95% confidence intervals would contain the true value of a racial group’s vote share 95% of the time.

<sup>21</sup>I have included with this report a digital Supplementary Appendix file recording individual estimates and confidence intervals for each election studied in a plot.

<sup>22</sup>Table 10 in the Appendix reports the full list of statewide minority-preferred candidates based on my estimates.

27. I estimate that about 96% of Hispanic voters supported Abrams in 2018. Again, the results are generally similar across other elections I examined with minority candidates. When a minority candidate was not one of the two major party candidates, minority voters continued to vote cohesively, supporting particular candidates at overwhelming rates. Overall, then, I conclude that Black and Hispanic voters' past behavior in statewide elections reveals that these groups had a clear *candidate of choice* in each election, with large majorities of these voters supporting the same candidate in each election and voting cohesively. And, in particular, when a minority candidate ran against a non-minority candidate in a general election, a clear majority of each racial minority group voted for the minority candidate.

28. Second, I study voting patterns of White voters. As an example, I estimate that in 2018 15% of White voters supported Abrams. Similarly, across all historical statewide elections between 2012 and 2022, considerably less than half of White voters supported minority candidates (when running against non-minority candidates). A majority of White voters voted against the candidate of choice of minority voters. With this information in mind, my assessment is that these historical elections exhibit clear evidence of racially polarized voting at the statewide level. Hispanic and Black voters cohere around the same candidates of choice, and White voters oppose them, consistent with RPV. Thus, any new districts proposed as a remedy would be drawing from a state where there is evidence of racially polarized voting affecting the minority groups considered in this report.

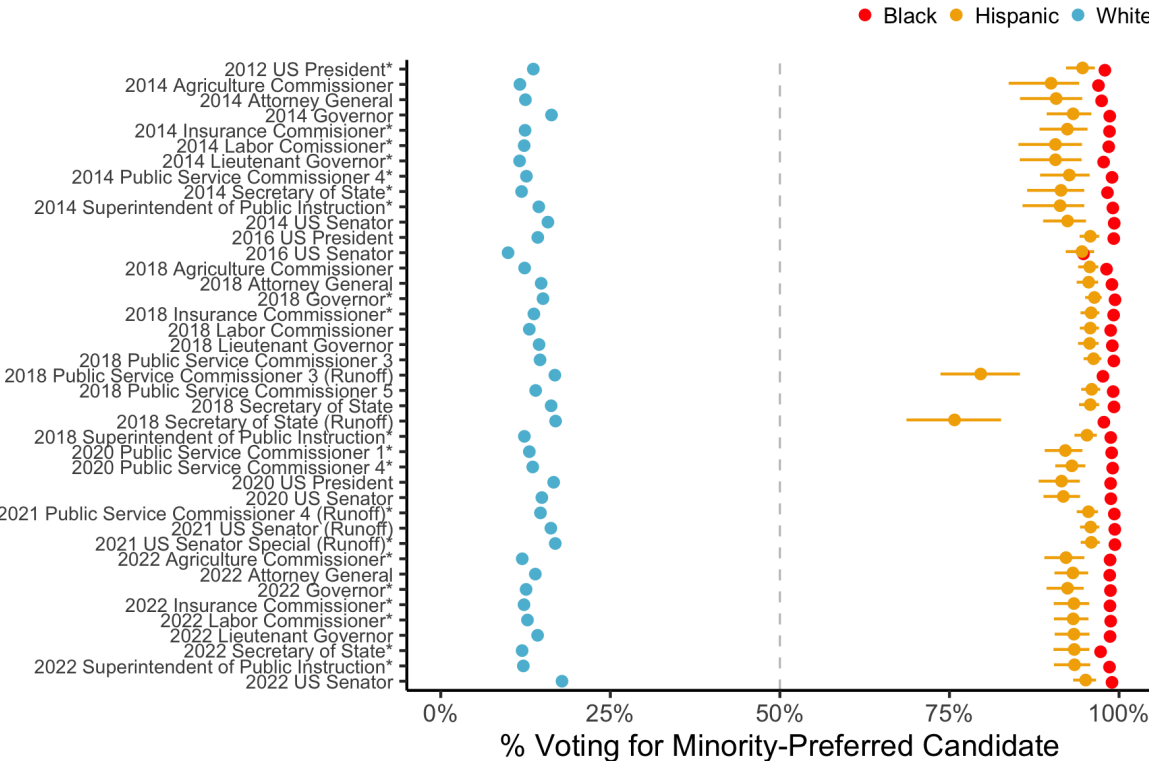


Figure 1: Ecological Inference Results — Statewide (Historical Elections, Two-Party Vote Shares), 3 Racial Groups

## Congressional Districts

29. I have been asked to examine RPV between Black and White voters in all enacted congressional districts in the state. Figure 2 illustrates the boundaries of the state's congressional districts.

30. Table 1 records the share of the electorate comprised by each racial group in each congressional district. These estimates are based on averaging across the 2020 and 2022 turnout figures. Minority groups constitute a majority of the electorate in CDs 4, 5, 7 and 13 based on the turnout numbers from 2020 and 2022.

31. Figures 3 through 7 present the EI results for individual congressional districts. As before, the point estimate for a racial group's vote share in a given election is represented with a dot and the uncertainty in the estimate is reflected in the 95% confidence intervals that emanate from the point estimate.

32. For most districts, the analysis of RPV between White and Black voters is very straightforward. In CDs 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 and 14, Black voters supported, by an overwhelming margin, the minority candidate in all historical elections in which they ran. When a minority candidate did not run or when multiple minority candidates ran, Black voters supported the statewide minority-preferred candidates in these districts: the confidence intervals never overlap with the threshold for majority support (e.g., 50%). White voters opposed the candidate of choice of Black voters in every historical election. Again, the confidence intervals on the estimates for White voters never

overlap with the the threshold for majority support.

33. For example, CD 3 demonstrates clear evidence of RPV between White and Black voters for all elections that I examine. For Black voters, I never estimate a minority-preferred candidate vote share below 92.8%. For White voters, I never estimate a minority-preferred candidate vote share above 12.2%.

34. As another example, CD 7 presents another strong example among the congressional districts of RPV, with Black voters cohering around minority candidates (and other minority-preferred candidates) and with White voters opposing these candidates of choice. In every election with a minority candidate running against a non-minority candidate, minority voters supported the minority candidate, often overwhelmingly. For example, in the 2018 Gubernatorial race, I estimate that 97% of Black voters supported Abrams. In contrast, 19% of White voters in the district supported Abrams according to my estimates. None of the confidence intervals overlapped with the threshold for majority support in this election. The same pattern generally holds in earlier election years where minority candidates ran. In my view, this pattern constitutes clear evidence of RPV.

35. CD 4 exhibits evidence of RPV between White and Black voters as well. In more recent elections a majority of White voters occasionally voted along with minority racial groups; however, this did not occur for any elections in which a minority candidate ran against a non-minority candidate. Two of the four instances where this occurred were lower salience elections, such as the 2018 Runoffs for Secretary of State and for Public Service Commissioner.

Overall, CD 4 suggests to me cohesive behavior across Black voters in support of minority candidates (and other minority-preferred candidates). White voters have reliably opposed the minority candidates of choice.

36. Unlike all other congressional districts in the state, CD 5 does not exhibit evidence of racially polarized voting. White voters in the district tended across a majority of elections to support the same candidate as minority voters. Based on my analysis, Black voters supported minority candidates in all historical elections, but White voters opposed this candidate of choice in only 15% of these elections.

37. To sum up, I observe RPV between Black voters on the one hand and White voters on the other hand when pooling across all CDs (e.g., statewide) as well as specifically for all CDs other than CD 5. In each of these congressional districts, when I focus specifically on elections with one minority candidate, Black voters supported that candidate and were opposed by White voters every time since 2012.

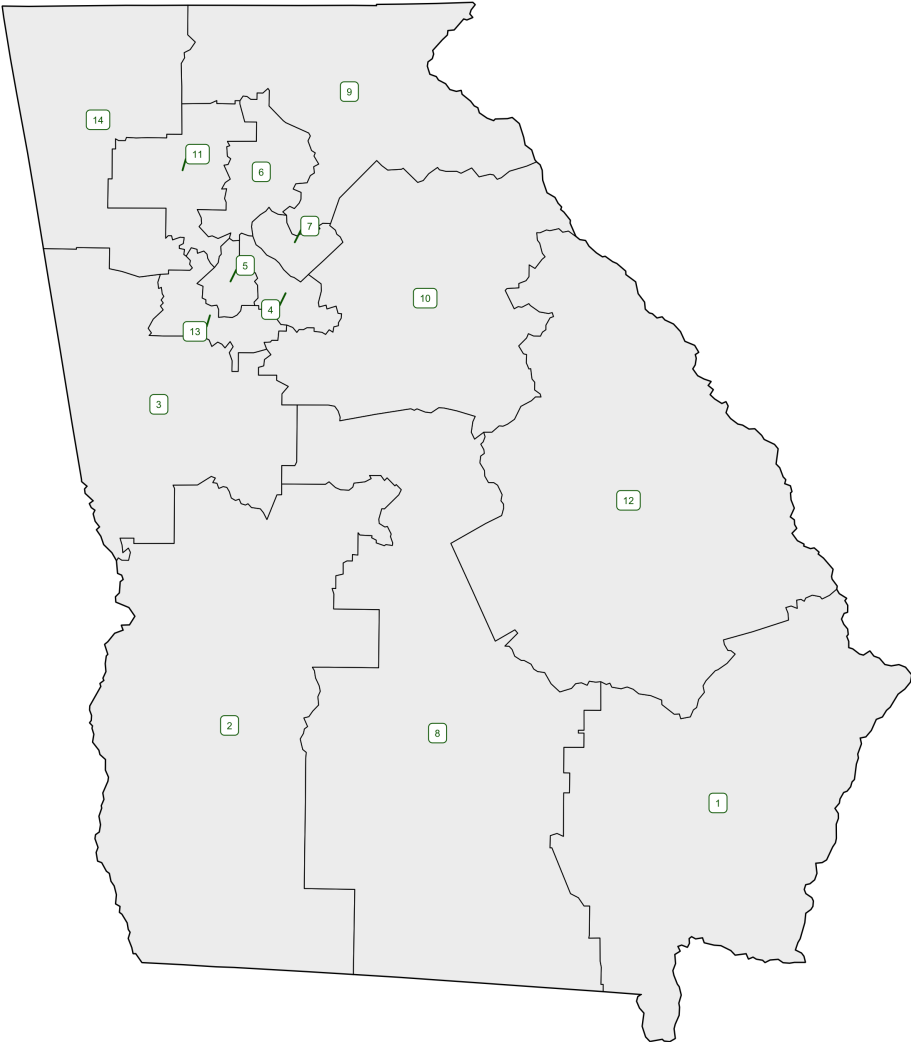


Figure 2: Map of Enacted Congressional Districts

Table 1: Percentage of Electorate by Race, Average of 2020 and 2022 Elections, Enacted CDs

CD	Black	Hispanic	White	Other
1	23.9%	1.8%	64.8%	9.5%
2	40.7%	1.1%	51.9%	6.3%
3	21.0%	1.8%	67.5%	9.7%
4	48.8%	2.3%	35.9%	12.9%
5	39.3%	2.3%	44.1%	14.2%
6	7.2%	3.3%	70.2%	19.2%
7	28.3%	6.5%	43.6%	21.5%
8	24.5%	1.2%	68.5%	5.7%
9	9.1%	4.0%	75.2%	11.7%
10	18.2%	2.1%	70.3%	9.3%
11	14.0%	3.6%	71.1%	11.2%
12	30.0%	1.4%	60.4%	8.2%
13	63.6%	2.8%	20.9%	12.7%
14	13.5%	3.1%	74.8%	8.6%

Note: This table reports the share of the electorate, based on the average across 2020 and 2022 turnout, of each racial group in a given congressional district.



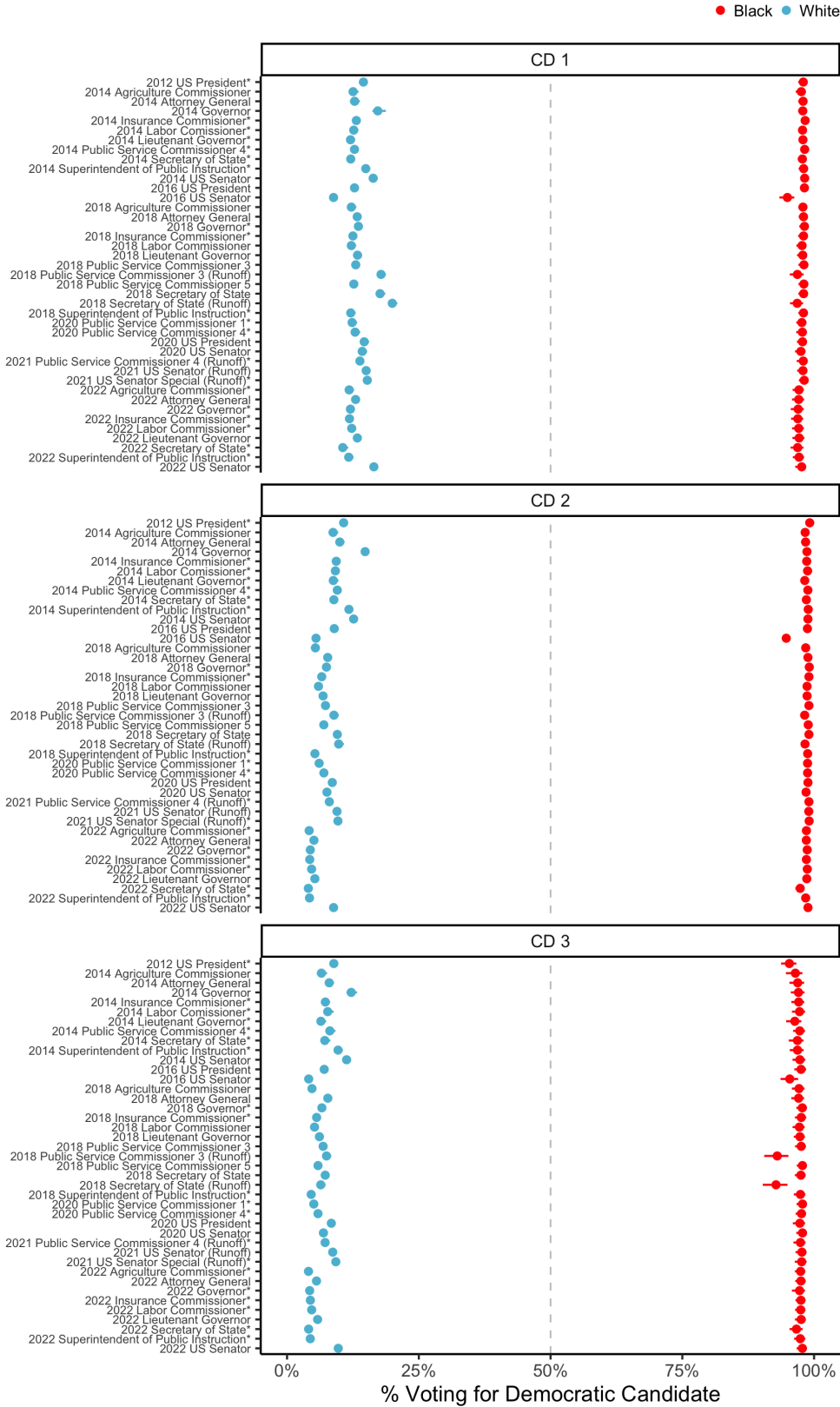


Figure 3: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

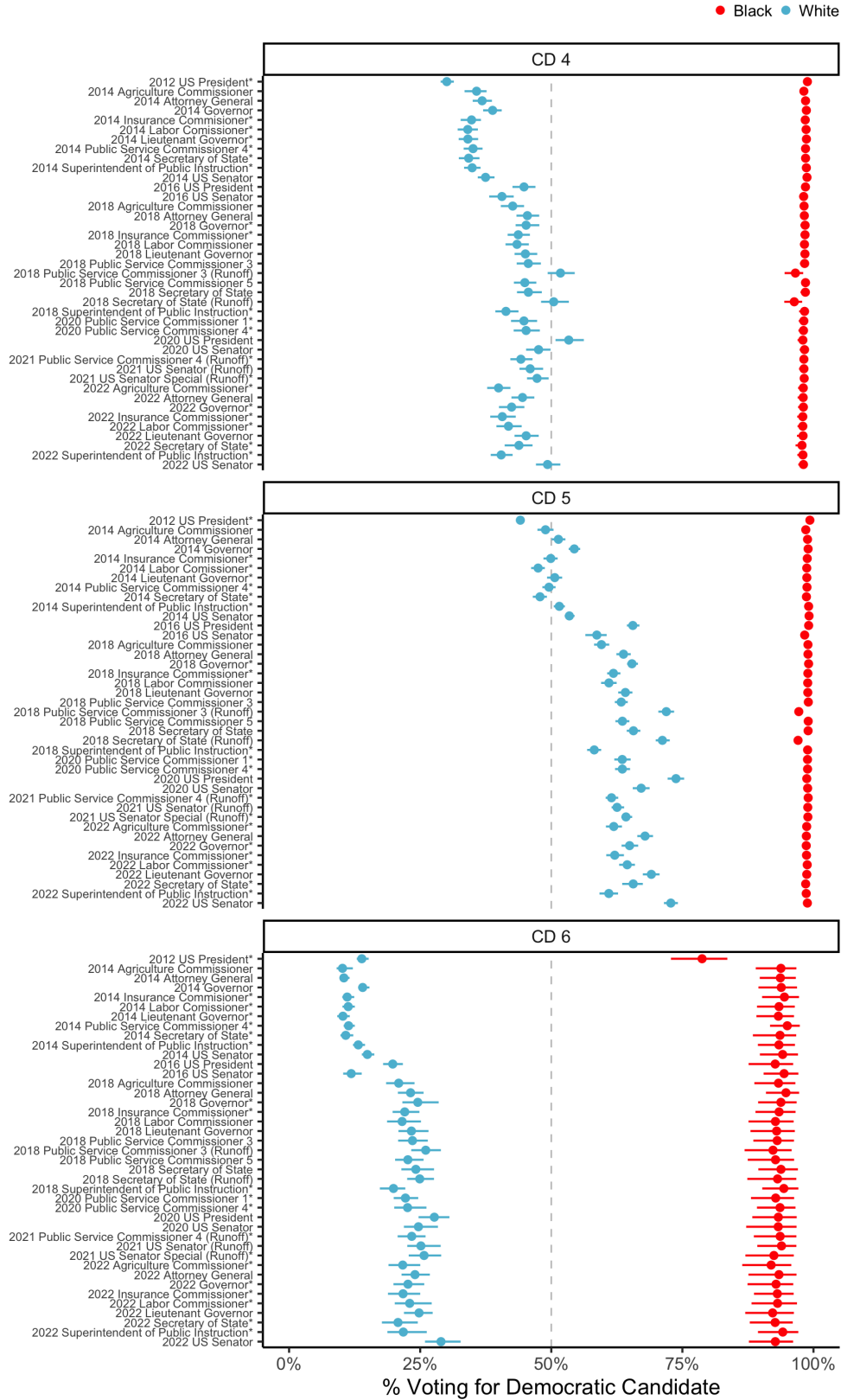


Figure 4: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)



Figure 5: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

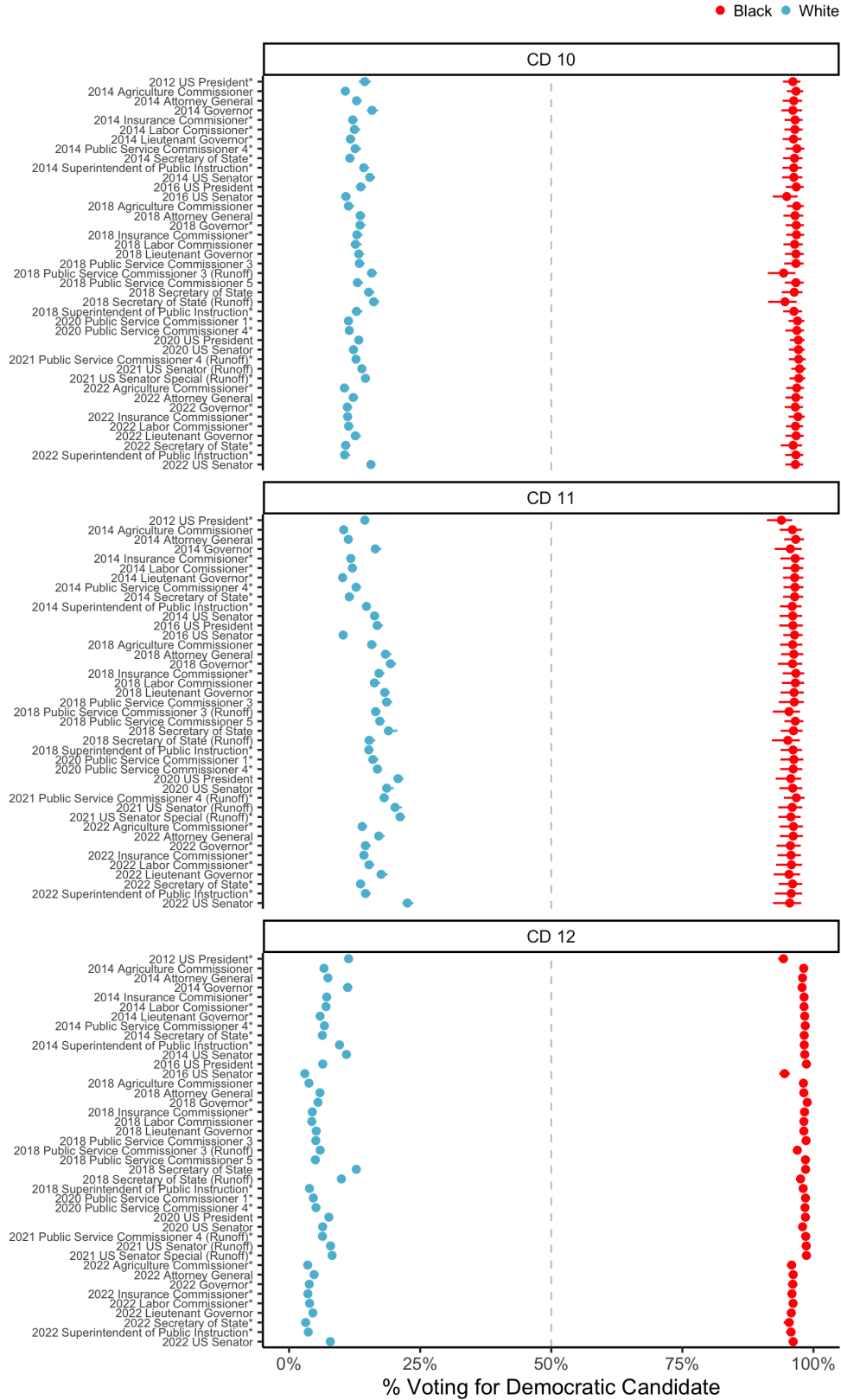


Figure 6: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)



Figure 7: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

## State Senate Districts

38. I was asked to examine enacted State Senate districts (SDs) that meaningfully overlapped with any focus illustrative SDs drawn by the plaintiffs' expert Moon Duchin. Therefore, I examine enacted SDs whose areas are comprised of 10% or more of an illustrative SD. Specifically, I analyze SDs 9, 16, 17, 22, 23, 25, 26, 28, 34, 35, 40, 41, 43, 44 and 55. Figure 8 presents a map of SDs in Georgia, with the districts in question shaded in dark gray. The SDs I am considering stretch in an almost contiguous band from west Georgia through Metro Atlanta to the eastern part of the state.

39. Of these districts, I have been asked to examine the extent of RPV between Black and Hispanic voters on the one hand and White voters on the other hand in SDs 16, 22, 23, 25, 26 and 44.<sup>23</sup> In all other SDs, I examine RPV between Black and White voters.

40. Figures 9-12 present the results of the EI analysis. I include estimates for Hispanic voter behavior in those districts where I have been instructed to examine it, and I omit it for the other districts. SDs 16, 22, 23, 25, 26 and 44 exhibit clear evidence of RPV with Black and Hispanic voters cohering around minority candidates and White voters opposing them in every historical election

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<sup>23</sup>Since Hispanic voters comprise a small share of the electorate in many SDs, and the SDs sometimes contain a small number of precincts, when analyzing RPV with Hispanic voters I perform a statewide EI analysis to determine precinct-level estimates, then I aggregate the precinct-level estimates up to the district in question. Compared with an EI analysis restricted to a single district, this approach adds an assumption that racial group voting behavior outside of the district contains useful information about racial group voter behavior within the district. This is similar in nature to the maintained assumption in any district-level EI analysis that behavior in one precinct is informative about behavior in another.

with a minority candidate that I examine. SDs 9, 17, 28, 34, 35, 43 and 55 exhibit evidence of RPV between Black and White voters, again with Black voters cohering around the minority candidate and White voters opposing this candidate.

41. For SDs 40 and 41 the evidence is slightly less clear cut. In SD 41, White voters join Black voters in support for minority candidates more than half the time. In my judgment, there is not racially polarized voting in this district. Importantly, it is worth noting that SD 41's boundaries contain less than half of an Illustrative district.<sup>24</sup> On the other hand, in SD 40 White voters opposed minority candidates in all but a handful of elections. Given the overall record of historical elections, my assessment is that there is evidence of RPV in SD 40.

42. Aside from the above exceptions, there is evidence of racially polarized voting behavior between Black and White voters in every other State Senate district I analyzed. Black voters clearly supported the minority-preferred candidate in every election under study, including those elections with a minority candidate running. White voters opposed their candidate of choice. Similarly, in the districts where I have been asked to assess behavior among Hispanic voters, I find evidence of RPV with Black and Hispanic voters supporting the minority-preferred candidate and White voters opposing them in every election.

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<sup>24</sup>About 39.6% of Illustrative Map 1 SD 40 is contained in enacted SD 41.

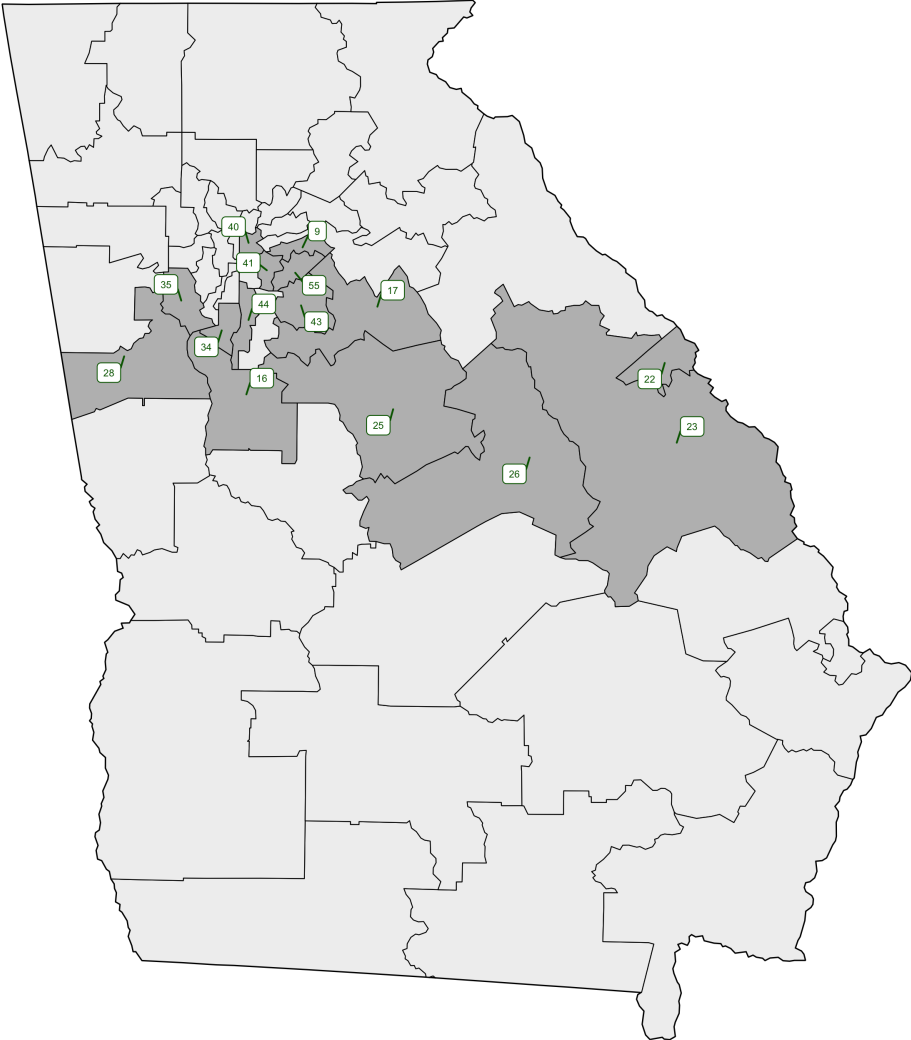


Figure 8: Map of Focus State Senate Districts



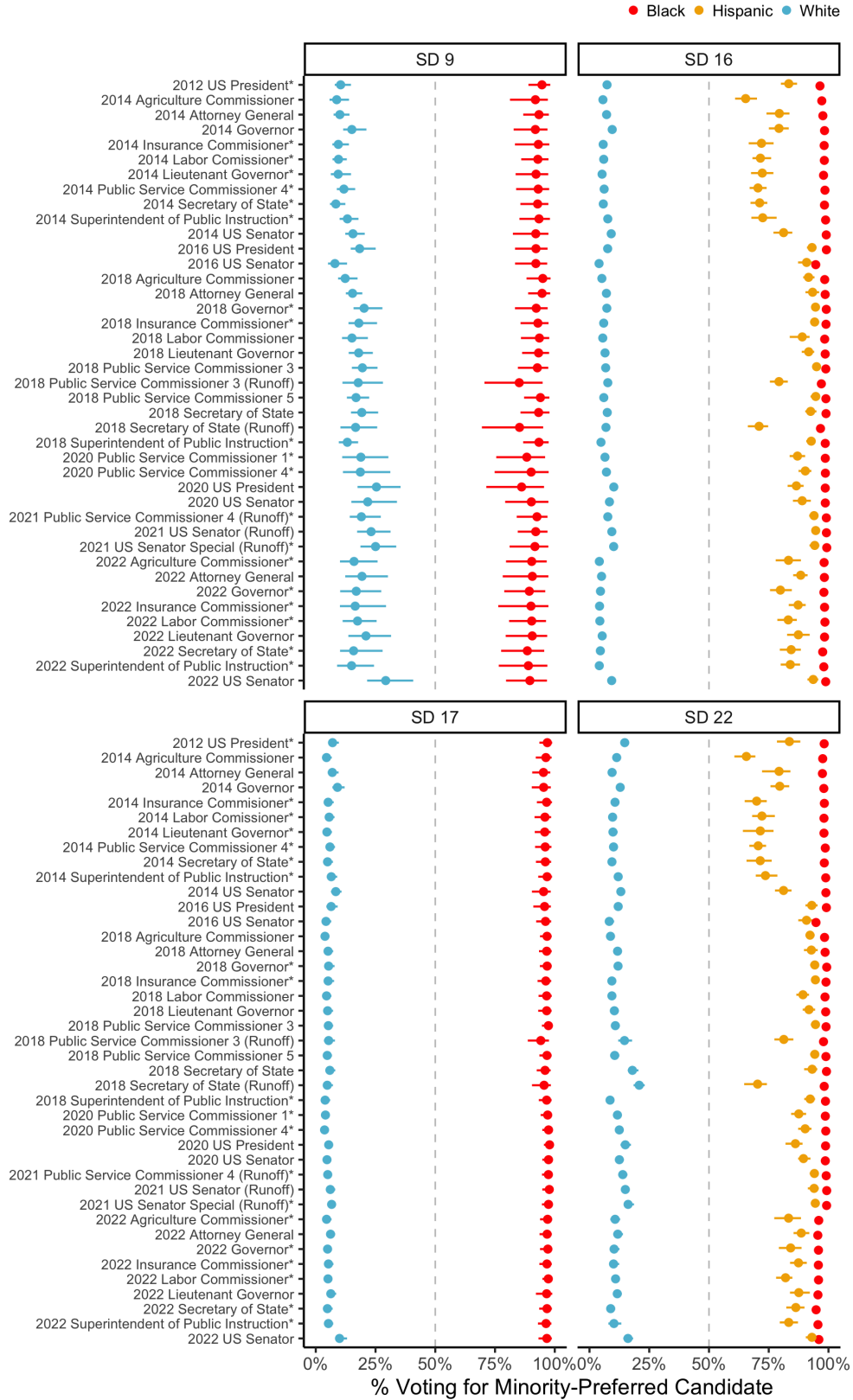


Figure 9: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

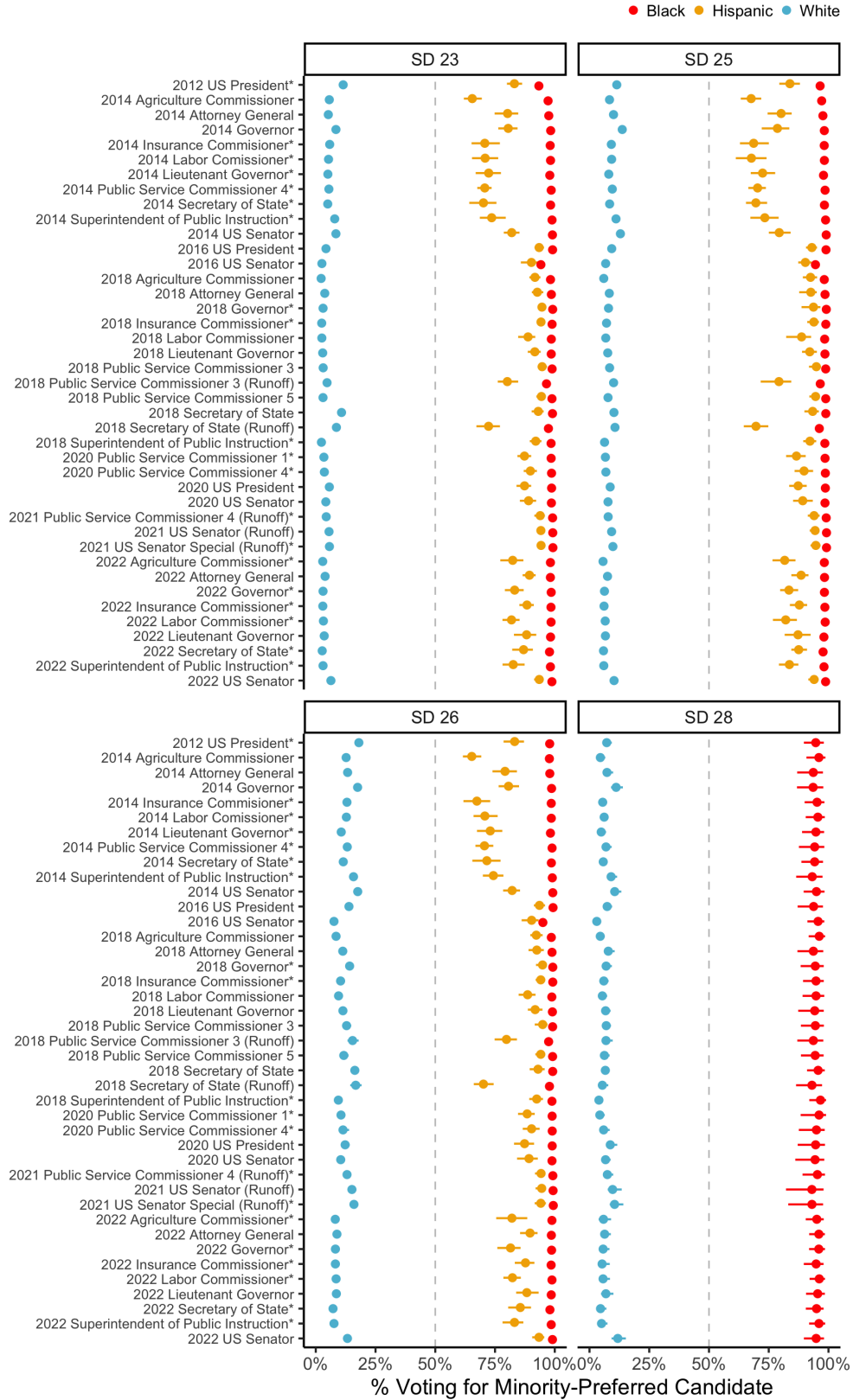


Figure 10: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)



Figure 11: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

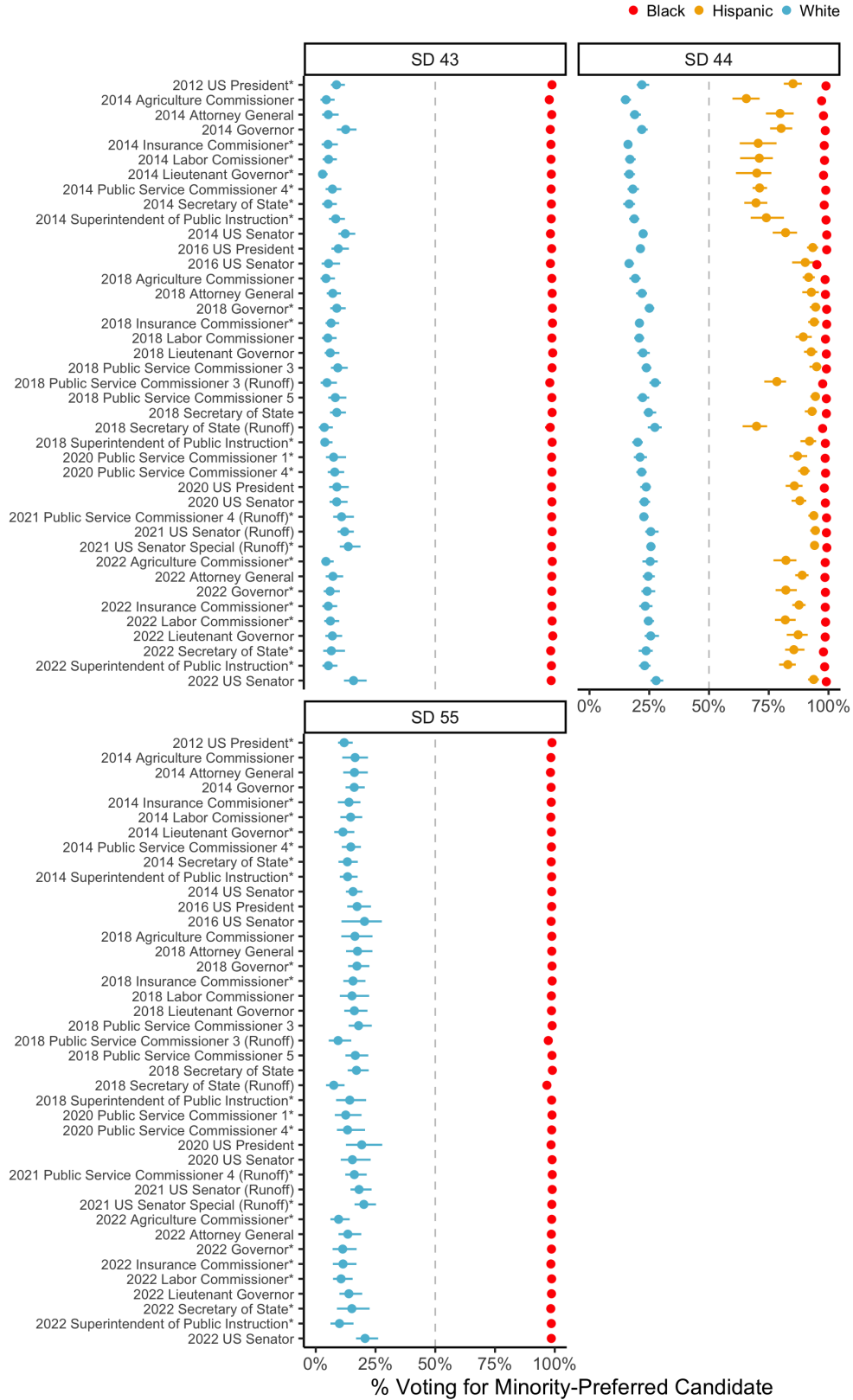


Figure 12: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

## State House Districts

43. I was asked to examine enacted State House districts (LDs) that meaningfully overlapped with any focus illustrative LDs drawn by the plaintiffs' expert Moon Duchin. As before, I examine enacted LDs whose areas are comprised of 10% or more of an illustrative LD. Specifically, I analyze LDs 61, 64, 65, 66, 74, 78, 115, 116, 117, 140, 142, 143, 151, 154, 161, 163, 165 and 171. Figure 13 presents a map of LDs in Georgia, with the districts in question shaded in dark gray.

44. Of these districts, I have been asked to examine the extent of RPV between Black and Hispanic voters on the one hand and White voters on the other hand in LDs 161, 163 and 165.<sup>25</sup> In all other LDs, I examine RPV between Black and White voters.

45. Drawing conclusions from the EI analysis for the individual Georgia state House Districts can be slightly more challenging than for the other districts in the report since State House districts themselves are small and sometimes contain few precincts (e.g., less than fifteen). I have elected to report all results because with the Bayesian estimation methods used for EI they remain valid even for small samples; however, it is worth noting that some estimates will have wide confidence intervals, not necessarily due to voter behavior but simply because of the limited data available.

46. Figures 14-18 present the estimates for the House districts that I examine. LDs 61, 65, 74, 115, 142, 143, 151, 154 and 171 present clear evidence of RPV with Black voters selecting the minority candidates as their candidate of choice,

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<sup>25</sup>I use the same method as with the State Senate districts to perform this analysis.

and White voters opposing these candidates in every historical election. LDs 161, 163 and 165 similarly present clear evidence of RPV with Black and Hispanic voters cohering to select the minority candidates as their candidate of choice, and White voters opposing these candidates in every historical election.

47. Of these districts with Black and Hispanic voters cohering, LDs 163 and 165 occasionally see White voters join with minority voters to support a minority-preferred candidate; however, this happens rarely and in fact never occurs when a minority candidate runs for election against a non-minority candidate.

48. For LDs 78 and 117 there is some uncertainty in the estimates for subsets of elections, but on balance the estimates show that Black voters supported minority candidates and were opposed by White voters in a vast majority of historical elections. For LD 116, the estimates reflect some uncertainty in the behavior of White voters, but there is significant evidence of RPV in 65% of elections and there is evidence of RPV in all 2022 statewide elections.

49. To sum up, then, I observe RPV between Black and White voters in LDs 61, 65, 74, 78, 115, 116, 117, 142, 143, 151, 154 and 171 and between Black and Hispanic voters on the one hand and White voters on the other in LDs 161, 163 and 165.

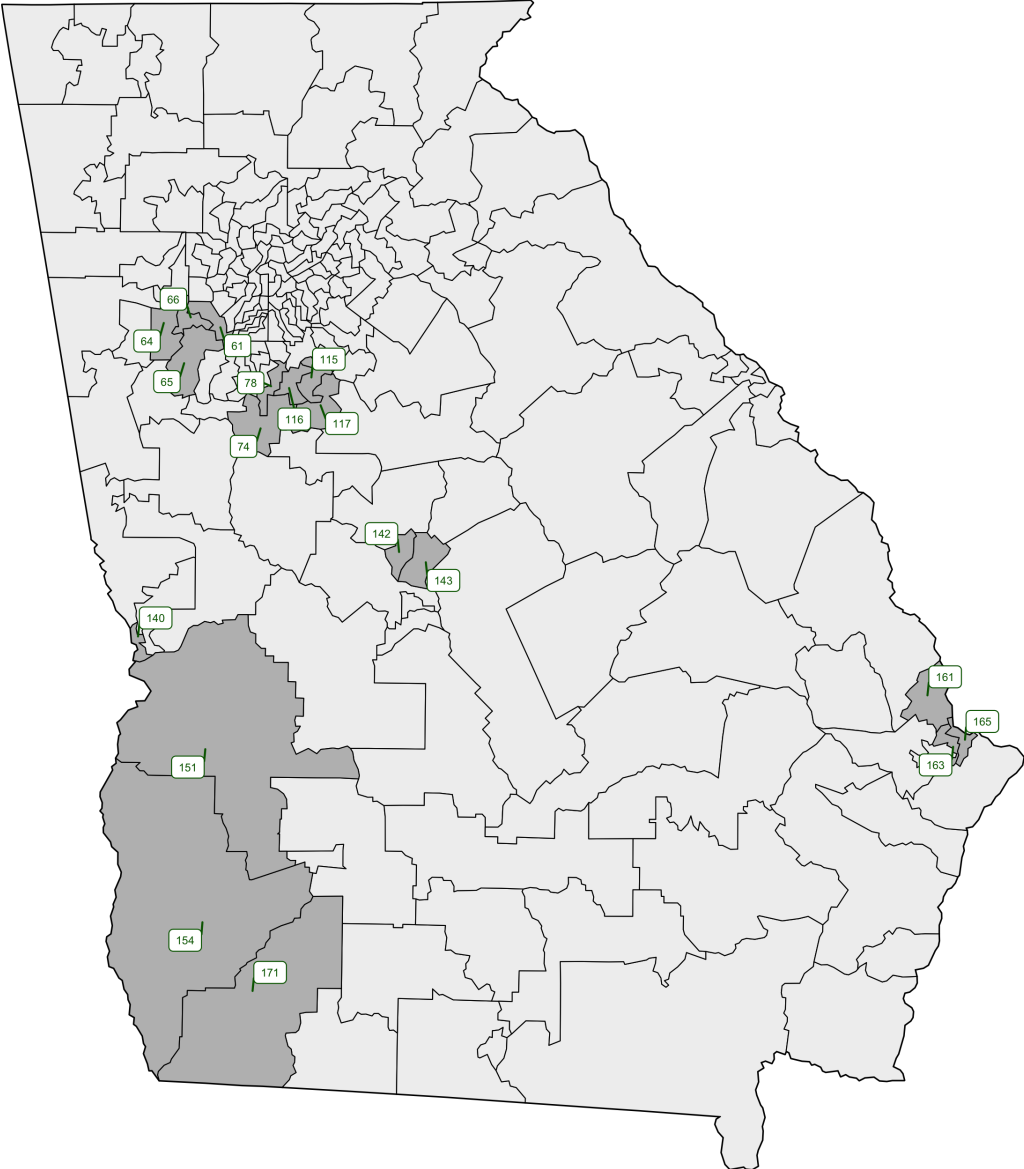


Figure 13: Map of Focus State House Districts



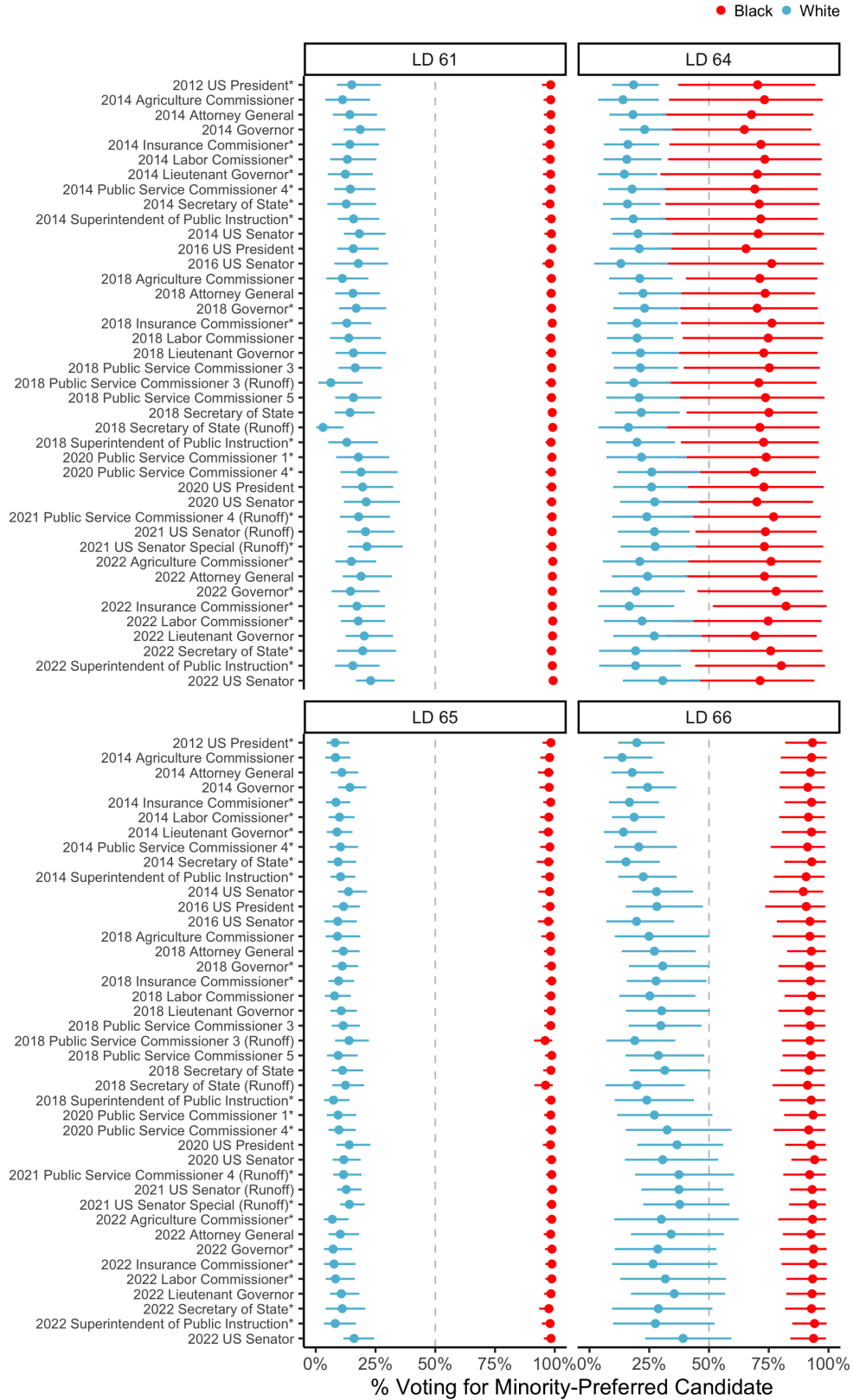


Figure 14: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)



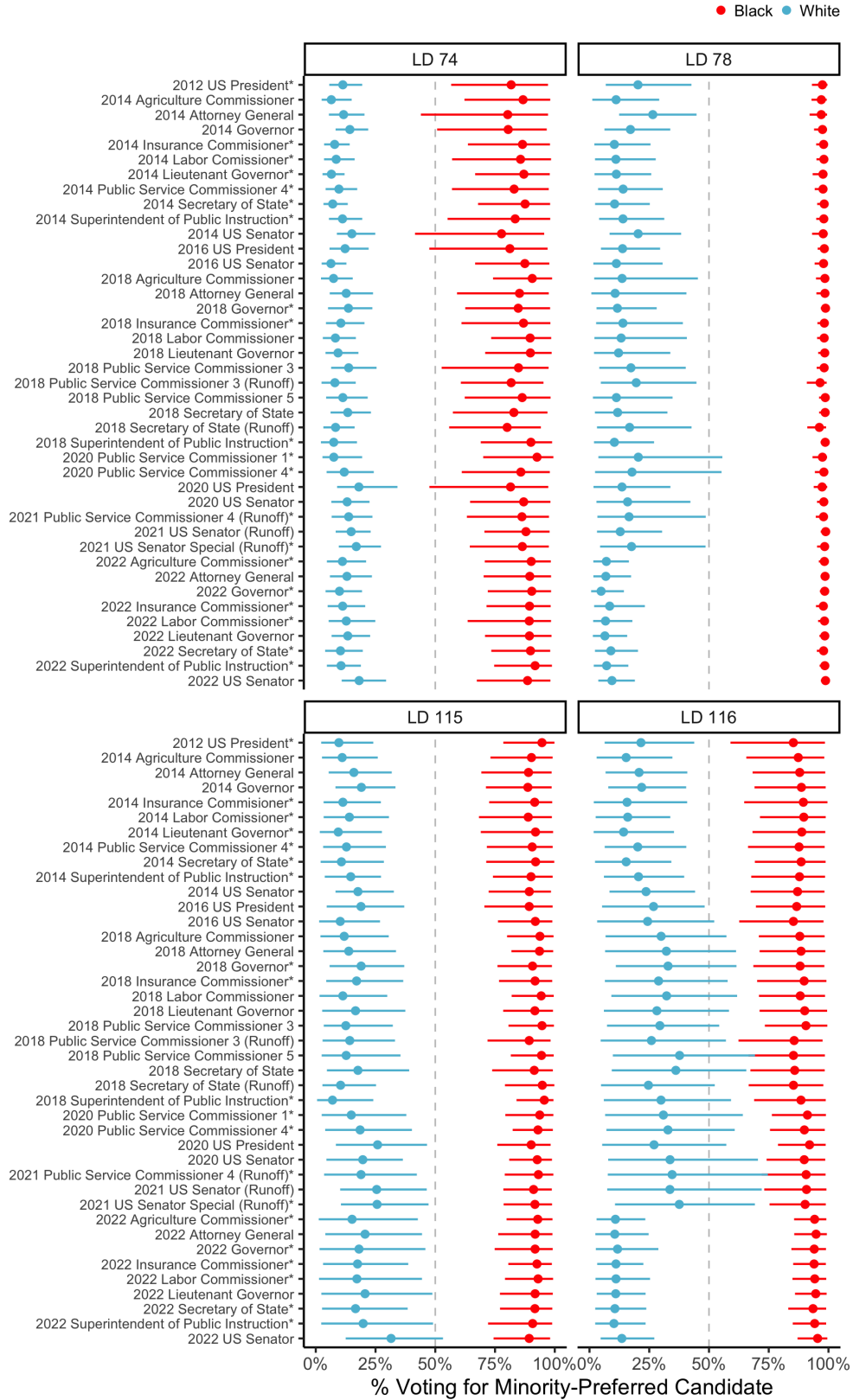


Figure 15: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)



Figure 16: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

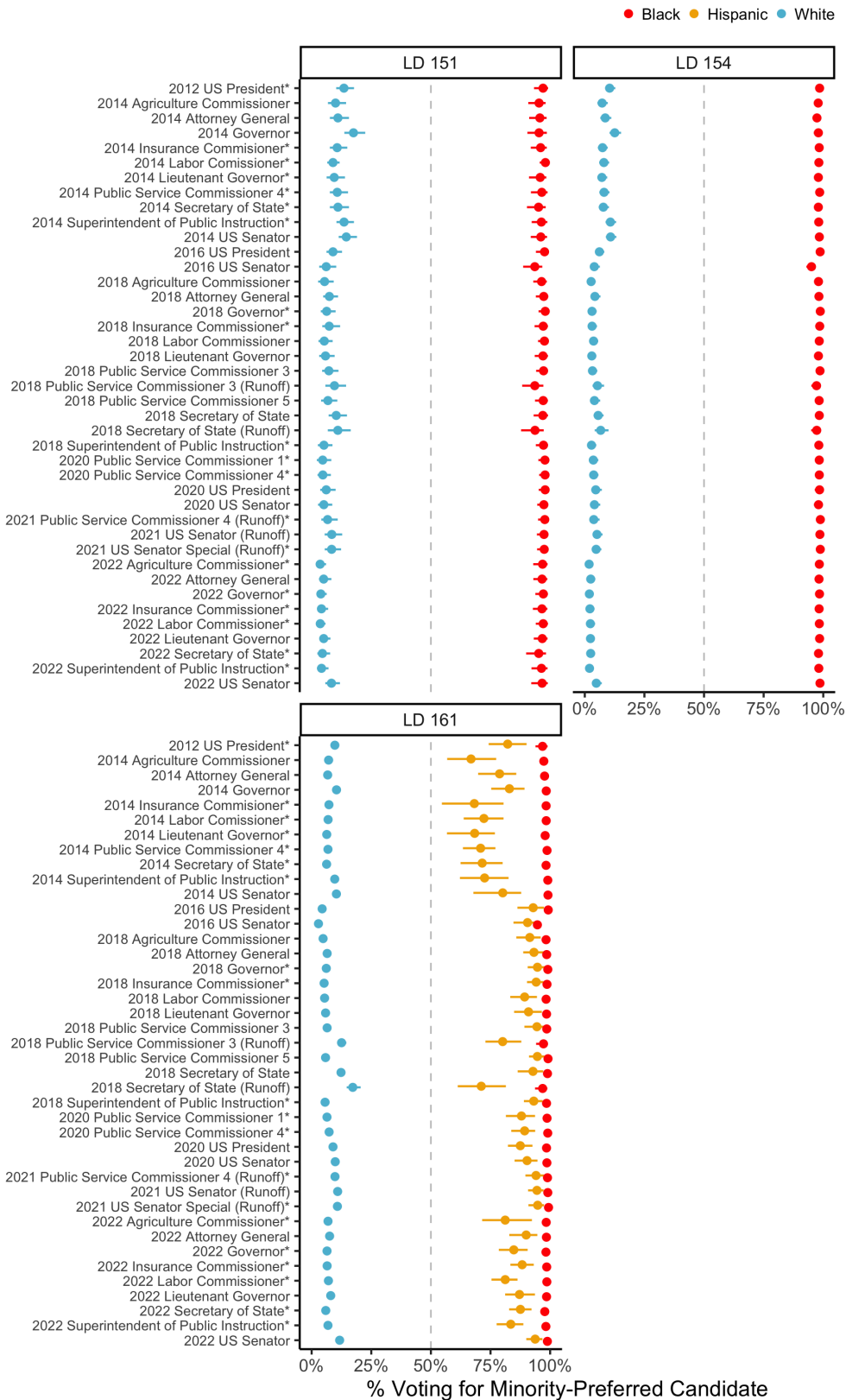


Figure 17: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)



Figure 18: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

## Clusters

50. I have also been asked to examine the extent of RPV in geographic clusters that were used as the starting point for drawing the plaintiffs' illustrative maps. Appendix Figure 30 depicts the geographic clusters given to me for the state Senate map. These clusters partition the state's Senate districts into the following broad geographic areas: Atlanta, East Black Belt, Gwinnett, Northwest, Southeast and Southwest. The plaintiffs' map-drawing expert Moon Duchin has created new illustrative Maps with districts focused in the Atlanta, East Black Belt and Gwinnett clusters. Therefore, I perform an EI analysis pooling the state Senate districts into these clusters. Figure 19 presents the results.

51. Across these clusters, I observe evidence of RPV between White and Black voters. For each cluster, Black voters cohesively support a candidate of choice and White voters oppose these candidates systematically. Furthermore, Hispanic voters tend to support the same candidates of choice as Black voters. In the Atlanta and Gwinnett clusters, Hispanic voters cohesively support the same candidate of choice as Black voters and the lower confidence interval on the vote share estimate does not overlap with the 50% threshold in all elections where a minority candidate runs against a non-minority candidate. In fact, the only exceptions are two runoff elections in 2018. In the East Black Belt cluster, Hispanic voters also systematically support the same candidates of choice as Black voters. The estimates for elections before 2016 tend to be more uncertain, with the confidence intervals including the 50% threshold; however,

since 2016 the estimates are more certain and we can conclude that Hispanic voters supported the same candidates of choice as Black voters. Thus, based on the historical elections observed and in particular those since 2016, I conclude that for each of these clusters Black and Hispanic voters vote cohesively for the same candidate of choice and White voters oppose this candidate.

52. I perform a similar exercise for State House districts. Appendix Figure 31 illustrates the geographic starting clusters for the map drawing exercise for state House districts. As before, these clusters partition the state's House districts into the following broad geographic areas: Atlanta, Cobb, DeKalb, East Black Belt, Gwinnett, Southeast and Southwest. Note that though some of the names for these clusters are identical to the cluster names for the state Senate districts, the boundaries differ. Of these clusters, Moon Duchin has drawn new districts focused on the Atlanta, Southwest, East Black Belt and Southeast clusters. As a result, I perform an EI analysis pooling the relevant state House Districts into these clusters. Figure 20 presents the results.

53. Again, I observe evidence of RPV between White and Black voters across all state House clusters I examine. Black voters cohesively support a candidate of choice and White voters oppose this candidate. Based on my estimates, this is true in every cluster and for every statewide election that I examine.

54. Hispanic voters join Black voters in supporting the same candidate of choice in each cluster. In Atlanta, this is true for all past statewide elections pitting a minority candidate against a non-minority candidate, with the confidence intervals never overlapping with the 50% threshold for these elections. For the

other House clusters, while there are some uncertainties, my estimates again suggest that Hispanic voters supported the same candidates as Black voters in all of the past statewide elections that I examine.

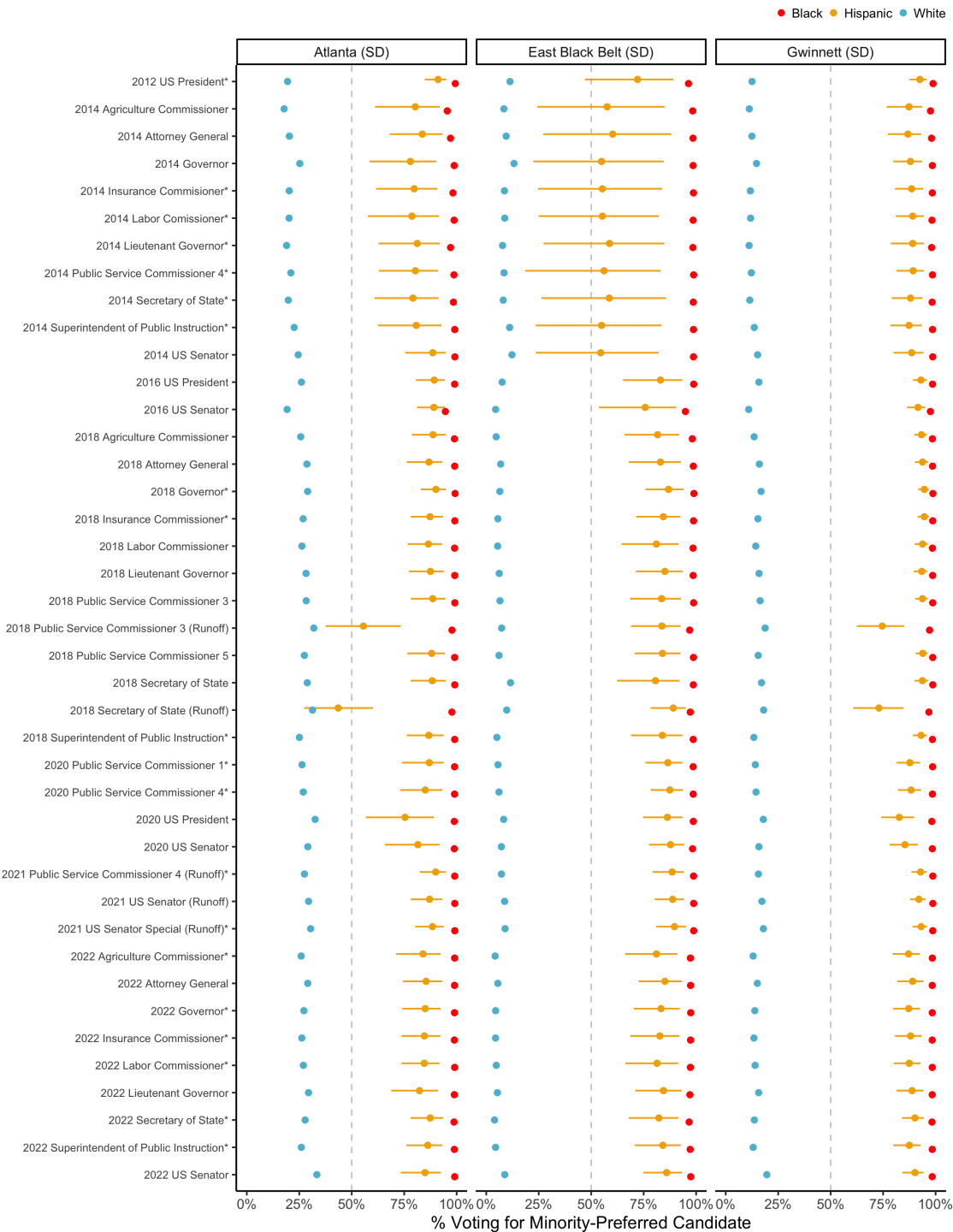


Figure 19: Ecological Inference Results — State Senate Clusters (Historical Elections, Two-Party Vote Shares)



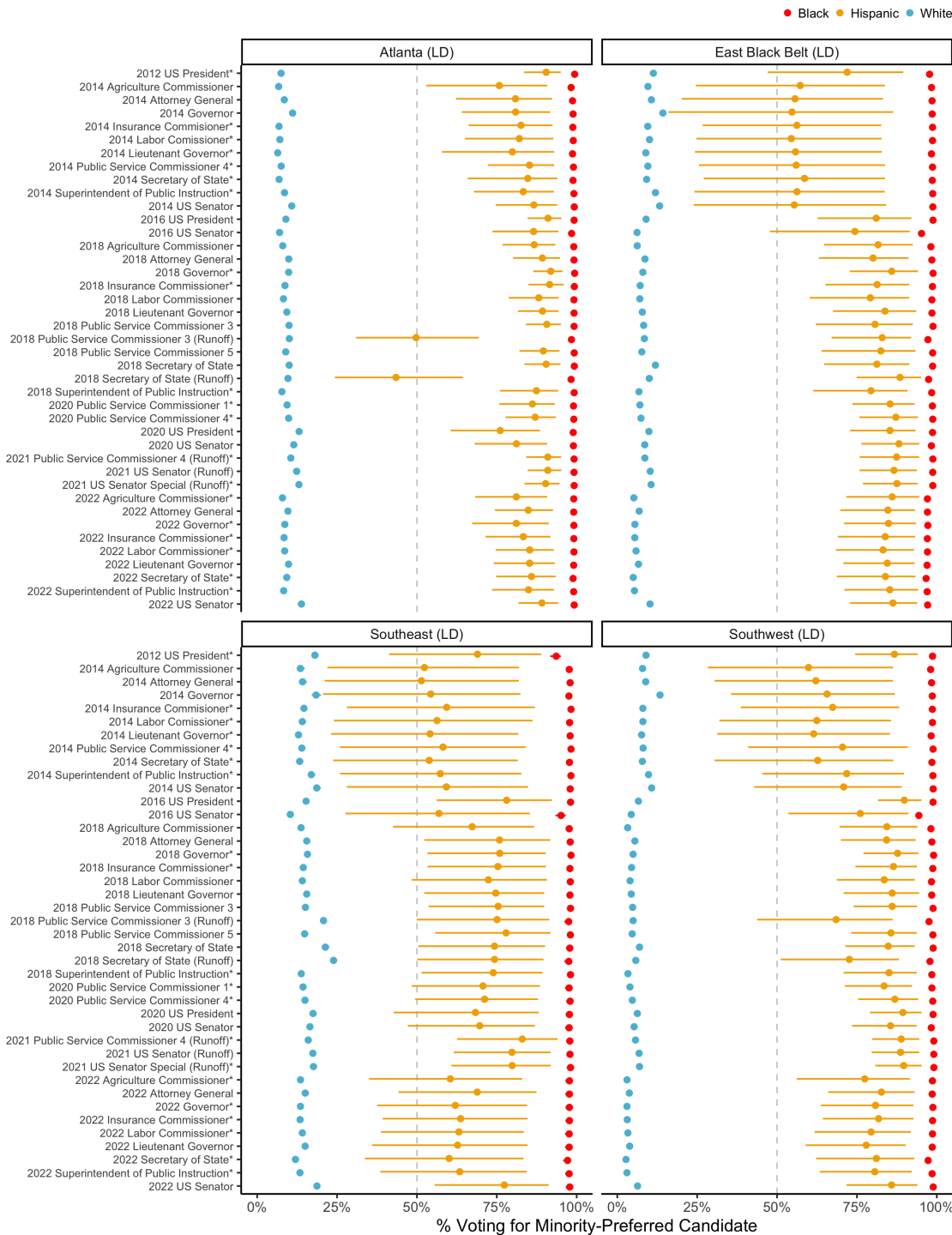


Figure 20: Ecological Inference Results — State House Clusters (Historical Elections, Two-Party Vote Shares)

## Performance Analysis of Enacted Districts

55. I now examine the electoral performance of the enacted congressional districts along with the focus enacted state Senate and enacted state House districts. The previous analysis established that in Georgia, in those instances where one minority candidate runs for office and there is racially polarized voting, the candidate of choice for minority voters has historically been the minority candidate. As a result, I use historical election data to examine whether the enacted districts appear to offer minority voters an opportunity to elect their candidates of choice.

### Congressional Districts

56. Table 2 presents the 2020 and 2022 share of the electorate for each minority group under consideration, along with several key summary statistics for district-wide electoral performance. To analyze district performance in terms of the ability to elect minority-preferred candidates, I examine the 20 statewide elections considered in this report in which a racial minority candidate ran against a non-minority candidate since 2012. Table 10 in the Appendix denotes these elections with a star and reports the names of these candidates. I report the mean two-party minority-preferred candidate vote share across all elections with a minority candidate that I examined. I also report the lowest vote share received by a minority candidate, in order to provide a sense of a lower bound of electoral performance. Finally, based on the historical elections, I report the share of elections in which minority candidates would have earned a

majority of the two-party vote in the district, along with the share of elections in which minority candidates would have earned over 55% of the vote, which is a conventional cutoff used in voting rights litigation to indicate a safer district.

57. In CDs 4 and 13, Black voters comprise a majority (or near-majority) of the electorate and, based on historical elections, these voters would be able to elect their candidates of choice if conditions in the districts remain similar. Minority-preferred candidates earned a majority of the two-party vote share in each election I examined for these districts, and the vote share surpassed 55% in every election in CDs 4 and 13.

58. In CDs 1, 3, 6, 8, 9, 10, 11, 12 and 14, White voters comprise a strong majority of the electorate. If conditions remain similar to historical elections, minority voters who preferred a minority candidate would not be able to elect that candidate: the minority-preferred candidate did not win in **any** of the historical elections I examine for these districts.

59. CD 7 is a multi-racial district in which no one racial group comprises a majority of the electorate. Based on historical elections, minority candidates in these statewide elections would have received a majority in the district 65.0% of the time. Candidates won “safely” (e.g., over 55% of the vote) at the same rate. Given the demographic composition of the district, and the fact that the previous RPV analysis showed strong evidence of Black voters cohesively supporting minority candidates, this is a district that could perform more strongly than it does as drawn (in terms of allowing minority voters to elect their candidates of choice).

60. CD 2 is split close to evenly between Black and White voters. In 2022, White voters comprised 56% of the electorate, and Black voters comprised 37%. Black voters retained the ability to elect candidates of choice in this district, with that candidate winning every statewide election I examined in this district.

61. CD 5 did not exhibit RPV in the previous analysis. White voters have historically voted along with minority voters to select minority voters' candidates of choice.

62. Overall, then, minority voters have a very strong chance of electing preferred candidates in three of fourteen congressional districts (CDs 4, 5 and 13). Minority voters have a chance of electing minority candidates slightly more than half the time in CDs 2 and 7. Finally, based on historical elections, minority voters have close to no chance of electing preferred candidates in the remaining nine congressional districts.

Table 2: Performance Analysis (Elections with a Minority Candidate), Enacted CDs

CD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
1	24.3%	23.5%	2.0%	1.6%	41.0%	39.0%	0.0%	0.0%
2	44.6%	36.9%	1.3%	0.9%	51.7%	44.4%	70.0%	25.0%
3	18.8%	23.2%	1.9%	1.8%	32.9%	28.1%	0.0%	0.0%
4	50.9%	46.7%	2.5%	2.1%	74.1%	69.0%	100.0%	100.0%
5	40.4%	38.2%	2.4%	2.3%	79.0%	73.9%	100.0%	100.0%
6	7.3%	7.2%	3.5%	3.2%	33.1%	24.1%	0.0%	0.0%
7	29.3%	27.4%	7.5%	5.5%	54.1%	43.4%	65.0%	60.0%
8	25.0%	24.0%	1.5%	0.9%	33.6%	31.3%	0.0%	0.0%
9	8.5%	9.7%	4.7%	3.3%	26.2%	21.4%	0.0%	0.0%
10	18.6%	17.9%	2.3%	2.0%	34.6%	30.8%	0.0%	0.0%
11	14.6%	13.4%	4.0%	3.2%	35.6%	28.1%	0.0%	0.0%
12	31.7%	28.1%	1.5%	1.3%	41.1%	37.5%	0.0%	0.0%
13	63.7%	63.4%	3.3%	2.4%	77.7%	71.8%	100.0%	100.0%
14	13.1%	14.0%	3.8%	2.4%	29.5%	27.8%	0.0%	0.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given congressional district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

## State Senate Districts

63. In the state Senate districts under consideration, there appears to be only a handful of competitive districts. Most either offer no chance for the election of minority-preferred candidates or are, on the other hand, clear minority majority districts. Based on historical elections, the candidate preferred by minority voters would not have won in any election I examine between 2012 and 2022 in SDs 16, 17, 23, 25 and 28. Conversely, in SDs 22, 26, 34, 35, 41, 43, 44 and 55 the minority-preferred candidate would have won in all past elections I examine.

64. SDs 9 and 40 are the only focus districts with some evidence of possibly meaningful electoral competition. SD 9 is a multi-racial district that has elected minority voters' candidates of choice slightly more than half of the time. SD 40, a district with a majority White electorate, has performed similarly in past elections.

Table 3: Performance Analysis (Elections with a Minority Candidate), Enacted SDs

SD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
9	28.5%	28.8%	7.4%	5.9%	51.6%	38.8%	65.0%	60.0%
16	18.0%	26.3%	1.9%	1.9%	33.8%	26.8%	0.0%	0.0%
17	26.2%	24.4%	1.8%	1.7%	35.1%	29.3%	0.0%	0.0%
22	55.3%	51.8%	1.5%	1.2%	66.5%	62.6%	100.0%	100.0%
23	31.8%	26.1%	1.6%	1.4%	38.6%	34.0%	0.0%	0.0%
25	28.8%	27.5%	1.3%	0.8%	37.9%	35.6%	0.0%	0.0%
26	54.5%	44.3%	0.9%	0.8%	60.6%	52.3%	100.0%	70.0%
28	15.0%	24.8%	2.4%	1.7%	31.3%	24.6%	0.0%	0.0%
34	68.4%	68.6%	3.4%	2.6%	81.7%	76.8%	100.0%	100.0%
35	67.1%	68.5%	2.4%	1.6%	79.2%	71.5%	100.0%	100.0%
40	16.0%	13.9%	5.0%	4.1%	53.6%	42.5%	65.0%	65.0%
41	55.6%	51.1%	2.2%	1.9%	78.7%	73.9%	100.0%	100.0%
43	60.5%	60.1%	1.9%	1.4%	70.2%	62.9%	100.0%	100.0%
44	68.3%	67.3%	2.9%	2.2%	86.2%	82.1%	100.0%	100.0%
55	61.5%	58.6%	3.2%	2.3%	74.9%	69.0%	100.0%	100.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given State Senate district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

## State House Districts

65. Based on historical elections, the candidate preferred by minority voters would not have won in any election I examine between 2012 and 2022 in LDs 16, 17, 23, 25 and 28. Conversely, in LDs 22, 26, 34, 35, 41, 43, 44 and 55 the minority-preferred candidate would have won in all past elections I examine.

66. LDs 115, 117, 151 and 154 are the only (possibly) competitive districts among the examined state House districts. The electorate for LD 151 is split roughly evenly between White and Black voters. Based on historical elections, the minority candidate of choice would have garnered a majority of the vote in this district in 65.0% of historical elections I examine. However, this does not appear to be a safe district by any means. In only 5.0% of elections was the margin at the level to call the district safe (e.g., over 55% of the two-party vote).

67. In LD 117, based on historical elections, minority voters are just now beginning to be able to elect minority-preferred candidates. Only in the three 2021 runoff elections and the 2022 general elections did minority candidates garner more than half the vote in this district, and in no cases was the margin of victory safe for the candidate of choice.

68. LDs 115 and 154 each offer minority voters the opportunity to elect minority candidates a bit more than half of the time based on historical elections.



Table 4: Performance Analysis (Elections with a Minority Candidate), Enacted LDs

LD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
61	70.6%	74.9%	2.1%	1.1%	84.3%	78.9%	100.0%	100.0%
64	26.8%	27.3%	3.2%	3.2%	38.0%	30.6%	0.0%	0.0%
65	54.2%	53.4%	1.8%	1.4%	67.5%	62.8%	100.0%	100.0%
66	50.9%	52.7%	3.3%	2.4%	63.5%	52.7%	100.0%	75.0%
74	21.2%	23.1%	2.2%	1.9%	32.6%	25.9%	0.0%	0.0%
78	67.9%	63.4%	3.2%	2.4%	78.4%	73.9%	100.0%	100.0%
115	45.5%	47.4%	2.7%	2.0%	55.8%	45.8%	65.0%	65.0%
116	52.5%	45.1%	2.9%	2.0%	59.5%	50.4%	100.0%	65.0%
117	34.5%	35.4%	2.4%	1.6%	42.8%	32.5%	10.0%	0.0%
140	58.6%	59.2%	2.4%	1.1%	75.2%	70.3%	100.0%	100.0%
142	53.9%	51.2%	0.8%	0.6%	62.0%	56.8%	100.0%	100.0%
143	58.3%	57.0%	0.9%	0.7%	70.2%	67.6%	100.0%	100.0%
151	44.3%	29.7%	0.9%	0.8%	46.8%	35.4%	65.0%	5.0%
154	49.8%	42.5%	0.4%	0.3%	52.5%	44.5%	70.0%	45.0%
161	22.4%	19.5%	3.1%	2.3%	34.1%	27.9%	0.0%	0.0%
163	42.8%	39.3%	1.8%	1.4%	67.4%	60.4%	100.0%	100.0%
165	54.5%	29.5%	1.2%	1.2%	72.0%	57.1%	100.0%	100.0%
171	32.4%	29.5%	1.0%	0.6%	38.0%	33.3%	0.0%	0.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given State House district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

## **EI Analysis of Illustrative Districts**

69. I now turn to an EI analysis of the Illustrative Maps drawn by the plaintiffs' map-drawing expert Moon Duchin.

### **Congressional Districts**

70. I have been instructed to analyze all congressional districts for RPV between Black and White voters in the Illustrative Map drawn by Moon Duchin. Appendix Figure 32 depicts the map of these illustrative districts.

71. Figures 21-25 report the results for my EI analysis. The results are quite straightforward. Illustrative CD 4 does not exhibit evidence of RPV between Black and White voters. In all other districts, there is essentially universal evidence of RPV between Black and White voters. In these districts, when a minority candidate runs Black voters support them and White voters oppose this candidate. In elections between no minority candidates or two minority candidates, Black voters support the minority-preferred candidate and White voters oppose them.

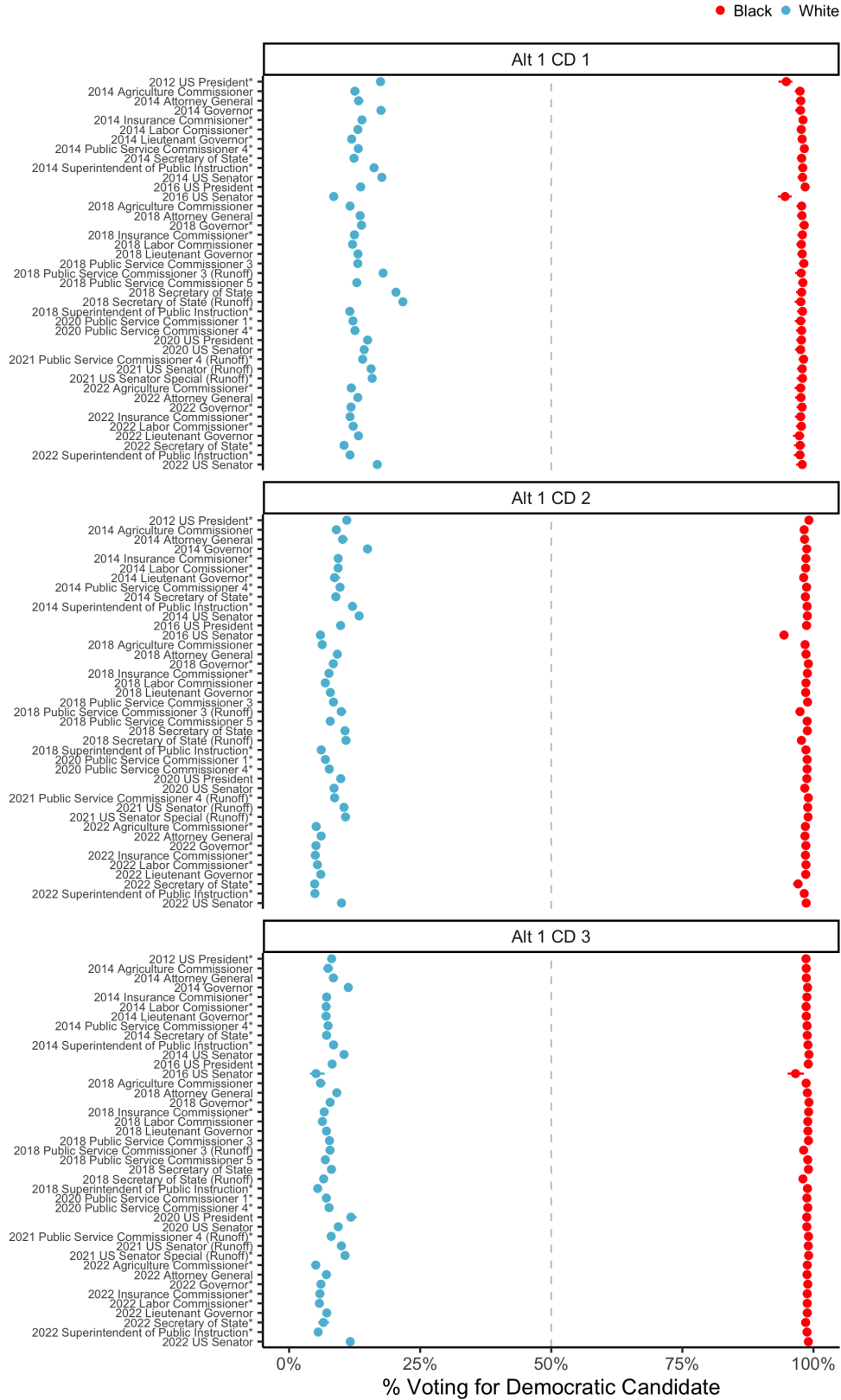


Figure 21: Ecological Inference Results — Illustrative Congressional Districts (Historical Elections, Two-Party Vote Shares)

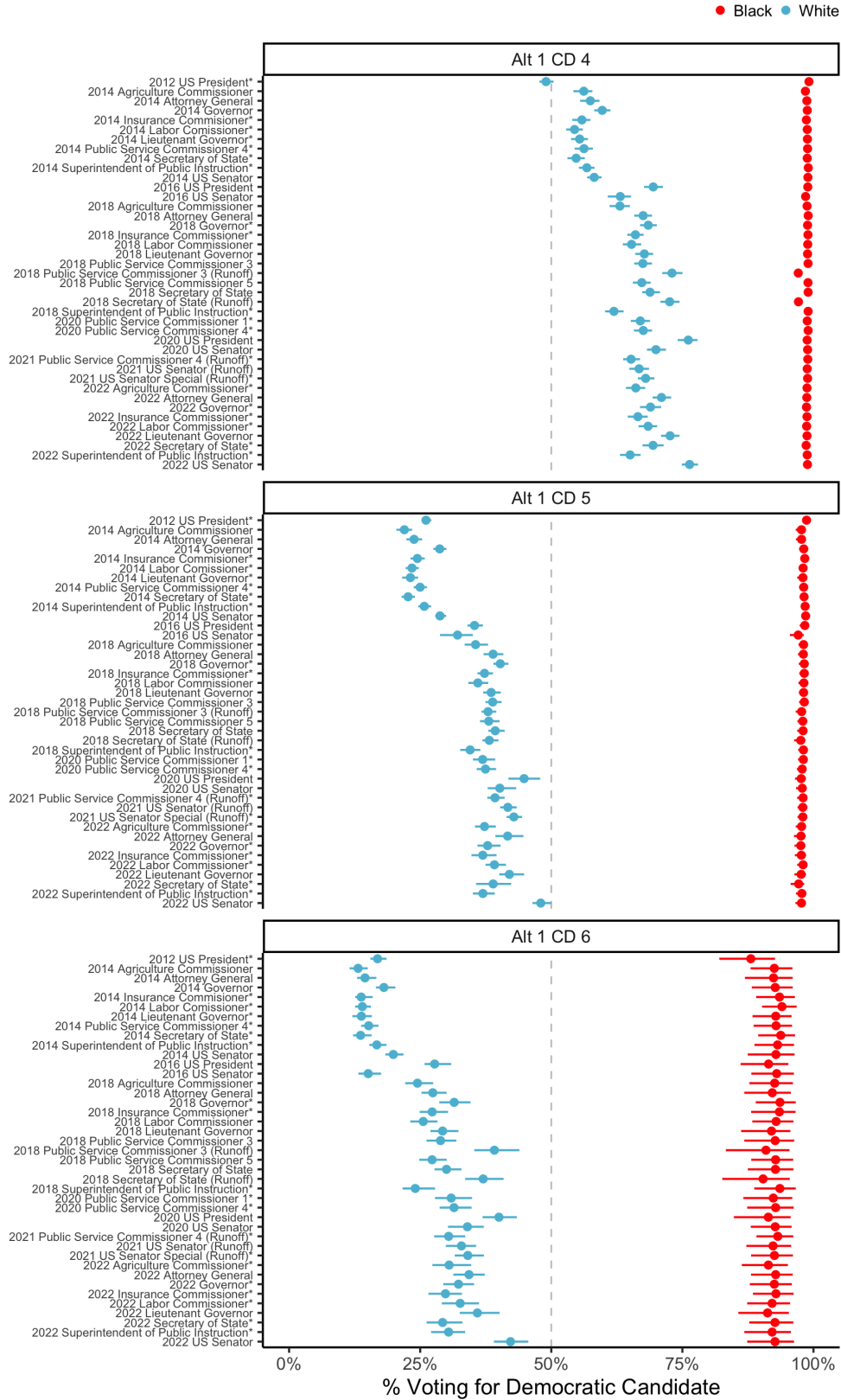


Figure 22: Ecological Inference Results — Illustrative Districts (Historical Elections, Two-Party Vote Shares)

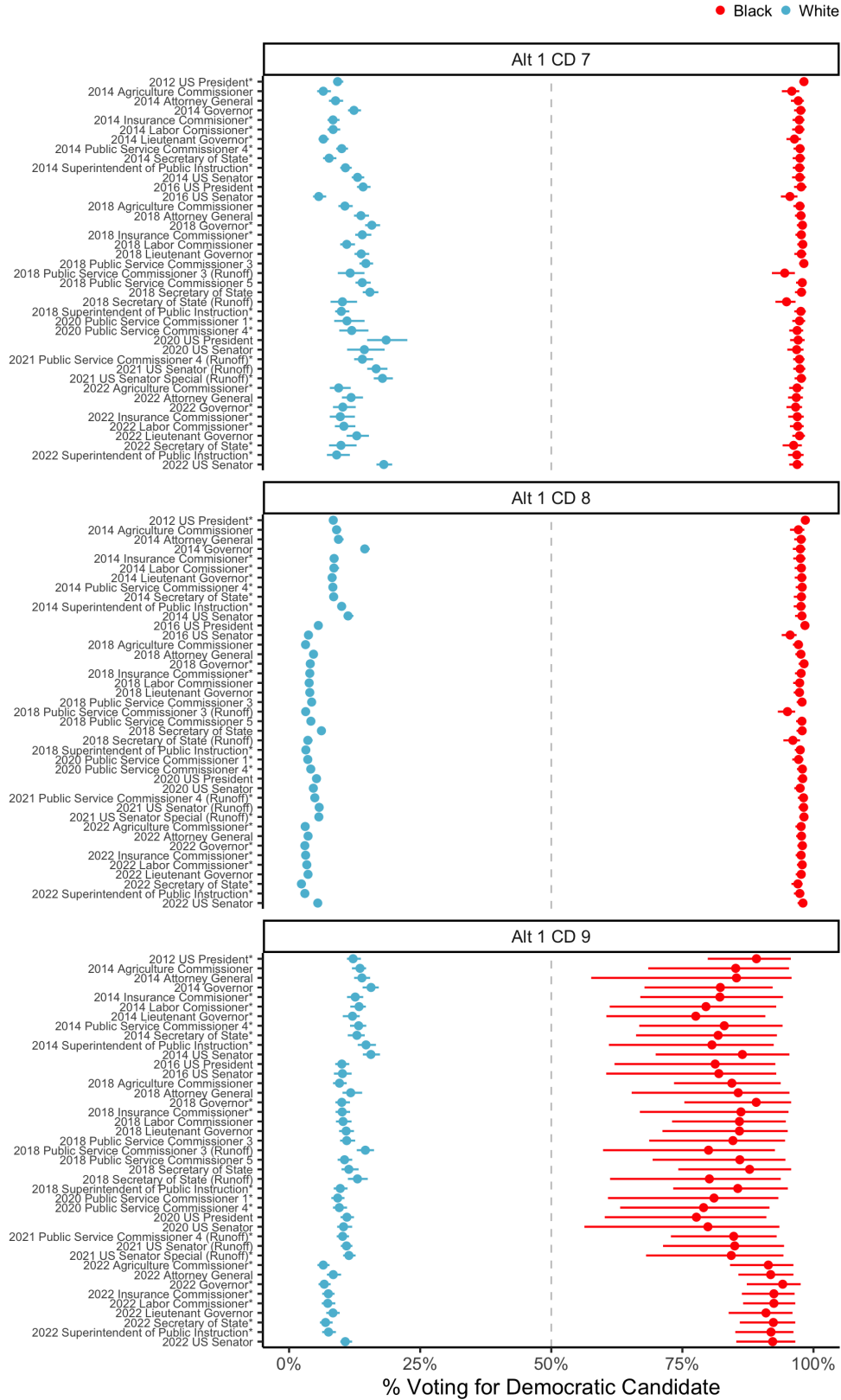


Figure 23: Ecological Inference Results — Illustrative Congressional Districts (Historical Elections, Two-Party Vote Shares)

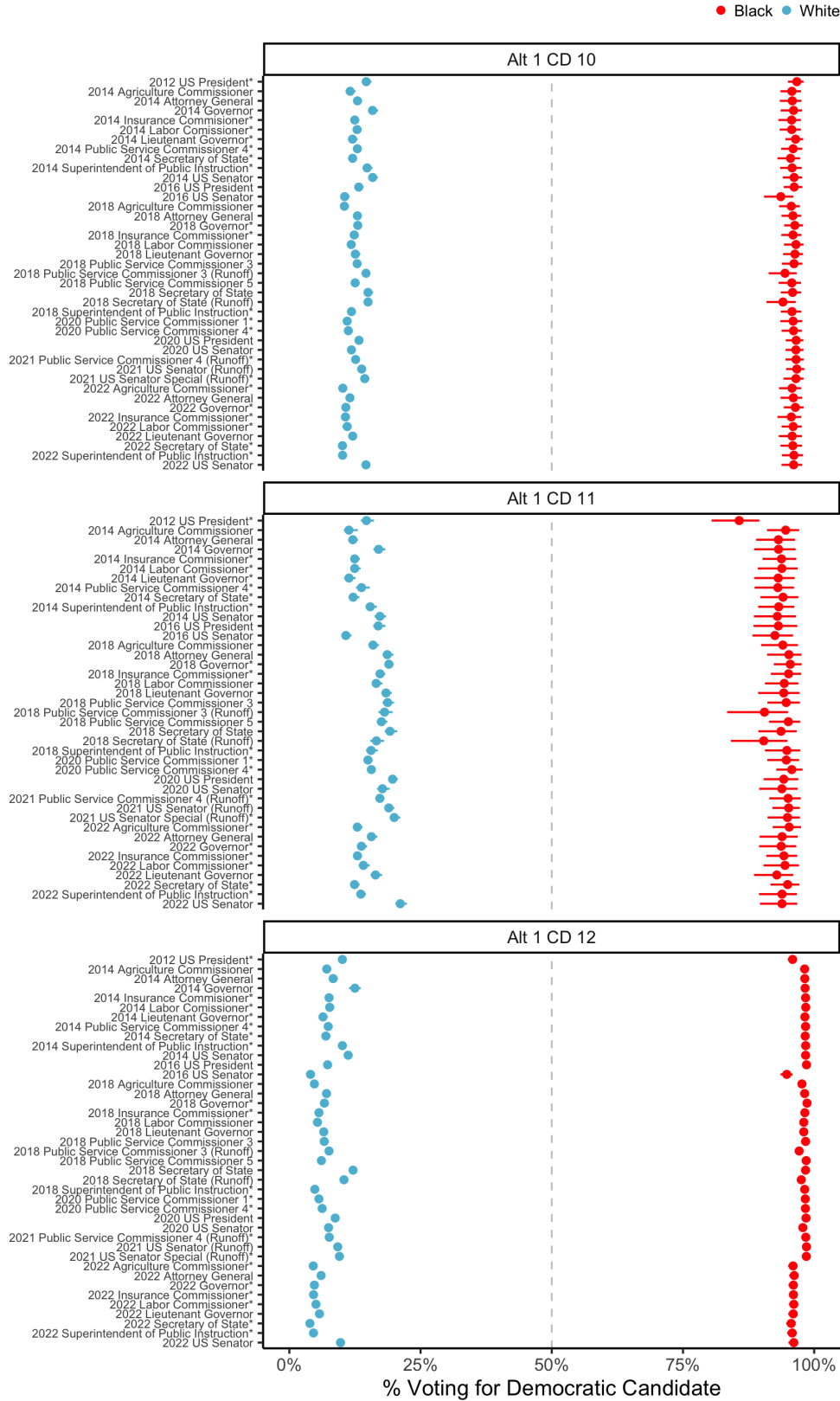


Figure 24: Ecological Inference Results — Illustrative Congressional Districts (Historical Elections, Two-Party Vote Shares)



Figure 25: Ecological Inference Results — Illustrative Congressional Districts (Historical Elections, Two-Party Vote Shares)

## State Senate Districts

72. I consider two Illustrative Maps of alternative State Senate Districts, and I apply the same methods of ecological inference as for the enacted map. Appendix Figures 33 and 34 depict the Illustrative State Senate maps, with the districts I have been instructed to focus upon highlighted.

73. I have been instructed to examine RPV for Black versus White voters in Illustrative Map 1 SDs 16, 17, 25, 28 and 40. I have been instructed to examine RPV for Black and Hispanic versus White voters in Illustrative Map 2 SDs 16 and 23.

74. Figure 26 reports the EI results for Illustrative State Senate Map 1, and Figure 27 reports the results for Illustrative State Senate Map 2.

75. For Map 1, I observe evidence of RPV between Black and White voters across all past statewide elections with a minority candidate running for SDs 16, 17, 25 and 28. In Illustrative Map 1 SD 40, I observe RPV 50% of the time in elections where a minority candidate ran. Furthermore, I observe evidence of RPV between Black and White voters in a majority (though not all) of elections with a minority-preferred candidate running.

76. For Map 2, I observe evidence of RPV with Black and Hispanic voters supporting minority candidates and White voters opposing them across all past statewide elections with a minority candidate running. When a minority candidate does not run, Black and Hispanic voters support the same minority-preferred candidate and White voters oppose this candidate.



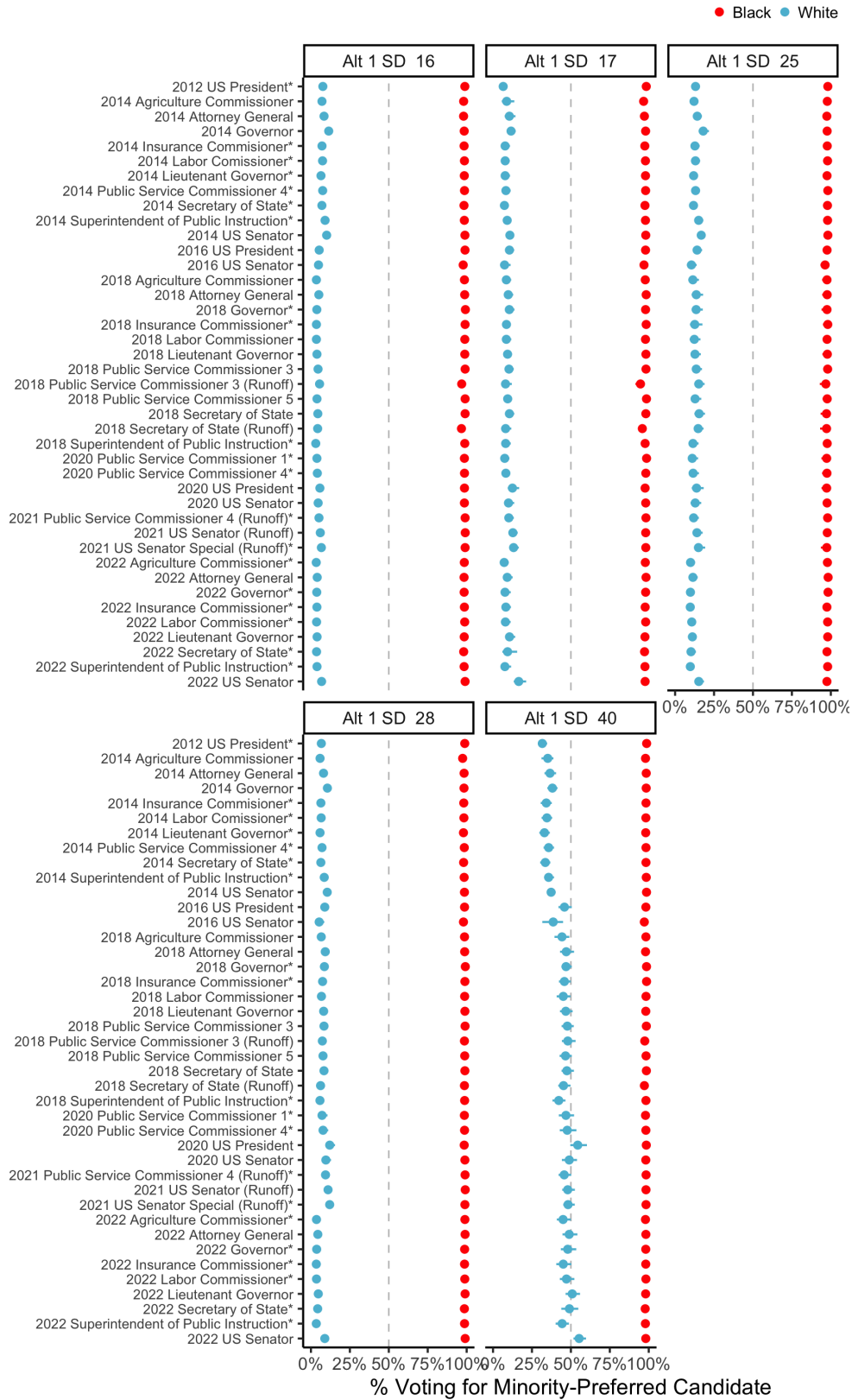


Figure 26: Ecological Inference Results — Illustrative Map 1 State Senate Districts (Historical Elections, Two-Party Vote Shares)

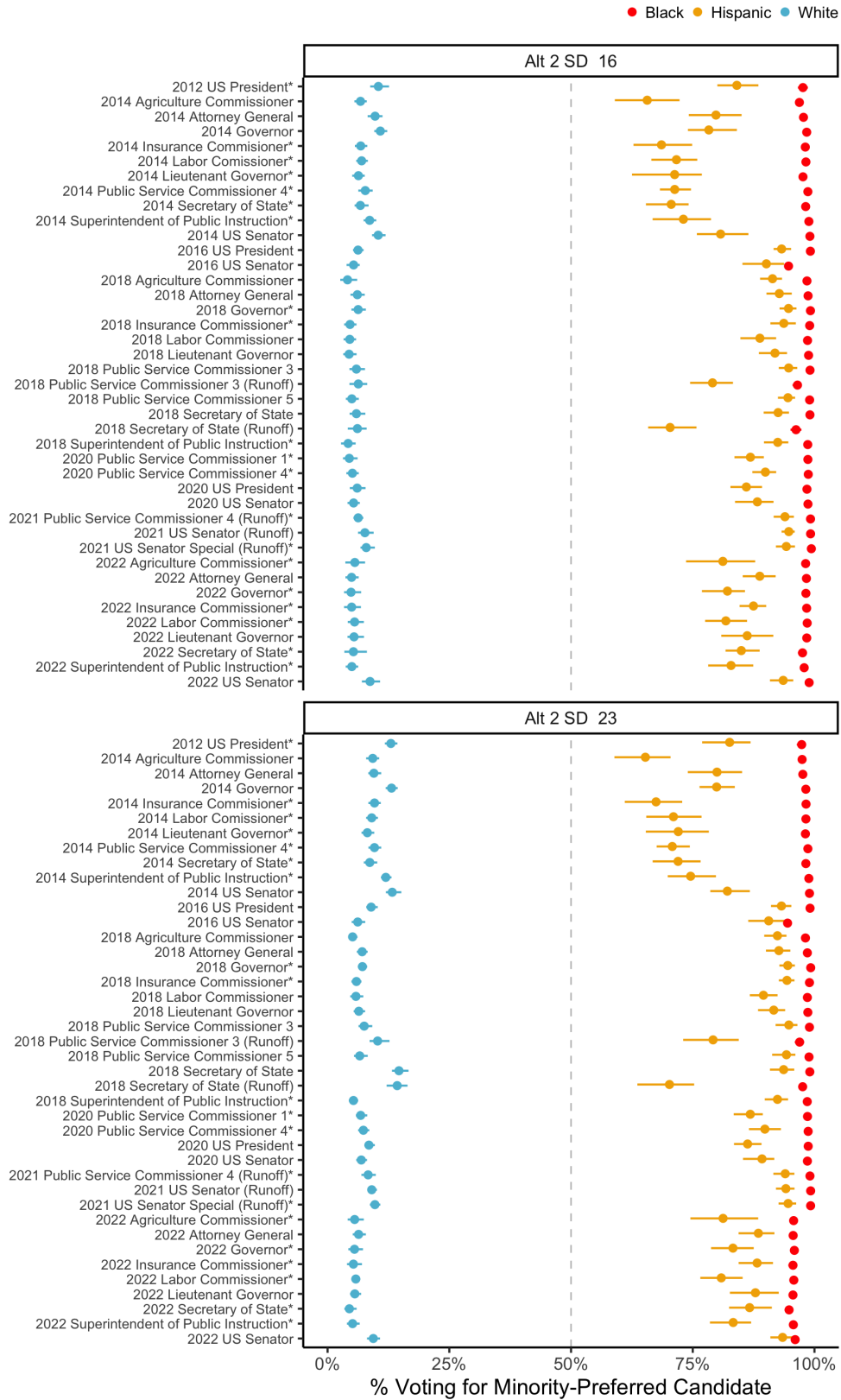


Figure 27: Ecological Inference Results — Illustrative Map 2 State Senate Districts (Historical Elections, Two-Party Vote Shares)

## State House Districts

77. I also consider two Illustrative Maps of alternative State House Districts, and I apply the same methods of ecological inference as I did for the enacted map. Appendix Figures 35 and 36 depict the Illustrative State House maps, with the districts I have been instructed to focus upon highlighted.

78. I have been instructed to examine RPV for Black versus White voters in Illustrative Map 1 LDs 64, 74, 117, 144, 151 and 171 and for Black, Hispanic and White voters in Illustrative Map 1 LD 161. For Illustrative Map 2, I have been instructed to examine RPV for Black versus White voters in LDs 64, 117 and 144 and for Black, Hispanic and White voters in LD 161.

79. Figure 28 reports the results for Illustrative State House Map 1, and Figure 29 reports the results for Illustrative State House Map 2.

80. For Illustrative Map 1, I observe evidence of RPV between Black and White voters in all districts I have been asked to examine. Furthermore, in Illustrative Map 1 LD 161, where I also examine the behavior of Hispanic voters, I again observe RPV with Black and Hispanic voters supporting minority candidates and White voters opposing them.

81. For Illustrative Map 2, I again observe evidence of RPV between Black and White voters in all districts I examine. In LD 64, this occurs in every election. In LD 117, occasionally the confidence intervals on the estimates are wide enough to cross the 50% threshold but nonetheless, but even accounting for this Black voters support a minority candidate and White voters oppose them

in 95% of these elections. Similarly, in LD 144, Black voters support a minority candidate and White voters oppose them (with the confidence intervals on the estimates not overlapping with the 50% threshold) in 95% of such elections. Finally, in SD 161, I observe RPV with Black and Hispanic voters supporting a minority or minority-preferred candidate and White voters opposing them in all past elections that I study.

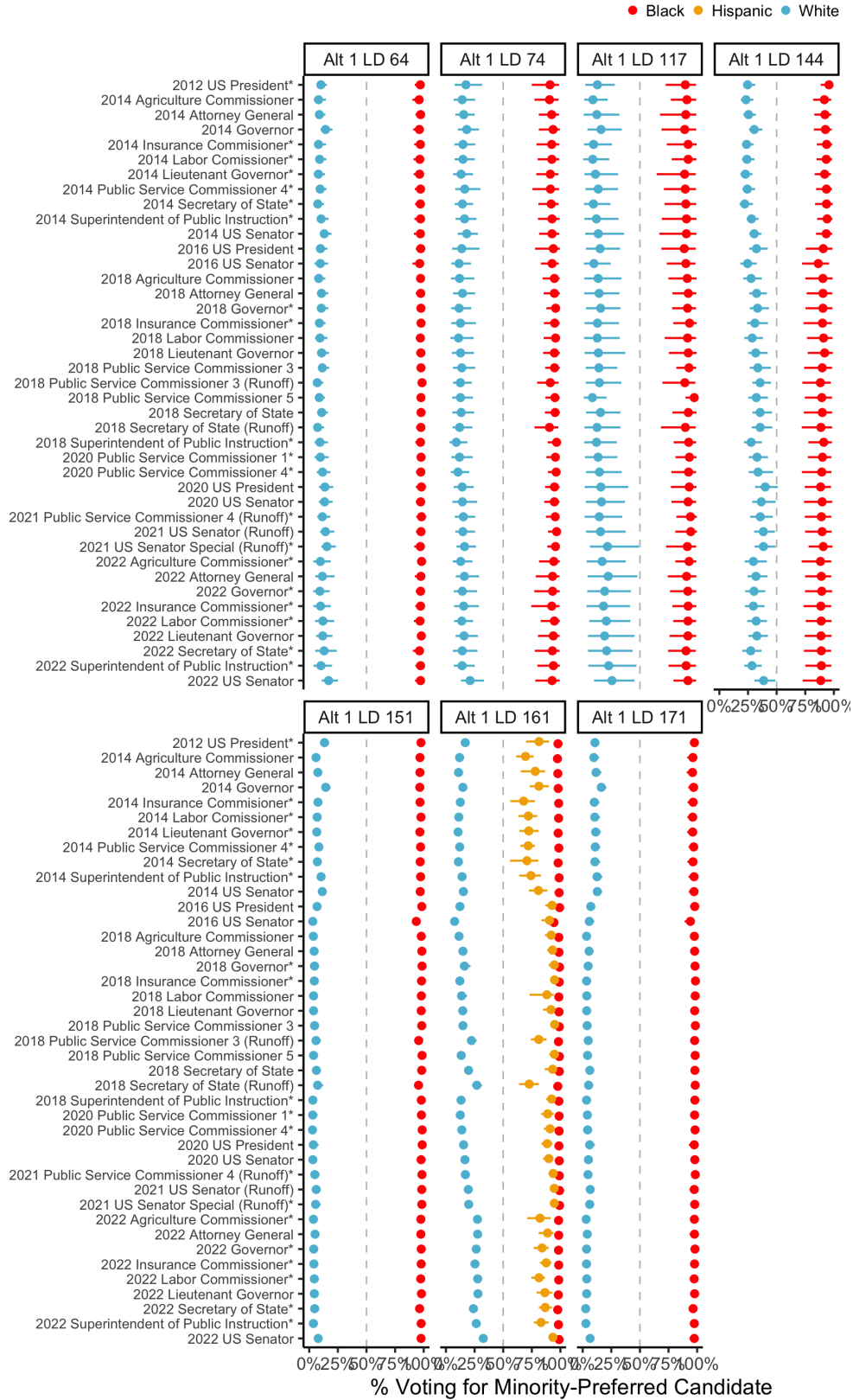


Figure 28: Ecological Inference Results — Illustrative Map 1 State House Districts (Historical Elections, Two-Party Vote Shares)

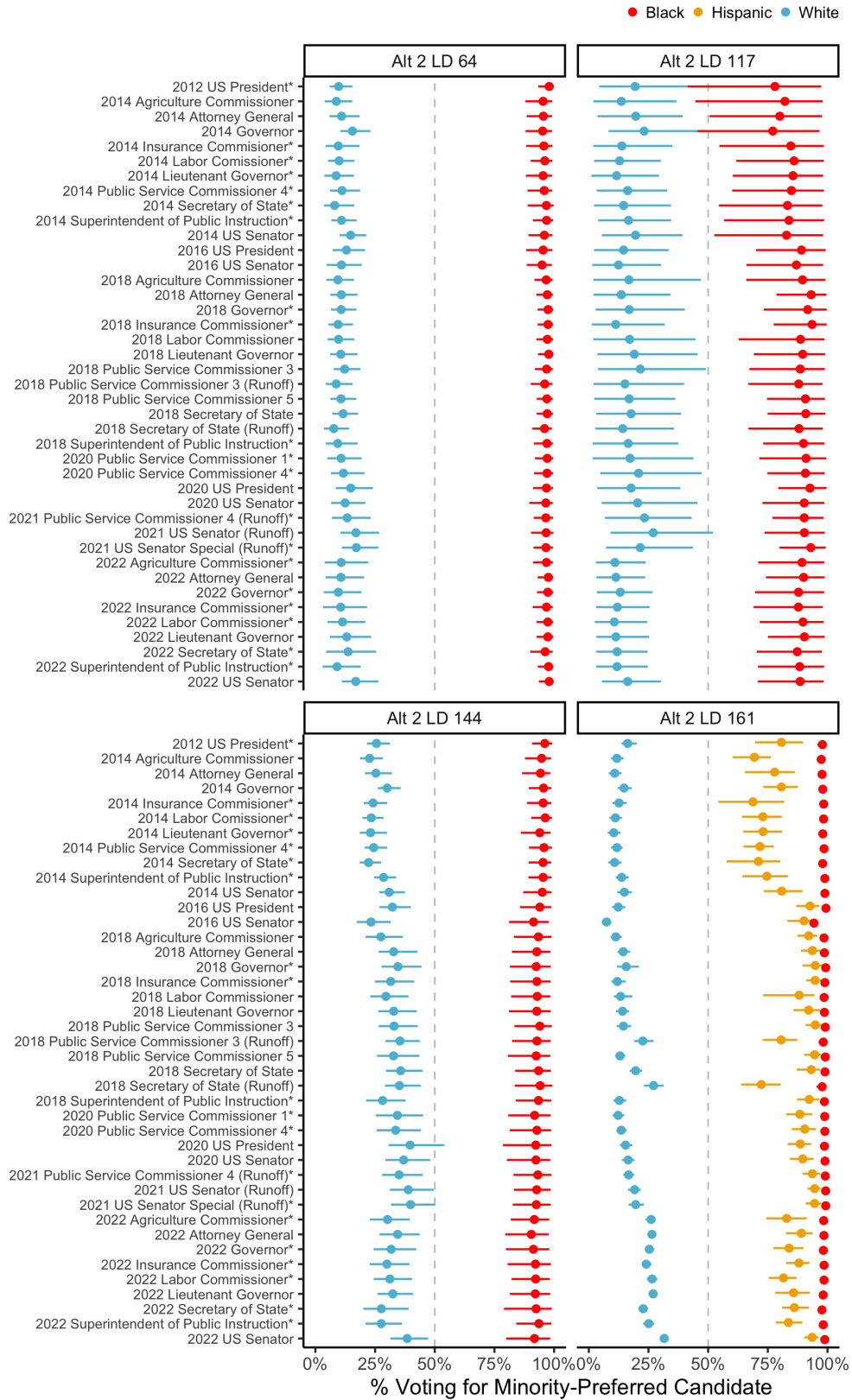


Figure 29: Ecological Inference Results — Illustrative Map 2 State House Districts (Historical Elections, Two-Party Vote Shares)

## Performance Analysis of Illustrative Districts

82. I now turn to a performance analysis of the districts contained in the Illustrative Maps. To examine the performance of minority candidates in the Illustrative Maps, I examine the extent to which minority candidates have earned votes in past elections in the relevant districts. As before, I have determined the average vote share among minority candidates in each district, the minimum vote share earned by a minority candidate, the share of past elections a minority candidate won in each district, and the share of elections the minority candidate won safely (e.g., over 55% of the vote). I again draw upon the 20 statewide elections in which a racial minority candidate ran against a non-minority candidate since 2012. Table 10 in the Appendix denotes these elections with a star and reports the names of these candidates.

### Congressional Districts

83. Table 5 presents the 2020 and 2022 share of the electorate for each minority group under consideration, along with the key summary statistics for district-wide electoral performance in the Illustrative congressional map.

84. Compared to the enacted map, there is one major difference and two slight differences. In the Illustrative Map, CD 3, which now reaches from the western part of the state into the Metro Atlanta area, becomes a district that performs in terms of the ability to elect minority candidates of choice. In the previous map, minority candidates never won an election in the district. In the

Illustrative Map, minority candidates now would have earned a majority in all past elections in which they ran.

85. Second, CDs 6 and 7 now provide a slightly stronger ability to elect minority candidates based on past elections. The share of past elections won by a minority candidate increased by 5% in CD 6 and by 15% in CD 7, compared to the enacted map. On the other hand, CDs 2 and 13 become more competitive, with CD 2 in particular now registering a safe victory for minority candidates in only a small share of past elections.

86. Overall, then, the Illustrative Map grants minority voters a very strong chance of electing preferred candidates in four of fourteen congressional districts (CDs 3, 4, 5 and 13). Minority voters still have a good chance of electing minority candidates in CDs 2 and 7, though with CD 2 considerably more competitive than in the enacted congressional map. Finally, based on historical elections, minority voters have a low chance of electing preferred candidates in the remaining congressional districts.



Table 5: Performance Analysis (Elections with a Minority Candidate), Illustrative Map CDs

CD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
1	25.8%	24.2%	2.0%	1.6%	42.0%	39.6%	0.0%	0.0%
2	42.6%	35.4%	1.3%	1.0%	50.1%	43.7%	70.0%	5.0%
3	43.9%	46.4%	2.2%	1.7%	58.7%	54.3%	100.0%	95.0%
4	45.0%	42.5%	2.4%	2.2%	80.7%	76.0%	100.0%	100.0%
5	45.2%	44.1%	4.1%	3.2%	71.0%	63.8%	100.0%	100.0%
6	11.1%	10.4%	3.9%	3.3%	42.0%	31.0%	5.0%	0.0%
7	34.8%	33.4%	8.3%	6.0%	57.8%	48.0%	80.0%	65.0%
8	21.5%	21.8%	1.5%	1.0%	30.4%	28.4%	0.0%	0.0%
9	2.8%	4.6%	3.3%	2.5%	19.8%	15.7%	0.0%	0.0%
10	14.0%	13.4%	2.6%	2.1%	30.9%	28.0%	0.0%	0.0%
11	14.0%	13.3%	3.2%	2.8%	34.0%	27.1%	0.0%	0.0%
12	34.8%	30.9%	1.6%	1.3%	44.5%	40.8%	0.0%	0.0%
13	47.2%	45.0%	2.2%	1.7%	56.8%	51.5%	100.0%	65.0%
14	5.5%	6.4%	3.8%	2.5%	23.5%	21.6%	0.0%	0.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a congressional district from the Illustrative Map along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

## State Senate Districts

87. The tables below report the performance of the State Senate districts that I have analyzed under Illustrative Map 1 and 2. In Map 1, minority candidates win all past elections in SDs 16, 25, 28 and 40 and a strong majority of past elections in SDs 17. Several of these districts are relatively competitive, with the minority candidate winning by a narrow margin (e.g., less than 55%) at least a third of the time in SDs 17, 25 and 28.

88. In Map 2, minority candidates win all past elections in SD 16 and a majority of past elections in SD 23. Each district is relatively competitive, with the minority candidate earning less than 55% of the vote share 35% of the time in SD 16 and 80% of the time in SD 23.

89. To sum up, in the Illustrative State Senate Maps, minority-preferred candidates won more than half the time in every district I examine. This performance contrasts with the enacted Senate Districts I have examined, where minority candidates won more than half the time in 67% of districts.

Table 6: Performance Analysis (Elections with a Minority Candidate), Illustrative Map 1 SDs

SD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
16	45.2%	46.6%	1.9%	1.7%	56.4%	52.3%	100.0%	75.0%
17	44.1%	45.3%	2.6%	2.1%	57.8%	49.3%	90.0%	65.0%
25	43.0%	42.7%	1.3%	0.8%	53.4%	50.9%	100.0%	15.0%
28	43.5%	49.5%	2.3%	1.4%	58.8%	51.9%	100.0%	65.0%
40	49.4%	46.9%	3.9%	3.0%	75.6%	69.2%	100.0%	100.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given Illustrative Map 1 State Senate district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

Table 7: Performance Analysis (Elections with a Minority Candidate), Illustrative Map 2 SDs

SD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
16	44.1%	45.7%	1.9%	1.8%	55.4%	50.7%	100.0%	65.0%
23	45.7%	40.5%	0.9%	0.8%	52.4%	46.4%	70.0%	20.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given Illustrative Map 2 State Senate district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

## State House Districts

90. The tables below report the performance of the State House districts that I have analyzed under Illustrative Map 1 and 2. In Map 1, minority candidates win all past elections in LDs 64, 144 and 161 and a majority of past elections in LDs 74, 117 and 151. Several of these districts are relatively competitive, with the minority candidate winning by a narrow margin (e.g., less than 55%) at least a third of the time in LDs 74, 117, 144 and 151. Finally, LD 171 offers some but by no means an overwhelming chance of electing minority candidates, as in this district minority candidates won 35% of past elections.

91. In Map 2, minority candidates win all past elections in LDs 64, 144 and 161. In LD 117, minority candidates won 35% of past elections.

92. To sum up, in each Illustrative State House Map, minority candidates won more than half the time in every district but one that I examine (86% and 75% of districts, respectively). This performance contrasts with the enacted House Districts I have examined, where minority candidates won more than half the time in 72% of districts.

93. I reserve the right to supplement this report if additional facts, testimony, and/or materials come to light. Pursuant to 28 U.S.C 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed this 13th day of January, 2023 at 11:30pm.

Signature: Ben Schuer

Table 8: Performance Analysis (Elections with a Minority Candidate), Illustrative Map 1 LDs

LD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
64	46.7%	51.2%	2.4%	1.8%	60.3%	53.5%	100.0%	80.0%
74	43.9%	36.2%	2.5%	1.9%	52.9%	48.0%	75.0%	35.0%
117	44.9%	50.5%	3.0%	1.8%	55.5%	45.7%	65.0%	60.0%
144	37.7%	33.7%	1.2%	0.9%	53.6%	50.4%	100.0%	30.0%
151	51.8%	35.5%	1.3%	0.6%	51.5%	39.5%	70.0%	45.0%
161	43.0%	36.7%	3.2%	2.9%	62.0%	57.4%	100.0%	100.0%
171	42.1%	39.2%	0.9%	0.5%	48.0%	42.3%	35.0%	0.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given State Senate district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

Table 9: Performance Analysis (Elections with a Minority Candidate), Illustrative Map 2 LDs

LD	Black 2020	Black 2022	Hispanic 2020	Hispanic 2022	Mean M Vote	Min M Vote	M Wins	M Over 55%
64	46.1%	50.5%	2.6%	1.9%	59.8%	53.0%	100.0%	75.0%
117	45.1%	33.6%	2.9%	1.7%	49.3%	42.0%	35.0%	35.0%
144	43.1%	39.5%	1.2%	0.9%	58.2%	54.7%	100.0%	95.0%
161	42.2%	35.4%	3.0%	2.7%	60.5%	56.2%	100.0%	100.0%

Note: This table reports the share of the electorate, based on 2020 and 2022 turnout, of each minority racial group in a given State Senate district along with the mean and minimum minority candidate vote share (labelled M) in the district across statewide elections with a minority candidate since 2012.

# Appendix A

## Additional Tables

Table 10: Statewide Minority-Preferred Candidates

Year	Office	Candidate
2020	2020 Public Service Commissioner 1*	Robert Bryant
2020	2020 Public Service Commissioner 4*	Daniel Blackman
2020	2020 US President	Joe Biden
2020	2020 US Senator	Jon Ossof
2021	2021 Public Service Commissioner 4 (Runoff)*	Daniel Blackman
2021	2021 US Senator (Runoff)	Raphael Warnock
2021	2021 US Senator Special (Runoff)*	Raphael Warnock
2022	2022 US Senator	Raphael Warnock
2022	2022 Governor*	Stacey Abrams
2022	2022 Lieutenant Governor	Charlie Bailey
2022	2022 Secretary of State*	Bee Nguyen
2022	2022 Attorney General	Jen Jordan
2022	2022 Agriculture Commissioner*	Nakita Hemingway
2022	2022 Insurance Commissioner*	Janice Laws Robinson
2022	2022 Labor Commissioner*	William Boddie
2022	2022 Superintendent of Public Instruction*	Alisha Searcy

Note: This table reports the overall minority-preferred candidate based on statewide ecological estimates for the elections considered in this report. A star denotes those offices where a minority candidate is preferred to a non-minority candidate by minority voters statewide.

Table 11: Statewide Minority-Preferred Candidates, Continued

Year	Office	Candidate
2012	2012 US President*	Barack Obama
2014	2014 Agriculture Commissioner	Christopher Irvin
2014	2014 Attorney General	Greg Hecht
2014	2014 Governor	Jason Carter
2014	2014 Insurance Commissioner*	Liz Johnson
2014	2014 Labor Commissioner*	Robbin Shipp
2014	2014 Lieutenant Governor*	Connie Stokes
2014	2014 Public Service Commissioner 4*	Daniel Blackman
2014	2014 Superintendent of Public Instruction*	Valarie Wilson
2014	2014 Secretary of State*	Doreen Carter
2014	2014 US Senator	Michelle Nunn
2016	2016 US President	Hilary Clinton
2016	2016 US Senator	Jim Barksdale
2018	2018 Agriculture Commissioner	Fred Swann
2018	2018 Attorney General	Charlie Bailey
2018	2018 Governor*	Stacey Abrams
2018	2018 Insurance Commissioner*	Janice Laws Robinson
2018	2018 Labor Commissioner	Richard Keatley
2018	2018 Lieutenant Governor	Sarah Riggs Amico
2018	2018 Public Service Commissioner 3	Lindy Miller
2018	2018 Public Service Commissioner 3 (Runoff)	Lindy Miller
2018	2018 Public Service Commissioner 5	Dawn Rudolph
2018	2018 Superintendent of Public Instruction*	Otha Thornton
2018	2018 Secretary of State	John Barrow
2018	2018 Secretary of State (Runoff)	John Barrow

Note: This table reports the overall minority-preferred candidate based on statewide ecological estimates for the elections considered in this report. A star denotes those offices where a minority candidate is preferred to a non-minority candidate by minority voters statewide.



# Additional Maps: Clusters

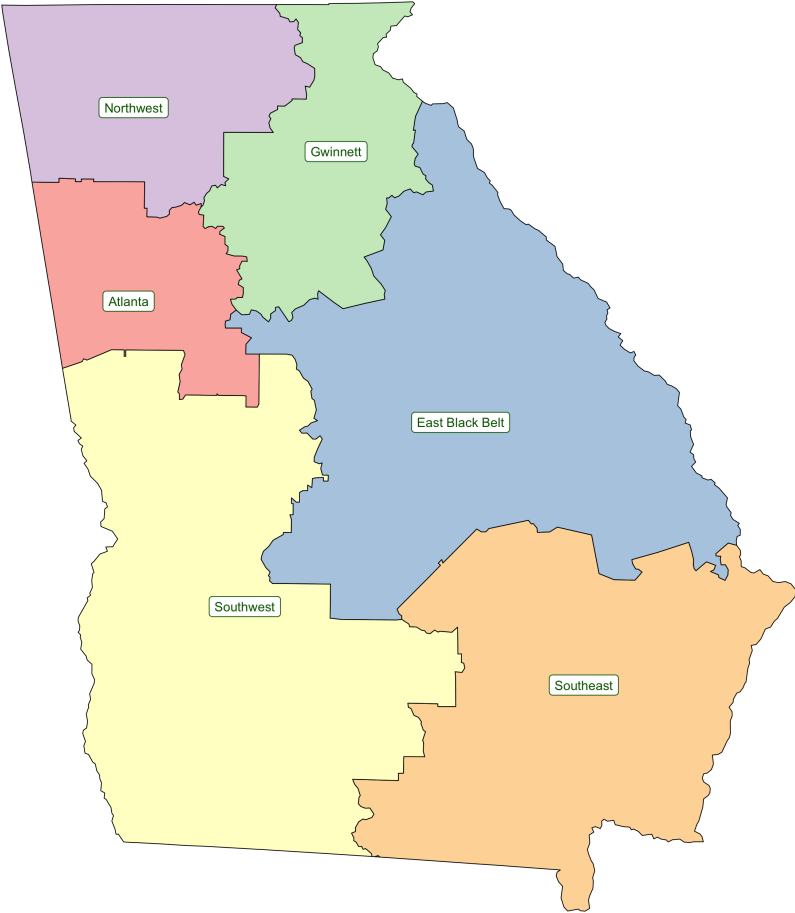


Figure 30: Map of State Senate Clusters

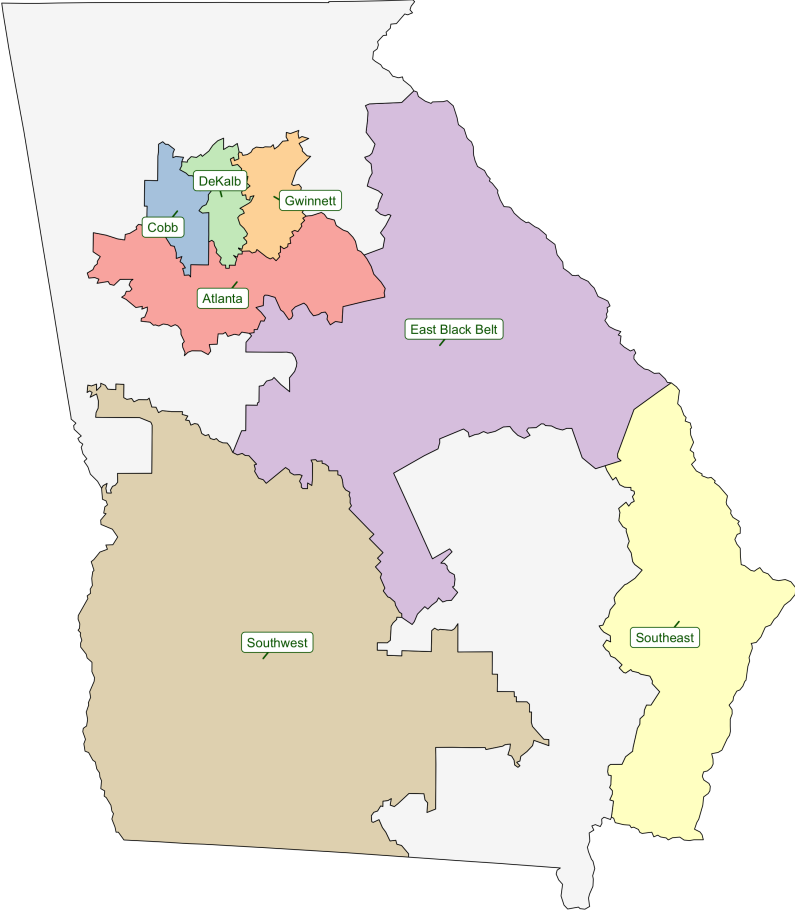


Figure 31: Map of State House Clusters

## Additional Maps: Illustrative Congressional Districts

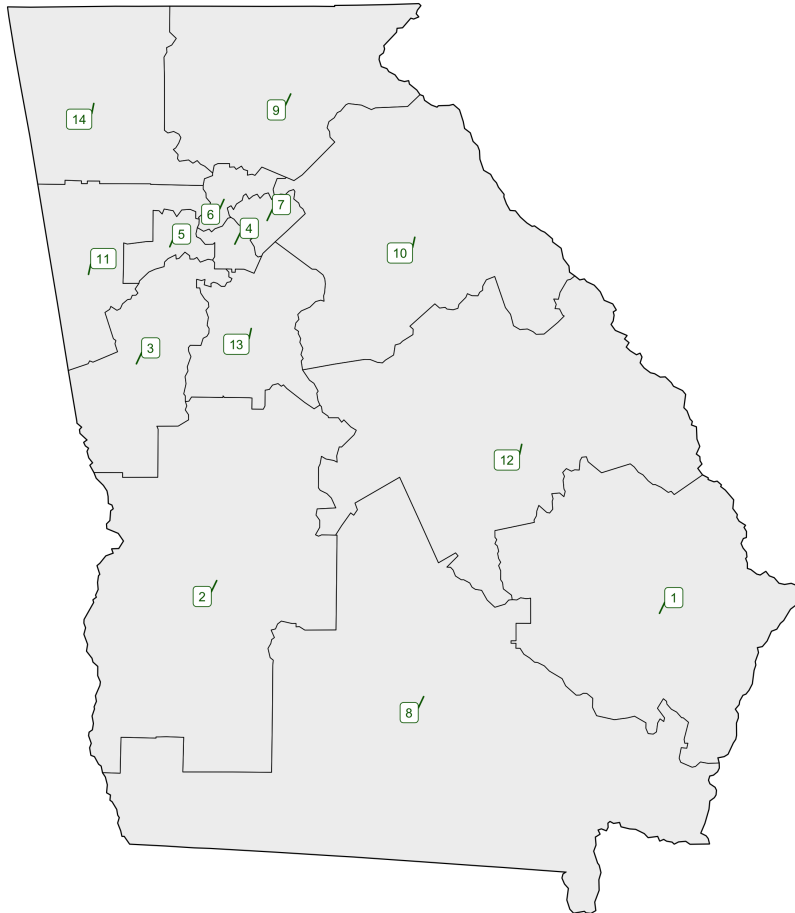


Figure 32: Map 1 of Illustrative State Senate Districts

# Additional Maps: Illustrative State Senate Districts

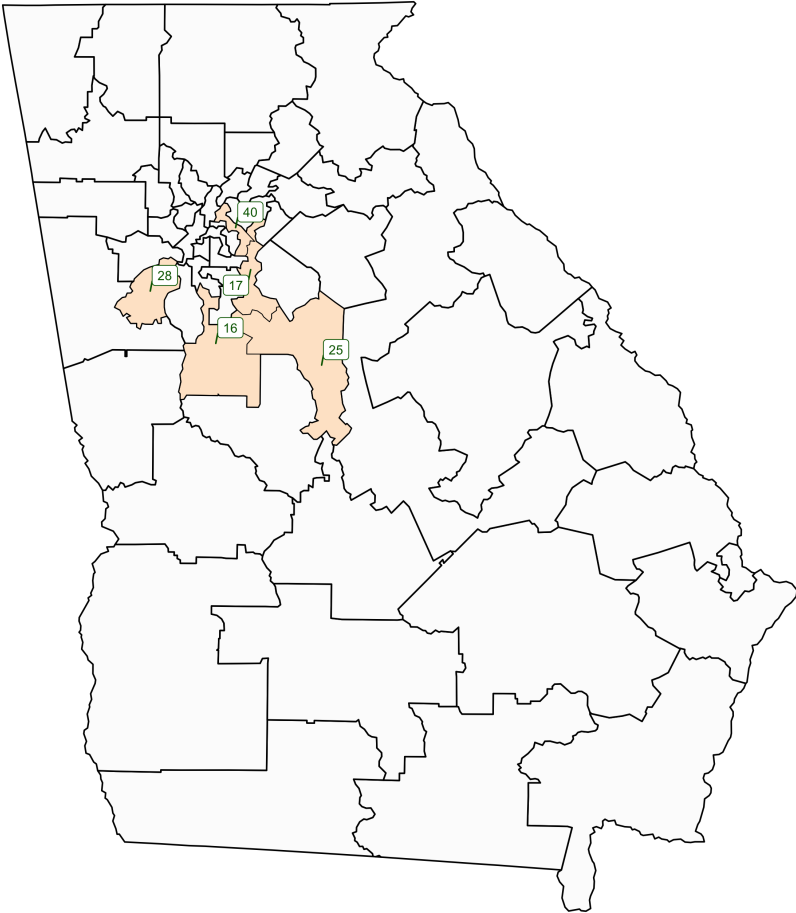


Figure 33: Map 1 of Illustrative State Senate Districts

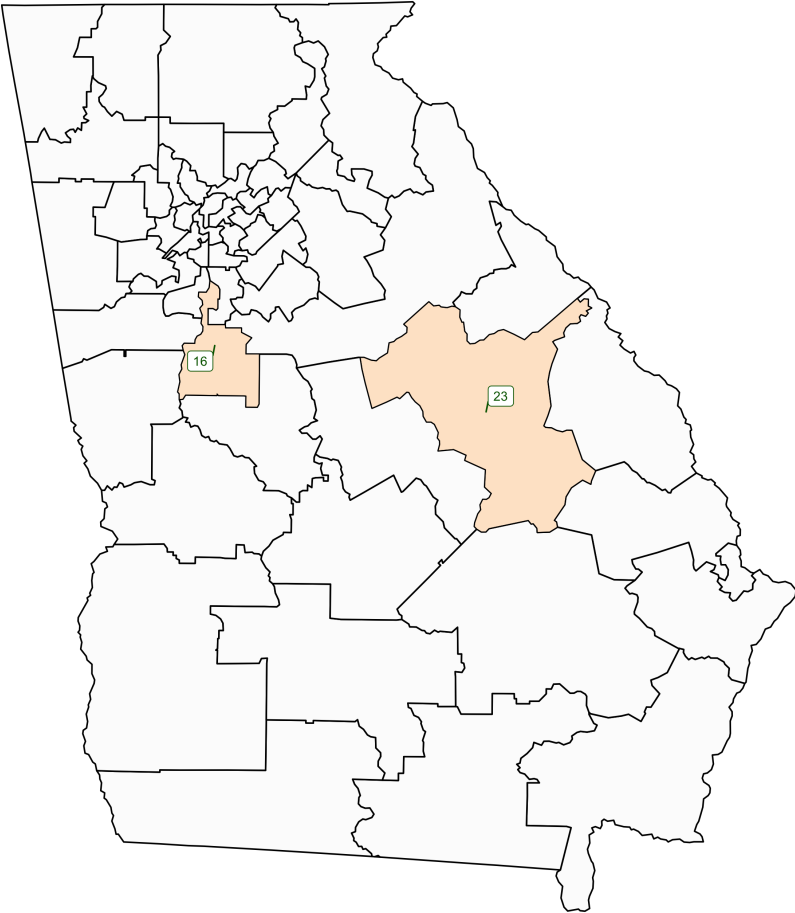


Figure 34: Map 2 of Illustrative State Senate Districts

# Additional Maps: Illustrative State House Districts

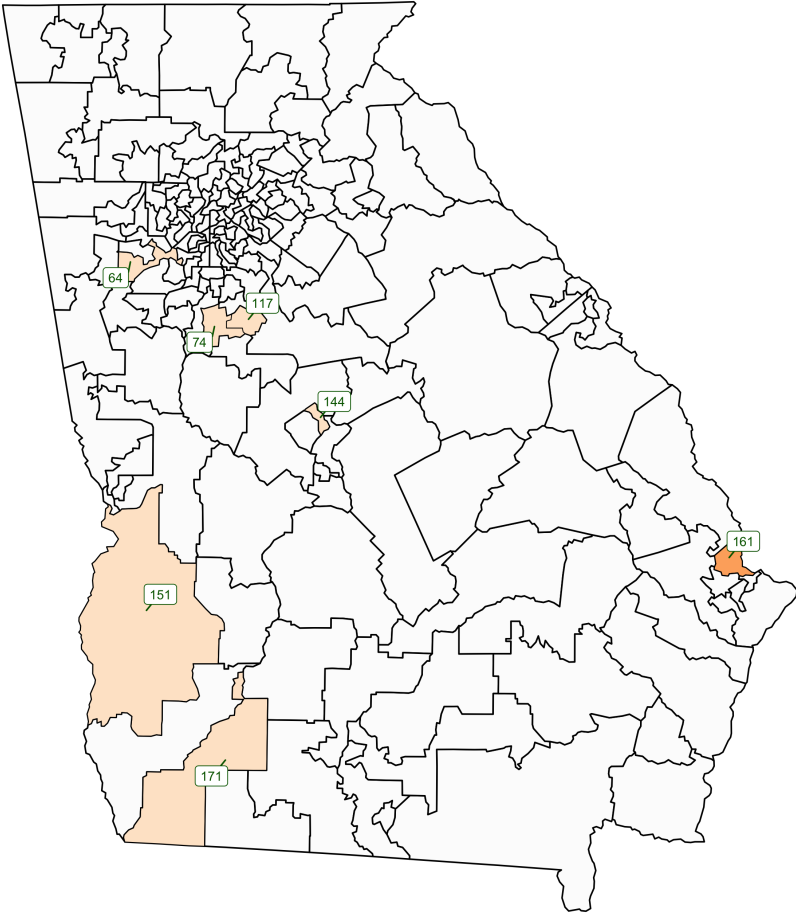


Figure 35: Map 1 of Illustrative State House Districts

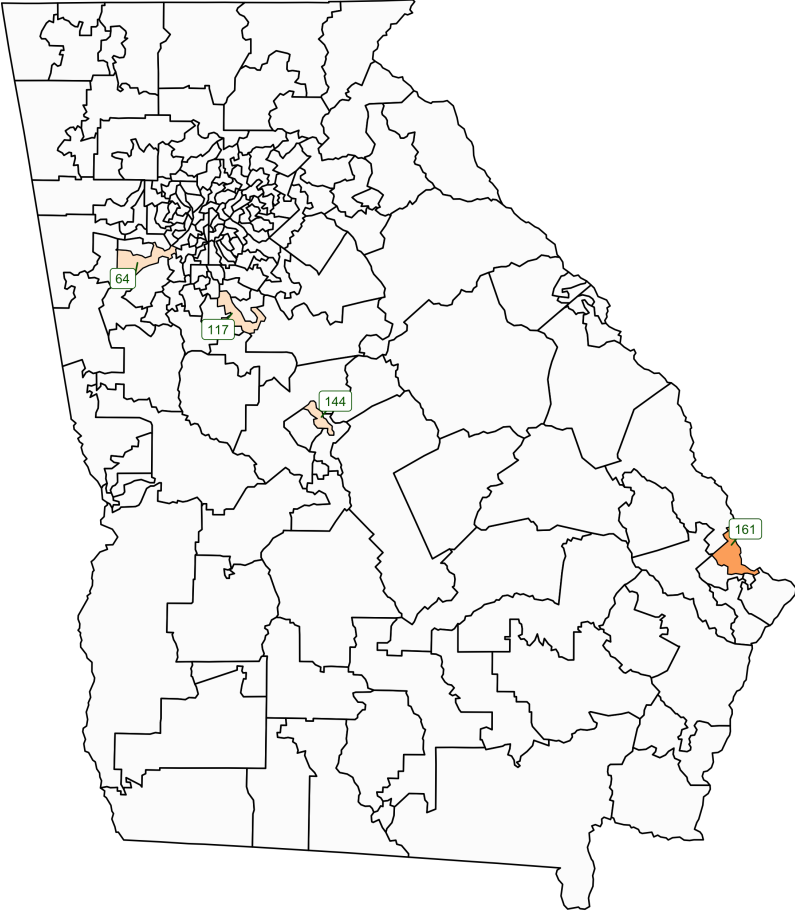


Figure 36: Map 2 of Illustrative State House Districts

## Benjamin Schneer

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## Academic Employment

Harvard Kennedy School

Assistant Professor of Public Policy, 2018–Present.

Florida State University

Assistant Professor of Political Science, 2016–2018.

## Education

Ph.D. Political Science, Harvard University, 2016.

Committee: Gary King, Daniel Carpenter, Stephen Ansolabehere

M.A. Political Science, Harvard University, 2012.

M.A. Economics, Stanford University, 2010.

B.A. Economics & History, *Summa Cum Laude*, Columbia University, 2005.

## Research Interests

Political Communication, Elections, Congress, Politics and History, Redistricting

## Publications

“The Popular Origins of Legislative Jurisdictions: Petitions and Standing Committee Formation in Revolutionary Virginia and the Early U.S. House” (with Tobias Resch, Maggie McKinley, and Daniel Carpenter). 2022. *Journal of Politics* 84 (3): 1727–1745.

“Partisan Alignment Increases Voter Turnout: Evidence from Redistricting” (with Bernard Fraga and Daniel J. Moskowitz). 2022. *Political Behavior* 44: 1883–1910.

“Congressional Representation by Petition: Assessing the Voices of the Voteless in a Comprehensive New Database, 1789-1949” (with Maggie Blackhawk, Tobias Resch, and Daniel Carpenter). 2021. *Legislative Studies Quarterly* 46 (3): 817–849.

“From the Halls of Congress to K Street: Government Experience and Its Value for Lobbying” (with Pamela Ban and Maxwell Palmer). 2019. *Legislative Studies Quarterly* 44 (4): 713–752.

“Reevaluating Competition and Turnout in U.S. House Elections” (with Daniel J. Moskowitz). 2019. *Quarterly Journal of Political Science* 14: 191-223.

“Postpolitical Careers: How Politicians Capitalize on Public Office” (with Maxwell Palmer). 2019. *Journal of Politics* 81 (2): 670-675.



“Suffrage Petitioning as Formative Practice: American Women Presage and Prepare for the Vote, 1840-1940” (with Daniel Carpenter, Zachary Popp, Tobias Resch, and Nicole Topich). 2018. *Studies in American Political Development* 32 (1): 24–48.

“Paths of Recruitment: Rational Social Prospecting in Petition Canvassing” (with Clayton Nall and Daniel Carpenter). 2018. *American Journal of Political Science* 62 (2): 192–209.

“Divided Government and Significant Legislation: A History of Congress from 1789–2010” (with Stephen Ansolabehere and Maxwell Palmer). 2018. *Social Science History* 42 (1): 81–108.

“How the News Media Activate Public Expression and Influence National Agendas” (with Gary King and Ariel White). 2017. *Science* 358 (6364): 776–780.

“Capitol Gains: The Returns to Elected Office from Corporate Board Directorships” (with Maxwell Palmer). 2016. *Journal of Politics* 78 (1): 181–196.

“What Has Congress Done?” (with Stephen Ansolabehere and Maxwell Palmer). 2016. *Governing in a Polarized Age: Elections, Parties, and Political Representation in America*, eds. Alan S. Gerber and Eric Schickler. New York: Cambridge University Press.

“Party Formation Through Petitions: The Whigs and the Bank War of 1832–1834” (with Daniel Carpenter). 2015. *Studies in American Political Development* 29 (2): 1–22.

## Working Papers

“Descended from Immigrants and Revolutionists’: How Immigrant Background Shapes Legislative Behavior in Congress” (with James Feigenbaum and Maxwell Palmer). HKS Working Paper No. RWP19-028. *Under Revision*.

“When the Going Gets Tough, Members Go Home: Electoral Threat and Legislator Behavior in the U.S. Congress” (with Jaclyn Kaslovsky and Daniel J. Moskowitz).

“Why Party Leaders Tend to Be Extremists” (with David C. King and Richard Zeckhauser). HKS Working Paper No. RWP20-015.

“Policy Consequences of Civil Society: Evidence from German-American Counter-Mobilization to Prohibition” (with Tobias Reisch).

“A Partisan Solution to Partisan Gerrymandering: The Define-Combine Procedure” (with Maxwell Palmer and Kevin DeLuca). HKS Working Paper No. RWP22-012.

“Direct Election and Political Representation: Evidence from Congressional Petitioning.”

“Bayesian Instrumental Variables Estimation with Relaxations of the Exclusion Restriction” (with Michael Gill and Arman Sabbaghi).

## Current Projects

“Paywalls” (with Desmond Ang and Avinash Moorthy).

“Permanent Minority Rule? Uncovering the Limits of Partisan Gerrymandering” (with Maxwell Palmer).

“Coattail Effects and Candidate Quality” (with Kevin DeLuca and Dan Moskowitz).

“Misperceptions of Life Expectancy” (with Desmond Ang).

## Reports, Other Publications and Selected Media

“Racially Polarized Voting Analysis for the Virginia Redistricting Commission” (with Maxwell Palmer). August 31, 2021.

“Drawing a Line.” *Harvard Kennedy School Magazine*. Winter 2020.

“Review of Evaluating Media Bias, by Adam J. Schiffer.” 2020. *American Review of Politics* 37 (1): 106–8.

“Drawing the Line on Gerrymandering.” *HKS PolicyCast (Podcast)*, December 10, 2019.

“The Arizona Redistricting Commission: One State’s Model for Gerrymandering Reform” (with Colleen Mathis and Daniel J. Moskowitz). *Ash Center Policy Brief*, 2019.

“Are Divided Governments the Cause of Delays and Shutdowns?” *The Science of Politics (Podcast)*, January 2, 2019.

“Canvassers Tend to Seek Out Supporters Who Are Like Themselves, and That’s Not Good for Political Participation” (with Daniel Carpenter and Clayton Nall). *LSE USAPP Blog*, November 1, 2017.

“How and Why Retired Politicians Get Lucrative Appointments on Corporate Boards” (with Maxwell Palmer). *The Washington Post (Monkey Cage)*, February 1, 2015.

“An Analysis of the Arizona Independent Redistricting Commission Congressional District Map” (with Gary King). *Submitted to Department of Justice*, 2012.

“An Analysis of the Arizona Independent Redistricting Commission Legislative District Map” (with Gary King). *Submitted to Department of Justice*, 2012.

## Conferences & Presentations

2022: Georgia State University (Economics), HKS Faculty Lunch Seminar, Harris School (University of Chicago CEG American Politics Conference), APSA

2021: Redistricting Algorithms, Law, and Policy (Radcliffe Institute), Metro Cities Council of the American Chamber of Commerce Executives, APSA

2020: HKS Faculty Lunch Seminar

2019: MPSA, Congress & History

2018: FSU (Colloquium), Congress & History, APSA

2017: Congress & History

2016: PolNet, APSA

2015: The Media Consortium, Boston University (Emerging Media Studies), MPSA, Iowa State, APSA, Harvard (Grad PE, APRW)

2014: SPSA, Texas A&M, The Media Consortium, Radcliffe (The Petition in North America), MPSA, Harvard (APRW x2, Grad PE, PE), NYU (Alexander Hamilton Center for Political Economy), PolMeth (Poster Session), APSA, Tobin Project

2013: Harvard (Grad PE), MPSA, The Media Consortium

2012: Harvard (APRW)

2011: Harvard (APRW)

## Teaching

API 202: Empirical Methods II, Harvard Kennedy School, Spring 2022 & Spring 2023.

DPI 610: Data Science for Politics, Harvard Kennedy School, Spring 2020 & Spring 2021.

DPI 308: Translating Public Opinion into Policy Action, Harvard Kennedy School, Spring 2019, Fall 2020 & Spring 2021.

Forecasting Elections in 2020 (Summer Engagement Session), Harvard Kennedy School, Summer 2020.

POS 3263: Political Elites and Representation, Florida State University, Spring 2018.

POS 4424: Legislative Systems, Florida State University, Spring 2017, Fall 2017 & Spring 2018.

POS 5427: Legislative Politics, Florida State University, Spring 2017.

POS 5045: National Government (American Politics Core), Florida State University, Fall 2017.

Gov 30: American Government, Professor Paul E. Peterson, Harvard University, Fall 2013 (TF).

Gov 1300: The Politics of Congress, Professor Stephen Ansolabehere, Harvard University, Spring 2013 (TF).

Gov 1359: The Road to the White House, Carlos Diaz Rosillo, Harvard University, Fall 2012 (TF).

Econ 101: Economic Policy Analysis, Anamaria Pieschacon, Stanford University, Fall 2009 & Winter 2010 (TA).

## Past Employment

Research Assistant, Professor Gary King, Harvard University, 2011–2016.

Research Assistant, Professor Daniel Carpenter, Harvard University, 2011–2014.

Research Assistant, Professor Gavin Wright, Stanford University, 2008–2009.

Research Analyst, LECG LLC, 2006–2007.

Research Fellow, Professor Alison Morantz, Stanford Law School 2005–2006, 2010.

## Fellowships & Awards

American Journal of Political Science Best Paper Award (co-winner) for “Paths of Recruitment: Rational Social Prospecting in Petition Canvassing,” 2018.

Summer Institute, Center for Advanced Study in the Behavioral Sciences, 2017.

First Year Assistant Professor Grant, Florida State University, 2017.

Richard J. Herrnstein Prize, awarded by the Harvard Graduate School of Arts and Sciences for “a dissertation that exhibits excellent scholarship, originality and breadth of thought, and a commitment to intellectual independence,” 2016.

GSAS Dissertation Completion Fellowship, Harvard University, 2015–2016.

Term Time Merit Fellowship, Graduate Society, Harvard University, 2014–2015.

Dissertation Research Fellowship for Study of the American Republic, Center for American Political Studies, Harvard University, 2014–2015.

Jeanne Humphrey Block Dissertation Award, Institute for Quantitative Social Sciences, Harvard University, 2014–2015.

Graduate Research Grant, Institute for Quantitative Social Sciences, Harvard University, 2014–2015.

Fellow, Democracy & Markets, Tobin Project, 2014–2015.

Graduate Fellowship, Harvard University, 2010–2016.

NSF Travel Grant, Annual Conference of the Society for Political Methodology, 2014

Travel Grant, Institute for Quantitative Social Science, Harvard University, 2013, 2014, 2015.

Outstanding Teaching Assistant, Stanford University, 2009–2010.

Phi Beta Kappa, 2005.

Dean's List, Columbia University, 2001–2005.

## Other

### *Affiliations*

Taubman Center for State and Local Government, Harvard Kennedy School

Ash Center for Democratic Governance and Innovation, Harvard Kennedy School

Institute for Quantitative Social Science, Harvard University

Center for American Political Studies (CAPS), Harvard University

Multidisciplinary Program in Inequality and Social Policy, Harvard University

Political Analysis Track, Ph.D. Program in Health Policy, Harvard University

### *Service*

Co-Organizer, American Politics Speaker Series, Harvard Kennedy School and Department of Government, 2019–Present.

DPI Junior American Politics Search Committee, Harvard Kennedy School, 2019–2020.

Host, Faculty Research Seminar, Harvard Kennedy School, 2019, 2021.

MPP Admissions Committee, Harvard Kennedy School, 2018–2019.

PhD Admissions Committee, Institutions and Politics Track, Harvard Kennedy School, 2021–2022.

### *Selected Consulting*

Virginia Redistricting Commission (Voter Polarization Analysis, 2020s Redistricting Cycle)

Arizona Independent Redistricting Commission (2010s Redistricting Cycle)

New York Civil Liberties Union (*Hurrell-Harring et al. v. the State of New York*)

Other Projects/Cases: Illinois State Legislature (Redistricting), Texas (Voter ID)

### *Software Packages*

R, Stata, SAS, Python, ArcGIS, L<sup>A</sup>T<sub>E</sub>X.

# EXHIBIT D

EXPERT REPORT OF JOHN R. ALFORD, Ph.D.

**Scope of Inquiry**

I have been retained by the Georgia Secretary of State and State Election Board as an expert to provide analysis related to *Grant v. Raffensperger*, *Alpha Phi Alpha v. Raffensperger*, and *Pendergrass v. Raffensperger*. All three cases allege the current U.S. Congressional, state Senate, and state House districts in Georgia violate Section 2 of the Voting Rights Act. In early 2022, I provided a report and testified in the preliminary injunction hearing in those matters. I have provided a report in those cases dated 2/6/2023 that was responsive to the reports and supplemental reports provided by plaintiffs' experts Dr. Maxwell Palmer, and Dr. Lisa Handley. The previous report, including my analysis of primary voting relevant to this case, is attached as Appendix 2. In this report I will supplement that report with additional consideration of the report provided by Dr. Benjamin Schneer dated 1/13/2023 in *Ga. NAACP* and *Common Cause* cases. My rate of compensation in this matter is \$500 per hour.

**Qualifications**

I am a tenured full professor of political science at Rice University. At Rice, I have taught courses on redistricting, elections, political representation, voting behavior and statistical methods at both the undergraduate and graduate level. Over the last thirty years, I have worked with numerous local governments on districting plans and on Voting Rights Act issues. I have previously provided expert reports and/or testified as an expert witness in voting rights and statistical issues in a variety of court cases, including on behalf of the U.S. Attorney in Houston, Texas, the Texas Attorney General, a U.S. Congressman, and various cities and school districts.

In the 2000 round of redistricting, I was retained as an expert to provide advice to the Texas Attorney General in his role as Chair of the Legislative Redistricting Board. I subsequently served as the expert for the State of Texas in the state and federal litigation involving the 2001 redistricting for U.S. Congress, the Texas Senate, the Texas House of Representatives, and the Texas State Board of Education. In the 2010 round of redistricting in Texas, I was again retained as an expert by the State of Texas to assist in defending various state election maps and systems including the district maps for the U.S. Congress, the Texas Senate, the Texas House of Representatives, and the current at large system for electing Justices to the State Supreme Court

and Court of Appeals, as well as the winner-take-all system for allocating Electoral College votes.

I have also worked as an expert on redistricting and voting rights cases at the state and/or local level in Alabama, Arkansas, Florida, Georgia, Kansas, Louisiana, Michigan, Mississippi, New Mexico, New York, Pennsylvania, Washington, and Wisconsin. The details of my academic background, including all publications in the last ten years, and work as an expert, including all cases in which I have testified by deposition or at trial in the last four years, are covered in the attached CV (Appendix 1).

### **Data and Sources**

In preparing this report, I have reviewed the reports filed by the Dr. Schneer in this case. I have also reviewed various election and demographic data provided by Dr. Schneer in his disclosures related to his report in this case.

### **Dr. Schneer's Report**

In his report dated 2/13/2023, Dr. Schneer provides the results of a set of Ecological Inference ("EI") election analyses that he used to assess Racially Polarized Voting (RPV) in 41 two-party contested general election contests between 2012 and 2022. He notes that 21 of these contests (indicated by an asterisk next to the contest label) include a minority candidate running against a non-minority candidate. He considers these contests to be the most probative. The remaining 20 contests feature candidates that are the same race. He reports results for the estimated voting preferences in all 41 of these contests within a variety of geographic contexts for Black, white, and sometimes Hispanic voters. As his list of the 21 minority candidates on pages 13-14 shows, all 21 are running as Democrats, and in his broader set of 41 election contests, the preferred candidate of Black voters is always the Democrat.

Dr. Schneer acknowledges that the race of the candidates provides important information about racially polarized voting. He notes, "[w]hile I estimate RPV results for all statewide general elections since 2012, I rely on those elections in which a minority candidate was one of the two major party candidates running for office as most probative for making inferences about racially polarized voting" (page 13). In his associated footnote 18 on page 13, he states that an "election between a minority and a non-minority candidate provides variation in the race of the candidate

and therefore offers a test of whether race might matter in vote choice among different voter groups.” He goes on to say that he also includes “elections in which no minority candidate ran or two minority candidates ran as major party candidates. These are useful for establishing a general pattern of vote choice for different racial groups, even if elections with a single minority candidate are most probative for determining the extent of RPV” (page 14).

However, despite having recognized the potential value this data identified in his reports and the associated opportunity analyze it, there is no discussion of the impact, if any, that the race of the candidate has on the behavior of Black, white, or Hispanic voters in any of these contests. Consider the patterns evident in Dr. Schneer’s Figure 1. In all 41 of the 41 election contests examined, minorities show cohesive voting for the Democratic candidate. In contrast, White voters cohesively favor the Republican candidate. Clearly the partisan label of a candidate matters, as there is only minimal variation in the estimated vote shares across ten years and 41 elections ranging from top-of-the-ballot Presidential contests to down ballot contests like Public Service Commissioner.

The key question is whether the variation in the race of the Democratic candidate matters to either minority or white voters. As noted above, Dr. Schneer acknowledges that “variation in the race of the candidate ... offers a test of whether race might matter in vote choice among different voter groups” (page 13). Here we have that variation across Democratic candidates as roughly half are minorities running against white candidates, and the other half are not. A look at any of the 17 figures relating to the various geographies examined in Dr. Schneer’s report makes it clear that the strong support of minority voters for Democratic candidates does not in fact vary to any visible degree<sup>1</sup> on the basis of the race of the candidates. In other words, “variation in the race of the candidate ... offers a test of whether race might matter in vote choice among different voter groups,” and based on Dr. Schneer’s results, there is no indication that race matters in the vote choice among different voter groups. This is exactly the same result illustrated in my discussion of the pattern of general election results presented in the reports of Dr. Handley and Dr. Palmer.

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<sup>1</sup> We have to rely on visual comparison here because Dr. Schneer does not provide the numerical point estimates for his EI analysis. However, his analysis is very similar to the analysis of general elections in Dr. Palmer’s reports where the numeric estimates are provided, and that numeric comparison is covered in my report in this case dated 2/6/2023.



Dr. Schneer recognizes that the vote patterns don't vary by the race of candidates, and this can be seen throughout his report where he consistently observes the same cohesive voting patterns in elections regardless of whether the election features a minority candidate running against a non-minority candidate, or the election has no minority candidate on the ballot. For example, in reflecting on his Figure 1, Dr. Schneer concludes that: "I estimate that about 96% of Hispanic voters supported Abrams in 2018. Again, the results are generally similar across other elections I examined with minority candidates. When a minority candidate was not one of the two major party candidates, minority voters continued to vote cohesively, supporting particular candidates at overwhelming rates." (Page 15). And again toward the end of his report discussing patterns in his Figure 27, he notes that he observes "evidence of RPV with Black and Hispanic voters supporting minority candidates and White voters opposing them across all past statewide elections with a minority candidate running. When a minority candidate does not run, Black and Hispanic voters support the same minority preferred candidate and white voters oppose this candidate" (page 63).

### **Summary Conclusions**

Dr. Schneer's analysis of voting in general elections is entirely comparable to that of Dr. Palmer and Dr. Handley. All three provide analysis that demonstrates that Black voters provide uniformly high levels of support for Democratic candidates and white voters provide uniformly high levels of support for Republican candidates. Dr. Schneer acknowledges that variation in the race of candidates provides a test of whether race matters to voters, and the large set of elections both he and Dr. Palmer provide, across the ballot and across a decade, nicely happens to divide almost evenly into half that are racially contested and half that are not. The results of this test are clear. The high level of minority voter support for Democratic candidates is not a response to the race of the Democratic or Republican candidates. Similarly, the high level of white voter support for Republican candidates is not a response to the race of the Democratic or Republican candidates.



John R. Alford, Ph.D.

February 10, 2023

# **Appendix 1**

**CV**

**John R. Alford**  
Curriculum Vitae  
January 2023

Dept. of Political Science  
Rice University - MS-24  
P.O. Box 1892  
Houston, Texas 77251-1892  
713-348-3364  
jra@rice.edu

**Employment:**

Professor, Rice University, 2015 to present.  
Associate Professor, Rice University, 1985-2015.  
Assistant Professor, University of Georgia, 1981-1985.  
Instructor, Oakland University, 1980-1981.  
Teaching-Research Fellow, University of Iowa, 1977-1980.  
Research Associate, Institute for Urban Studies, Houston, Texas, 1976-1977.

**Education:**

Ph.D., University of Iowa, Political Science, 1981.  
M.A., University of Iowa, Political Science, 1980.  
M.P.A., University of Houston, Public Administration, 1977.  
B.S., University of Houston, Political Science, 1975.

**Books:**

*Predisposed: Liberals, Conservatives, and the Biology of Political Differences.* New York: Routledge, 2013. Co-authors, John R. Hibbing and Kevin B. Smith.

**Articles:**

“Political Orientations Vary with Detection of Androstenone,” with Amanda Friesen, Michael Gruszczynski, and Kevin B. Smith. **Politics and the Life Sciences.** (Spring, 2020).

“Intuitive ethics and political orientations: Testing moral foundations as a theory of political ideology.” with Kevin Smith, John Hibbing, Nicholas Martin, and Peter Hatemi. **American Journal of Political Science.** (April, 2017).

“The Genetic and Environmental Foundations of Political, Psychological, Social, and Economic Behaviors: A Panel Study of Twins and Families.” with Peter Hatemi, Kevin Smith, and John Hibbing. **Twin Research and Human Genetics.** (May, 2015.)

“Liberals and conservatives: Non-convertible currencies.” with John R. Hibbing and Kevin B. Smith. **Behavioral and Brain Sciences** (January, 2015).

“Non-Political Images Evoke Neural Predictors Of Political Ideology.” with Woo-Young Ahn, Kenneth T. Kishida, Xiaosi Gu, Terry Lohrenz, Ann Harvey, Kevin Smith, Gideon Yaffe, John Hibbing, Peter Dayan, P. Read Montague. **Current Biology.** (November, 2014).

“Cortisol and Politics: Variance in Voting Behavior is Predicted by Baseline Cortisol Levels.” with Jeffrey French, Kevin Smith, Adam Guck, Andrew Birnie, and John Hibbing. **Physiology & Behavior**. (June, 2014).

“Differences in Negativity Bias Underlie Variations in Political Ideology.” with Kevin B. Smith and John R. Hibbing. **Behavioral and Brain Sciences**. (June, 2014).

“Negativity bias and political preferences: A response to commentators Response.” with Kevin B. Smith and John R. Hibbing. **Behavioral and Brain Sciences**. (June, 2014).

“Genetic and Environmental Transmission of Political Orientations.” with Carolyn L. Funk, Matthew Hibbing, Kevin B. Smith, Nicholas R. Eaton, Robert F. Krueger, Lindon J. Eaves, John R. Hibbing. **Political Psychology**, (December, 2013).

“Biology, Ideology, and Epistemology: How Do We Know Political Attitudes Are Inherited and Why Should We Care?” with Kevin Smith, Peter K. Hatemi, Lindon J. Eaves, Carolyn Funk, and John R. Hibbing. **American Journal of Political Science**. (January, 2012)

“Disgust Sensitivity and the Neurophysiology of Left-Right Political Orientations.” with Kevin Smith, John Hibbing, Douglas Oxley, and Matthew Hibbing, **PlosONE**, (October, 2011).

“Linking Genetics and Political Attitudes: Re-Conceptualizing Political Ideology.” with Kevin Smith, John Hibbing, Douglas Oxley, and Matthew Hibbing, **Political Psychology**, (June, 2011).

“The Politics of Mate Choice.” with Peter Hatemi, John R. Hibbing, Nicholas Martin and Lindon Eaves, **Journal of Politics**, (March, 2011).

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” with Peter Hatemi, John Hibbing, Sarah Medland, Matthew Keller, Kevin Smith, Nicholas Martin, and Lindon Eaves, **American Journal of Political Science**, (July, 2010).

“The Ultimate Source of Political Opinions: Genes and the Environment” with John R. Hibbing in **Understanding Public Opinion**, 3rd Edition eds. Barbara Norrander and Clyde Wilcox, Washington D.C.: CQ Press, (2010).

“Is There a ‘Party’ in your Genes” with Peter Hatemi, John R. Hibbing, Nicholas Martin and Lindon Eaves, **Political Research Quarterly**, (September, 2009).

“Twin Studies, Molecular Genetics, Politics, and Tolerance: A Response to Beckwith and Morris” with John R. Hibbing and Cary Funk, **Perspectives on Politics**, (December, 2008). This is a solicited response to a critique of our 2005 APSR article “Are Political Orientations Genetically Transmitted?”

“Political Attitudes Vary with Physiological Traits” with Douglas R. Oxley, Kevin B. Smith, Matthew V. Hibbing, Jennifer L. Miller, Mario Scalora, Peter K. Hatemi, and John R. Hibbing, **Science**, (September 19, 2008).

“The New Empirical Biopolitics” with John R. Hibbing, **Annual Review of Political Science**, (June, 2008).

“Beyond Liberals and Conservatives to Political Genotypes and Phenotypes” with John R. Hibbing and Cary Funk, **Perspectives on Politics**, (June, 2008). This is a solicited response to a critique of our 2005 APSR article “Are Political Orientations Genetically Transmitted?”

“Personal, Interpersonal, and Political Temperaments” with John R. Hibbing, **Annals of the American Academy of Political and Social Science**, (November, 2007).

“Is Politics in our Genes?” with John R. Hibbing, **Tidsskriftet Politik**, (February, 2007).

“Biology and Rational Choice” with John R. Hibbing, **The Political Economist**, (Fall, 2005)

“Are Political Orientations Genetically Transmitted?” with John R. Hibbing and Carolyn Funk, **American Political Science Review**, (May, 2005). (The main findings table from this article has been reprinted in two college level text books - Psychology, 9th ed. and Invitation to Psychology 4th ed. both by Wade and Tavris, Prentice Hall, 2007).

“The Origin of Politics: An Evolutionary Theory of Political Behavior” with John R. Hibbing, **Perspectives on Politics**, (December, 2004).

“Accepting Authoritative Decisions: Humans as Wary Cooperators” with John R. Hibbing, **American Journal of Political Science**, (January, 2004).

“Electoral Convergence of the Two Houses of Congress” with John R. Hibbing, in **The Exceptional Senate**, ed. Bruce Oppenheimer, Columbus: Ohio State University Press, (2002).

“We’re All in this Together: The Decline of Trust in Government, 1958-1996.” in **What is it About Government that Americans Dislike?**, eds. John Hibbing and Beth Theiss-Morse, Cambridge: Cambridge University Press, (2001).

“The 2000 Census and the New Redistricting,” **Texas State Bar Association School Law Section Newsletter**, (July, 2000).

“Overdraft: The Political Cost of Congressional Malfeasance” with Holly Teeters, Dan Ward, and Rick Wilson, **Journal of Politics** (August, 1994).

"Personal and Partisan Advantage in U.S. Congressional Elections, 1846-1990" with David W. Brady, in **Congress Reconsidered** 5th edition, eds. Larry Dodd and Bruce Oppenheimer, CQ Press, (1993).

"The 1990 Congressional Election Results and the Fallacy that They Embodied an Anti-Incumbent Mood" with John R. Hibbing, **PS** 25 (June, 1992).

"Constituency Population and Representation in the United States Senate" with John R. Hibbing. **Legislative Studies Quarterly**, (November, 1990).

"Editors' Introduction: Electing the U.S. Senate" with Bruce I. Oppenheimer. **Legislative Studies Quarterly**, (November, 1990).

"Personal and Partisan Advantage in U.S. Congressional Elections, 1846-1990" with David W. Brady, in **Congress Reconsidered** 4th edition, eds. Larry Dodd and Bruce Oppenheimer, CQ Press, (1988). Reprinted in *The Congress of the United States, 1789-1989*, ed. Joel Silby, Carlson Publishing Inc., (1991), and in *The Quest for Office*, eds. Wayne and Wilcox, St. Martins Press, (1991).

"Can Government Regulate Fertility? An Assessment of Pro-natalist Policy in Eastern Europe" with Jerome Legge. **The Western Political Quarterly** (December, 1986).

"Partisanship and Voting" with James Campbell, Mary Munro, and Bruce Campbell, in **Research in Micropolitics. Volume 1 - Voting Behavior**. Samuel Long, ed. JAI Press, (1986).

"Economic Conditions and Individual Vote in the Federal Republic of Germany" with Jerome S. Legge. **Journal of Politics** (November, 1984).

"Television Markets and Congressional Elections" with James Campbell and Keith Henry. **Legislative Studies Quarterly** (November, 1984).

"Economic Conditions and the Forgotten Side of Congress: A Foray into U.S. Senate Elections" with John R. Hibbing, **British Journal of Political Science** (October, 1982).

"Increased Incumbency Advantage in the House" with John R. Hibbing, **Journal of Politics** (November, 1981). Reprinted in *The Congress of the United States, 1789-1989*, Carlson Publishing Inc., (1991).

"The Electoral Impact of Economic Conditions: Who is Held Responsible?" with John R. Hibbing, **American Journal of Political Science** (August, 1981).

"Comment on Increased Incumbency Advantage" with John R. Hibbing, Refereed communication: **American Political Science Review** (March, 1981).

"Can Government Regulate Safety? The Coal Mine Example" with Michael Lewis-Beck, **American Political Science Review** (September, 1980).

### **Awards and Honors:**

CQ Press Award - 1988, honoring the outstanding paper in legislative politics presented at the 1987 Annual Meeting of the American Political Science Association. Awarded for "The Demise of the Upper House and the Rise of the Senate: Electoral Responsiveness in the United States Senate" with John Hibbing.

### **Research Grants:**

National Science Foundation, 2009-2011, "Identifying the Biological Influences on Political Temperaments", with John Hibbing, Kevin Smith, Kim Espy, Nicolas Martin and Read Montague. This is a collaborative project involving Rice, University of Nebraska, Baylor College of Medicine, and Queensland Institute for Medical Research.

National Science Foundation, 2007-2010, "Genes and Politics: Providing the Necessary Data", with John Hibbing, Kevin Smith, and Lindon Eaves. This is a collaborative project involving Rice, University of Nebraska, Virginia Commonwealth University, and the University of Minnesota.

National Science Foundation, 2007-2010, "Investigating the Genetic Basis of Economic Behavior", with John Hibbing and Kevin Smith. This is a collaborative project involving Rice, University of Nebraska, Virginia Commonwealth University, and the Queensland Institute of Medical Research.

Rice University Faculty Initiatives Fund, 2007-2009, "The Biological Substrates of Political Behavior". This is in assistance of a collaborative project involving Rice, Baylor College of Medicine, Queensland Institute of Medical Research, University of Nebraska, Virginia Commonwealth University, and the University of Minnesota.

National Science Foundation, 2004-2006, "Decision-Making on Behalf of Others", with John Hibbing. This is a collaborative project involving Rice and the University of Nebraska.

National Science Foundation, 2001-2002, dissertation grant for Kevin Arceneaux, "Doctoral Dissertation Research in Political Science: Voting Behavior in the Context of U.S. Federalism."

National Science Foundation, 2000-2001, dissertation grant for Stacy Ulbig, "Doctoral Dissertation Research in Political Science: Sub-national Contextual Influences on Political Trust."

National Science Foundation, 1999-2000, dissertation grant for Richard Engstrom, "Doctoral Dissertation Research in Political Science: Electoral District Structure and Political Behavior."

Rice University Research Grant, 1985, Recent Trends in British Parliamentary Elections.

Faculty Research Grants Program, University of Georgia, Summer, 1982. Impact of Media Structure on Congressional Elections, with James Campbell.

## **Papers Presented:**

"The Physiological Basis of Political Temperaments" 6th European Consortium for Political Research General Conference, Reykjavik, Iceland (2011), with Kevin Smith, and John Hibbing.

"Identifying the Biological Influences on Political Temperaments" National Science Foundation Annual Human Social Dynamics Meeting (2010), with John Hibbing, Kimberly Espy, Nicholas Martin, Read Montague, and Kevin B. Smith.

"Political Orientations May Be Related to Detection of the Odor of Androstenone" Annual meeting of the Midwest Political Science Association, Chicago, IL (2010), with Kevin Smith, Amanda Balzer, Michael Gruszczynski, Carly M. Jacobs, and John Hibbing.

"Toward a Modern View of Political Man: Genetic and Environmental Transmission of Political Orientations from Attitude Intensity to Political Participation" Annual meeting of the American Political Science Association, Washington, DC (2010), with Carolyn Funk, Kevin Smith, and John Hibbing.

"Genetic and Environmental Transmission of Political Involvement from Attitude Intensity to Political Participation" Annual meeting of the International Society for Political Psychology, San Francisco, CA (2010), with Carolyn Funk, Kevin Smith, and John Hibbing.

"Are Violations of the EEA Relevant to Political Attitudes and Behaviors?" Annual meeting of the Midwest Political Science Association, Chicago, IL (2010), with Kevin Smith, and John Hibbing.

"The Neural Basis of Representation" Annual meeting of the American Political Science Association, Toronto, Canada (2009), with John Hibbing.



“Genetic and Environmental Transmission of Value Orientations” Annual meeting of the American Political Science Association, Toronto, Canada (2009), with Carolyn Funk, Kevin Smith, Matthew Hibbing, Pete Hatemi, Robert Krueger, Lindon Eaves, and John Hibbing.

“The Genetic Heritability of Political Orientations: A New Twin Study of Political Attitudes” Annual Meeting of the International Society for Political Psychology, Dublin, Ireland (2009), with John Hibbing, Cary Funk, Kevin Smith, and Peter K Hatemi.

“The Heritability of Value Orientations” Annual meeting of the Behavior Genetics Association, Minneapolis, MN (2009), with Kevin Smith, John Hibbing, Carolyn Funk, Robert Krueger, Peter Hatemi, and Lindon Eaves.

“The Ick Factor: Disgust Sensitivity as a Predictor of Political Attitudes” Annual meeting of the Midwest Political Science Association, Chicago, IL (2009), with Kevin Smith, Douglas Oxley Matthew Hibbing, and John Hibbing.

“The Ideological Animal: The Origins and Implications of Ideology” Annual meeting of the American Political Science Association, Boston, MA (2008), with Kevin Smith, Matthew Hibbing, Douglas Oxley, and John Hibbing.

“The Physiological Differences of Liberals and Conservatives” Annual meeting of the Midwest Political Science Association, Chicago, IL (2008), with Kevin Smith, Douglas Oxley, and John Hibbing.

“Looking for Political Genes: The Influence of Serotonin on Political and Social Values” Annual meeting of the Midwest Political Science Association, Chicago, IL (2008), with Peter Hatemi, Sarah Medland, John Hibbing, and Nicholas Martin.

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” Annual meeting of the American Political Science Association, Chicago, IL (2007), with Peter Hatemi, John Hibbing, Matthew Keller, Nicholas Martin, Sarah Medland, and Lindon Eaves.

“Factorial Association: A generalization of the Fulker between-within model to the multivariate case” Annual meeting of the Behavior Genetics Association, Amsterdam, The Netherlands (2007), with Sarah Medland, Peter Hatemi, John Hibbing, William Coventry, Nicholas Martin, and Michael Neale.

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” Annual meeting of the Midwest Political Science Association, Chicago, IL (2007), with Peter Hatemi, John Hibbing, Nicholas Martin, and Lindon Eaves.

“Getting from Genes to Politics: The Connecting Role of Emotion-Reading Capability” Annual Meeting of the International Society for Political Psychology, Portland, OR, (2007.), with John Hibbing.

“The Neurological Basis of Representative Democracy.” Hendricks Conference on Political Behavior, Lincoln, NE (2006), with John Hibbing.

“The Neural Basis of Representative Democracy” Annual meeting of the American Political Science Association, Philadelphia, PA (2006), with John Hibbing.

“How are Political Orientations Genetically Transmitted? A Research Agenda” Annual meeting of the Midwest Political Science Association, Chicago Illinois (2006), with John Hibbing.



"The Politics of Mate Choice" Annual meeting of the Southern Political Science Association, Atlanta, GA (2006), with John Hibbing.

"The Challenge Evolutionary Biology Poses for Rational Choice" Annual meeting of the American Political Science Association, Washington, DC (2005), with John Hibbing and Kevin Smith.

"Decision Making on Behalf of Others" Annual meeting of the American Political Science Association, Washington, DC (2005), with John Hibbing.

"The Source of Political Attitudes and Behavior: Assessing Genetic and Environmental Contributions" Annual meeting of the Midwest Political Science Association, Chicago Illinois (2005), with John Hibbing and Carolyn Funk.

"The Source of Political Attitudes and Behavior: Assessing Genetic and Environmental Contributions" Annual meeting of the American Political Science Association, Chicago Illinois (2004), with John Hibbing and Carolyn Funk.

"Accepting Authoritative Decisions: Humans as Wary Cooperators" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (2002), with John Hibbing

"Can We Trust the NES Trust Measure?" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (2001), with Stacy Ulbig.

"The Impact of Organizational Structure on the Production of Social Capital Among Group Members" Annual Meeting of the Southern Political Science Association, Atlanta, Georgia (2000), with Allison Rinden.

"Isolating the Origins of Incumbency Advantage: An Analysis of House Primaries, 1956-1998" Annual Meeting of the Southern Political Science Association, Atlanta, Georgia (2000), with Kevin Arceneaux.

"The Electorally Indistinct Senate," Norman Thomas Conference on Senate Exceptionalism, Vanderbilt University; Nashville, Tennessee; October (1999), with John R. Hibbing.

"Interest Group Participation and Social Capital" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (1999), with Allison Rinden.

"We're All in this Together: The Decline of Trust in Government, 1958-1996." The Hendricks Symposium, University of Nebraska, Lincoln. (1998)

"Constituency Population and Representation in the United States Senate," Electing the Senate; Houston, Texas; December (1989), with John R. Hibbing.

"The Disparate Electoral Security of House and Senate Incumbents," American Political Science Association Annual Meetings; Atlanta, Georgia; September (1989), with John R. Hibbing.

"Partisan and Incumbent Advantage in House Elections," Annual Meeting of the Southern Political Science Association (1987), with David W. Brady.

"Personal and Party Advantage in U.S. House Elections, 1846-1986" with David W. Brady, 1987 Social Science History Association Meetings.

"The Demise of the Upper House and the Rise of the Senate: Electoral Responsiveness in the United States Senate" with John Hibbing, 1987 Annual Meeting of the American Political Science Association.

"A Comparative Analysis of Economic Voting" with Jerome Legge, 1985 Annual Meeting of the American Political Science Association.

"An Analysis of Economic Conditions and the Individual Vote in Great Britain, 1964-1979" with Jerome Legge, 1985 Annual Meeting of the Western Political Science Association.

"Can Government Regulate Fertility? An Assessment of Pro-natalist Policy in Eastern Europe" with Jerome Legge, 1985 Annual Meeting of the Southwestern Social Science Association.

"Economic Conditions and the Individual Vote in the Federal Republic of Germany" with Jerome S. Legge, 1984 Annual Meeting of the Southern Political Science Association.

"The Conditions Required for Economic Issue Voting" with John R. Hibbing, 1984 Annual Meeting of the Midwest Political Science Association.

"Incumbency Advantage in Senate Elections," 1983 Annual Meeting of the Midwest Political Science Association.

"Television Markets and Congressional Elections: The Impact of Market/District Congruence" with James Campbell and Keith Henry, 1982 Annual Meeting of the Southern Political Science Association.

"Economic Conditions and Senate Elections" with John R. Hibbing, 1982 Annual Meeting of the Midwest Political Science Association. "Pocketbook Voting: Economic Conditions and Individual Level Voting," 1982 Annual Meeting of the American Political Science Association.

"Increased Incumbency Advantage in the House," with John R. Hibbing, 1981 Annual Meeting of the Midwest Political Science Association.

### **Other Conference Participation:**

Roundtable Participant – Closing Round-table on Biopolitics; 2016 UC Merced Conference on Bio-Politics and Political Psychology, Merced, CA.

Roundtable Participant “Genes, Brains, and Core Political Orientations” 2008 Annual Meeting of the Southwestern Political Science Association, Las Vegas.

Roundtable Participant “Politics in the Laboratory” 2007 Annual Meeting of the Southern Political Science Association, New Orleans.

Short Course Lecturer, "What Neuroscience has to Offer Political Science" 2006 Annual Meeting of the American Political Science Association.

Panel chair and discussant, "Neuro-scientific Advances in the Study of Political Science" 2006 Annual Meeting of the American Political Science Association.

Presentation, "The Twin Study Approach to Assessing Genetic Influences on Political Behavior" Rice Conference on New Methods for Understanding Political Behavior, 2005.

Panel discussant, "The Political Consequences of Redistricting," 2002 Annual Meeting of the American Political Science Association.

Panel discussant, "Race and Redistricting," 1999 Annual Meeting of the Midwest Political Science Association.

Invited participant, "Roundtable on Public Dissatisfaction with American Political Institutions", 1998 Annual Meeting of the Southwestern Social Science Association.

Presentation, "Redistricting in the '90s," Texas Economic and Demographic Association, 1997.

Panel chair, "Congressional Elections," 1992 Annual Meeting of the Southern Political Science Association.

Panel discussant, "Incumbency and Congressional Elections," 1992 Annual Meeting of the American Political Science Association.

Panel chair, "Issues in Legislative Elections," 1991 Annual Meeting of the Midwest Political Science Association.

Panel chair, "Economic Attitudes and Public Policy in Europe," 1990 Annual Meeting of the Southern Political Science Association

Panel discussant, "Retrospective Voting in U.S. Elections," 1990 Annual Meeting of the Midwest Political Science Association.

Co-convener, with Bruce Oppenheimer, of Electing the Senate, a national conference on the NES 1988 Senate Election Study. Funded by the Rice Institute for Policy Analysis, the University of Houston Center for Public Policy, and the National Science Foundation, Houston, Texas, December, 1989.

Invited participant, Understanding Congress: A Bicentennial Research Conference, Washington, D.C., February, 1989.

Invited participant--Hendricks Symposium on the United States Senate, University of Nebraska, Lincoln, Nebraska, October, 1988

Invited participant--Conference on the History of Congress, Stanford University, Stanford, California, June, 1988.

Invited participant, "Roundtable on Partisan Realignment in the 1980's", 1987 Annual Meeting of the Southern Political Science Association.

## **Professional Activities:**

### **Other Universities:**

Invited Speaker, Annual Lecture, Psi Kappa -the Psychology Club at Houston Community College, 2018.

Invited Speaker, Annual Allman Family Lecture, Dedman College Interdisciplinary Institute, Southern Methodist University, 2016.

Invited Speaker, Annual Lecture, Psi Sigma Alpha – Political Science Dept., Oklahoma State University, 2015.

Invited Lecturer, Department of Political Science, Vanderbilt University, 2014.

Invited Speaker, Annual Lecture, Psi Kappa -the Psychology Club at Houston Community College, 2014.

Invited Speaker, Graduate Student Colloquium, Department of Political Science, University of New Mexico, 2013.

Invited Keynote Speaker, Political Science Alumni Evening, University of Houston, 2013.

Invited Lecturer, Biology and Politics Masters Seminar (John Geer and David Bader), Department of Political Science and Biology Department, Vanderbilt University, 2010.

Invited Lecturer, Biology and Politics Senior Seminar (John Geer and David Bader), Department of Political Science and Biology Department, Vanderbilt University, 2008.

Visiting Fellow, the Hoover Institution, Stanford University, 2007.

Invited Speaker, Joint Political Psychology Graduate Seminar, University of Minnesota, 2007.

Invited Speaker, Department of Political Science, Vanderbilt University, 2006.

**Member:**

Editorial Board, Journal of Politics, 2007-2008.

Planning Committee for the National Election Studies' Senate Election Study, 1990-92.

Nominations Committee, Social Science History Association, 1988

**Reviewer for:**

American Journal of Political Science

American Political Science Review

American Politics Research

American Politics Quarterly

American Psychologist

American Sociological Review

Canadian Journal of Political Science

Comparative Politics

Electoral Studies

Evolution and Human Behavior

International Studies Quarterly

Journal of Politics  
Journal of Urban Affairs  
Legislative Studies Quarterly  
National Science Foundation  
PLoS ONE  
Policy Studies Review  
Political Behavior  
Political Communication  
Political Psychology  
Political Research Quarterly  
Public Opinion Quarterly  
Science  
Security Studies  
Social Forces  
Social Science Quarterly  
Western Political Quarterly

### **University Service:**

Member, University Senate, 2021-2023.

Member, University Parking Committee, 2016-2022.

Member, University Benefits Committee, 2013-2016.

Internship Director for the Department of Political Science, 2004-2018.

Member, University Council, 2012-2013.

Invited Speaker, Rice Classroom Connect, 2016.

Invited Speaker, Glasscock School, 2016.

Invited Speaker, Rice Alumni Association, Austin, 2016.

Invited Speaker, Rice Alumni Association, New York City, 2016.

Invited Speaker, Rice TEDxRiceU , 2013.

Invited Speaker, Rice Alumni Association, Atlanta, 2011.

Lecturer, Advanced Topics in AP Psychology, Rice University AP Summer Institute, 2009.

Scientia Lecture Series: "Politics in Our Genes: The Biology of Ideology" 2008

Invited Speaker, Rice Alumni Association, Seattle, San Francisco and Los Angeles, 2008.

Invited Speaker, Rice Alumni Association, Austin, Chicago and Washington, DC, 2006.

Invited Speaker, Rice Alumni Association, Dallas and New York, 2005.

Director: Rice University Behavioral Research Lab and Social Science Computing Lab, 2005-2006.

University Official Representative to the Inter-university Consortium for Political and Social Research, 1989-2012.

Director: Rice University Social Science Computing Lab, 1989-2004.

Member, Rice University Information Technology Access and Security Committee, 2001-2002

Rice University Committee on Computers, Member, 1988-1992, 1995-1996; Chair, 1996-1998, Co-chair, 1999.

Acting Chairman, Rice Institute for Policy Analysis, 1991-1992.

Divisional Member of the John W. Gardner Dissertation Award Selection Committee, 1998

Social Science Representative to the Educational Sub-committee of the Computer Planning Committee, 1989-1990.

Director of Graduate Admissions, Department of Political Science, Rice University, 1986-1988.

Co-director, Mellon Workshop: Southern Politics, May, 1988.

Guest Lecturer, Mellon Workshop: The U.S. Congress in Historical Perspective, May, 1987 and 1988.

Faculty Associate, Hanszen College, Rice University, 1987-1990.

Director, Political Data Analysis Center, University of Georgia, 1982-1985.

### **External Consulting:**

Expert Witness, Soto Palmer v. Hobbs, (Washington State), racially polarized voting analysis, 2022.

Expert Witness, Pendergrass v. Raffensperger, (Georgia State House and Senate), racially polarized voting analysis, 2022.

Expert Witness, LULAC, et al. v. Abbott, et al., Voto Latino, et al. v. Scott, et al., Mexican American Legislative Caucus, et al. v. Texas, et al., Texas NAACP v. Abbott, et al., Fair Maps Texas, et al. v. Abbott, et al., US v. Texas, et al. (consolidated cases) challenges to Texas Congressional, State Senate, State House, and State Board of Education districting, 2022.

Expert Witness, Robinson/Galmon v. Ardoin, (Louisiana), racially polarized voting analysis, 2022.

Expert Witness, Christian Ministerial Alliance et al v. Arkansas, racially polarized voting analysis, 2022.

Expert Witness, Johnson v. Wisconsin Elections Commission, 2022.

Expert Witness, Rivera, et al. v. Schwab, Alonzo, et al. v. Schwab, Frick, et al. v. Schwab, (consolidated cases) challenge to Kansas congressional map, 2022.

Expert Witness, Grant v. Raffensperger, challenge to Georgia congressional map, 2022

Expert Witness, Brooks et al. v. Abbot, challenge to State Senate District 10, 2022.

Expert Witness, Elizondo v. Spring Branch ISD, 2022.

Expert Witness, Portugal v. Franklin County, et al., challenge to Franklin County, Washington at large County Commissioner's election system, 2022.

Consulting Expert, Gressman Math/Science Petitioners, Pennsylvania Congressional redistricting, 2022.

Consultant, Houston Community College – evaluation of election impact for redrawing of college board election districts, 2022.

Consultant, Lone Star College – evaluation of election impact for redrawing of college board election districts, 2022.

Consultant, Killeen ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Houston ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Brazosport ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Dallas ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Lancaster ISD – redrawing of all school board member election districts including demographic analysis and redrawing of election districts, 2021.

Consultant, City of Baytown – redrawing of all city council member election districts including demographic analysis and redrawing of election districts, 2021.

Consultant, Goose Creek ISD – redrawing of all board member election districts including demographic analysis and redrawing of election districts, 2021.

Expert Witness, Bruni et al. v. State of Texas, straight ticket voting analysis, 2020.

Consulting Expert, Sarasota County, VRA challenge to district map, 2020.

Expert Witness, Kumar v. Frisco ISD, TX, racially polarized voting analysis, 2019.

Expert Witness, Vaughan v. Lewisville ISD, TX, racially polarized voting analysis, 2019.

Expert Witness, Johnson v. Ardoin, (Louisiana), racially polarized voting analysis, 2019.

Expert Witness, Flores et al. v. Town of Islip, NY, racially polarized voting analysis, 2018.

Expert Witness, Tyson v. Richardson ISD, racially polarized voting analysis, 2018.

Expert Witness, Dwight v. State of Georgia, racially polarized voting analysis, 2018.

Expert Witness, NAACP v. East Ramapo Central School District, racially polarized voting analysis, 2018.

Expert Witness, Georgia NAACP v. State of Georgia, racially polarized voting analysis, 2018.



## **Appendix 2**

EXPERT REPORT OF JOHN R. ALFORD, Ph.D.

**Scope of Inquiry**

I have been retained by the Georgia Secretary of State and State Election Board as an expert to provide analysis related to *Grant v. Raffensperger*, *Alpha Phi Alpha v. Raffensperger*, and *Pendergrass v. Raffensperger*. All three cases allege the current U.S. Congressional, state Senate, and state House districts in Georgia violate Section 2 of the Voting Rights Act. In early 2022, I provided a report and testified in the preliminary injunction hearing in this matter. I have examined the reports and supplemental reports provided by plaintiffs' experts Dr. Maxwell Palmer, and Dr. Lisa Handley in this case. My rate of compensation in this matter is \$500 per hour.

**Qualifications**

I am a tenured full professor of political science at Rice University. At Rice, I have taught courses on redistricting, elections, political representation, voting behavior and statistical methods at both the undergraduate and graduate level. Over the last thirty years, I have worked with numerous local governments on districting plans and on Voting Rights Act issues. I have previously provided expert reports and/or testified as an expert witness in voting rights and statistical issues in a variety of court cases, including on behalf of the U.S. Attorney in Houston, the Texas Attorney General, a U.S. Congressman, and various cities and school districts.

In the 2000 round of redistricting, I was retained as an expert to provide advice to the Texas Attorney General in his role as Chair of the Legislative Redistricting Board. I subsequently served as the expert for the State of Texas in the state and federal litigation involving the 2001 redistricting for U.S. Congress, the Texas Senate, the Texas House of Representatives, and the Texas State Board of Education. In the 2010 round of redistricting in Texas, I was again retained as an expert by the State of Texas to assist in defending various state election maps and systems including the district maps for the U.S. Congress, the Texas Senate, the Texas House of Representatives, and the current at large system for electing Justices to the State Supreme Court

and Court of Appeals, as well as the winner-take-all system for allocating Electoral College votes.

I have also worked as an expert on redistricting and voting rights cases at the state and/or local level in Alabama, Arkansas, Florida, Georgia, Kansas, Louisiana, Michigan, Mississippi, New Mexico, New York, Pennsylvania, Washington, and Wisconsin. The details of my academic background, including all publications in the last ten years, and work as an expert, including all cases in which I have testified by deposition or at trial in the last four years, are covered in the attached CV (Appendix 1).

### **Data and Sources**

In preparing this report, I have reviewed the reports filed by the plaintiffs' experts in this case. I have relied on the analysis provided to date by Dr. Palmer and Dr. Handley in their expert reports in this case. I have also relied on various election and demographic data provided by Dr. Palmer and Dr. Handley in their disclosures related to their reports in this case. In addition, I relied on data on turnout by race for the 2022 Republican Primary election provided to counsel by the Georgia Secretary of State, and 2022 precinct-level election results for that election downloaded from the publicly available website of the Georgia Secretary of State.

### **Dr. Palmer's Reports**

Dr. Palmer, in his report in *Pendergrass v. Raffensperger* dated 12/12/2022, provides the results of an EI election analysis that he used to assess Racially Polarized Voting (RPV) in each of 40 contests between 2012 and 2022, and reports the results in his Tables 1 through 6 for five U.S. Congressional districts and as a combined focus area. Similarly, in his report in *Grant v. Raffensperger* dated 12/12/2022, Dr. Palmer provides the EI results for the same 40 contests between 2012 and 2022 as reported in his Tables 2 through 6, for three Georgia House and two Georgia Senate focus areas. The race of the candidate preferred by Black voters is indicated in Dr. Palmer's tables with an asterisk by the name of each Black candidate, and the absence of an asterisk indicating a non-Black candidate. Across the 40 reported contests 19 of the preferred candidates are Black and 21 are non-Black, providing an ideal, almost equal distribution, for comparing both Black and white voter support for Black-preferred candidates that happen to be Black, with Black voter support for Black-preferred candidates that happen not to be Black.

However, despite having this data identified in his reports and the associated opportunity analyze it, there is no discussion of the impact, if any, that the race of the candidate might have on the behavior of Black or white voters in these contests. Also, Dr. Palmer provides no party labels in these tables, and does not mention the party of candidates in his discussion of the results of his analysis.

As evident in Dr. Palmer's Tables 1-6 in his *Pendergrass* report, and Tables 2-6 in his *Grant* report, the pattern of polarization is quite striking. Black voter support for their preferred candidate is typically in the 90 percent range and scarcely varies at all across the ten years examined from 2012 to 2022. Nor does it vary in any meaningful degree from the top of the ballot elections for U.S. President to down-ballot contests like Public Service Commissioner. While slightly more varied, estimated white voter opposition to the Black-preferred candidate is typically above 80 percent. In the *Pendergrass* Table 1 for the combined focus area, Dr. Palmer reports estimates of Black voter support that only varies between 96 and 99 percent when results are rounded to the nearest percent. White voter opposition to the Black preferred candidate is slightly more varied, but still remarkably stable, ranging in *Pendergrass* Table 1 only from 84.5% to 91.4 percent.

What accounts for this remarkable stability in the divergent preferences of Black and white voters across years and offices? It is clearly not Black voter's preference for Black candidates, or white voter's disinclination to vote for Black candidates. At 98.5 percent, the average Black support for the 19 Black candidates identified as Black in Palmer's *Pendergrass* Table 1 is indeed nearly universal, but so is the average 98.4 percent support for the 21 candidates identified as non-Black in Table 1. Similarly, the average white vote in opposition to the 19 candidates identified as Black in *Pendergrass* Table 1 is a clearly cohesive 88.1 percent, but so is the average 87.1 percent white voter opposition to the 21 candidates identified as non-Black. The same can said for Dr. Palmer's results in his *Grant* report where, for example, the average Black support for the 19 candidates identified as Black in Table 2 is 98.2 percent, and Black voter support for the 21 candidates identified as non-Black is a nearly identical 98.1 percent. Similarly, the average white vote in opposition to the 19 candidates identified as Black in *Grant* Table 2 is a clearly cohesive 90.1 percent, but so is the average 89.1 percent white voter opposition to the 21 candidates identified as non-Black.

If we do consider the party affiliation of the candidates, the pattern over these election contests is stark in both the *Grant* report and the *Pendergrass* report. In all 40 contests the candidate of choice of Black voters is the Democrat and the candidate of choice of white voters is the Republican.

In contrast, the race of the candidates does not appear to be influential. Black voter support for Black Democratic candidates is certainly high, as Dr. Palmer's Tables 2 through 6 in *Grant* and Tables 1 through 5 in *Pendergrass* clearly show, but those same figures also show Black voter support in the same high range for white Democratic candidates as it is for Black Democratic candidates. Similarly, white voter support for Black Democratic candidates is very low, but white voter support for white Democratic candidates is also very low.<sup>1</sup> In other words, there appears to be just one overarching attribute of candidates that uniformly leads to their relative acceptability or unacceptability among white voters and Black voters alike. And it is not the candidate's race. It is their party affiliation.

For example, in the 2022 contest for Governor in Dr. Palmer's *Pendergrass* Table 1 (his combined focus region) Stacey Abrams, the Black Democratic candidate, gets an estimated 98.5% of the Black vote, but in the same election in the adjacent Lt. Governor contest Charlie Bailey, a white Democrat, gets an almost identical estimated 98.4% of the Black vote. Looking at White voters a similar pattern is clear. Abrams gets an estimated 10.3% of the white vote, but in the same election in the adjacent Lt. Governor contest Baily, the white Democrat, received a similar estimated 12.1% of the white vote.

Similarly, in the 2021 U.S. Senate runoffs in Dr. Palmer's *Pendergrass* Table 1 (his combined focus region) Raphael Warnock, the Black Democratic candidate gets an estimated 98.7% of the Black vote, but in the same election in the other Senate contest Jon Ossoff, a white Democrat gets an identical estimated 98.7% of the Black vote. Looking at white voters a similar pattern is clear. Warnock, the Black Democratic candidate, gets an estimated 15.2% of the white vote, but in the same election in the other Senate contest, Ossoff, the White Democrat, gets an almost identical estimated 14.5% of the white vote.

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<sup>1</sup> The limited evidence from the 2022 endogenous elections provided in Dr. Palmer's supplemental reports do not contradict this broad pattern.

Moving beyond his EI analysis, Dr. Palmer also provides reconstituted election results to demonstrate the success rate of Black preferred candidates in his focus areas. Given that as mentioned above the Black preferred candidate is always the Democratic candidate and given the dominance of political party in the EI results as discussed above, it is no surprise that these tables show stable performance for Democratic candidates across the 40 contests, regardless of race. For example, in Dr. Palmer's Table 7 in his *Pendergrass* report, the average vote share for the Democratic candidate is 41.7 percent in the 19 contests where the Democratic candidate is Black, and a very similar 42.3 percent in the 21 contests where the Democratic candidate is not Black.

In short, all that Dr. Palmer's analysis demonstrates is that Black voters provide uniformly high levels of support for Democratic candidates and white voters provide uniformly high levels of support for Republican candidates. There is no indication in these EI results that the high levels of Black voter support for Democratic candidates is connected in any meaningful way to the race of the Democratic or Republican candidates. Similarly, there is no indication in these results that the high levels of white voter support for the Republican candidates is connected in any meaningful way to the race of the Democratic or Republican candidates.

### **Dr. Handley's Report**

Dr. Handley's December 12, 2022 report in *Alpha Phi Alpha* focuses first on general elections, and reports results similar to those reported by Dr. Palmer. Black voters support Democratic candidates and white voters support Republican candidates. She indicates that she has chosen to focus on racially contested elections, so this limits the ability to see whether this partisan pattern varies at all with the race of the candidates, but in the two contests without a Black Democrat, the Ossoff 2020 Senate contest and 2021 runoff, the results for both Black and White voters are very similar to the results for the racially contested elections, as was the case in Dr. Palmer's larger set of general elections.

Unlike Dr. Palmer, Dr. Handley also analyzes eleven racially contested statewide Democratic primaries. The results in these primaries are very different from the general election patterns. The general election pattern is a very important contrast to keep in mind when evaluating the results for these eleven primary contests. In the general elections, Black support for the Democratic candidate is very high and very stable in the upper 90% range. Similarly,

White voter opposition to the Democratic candidates is also high and stable in the 80 percent and up range.

While there is not currently a bright-line court standard for determining the level of support needed under *Gingles* prongs 2 and 3 to demonstrate cohesion, multiple plaintiffs' experts have recently discussed a minimum of 60 percent threshold for cohesion in a two-person contest. Simply having a preferred candidate (50 percent plus 1 in a two-candidate contest) is not sufficient. This is, of course, true by definition. If simply having a preferred candidate was sufficient to establish cohesion, then the *Gingles* 2 threshold test would always be met in two candidate contests and thus not actually constitute a test at all. As Dr. Palmer notes on page 4 of his *Pendergrass* report, "[i]f the group's support is roughly evenly divided between the two candidates, then the group does not cohesively support a single candidate". Even if a more stringent 75 percent or 80 percent threshold was the cohesion threshold standard, the results for the general elections provided by both Dr. Palmer and Dr. Handley clearly establish partisan polarization, with Blacks always favoring Democratic candidates at stable levels well above 80 percent, and whites favoring Republican candidates at similarly stable levels, typically above 80 percent.

Applying the 60 percent threshold for cohesion to the 40 general election contests in Dr. Palmer's *Grant* report or the 40 general election contests in Dr. Palmer's *Pendergrass* report, produces the same clear result. In 40 out of 40 contests, Black voters provide cohesive support to the Democratic candidate and white voters provide cohesive support to the opposing Republican candidate. This unequivocal result is what Palmer references as supporting his conclusion of polarized voting. As he states on pages 5-6 of his December 12, 2022 *Grant* report:

*Black voters are extremely cohesive, with a clear candidate of choice in all 40 elections. In contrast to Black voters, Figure 2 shows that White voters are highly cohesive in voting in opposition to the Black-preferred candidate in every election across the five focus areas. Table 1 lists the average level of support for the Black-preferred candidate for Black and White voters in each focus area. Across all five focus areas, Black voters support their preferred candidate with an average of 98.5% and a minimum of 95.2% of the vote, and White voters support Black-preferred candidates with an average of 8.3% and a maximum of 17.7% of the vote. This is strong evidence of racially polarized voting across all five focus areas.*

The same can be said for the 16 general election contests that Dr. Handley includes for each of her seven focus regions as reported in her Appendix C1-C7. In every one of the 16 contests examined in all seven regions, Black voter support for the Democratic candidate clearly exceeds 60 percent and in all the regular elections (excluding the one 20 candidate special Senate election in 2020) exceeded 90 percent. White voters provided cohesive support to the opposing Republican candidates exceeding 60% in every contest with the sole exception of the 2022 Senate contest in Appendix 1, where the white estimated vote fell just short of 60 percent at 59.3 percent.

As Dr. Handley, herself, states on page 9 of her December 23, 2022 Report:

*Overall, the average percentage of Black vote for the 16 Black-preferred candidates is 96.1%. The average percentage of White vote for these 16 Black-preferred candidates across the seven areas is 11.2%. (When Ossoff is excluded, and only Black-preferred Black candidates are considered, the average White vote is slightly lower: 11.1 %.) The highest average White vote for any of the 16 candidates is 14.4% for Raphael Warnock in his 2022 general election bid for re-election. While the percentage of White support for candidates preferred by Black voters varies across the areas, in five of the seven areas the average did not even reach 10%. White crossover voting was the highest in the Eastern Atlanta Metro Region (Map 1), but only about one third of White voters typically supported the Black-preferred Black candidates in this area.*

She finds similarly clear evidence of polarization when she considers the analysis of state legislative elections included in her Appendix B1 and B2, stating on page 9 of her December 23, 2022:

*Nearly every one of the 54 of the state legislative elections analyzed (53 of the 54 contests, or 98.1%) was racially polarized. The estimates of Black and White support for the state legislative candidates in these contests analyzed can be found in Appendices B1 (State Senate) and B2 (State House). Black voters were quite cohesive in supporting Black candidates in these state legislative contests: on average, 97.4% of Black voters supported their preferred Black state senate candidates, and 91.5% supported their preferred Black state house candidate. Very few White voters supported these candidates, however: Black-preferred Black state senate candidates garnered, on average, 10.1% of the White vote; Black-preferred Black state house candidates received, on average, 9.8% of the White vote.*

Based on their summary descriptions of their general election analysis, it is clear that both Dr. Palmer and Dr. Handley know what a convincing pattern of polarization looks like. That clear pattern is not present once candidate party labels are removed from the contest. Dr. Palmer



makes no effort to address this issue of conflating polarization in support for Democratic versus Republican candidates with racial polarization. Dr. Handley attempts to address the issue by providing analysis for eleven Democratic primaries in each of her seven focus regions.

But looking at the Democratic primary contests, as reported in Dr. Handley's Appendix C1-C7, the contrast to the pattern in the partisan general elects is stark. As detailed above, the pattern of Black voter support for Democratic candidates and white voter support for their Republican opponents in general elections is near universal, and both Black and white voters show strong and highly stable levels of cohesion. In contrast the pattern Dr. Handley identifies in the Democratic primaries is far from universal or stable. The support of Black voters for Black candidates varies widely, and seldom reaches above 80 percent. Similarly, white voter support for Democratic candidates is typically below 20% in the general elections, but in the primaries white support for Black candidates varies widely and is often fairly evenly divided. In many of the contests within Dr. Handley's six focus regions, for example, the votes of Blacks, whites, or both are divided too evenly to characterize the voting as cohesive. Even ignoring any concern for establishing minority or majority cohesion and applying a very loose standard of Blacks and whites simply preferring different candidates, Dr. Handley is only able to conclude that "the majority (55.8%) of the contests I analyzed were racially polarized" (page 10), a level not much above chance, and far below the 100 percent or 98.1 percent reported for general elections.

If we consider the *Gingles* 2 and 3 cohesion thresholds, even this slight result disappears. Using even a modest 60% standard for voter cohesion, Black voters vote cohesively for Black candidates in only 35 contests out of 77 (46 percent). If we add the instances where Blacks vote cohesively for white candidate that rises to 49 contests (64 percent of the 77 total). In those 49 contests, white voters cohesively opposed the Black preference in only 10 contests (20 percent of the 49 contests).

### **Herschel Walker Senate Race**

The recent 2022 Republican U.S. Senate primary provides an additional racially contested primary to consider. Among the six candidates, the majority winner was Herschel Walker, one of the three Black candidates. Given that Black voters were less than 12 percent of the voters in any county in the state in that primary, and that Walker received a majority of the vote in every county in Georgia, it is clear the Walker was the preferred candidate among White voters

in the Republican primary. This can be seen as well in an initial look at EI estimates for the area covered in Dr. Handley's Appendix A1, reproduced below in Table 1 (Eastern Atlanta Metro Region – Map Area 1, Dekalb, Henry, Morgan, Newton, Rockdale, and Walton). With an estimated 62 percent support among Black voters, and 67 percent support among white voters, Walker is the preferred candidate of both Black and white voters in the Republican primary.

Table 1; Ecological Estimates of Voting Patterns by Race in the 2022 Republican U.S. Senate Primary for Dr. Handley's Eastern Atlanta Metro Region

Last Name	Candidate Race	Black support	95% Confidence Interval		White Support	95% Confidence Interval		Other Support	95% Confidence Interval	
			Low	High		Low	High		Low	High
Herschel Walker	Black	<b>62.4%</b>	57.8%	67.4%	<b>67.0%</b>	66.3%	67.6%	5.3%	1.8%	11.7%
Kelvin King	Black	<b>10.1%</b>	7.7%	12.8%	<b>2.5%</b>	2.0%	3.0%	17.5%	12.5%	22.5%
"Jon" McColumn	Black	<b>3.0%</b>	1.7%	4.8%	<b>0.9%</b>	0.6%	1.2%	22.4%	18.8%	25.4%
Gary Black	white	<b>12.8%</b>	9.6%	16.2%	<b>15.3%</b>	14.5%	16.0%	9.3%	3.3%	17.0%
Latham Saddler	white	<b>7.1%</b>	4.1%	10.7%	<b>12.7%</b>	11.9%	13.5%	15.7%	7.8%	24.0%
Josh Clark	white	<b>4.5%</b>	2.7%	6.8%	<b>1.6%</b>	1.1%	2.2%	29.8%	23.7%	35.3%

## Summary Conclusions

The partisan general election analysis report by Dr. Palmer and Dr. Handley show that Black voters cohesively support Democratic candidates, regardless of whether those candidates are Black or White. Similarly, white voters cohesively vote for Republican candidates, and in opposition to Democratic candidates, regardless of whether those Democratic candidates are Black or white. Thus, it is cohesive Black voter support for *Democratic* candidates, and white voter support for *Republican* candidates that the general election analysis reveals, not cohesive Black voter support for *Black* candidates and white voter support for *white* candidates. Nonetheless, the voting pattern is clearly one of partisan polarized voting, with both highly cohesive Black vote for the Democrat and highly cohesive white vote for the Republican candidate. The more limited analysis of Democratic primaries reported by Dr. Handley shows a very different picture of voting behavior from the general elections. Nothing even approaching the levels of Black and white cohesion seen in the general elections appears anywhere in the

primary contests, and the overall patterns are mixed and variable even within the same set of voters on the same day as we see in the multiple contests in the 2018 Democratic primary. Similarly, the 2022 U.S. Senate Republican primary indicates that white Republican primary voters are willing to support a Black Republican candidate over multiple white opponents.

February 6, 2023

A handwritten signature in black ink, appearing to read "John R. Alford", written over a horizontal line.

John R. Alford, Ph.D.

# EXHIBIT E

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. )  

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

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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 the second, third, fourth and fifth Arlington Heights  
2 factors; right?

3 A. Yes.

4 Q. And you're also opining about Senate  
5 Factor 6; correct?

6 A. Yes.

7 Q. And you're not offering opinions on any  
8 other Arlington Heights factors except for the  
9 second, third, fourth and fifth ones; right?

10 A. That's correct. Insofar as to me the way  
11 that I read Arlington Heights, the first factor asks  
12 whether it is just plainly obvious that there is  
13 discriminatory intent. And if that is not the case,  
14 the Court sort of directs you to the remaining  
15 factors. And so for me, you don't see in modern  
16 times an inquiry on Factor 1.

17 Q. And so did you conduct an analysis of  
18 Factor 1 before moving to the other Arlington Heights  
19 factors you analyzed?

20 A. I would say to me looking at the evidence,  
21 it required an inquiry into the other factors.

22 Q. So in your view, the first Arlington Heights  
23 factor of obvious discriminatory intent wasn't  
24 present and that's what led you to look at the other  
25 factors?

1 A. In plain obvious terms, that is correct.

2 Q. And so aside, I guess, from that limitation  
3 on the first factor, the only factors from Arlington  
4 Heights you're offering any opinions about in this  
5 report are the second, third, fourth and fifth  
6 factors; right?

7 A. Correct.

8 Q. And you're not offering an opinion on any  
9 other Senate factor other than Senate Factor 6;  
10 correct?

11 A. Yes, sir.

12 Q. So let's look at the top of page 6 of what  
13 the plaintiff asked you to do here. And you were  
14 asked to examine the drafting, passage and enactment  
15 of the Georgia General Assembly's new congressional  
16 State House and State Senate redistricting plans.

17 That was kind of piece number one; right?

18 A. Yes.

19 Q. And that analysis and evaluation didn't look  
20 at boundaries, political impact or racial make-up  
21 after those plans; right?

22 A. Not in the way that a political scientist  
23 would.

24 Q. Was there any way that you looked at  
25 boundaries, political impact, racial make-up of the

1 districts themselves as part of your analysis?

2 A. Not in terms of a numbers-crunching  
3 analysis, if that's what you mean.

4 Q. And you primarily reviewed the process by  
5 which those maps became law. Is that fair to say?

6 A. Yes, sir.

7 Q. So I'm looking at paragraph four in this  
8 section. You say: Insofar, as the Supreme Court  
9 directed trial courts to use this framework --  
10 referring to Arlington Heights framework -- in making  
11 determinations on discriminatory intent, experts in  
12 my understanding should also follow this guidance in  
13 assisting courts to do the same.

14 Where did you gain the understanding that  
15 you're referencing in that paragraph?

16 A. From Arlington Heights itself and from -- in  
17 previous work on Arlington Heights framework reports.

18 Q. In your previous work on Arlington Heights  
19 framework reports, have you reached a conclusion  
20 about the intent of the legislature you were  
21 analyzing or did you reach an opinion similar to that  
22 here that just evidence would support an intent  
23 finding?

24 A. Similar to this here.

25 Q. In the next paragraph, you talk about you're



1 consider"?

2 A. I mean that this is among the things that  
3 people at the time would have raised a red flag  
4 about, that it is potentially packing those  
5 districts.

6 Q. And so it's your belief that raising  
7 districts above 50 percent, black voter registration,  
8 is packing or can be?

9 A. It depends --

10 MR. DAVIS: Objection to the extent that  
11 calls for a legal conclusion, but you may  
12 answer.

13 THE WITNESS: It depends. I don't  
14 myself perform racially polarized voting  
15 analyses. But if one were to do that, you  
16 would then determine what would be a viable  
17 number for minority candidates to elect a  
18 candidate of their choice.

19 BY MR. TYSON:

20 Q. Now, you'd agree that in the 2011 cycle, the  
21 House, Senate and congressional plans were precleared  
22 by the Department of Justice on the first attempt;  
23 right?

24 A. They were.

25 Q. And that was the first time since the Voting

1 Rights Act was passed in 1965 that all three of  
2 Georgia's redistricting plans were approved on the  
3 first attempt; right?

4 A. Yes.

5 Q. And 2011 was also the first time Republicans  
6 drew the House, Senate and congressional plans for  
7 Georgia; right?

8 A. Indeed.

9 Q. Moving over to page 39, you say: In 2015,  
10 after Shelby County versus Holder ended the  
11 preclearance requirement and the General Assembly  
12 passed a redistricting plan -- and this was a  
13 mid-decade redistricting involving the change in a  
14 few districts; correct?

15 A. Correct.

16 Q. And you're not saying Shelby County was  
17 decided in 2015. You're saying the lawsuit was filed  
18 in 2015?

19 A. That's correct.

20 Q. And you'd agree that the 2015 litigation you  
21 reference here never resulted in a court order  
22 finding that those changes in the 2015 map to be  
23 illegal; right?

24 A. Right. I believe that was voluntarily  
25 dismissed.

1 Q. And it was voluntarily dismissed after  
2 Democrats won both of the challenged seats?

3 A. Correct.

4 Q. And are you aware that -- or are you aware  
5 if there was ever any court order finding any of the  
6 plans drawn by Republicans statewide in the 2011  
7 cycle to be unlawful or unconstitutional?

8 A. No.

9 Q. So you're not aware or were there no such  
10 orders?

11 A. There were no such orders that I'm aware of.

12 Q. Down on the bottom of page 40 you reference  
13 a program for then Secretary of State Brian Kemp  
14 removing voters from the voter registration rolls;  
15 right?

16 A. Yes.

17 Q. And you're aware that that system was upheld  
18 in the Fair Fight Action litigation against both  
19 constitutional and other legal challenges; right?

20 A. Yes.

21 Q. You also reference Senate Bill 202.

22 Are you saying that Senate Bill 202 is  
23 intentionally racially discriminatory?

24 MR. DAVIS: Objection to the extent it  
25 calls for a legal conclusion, but you may

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 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 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 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 (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 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 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 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 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 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 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 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 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

1 BY MR. TYSON:

2 Q. And so you call these items in this list  
3 departures in the legislative process. But the  
4 departure was only from what you read in the public  
5 comment the public was asking for; is that right?

6 A. And then in terms of what the committee  
7 itself purported to value.

8 Q. When you say what the committee itself  
9 purported to value, are you relying on the guidelines  
10 that were adopted by House and Senate committees?

11 A. And comments made by leadership throughout  
12 the process, yes.

13 Q. But you'd agree that there were not  
14 procedural and substantive departures in the  
15 legislative process when the comparison point is the  
16 2001 and 2011 redistricting cycles?

17 A. They are generally analogous in that regard.

18 MR. TYSON: Those are all the questions  
19 I have for you.

20 THE WITNESS: All right.

21 MR. TYSON: Alex may have some more, but  
22 I'm finished for today. Thank you.

23 THE WITNESS: Thanks, Mr. Tyson.

24 MR. DAVIS: I have a few questions.

25 (Discussion ensued off the record.)



BY THE GOVERNOR OF THE STATE OF GEORGIA

**A PROCLAMATION**

**CONVENING THE GENERAL ASSEMBLY OF GEORGIA IN SPECIAL SESSION**

**WHEREAS:** Article V, Section II, Paragraph VII of the Constitution of the State of Georgia grants to the Governor the power to convene a special session of the General Assembly, stating and thereby limiting its purposes; and

**WHEREAS:** The Regular Session of the 2011 General Assembly adjourned sine die on April 14, 2011; and

**WHEREAS:** The Governor has determined that certain purposes warrant the convocation of a special session; and

**THEREFORE:** By virtue of the power and authority conferred upon me by the Constitution of Georgia, I, Nathan Deal, Governor of the State of Georgia, do hereby convene the General Assembly of this State in Special Session at ten o'clock (10:00) a.m. on Monday, August 15, 2011, for the purposes and only those purposes specified as follows:

1. For enacting, revising, repealing or amending general law for :
  - (a) The division of the State into appropriate districts from which members of the Georgia State Senate shall be elected,
  - (b) The division of the State into appropriate districts from which members of the Georgia State House of Representatives shall be elected,
  - (c) The division of the State into appropriate districts from which members of the House of Representatives to the United States Congress shall be elected; and
2. To ratify the Executive Order dated June 23, 2011, and numbered 06.23.11.03 in the official records of the Office of the Governor until the General Assembly acts upon this Order; and
3. For amending the Official Code of Georgia Annotated Section 48-8-244(a), relating to the special district transportation sales and use tax; and
4. For enacting, revising, repealing or amending local laws which the General Assembly deems necessary to avoid unreasonable hardship or to avoid undue impairment of public functions if consideration and enactment thereof are postponed.

Given under my hand and the Great Seal of the State of Georgia, at the City of Atlanta, on this 10<sup>TH</sup> day of August 2011.



*Nathan Deal*  
GOVERNOR

ATTEST  
*C. E. R.*  
CHIEF OF STAFF





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# SB 1EX2

Congressional Election Districts; reapportion; campaign posters on public roads, change a cross-reference

Current Version Past Versions

## Sponsors

No.	Name	District
1.	<a href="#">Golden, Tim</a>	8th

## Committees

House Committee:  
[Legislative & Congressional Reapportionment](#)  
 Senate Committee:  
[Reapportionment](#)

## First Reader Summary

A BILL to be entitled an Act to amend Title 21 of the Official Code of Georgia Annotated, relating to elections, so as to define certain terms; to provide for the composition of the congressional districts of Georgia; to provide for the election of members of Congress; to provide when the members of Congress shall take office; to provide for the continuation of present congressional districts until a certain time; to redesignate certain provisions designating congressional districts; to amend Code Section 32-6-51 of the Official Code of Georgia Annotated, relating to certain unlawful or unauthorized structures, so as to change a cross-reference; to provide for other matters relative to the foregoing; to provide an effective date; to repeal conflicting laws; and for other purposes.

## Status History

Date	Status
10/01/2001	Effective Date
10/01/2001	Act 2EX11
10/01/2001	Senate Date Signed by Governor
10/01/2001	Senate Sent to Governor
09/28/2001	Senate Conference Committee Report Adopted
09/28/2001	House Conference Committee Report Adopted
09/11/2001	House Conference Committee Appointed 169th, 159th, 136th
09/11/2001	Senate Conference Committee Appointed 8th, 10th, 26th
09/11/2001	House Insisted
09/11/2001	Senate Disagreed House Amend or Sub
09/11/2001	House Immediately Transmitted to Senate
09/11/2001	House Passed/Adopted By Substitute
09/11/2001	House Third Readers
09/10/2001	House Committee Favorably Reported By Substitute
09/10/2001	House Second Readers



Date	Status
09/07/2001	House First Readers
09/07/2001	Senate Passed/Adopted By Substitute
09/07/2001	Senate Third Read
09/06/2001	Senate Committee Favorably Reported By Substitute
08/30/2001	Senate Recommended
08/30/2001	Senate Third Read
08/29/2001	Senate Read Second Time
08/28/2001	Senate Committee Favorably Reported By Substitute
08/22/2001	Senate Read and Referred
08/22/2001	Senate Hopper

Footnotes

8/20/01 Senator of 22nd replaced by Senator of 10th on SB 1EX2 Conference Committee; 8/28/01 Favorably reported by substitute; 9/21/01 Motion to dissolve Conference Committee lost.

Votes

Date	Vote No.	Yea	Nay	NV	Exc
<i>No Votes available.</i>					

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- [Georgia Department of Motor Vehicles](#)
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# HB 14EX2

## House districts; reapportion

[Current Version](#) [Past Versions](#)

### Sponsors

No.	Name	District
1.	<a href="#">Smith, Tommy</a>	169th
2.	<a href="#">Connell, Jack</a>	115th
3.	<a href="#">Walker, Larry</a>	141st
4.	<a href="#">Skipper, Jimmy</a>	137th
5.	<a href="#">Smyre, Calvin</a>	136th
6.	<a href="#">Murphy, Thomas</a>	18th

### Committees

House Committee:  
[Legislative & Congressional Reapportionment](#)  
 Senate Committee:  
[Reapportionment](#)

### First Reader Summary

A BILL to amend Chapter 2 of Title 28 of the Official Code of Georgia Annotated, relating to apportionment of the House of Representatives and Senate and qualifications of members, so as to provide for the composition and number of state representative districts; and for other purposes.

### Status History

Date	Status
10/01/2001	Effective Date
10/01/2001	Act 2EX23
10/01/2001	House Date Signed by Governor
09/26/2001	House Sent to Governor
09/06/2001	Senate Notice to Reconsider
09/06/2001	Senate Passed/Adopted
09/06/2001	Senate Third Read
09/05/2001	Senate Read Second Time
09/04/2001	Senate Committee Favorably Reported
08/29/2001	Senate Read and Referred
08/29/2001	House Passed/Adopted
08/29/2001	House Third Readers
08/28/2001	House Committee Favorably Reported

Date	Status
08/28/2001	House 2nd Read Engrossed Failed
08/28/2001	House Second Readers
08/27/2001	House Notice of Motion to Engross
08/27/2001	House First Readers
08/26/2001	House Hopper

Footnotes

9/7/01 Motion to reconsider lost in Senate.

Votes

Date	Vote No.	Yea	Nay	NV	Exc
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No Votes available.

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- [Georgia.gov](#)
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## SB 1EX1

Senatorial Districts; reapportion election districts; change composition to take office in 2003

Current Version Past Versions

### Sponsors

No.	Name	District
1.	<a href="#">Golden, Tim</a>	8th
2.	<a href="#">Starr, Terrell</a>	44th
3.	<a href="#">Walker, Charles</a>	22nd

### Committees

House Committee:  
[Legislative & Congressional Reapportionment](#)  
 Senate Committee:  
[Reapportionment](#)

### First Reader Summary

A BILL to be entitled an Act to amend Chapter 2 of Title 28 of the Official Code of Georgia Annotated, relating to apportionment of the House of Representatives and Senate and qualifications of members, so as to provide for the composition and number of state senatorial districts; to provide for the number of Senators; to provide for certain qualifications; to provide for the election of Senators; to provide when the Senators elected shall take office; to provide for the continuation of present senatorial districts until a certain time; to provide for other matters relative to the foregoing; to provide an effective date; to repeal conflicting laws; and for other purposes.

### Status History

Date	Status
08/24/2001	Effective Date
08/24/2001	Act 1EX6
08/24/2001	Senate Date Signed by Governor
08/17/2001	Senate Sent to Governor
08/17/2001	House Passed/Adopted
08/17/2001	House Third Readers
08/16/2001	House Committee Favorably Reported
08/14/2001	House Second Readers
08/13/2001	House First Readers
08/10/2001	Senate Passed/Adopted By Substitute
08/10/2001	Senate Third Read
08/09/2001	Senate Committee Favorably Reported By Substitute
08/08/2001	Senate Recommitted

Date	Status
08/08/2001	Senate Third Read
08/07/2001	Senate Read Second Time
08/06/2001	Senate Committee Favorably Reported By Substitute
08/01/2001	Senate Read and Referred
08/01/2001	Senate Hopper

Footnotes

8/6/01 Favorably reported by substitute

Votes

Date	Vote No.	Yea	Nay	NV	Exc
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No Votes available.

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## HB 20EX

### Georgia Congressional Reapportionment Act of 2011; enact

[Current Version](#)
[Past Versions](#)

#### Sponsors

No.	Name	District
1.	<a href="#">Lane, Roger</a>	167th

#### Sponsored In Senate By:

[Seabaugh, Mitch](#)

#### Committees

House Committee:

[Legislative & Congressional Reapportionment](#)

Senate Committee:

[Reapportionment and Redistricting](#)

#### First Reader Summary

A BILL to be entitled an Act to provide for the composition and number of congressional districts; to provide for a short title; to amend Title 21 of the Official Code of Georgia Annotated, relating to elections, so as to provide for election of members of Congress; to provide when such members shall take office; to provide for definitions and inclusions; to provide for continuation of present congressional districts until a certain time; to correct a certain reference; to provide for other matters relative to the foregoing; to provide an effective date; to repeal conflicting laws; and for other purposes.

#### Status History

Date	Status
09/06/2011	Effective Date
09/06/2011	Act 3EX
09/06/2011	House Date Signed by Governor
09/01/2011	House Sent to Governor
08/31/2011	Senate Passed/Adopted
08/31/2011	Senate Third Read
08/30/2011	Senate Read Second Time
08/30/2011	Senate Committee Favorably Reported
08/25/2011	Senate Read and Referred
08/25/2011	House Immediately Transmitted to Senate
08/25/2011	House Passed/Adopted By Substitute
08/25/2011	House Third Readers
08/24/2011	House Committee Favorably Reported By Substitute
08/23/2011	House Second Readers
08/22/2011	House First Readers



08/19/2011

House Hopper

Footnotes

8/25/2011 Structured Rule; 8/25/2011 Immediately transmitted to Senate

Votes

Date	Vote No.	Yea	Nay	NV	Exc
08/25/2011	<a href="#">House Vote #409</a>	110	60	4	6
08/31/2011	<a href="#">Senate Vote #22</a>	34	21	0	1

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- [Georgia Department of Motor Vehicles](#)
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## SB 1EX

Georgia Senate Reapportionment Act of 2011; provide for composition and number of State Senatorial districts

[Current Version](#)
[Past Versions](#)

### Sponsors

No.	Name	District
1.	<a href="#">Seabaugh, Mitch</a>	28th
2.	<a href="#">Cowsert, Bill</a>	46th
3.	<a href="#">Bethel, Charlie</a>	54th
4.	<a href="#">Williams, Tommie</a>	19th
5.	<a href="#">Rogers, Chip</a>	21st

#### Sponsored In House By:

[Lane, Roger](#)

### Committees

House Committee:

[Legislative & Congressional Reapportionment](#)

Senate Committee:

[Reapportionment and Redistricting](#)

### First Reader Summary

A BILL to be entitled an Act to provide for the composition and number of state senatorial districts; to provide for a short title; to amend Chapter 2 of Title 28 of the Official Code of Georgia Annotated, relating to apportionment of the House of Representatives and Senate and qualifications of members, so as to provide for the number and election of Senators; to provide for qualifications; to provide when the Senators elected shall take office; to provide for the continuation of present senatorial districts until a certain time; to provide that the provisions of this Act shall supersede and replace an interim apportionment plan; to provide for other matters relative to the foregoing; to provide an effective date; to repeal conflicting laws; and for other purposes.

### Status History

Date	Status
08/24/2011	Effective Date
08/24/2011	Act 2EX
08/24/2011	Senate Date Signed by Governor
08/23/2011	Senate Sent to Governor
08/23/2011	House Immediately Transmitted to Senate
08/23/2011	House Passed/Adopted
08/23/2011	House Third Readers
08/22/2011	House Committee Favorably Reported
08/22/2011	House Second Readers

Date	Status
08/18/2011	House First Readers
08/18/2011	Senate Transmitted House
08/18/2011	Senate Passed/Adopted By Substitute
08/18/2011	Senate Third Read
08/17/2011	Senate Read Second Time
08/17/2011	Senate Committee Favorably Reported By Substitute
08/15/2011	Senate Read and Referred
08/09/2011	Senate Hopper

### Footnotes

8/23/2011 Structured Rule; 8/23/2011 Immediately transmitted to Senate and Governor

### Votes

Date	Vote No.	Yea	Nay	NV	Exc
08/18/2011	<a href="#">Senate Vote #4</a>	35	18	1	2
08/23/2011	<a href="#">House Vote #403</a>	104	56	6	14

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## HB 1EX

Georgia House of Representatives Reapportionment Act of 2011; enact

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[Past Versions](#)

### Sponsors

No.	Name	District
1.	<a href="#">Lane, Roger</a>	167th

### Sponsored In Senate By:

[Seabaugh, Mitch](#)

### Committees

House Committee:

[Legislative & Congressional Reapportionment](#)

Senate Committee:

[Reapportionment and Redistricting](#)

### First Reader Summary

A BILL to be entitled an Act to provide for the composition and number of state house districts; to provide for a short title; to amend Chapter 2 of Title 28 of the Official Code of Georgia Annotated, relating to apportionment of the House of Representatives and Senate and qualifications of members, so as to provide for the number and election of Representatives; to provide for certain qualifications; to provide when the Representatives elected shall take office; to provide for the continuation of the present representative districts until a certain time; to provide that the provisions of this Act shall supersede and replace an interim apportionment plan and certain changes thereto; to provide for other matters relative to the foregoing; to provide an effective date; to repeal conflicting laws; and for other purposes.

### Status History

Date	Status
08/24/2011	Effective Date
08/24/2011	Act 1EX
08/24/2011	House Date Signed by Governor
08/23/2011	House Sent to Governor
08/23/2011	Senate Transmitted House
08/23/2011	Senate Passed/Adopted
08/23/2011	Senate Third Read
08/22/2011	Senate Read Second Time
08/22/2011	Senate Committee Favorably Reported
08/18/2011	Senate Read and Referred
08/18/2011	House Immediately Transmitted to Senate
08/18/2011	House Passed/Adopted By Substitute
08/18/2011	House Third Readers

Date	Status
08/16/2011	House Committee Favorably Reported By Substitute
08/16/2011	House Second Readers
08/15/2011	House First Readers
08/15/2011	House Hopper

Footnotes

8/18/2011 Passed House by Rules Committee Substitute; 8/18/2011 Structured Rule; 8/18/2011 Immediately transmitted to Senate; 8/23/2011 Immediately transmitted to House and Governor

Votes

Date	Vote No.	Yea	Nay	NV	Exc
08/18/2011	<a href="#">House Vote #399</a>	108	64	4	4
08/23/2011	<a href="#">Senate Vote #7</a>	36	16	0	4

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## SB 2EX

"Georgia Congressional Redistricting Act"; enact

Current Version

Past Versions

### Sponsors

No.	Name	District
1.	<a href="#">Kennedy, John</a>	18th
2.	<a href="#">Cowsert, Bill</a>	46th
3.	<a href="#">Dugan, Mike</a>	30th
4.	<a href="#">Gooch, Steve</a>	51st
5.	<a href="#">Burke, Dean</a>	11th
6.	<a href="#">Walker, III, Larry</a>	20th
7.	<a href="#">Miller, Butch</a>	49th

### Committees

House Committee:

[Legislative & Congressional Reapportionment](#)

Senate Committee:

[Reapportionment and Redistricting](#)

### First Reader Summary

A BILL to be entitled an Act to provide for the composition and number of congressional districts; to provide for a short title; to provide when such representatives shall take office; to provide for continuation of present congressional districts until a certain time; to provide for related matters; to provide an effective date; to repeal a specific Act; to repeal conflicting laws; and for other purposes.

### Status History

Date	Status
12/30/2021	Effective Date
12/30/2021	Act 8EX
12/30/2021	Senate Date Signed by Governor
11/30/2021	Senate Sent to Governor
11/22/2021	House Passed/Adopted
11/22/2021	House Third Readers
11/20/2021	House Committee Favorably Reported
11/20/2021	House Second Readers
11/19/2021	House First Readers
11/19/2021	Senate Passed/Adopted By Substitute
11/19/2021	Senate Third Read



Date	Status
11/18/2021	Senate Read Second Time
11/18/2021	Senate Committee Favorably Reported By Substitute
11/03/2021	Senate Read and Referred
11/02/2021	Senate Hopper

### Footnotes

11/18/2021 Notice of intent to file Minority Report; 11/19/2021 Minority Report Filed; 11/22/2021 Structured Rule

### Votes

Date	Vote No.	Yea	Nay	NV	Exc
11/19/2021	<a href="#">Senate Vote #23</a>	32	21	0	3
11/22/2021	<a href="#">House Vote #22</a>	96	68	4	12

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# SB 1EX

"Georgia Senate Redistricting Act of 2021"; enact

[Current Version](#) [Past Versions](#)

## Sponsors

No.	Name	District
1.	<a href="#">Kennedy, John</a>	18th
2.	<a href="#">Cowsert, Bill</a>	46th
3.	<a href="#">Dugan, Mike</a>	30th
4.	<a href="#">Gooch, Steve</a>	51st
5.	<a href="#">Burke, Dean</a>	11th
6.	<a href="#">Walker, III, Larry</a>	20th
7.	<a href="#">Miller, Butch</a>	49th

## Committees

House Committee:  
[Legislative & Congressional Reapportionment](#)  
 Senate Committee:  
[Reapportionment and Redistricting](#)

## First Reader Summary

A BILL to be entitled an Act to provide for the composition and number of state senatorial districts; to provide for a short title; to provide when members of the Senate elected shall take office; to provide for the continuation of present senatorial districts until a certain time; to provide that the provisions of this Act shall supersede and replace a districting plan and certain changes thereto; to provide for related matters; to provide an effective date; to repeal specific Acts; to repeal conflicting laws; and for other purposes.

## Status History

Date	Status
12/30/2021	Effective Date
12/30/2021	Act 7EX
12/30/2021	Senate Date Signed by Governor
11/30/2021	Senate Sent to Governor
11/15/2021	House Passed/Adopted
11/15/2021	House Third Readers
11/12/2021	House Committee Favorably Reported
11/12/2021	House Second Readers
11/10/2021	House First Readers
11/09/2021	Senate Passed/Adopted By Substitute

Date	Status
11/09/2021	Senate Third Read
11/08/2021	Senate Read Second Time
11/08/2021	Senate Committee Favorably Reported By Substitute
11/03/2021	Senate Read and Referred
11/02/2021	Senate Hopper

### Footnotes

11/08/21 Notice of Intent to file Minority Report; 11/09/2021 Minority Report Filed; 11/15/2021 Structured Rule

### Votes

Date	Vote No.	Yea	Nay	NV	Exc
11/09/2021	<a href="#">Senate Vote #6</a>	21	33	1	1
11/09/2021	<a href="#">Senate Vote #7</a>	34	21	0	1
11/15/2021	<a href="#">House Vote #12</a>	96	70	1	13

### Helpful Links

- [Georgia.gov](#)
- [Governor's Office](#)
- [Secretary of State](#)
- [Georgia Department of Motor Vehicles](#)
- [Georgia Department of Driver Services](#)
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# HB 1EX

Georgia House of Representatives Redistricting Act of 2021; enact

Current Version

Past Versions

## Sponsors

No.	Name	District
1.	<a href="#">Rich, Bonnie</a>	97th

### Sponsored In Senate By:

[Kennedy, John](#)

## Committees

House Committee:

[Legislative & Congressional Reapportionment](#)

Senate Committee:

[Reapportionment and Redistricting](#)

## First Reader Summary

A BILL to be entitled an Act to provide for the composition and number of state house districts; to provide for a short title; to provide when members of the House of Representatives elected shall take office; to provide for the continuation of the present representative districts until a certain time; to provide that the provisions of this Act shall supersede and replace a districting plan and certain changes thereto; to provide for related matters; to provide an effective date; to repeal specific Acts; to repeal conflicting laws; and for other purposes.

## Status History

Date	Status
12/30/2021	Effective Date
12/30/2021	Act 6EX
12/30/2021	House Date Signed by Governor
11/29/2021	House Sent to Governor
11/12/2021	Senate Passed/Adopted
11/12/2021	Senate Third Read
11/11/2021	Senate Read Second Time
11/11/2021	Senate Committee Favorably Reported
11/10/2021	Senate Read and Referred
11/10/2021	House Immediately Transmitted to Senate
11/10/2021	House Passed/Adopted By Substitute
11/10/2021	House Third Readers
11/09/2021	House Committee Favorably Reported By Substitute
11/04/2021	House Second Readers
11/03/2021	House First Readers

11/03/2021

House Hopper

Footnotes

11/10/2021 Structured Rule; 11/10/2021 Immediately transmitted to Senate

Votes

Date	Vote No.	Yea	Nay	NV	Exc
11/10/2021	<a href="#">House Vote #8</a>	99	79	1	1
11/12/2021	<a href="#">Senate Vote #13</a>	32	21	0	3

Helpful Links

- [Georgia.gov](#)
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- [Secretary of State](#)
- [Georgia Department of Motor Vehicles](#)
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- [Georgia Department of Revenue](#)
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# EXHIBIT F

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

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

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

vs. ) Case No. 1:21-CV-5338  
ELB-SCG-SDG

STATE OF GEORGIA, et al, )  
Defendants. )

STATE OF GEORGIA, et al., )  
Plaintiffs, ) Case No. 1:22-CV-00090  
vs. ) ELB-SCJ-SDG

BRAD RAFFENSPERGER, )  
Defendant. )

Deposition of Moon Duchin, PhD  
(Signature is reserved.)  
February 27, 2023  
1:07 p.m.

Remote via Zoom technology

Reported by: Carla J. Hopson, RPR, CCR-1816

1 Rights Act lawsuit has to begin with establishing  
2 three threshold conditions called the Gingles  
3 factors. In Gingles 1, which is the one I'm  
4 discussing here, involves the production of  
5 demonstration maps with additional majority minority  
6 districts.

7 Q And those additional majority minority  
8 districts are not necessarily majority black VAP  
9 majority -- or majority BVAP districts; is that  
10 correct?

11 A That's right. In general -- since  
12 you're asking about Gingles 1 in general, it depends  
13 on the group on whose behalf the challenge is  
14 launched.

15 Q And your maps in this case or in this  
16 report -- in some cases you've drawn more majority  
17 BVAP districts and in others you've drawn more  
18 coalition districts. Is that fair to say?

19 A That's correct. The -- the claims were  
20 sometimes looking for additional opportunity on  
21 behalf of black voters and sometimes on behalf of  
22 the coalition.

23 Q And you say the effective districts are  
24 shown to be highly likely to provide an opportunity  
25 for black and Latino voters to elect candidates of

1 an opinion about the particular motivation behind a  
2 plan? Is that correct?

3 A I think at a high level the narrative  
4 that I am offering in terms of my conclusions is  
5 that what I observe in the plans is consistent with  
6 a pursuit of partisan ends but one in which race was  
7 clearly used to achieve those ends.

8 Q And so your opinion is that the  
9 legislature pursued partisan ends but then used race  
10 in part to achieve those partisan ends?

11 A I try to be careful to be clear that I'm  
12 not reading minds. And so if you will allow me,  
13 I'll continue to use constructions like "I find  
14 evidence consistent with the following behavior," so  
15 that I'm not pretending to know more than I'm able  
16 to discern from the data that's available to me.

17 Q And you anticipated my next question  
18 which was, are you offering any opinions about the  
19 reasoning of Georgia legislators in the creation of  
20 the Congressional, State House and State Senate  
21 plans?

22 A Right. I would -- I would say that  
23 generally I think the kinds of findings that I  
24 describe here are evidence that might be persuasive  
25 in terms of discerning intent, but I certainly can

1           A           Absolutely. Absolutely. So the process  
2 is to use regionally specific ACS estimates to poll  
3 the citizenship ratio for four different groups:  
4 Black, Hispanic, white and other. And so I used  
5 tract level data. Tracts are census units typically  
6 with about 8,000 people.

7                       So I used tract-level data to get those  
8 local ratios of citizenship, and then I apply that  
9 to the voting age population of the block level.

10           Q           At the very bottom of Page 7 you talk  
11 about how in Section 8, "I will confirm that my  
12 alternative plans satisfy the Gingles 1 standard for  
13 coalition districts using black and Hispanic CVAP as  
14 well as using VAP."

15                       What is the Gingles 1 standard for  
16 coalition districts as you understand it.

17           A           Well, here I'm referring to the  
18 threshold that was in my understanding confirmed in  
19 Bartlett vs. Strickland. That's the 50 percent plus  
20 one threshold. That's what I mean.

21           Q           And it's your understanding that that 50  
22 percent plus one standard for coalition district  
23 came from Bartlett?

24           A           Was clarified in Bartlett.

25           Q           And did you use that understanding as

1 you drew your alternative plans in constructing  
2 those districts?

3 A Oh, definitely. They're -- they're  
4 designed to meet a 50 percent plus one threshold.

5 Q And next -- I know we already referenced  
6 these tables, but on Page 8 you go into the  
7 demographic trends, the different places, and we  
8 talked about various numbers. But just in looking  
9 at the change in the black CVAP population in Table  
10 2 from 2010 to 2019, that's a movement of almost  
11 exactly two points from 2010 to 2019; right?

12 A 2 percentage points, right.

13 Q And then Figure 2 has your racial dot  
14 density plot.

15 A Yes.

16 Q Please describe the difference in a  
17 Choropleth versus a racial dot density plot?

18 A Absolutely. And I think they can both  
19 be informative. If you use just one, sometimes  
20 you're not getting the whole picture. So as I said  
21 before, a Choropleth colors the units. But that's  
22 subject to what geographers called MAUP, M-A-U-P,  
23 which stands for the modifiable aerial unit problem,  
24 which suggests that you can radically change the  
25 impressions of the picture just by shifting the

1 Alt plan back on Page 11 compared to the enacted  
2 plan. It's correct that every district changes at  
3 least somewhat between the enacted plan and the Alt  
4 plan, right?

5 A I'm sorry. Would it okay if I opened my  
6 own local copy of this report because it's a little  
7 slow in the exhibit software.

8 Q That's totally fine with me if it's the  
9 same report in pdf --

10 A It's the same report.

11 Q -- and if it will make it go faster --

12 A Yeah, it will go faster. Thank you.

13 All right. So you said back to Page 11?

14 Q Back to Page 11.

15 A Yes. Oh, is it fair to say, I think you  
16 asked, that all the districts changed? I believe  
17 that's -- that seems to be true.

18 Q Okay. And looking at Congress Alt,  
19 you'd agree that it connects parts of south Fulton  
20 and Clayton Counties with Troup and Meriwether  
21 Counties and Harris County in rural Georgia; right?

22 A Which district are you asking about?

23 Q District 3.

24 A District 3. Yes, it does touch Fulton  
25 and it does reach down to rural Georgia. It's -- I

1 would say it's in -- close to the same part of the  
2 state it's geographically aligned with where  
3 District 3 is in the other maps.

4 Q Would you agree that there's more of  
5 urban population in the Congress Alt District 3 than  
6 in the enacted District 3?

7 A Yes, that seems quite likely.

8 Q And District 12 on the Alt plan connects  
9 Augusta over to Houston County and separates  
10 Macon-Bibb County from Houston County; is that  
11 right?

12 A I don't have the county names in front  
13 of me in this report, but I accept that.

14 Q Let's move next to the Senate plan. And  
15 you -- again, we talked a little bit about the lack  
16 of competitiveness on the plan, and that refers to  
17 kind of district performance, not overall number of  
18 seats for a political party; right?

19 A Correct. That's right.

20 Q And isn't a lack of competitiveness on a  
21 plan generally a sign of a partisan goal of the map  
22 drawer?

23 A Well, usually I think you'd say that  
24 it's a sign of wanting to create safe seats on both  
25 sides. So is that partisan? I think typically when



1 earlier.

2 Q So did you start with a blank map or did  
3 you start with the enacted plan and modify the  
4 enacted plan?

5 A For all of these, I don't start with a  
6 blank map except that -- well, to be clear, I'm doing  
7 everything on the level of clusters. I know we've  
8 said that but just repeating that. And so I don't  
9 start with a statewide blank slate.

10 I start with a region that's been carved  
11 out by a district in the enacted plan. So in that  
12 sense the enacted plan gets strong deference in all  
13 of my alternatives because each of those regions is  
14 picked out by a collection of districts enacted by  
15 the state.

16 Q And so you start with an area enacted by  
17 the state. Do you begin then with the majority  
18 minority districts that you're looking to draw and  
19 then draw the remaining districts around it?

20 A No, it's -- that's not -- I wouldn't --  
21 I wouldn't agree to that.

22 Q Okay. So can you just give me an  
23 example if we -- let's say the SD East Black Belt.  
24 We have that as a region on Page 13. Is there a  
25 particular process or methodology you would follow

1 for how you would draw the districts in that  
2 particular region when you were looking at them?

3 A Sure. Should we discuss specifically  
4 the algorithmic exploration stage or the hand  
5 drawing following that?

6 Q I'm interested primarily in the hand  
7 drawing stage.

8 A Sure.

9 Q So how that process works.

10 A Sure. So I will -- at that point I will  
11 have seen a collection of maybe dozens of  
12 alternatives, and I'll examine those to try to find  
13 some that have properties that seems to handle the  
14 tradeoffs of redistricting in a way that seems  
15 favorable.

16 So just to be clear by what I mean by  
17 that, everyone who draws maps knows that you have to  
18 handle tradeoffs. You have -- to make your map  
19 better in one way you're necessarily sacrificing  
20 something else and we're trying to take account of  
21 many things, of county splits, of maybe opportunity  
22 to elect, if that's a priority for the map drawer,  
23 compactness, which can be scored in many ways and so  
24 on.

25 So when you see a district like that one

1 that wraps there that you identified in Alternative  
2 Effective 1 that's not going to have a great score  
3 in certain compactness methods, like Polsby-Pepper,  
4 but it can still have a very good score in other  
5 compactness methods like Reock.

6 And as a line drawer, you just face  
7 these trade-offs everywhere. And so you're trying  
8 to balance them and come up with something favorable  
9 across the board.

10 Q In terms of the process of doing that  
11 balancing, what types of data did you have displayed  
12 while you were working on drawing the different  
13 components in the hand-drawing phrase to be clear?

14 A Only the data that you see in the  
15 report. Those are the only things I considered. I  
16 didn't look at anything else besides the metrics  
17 that are discussed here, the -- my so-called  
18 effectiveness score, and demographics because the  
19 Gingles 1 assignment involves hitting a 50 percent  
20 plus one line.

21 Q Were all those data points displayed as  
22 you were drawing all of the effectiveness score, the  
23 racial data? Were all those displayed while you  
24 were drawing the maps?

25 A So unfortunately, because my drawing

1 span of some time.

2 And so I'm not sure how it intersperses  
3 with the map drawing, which also extended over quite  
4 a long time.

5 Q So it would be fair to say that those  
6 processes were running simultaneously, reviewing  
7 the -- well, not simultaneously, in parallel,  
8 reviewing the public comment and working on drawing  
9 the maps, right?

10 A I think that would be fair, yes.

11 Q And when you were looking at various  
12 metrics -- let's just use compactness as an example,  
13 did you ever reach a point where you drew a map, ran  
14 compactness reports or looked at scores and then go  
15 modify the plan to improve the compactness scores?

16 A Yes.

17 Q And the same for county splits. Did you  
18 reach a point where you had drawn a plan and then  
19 ran a county I split analysis of some sort and went  
20 back to unsplit some counties?

21 A Yes. And I'll mention that the modular  
22 method makes it particularly tricky to handle county  
23 splits well because it concedes to the design of the  
24 enacted plan certain choices of splits to make.

25 That's because the modules are made, again, out of

1 be cognizant of that and pay attention not only to  
2 the number of split counties but also to the number  
3 of pieces into which they were split.

4 So that's an example of a way that I  
5 draw while keeping in mind some of the testimony  
6 that I read.

7 Q And just to avoid having to repeat those  
8 for each of the plan did you follow a similar  
9 process as we've described in terms of the metrics  
10 and the drawing and the modules for drawing the  
11 House plan well?

12 A Yes. The process was quite parallel for  
13 the House and the Senate.

14 Q And did it differ at all for the drawing  
15 of the Congressional plan from the process we've  
16 talked about?

17 A Well, only in that the Congressional  
18 plan wasn't modularized, wasn't -- wasn't  
19 regionalized.

20 Q Are there 1, 2 and 3 plans the order in  
21 which they were drawn, you drew Plan 1 first, then  
22 Plan 2, and then Plan 3, or is that just kind of  
23 the number you assigned them after they were  
24 complete?

25 A That's right. The numbers shouldn't be

1 remediable packing and cracking.

2 Q And so the primary focus really was  
3 looking for areas where you thought you could find  
4 remediable packing and cracking; right?

5 A Well, generally I would say that I was  
6 trying to create -- because this is for -- in the  
7 first instance my goal was to create Gingles  
8 demonstrative maps.

9 Of course I reused the clusters later  
10 for the purpose of effectiveness analysis or  
11 effectiveness alternatives, I should say.

12 And so to create Gingles districts,  
13 again, which require 50 percent plus 1, you need to  
14 have some minority population in order to achieve  
15 that.

16 Q And in the House section you indicate  
17 that there were 42 House districts that were  
18 unchanged, but then I didn't see a similar count for  
19 unchanged Senate districts, although I think we both  
20 can confirm visually there's really some that aren't  
21 changed; right?

22 A That's right. But the difference is  
23 that in the Senate clusters they cover the whole  
24 state. And so that means every single district  
25 could at least be potentially changed according to

1 Q And so not relying on the 50 percent  
2 plus 1 line as a predictor of electoral opportunity,  
3 you're not saying that's the state of the law today.  
4 You're just saying -- you're trying to distinguish  
5 where Bartlett is from that?

6 A Oh, I do think that in the state of the  
7 law today that these two concepts are distinct. The  
8 concept a majority district has a role in the law,  
9 but that's distinct from the concept of an  
10 opportunity district even in the law today.

11 MR. CANTER: And I'm going to object to  
12 the extent it was calling for a legal  
13 conclusion. Just be careful on that point.

14 THE WITNESS: Thank you. I think  
15 that's -- that's a good reminder. We're  
16 talking about my understanding that informs my  
17 expert work.

18 I certainly don't mean to be opining on  
19 anything that requires a legal conclusion.

20 Q (By Mr. Tyson) Now, have you drawn maps  
21 for jurisdictions to the used in elections?

22 A Yes.

23 Q And have any of those been statewide  
24 plans?

25 A Well, it -- here it depends on -- often

1 drawing maps that are ultimately enacted involves  
2 participation from many people. But I had a role  
3 in, for instance, the drawing of the Massachusetts  
4 state Senate districts in this cycle.

5 Q And in that role do you advise  
6 legislators or others who are drawing or working  
7 with you on those plans that maximizing electoral  
8 opportunity for minority-preferred candidates is a  
9 goal they should ascribe to?

10 A I've certainly never advised that as a  
11 goal.

12 Q And so ultimately in this report, I  
13 guess since we're getting into the section, it's  
14 criticizing Georgia for not drawing enough majority  
15 minority districts on its Congressional House and  
16 Senate plans. Is that fair?

17 A Oh, I wouldn't say so. Rather than  
18 criticizing Georgia for not doing enough, what I'm  
19 trying to do here is create a framework for  
20 measurement. And then, as I say in the section  
21 we've already reviewed, providing maps that  
22 demonstrate that it's possible to get more  
23 opportunity while still being very respectful to  
24 DPs.

25 But I don't think it amounts to



1 being unusually terse framework, that's in reference  
2 to the 15 or so that you've looked at in other  
3 states?

4 A Yes, what's what I meant. I meant that  
5 of the one that I reviewed, I think this may be the  
6 shortest I've seen.

7 Q And have you looked at Georgia criteria  
8 or principles of redistricting from prior  
9 redistricting cycles?

10 A No, I haven't.

11 Q So in looking at the various metrics --  
12 we'll move to population balance. And I guess this  
13 is the first -- Table 7 is the first of several  
14 tables that are going to compare various metrics  
15 among the enacted plan and then various alternative  
16 plans. Is that right?

17 A That's right.

18 Q And so in looking at the enacted Senate  
19 district for the alternative 1, 2, and 3, you'd  
20 agree the deviation is higher -- the total deviation  
21 is higher on all the alternative plans than on the  
22 enacted plan; right?

23 A Yes, it is.

24 Q And that's also true for the House  
25 alternative plans? Higher deviation for each of the

1 alternative than for the enacted plan?

2 A Yes, that's correct.

3 Q And then looking at compactness, you'd  
4 agree that compactness is something you have to  
5 measure in relationship or comparison to something  
6 else. It's not an objective measurement. Is that  
7 generally correct?

8 A I think the term I would use rather than  
9 objective -- I mean, to me objective just means not  
10 influenced by personal discretion. So all of these  
11 would be objective in that sense. But I think the  
12 question is about whether it can sort of stand alone  
13 or whether it's best used comparatively.

14 I've definitely argued very frequently  
15 that compactness scores are best understood  
16 comparatively. Although I think some people persist  
17 in using them as though they can be read on their  
18 own.

19 Q And so you'd agree that there's not a  
20 Polsby-Popper score where a district is not compact,  
21 it's just more or less compact than something else;  
22 right?

23 A That's right. And furthermore, more or  
24 less compact by the likes of that one metric. So I  
25 kind of referenced this earlier when we were talking

1 about a C-shaped district. But Polsby-Popper and  
2 Reock, those are contour based scores that measure  
3 slightly different things.

4 And so would probably -- unless there  
5 was emphatic agreement among all of the metrics, I  
6 would avoid saying something is more compact than  
7 another full stop. And I would try to specific  
8 measured how.

9 Q And in looking at the compactness  
10 scores -- let's just take them kind of one at a  
11 time. So the alternative plan, I guess, on  
12 Polsby-Popper is slightly more compact on the  
13 Polsby-Popper score than the enacted plan. Am I  
14 saying that in the right formulation?

15 A That sounds good. Are we talking about  
16 the Congressional?

17 Q Yes, I'm starting with Congressional and  
18 Polsby-Popper.

19 A Right. So the alternative plan is more  
20 compact by Polsby Popper than the enacted plan is on  
21 average.

22 Q In your experience is a difference in  
23 two hundredths of a point on Polsby-Popper a  
24 significant difference in the plans?

25 A I think they usually call that two

1 points, as in two percentage points rather than two  
2 hundredths.

3 Q Oh, two points. I'm sorry.

4 A I would try to resist making any blanket  
5 statements about, you know, how big of a difference  
6 is officially significant. I don't think that there  
7 are -- I think it really depends where you are and  
8 what you're measuring.

9 I've written about this at length.  
10 Polsby Pepper scores in particular can penalize you  
11 for following coastlines. They have all kinds of  
12 features that make it desirable to understand them  
13 in context and not try to say anything like 2  
14 percentage points is an official big difference. I  
15 would resist that.

16 Q And then conversely, I guess, for the  
17 Reock on the Congressional plan, the alternative  
18 plan is more compact than the enacted plan on the  
19 Reock score as well; right?

20 A Right. So not conversely, but in --  
21 it's not compact on both Polsby-Popper and Reock.

22 Q On both. Yes, I'm sorry. That's right  
23 I was going the other direction. Yes.

24 And so for all the differences between  
25 the various plans in Table 8 would you categorize

1 any of them as significant differences in  
2 compactness scores?

3 A That's not -- I'm not sure. I mean,  
4 it's possible that words like "significant" have  
5 crept in in individual places. But I would say  
6 generally if one plan is more compact than another  
7 on all three of these measures, Polsby-Popper, Reock  
8 and cut edges, then I'm comfortable saying that it's  
9 generally more compact.

10 And that's certainly the case for this  
11 CD Alt versus enacted CD. It's -- it's more compact  
12 on all three of these measures. And so I would say  
13 CD Alt is generally more compact than the enacted  
14 plan.

15 Q And you knew the compactness scores of  
16 the enacted plans when you were drawing the  
17 alternative plans for Congress, House and Senate;  
18 right?

19 A I knew them? I had certainly reviewed  
20 them, yes.

21 Q And did you have as one of your goals in  
22 drafting the alternative plans a compactness metric  
23 to hit?

24 A No, I didn't have a numerical goal.

25 Q And your redistricting program that you

1 three districts, that contributes one to county  
2 splits but it contributes three to county pieces.

3 Q Thank you. And in looking at the  
4 various comparisons on -- let's just -- let's start  
5 with just county splits or the number of times --  
6 well, the number of counties that are split. We'll  
7 just call it that. That's the first column in Table  
8 9; right?

9 A Yes.

10 Q And so on the -- looking at the Senate  
11 district, the comparison of the enacted to the  
12 alternative plan on Alt 1 and Alt 3 have the same or  
13 more county splits and Alt 2 has three fewer  
14 counties that are split; right?

15 A That's correct.

16 Q And on that House plan, the enacted  
17 House plan as compared to the Alt plans, Alt 1, 2  
18 and 3 alternative plans have the same number or more  
19 county splits than the enacted plan for the House;  
20 right?

21 A That's right.

22 Q And you have a count of municipality  
23 splits. Do you know Georgia prioritizes avoiding  
24 splits of municipalities?

25 A Well, what I tried to do -- so I'm aware

1 Democratic districts, you might pick a higher  
2 threshold than 5 out of 8. And so if you did that,  
3 it could be higher or it could be lower. It's just  
4 a different -- and that's -- that was my point from  
5 earlier.

6 This really is not attempting to get a  
7 measure of Democratic performance. It's doing  
8 something different.

9 Q And so in looking then -- let's kind of  
10 look at the specific groupings we have. So we have  
11 the enacted plan has two majority BVAP districts and  
12 five majority BHBVAP [sic] districts, right? BHVAP  
13 districts. Sorry.

14 A Yes. Let's get that right. Okay.  
15 Sorry. So the enacted plan has two majority BVAP,  
16 five majority BHVAP and just four majority BHCVAP.

17 Q Okay. And so the differences from the  
18 enacted plan to the Alt plan for Congress with plus  
19 2 BVAP, plus 1 BHVAP, and plus 2 BHCVAP and plus 1  
20 effective, right?

21 A Correct.

22 Q And the Senate plan here. On just the  
23 majority BVAP column are either going to go plus 3  
24 majority BVAP for Alt 1 plus one majority BVAP for  
25 Alt 2 and minus 6 majority BVAP for all three. Do I

1 have that right?

2 A That looks right.

3 Q And similarly for the House, only Alt 1  
4 increases the number of majority BVAP districts and  
5 that's plus 1, and Alts 2 and 3 both reduce the  
6 number of majority BVAP districts over from the  
7 enacted plan, right?

8 A I agree.

9 Q Let's move next to out incumbency and  
10 core retention setup. So you reference the  
11 incumbent database that you were provided by counsel  
12 but U suspect that it's not current data given where  
13 we -- where they stand. Please explain generally  
14 what you're talking about in Section 6.5.

15 A Right. I was provided with incumbent  
16 addresses. I then geo-located them, and based on  
17 what I found I'm not sure that they're fully  
18 accurate or up to date for everyone.

19 One reason is that there is a  
20 requirement of living in the district for  
21 legislative districts, though not for Congressional  
22 and I wasn't finding that all the incumbents lived  
23 in the districts from which they were elected.

24 So that leads me to think there were  
25 some errors.



1 retention you'll find far higher retention numbers.

2 Q And so wrapping Section 6 -- one more  
3 question on this front. You are aware that on the  
4 Senate plan there are districts that would be  
5 collapsed in south Georgia and move to north Georgia  
6 as part of the process; right?

7 A I did read that in the transcript, the  
8 collapsed districts. And that's completely  
9 consistent with -- with what I inferred from my  
10 study of the map.

11 Q So wrapping up Section 6 of the report  
12 here, you've reported a variety of metrics, but we  
13 start at a point where you're offering opinions but  
14 you're still just reporting statistics about the  
15 various plans; right?

16 A Well, to some extent there are opinions  
17 here such as the opinion that relative to other  
18 states I find there to be low evidence of a priority  
19 on core retention. You could characterize that as  
20 an opinion.

21 And so along the way in the discussion  
22 of these, there's some implicit opinions that are  
23 articulated. But generally I agree with you that  
24 the point of this section is to report the metrics.

25 Q Let's move next to the Gingles

1 Demonstration Plans. So in reviewing -- I'll start  
2 with Congress, Section 7.1. And the alternative  
3 plan that you've drawn does not make district 6 a  
4 majority-minority district, it remains a majority  
5 white district; is that right?

6 A Yes, that's right. In my CD Alt plan  
7 District 6 is 57.1 percent white by VAP.

8 Q And District 3 is a district that now  
9 has become a majority black VAP and BHVAP district,  
10 right?

11 A That's correct.

12 Q Then moving to the Senate plans, you  
13 indicate in the second paragraph there on Page 25  
14 under 7.2 that the increase in majority BVAP, BHVAP,  
15 BHCVAP districts is accomplished while maintaining  
16 other traditional principles. Do you see that?

17 A I do.

18 Q And what is the basis -- is the basis  
19 for you saying that the increase is accomplished  
20 while maintaining other traditional principles like  
21 compactness and splitting scores that are generally  
22 comparable to or better than those of the state's  
23 enacted plan that the metrics we looked at in  
24 Section 6 are largely similar?

25 A Similar or better, that's right.

1 Q And so in dealing with the incredibly  
2 complicated puzzle that we know redistricting and  
3 the tradeoffs that are involved, when you're  
4 creating the alternative Senate plans were you able  
5 to prioritize any of the principles over any others,  
6 or does each district involve a balancing of those  
7 principles as you drew?

8 A You're always balancing. And as I  
9 indicated earlier, when I found what I thought were  
10 materially different ways of handling the  
11 tradeoffs, I offered two options rather than just  
12 one.

13 Q Let's look at some of those options,  
14 turning to Page 26. And this is the SD Atlanta  
15 region; is that right?

16 A Yes. Correct.

17 Q And so in this -- in this plan District  
18 16 as it's drawn, it looks like it's the  
19 southernmost district -- we'll call it that just for  
20 easy reference on this -- includes parts of Clayton  
21 County with other more rural counties south of  
22 Atlanta, is that right?

23 A I'm not sure I could pick out Clayton  
24 confidently without a label, but I think if I have  
25 it right, then yes.

1 Q And Fayette County -- we'll make it a  
2 little easier. Fayette County is all dark blue on  
3 Alt 1?

4 A Okay.

5 Q That includes a part of south Fulton  
6 along with all of Fayette; right?

7 A Yes. That's what it looks like.

8 Q And so is there a particular methodology  
9 you used in deciding to put, for example, south  
10 Fulton with all of Fayette?

11 A That wouldn't have been, you know, a  
12 sort of explicit consideration. I looked to see if  
13 there were ways of drawing the maps that balanced  
14 the principles that we've discussed.

15 These should be understood, of course,  
16 as demonstration maps that show that it's possible  
17 to do several things at the same time. And that's  
18 the intent of presenting them here.

19 Q Okay. And so you weren't considering,  
20 for example, the rural nature of southern Fayette  
21 and the more urban nature of south Fulton as you  
22 were drawing the alternative plans, right?

23 A Generally as we discussed earlier, I had  
24 certain aspects of community testimony in mind  
25 because, as we discussed, I reviewed that testimony

1 at the same time that I was doing map drawing. But  
2 as a general matter, I think it's important to  
3 emphasize again that these are particular kinds of  
4 demonstrative plans that have a particular racial  
5 threshold that they in my understanding have to hit  
6 by law and that they're not the same as remedial  
7 plans which come at a later stage of the Voting  
8 Rights Act.

9 Q And so these are examples, they're not  
10 districts that the legislature should have  
11 necessarily created? It's more just to show a  
12 problem?

13 A I think the role of Gingles 1  
14 demonstrative plans is to show that there's a  
15 problem and to show that the problem is remediable.

16 MR. CANTER: Bryan, we've been going --

17 Q In looking --

18 MR. CANTER: We've been going just about  
19 an hour, just if you're -- Moon, if you're  
20 fine, then we can keep going. I just wanted  
21 to --

22 THE WITNESS: Yeah, I -- I'd love to  
23 keep going for now.

24 Q (By Mr. Tyson) All right. So looking  
25 over at tables 12 and 13, this is where you're

1 comparing the enacted plans to the alternative  
2 plans, right?

3 A That's right.

4 Q And so in looking at Alt 1, for example,  
5 you have districts 34 at 72.2 percent on BVAP,  
6 right?

7 A Yes.

8 Q And in Alt 2, District 39 is at 86.5  
9 percent on the BVAP number, is that right?

10 A That's right.

11 Q Do you consider either of those  
12 districts to be packed under your definition?

13 A Well, so the definition of packing is  
14 elevation of the -- that I gave before. So my -- my  
15 working definition for the purposes of this report  
16 is the elevation of minority population past what's  
17 necessary to achieve a certain goal.

18 And so here -- in particular, to achieve  
19 electoral opportunity. So here my claim isn't that  
20 I've tried to optimize demographics. In fact, as I  
21 think we all know in redistricting, there's a  
22 delicate balance we're trying to strike where you  
23 must be race conscious at least to hit the 50  
24 percent plus 1 threshold.

25 But you try to be minimally race

1 conscious because it's -- it's best not to let --  
2 you're required not to let race predominate over  
3 other concerns.

4 And so this area, we're looking at the  
5 Atlanta region, has a lot as we saw in the dot  
6 densities before. It's -- it's quite a segregated  
7 area. There are areas with very high concentration.  
8 And so if I'm only looking at race in order to meet  
9 that 50 percent threshold, then it is likely that  
10 I'll tend to see some districts with extremely high  
11 black voting age population.

12 So, again, if I'm not exclusively trying  
13 to bring that down but only trying to draw minimally  
14 racer conscious alternatives that meet the threshold  
15 requirement, then it's not surprising to see high  
16 concentration.

17 Q And just so I understand that last  
18 point, so your goal is to draw minimally race  
19 conscious districts that are above 50 percent, that  
20 essentially -- like, for example, District 39 on Alt  
21 2 is leftover population after you created those  
22 other districts that were above that 50 percent  
23 threshold?

24 A No. Rather what I mean to say is that  
25 based on the size of the Senate district and the

1 regions which are very heavily black I found that I  
2 was creating some district with very high black  
3 percentage just as a matter of human geography but  
4 that even though that was happening it did not  
5 impede my ability to draw additional majority  
6 districts. So that the Gingles threshold standard  
7 is quite easily met in this part of the state.

8 Q And so then in your mind the 86.5  
9 percent district on Alt 2 wouldn't be packed because  
10 the Gingles threshold can be met in districts around  
11 it?

12 A Well, the term packed is -- is not as we  
13 saw before a matter of bright lines. It's  
14 definitely true -- as I said, when I have two  
15 different demonstration plans it's often that I'm  
16 trying to illustrate a tradeoff.

17 And so here Alt 2 has fewer majority  
18 districts than Alt 1 does but still more than the  
19 state. And on the other hand, it's a bit more  
20 compact, maybe even substantially more compact  
21 depending on what you think counts as a substantial  
22 difference.

23 So you're seeing tradeoffs here. And I  
24 think it's the -- the stats that we see in Alt 1  
25 where there are nine majority BVAP districts, ten



1 majority BHVAP and also ten by BHCVAP. What I've  
2 shown here is that that's readily accomplished while  
3 being highly mindful of other principles. Alt 2  
4 shows that if you dial up certain other principles  
5 you can still even with a very heavy emphasis, say,  
6 on compactness, you can still achieve that while  
7 increasing the number of majority districts over the  
8 state.

9 Q Let's look next to Page 28 which is the  
10 SD Gwinnett area. And this one, unlike the prior  
11 set of maps, only has an Alt comparison, not an Alt  
12 1 and Alt 2 comparison. Is Alt 2 any different in  
13 this area?

14 A There is no Alt 2. I'm sorry. Can you  
15 ask that a different way?

16 Q Certainly. So I just wanted to  
17 understand in the SD Atlanta region you provided  
18 enacted, Alt 1 and Alt 2. In the Gwinnett you only  
19 have enacted an Alt 2. And so my question is: Is  
20 Alt 2 in SD Gwinnett different than the enacted or  
21 different than Alt 1, or are you just selecting one  
22 to look at?

23 A Oh, I'm sorry. I don't mean to be non  
24 responsive. But there is no Alt 2, so I can't  
25 describe it's properties. But --

1           A           That's definitely right. It reaches  
2 significantly further north south in the Alt 1 than  
3 it did in the enacted.

4           Q           Turning over to Page 34 and Table 17 and  
5 18, I wanted to ask you about Table 18. You said  
6 that Alt 2 dominates the enacted plan. And that's  
7 based on the county splits and number of cut edges  
8 only; is that right?

9           A           So -- sorry if that's unfamiliar. So  
10 dominates is a technical term from optimization in  
11 which you say that one -- if you have  
12 multi-objective optimization, if you have several  
13 different metrics you're considering, to dominate is  
14 just to be better in all.

15                       That's all it means. I know the  
16 connotations are sort of aggressive, but it's --  
17 it's a technical term.

18           Q           Great. Thank you. Thank you for that  
19 clarification. I definitely was thinking a more  
20 aggressive reading of that, not the technical  
21 reading.

22                       So in looking at the Alt plan again, I  
23 noticed that on Alt 1 counted four districts that  
24 are greater than 80 percent on the Black VAP number,  
25 a district that's over 90 percent on Alt 2 in

1 District 57 on the Black VAP number.

2 Are these districts packed in your  
3 estimation?

4 A It depends whether you're using the word  
5 packed to kind of connote the intent to dilute the  
6 vote. And certainly if you mean packed that way,  
7 then they're not packed. Because there's no  
8 dilutive intent, I can assure you.

9 If, on the other hand, you mean the more  
10 restricted population concentration beyond what's  
11 needed to achieve certain goals, I would say that  
12 those are very high numbers but they reflect the --  
13 what I found in the geography.

14 Now, of course, you can always attempt  
15 to unpack that to counteract the human geography by  
16 creating, for example, elongated districts. But I  
17 found that that was not necessary here in order to  
18 significantly improve on the number of majority  
19 districts overall.

20 So, again, just to summarize. That was  
21 a bit of a mouthful. What I'm saying is, yes, those  
22 numbers are very high. No one's claiming you need  
23 90 percent black population to have opportunity.  
24 But, you know, the -- the tradeoff of compactness  
25 and county splitting and so on that would be

1 necessary to bring those down isn't needed here in  
2 order to meet the Gingles standard.

3 Q If we keep working our way along through  
4 the southwest region, and this is a region -- in  
5 looking at this, this looks like it's a plus 2 on  
6 all three of the majority and coalition categories;  
7 is that right?

8 A Yes. So now we're in HD Southwest, and  
9 I see plus 2 in all categories.

10 Q And one of the things on the Alt plan I  
11 noticed is Albany is the -- kind of population  
12 center area. It's connected all the way down to the  
13 Florida border. Again, is there a particular reason  
14 why you're putting Albany with a border county  
15 with -- on the Florida border like that?

16 A I would just repeat the explanation from  
17 earlier that says that these are intended to be  
18 demonstrations of what's possible, not necessarily a  
19 call for a particular configuration in -- you know,  
20 in this remedy at the end of the day.

21 Q And going over to Table 19, the HD  
22 Southwest Alt 1 also does split more counties than  
23 the enacted plan, right?

24 A That's correct.

25 Q And I think I know the answer to this

1 account or is this really just focused on  
2 effectiveness?

3 A This -- this section shows a focus on  
4 effectiveness.

5 Q So you can't identify any particular  
6 geographic or community reasons to link that part of  
7 Columbus with this part of south Georgia?

8 A Well, no.

9 Q -- in the effectiveness?

10 A That's right. And once again, I'm not  
11 suggesting that some -- this particular  
12 configuration is in any way required. I'm showing  
13 what might happen if you were drawing with an eye to  
14 effectiveness and the TDPs.

15 Q I'm looking over to the Augusta area.  
16 It looks like from this that in the process of  
17 adding the effective districts there's not a single  
18 district that's below -- above 50 percent on either  
19 BVAP or BHVAP on this east Black Belt Alt 3 map,  
20 right?

21 A Right. That's -- that's quite notable  
22 here. So while no districts get to 50, four of the  
23 districts are nonetheless effective, labeled  
24 effective.

25 Q And looking over to SD Southeast gets us

1 Q We again have a collection of four  
2 districts as I counted them of 80 percent BVAP in  
3 the process of getting to the increase in effective  
4 districts. And again, that wasn't something that  
5 you looked at because you weren't looking at racial  
6 issues while drawing, right?

7 A I was not.

8 Q And in the HD Cobb area, we have a 93.1  
9 percent BVAP district in Districts 58. And again,  
10 no particular reason for that configuration beyond  
11 that's what happened when you figured these other  
12 effective districts.

13 A Right. That would be the story  
14 throughout that you can see some very high numbers  
15 here as a function of the human geography that says  
16 especially black but also to a lesser extent Latino  
17 people live residentially in some parts of the state  
18 in area that are extremely heavily concentrated with  
19 minority residents.

20 It's possible to reduce those numbers.  
21 But if you're not looking at race, you might tend to  
22 see really high numbers like these.

23 Q And you also have one of the -- one of  
24 the changes I noted on this chart, too, is in  
25 District 43. There's a decrease in the number of

1       generals that are successfully for the minority  
2       preferred candidate from 8 to 5 in District 43. But  
3       still because it met the definition of effectiveness  
4       under your method you counted that as an effective  
5       district, right?

6               A       That's absolutely right. And not a  
7       great indication that we're not sort of -- aiming  
8       for Democratic performance here but for opportunity  
9       under this constructed definition.

10              Q       So looking at DeKalb on the next page, I  
11       guess the same answers in terms of high BVAP  
12       percentages and nothing difficult in this region  
13       versus any of the others; right?

14              A       Identical answers.

15              Q       And for particular configurations,  
16       again, like connecting areas of Milton with areas of  
17       Roswell or parts like that in north Fulton, that  
18       wasn't a consideration you were looking at in  
19       drawing these plans, right?

20              A       Right. I mean, with the knowledge --  
21       I'll will just sort of reiterate. With the  
22       knowledge that I gained throughout this process  
23       about areas where people were talking about shared  
24       community concerns, that probably informs all the  
25       map drawing in the back of my mind.

1 But because it's not visible on a map,  
2 those considerations aren't always going to be front  
3 of mind in the mapping process.

4 Q And so then for Gwinnett, for Southwest  
5 for East Black Belt, the process that you followed  
6 was the same for all of those regions, including fro  
7 Southeast region, right?

8 A Yes, quite the same.

9 Q That makes that part of the process a  
10 little bit shorter then. So in terms of Section 9  
11 of the report, are you offering of any opinions in  
12 this section of the report or just presenting the  
13 plans that you drew in light of what you described  
14 at the beginning of the section?

15 A Well, there's -- there's really very  
16 minimal text at all in this section. So to the  
17 extent that I intend conclusions -- they're  
18 conclusions about possibility, right. So the  
19 existence of these demonstrative plans shows that  
20 certain things are possible. And that's all that I  
21 want -- wanted to conclude from that section.

22 Q Let's move into our racial  
23 gerrymandering section. And so your method of  
24 looking at racial gerrymander as I understand it in  
25 this section is through core retention or conversely



1 partisan considerations can be in play. My question  
2 was just was raced used to achieve them or is there  
3 evidence that racial considerations were also in  
4 play.

5 Q And so -- but specifically in this  
6 section of your report, you're not analyzing any  
7 political data in comparison to racial data for  
8 these various geographic changes; right?

9 A I think in this section itself you won't  
10 see that. But the section is supported by several  
11 appendix tables. And, for example -- let me just  
12 flip ahead and find them.

13 So Section C supports the split of  
14 subsection of 10, and there you will see political  
15 data compared to demographic data.

16 Q So in terms of finding a complete  
17 analysis in Section 10, you have to include all of  
18 Appendix C to see the complete analysis of that. is  
19 that fair to say?

20 A I guess the way I would phrase it is  
21 that I think Section -- Appendix C can be helpful.  
22 But I've tried in section -- in the body of Section  
23 10 to present what I think is a collection of useful  
24 facts and observations.

25 Q Let's start with District 6. And you

1           A           That's right. It's the most  
2           overpopulated on this chart.

3           Q           And 14 -- well, and District 11 as well  
4           was also overpopulated by more than 37,000 people,  
5           right?

6           A           Okay.

7           Q           And those are districts that all -- at  
8           least in part touch District 6, is that right?

9           A           Let's see. What was the list again?  
10          14, 11 -- I just want to make sure I'm --

11          Q           And 7.

12          A           Yes, that sounds right. I'm trying to  
13          -- I'll just flip back to my map.

14                    14, yes. So that doesn't touch 6,  
15          right?

16          Q           14 does not touch 6. It touches 6, yes.  
17          There's -- I'm sorry. 14 is on your chart here, but  
18          it doesn't touch District 6, you're correct.

19          A           Right. I mean, it does in my  
20          alternative map, but not in the enacted plan, the  
21          benchmark plan, or the Duncan-Kennedy plan.

22          Q           And so you'd expect that there would be  
23          changes to all the districts. You're just pointing  
24          out -- when you're pointing out this closeness of  
25          District 6 to the ideal district size, that's not

1 looking at anything else in context, right?

2 A That's right. It's merely saying that  
3 if -- that one could conclude from that merely that  
4 if core retention were the top of mind  
5 consideration, only very small changes would have to  
6 be made. But of course we all fully recognize that  
7 there are many other considerations in play.

8 Q And on District -- I'm sorry. On Page  
9 68 you're discussing this -- back to Exhibit 1.  
10 You're discussing the transfers that took place  
11 here.

12 A Once again, what page are we on?

13 Q I'm sorry. Back on Exhibit 1, your main  
14 report, Page 68.

15 A Yes. Okay. I'm there.

16 Q Okay. And so you note that there were  
17 swaps or transfers of more urban, more black and  
18 Hispanic neighborhood out of CD 6 while bringing in  
19 whiter suburban areas; right?

20 A Correct.

21 Q And you say at the end of that  
22 paragraph, "This transition looks to be plainly  
23 dilutive of voting power."

24 What about the transition is plainly  
25 dilutive of voting power?

1 But equally because nothing changes in a  
2 vacuum, if you change a district you change its  
3 neighbors. And I also considered whether any of  
4 those swaps improved the prospects in the  
5 neighboring districts, and they do not.

6 So taken together, that's what supports  
7 the conclusion that this transition looks to be  
8 plainly dilutive.

9 Q And how do you rule out that the  
10 transition could be plainly political in terms of  
11 the goals of the map drawers?

12 A I don't need to rule it out to conclude  
13 that it's dilutive, right? It could be both  
14 political and dilutive.

15 Q Moving next into the changes made in CD  
16 14 into Cobb County.

17 A Yes.

18 Q And you say that -- I'm going to point  
19 here. In that -- in the next paragraph after what  
20 we were just looking at, you say Figure 31 makes it  
21 clear that the movement of these areas of Cobb into  
22 the district can't be justified in terms of  
23 compactness or respect for urban/rural communities  
24 of interest."

25 How does Figure 31 illustrate that to be

1 shifts.

2 Q And how did you go about doing the --  
3 garnering the information about, for example,  
4 Senator, now Representative Au or Senator Islam?

5 A Let's see. So I think I -- one thing  
6 that I had encountered is a list of who -- I'm  
7 actually not sure how to pronounce it. Galeo or  
8 Galeo had -- had endorsed in the elections. So I  
9 got -- you know, I really used sort of every means  
10 at my disposal to try to figure out who were the  
11 candidates aligned with the grass roots organization  
12 representing black and Latino voters.

13 So the -- this endorsement is a matter  
14 of public record. Other than that, I mean, I'm sure  
15 I looked at PDM many times to try to figure out what  
16 I could about the reelection records. But I didn't  
17 use any other non-publicly available resources.

18 Q And do you consider racially imbalanced  
19 population transfers in and out of a district as  
20 evidence of racial predominance in the consideration  
21 of a district map?

22 A I would call it suggestive evidence, not  
23 conclusive evidence, but suggestive evidence.

24 Q Do you think a racially imbalanced  
25 population shift is suggestive of a racial goal of a

1 precincts you cannot claim to be doing do, I think  
2 -- as far as I'm aware, you cannot claim to be  
3 confidently doing so on the basis of election  
4 history.

5 Of course you can use the predictive  
6 analytics to try to guess who voted how. But in my  
7 understanding the primary tool that you have at your  
8 disposal when you split precincts is demographics.  
9 That's what's available to you when you split  
10 precincts.

11 And so I find that the state has split  
12 far, far more precincts than my alternative maps  
13 have. And again, we're talking about state  
14 precincts here, not the census VTDs.

15 And to me that is -- that is suggestive  
16 of race, not party, as a kind of explanation.

17 Q So beyond the precinct splits we just  
18 talked about and for purposes of this report, you  
19 don't have further analysis to discuss splits of a  
20 partisan nature having a racial impact that may be  
21 unintended, right?

22 A That's right. The strongest evidence is  
23 that of split precincts.

24 Q Well, let's move into the state House.  
25 I wanted to ask you about -- I think this gets into

1 could learn from that record.

2 Q And so the same question as to the  
3 Senate districts that we talked about. Are you  
4 saying that the districts listed in Table 40 on Page  
5 71 were drawn primarily based on race to the  
6 detriment of traditional districting principles?

7 A Well, again, I -- I would probably stop  
8 short of using a word like "primarily," but I would  
9 say they were drawn in a quite racially-distinctive  
10 way.

11 And I think what I mean for you to --  
12 for readers to draw from these figures is we can see  
13 they have more countries reversals than they used to  
14 have, they're less compact looking than they used to  
15 be.

16 And so I'm not seeing at least that  
17 level any possible TP justification, although  
18 certainly, as you say, there could be others that  
19 aren't on the record.

20 Q And did you review precinct shapes as  
21 part of your analysis of traditional districting  
22 principles for these districts?

23 A I definitely do take that into account  
24 where I can, yes.

25 Q And my question was specifically, did

1 mean that very sincerely. You can achieve things  
2 that look really conspicuous must by chance. But  
3 here I find that, you know, the indicia of racial  
4 sorting are quite strong. And so generally that's  
5 suggestive of the use of race at least as a proxy.

6 Q So are you offering the opinion in this  
7 report, looking at Page 72, that race predominated  
8 over other traditional districting principles in the  
9 splits in the Congressional map of Cobb, Fayette,  
10 Fulton, Douglas, Newton, Gwinnett, Muscogee and Bibb  
11 Counties?

12 A Well, I made a slightly more qualified  
13 determination here the way I wrote it, which is to  
14 say that I see patterns consistent with a packing  
15 and cracking strategy.

16 Q But you're not saying there was a  
17 packing and cracking strategy. You're just saying  
18 the data are consistent with that kind of strategy?

19 A Well, that's right. I -- I try not to  
20 overstate the kinds of conclusions that can be drawn  
21 from these kinds of methods.

22 Q In turning to the precinct split  
23 analysis, which is our next section, you reference  
24 the -- and so in looking at these -- and I saw  
25 you've given seven precincts as examples of split



1           A       Well, let's see. CD 6 and 11. I don't  
2 -- let's see. They might be contained in the  
3 figures in Appendix C.

4                   Let me take a quick look. But  
5 otherwise, from memory I wouldn't be able to say. I  
6 don't think those are in the figures. So I can't  
7 say from memory.

8           Q       Okay. I didn't see them either, so  
9 that's -- that's --

10          A       Okay. We agree.

11          Q       And in Table 42 you use kind of the same  
12 language we just said. There's a showing of  
13 significant racial disparity consistent with an  
14 effort to diminish the electoral effectiveness of CD  
15 6 for black voters.

16                   You're not saying that was the effort.  
17 You're just saying the evidence is consistent with  
18 that kind of effort, right?

19          A       That's right. I've made an effort to be  
20 disciplined about the language.

21          Q       When you reviewed -- the next page over  
22 there's kind of a District CD 4 and 10 precinct  
23 split with the boundaries.

24          A       Yes.

25          Q       Did you look to see if there were other

1 geographic features, like highways or other areas  
2 along which those boundaries were split?

3 A That is something I generally do look  
4 for. I can't tell you with confidence, you know, in  
5 realtime whether I looked at that for these  
6 particular splits. But that is generally something  
7 I do consider.

8 Q Next you look at the state Senates. And  
9 we have similar -- a similar kind of county precinct  
10 sequence. And you being with the county splits.  
11 And you note there is significant racial disparities  
12 between the splits in Fulton, Gwinnett, DeKalb,  
13 Cobb, Bibb, Chatham, Douglas and Houston and Newton,  
14 Clarke, Hall, Muscogee, Fayette and Richmond  
15 Counties.

16 You're not saying that these -- you're  
17 saying, like the Congressional plan, that these are  
18 splits consistent with a racial goal, not that it  
19 was definitely a racial goal in those splits, right?

20 A Right. I would never try to claim that  
21 I can definitely conclude anything about goals.

22 Q And you also say that numerous counties  
23 were split into unnecessarily many pieces, again, in  
24 that district than necessary. You're just referring  
25 to that if it was done and there could have been a

1 reduction in precincts -- I mean in county splits?

2 A Right. Necessary refers to possibility.  
3 And so, for instance, some counties are so large  
4 that they're larger than Senate districts and so  
5 they must be split. Those are necessary splits.

6 And, you know, some counties are so  
7 large they must be split into at least a certain  
8 number of pieces. And my point here is that the  
9 actual number of pieces far exceeds that necessary  
10 count.

11 Q And then you reference that there were  
12 13 state precincts split with a significant racial  
13 disparity; right?

14 A Yes.

15 Q And you didn't identify any other  
16 precincts that were split on the Senate plan with a  
17 significant racial disparity besides the 13, right?

18 A Right. And I think -- what I -- if I  
19 wrote this well, which I hope that I did, what I  
20 meant by significant is the same 20-point disparity  
21 that was referred to earlier in the paragraph,  
22 although I -- it would have been better if I had  
23 specified within the sentence.

24 Q And then for the state House plan you  
25 listed out 30 counties, and I won't read off all of

1 those. But I'm assuming the same opinion in terms  
2 of you find the racially sorting splits consistent  
3 with a racial goal, but you can't say for certain  
4 that it is a racial goal, right?

5 A That's right. And I'll note that here  
6 it returns to a theme I mentioned, you know, a few  
7 hours ago, which is that, as I wrote here, the large  
8 counties take the brunt of the splitting. So, you  
9 know, Fulton 22 pieces and Gwinnett 21 and so on.

10 And that's something that I gleaned from  
11 the public testimony was undesirable from a  
12 community's point of view.

13 Q And then you say the number of precinct  
14 splits was a striking number. Any special meaning  
15 for striking there, like dominate earlier?

16 A No, there's no technical meaning, just  
17 that I was struck by it.

18 Q Okay. And you identified only 47  
19 precincts in the state House plan that are split  
20 with a heavy racial disparity across the division;  
21 right?

22 A That's right.

23 Q Then you conclude this section by saying  
24 racially distinctive precinct splits provide  
25 particularly strong evidence that race has

# EXHIBIT G

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UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF GEORGIA

GEORGIA STATE CONFERENCE OF ) No.  
NAACP, et al., ) 1:21-CV-5338-ELB-SCJ-  
) SDG  
Plaintiff, )  
)  
vs. )  
)  
STATE OF GEORGIA, et al., )  
)  
Defendant. )  
\_\_\_\_\_)

VIDEOTAPED 30(b)(6) and 30(b)(1) DEPOSITION OF  
LEGISLATIVE AND CONGRESSIONAL REAPPORTIONMENT OFFICE  
(MS. GINA WRIGHT)  
January 26, 2023  
9:17 a.m.  
18 Capitol Square SW  
Atlanta, Georgia

Reported by: Marcella Daughtry, RPR, RMR  
CA CSR 14315  
GA No. 6595-1471-3597-5424

1 Q In September?

2 A No.

3 Q In October?

4 A Possibly. October sounds -- maybe.

5 Q Late October?

6 A It had to be in that time window because it's a  
7 narrow time window, so maybe October.

8 Q Late October?

9 A I couldn't say specifically.

10 Q Do you recall if it was closer to when the  
11 September 27th map was made public or was it closer to  
12 when the ultimately enacted map was made public?

13 A I don't think it was close to the  
14 September time frame, but I don't know exactly the date.

15 Q Do you remember, what did you guys talk about?

16 A The Congressional map.

17 Q Who was at the meeting?

18 A The -- the names I gave you previously.

19 Q So just to be clear, you had a meeting with --  
20 about the Congressional map at some time closer to the  
21 enacted map's publication with Chairmans Kennedy, Rich,  
22 Mr. Tyson, Speaker Ralston, Lieutenant Governor Duncan,  
23 and staff of the Speaker and Lieutenant Governor?

24 A That's correct.

25 Q Do you remember how many staff?

1           A    No.  I was in my office on a Zoom call and I  
2 was not in the actual room with them, so I don't know who  
3 all was in the room.

4           Q    Was everyone -- maybe you don't know this, but  
5 was everyone else in a single room and you were on the  
6 video?

7           A    I can't say that everyone.  Most of them were  
8 in a single room.  I don't recall there being someone  
9 else on the Zoom call, but...

10          Q    Was -- was a map projected when that was taking  
11 place?

12          A    Yes.

13          Q    Did you have the ability to change the map's  
14 composition when that occurred?

15          A    Yes.

16          Q    Did anyone on that call ask you to make changes  
17 to the lines at that time?

18          A    Yes.  We worked on adjusting the map during  
19 that call.

20          Q    It was a working session?

21          A    Yes.

22          Q    And changes were made?

23          A    Yes.

24          Q    At the direction of Chairman Ralston?

25          A    Speaker Ralston?



1 Q I apologize. Excuse me. At the direction of  
2 Speaker Ralston?

3 A Yes. I think there was a group discussion  
4 about things. I don't know that it was a single person  
5 who said do this, but...

6 Q Somebody on the other side of the Zoom --

7 A Uh-huh.

8 Q -- gave you an instruction about how the  
9 composition lines would look and you followed it?

10 A Yes. We would try different scenarios.

11 Q I just want to understand what you are saying.  
12 So would it be fair to say that it was difficult to  
13 discern who was in charge of that instruction, but it was  
14 someone on the other side of the call?

15 A It's not difficult to discern, but there was  
16 discussion happening.

17 Q I see.

18 A So as listening to the discussion, I would then  
19 attempt to try and create a sample of what it was that  
20 they were looking to see.

21 Q So it was a collaborative process amongst the  
22 people on that Zoom call?

23 A Yes.

24 Q Are you aware of how the individuals on the  
25 Zoom call obtained -- you know, built their opinions

1 point, but I don't recall a specific e-mail with him.

2 Q The same reasons why you didn't really e-mail  
3 the Congressional map?

4 A Yes.

5 Q Okay. Do you -- did -- I think you told me  
6 that Chairman Kennedy provided you with specific  
7 instructions about how the lines of the map should be  
8 drawn?

9 A Say that one more time. I'm sorry.

10 Q Sure.

11 Did Chairman Kennedy provide you with specific  
12 instructions about how the lines of the State Senate map  
13 should be drawn?

14 A No.

15 Q Did you receive any specific instructions about  
16 how the lines of the State Senate map should be drawn?

17 A Initially, no.

18 Q How did you make a determination about how to  
19 draw the lines for the State Senate map?

20 A That was a -- basically a -- call it a blind  
21 map, but it was a map, just a starting point map to  
22 address the population changes in the state and make  
23 adjustments to the districts as they were, to try and  
24 have a starting point, a discussion map to -- to start  
25 with.

1 you about Mr. Tyson's role?

2 A I believe so.

3 Q So Mr. Kennedy -- pardon me. Chairman Kennedy  
4 sees the blind map, and then what happens? Does he  
5 direct you to make changes to it?

6 A That being a starting point map, then yes, we  
7 began to work within it to make adjustments for whatever  
8 requests people wanted to try and modify the map, however  
9 he wanted to try to best accommodate requests and things  
10 that were brought to him.

11 Q And you had a lot of conversations with him?

12 A Yes.

13 Q A lot of conversations about modifying the  
14 blind map?

15 A We did have conversations about modifying it,  
16 yes.

17 Q Were those conversations ever in person?

18 A Yes.

19 Q Were they mostly in person?

20 A Yes.

21 Q When you had those conversations, was the map  
22 projected onto a screen?

23 A Not necessarily.

24 Q But sometimes?

25 A Sometimes.

1 Q When you had the conversations when the map was  
2 projected onto the screen, was it within Maptitude?

3 A If I'm looking at the map, it would have been  
4 in Maptitude.

5 Q Okay. And you know how to use Maptitude?

6 A Yes.

7 Q Was data projected onto the screen?

8 A Sometimes it may have been. Not all the time.

9 Q Why would you look at a map without any data  
10 related to it?

11 A You are just reviewing the geography. You  
12 wouldn't necessarily be looking at the data. You are  
13 looking at the composition of districts, the counties,  
14 precincts and things.

15 Q When data was projected onto the screen, what  
16 type of data was it?

17 A Typically, our data would include the total  
18 population, the deviation, the percent deviation, voting  
19 age population. Most of the fields that you see on our  
20 population summary reports would be also included on  
21 there, as well as political data.

22 Q I recall that there's data related to the race  
23 of the population on those summary reports.

24 A Correct.

25 Q Was data related to the race of the populations

1 projected onto the screen?

2 A It could have been sometimes.

3 Q Most of the time?

4 A Most of the time. We usually projected all the  
5 race data that we would use on the reports, as well as  
6 the political data that they were reviewing. So both  
7 together.

8 Q Was that data relevant to you making -- I'll  
9 rephrase.

10 Did Chairman Kennedy consider that data when  
11 making instructions about how to draw the lines?

12 A I would assume he did. I don't know what  
13 Chairman Kennedy considered.

14 Q Was it sort of a collaborative conversation or  
15 was it really just Chairman Kennedy giving you  
16 instructions and you following them?

17 A Can you explain what you mean by that?

18 Q Yeah. I can imagine that Chairman Kennedy told  
19 you you need to move this line in southeast Georgia and  
20 then you did it. Or Chairman Kennedy could say, what  
21 would happen if I moved -- you moved this line in  
22 southeast Georgia? You could say, well, Chairman, this  
23 or that.

24 A I'd say it's more like the second scenario.

25 Q Okay. What type of questions did he ask you?

1 Kennedy, Mr. Tyson and Ms. Paradise and other senators?

2 A The changes, I think, came at the request of  
3 the senator, and then Chairman Kennedy authorized to try  
4 and see if we could do what he had requested.

5 Q At the request of the senator, what senator are  
6 you referring to?

7 A Senator Rhett.

8 Q So there was the map that was published first?

9 A Uh-huh.

10 Q And then Senator Rhett requested changes?

11 A Uh-huh.

12 Q And as a consequence of that, you made changes?

13 A Yes.

14 Q And then another map was published?

15 A Yes.

16 Q Were there any other changes requested?

17 A I cannot recall. That one stands out. I  
18 remember doing that one. I don't recall if there were  
19 others in that draft.

20 Q Why does it stand out?

21 A I have drawn a lot of maps, so...

22 Q Yeah. So why does that one stand out?

23 A Because in committee, I remember there was  
24 discussion over the change, that that was in the  
25 committee meeting, so that one sticks out. That may have

1       been the only one that went into that final version  
2       because other -- other changes might have gone into the  
3       other version, the first presented version before we got  
4       to that, but there were members, you know, putting  
5       changes in.

6               That one just jumps out at me. That may have  
7       been the only one that went into that last version.

8               Q     Did you speak with anyone else in addition to  
9       the people you referred to for any reason about the State  
10      Senate map?

11              A     I probably spoke with a lot of senators  
12      regarding that map.

13              Q     Right. Right. Okay.

14              A     So I don't want to list all 56 of the  
15      members --

16              Q     Yeah.

17              A     -- that were here then, but I spoke with a lot  
18      of members at that point, from the time -- especially  
19      when the map was made public, those that requested  
20      things.

21              Q     Did you speak with anyone in the House about  
22      drawing the State Senate map?

23              A     I don't think so.

24              Q     Did you speak with anyone outside of the  
25      General Assembly about drawing the State Senate map?

1 look like?

2 A There was a lot of input everywhere.

3 Q And it was hard to look at all of it?

4 A Yes.

5 Q Right. You weren't able to look at all of it?

6 A I looked at a lot of it but not all of it.

7 Q Yeah. There was a lot you didn't look at?

8 A I don't know that I'd say there was a lot I  
9 didn't look at.

10 Q Okay.

11 A But I did watch or attend every public hearing.

12 Q Okay. We have just been talking about the  
13 State Senate map, and you described a blind -- I'm going  
14 to call it a blind map process. Does that make sense if  
15 I said it that way?

16 A Sure.

17 Q Yeah. I should back up. What was your role in  
18 drawing the State House map which Governor Kemp signed  
19 into law?

20 A It was the same as the House, or as the Senate  
21 and Congressional.

22 Q Okay. And did you use the same blind map  
23 process to draw the State House map?

24 A Yes.

25 Q Was Brian Knight involved at all in drawing the



1 Q Well, so -- sure. Let me rephrase.

2 You referred to having a working session with  
3 Chairman Kennedy, Mr. Tyson, Ms. Paradise about the State  
4 Senate map. Am I recalling that?

5 A Right. Well, we would have had several  
6 meetings where we discussed the map. There wasn't one  
7 session where we had other multiple senators involved at  
8 the same time that I recall. So the Senate was a little  
9 different in that respect.

10 Q You met with Chairman Rich regarding the State  
11 Senate map?

12 A Yes.

13 Q Was it the same type of process that you had  
14 with Senator Kennedy, where you had a blind map and then  
15 you reviewed it with her?

16 A Yes.

17 Q And then she, as the sponsor of the map, would  
18 either direct you to make changes or bring in other  
19 members of the House who would make directions for  
20 changes?

21 A Yes. It was my understanding both chairmen  
22 were meeting with members and had opened up office time  
23 and meeting time to take input from the members about the  
24 map and their districts. And I don't know how many  
25 members each of them met with, but they did have those

1 meetings and that frame of reference. So that when we  
2 met together, they could use those meetings and the input  
3 they received from members to make adjustments if the --  
4 if the draft didn't look -- if they felt like this member  
5 had requested this and we weren't -- if we could  
6 accommodate things, we would try to accommodate those  
7 things.

8 Q But you weren't involved in those meetings?

9 A I was not.

10 Q Was anyone in your office involved in those  
11 meetings?

12 A No.

13 Q You just knew they existed?

14 A Right.

15 Q Would Chairman Rich mention them to you?

16 A Yes.

17 Q Sometimes specific meetings?

18 A Maybe.

19 Q Yeah.

20 We've been going about an hour, I think. Would  
21 this be a good time to maybe take a 15-minute break?

22 A I'm -- whatever.

23 THE WITNESS: Patrick?

24 MR. JAUGSTETTER: Sure.

25 MR. CANTER: Thank you.

1 received directions from -- sorry, I'll rephrase.

2 You mentioned earlier that with regards to the  
3 Senate map, you received directions on how to draw the  
4 lines from -- either directly from Chairman Kennedy or  
5 through Chairman Kennedy from other senators. Is that  
6 basically right?

7 A Yes.

8 Q And it was the same process with the State  
9 House map but with Chairman Rich, not Chairman Kennedy?

10 A Yes.

11 Q What was your process for receiving directions  
12 on how to change the lines with regards to the  
13 Congressional map?

14 A Well, I think we talked about the meeting,  
15 jointly meeting with them, so same type of thing. Input  
16 from whatever they had, conversations or whatnot. There  
17 were also considerations, of course, from things we had  
18 heard from public hearings and other things to try and  
19 incorporate into those maps, so those decisions were made  
20 in coordination with all of that together.

21 Q Did you use a blind map for the Congressional  
22 map -- sorry, let me rephrase.

23 A Yeah.

24 Q You mentioned -- that's fair.

25 You had mentioned creating a blind Senate map

1 same thing?

2 A Right. The fewer the splits, the easier it  
3 would be for them to assign voters, especially under a  
4 compressed time frame.

5 Q Got it. I understand that's especially the  
6 case with precinct splits?

7 A Yes.

8 Q As part of your analysis of the maps, what did  
9 you do to confirm that they were in compliance with the  
10 Voting Rights Act?

11 A So compliance with the Voting Rights Act is a  
12 legal opinion, so my work on drawing the map would  
13 create -- try and maintain districts that we had  
14 previously had that were districts that had been  
15 majority-minority population districts. We try not to  
16 reduce the number that we had before, and I would try to  
17 make sure that what we were drawing, to the best of my  
18 ability, continued that, if possible, but then I would  
19 also ask them to have those reviewed by counsel for that  
20 compliance.

21 Q So would it be fair to say that as a nonlawyer,  
22 you tried your best to ensure compliance, but ultimately  
23 that wasn't a determination you were making?

24 A True.

25 Q Okay. And the way you tried your best was to

1 recommended to add to 6 on that.

2 Q What do you mean by "e-mail list"?

3 A We talked about that. I had an e-mail from his  
4 staff.

5 Q Oh, I see.

6 A It was in the documents somewhere.

7 Q I understand. So there was an e-mail from the  
8 staff of Chairman Kennedy?

9 A Chairman Kennedy, uh-huh, on his behalf.

10 Q And the e-mail -- and I know I'm partly  
11 paraphrasing here -- but roughly said, hey, here are some  
12 things we would like you to do for your blind map?

13 A Right. Well, they didn't call that a blind  
14 map, but here's some things we'd like to try on a  
15 Congressional map.

16 Q Do you know why Senator Kennedy's staff wanted  
17 to try adding Forsyth into CD 6?

18 A The desire for district -- or for congressional  
19 District 6 was to make it a more politically electable  
20 district.

21 Q Politically electable for whom?

22 A For the party of the people who were drawing  
23 the map.

24 Q How was that information conveyed to you?

25 A It is obvious to me, but, I mean, I don't -- I

1 don't -- that discussion I think was had at some point.

2 Q Sorry. Sorry.

3 A I don't --

4 Q That question --

5 A -- have a specific --

6 Q Yeah.

7 A -- moment.

8 Q What makes it -- what makes it obvious to you?

9 A Forsyth County tends to vote Republican. It  
10 was a political decision.

11 Q If you are gonna add Forsyth County, you are  
12 going to have to take away something else. Is that  
13 right?

14 A Right. So as the map from the bottom -- of  
15 course, we have mentioned south Georgia's loss of  
16 population, those three congressional districts across  
17 the bottom, and I think even District 12 had a loss of  
18 population or were below in population. They had to  
19 reach upward. It sort of pushed the entire map. It did  
20 this on all three. The effects of that on all three maps  
21 pushed things northward.

22 So some districts around the middle and in the  
23 upper parts in the Metro area were gonna get shifted  
24 further up to where the population was. So the growth in  
25 population there added into District 6 also gave -- met

1 their political goal for District 6, so that would be the  
2 decision they made to push that district into Forsyth.

3 Q Are you aware that the benchmark Congressional  
4 District 6 -- I'm pretty sure I'm right about this one --  
5 was within 600 persons of the ideal population size for a  
6 Congressional map?

7 A Yes. I think some of them were closer to the  
8 target size than others, depending upon the pace of  
9 growth. But in any redistricting map, we always say that  
10 doesn't mean you can leave one district in a vacuum. The  
11 effects of other districts, the desires of, you know,  
12 what they want to see in the map impact the shape of the  
13 district, so...

14 Q It seems like adding Forsyth was one of the  
15 first proposals, though; is that right?

16 A It was on that initial draft.

17 Q The initial list --

18 A Uh-huh.

19 Q -- requesting information, right?

20 Are you aware of any other reasons why Forsyth  
21 was added to -- just we'll start with the September map?

22 A Other than political reasons?

23 Q Other than the direction from the e-mail from  
24 Senator Kennedy's -- Chairman Kennedy's staff.

25 A Well, as I said, I think that was the political

1 goal for District 6, so...

2 Q Ultimately in the passed map, Dawson was added  
3 as well?

4 A I'm sorry, can you say that again?

5 Q It looks like, when I look at the passed map,  
6 Dawson County was added on top of Forsyth.

7 A You mean passed, approved. I was wondering --

8 Q Oh, no, I didn't --

9 A -- when you said passed, and I was like --

10 Q I'm sorry.

11 A I was like, what, what?

12 Q I was told I need to stop that. Enacted?

13 A Enacted.

14 Q Yeah.

15 A Yes.

16 Q I'll --

17 A Yes.

18 Q -- rephrase.

19 Yeah. Ultimately the enacted map includes --

20 A Dawson.

21 Q -- Dawson County as well?

22 A That's correct.

23 Q Yeah. What was -- how did you get the  
24 direction to add Dawson County to the enacted map?

25 A That was discussed in the meeting we talked



1 about earlier that I was on Zoom, and we worked on the  
2 map, the Congressional map, and that --

3 Q So --

4 A -- was discussed in that meeting to increase --  
5 (Zoom interruption.)

6 THE WITNESS: Okay. I don't know --

7 MR. JAUGSTETTER: Keep going.

8 THE WITNESS: Okay. What was I saying? The  
9 meeting. Yes, that was discussed in the meeting, to add  
10 that into District 6 to further -- to further increase  
11 the Republican percentage in that district.

12 Q BY MR. CANTER: I believe that meeting included  
13 Chairmans Kennedy and Rich, Mr. Tyson, Speaker Ralston,  
14 Lieutenant Governor Duncan, and some of the Speaker and  
15 other Governor staff, right?

16 A Yes, that's correct.

17 Q Do you remember who directed you to add Dawson?

18 A If I recall correctly, I think it was Speaker  
19 Ralston.

20 Q Did he provide a reason?

21 A As mentioned, the discussion was about the  
22 Republican percentage of the way the district would vote,  
23 so that was what was being looked at and discussed as it  
24 was -- as we were trying that out.

25 Q I believe you said that a map was up on the

1 screen during this conversation?

2 A Yes.

3 Q Was demo -- demographic data reflected on the  
4 screen as well?

5 A Yes. There would have been demographic, as  
6 well as political. I'm not sure how clearly they could  
7 see that from where they were and the way that it was  
8 projected, because I wasn't there with them, but it would  
9 have been on the screen for -- while we were doing it.

10 Q Do you know if there was data reflecting the  
11 race of citizens in the different districts on the  
12 screen? Was it racial data --

13 A What do you mean?

14 Q Yeah, was it racial data reflected on the  
15 screen?

16 A Yes.

17 Q Yeah, it doesn't mean you had demographic,  
18 yeah.

19 A Racial data, as well as political data.

20 Q I'm sorry. I might have misheard you.

21 A Yes.

22 Q Thank you for that confirmation.

23 Did you literally make the change to Dawson  
24 during that meeting?

25 A Yes.

1 Q And did the data change on the screen when you  
2 made it?

3 A The data would change when you --

4 Q Yeah, yeah.

5 A -- change the map, yes.

6 Q So the -- the members -- the participants in  
7 the meeting on the other side of the Zoom at least could  
8 have seen the changes in the numbers?

9 A They could have. The pending change box that  
10 shows up, I don't know if you are familiar with  
11 Maptitude, but it will only show the changing number  
12 while you have the selection highlighted.

13 Once you click that into the district or make  
14 that change, then it switches to the new. You then can't  
15 see the previous. You are not seeing both at the same  
16 time.

17 Q Yeah, no, I know what you mean.

18 A Yeah.

19 Q So when you were about to change -- when you  
20 were about to add Dawson to CD 6, you could see the  
21 racial composition of Dawson under the September map next  
22 to the racial compo- -- I'm sorry, the racial composition  
23 of CD 6 on the September map next to the racial  
24 composition of CD 6, or would it change --

25 A No.

1 Q Okay.

2 A It's going to show the two districts. So  
3 whichever district you are moving it out of and the  
4 district you are pushing it into, it's going to show the  
5 new number for what that would be if you moved -- if  
6 you --

7 Q Okay.

8 A -- clicked that, made that change.

9 Q So right before making -- right before adding  
10 Dawson into CD 6, they are able to see what the new  
11 racial composition of CD 6 would be?

12 A Right. They would see the new number. They  
13 wouldn't see the previous --

14 Q Right.

15 A -- at that point.

16 Q Yeah. But before adding that, you would have  
17 seen the previous --

18 A Right.

19 Q -- composition? Okay.

20 A You could have, yes.

21 Q Yeah, yeah, if they looked.

22 A If you are looking, yeah.

23 Q Yeah, right. And then you click it, and it's  
24 added?

25 A It switches.

1 Q Yeah.

2 Was the discussion just, let's add Dawson, or  
3 was there anything more specific about that? It looks  
4 like the entirety of Dawson County was added.

5 A Yes. We moved -- both those two counties were  
6 in -- added in whole. Of course, trying to divide  
7 counties was not -- as we talked about earlier, it poses  
8 problems with elections and whatnot, so trying to limit  
9 the splitting of counties.

10 I think there was discussion about the fact  
11 that Georgia 400 runs up through that district, so there  
12 is a common road traveling through there, as far as those  
13 areas being together, but the -- there was a lot of  
14 discussion going on. Again, I wasn't in the room, so  
15 it's...

16 Q Could you hear what was in the room?

17 A I could, but again, I'm looking at other things  
18 while they are discussing --

19 Q I see.

20 A -- what they are doing.

21 Q So based on your knowledge -- I understand you  
22 couldn't necessarily hear everything, but based on your  
23 knowledge, was there any other factors that were  
24 considered in the room when deciding to add Dawson County  
25 to CD 6?

1           A    To my recollection, adding Dawson to CD 6 had  
2   to do with the political numbers of the district. That  
3   was the only thing.

4           Q    Okay. You just mentioned that you try hard to  
5   not cut counties. Is that right?

6           A    Correct.

7           Q    I see the new CD 6 cuts right through Cherokee.  
8   Is that right?

9           A    Yes.

10          Q    Did I pronounce it correct?

11          A    Cherokee.

12          Q    Yeah. When was the decision made to add this  
13   portion of Cherokee County to CD 6?

14          A    I think that was a part of that meeting as  
15   well. We were working on the shape of District 6 --

16          Q    Okay.

17          A    -- and the political performance of District 6.

18          Q    Who asked that this portion of Cherokee be  
19   added to CD 6?

20          A    I don't recall.

21          Q    But it was someone that was in the room?

22          A    Right. As we were making adjustments in that  
23   area to District 11 and District 6, that I think we were  
24   able to put Bartow County back together, it previously  
25   had been split before, but then population-wise required

1 that splitting in Cherokee. There was a lot of movement  
2 in making adjustments in those two districts in that area  
3 during that meeting.

4 Q Yeah. Can you help me out? Can we go to the  
5 September map for a second, just -- oh, I see. Bartow  
6 County was split in CD 11 in the September map?

7 A Right.

8 Q But when you added Cherokee to CD 6, you were  
9 able to keep Bartow County whole --

10 A Yes.

11 Q -- in the passed map?

12 A Right.

13 Q Okay. The -- the line that cuts through  
14 Cherokee --

15 A Uh-huh.

16 Q -- right, it's kind of jagged?

17 A Uh-huh.

18 Q Right?

19 A It's a river.

20 Q It's a river. Okay. So it follows the river?

21 A That's -- yes. The precinct lines there follow  
22 the river, and so, therefore, it's following the  
23 precincts, which is, I think, follows the river.

24 Q Great. Thank you for that.

25 A Uh-huh.

1 Q It looks like a portion of Cobb County was  
2 taken out of CD 6. Let me rephrase the question.

3 I'm looking at the side-by-side map right now.

4 A Okay.

5 Q I think it's helpful right now. And I see in  
6 the benchmark CD 6, there is more Cobb County than in the  
7 enacted CD 6?

8 A Uh-huh.

9 Q Do you recall taking a portion of Cobb County  
10 out of CD 6?

11 A Specifically, no. As I said, we were doing a  
12 lot of movement in that area on the map. And again, the  
13 push of population does impact what -- where those lines  
14 are drawn. I don't specifically recall --

15 Q Okay.

16 A -- what we did, you know.

17 Q Do you think that you made that change  
18 regarding Cobb County and CD 6 during the working session  
19 that we've been discussing?

20 A Cobb County was divided on both of the versions  
21 from September. In CD 6 it had been -- even before that,  
22 I think it was split. So that area had always been a  
23 portion of District 6; it had always been divided. So  
24 it's a similar line on all three versions. I mean, if  
25 you look at -- I'm trying to remember which. This is the



1 prior.

2 Q Yes.

3 A So this would have been the benchmark.

4 Q Yeah.

5 A And then this is the September. All three,  
6 that same East Cobb area is in District 6. So to give  
7 you the specifics of how many people moved one or the  
8 other in that area, I don't know.

9 Q Got it.

10 Some portion of CD 6 -- well, let me back up.  
11 You added a portion of Cherokee, all of  
12 Forsyth, all of Dawson into CD 6 for, ultimately, the  
13 enacted plan?

14 A Uh-huh.

15 Q Adding more people, you've got to take some  
16 people out. Was there any discussion about where you  
17 were going to take people out?

18 A So I think that had been done on the  
19 September map when we moved District 6 out of North  
20 DeKalb.

21 Q I see. So was the decision to move -- remove a  
22 portion of DeKalb from CD 6 made in the e-mail provided  
23 to you from Chairman Kennedy's staff?

24 A I believe that it did say to shift 6 out of  
25 DeKalb and up into Forsyth, so yes.

1 Q Do you recall any other directions from  
2 Chairman Kennedy's staff about the composition of CD 6?

3 A Not specifically, no.

4 Q Do you remember any other discussions about  
5 CD 6 during -- about the composition of CD 6 during the  
6 working session that we've been talking about?

7 A Yes. There was discussion about a proposed --  
8 or a candidate, a potential candidate in District 6 that  
9 where that person lives and something about that person.

10 Q Do you remember the potential candidate?

11 A I'm trying to remember his name.

12 Q It was a he?

13 A It was a he.

14 Q McCormick?

15 A No.

16 Q But it was a potential candidate that you  
17 wanted to keep in CD 6?

18 A That they wanted to not have in CD 6. But, of  
19 course, candidates for Congress don't have to live in the  
20 district anyway, so...

21 Q Did you talk to anyone who either is in  
22 Congress or who -- actually, I won't make -- break it  
23 down. Did you talk to anyone in Congress about the  
24 composition of CD 6?

25 A Did I talk to anyone in -- say that one more

1 time.

2 Q Yeah. Did you talk to any congressional  
3 representatives about the composition of CD 6?

4 A About 6, specifically 6, no.

5 Q Okay. But you talked to congressional  
6 representatives about some other portions of the map?

7 A I did speak with a member of Congress about the  
8 maps, and this was at the beginning before there were  
9 proposed maps produced, yes.

10 Q Which member?

11 A Sanford Bishop.

12 Q Is there anything else about -- did you receive  
13 any other directions than what we discussed about the  
14 composition of CD 6?

15 A I think that the portion that went into  
16 Gwinnett was something requested from Chairman Rich on  
17 the final version.

18 Q Oh, oh, I see, the portion in the north part of  
19 Gwinnett?

20 A Yes.

21 Q Do you know why Chairman Rich asked to have  
22 that portion?

23 A I think she has connections to that area, so I  
24 assume that's why, but she didn't specifically tell me  
25 that.

1 MR. CANTER: We can go off the record.

2 THE VIDEOGRAPHER: The time is 11:44 a.m. We  
3 are going off the video record.

4 (The deposition was at recess from 11:44 a.m.  
5 to 12:56 p.m.)

6 THE VIDEOGRAPHER: 12:56, we are back on the  
7 video record.

8 Q BY MR. CANTER: Hello, Director Wright.

9 A Hello.

10 Q During the break, did you speak with your  
11 counsel about the subject or the contents of this  
12 deposition?

13 A No.

14 Q Did you speak with anyone else about the  
15 subject or contents of this deposition?

16 A No.

17 Q If you recall before the break, we were  
18 discussing the enacted CD 4; is that right?

19 A 6.

20 Q The enacted CD 6, excuse me.

21 A Yes.

22 Q Yes. Dawson County was added to CD 6. Do you  
23 know the racial composition of Dawson County?

24 A No, I don't, not specifically.

25 Q Do you know the racial composition of Forsyth

1 County?

2 A Not specifically, no.

3 Q Would you agree that Dawson County is majority  
4 white?

5 A I believe that to be true.

6 Q Would you -- would you agree that the vast  
7 majority of Dawson County is white?

8 A How would you measure vast?

9 Q More than 70.

10 A That very well could be true. I don't --  
11 again, I don't know the demographics.

12 Q Sure. But based off your experience as a  
13 demographer, you're pretty sure it's more than 70?

14 A I would think it's around that at least.

15 Q Would you agree that Forsyth County is majority  
16 white?

17 A I believe that to be true, but I'm not sure of  
18 the numbers again on that one either.

19 Q Still pretty high?

20 A Probably pretty high.

21 Q Would you agree that Cherokee County is  
22 majority white?

23 A I believe that's true.

24 Q Do you know whether the portion of Cherokee  
25 County that was added into CD 6 is majority white?

1 A I don't know the demographics specifically.

2 Q Would you agree that the portion of Cobb County  
3 that was taken out of CD 6 is majority people of color?

4 A Again, I'd have to look closely. The areas are  
5 very similar, so you are looking at a few precincts, and  
6 I don't know the demographics of those precincts  
7 specifically.

8 Q The last one is, would you agree that the  
9 portion of DeKalb County taken out of CD 6 is majority  
10 people of color?

11 A I don't know that to be true either.

12 Q Okay.

13 A DeKalb.

14 Q DeKalb, thank you. DeKalb County.

15 A Sure.

16 Q Now, looking at those changes to CD 6 in  
17 totality, adding in Dawson and Forsyth counties, taking  
18 out Cobb and DeKalb counties, would you agree that  
19 this -- these changes make CD 6 more white?

20 A I would have to look at the data to verify  
21 that. I'm not 100 percent sure that they do.

22 Q Do you have a sense right now?

23 A I have no reason to think that you're wrong  
24 based on the demographics of the counties that were added  
25 in, so that's probably true.

1 Q Okay. Okay. Do you know if Lucy McBath was  
2 the candidate of choice for voters of color?

3 A Voter -- I don't know where. I don't know. In  
4 what --

5 Q Sure.

6 A -- election?

7 Q Do you recall that Representative Lucy McBath  
8 represented CD 6 from 2020 to 2022?

9 A Yes.

10 Q Do you know that in the -- whether in the 2020  
11 election Representative McBath was the candidate of  
12 choice for people of color?

13 A I don't know. She was elected from the voters  
14 in District 6. I don't know the demographics of what  
15 that district was at that time, so I can't speak to  
16 whether that was voters of color or just the voters of  
17 the district.

18 Q Can you go back to, I think it was Exhibit 2,  
19 which is the enacted Congressional map. And you see that  
20 CD 4 is next to CD 10?

21 A Yes.

22 Q All right. And if you go to page 2, you have a  
23 blowup of CD 4 next to CD 10, right?

24 A Yes.

25 Q Did you draw the lines that separated CD 4 from

1 CD 10?

2 A Yes.

3 Q Do you remember drawing those lines?

4 A Specifically, no.

5 Q Okay. Okay. Do you see Oxford is right at the  
6 edge between CD 4 and CD 10?

7 A Yes.

8 Q I'd like to pull up an exhibit on Exhibit  
9 Share, so it should pop up on your computer.

10 (Deposition Exhibit 5 was marked for  
11 identification.)

12 MR. DAVIS: I'm going to share my screen, so  
13 you should be able to see it on your screen in a second  
14 here.

15 MR. CANTER: He's loading it.

16 MR. DAVIS: Okay. Can you see something on  
17 your screen? I'm going to make it bigger for you.

18 THE WITNESS: Yeah, I see something.

19 MR. DAVIS: I will make it bigger. There we  
20 go. Is that -- can you see anything?

21 THE WITNESS: I can see red outlines with blue,  
22 red, gray.

23 MR. DAVIS: Great. We can zoom in. If you  
24 want us to zoom in at any point, just let us know,  
25 please.



1 THE WITNESS: Okay.

2 Q BY MR. CANTER: So I'm going to describe the  
3 image on the screen right now.

4 A Okay.

5 Q The blue line represents the congressional  
6 district line.

7 A Okay.

8 Q Below is CD 4. Above is CD 10.

9 A Okay.

10 Q Does that make sense?

11 A Yes.

12 Q The gray box is the city of Oxford.

13 A Okay.

14 Q So if you recall from Exhibit 2 we just looked  
15 at, it's right around where I was pointing to.

16 A Uh-huh.

17 Q Right? The red lines are the state precincts.

18 A Okay.

19 Q Does that make sense?

20 A Yes.

21 Q Okay. Have you ever -- have you ever looked --  
22 when you -- how about this. When you are drawing maps,  
23 do you ever look at the map this zoomed in on an area in  
24 the state of Georgia?

25 A Yes.

1 Q And why do you do that?

2 A There could be a lot of reasons why you would  
3 zoom in.

4 Q Sure. Can you describe some of the reasons why  
5 you would zoom in?

6 A Oh, well --

7 Q Yeah.

8 A -- I mean, on a Congressional map, we try to  
9 use whole precincts where we can, but because you have to  
10 draw them to as a population, or we draw them to a  
11 population of zero deviation, you are going to have to  
12 zoom in down to block level to get the correct numbers of  
13 population so that you can have that deviation to that --  
14 that tight range.

15 Q Okay. So you testified earlier that an  
16 important goal for drawing is to not cut state precincts?

17 A Right.

18 Q And one of the reasons you provided was that  
19 it's administratively difficult --

20 A Uh-huh.

21 Q -- for the election administrators?

22 A Yes.

23 Q Can you describe why it's administratively  
24 difficult?

25 A So when an elections official assigns voters a

1 ballot in a split precinct, they have to create a combo  
2 for the unique district combinations in that precinct,  
3 unless they change their precinct lines, meaning the  
4 voters that are in one district have one combo that  
5 reflects that in the other district assignments that they  
6 are in; and voters that are in that same precinct that  
7 have a different district assignment would require a  
8 different combo, so that they receive the correct ballot  
9 when they go to vote.

10 Q Okay. Now, if we look back at this image and  
11 we look at how the blue line cuts through the city of  
12 Oxford --

13 A Uh-huh.

14 Q -- it looks to me like that line is cutting  
15 through the state precinct; is that correct?

16 A That looks to be, yes.

17 Q How would, on a sort of technical level, you  
18 accomplish drawing a line that cuts through a state  
19 precinct?

20 A What do you mean how would I accomplish it?

21 Q So you drew -- you drew this line so that CD 4  
22 and CD 10 have this composition, right?

23 A Right. So drawing is clicking with a mouse,  
24 not drawing.

25 Q Yeah, yeah. Fair enough.

1 A Okay.

2 Q So when you are clicking with a mouse to create  
3 the line between -- I'm going to say it's between CD 4  
4 and 10, because that's what we are looking at. What do  
5 you need to do to draw -- to create a line that cuts  
6 through a precinct? Is it a different process than  
7 creating a line that goes along a precinct?

8 A So you'd select which type level of geography  
9 you are using for what you are clicking on.

10 Q Sure.

11 A You can click on the larger geography. You can  
12 click on counties. You can click on precincts or voting  
13 districts. You can click on Census blocks. When you get  
14 down to this level, you would be clicking on Census  
15 blocks.

16 Q Please go on.

17 A At that level. And that's the level you would  
18 be at so that you would know, because you are trying to  
19 reach that perfect ideal district size, finding the right  
20 combination of the population in the Census blocks to  
21 achieve that.

22 Q You would -- and just so I understand, you  
23 would have to be at the Census block level in order to  
24 draw a line that cuts through a state precinct?

25 A Say that one more time.

1 Q So is there racial data at the block level?

2 A Yes.

3 Q All right. Is there any other type of demo --  
4 data at the block level?

5 A So when we build our precinct layer, we do  
6 allocate the election data to the block level, so we have  
7 that political data at that level. It's estimating,  
8 based on the demographics in there, based on registered  
9 voter demographics kind of corresponds the two and  
10 allocates down to that level. So we do have estimate  
11 political data at the block level when we do this.

12 Q When you are drawing a map and you are looking  
13 at the block level --

14 A Uh-huh.

15 Q -- is data reflected on the screen?

16 A Yes.

17 Q And is the estimated election data on the  
18 screen with the other data?

19 A Yes.

20 Q You agree that the line we're looking at here  
21 splits through the precinct, right?

22 A At the time, Newton County was considering  
23 precinct changes. We were working with several -- their  
24 elections office, and we had a draft precinct layer that  
25 they were considering, so it's possible that I referred

1 earlier today?

2 A Yes.

3 Q About the Congressional map?

4 A Yes.

5 Q Do you remember talking about the line that  
6 separated CD 4 and 10 during that working session?

7 A No, I do not.

8 Q At any other time, do you recall communications  
9 or requests related to drawing the line between CD 4 and  
10 10?

11 A I don't remember conversation about the line.  
12 In that area, there was a question about an address at  
13 one point. I don't remember where it fell and whose it  
14 was, but that's the only thing I remember about that  
15 area.

16 Q When you say a question about an address, would  
17 that be an incumbent address?

18 A I don't know whose it was.

19 Q Okay. Just a question.

20 How often were you looking at the block level  
21 when drawing maps?

22 A I don't have an answer for that. It varies.

23 Q Would it be fair -- would it be fair to say  
24 that you looked at the block level a lot?

25 A When you get to the point of where you are

1 A Yes.

2 Q And they probably weren't looking at precinct  
3 level data?

4 A Probably not.

5 Q Okay. Can you go back to Exhibit 2, and you  
6 can stay on the second page. And do you see that CD 14  
7 shows up on the second page?

8 A Yes.

9 Q Did you draw the lines for CD 14?

10 A Yes.

11 MR. CANTER: I'm going to hand to the court  
12 reporter what I'd like to mark as Exhibit 5 (sic), I  
13 believe.

14 (Deposition Exhibit 6 was marked for  
15 identification.)

16 Q BY MR. CANTER: Director Wright, this is  
17 another document which reflects on the left the benchmark  
18 CD 14?

19 A Uh-huh.

20 Q And on the right the enacted plan CD 14. Does  
21 that make sense?

22 A Yes.

23 Q Do you -- and I think you can also see this in  
24 Exhibit 2, but do you see the enacted CD 14 adds a little  
25 piece on the bottom southeast?

1 A I'm sorry, where?

2 Q On the bottom southeast.

3 A Yes.

4 Q And this bottom southeast addition includes the  
5 cities of Austell and Powder Springs?

6 A Yes.

7 Q Do you know that Austell and Powder Springs are  
8 both majority people of color cities?

9 A I do not know the specific demographics of  
10 those cities, but...

11 Q Would it -- does that make sense to you, I  
12 mean, based on your understanding of the demographics of  
13 that area?

14 A Sure.

15 Q Okay.

16 A But the cities themselves are not in their  
17 entirety the area that was taken in. They are just a  
18 portion of it.

19 Q There are -- I just want to understand what you  
20 said. There are other portions of this addition to CD 14  
21 that are not Powder Springs and Austell?

22 A Correct.

23 Q The majority of the addition, though, are those  
24 two cities?

25 A I don't know what the population of the two



1 cities are in relation to the population of that entire  
2 area, but...

3 Q Okay. But at least --

4 A They are -- they are included in the area that  
5 was added into CD 14.

6 Q Right. They are certainly part of it. Okay.

7 Would you say that -- I'm going to call this  
8 just the addition, the southeast addition. Does that  
9 work?

10 A Sure.

11 Q Would you say that the southeast addition can  
12 be justified based off of compactness principles?

13 A Based off compactness principles, I don't think  
14 it makes a huge change in the shape of the district.

15 Q Okay.

16 A It's a small area.

17 Q Would you say that adding the southeast  
18 addition can be justified based off of respect for  
19 preserving communities of interest?

20 A In terms of keeping two cities wholly within  
21 that district, they were maintained and not divided into  
22 any other districts, so if you consider that a community,  
23 they were maintained in one district.

24 Q What about adding an urban community into a  
25 district that is primarily rural?

1           A    I'm sure there are places on the map where that  
2 happens, but this decision to draw this in this area was  
3 above my -- my level.

4           Q    Okay. Let's talk about that then.

5           A    Go right ahead.

6           Q    Why did this piece of CD 14, why did the  
7 southeast addition get added to CD 14?

8           A    Sure. So the push from the south part, as  
9 we've talked about population wise, impacted the other  
10 districts that border up against it. So we already had  
11 removed Haralson County out of 14, and Pickens County  
12 also, as you know, had requested quite vocally to be  
13 wholly within one district and not be divided. So the  
14 decision was made then to push Pickens into a different  
15 district and keep it wholly together.

16                   And there was still a need for District 14 then  
17 to have population. Because the size of District 13 is  
18 what -- it was not modified very much at all. It did  
19 lose part of Douglas County and a little bit of Cobb.  
20 That population needed to go elsewhere. And politically  
21 putting that area into District 11 was not beneficial to  
22 the performance, as you talked about, for District 11, so  
23 it was decided that it would go into 14. That area  
24 voted, I think around 60 percent democratic, so that was  
25 the reason that it was chosen to be pushed into 14.

1 Q That was a lot of information.

2 A There you go.

3 Q When was that -- when was the direction  
4 conveyed to you?

5 A That was part of that working session.

6 Q All right. Do you remember who conveyed that  
7 direction to you?

8 A I do not specifically. It was discussed.

9 Q And were all of those factors that you just  
10 brought up discussed?

11 A Yes. I think that was part of what led to --  
12 to that idea.

13 Q I see. And I know you just said you don't  
14 recall who specifically made the direction, right?

15 A Right.

16 Q But did you have any sort of opinion about  
17 making this change?

18 A Well, I mean, I understood their justification  
19 for their -- that was the political goal that they had,  
20 and I work for them, so, you know, my opinions are not...

21 Q I -- okay. Though it seems like you might, in  
22 fact, have an opinion.

23 A Well, counties are -- larger counties are going  
24 to be split on these maps. We know that. And it is  
25 always better if you are going to split, split within a

1 larger county than to go and split another smaller  
2 county. So putting Pickens back together was definitely  
3 a decision I felt like was a good choice. They requested  
4 that. Let's do that. It made sense to the map, and  
5 it -- it fit into where everything else laid out.

6 This particular area, that was not my decision.  
7 They made that decision, and I do what I am told.

8 Q Okay. So you said that it made sense to keep  
9 Pickens whole?

10 A Yes.

11 Q Would it be fair to say that you didn't think  
12 it made sense to take this piece of Cobb?

13 A Well, no. I will say that it is -- when you  
14 are splitting and dividing between districts, larger  
15 counties are going to already be split. So rather than  
16 cause a county that is much smaller to have to have two  
17 different combinations, two different congressional  
18 districts, especially when they requested specifically to  
19 have that reversed from how it had been, putting that  
20 county back together was a more logical choice than  
21 including an additional split in another county that's  
22 already split.

23 Q You -- I think you just said that putting  
24 Pickens back together so that it's not split --

25 A Uh-huh.

1 Q -- was a logical choice if the consequence  
2 would be to split Cobb, which already was split?

3 A Correct.

4 Q So it was a good idea in this circumstance to  
5 split Cobb into four?

6 A There were the political justifications for why  
7 they chose to do that. That's the reasoning behind that  
8 split, why that was put into the 14th District.

9 Had they chosen a different route, that  
10 particular area, as I said, was a strongly democratic  
11 voting area, and putting that into the 11th District  
12 would have reduced the Republican numbers in the 11th  
13 District. The 14th District was a stronger Republican  
14 district, so therefore, adding that democratic area into  
15 a more Republican performing district was not going to  
16 make as big of an impact on the 14th as it would on the  
17 11th.

18 Q And those were political considerations that  
19 you were -- that were conveyed to you?

20 A Well, yes, that was what the -- you can look at  
21 the numbers in the data and see.

22 Q But you're -- you're a demographer, right? Or  
23 you draw maps a lot, right?

24 A I've been called that, yes.

25 Q Yeah, yeah. Yeah, you draw maps a lot.

1 going off the video record.

2 (The deposition was at recess from 1:40 p.m. to  
3 1:56 p.m.)

4 THE VIDEOGRAPHER: The time is 1:56. We are  
5 back on the video record.

6 MR. CANTER: I want to clarify for the record  
7 the exhibit numbers for the documents that I just showed  
8 during the last session.

9 Exhibit 5 will be the zoomed-in map of the area  
10 of Oxford, and Exhibit 6 will be the prior and enacted  
11 Congressional District 14 boundaries.

12 Q BY MR. CANTER: Director Wright, did you speak  
13 with your counsel about the contents of this deposition  
14 during the break?

15 A No.

16 Q Did you speak with anyone else about the  
17 contents of the deposition during the break?

18 A No.

19 Q Can you please go to the enacted Congressional  
20 map. It was Exhibit 2.

21 A 2.

22 Q And can you take a look at CD 13? We spoke a  
23 little bit about CD 13 before because you pointed out  
24 that an area around Douglasville had previously been in  
25 CD 3 and was added to CD 13. Is that correct?

1           A    I think Douglas County had been wholly within  
2    13.

3           Q    Ah. So in the benchmark plan, Douglas County  
4    was wholly in 13?

5           A    Correct.

6           Q    In the September plan, a portion of it that  
7    didn't include Douglasville was added to 13; and then for  
8    the enacted, that portion that now includes Douglasville  
9    was added?

10          A    That sounds correct. Yeah, it changed.

11           MR. CANTER: Okay. I'd like the court reporter  
12    to mark as Exhibit 7 another comparison of two districts.  
13    This time on the left we have the benchmark Congressional  
14    District 13, and on the right we have the enacted  
15    Congressional District 13.

16          Q    BY MR. CANTER: Does that sound right to you,  
17    Director Wright?

18          A    Yes. I haven't looked at it yet, but...

19                (Deposition Exhibit 7 was marked for  
20    identification.)

21          Q    BY MR. CANTER: So yeah, take a second. Does  
22    that look right?

23          A    That looks right.

24          Q    Okay. Now, can you go to the population  
25    summary tables in Exhibit 2 and look at the data

1 reflecting the black population in CD 13.

2 Do you see where I'm looking?

3 A Yes.

4 Q It says that the black population is just  
5 under -- or just over 64 percent of CD 13; is that right?

6 A Yes.

7 Q Do you consider that CD 13 a packed district?

8 A No.

9 Q Why not?

10 A Packing usually is a higher percentage, in my  
11 mind, than 64 percent.

12 Q Okay. So am I understanding that the reason  
13 you think CD 13 isn't packed is because 64 percent black  
14 population isn't enough to constitute a pack?

15 A I don't know that I'd say isn't enough. But  
16 typically, when I have looked at things to question  
17 whether or not that was something that was packed, these  
18 numbers were significantly higher than 64 percent. We  
19 have a lot of districts on our House and Senate maps that  
20 are comparable to that number and note those are not --  
21 we would not consider those to be packed districts  
22 either, so I would not consider that to be a packed.

23 Q If we can go back to the summary table. Right  
24 next to it is the Hispanic population for CD 13.

25 A Uh-huh.



1 Q And that's just over 12 percent.

2 A Yes.

3 Q Now, if you were to combine the black and  
4 Hispanic populations into a single minority coalition,  
5 that would equal about 76 percent Hispanic/black  
6 population in CD 13, right?

7 A Yes.

8 Q Would you consider 76 percent of a -- of a  
9 coalition population to be packing that coalition into  
10 the district?

11 A I have not usually combined race categories  
12 together to consider it a packing or not packing. From  
13 my experience, it's typically been one single race  
14 category.

15 Q Okay. Let's say it was one single race  
16 category.

17 A Uh-huh.

18 Q Would 76 percent of that group be considered a  
19 pack to you?

20 A It would be a high number. It might depend on  
21 what the circumstances were in the area surrounding that  
22 same area. I know that we have had some of our State  
23 House districts that have been around 70 percent of a  
24 single race category, which is high, but they are also  
25 surrounded by other districts that are equally as high.

1           A    I have to think about it, but that's definitely  
2 one of the things --

3           Q    Yeah.

4           A    -- to look for and to look at.

5           Q    Okay. Do you remember drawing -- do you  
6 remember drawing CD 13? I know we talked about a portion  
7 of drawing CD 13. Do you remember drawing CD 13?

8           A    Not specifically in detail.

9           Q    Were there any discussions during the working  
10 session about CD 13 in particular?

11          A    I don't recall any.

12          Q    Okay. You can put the document -- those  
13 documents to the side.

14               MR. CANTER: I'm going to hand to the court  
15 reporter what should be marked as Exhibit 8.

16               (Deposition Exhibit 8 was marked for  
17 identification.)

18          Q    BY MR. CANTER: And Director Wright, this is  
19 the enacted Senate map, if you want to take a second to  
20 look at it.

21               Does this look right to you?

22          A    Yes.

23          Q    And we've already talked about this, but do you  
24 remember -- you drew this map?

25          A    Yes.

1 A Who did I have these discussions --

2 Q Yes.

3 A -- with?

4 That would have been with Chairman Kennedy.

5 Q So did Chairman Kennedy convey Senator  
6 Strickland's position about SD 17 to you?

7 A I don't know that he conveyed a position about  
8 it.

9 Q Okay.

10 A I think the idea was to draw a district that  
11 would be a Republican district.

12 Q So Chairman Kennedy told you to draw a district  
13 that would allow Strickland to win?

14 A I don't know that it's -- it's hard to bring  
15 out explicit details of conversations because I don't  
16 know that he said that word for word --

17 Q Yeah, I understand.

18 A -- verbatim, but that was the understanding. I  
19 think for all the senators there was, you know, drawing a  
20 district that would allow any incumbent senator to  
21 continue to be reelected was something that they  
22 considered.

23 Q Was there any direction about how Chairman  
24 Kennedy wanted you to draw SD 17?

25 A I don't know if -- if I recall specific

1 just talking about. And the yellow dots are Latino  
2 citizens, the green dots are black citizens, and the blue  
3 dots are white citizens.

4 Do you agree that a lot of Latino citizens have  
5 been taken out of SD 17?

6 A It looks to me that there is a broad spectrum  
7 of population. There's a large area of blue. There's an  
8 area of orange mixed with green. There's an area here --  
9 I mean, I wouldn't know exactly what that represented  
10 other than a variety of those different colors.

11 Q Okay. If we can just zoom out again.

12 So a lot of white citizens were added in the  
13 top right portion, and it was a mix of citizens that were  
14 taken out in the bottom left portion. So does it accord  
15 with your understanding of changes to SD 17 that the  
16 district has gotten whiter?

17 A I couldn't speak to the exact demographic  
18 breakdown of what it was to what it is. This was a -- as  
19 I mentioned, this district was about political  
20 improvement, and that is what the number -- that's the  
21 numbers that I was looking at for this particular  
22 district.

23 Q Specifics aside, does it generally accord with  
24 your understanding about changes to the composition of  
25 SD 17, that it's gotten whiter?

1 A That is what it appears to be on here.

2 Q If you can go to the population summary page on  
3 the -- this Senate district map. I don't remember what  
4 exhibit number this is.

5 A 8.

6 Q 8. Exhibit 8. Thank you.

7 And do you see that SD 17 has almost 57 percent  
8 white population?

9 A Yes.

10 Q Do you think that's a lot?

11 A 57?

12 Q Yeah.

13 A I don't know that that's sufficiently a lot.

14 Q Do you think that's enough to ensure that  
15 Senator Strickland can win an election?

16 A That wouldn't have been what I based that on.  
17 I would have looked at the political data to determine  
18 whether or not I thought it was a district that would win  
19 reelection for him.

20 Q What political data?

21 A The same political data we've looked at for  
22 all -- that we pull into the precincts, election data,  
23 election returns.

24 THE REPORTER: Wait. Say that again. Just  
25 start over.

1 THE WITNESS: The same political data that we  
2 have discussed that we brought in from the Secretary of  
3 State's Office that are election returns.

4 Q BY MR. CANTER: Do you recall whether you  
5 looked at data at the county level when determining how  
6 to draw the lines for SD 17?

7 A Can you say that one more time? I'm sorry.

8 Q Yeah. So do you recall whether you looked at  
9 data at the county level when deciding how to draw the  
10 lines for SD 17?

11 A Possibly. I know there is one whole county in  
12 the district, so we probably would have looked at county  
13 data there. The others we would have looked at probably  
14 precinct data because it's divided amongst different  
15 precincts.

16 Q Any other layers?

17 A What do you mean "other"?

18 Q Did you look at block level data?

19 A Possibly, if we had to look at splitting a  
20 precinct. I don't know if he has any split precincts in  
21 this district or not.

22 Q Okay. But you at least looked at precinct  
23 level data?

24 A Yes.

25 Q If you go back to Exhibit 8, do you see a bit

1 above SD 17, there is SD 48?

2 A Yes.

3 Q Did you draw SD 48?

4 A Yes.

5 Q Do you recall drawing SD 48?

6 A As a part of the map as a whole, yes.

7 Specifically, no.

8 Q Do you remember having any discussions about SD  
9 48?

10 A Not -- there were some, yes, but...

11 Q What were the discussions?

12 A So Senate District 48, there was a discussion  
13 about whether that district could be flipped from a  
14 Democratic seat to a Republican seat.

15 Q Do you know who had those discussions with you?

16 A Again, these discussions kind of happened in  
17 a -- not necessarily one on one. There might be a group  
18 discussion or things that had been discussed that are  
19 then brought to me. I don't have a specific conversation  
20 that I can recall.

21 Q Do you recall whether Senator Kennedy, Chairman  
22 Kennedy was part of any discussion about how to change  
23 the composition of SD 48?

24 A Yes.

25 Q Do you know who was the senator in SD 48 prior

1 Share another document, once it's ready. And this is  
2 going to be Exhibit 10 for the marking.

3 (Deposition Exhibit 10 was marked for  
4 identification.)

5 Q BY MR. CANTER: Just let me know when you see  
6 it, Director.

7 A I can see it.

8 Q Oh, great.

9 A It's far back.

10 Q So Director Wright, this is another map, like  
11 the last one. So the blue lines represent SD 48 in the  
12 benchmark plan, and the red lines represent SD 48 in the  
13 enacted plan.

14 Does that make sense?

15 A Yes.

16 Q All right. And it's the same description on  
17 the bottom where the dots represent the race of different  
18 citizens within the district.

19 Does that make sense?

20 A Yes.

21 Q Would you agree that a lot of white voters were  
22 added to SD 48?

23 A Yes.

24 Q Would you agree that a lot of Latino voters  
25 were taken out of SD 48?



1           A    Yes.  It would be helpful if there had been an  
2   overlay of the new Senate District 7, because most of  
3   that area is the new Senate District 7.  So it actually  
4   created a new district, that portion.  As everything  
5   again shifted upward, that's where the new district was  
6   placed.  And it was -- if you look at Exhibit 8, you will  
7   see that on there, but it would have been helpful to have  
8   seen that overlay there as well.

9           Q    Yeah.  Yeah, I guess on page 2 -- it's a good  
10  point -- on page 2 of Exhibit 8, you can actually see a  
11  blowup of 48 and 7 --

12          A    7.

13          Q    -- right under it?

14          A    Yes.

15          Q    So --

16          A    So most of that area you are asking me about  
17  that is below the red line, and in that area where there  
18  is a large population of Latino and some Asian -- I can't  
19  see.  I think there's green in there.  I can't make it  
20  all out -- was part of the population that was used to  
21  create the new District 7 there.  That is mostly -- that  
22  is all within Gwinnett, and there's an extremely diverse  
23  district there, as that other district pushes 48  
24  northward.

25          Q    Were you aware -- or, actually, let me ask

1 this. Was Chairman Kennedy aware that adding white  
2 voters to District 48 would cause Senator Au to lose?

3 A I don't believe we discussed adding white  
4 voters in an effort to cause her to lose. We discussed  
5 adding Republican voters in an effort to make that seat  
6 competitive.

7 Q Okay. And how did you seek to accomplish that?

8 A I'm sorry, can you --

9 Q Yeah, sure.

10 A -- rephrase that?

11 Q Yeah. How as the map drawer did you make  
12 changes to Senate District 48 to reflect the goal that  
13 Senator -- that Chairman Kennedy wanted?

14 A Right. So I think in the creation of  
15 District 7 first, once we were able to draw that district  
16 there, which we did, of course, take some of the  
17 population away from District 48 to fit that new district  
18 in Gwinnett, which is a very rapidly growing county, very  
19 diverse county, we created that new seat there, pushing  
20 48 upward.

21 So that then caused us to make decisions about  
22 where do we push District 48, now that it will need to  
23 pick up population, and also to make it a more  
24 competitive political district. That we would have to go  
25 northward, and going northward into Forsyth County and

1 into that area, in the Sugar Hill area, those were some  
2 Republican voting areas that would create -- that make --  
3 make District 48 a more competitive district.

4 Q It looks to me from Exhibit 10 like those are  
5 also -- on the screen, excuse me.

6 A Sorry.

7 Q No, no.

8 It looks to me like on Exhibit 10, that the  
9 northern areas added to Senate District 48 are also --  
10 have a very large white population?

11 A Well, I don't create race density maps like  
12 this, and this is something I have not seen, so this is  
13 your analysis of it. That is not something we use or  
14 look at when we do this, so this is new to me to look at  
15 it like this.

16 Q Okay. Did you draw Senate District 48 while  
17 looking at the precinct level layer?

18 A Yes.

19 Q Did you also look at the block layer while  
20 drawing Senate District 48?

21 A I don't know that I would have looked at  
22 blocks. If I was able to draw that with whole precincts,  
23 I wouldn't have zoomed into the block layer. It's  
24 possible that I did in some of the Sugar Hill area. It  
25 looks like I followed the interstate there, so it's

1 Q Yeah. Okay.

2 And then Chairman Rich came and provided  
3 direction, either directly to you, or Chairman Rich spoke  
4 to other members of the House and they provided direction  
5 to you through Chairman Rich?

6 A Yes.

7 Q Am I missing anything about people who provided  
8 direction to you about how to draw this House district?

9 A I'm not sure what you mean.

10 Q Are there other people that directed you on how  
11 to draw the House plan that I haven't mentioned already?

12 A Counsel was involved in consulting on -- on the  
13 drawing of the maps as well.

14 Q Anyone else other than your counsel or those  
15 that I've mentioned?

16 A Not that I can recall.

17 Q When you are drawing at the House level, are  
18 you more often looking at the block layer?

19 A It would depend on which part of the state you  
20 were in. In the more rural parts of the state, as you  
21 can see on the map, the districts are larger --

22 Q Sure.

23 A -- and made up of whole counties. So in those  
24 cases, it's probably more county and precinct based in  
25 terms of what you use.

1 major features to split a district. It makes it easier.  
2 Street -- major interstate or a street or something.

3 Q Do you recall drawing House District 49?

4 A I recall working on House District 49.

5 Q What do you recall about it?

6 A There was discussion and work in that area of  
7 how to draw those districts there. I think we did draw a  
8 new district that's just below that, the 53rd.

9 Q The 53rd? I see that, yes.

10 A Uh-huh. That was an open seat, so trying to  
11 configure adding an open seat in that area between the  
12 other districts there, and also trying to make them  
13 politically competitive in that area.

14 Q Who was the elected official for House -- the  
15 area where House District 49 is before -- you know, under  
16 the benchmark plan?

17 A I believe that's Representative Chuck Martin.

18 Q Okay. Did you speak with Representative Martin  
19 about the composition of the new House District 49?

20 A I believe I did speak with him at some point.

21 Q What did he say?

22 A I don't remember specifically what he said.

23 Q Generally?

24 A I mean, of course, drawing a district that --  
25 you know, and any member when you are at this level, you

1 are talking about the precinct level, they have precincts  
2 that they have connections to, whether it's family lives  
3 there, a school they went to, they have good support  
4 there, whatnot. So when you discuss those precincts,  
5 they want to make sure those precincts are in their  
6 district if possible.

7 Q Did you discuss with Chairman Rich the  
8 composition of HD 49?

9 A I would expect that she would have been present  
10 with conversations that were had in that area.

11 Q Why?

12 A She was usually present when we met with other  
13 members discussing the districts in certain regions.

14 Q Did the racial composition of HD 49 ever come  
15 up in discussions?

16 A I don't recall that coming up in discussions.

17 MR. CANTER: I'd like to -- I'd like to offer  
18 for marked Exhibit 12 another document on Exhibit Share.

19 (Deposition Exhibit 12 was marked for  
20 identification.)

21 Q BY MR. CANTER: So this is the same type of  
22 image, once you see it on the screen.

23 MR. DAVIS: Can you guys -- is it showing?

24 THE WITNESS: Yeah, I can see it. It's kind of  
25 far back, but if you zoom in, it might cut off.

1 MR. DAVIS: You want me to zoom in?

2 THE WITNESS: It may cut some -- okay. Yeah,  
3 that's good. That's good.

4 Q BY MR. CANTER: So the principles for this  
5 document are the same as the two that we see before. The  
6 blue lines reflect the benchmark of House District 49,  
7 and the red lines reflect the enacted House District 49.

8 Does that make sense?

9 A Remind me one more time. The blue is the old  
10 and the red is the new?

11 Q Yeah. Blue before. That's how I remember it.

12 A Blue before, there you go. Okay.

13 Q Do you agree that a lot of white people were  
14 added into HD 49?

15 A It does look to be that from your image.

16 Q Was a goal of Chairman Rich when drawing the  
17 districts in the House map to retain the core of a prior  
18 district?

19 A I think that was something that was considered.  
20 I don't know that that was something that was focused  
21 heavily upon. Sometimes that's easier in some areas than  
22 others, but it was not the -- not a top priority but  
23 something that was considered.

24 Q When you say it was considered, do you mean  
25 that it was considered as a factor to bake into the

1 drawing or as a factor not to bake into the drawing?

2 A So in a lot of the districts, it's easier to  
3 look at cores of districts where a previous district had  
4 been. From things we've heard, a lot of the people in  
5 the public hearings, you know, wanted to maintain  
6 consistent representation with the -- the representative  
7 or senator that they had had before, so we do try to  
8 consider, if we can try and draw a district in a similar  
9 way, to maintain as much of that as we could, but also  
10 knowing we have to make changes due to growth and  
11 population.

12 In this particular area, in the Metro area, we  
13 know there's been a ton of population growth, so that's  
14 going to involve, of course, in this case, adding a  
15 totally new district that had not been there before. I  
16 think we actually did that in Gwinnett as well. So in  
17 that same region, when you are adding new districts,  
18 there were open seats that -- yeah, well, that one I  
19 think didn't run again. But it does make a difference in  
20 trying to maintain, because the districts don't  
21 necessarily look the same anymore as they move due to  
22 that shifts in population. You can't just always keep  
23 them just as they were.

24 Q Do you think the new HD 49 retains the core of  
25 the benchmark HD 49?



1           A    It retains some of its core.  I mean, there's  
2   obviously overlap in this map.  I don't know particulars  
3   on the value of how much that population is that was  
4   there before.  Obviously, it's -- there's some, but it  
5   did shift.

6           Q    Would you say -- when you said it retained some  
7   of the core, do you think -- would you say that it  
8   retains more than half or less than half of the core?

9           A    That's speculation.  I have no idea.

10          Q    Okay.  When drawing this district, do you  
11   recall whether you looked at precinct level data?

12          A    Yes.  I would most likely have been working  
13   with precincts.

14          Q    Do you recall whether you also looked at block  
15   level data?

16          A    I do not recall specifically looking at the  
17   block level.  They do have some precinct boundaries that  
18   are a little unusual sometimes.

19          Q    Yeah.

20          A    So sometimes you do have to look at that, if  
21   they have non -- they have some noncontiguous pieces --

22          Q    Yeah.

23          A    -- of precincts up there, so you do have to  
24   look at it sometimes.

25          Q    Yeah, if you don't mind, I'm going to try to

1 zoom in on a portion in the enacted, a little -- where it  
2 sort of looks like there's like a person pointing in the  
3 left direction --

4 A Uh-huh.

5 Q -- that's not part of the district. Do you see  
6 that?

7 A Yes.

8 Q Right.

9 Is that one of these areas that you mentioned  
10 that might be a little -- I think you said maybe a little  
11 noncontiguous, is how you put it?

12 A I don't know if that one is noncontiguous.

13 Q Yeah.

14 A That might be part of a city boundary there.

15 Q Okay.

16 A There's a little city of Mountain Park there.  
17 It could be a portion of that. It could be a city limit  
18 from one of the other cities. They do tend to follow the  
19 city limit boundaries for their precincts in that area,  
20 which tends to make them look a little more unusual.

21 Q Okay. Right now you're not sure whether  
22 that's -- that somewhat odd shape reflects a split county  
23 or a split precinct?

24 A I would expect that is a precinct boundary,  
25 because I wouldn't have drawn a split precinct that

1 looked like that.

2 Q Okay. Looking at this document -- and we can  
3 zoom out if that's helpful -- do you see anywhere that  
4 looks like a split precinct?

5 A Without the precincts, it's hard for me to  
6 tell. They're on the exhibit, but it's hard to see  
7 because it's not zoomed in very well either. So I can't  
8 say for sure without having that.

9 Q We can put the Exhibit Share document away.  
10 And if you can go to the Georgia House  
11 District, which I think was marked as --

12 A 11.

13 Q -- 11, thank you. And again, on page 2, you  
14 can see House District 104.

15 Do you see that?

16 A 104?

17 Q Yes, ma'am.

18 A Yes.

19 Q Do you remember drawing House District 104?

20 A Yes.

21 Q Who was the representative of that district?

22 A That would be Representative Chuck Efstoration.

23 (Court reporter clarification.)

24 Q BY MR. CANTER: What did you and the  
25 representative discuss -- did you discuss with the

1 representative about HD 104?

2 A I don't recall discussing it with him prior  
3 to -- well, I don't know when I discussed it with him.  
4 There was a time that I spoke with him. I don't recall  
5 if that was before or after the map was in a format that  
6 was presented. I don't remember when it was.

7 Q Did you speak with Chairman Rich about HD 104?

8 A Yes, I believe she would have been involved in  
9 those conversations.

10 Q Were there any conversations with Chairman Rich  
11 that didn't include Representative Efstration?

12 A Efstration. I couldn't say. I'm not sure.

13 Q What did you talk about in terms of the  
14 composition in drawing a new HD 104?

15 A I think that if -- in some capacity, I was told  
16 that 104, of course, they want to ensure that it  
17 maintains as -- oh, it got dark -- a Republican district,  
18 that an electable district for him, and that to draw that  
19 district into Barrow County would be the direction for  
20 that one to move, to pick up population. That would  
21 continue to maintain that district as a Republican  
22 district.

23 Q Just so I understand, were you directed to add  
24 Barrow County into HD 104?

25 A Again, you know, we've talked about this being

1 a collaborative thing. At some point in conversation I  
2 think that was mentioned. I don't remember being, you  
3 know, directly told do this and that was how it happened,  
4 but the discussion was there that taking it into Barrow  
5 County. And I think all of these districts kind of  
6 pushing out a little bit from where they had been because  
7 of the growth in the Metro area, especially in Gwinnett,  
8 them pushing outward is not -- that was sort of the side  
9 effect of the growth in the -- in the area anyway, that  
10 they were going to push out to some degree in some areas.  
11 And so that one pushing into Barrow to pick up Republican  
12 population that votes Republican to ensure that district  
13 to maintain.

14 Q Do you know the racial composition of sort of  
15 the middle of Barrow County?

16 A No, I do not.

17 Q And I appreciate you bringing this up.  
18 You've -- I agree we talked about it and you mentioned  
19 that sometimes you had conversations about how the  
20 composition of lines should be drawn.

21 Ultimately, did you always follow the  
22 directions of Chairman Rich or another member of the  
23 House when drawing the House lines?

24 A So making changes to the map would usually have  
25 been prompted by a discussion with Chairman Rich or

1 that area or how many people that is.

2 Q Is the inclusion of a large white population  
3 into 104 and the exclusion of a large Latino population  
4 out of 104 consistent with your understanding of how the  
5 new 104 was, in fact, drawn?

6 A Can you repeat that one more time?

7 Q Yeah. Is the inclusion of a large white  
8 population into 104 and the exclusion of a large Latino  
9 population out of 104 consistent with your understanding  
10 of how the new 104 was drawn?

11 A I don't recall having discussions about adding  
12 white population or removing Latino population. I think  
13 the political goal of this district was what the  
14 objective was, to push it into Barrow County.

15 I also know we added some new seats in Gwinnett  
16 that would have pushed that Latino population into  
17 districts where they would have been, you know, a large  
18 portion of those districts in that area as this district  
19 shifted outward. So the political objective, combined  
20 with new districts being drawn, I think that's the  
21 effect, and that's why this district is shaped like it  
22 is.

23 Q When you drew this district, were you looking  
24 at the precinct layer?

25 A Yes.

1 any block level changes when drawing HD 104?

2 A No, I don't recall whether I made any block  
3 level changes probably on a lot of these.

4 Q Okay.

5 A It's a lot.

6 Q You do know that you made some block level  
7 changes?

8 A I'm sure that I did in some places. Like I  
9 mentioned, you know, if there were block precincts that  
10 are noncontiguous, you are going to have block splits  
11 between those two, because you have to.

12 Cobb County is gonna have a lot of block level  
13 work because they have a lot of precinct split,  
14 noncontiguous pieces in islands in their precincts, so  
15 it's -- it's going to happen in certain places that I  
16 have to look at the blocks. But that is, again, I  
17 usually try to work with the precincts to avoid blocks  
18 and let that level of work, if I can avoid that.

19 Q Can you please take a look on page 2 of the  
20 House district document we are looking at right now of HD  
21 48?

22 A Yes.

23 Q Do you recall drawing HD 48?

24 A Yes.

25 Q Who was the representative of HD 48?

1           A    I -- I think that it was representative Mary  
2 Robichaux.

3           Q    Did you ever speak with Representative  
4 Robichaux about the new composition of HD 48?

5           A    No, I did not.

6           Q    Did you ever speak with Representative Rich  
7 about HD 48 -- Chairman Rich, excuse me?

8           A    Yes. I think this area was worked on all  
9 together. So we've talked about 49 and this whole area,  
10 so that would have been as a whole.

11          Q    I believe when we talked about 49, you  
12 mentioned 53. What --

13          A    Yes.

14          Q    Can you elaborate on what you talked about with  
15 48?

16          A    I'm sorry, so 50 --

17          Q    You talked -- when I asked about HD 49, I  
18 recall you talking about HD 53.

19          A    Correct.

20          Q    But now you are saying that you also, as part  
21 of the discussion, were looking at HD 48?

22          A    So we don't draw districts in isolation one at  
23 a time. You are looking at, sometimes it's a county  
24 delegation as a whole. They all -- you kind of have to  
25 work as a group because when you make a change to one,



1 you are going to move another district. So when you  
2 reshape, push one district this way, you are going to  
3 have to fix that here. So you kind of work with all of  
4 them at the same time.

5 So this particular region would have been  
6 something that was looked at as a group, not one district  
7 at a time.

8 Q Were you directed to draw HD 48 in some way?

9 A No, I don't recall being told to draw 48 any  
10 particular way. I actually think that in working on some  
11 of the surrounding districts and then looking at the  
12 political breakdown afterwards, we -- I realized that it  
13 had then become a competitive district. That wasn't  
14 really the goal. It was the effect of working on the  
15 other area.

16 Q Can you take a look at HD 44, on page -- on the  
17 same page?

18 A I see it. It took me a minute, yes.

19 Q Yeah. Do you remember drawing HD 44?

20 A Yes.

21 Q Who was the representative of HD 44?

22 A I'm not certain.

23 Q Okay. That's fine.

24 A I think I know, but I don't want to misspeak,  
25 so I'm not gonna say.

1 Q I promise I won't get upset if you misspeak.  
2 Who do you think?

3 A There's a lot of members. We have 236, so I  
4 feel like I'm on the spot when you are asking me who is  
5 in every one of them.

6 Is that -- is that Don Parsons? Don Parsons.

7 Q I think that's right. I think that's right.

8 Did you speak with Representative Parsons about  
9 HD 44?

10 A I do not recall speaking with him, no.

11 Q Did you speak with Chairman Rich about HD 44?

12 A This would have been, again, part of an area  
13 discussion, the districts in that vicinity. So  
14 specifically that one district, I don't recall a  
15 conversation.

16 Q What were the -- in that area, what were your  
17 priorities? What were you directed to do about drawing  
18 the map?

19 A There is fairly large growth in that area  
20 around House District 35, and that's the college area.  
21 There's a school there, so there's a lot of growth in  
22 population. That school has really hugely grown in the  
23 last few years, so they've had a lot of change in the  
24 area there.

25 So in terms of -- that actually, I think, is a

1 change to the districts there, which push some of that  
2 population up into Cherokee as that district there was  
3 formed, 35. And talking about 35, 44, 22, 20, in that  
4 whole area.

5 MR. CANTER: I'd like to put up on Exhibit  
6 Share Exhibit 14.

7 Q BY MR. CANTER: And Director Wright, please let  
8 me know when you see it.

9 (Deposition Exhibit 14 was marked for  
10 identification.)

11 MR. DAVIS: It should be up there now.

12 THE WITNESS: It is. If you can zoom in some  
13 more.

14 Q BY MR. CANTER: You recall from before, this is  
15 another one of these maps where blue is before and red is  
16 after?

17 A Yes.

18 Q Does that sound good?

19 A Yes.

20 Q All right. And the dots -- the colors of the  
21 dots represents the same racial composition of the  
22 benchmark in enacted districts.

23 It looks -- would you agree that a large number  
24 of white voters -- white persons, excuse me, were added  
25 into HD 44?

1           A    This one is hard to see.  It looks to be a  
2   pretty disperse spread of different population in there,  
3   because there seems to be a fairly good bit of -- I think  
4   that's Hispanic population in there as well.  It's kind  
5   of dispersed between.

6           Q    Okay.  Do you think that the new HD 44 retains  
7   the core of the old HD 44?

8           A    As we said before, it retained some of the  
9   core.

10          Q    Okay.

11          A    I don't know how much.  I'd have to, you know,  
12   do further digging to tell you how much of the core that  
13   it retains.  It does have some.  But again, this is  
14   another one of those everything expanding and pushing  
15   outward.  This pushed into Cherokee County, and  
16   everything below is pushing the districts that way.  So  
17   it did change.  It does retain some of the core.

18          Q    Did you ever have a discussion about a  
19   threshold of core retention that would be sort of  
20   satisfactory for the legislators or for anyone else?

21          A    No.

22          Q    So there is no notion of enough core retention?

23          A    Not to my knowledge.

24               MR. CANTER:  What time are we at?

25               THE VIDEOGRAPHER:  We have been going one hour

1 Census data until the time when all three of the final  
2 maps were published, so the maps that ultimately were  
3 passed by Governor Kemp became public. So this is after  
4 you --

5 A Can I ask you to clarify what you mean by a  
6 "block equivalency file" to make sure we're on the same  
7 page?

8 Q Yeah. So it's a spreadsheet that request --  
9 that reflects block data.

10 A Like block with a district assignment?

11 Q Correct.

12 A Okay. Just making sure we're talking about the  
13 same thing.

14 So during the process of the draft maps coming  
15 out and being made available, yes, I did receive requests  
16 for block equivalency files.

17 Q From whom?

18 A I know that Shalamar Parham asked for them.  
19 And there -- I don't know if there were other people who  
20 did, but those -- I know she communicated directly with  
21 me. So I don't know if there were others. There may  
22 have been, but I know she did.

23 Q Do you know why?

24 A Do I know why she wanted them?

25 Q Yeah.

1           A    I figured she was going to re-create those in  
2 her software or their office. She worked for the House  
3 Democratic Caucus, so I figured that's what they would be  
4 using them for.

5           Q    Did anyone else ask for block equivalency  
6 files?

7           A    I don't recollect anyone else, but that could  
8 have gone to other staff as well.

9           Q    Other staff you mean in the LCRO?

10          A    Yes.

11          Q    So Mr. Knight?

12          A    It could have -- any requests would come  
13 through our office manager, and then she would hand them  
14 or give them to staff --

15          Q    Okay.

16          A    -- to handle.

17          Q    So it could have gone to Mr. Knight?

18          A    Could have.

19          Q    Could have gone to Mr. O'Connor?

20          A    Could have. I would think if it was an  
21 e-mailed request, it would have been provided already in  
22 the documents.

23          Q    What do you mean by that? Sorry.

24          A    The way the -- all the information that was  
25 discovery, all those documents, if there was a request

1 Q And when you answer that, is that just within  
2 the redistricting period or is that even after the maps  
3 were published?

4 A Even after. I mean, requests don't come to me  
5 and then to them, so they -- like I said, they come  
6 through our office manager. If someone asks for some  
7 information, it could have been fielded out to anyone in  
8 our office to provide the answer to that.

9 Q You mentioned that Ms. Shalamar?

10 A Shalamar Parham.

11 Q Yeah, Ms. Shalamar asked for block equivalency  
12 data?

13 A Yes.

14 Q Did you give it to her?

15 A Yes.

16 Q Did she have any follow-up questions?

17 A No.

18 Q Can you recall providing block equivalency data  
19 to anyone else?

20 A She's the only particular individual I recall  
21 providing that or asking for that file.

22 Q So generally, do you recall other people asking  
23 for block equivalency data?

24 A What is the distinction in the question?

25 Q Because you said particularly, and so I'm

1           A     Well, as I mentioned earlier, the inclusion of  
2     an educational video, that was actually my idea. I  
3     wanted to provide the people who cared enough to come out  
4     to the public hearings the opportunity to learn a little  
5     bit about the process, rather than just come up and talk  
6     about things without knowing some of the detail or the  
7     reasons why we do this. So that video was a new feature  
8     to add.

9           I also -- I don't know if related to the  
10    hearings, per se, the Zoom platform is new. We didn't  
11    have that before. We have two public hearings on Zoom at  
12    this time. That was definitely not something we did ten  
13    years before. To allow people to not just watch but also  
14    participate from -- from that platform.

15           I think all of the public hearings were  
16    streamed at this time, and I don't know that they were in  
17    2011. They may have been recorded, but I don't know that  
18    they were streamed to be able to watch it live as it was  
19    taking place. So that was new this time.

20           And the comment portal we had on the website  
21    was also a new feature at this time, to allow people to  
22    submit comments, and those comments are actually posted  
23    so that they were viewable throughout the whole process.  
24    I think the comment portal was left up until through the  
25    end of the year, even following the adoption of the maps.



1 And it actually might still be there now. I'm not even a  
2 hundred percent sure if it's still active, but it might  
3 be still active now, not to submit, but to at least  
4 review comments.

5 So all of those things were new in 2021 that we  
6 did not do or have the ability to do in 2011.

7 Q Do you recall if the special session timeline  
8 was similar in 2011 to 2021, the actual time in special  
9 session?

10 A 2011, the special session was in the summer.  
11 It was August, I believe. It was around maybe two, two  
12 and a half weeks. It was a relatively short time period.  
13 I mean, it was, like I said, in the summer. So 2021, we  
14 were in session. Maybe -- I don't know if it was exact.  
15 Maybe a little longer than that or around that time  
16 period, but it was in November as opposed to August, so  
17 much later in the year.

18 Q Okay. What was generally your role in the  
19 redistricting process in 2011?

20 A Similar to what it was this time. I worked on  
21 drawing those maps, worked with the legislators to draw  
22 the -- the statewide maps for the Senate and  
23 Congressional and a large portion of the House map in  
24 2011.

25 Q Did you follow a similar process in drawing the

1           A    Traditionally, we renumber the House plan  
2 following finalizing a map. And it follows a pattern  
3 from the top left, moving towards the bottom right,  
4 trying to, number one, if I can maintain the same  
5 district numbers that were there previously, that does  
6 help with a lot of things in the counties for the  
7 elections, and also for the members. But I renumber to  
8 try and keep delegations in similar numbering patterns  
9 and things like that as it moves through. It's not a  
10 perfect science, but that is traditionally what we do in  
11 the House.

12           Q    So is it unusual for House District numbers to  
13 change for Georgia voters following a Census and a redraw  
14 of the maps?

15           A    No, that's not unusual.

16           Q    You talked to Mr. Canter a little bit about the  
17 political data that you had available and the process of,  
18 I guess, disaggregating or imputing that data to blocks.

19                    Do you recall that?

20           A    Yes.

21           Q    And so is it correct then that if you were  
22 looking at Census block data, each Census block has  
23 political data in it even though it's an estimate, right?

24           A    Right. As you move blocks, you would see a  
25 change in not just demographic data but also in political

1 data as you move those blocks.

2 Q And when drawing the maps, you talked about  
3 different meetings with groups. Let's start with the --  
4 the Senate groups that you met with. Was the political  
5 data for each district an important consideration for the  
6 members when they were drawing the maps?

7 A Yes.

8 Q And for the House maps, was that also -- was  
9 political data also an important consideration?

10 A Yes.

11 Q And for the congressional maps in that  
12 leadership meeting, was political data an important  
13 consideration?

14 A Yes.

15 Q Mr. Canter talked with you about the -- the  
16 different factors of redistricting that the committee  
17 adopted.

18 Do you recall that?

19 A Yes.

20 Q Can you just describe briefly, as a map drawer,  
21 how do you go about trying to balance -- because I'm  
22 assuming there is a competing interest between a lot of  
23 those different factors. How do you go about approaching  
24 balancing those different factors?

25 A It's very difficult, and in certain situations

1 you may have to give on one factor to accommodate another  
2 factor. For instance, maybe population requires that I  
3 have to divide a county because I can't fit this entire  
4 county into this district as it is, and the -- and the  
5 district nearby needs additional population. So although  
6 I would prefer to keep that county whole and intact, I  
7 might have to divide it so that the population is  
8 balanced between the two.

9 But it is a give and take. There is not a  
10 specific method or rhyme or reason as to how you choose  
11 what takes precedence in any given situation. And  
12 sometimes that's driven by what the legislator is asking  
13 for.

14 Q And so it becomes, at some level, a policy  
15 decision of which one the legislator wants to prioritize  
16 in that situation?

17 A Yes, it can.

18 Q Mr. Canter talked with you about using the  
19 different racial data available to you, and Maptitude  
20 will allow you to color a district by the racial makeup  
21 of the population; is that right?

22 A Can you say that one more time?

23 Q Yeah. Let me ask it this way.

24 Does Maptitude allow you to color different  
25 parts of the district by the racial makeup of the

1 population in that area?

2 A You could create a theme that would do that, I  
3 think using the data, whatever field you selected, and --  
4 and setting a theme that way, yes, you could.

5 Q In drawing the House, Senate, and Congressional  
6 plans, did you ever use a theme of racial coloring on a  
7 map?

8 A No, I did not.

9 Q We talked a little bit, too, about discussions  
10 with the House Democratic Caucus. Did you meet with  
11 members of the Democratic party and work on redistricting  
12 maps for members of the Democratic party in the 2021  
13 cycle?

14 A Yes.

15 Q And so those legislators had equal access to  
16 your office if they wanted to come in and draw a map?

17 A Yes.

18 Q And do you recall ever receiving a request from  
19 the House or Senate Democratic Caucus that your office  
20 was not -- did not respond to and provide information in  
21 response to?

22 A Are you asking -- can you say that one more  
23 time?

24 Q Sure. So you mentioned Shalamar -- and I'm  
25 forgetting her last name.

# EXHIBIT H

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UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF GEORGIA

GEORGIA STATE CONFERENCE OF	)	No.
NAACP, et al.,	)	1:21-CV-5338-ELB-SCJ-
	)	SDG
Plaintiff,	)	
	)	
vs.	)	
	)	
STATE OF GEORGIA, et al.,	)	
	)	
Defendant.	)	
_____	)	

VIDEOTAPED 30(b)(6) and 30(b)(1) DEPOSITION OF  
SENATE REDISTRICTING & REAPPORTIONMENT COMMITTEE  
(MR. JOHN F. KENNEDY)  
January 20, 2023  
9:03 a.m.  
18 Capitol Square SW  
Atlanta, Georgia

Reported by: Marcella Daughtry, RPR, RMR  
CA CSR 14315  
GA No. 6595-1471-3597-5424

1 data that she had, but I -- I can't tell you the software  
2 she was using or, you know, that level of detail of what  
3 she -- what she sourced her information from.

4 Q Okay. Was it -- did you tell Gina Wright that  
5 it was important that she try to protect incumbents in  
6 the first draft of the congressional map?

7 A We certainly may have. I'm just trying to  
8 recall. I don't recall the specifics of any conversation  
9 about -- about that issue. I don't think anybody got  
10 drawn out of their district, so to speak, though, so  
11 that's why I'm telling you that, yeah.

12 Q Did you tell Gina Wright that she should  
13 consider demographic data when drafting the first  
14 congressional map?

15 A What do you mean "demographic data"?

16 Q Let's start with racial demographic data.

17 A Again, your -- your question presupposes. It  
18 kind of puts the cart before the horse in the sense of as  
19 though I walked in and said, here's what I want you to do  
20 and here is the consideration. She was the expert. She  
21 knew that. She -- she was steeped in the requirements of  
22 what one would have to do to do this correctly, legally,  
23 and be compliant going forward.

24 And I would say it was something that was just  
25 inherent in her process as she went forward. She knew



1 Q Were the Senate Committee guidelines approved  
2 on August 30, 2021?

3 A I don't remember the date, but that sounds  
4 about right.

5 Q What role did you have in creating the  
6 redistricting guidelines?

7 A If I remember correctly, these are the same  
8 principles that were utilized in the last redistricting  
9 cycle. So I would have lifted them, if you will, from  
10 that and utilized them and placed them with our materials  
11 for presentation to the committee for consideration of  
12 what the plans, or the principles for drafting plans  
13 should be for our current cycle.

14 Q What is your understanding of -- sorry, could  
15 you read the principle number 3, please?

16 A "All plans adopted by the Committee will comply  
17 with Section 2 of the Voting Rights Act of 1965, as  
18 amended."

19 Q And what is your understanding of this  
20 principle?

21 A I would have relied upon counsel to advise us  
22 as to what, one, we should do to make sure we're in  
23 compliance.

24 Q How did you ensure the Senate Committee  
25 complied with this principle?

1 you provide any input on S.B. 2EX?

2 A Not that I can recall.

3 Q Can we return back to tab 8, which we marked as  
4 Exhibit 8.

5 How would you -- so I'll represent that the map  
6 on the left is a map of prior congressional District 6  
7 boundaries and the map on the right is a map of the  
8 S.B. 2EX congressional district boundaries.

9 Do you have any reason to believe that that is  
10 inaccurate?

11 A No, sir. I assume you're -- I don't have a  
12 memory that informs me that it's accurate, but I will  
13 assume that you are being truthful with me.

14 Q How would you characterize the difference  
15 between the prior boundaries and S.B. 2EX boundaries?

16 A The boundary of S.B. 2EX takes the district  
17 further north and encompasses part of Cherokee and  
18 Forsyth and Dawson counties, which if I am reading where  
19 the county line between Fulton and Forsyth would be, if I  
20 am looking at that correctly, don't exist in the prior.

21 Q Are you aware that approximately 360,000 people  
22 were added to District 6 in S.B. 2EX that weren't in the  
23 district in the prior boundaries?

24 A Not that number, but I thought you said earlier  
25 it was just a much smaller number. Did you not?

1 Q So --

2 A That was not the figure you gave me earlier.

3 Q So --

4 A Hold on a minute, please.

5 Q Okay.

6 A That was not the figure you gave me earlier  
7 when you embedded it in your question, when we were  
8 doing -- we were trying to compare the two.

9 Q So what I said earlier was that the district,  
10 the prior district boundaries did not have to change  
11 based on the Census results. So the prior district with  
12 the Census data was almost identical to a -- to the  
13 number -- amount of population it needed to be.

14 Does that make sense?

15 A Maybe I'm just confused. I thought you just  
16 told me that the new 6 had to add 300 and something  
17 thousand to get to the right number.

18 Q What I was saying -- what I was --

19 A How can they both be true?

20 Q My question was, was the -- did the District 6  
21 add people and subtract people, not whether it was  
22 required to to comply with equal population.

23 A Are you saying did it add different people?

24 Q Correct.

25 A Or different numbers?

1 Q It added people and subtracted people. So  
2 it -- it was close to the population it needed to, and  
3 then added approximately 360,000 people and subtracted  
4 360,000 people that used to be in the district. So the  
5 net-net was essentially bringing it back to population  
6 equality, which it would have been if no changes were  
7 made.

8 Does that make sense?

9 A I think I follow you.

10 Q How does the S.B. 2EX District 6 boundaries  
11 respect communities of interest?

12 A Well, again, specifically, Gina Wright and  
13 counsel would have advised on this, but you can look and  
14 see, if I'm reading this correctly, S.B. 2EX includes the  
15 county of Dawson as a whole, which in some ways I think  
16 is recognized as a community of interest. It appears to  
17 have all or most of Forsyth County, which would be, I  
18 think a community of interest. Maybe I'm not looking at  
19 this correctly, but it appears to have a substantial  
20 portion of the core of North Fulton, which was there  
21 previously. I don't know if North Fulton would be deemed  
22 a community of interest. But it, I think, also would  
23 have respected it, in that S.B. 2EX put DeKalb County  
24 back as a whole county, which it was split on the old  
25 map, so there again, respecting the community of interest

1 driven by county lines.

2 Q Do you believe there are similar --  
3 similarities between the residents of Dawson County and  
4 the residents of East Cobb?

5 A I'm sure there are.

6 Q Do you believe they have similar policy  
7 interests?

8 A I'm sure they do in some regards.

9 Q Can you name any similar policy interests that  
10 the residents of Dawson County and the residents of East  
11 Cobb have?

12 A I don't think on the level you're looking for,  
13 no. I don't have that level of expertise or specificity.

14 Q If you turn to tab 9.

15 MR. GENBERG: And mark that as Exhibit 9.

16 THE WITNESS: Okay.

17 MR. JAUGSTETTER: You already marked Exhibit 9  
18 to be tab 13.

19 MR. GENBERG: Oh, can we mark it -- sorry.  
20 Thank you. Can we mark it as Exhibit 10.

21 (Deposition Exhibit 10 was marked for  
22 identification.)

23 THE WITNESS: So tab 9 is Exhibit 10?

24 MR. GENBERG: Yes.

25 THE WITNESS: Okay.

1 Q BY MR. GENBERG: What does this appear to be?

2 A It's a document turned side landscape that has  
3 a map on the left, a partial map on the left entitled  
4 "Prior Congressional District 13 Boundaries." And then  
5 on the right, a partial map that says, "S.B. 2EX  
6 Congressional District 13 Boundaries."

7 Q Looking at the S.B. 2EX boundaries on the  
8 right, which counties would you say are included in the  
9 District 13 boundaries?

10 A The one on the right?

11 Q Yes.

12 A It looks like parts of Douglas, parts of  
13 Fulton. It appears to go in parts of Cobb, parts of  
14 Clayton, Henry, and Fayette.

15 Q Does this district appear to contain any whole  
16 counties?

17 A It -- I don't think so. It doesn't look like  
18 either one did.

19 Q Does the prior boundaries appear to include all  
20 of Douglas County?

21 A I can't answer that. I can't see enough of  
22 Douglas County to know if that's all of Douglas or not.

23 Q Did the committee prioritize preserving whole  
24 counties in the creation of District 13 in S.B. 2EX?

25 A We prioritized it -- I don't want to use the

1 word "prioritize" as in made it the sole or most  
2 important issue of all the considerations. It was an  
3 important -- as I have said earlier, an important  
4 consideration of what we were doing, as seen in the  
5 application of the importance of that to all the  
6 districts, all 14 of the districts that were formed.

7 Q Which criteria were prioritized for District  
8 13?

9 A I think I just said that the criteria that we  
10 talked about were -- I don't want to use the word  
11 "prioritize." They were all deemed to be important in  
12 the work the committee was doing. When you say  
13 prioritize, that suggests to me that there's one that was  
14 placed above all others.

15 Q Do you believe that the residents of Cobb  
16 County share a community of interest?

17 A Yes, I would think they do. Some do in some  
18 ways.

19 Q Do you believe that the residents of Henry  
20 County share a community of interest?

21 A I would think some do in some ways.

22 Q If we can turn to tab 10.

23 MR. GENBERG: Mark it as Exhibit 11, please.

24 (Deposition Exhibit 11 was marked for  
25 identification.)

1 THE WITNESS: Okay.

2 Q BY MR. GENBERG: What does Exhibit 11 appear to  
3 be?

4 A It is identified or entitled "Prior  
5 Congressional District 14 Boundaries," and a partial map  
6 on the left, and then on the right half of the page is  
7 "S.B. 2EX Congressional District 14 Boundaries," and a  
8 partial map below it.

9 Q Does this appear to -- to you to be the prior  
10 congressional District 14 boundaries on the left and the  
11 S.B. 2EX congressional district boundaries on the right?

12 A I don't remember what the prior congressional  
13 District 14 looked like. And I'm assuming you have  
14 accurately copied the current, or the 2EX District 14 on  
15 the right.

16 Q How would you characterize District 14? How  
17 would you characterize --

18 A One above 13, I mean.

19 Q Yeah. How would you --

20 A I don't know what you mean by that.

21 Q How would you characterize the race of the  
22 citizens in District 14?

23 A I don't know if you've got some numbers for me  
24 to look at. I'm happy to. I would -- I don't know the  
25 actual numbers.



1 Q Would it surprise you if I told you it was  
2 predominantly white?

3 A No, that would not surprise me.

4 Q Are you aware of the primary industries of the  
5 residents of District 14?

6 A The "primary industries of the residents"?

7 Q Yes.

8 A Are you asking me what kind of jobs they work  
9 at? What do you mean "primary industries"? I don't  
10 understand that.

11 Q Yes, the jobs.

12 A Well, I-75 comes down through here somewhere,  
13 so you've got things that would be related to the  
14 transportation aspect of that. And there are -- and you  
15 also have a large carpet mill industry in Northwest  
16 Georgia that is something we're proud of to have. I  
17 think some of the largest flooring manufacturers in the  
18 country that are located in Northwest Georgia.

19 Q How would you --

20 A Among other industries. I don't want to -- but  
21 that's the one that we're probably just commonly most  
22 known for for Northwest Georgia.

23 Q How about agriculture?

24 A Maybe, but I don't -- I can't give you any  
25 details of that.

1 Q How would you compare the prior District 14  
2 boundaries and the S.B. 2EX boundaries of District 14?

3 A Well, I guess first what jumps out at me is the  
4 comment I made earlier that was sourced from a town hall  
5 meeting, that there were residents of Pickens County,  
6 Georgia that asked that their little county not be split  
7 and divided. You remember those comments? That is -- it  
8 is that to which I was referring.

9 And I think you see that on this map, that we  
10 chose to keep Pickens whole. And it's in the -- whatever  
11 the district to the right is. I guess the 9th? Yes.  
12 And it looks like there is a little bit of Cobb added to  
13 it.

14 Unless I am missing something, it looks like  
15 those may be the only two differences from the old 14th  
16 District to the new 14th District.

17 Q Are you aware that that portion of Cobb that  
18 was added to District 14 is a heavily black population  
19 area?

20 A No.

21 Q Would you have been aware of that at the time  
22 of the enactment of S.B. 2EX?

23 A I don't know if I would have or not.

24 Q Would you say that that section of Cobb County,  
25 which I will represent includes the cities of Austell and

1 Powder Springs, if that portion of Cobb County shares a  
2 community of interest with any area within congressional  
3 District 14 boundaries?

4 A Are you asking if I think the portion of Cobb  
5 that's in the D 14 shares communities of interest with  
6 other areas of 14?

7 Q Yes.

8 A I really don't have specific information or  
9 knowledge about that area of Cobb or, for that matter,  
10 Cobb County in general. It's not where I live, but it's  
11 contiguous to and immediately next to Paulding County. I  
12 would think there would be some similarities of the  
13 people that are right -- or the geographic area that's  
14 right adjacent to it.

15 Q Can we return to tab 4 --

16 A Okay.

17 Q -- which will be Exhibit 4, and to page -- I  
18 think it's 5 of your binder, which is entitled "Draft -  
19 Georgia Congressional Districts." It's the --

20 A Is it this (indicating)?

21 Q Oh, I think you are on -- no, it's the page  
22 before that. Yes.

23 A Okay.

24 Q And this is the September 27th plan, correct?

25 A Okay. I don't know. I can't look at it.

1 I'll -- this is your exhibit binder, so I'm going to  
2 assume when you make a statement like that, Counselor,  
3 that I'm going to rely upon you and that you are being  
4 truthful with me and accurate, so I will go forward with  
5 that assumption.

6 Q Okay. You know what, actually, let's -- let's  
7 just go to Exhibit 3, sorry, because this one is kind of  
8 hard to read.

9 A Okay.

10 Q So looking at Exhibit 3.

11 A Okay. Is that the same one we were just  
12 looking at?

13 Q It is the same September 27th map but in color.

14 A Okay. Okay. Thank you.

15 Q Does District 14 in the September 27th map  
16 include part of Cobb County?

17 A No.

18 Q Does District 14 in the September 27 plan  
19 include part of Bartow County?

20 A Yes.

21 Q And then going back again to tab 4, Exhibit 4,  
22 again, refer you to the words that say "District 14: Add  
23 population from Bartow to balance out."

24 A Okay.

25 Q Do you have an understanding of why a portion

1 of Cobb County was added to District 14 in the enacted  
2 S.B. 2EX plan as opposed to a portion of Bartow County or  
3 any portion of Bartow County?

4 A Is tab 7, Exhibit 7, the --

5 Q Tab 7.

6 A -- congressional map --

7 Q That's --

8 A -- that was passed? 2EX --

9 Q It is.

10 A -- that is passed?

11 Q Yes.

12 A Okay. So I think in answering your question, I  
13 would answer it by saying what was passed kept Bartow  
14 County whole and intact, as opposed to what was being --  
15 as what -- as opposed to what's in the September 27  
16 draft, which is behind tab 3 for CD 14.

17 Q If you compare -- strike that.

18 Well, actually, how many county splits -- how  
19 many times has Cobb County split in S.B. 2EX, the Exhibit  
20 7?

21 A And that's behind tab 3, right?

22 No, behind tab 7. Sorry.

23 It looks like four.

24 Q How many times has Cobb County split in that  
25 September 27th plan on tab 3?

1 A It looks like three.

2 Q Would you say it's better to have fewer county  
3 splits than more?

4 A I can't answer that in a vacuum. If you can do  
5 that without impacting other counties, fewer splits are  
6 better; but if more splits in one county enable you to  
7 keep other counties or more counties intact, then there's  
8 a benefit to doing that.

9 Q If we can return to tab 9, which is Exhibit 10.

10 A Okay. Got it.

11 Q Before the redistricting process in 2021, was  
12 the black population in District 13 able to elect  
13 candidates of choice in District 13?

14 A I don't know what the boundaries looked like  
15 back then, but I would further answer by saying, every  
16 voter is free to go to the polls and elect whomever  
17 they -- vote for whomever they want to.

18 Q Okay. So do you know if District 13 usually  
19 elected the black candidate of choice?

20 A I don't know.

21 Q Would you have known that at the time of  
22 redistricting?

23 A This is CD 13?

24 Q Yes. So on the left is the old boundaries.

25 A No, I would have not -- I don't think I would

1 Q Okay. Let's -- I'm going to ask you a little  
2 bit about -- if we could look at the topic -- at the  
3 document that ends with 8454.

4 A Is that one of the previous exhibits?

5 Q No, that's something Lily has.

6 A Okay.

7 Q And while she's grabbing it, can I ask you if  
8 you know who represented SD 48 before the redistricting?

9 A Your question is who represented SD 48 before  
10 the redistricting?

11 Q Yeah.

12 A No, I'm -- I'm trying to call from memory which  
13 of my --

14 Q Well --

15 A -- colleagues had -- had 48.

16 Q -- are you familiar with Senator Michelle Oh --  
17 Au?

18 A Michelle Au, yes.

19 Q Au?

20 A Yes.

21 Q Is she an Asian woman?

22 A Yes.

23 Q Is it your understanding that she was the  
24 candidate of choice among people of color in her  
25 district?

1           A     I wouldn't know who the candidate of choice  
2     were -- was of that district.

3           MS. LIU:   Okay.   We're going to take a quick  
4     break, if you don't mind.   Just a quick --

5           THE WITNESS:   Okay.

6           MS. LIU:   -- break.

7           THE VIDEOGRAPHER:   The time is 6:07 p.m.   We  
8     are now off the record.

9           (The deposition was at recess from 6:07 p.m. to  
10    6:16 p.m.)

11          THE VIDEOGRAPHER:   The time is 6:16 p.m.   We  
12    are back on the record.

13

14

EXAMINATION

15

BY MR. DAVIS:

16

      Q     Thank you, Senator Kennedy.   I am Alex Davis  
17    from the Lawyers' Committee.   I know it's been a long  
18    day.   I'm the last face you want to see at the end of a  
19    long day, so I will try to keep this short.

20

      I think we have one more video clip.   We have a  
21    video clip to play you.

22

      Lily, is that ready?

23

      MS. HSU:   Yes.

24

      MR. DAVIS:   This is from the same November 4th  
25    Senate Committee hearing.



1           A    Again, you're -- you're asking me for a legal  
2   opinion and how that opinion would have been deployed  
3   through the process that we went through.  And again,  
4   that would have been guided -- we would have been guided  
5   and were guided by counsel.

6           You're -- as I understand the question,  
7   Mr. Davis, you are specifically setting forth two  
8   principles and saying what happens when those compete,  
9   and what is the legal outcome of which prevails and in  
10  what way and in -- you know, and that's the kind of thing  
11  you need good lawyers for to help guide you down that  
12  process to make sure, A, you are doing the job correctly  
13  and properly as you are doing it, and B, you wind up  
14  substantively with a good work product that is legal and  
15  proper and appropriate.

16          Q    Okay.  I'm -- I'm gonna move on.  I had a few  
17  questions about Senate District 17.  Are you aware that  
18  the final map reduced the black voting age population in  
19  Senate District 17 by approximately 10 percent?

20          A    As I sit here today, I don't -- I don't have  
21  those numbers, you know, at hand, if you will.

22          Q    Would you have any basis to dispute that the  
23  black voting age population in District 17 was reduced by  
24  approximately 10 percent sitting here today?

25          A    You know, Mr. Davis, since I don't have those

1 numbers or any data or any information in front of me, I  
2 wouldn't -- I wouldn't be able to comment one way or the  
3 other. Assuming -- I assume that if we are talking about  
4 something that's purely factual, that you would not  
5 represent that information to me.

6 Q Okay. So then, is it also true that you -- you  
7 wouldn't have any knowledge sitting here today about why  
8 that was done?

9 A When you say "why that was done," that your  
10 question is couched in a way seemingly to imply that that  
11 was the sole reason that that district was drawn, and  
12 that's -- that's not the case. I think -- I know you all  
13 are tired of hearing me talk and explain that this is a  
14 complex process that involves lots of moving parts, lots  
15 of variables in the equation, from population to  
16 geographies, all those other reasons that go into what is  
17 ultimately seen as a formed district that has a number on  
18 it.

19 Q Sitting here today, do you remember any reason  
20 why the black voting age population in Senate District 17  
21 wasn't used?

22 A No, except to say that anytime you take any  
23 district and ask why it looks the way it does for any  
24 purpose or for any data point you want, you -- I don't  
25 mean you, sir, but anyone that wants to describe or

1 discuss it, you cannot do it in a vacuum without  
2 consideration of and recognizing the districts that are  
3 around it and why were the -- you know, the simple  
4 approach, why were the contiguous districts around it  
5 formed the way they were and what were the drivers?  
6 Because that naturally and inexplicably impacts what the  
7 district you are looking at wound up looking like.

8 Q But you don't remember anything specific about  
9 Senate District 17 and why black population had to be  
10 reduced?

11 A No. When you -- when you said the question why  
12 it had to be reduced, no, I don't remember.

13 Q Let me rephrase that.

14 A Thank you.

15 Q Do you remember any reason, specific reason  
16 sitting here today, why the black voting age population  
17 in Senate District 17 was reduced?

18 A No, other than 17 is a product of all those  
19 around it, just like 18 is a product of all those around  
20 it. 19 is a product of all those around it.

21 Q Do you know Senator Brian Strickland?

22 A Yes, sir, I do.

23 Q Did you ever speak to Senator Strickland about  
24 his district?

25 A Probably so. And I'm -- I'm thinking, because

1 as I had testified earlier, I had offered to meet with  
2 all 55 other senators, some of whom took me up on it.  
3 I -- I think Mr. Strickland and I did meet, yes, sir.

4 Q Did he request any change to his district?

5 MR. JAUGSTETTER: I'm going to object to that  
6 question on the basis of legislative privilege. Senator  
7 Strickland has not waived his privilege. The question  
8 you are asking necessarily requires Senator Kennedy to do  
9 so, and I will instruct him not to answer.

10 Q BY MR. DAVIS: Okay. I'm going to move on. I  
11 just have one more question.

12 Are you aware of a history of voting-related  
13 discrimination in Georgia?

14 A I think I would say yes. You mean just from a  
15 macro historical perspective?

16 Q Yes, let me clarify. Are you aware of a  
17 history of voting-related discrimination in Georgia  
18 against black voters?

19 A Yes.

20 Q What about Hispanic voters?

21 A I don't consider myself an expert in history,  
22 and this is not my area, so, you know, I think I'll say  
23 yes to the -- to black voters. I can't give you any  
24 details really beyond that.

25 Q Actually, just to go back to -- to the Senate

# EXHIBIT I

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

Georgia State Conference  
of the NAACP; Georgia  
Collation for the People's  
Agenda, Inc; Galeo Latino  
Community Development Fund,  
Inc.,

Plaintiffs,

vs.

CIVIL ACTION FILE NO.  
1:21-CV-5338-ELB-SCJ-SDG

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.

VIDEOTAPED HYBRID ZOOM  
30(b)(6) and 30(b)(1)

DEPOSITION OF  
BONNIE RICH  
January 18, 2023  
9:11 A.M.

18 Capitol Square SW  
Atlanta, Georgia  
Lee Ann Barnes (via Zoom), CCR-1852B, RPR, CRR, CRC

1 Q. How would you characterize them?

2 A. Oh, suburban.

3 Q. Suburban?

4 A. Yes.

5 Q. Okay. And how would you characterize the  
6 areas of North Fulton and East Cobb County?

7 A. Suburban.

8 Q. So would you say that -- would you say  
9 those are relatively similar -- have relatively  
10 similar characteristics to the districts that were  
11 added?

12 A. Yes.

13 Q. Okay. We're going to take a minute to  
14 look at another map of Congressional District 14.  
15 Just give me a moment.

16 (Plaintiffs' Exhibit 10 was marked for  
17 identification.)

18 BY MR. MELLMAN:

19 Q. This is has also been introduced in the  
20 Dugan deposition. We can just mark it as  
21 Exhibit 10.

22 Do you recognize this map?

23 A. I -- I recognize that it's titled "Prior  
24 Congressional District 14 and S.B.~2EX Congressional  
25 District 14."

1 Q. And how would you characterize the former  
2 Congressional District 14?

3 A. I'm sorry. What do you mean?

4 Q. Urban? Suburban? Rural? Exurban?

5 A. I'm -- I'm not familiar with this area  
6 like I am 6 because I don't live down here and I  
7 never have. It's my understanding it's very rural  
8 in the area, but I don't really -- I don't really  
9 have personal knowledge of that area the way that I  
10 do the other one.

11 Q. Are you aware that the primary industries  
12 there are agricultural and manufacturing?

13 A. I am not but that would not surprise me.

14 Q. Okay. And the -- looking down at the  
15 bottom there, the portion of Cobb County that was  
16 added, are you familiar with the general  
17 characteristics of that area?

18 A. Generally, yes.

19 Q. Would you characterize that area as rural?

20 A. No.

21 Q. How would you characterize it?

22 A. Cobb County?

23 Q. (Nodded head.)

24 A. It -- it's suburban.

25 Q. Would you say it's part of the metro



1 Atlanta area?

2 A. Yeah, I would say that.

3 Q. Do you believe that there are communities  
4 of interest between that portion of Cobb County that  
5 was added and the prior Congressional District 14?

6 A. So the portion that's beside Paulding  
7 County, I really -- I -- I don't know the area. So  
8 I really wouldn't know. I would assume that because  
9 it's right there, it would be pretty similar to the  
10 Paulding County area that it butts up against. But  
11 I don't really know that.

12 Q. Are you aware that District 14 is Marjorie  
13 Taylor Greene's district?

14 A. Yes.

15 Q. And so are you aware of any of the various  
16 demographics of the former Congressional District 14  
17 versus the current Congressional District 14?

18 A. I don't know the differences. I would  
19 assume that they're both conservative, Republican  
20 leaning. I don't really know.

21 Q. Including the portion of Cobb County that  
22 was added?

23 A. I really don't know.

24 Q. Are you aware that the portions of Cobb  
25 County that were added included Austell and Powder

1 Springs?

2 A. No.

3 Q. Are you familiar with those names?

4 A. I -- I've heard of them, but I'm not  
5 familiar with the specific parts of Cobb County. I  
6 just know it as a whole.

7 Q. So are you aware that Austell has a mostly  
8 high black population?

9 A. I don't -- I don't know that specifically.

10 Q. The same for Powder Springs?

11 A. Right. I don't know that. I believe you  
12 if you say it is.

13 Q. What about the racial demographics of the  
14 various parts of the district that were moved?

15 So that would be Haralson County and part  
16 of Pickens County.

17 A. I -- I really -- I really don't know. I  
18 just remember that Pickens County wanted to be  
19 whole. I do remember that.

20 Q. Would you be surprised to learn that the  
21 percentage of non-white people in District 14  
22 increased with the new map?

23 A. No.

24 Q. You would not be surprised?

25 A. No.

1 Q. Why not?

2 A. Well, I think that the percentage of  
3 non-white people for the whole state increased.

4 Q. And would that have been smoothly across  
5 the whole state?

6 A. I -- I doubt that.

7 Q. Do you recall receiving any public  
8 comments or feedback from the residents of the --  
9 from the residents of the part of Cobb County that  
10 was added to Congressional District 14?

11 A. Yes, I do.

12 Q. And what was the tenor of that feedback?

13 A. Yeah. They -- they did not want to be  
14 included there.

15 Q. And can you discuss why the decision would  
16 be made to include them anyway?

17 A. I really -- you know, I can't say  
18 specifically. I know that there were a lot of  
19 factors that went into this map and we tried to  
20 please as many people as possible, but never --  
21 you're never going to please everybody. There will  
22 always be people who are not happy. So I -- I would  
23 assume that the reason that the map exists the way  
24 it is is because it needed to to comply with the  
25 legal standards and the redistricting guidelines.

1 Q. And would you have made the decision on  
2 whether to include that piece of Cobb County?

3 A. No. It was part of the map. Like, it was  
4 not -- you know, it wasn't anything that -- that we  
5 discussed changing. So I would say that that  
6 decision was probably made by the map drawer and  
7 then we did just -- we approved it when we -- when  
8 we looked at the map.

9 Q. "We" being you and counsel?

10 A. The committee, and yeah, counsel. Yeah.

11 Q. Did you conduct any sort of analysis to  
12 determine the propriety of the map?

13 A. Beyond hiring counsel to review it?

14 Q. (Nodded head.)

15 A. No.

16 Q. Do you recall receiving any comments or  
17 feedback from the residents of the existing  
18 Congressional District 14 about the prospect of  
19 adding parts of Cobb County?

20 A. I -- I don't remember. There may have  
21 been. There may have been people who complained  
22 about that.

23 Q. Do you recall the tenor of any of those  
24 complaints?

25 A. Well, if -- if somebody did complain, they

1 just wouldn't have wanted it. But I -- I -- I  
2 don't -- I don't have a specific recollection who it  
3 may have been. It's been over a year ago. There  
4 were a lot of, you know, people testifying in these  
5 hearings.

6 Q. Okay. Do you recall why they would not  
7 have wanted that part of Cobb County as part of  
8 their district?

9 A. No, I don't.

10 Q. Can you look back again at the -- the  
11 email attachment that we just looked at?

12 On the last page with respect to  
13 Congressional District 11, you write "Responded to  
14 the overwhelming public input with respect to  
15 Pickens County and made it whole."

16 A. Yes.

17 Q. And we discussed that before as well?

18 A. Yes.

19 Q. And then just above that for Congressional  
20 District 14 you write "Maintained this core  
21 district; needed to gain population, so it  
22 geographically moved south, where we had population  
23 growth."

24 A. Yes.

25 Q. And if you take a look at the map, why

1 didn't you make Pickens whole if you needed to add  
2 population growth?

3 Why didn't you make Pickens whole by  
4 adding all of Pickens to Congressional District 14?

5 A. I -- I really couldn't answer that. I'm  
6 not a map drawer. This was something that was an  
7 issue because of a mountain range that divided and  
8 made things difficult there, is what I seem to  
9 recall. But I -- I'm not the map drawer so I  
10 couldn't really answer that.

11 Q. Do you recall if anyone suggested  
12 incorporating all of Pickens County into  
13 Congressional District 14?

14 A. Who? Like -- like the public?

15 Q. A legislator. A map drawer.

16 A. No, I don't.

17 Q. Okay. I'm going to show -- I'm going to  
18 show you another document which I'm going to mark as  
19 Exhibit 11.

20 (Plaintiffs' Exhibit 11 was marked for  
21 identification.)

22 BY MR. MELLMAN:

23 Q. And it begins with a Bates  
24 Number LEGIS00003224.

25 And can you take a look at this email?

1 Q. (Nodded head.)

2 A. I really don't. I -- I really don't.

3 Q. Do you have an understanding of why she  
4 was critical of the redistricting decisions related  
5 to Congressional District 14?

6 A. I don't. I don't -- I don't follow her  
7 rationale or logic. I don't understand it.

8 Q. Do you have an understanding of why any  
9 residents of Congressional District 14 were  
10 displeased with the redistricting process?

11 A. I wouldn't -- I wouldn't know except for  
12 whatever they said in the meeting, and I -- I don't  
13 remember that, sitting here today.

14 Q. I'm going to ask you now about some of the  
15 specific districts -- some of the specific House  
16 districts.

17 So the map, if you flip to the subsequent  
18 pages, there's some zoomed-in portions, and I'll  
19 just ask you to answer to -- to the best of your  
20 ability about each particular district.

21 So for House District 44, do you see where  
22 that is? It's --

23 A. No.

24 Q. -- in the top left. It splits between  
25 the -- the second big box down there.

1 A. Oh, is it on a blowup?

2 Q. Yeah. On the second page --

3 A. Oh, okay.

4 Q. -- Metro Atlanta area.

5 A. I see 43 and 45. Oh, there's 44, yes.

6 Q. And are you generally familiar with House  
7 District 44?

8 A. No.

9 Q. Okay. Can you explain when a factors you  
10 considered in redrawing House District 44?

11 A. None other than the ones that I've already  
12 told you about.

13 Q. Are you aware of whether the district core  
14 was maintained from the 2010 map?

15 A. I don't recall.

16 Q. Are you aware of the racial demographic --  
17 demographics of the old HD44?

18 A. Not sitting here.

19 Q. Or would you have been at the time?

20 A. I may not have been. I -- I -- I don't --  
21 I -- I don't recall looking -- I know for a fact I  
22 didn't look at every district, and I don't recall if  
23 I looked at that one or not.

24 Q. For the districts that you looked at,  
25 would you have looked at the racial demographics?



1           A.    The information -- if -- if we clicked on  
2           the district, it would have popped up and, you know,  
3           that would have been something, you know, when we  
4           would try to make a change that was requested, it  
5           may have altered it so extreme that, for example,  
6           you know, a voting rights district went down to, you  
7           know, nothing. No -- no black population or very  
8           low. So we're, like, well, we can't do that.

9                        So to that extent, I would have, but I --  
10           I really wasn't the one using those figures to draw  
11           the maps. Those would just pop up when we were  
12           trying to tweak it.

13           Q.    And when you say you -- you didn't look at  
14           every district, for the districts you did look at,  
15           what does it mean to you to look at them?

16           A.    Meaning the districts where we tried to  
17           change something that somebody -- that a legislator  
18           had -- had requested.

19           Q.    And in drawing this district and the  
20           districts in general, we talked about did you value  
21           keeping counties whole?

22           A.    That was one of the redistricting  
23           guidelines.

24           Q.    Do you recall why it would have been  
25           sacrificed in this particular situation?

1           A.    I don't recall in this particular  
2 situation, but given the fact that we have as many  
3 counties as we do, that was inevitable, to have to  
4 split them.

5           Q.    Okay.  What about -- what about House  
6 District 48?

7           A.    I see it here.

8           Q.    Was that one of the districts that you  
9 looked at?

10          A.    I would not be able to say.

11          Q.    Do you know if the district core was  
12 maintained from the 2010 map?

13          A.    I have no idea looking at this now.

14          Q.    Are you aware of the racial demographics  
15 of the old HD48?

16          A.    No.  I -- I'm not going to be able to  
17 answer any questions like that.

18          Q.    Okay.  Or the new HD48?

19          A.    No.

20          Q.    And so when you were looking at a  
21 particular district, you were able to click on it  
22 and view the racial data for that district?

23          A.    I couldn't.  I didn't have access to that  
24 software.  But when I was with Gina or Brian in the  
25 apportionment office, if they clicked on a district,

1 then they could make that information populate. And  
2 they would do that to look at it themselves because  
3 they knew that they needed to consider that for  
4 whatever changes we were trying to make.

5 Q. And you were in the office at times when  
6 they were clicking on particular districts and  
7 looking at that data?

8 A. Yes.

9 Q. And if they were making tweaks, you could  
10 look at that data before and after the tweak?

11 A. Yes.

12 Q. I'm just going to ask you about a few more  
13 districts. If you don't know the answer, that's  
14 okay. I'm going to ask the questions.

15 Go look now at House District 49.

16 A. Okay.

17 Q. Do you recall looking at that district?

18 A. I don't.

19 Q. Can you explain any factors you considered  
20 in redrawing that district?

21 A. We would have -- we would have asked the  
22 Reapportionment Office, our lawyers to apply the  
23 guidelines and the law. That's all I can tell you.

24 Q. Do you know if the district core was  
25 maintained from the 2010 map?

1 A. I can't say, sitting here today.

2 Q. Are you aware of the racial demographics  
3 of the old HD49?

4 A. I don't know.

5 Q. What about the new HD49?

6 A. I don't know.

7 Q. HD52?

8 A. Okay. I see it.

9 Q. Do you recall reviewing that district?

10 A. No.

11 Q. Are you aware of what factors would have  
12 been considered in redrawing that district?

13 A. The same as all of the other ones.

14 Q. Was -- are you aware of whether the  
15 district core was maintained from the 2010 map?

16 A. I don't remember.

17 Q. Are you aware of the racial demographics  
18 of the old HD52?

19 A. No.

20 Q. Or new HD52.

21 A. No.

22 Q. Last one.

23 HD104?

24 A. Okay.

25 Q. And do you recall looking at that

1 district?

2 A. Not specifically.

3 Q. Are you aware of what factors were  
4 considered in redrawing that district?

5 A. The -- the same factors as all of the  
6 others.

7 Q. Are you aware of whether the district core  
8 was maintained from the 2010 map?

9 A. I don't remember, sitting here today.

10 Q. Are you aware of the racial demographics  
11 of the old HD104?

12 A. There is no way I could ever remember  
13 that.

14 Q. Or the new HD104?

15 A. No.

16 Q. And so are there particular districts you  
17 do remember looking at?

18 A. I don't have specific recollection.  
19 It's -- it's hard to do that by the numbers, you  
20 know, and they don't stay the same after  
21 redistricting. So it's virtually impossible.

22 Q. Were there specific areas or -- of the  
23 state or districts that you recall specifically  
24 tweaking or working on?

25 A. I -- I would have for -- representatives

1 with whom I met who made requests who had not  
2 already, in just the -- the drawing by the  
3 Reapportionment Office, who had not gotten something  
4 they asked for, we would have pulled them up. And  
5 we did. I think we gave every -- almost every  
6 member who met with me something they asked for, if  
7 not every member. And sometimes more than what  
8 they -- the one thing.

9 So I just don't recall what they were  
10 because I -- my memory is just -- does not work like  
11 that. I just can't remember the -- the district  
12 numbers that way.

13 Q. And so you mentioned earlier that you  
14 spoke with about roughly 100 legislators and got  
15 requests regarding their district?

16 A. Yes.

17 Q. Do you recall how many of those were  
18 accommodated in the initial draft and how many  
19 tweaks needed to be made for?

20 A. I don't recall specifically. I do know  
21 that we -- I opened the file for every single  
22 legislator, and we looked -- so we did look at every  
23 single district, now that I'm thinking about how we  
24 did it. And if we looked at it and we felt like  
25 they got something that they asked for, we closed

1 A. I did.

2 Q. And I believe you said earlier, the  
3 Democratic members except for a handful of them  
4 didn't show up for meetings or try to meet with you.

5 A. Correct.

6 Q. And there was a portal that was made to  
7 receive public comments as well?

8 A. Yes, that's correct.

9 Q. And you received, I guess, hundreds of  
10 comments at that portal?

11 A. I think at last count it was in the 900s  
12 and I thought it went over 1,000.

13 Q. And all those were made available to  
14 members to review; right?

15 A. Yes.

16 Q. And you -- you reviewed those comments, as  
17 you said?

18 A. Yes, I did.

19 Q. And we had some discussion about the  
20 education data the committees hold.

21 Do you recall inviting a variety of  
22 different groups interested in redistricting?

23 A. I did.

24 Q. In both political parties?

25 A. Yes, both parties.

1 Q. And the National Conference of State  
2 Legislatures?

3 A. That is correct.

4 Q. And the guidelines for the committee were  
5 adopted after that educational process; is that  
6 right?

7 A. That is correct.

8 Q. In the map drawing process, I know you  
9 talked about you primarily did that in the  
10 Reapportionment Office with Ms. Wright or with  
11 Mr. Knight; right?

12 A. Correct.

13 Q. Was political data generally displayed as  
14 you looked at different districts?

15 A. The political data, if you mean the  
16 election results, yes.

17 Q. And so it's fair to say you were aware of  
18 the partisan impact of district lines and you looked  
19 at various drafts?

20 A. Yes.

21 Q. When you held the committee meetings  
22 during the special session, did you generally  
23 receive public comment at those meetings as well?

24 A. I -- I did not at the very first meeting  
25 where Leader Beverly and I both presented our maps



# EXHIBIT J

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

GEORGIA STATE CONFERENCE OF THE  
NAACP, et al.,

Plaintiffs,

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

vs.

STATE OF GEORGIA, et al.,

Defendants.

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COMMON CAUSE, et al.,

Plaintiffs,

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

vs.

BRAD RAFFENSPERGER,

Defendant.

DEPOSITION OF GERALD GRIGGS

30(B)(6) REPRESENTATIVE

THE GEORGIA STATE CONFERENCE

OF THE NAACP

JANUARY 18TH, 2023 - 9:00 a.m.

Through Video-Conference

Via ZOOM,

Inna Russell, RPR, CCR #1-1-1-1

1 Q. Are you able to testify on how many members of  
2 the Conference were affected by the re-districting?

3 A. No, I can't give a single number because I  
4 haven't -- I haven't seen that, that research, but I  
5 do know it was a lot.

6 Q. Do you know what would be involved in trying  
7 to find out that number?

8 A. Talking to the individual units.

9 Q. Is there any particular reason why you talked  
10 to Dantaye Carter for this topic?

11 A. Because I know that he lived in the sixth  
12 district and was drawn out of the sixth into the  
13 seventh.

14 Q. Topic 10, The methods used by the Organization  
15 to determine which districts it would challenge in  
16 this action.

17 MR. BOYLE: My understanding, counsel, is that  
18 you are not allowing testimony on this topic based  
19 on privilege; is that correct?

20 MR. HEAVEN: Exactly. Yes, that's right.

21 MR. BOYLE: I'll just note, for the record,  
22 that we, unless I've missed something, we don't  
23 concede to that, but we'll just move on for  
24 today's purposes.

25 BY MR. BOYLE:

# EXHIBIT K

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 DIVISION

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

Plaintiffs, )

vs. )

STATE OF GEORGIA, et al., )

Defendants. )

----- )  
COMMON CAUSE, et al., )

Plaintiffs, )

vs. )

BRAD RAFFENSPERGER )

Defendant. )

CASE NO.  
1:21-CV-5338  
ELB-SCJ-SDG

CASE NO.  
1:22-CV-00090  
ELB-SCJ-SDG

30(b)(6) remote deposition of GEORGIA  
ASSOCIATION OF LATINO ELECTED OFFICIALS, INC.,  
Deponent GERARDO ELEAZAR GONZALEZ, pursuant to  
notice and agreement of counsel, under the  
Federal Rules of Civil Procedure, before Celeste  
Mack, CCR, RPR, at Crowell & Moring, 1001  
Pennsylvania Avenue NW, Washington, D.C., on  
Wednesday, January 11, 2023, commencing at  
9:05 a.m.

1 example, during the election we invited our  
2 members to participate in Taco Tuesday to the  
3 poles. We had -- we provided tacos for folks and  
4 started reminding people about going to the poles  
5 during the early voting process, as an example.

6 MS. LaROSS: And Shawn, in response  
7 to supplemental response to discovery, the FUND  
8 has disclosed under an AAO designation the name  
9 of a member who's been affected by redistricting.  
10 And I obviously -- we don't want to say her name  
11 here, but I do want to ask just a couple of  
12 questions about that.

13 And then you can tell me if we need to  
14 designee this portion of the deposition as a --  
15 I'm trying to avoid that, but if we need to, just  
16 let me know; is that acceptable?

17 MR. LAYMAN: Yes. Yeah, just to  
18 the -- I'll let you ask the questions and just  
19 object.

20 MS. LaROSS: Okay. And you can  
21 object as I ask the question, if need be. I'm  
22 not trying to lock you in there.

23 BY MS. LaROSS:

24 Q. Okay. So Mr. Gonzalez, are you aware,  
25 and we don't want to say the name of the person,

1 but that one member of the FUND has been  
2 identified as having been affected by  
3 redistricting?

4 A. Yes.

5 Q. And what process did the FUND undertake  
6 to determine that individual?

7 MR. LAYMAN: Objection to the  
8 extent that it covers attorney/client privilege,  
9 and conversations you had with an attorney or any  
10 work product.

11 MS. LaROSS: Sure.

12 BY MS. LaROSS:

13 Q. Other than discussions with your  
14 attorney, what did the FUND do to determine that  
15 particular individual?

16 A. We looked at our membership list and  
17 made sure that we had addresses for the folks  
18 that we were looking at and made sure that they  
19 were in concert with what we were particularly  
20 looking for.

21 Q. And what district does that person  
22 reside in?

23 A. I don't know the particular district,  
24 but I know that the district is within Dekalb  
25 County.

# EXHIBIT L



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 DIVISION  
GEORGIA STATE CONFERENCE OF THE )  
NAACP, et al., ) Case No.  
Plaintiffs, ) 1:21-CV-5338-  
v. ) ELB-SCJ-SDG  
STATE OF GEORGIA, et al. )  
Defendants. )  
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COMMON CAUSE, et al., )  
Plaintiffs, ) Case No.  
v. ) 1:22-CV-00090-  
BRAD RAFFENSPERGER ) ELB-SCJ-SDG  
Defendant. )  
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The DEPOSITION of:  
HELEN BUTLER  
Being taken pursuant to stipulations herein:  
Before Kathryn Taylor, CCR  
FRIDAY, JANUARY 13, 2023  
Commencing at 9:00 a.m.  
All parties, including the court reporter, appeared by  
videoconference.

1 Q. So maybe what we can do is this: If you want  
2 to jump back to Exhibit Number 4, the complaint, and  
3 we'll go to page -- page 15. Again, I'm sorry. This  
4 is a lot easier when we're in the same room and I  
5 can -- we can keep the documents open in front of us.

6 A. I have it.

7 Q. Okay. On page 15, and I wanted to ask --  
8 what I am asking about is paragraph 45.

9 It says, "The GCPA brings this action on  
10 behalf of itself and its individual members who are  
11 registered voters residing in Georgia House, State  
12 Senate, and Congressional districts where their voting  
13 power will be reduced under the new plans."

14 Do you see that?

15 A. Yes.

16 Q. And so what I'm asking is just, does the  
17 Peoples' Agenda have a way to determine which House,  
18 Senate, and Congressional districts its individual  
19 members reside in?

20 A. They have a way of determining -- let's see,  
21 we can -- we go by our members, where they live, and by  
22 the voter files.

23 Q. Okay. And, again, I'm not asking for  
24 anything that might have come from work with your  
25 lawyers on this topic, but I'm just ask -- I'm just

1 going to ask: Unrelated to that, did the Peoples'  
2 Agenda do any analysis of which House, Senate, and  
3 Congressional districts its members live in either  
4 before filing a lawsuit or after filing it?

5 A. I think that, again, is something we work  
6 with our counsel on.

7 Q. Okay. Then that's totally fine. There also  
8 is the name of one individual that was provided in the  
9 discovery responses. And to make things easier, I  
10 don't want to put that person's name on the transcript  
11 of the deposition. But does the Peoples' Agenda know  
12 what district for House, Senate, and Congress the  
13 identified member lives in?

14 A. We know, yes.

15 Q. And what districts are those?

16 A. I didn't look at them to refresh my memory on  
17 it -- the numbers, but I know he lives in Cobb County,  
18 in the Cobb County districts.

19 Q. Okay.

20 A. The numbers change, so, you know . . .

21 Q. Yes. My district numbers change too. You  
22 get used to that.

23 A. Uh-huh.

24 Q. All right. So next, let's go ahead and go to  
25 the next topic, which is Topic Number 9, which is,

1 "Whether and how the Organization determined if any of  
2 its individual members are impacted by the laws,  
3 policies, and protocols challenged in this action."

4 And I think based on your answer earlier,  
5 this -- this may be one there's not a whole lot to talk  
6 about. But just to clarify, you're the designee for  
7 Topic 9, right?

8 A. Yes.

9 Q. And is there any method the organization used  
10 to determine whether its individual members were in  
11 districts that it challenges that did not involve  
12 working with your lawyers to make that determination?

13 A. No.

14 Q. Okay. Then that is definitely our shortest  
15 topic yet. So I suspect Number 10 may be similar, but  
16 let's move to that one. Topic 10, "The method(s) used  
17 by the Organization to challenge" -- I'm sorry -- "to  
18 determine which district(s) it would challenge in this  
19 action."

20 MR. TYSON: And, Crinesha, I know this is one  
21 that y'all had not planned to produce a witness  
22 on. And I'm assuming based on Ms. Butler's answer  
23 to Number 9, every answer to the methods used  
24 would also be privileged; is that right?

25 MS. BERRY: That's correct.

# EXHIBIT M

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 DIVISION

GEORGIA STATE CONFERENCE )  
OF THE NAACP, ET AL., )  
PLAINTIFFS, ) Case No. 1:21-CV-5338-  
v. ) ELB-SCJ-SDG  
STATE OF GEORGIA, ET AL., )  
DEFENDANTS. )

----- )  
COMMON CAUSE, ET AL., )  
PLAINTIFFS, ) Case No. 1:22-CV-00090-  
v. ) ELB-SCJ-SDG  
BRAD RAFFENSPERGER, )  
DEFENDANT. )  
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VIDEO RECORDED DEPOSITION OF PEYTON MCCRARY  
(TAKEN by DEFENDANTS)  
ATTENDING VIA ZOOM IN WASHINGTON, D.C.  
MARCH 3, 2023

VIDEOGRAPHER: Maya Carter  
REPORTED BY: Meredith R. Schramek  
Registered Professional Reporter  
Notary Public  
(Via Zoom in Mecklenburg County,  
North Carolina)

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

Page 48

1 to rely on newspapers rather than other kinds of  
2 documents, does that apply to this -- to the report you  
3 ended up doing, or would that only apply to the effort  
4 you thought you were going to be doing in looking at  
5 the redistricting in 2021?

6 A It refers primarily to what I thought I was  
7 going to be examining, but ended up not being asked to  
8 address.

9 Q Now, are you offering an opinion about  
10 discriminatory intent behind the 2021 redistricting?

11 A No.

12 Q Are you offering any opinion about the design  
13 of the districts that were adopted in 2021?

14 A I'm sorry. The districts that were adopted  
15 when?

16 Q In 2021.

17 A Could you repeat your question, so I'm sure  
18 I'm answering the question I thought I heard?

19 Q Are you offering an opinion about the design  
20 of the districts that were adopted in 2021?

21 A No.

22 Q Okay. At the top of page 6, you talk about  
23 your voting rights law course at George Washington law  
24 school. Tell me about that course.

25 A It's a course that considers the evolution of

# EXHIBIT N



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 DIVISION

GEORGIA STATE CONFERENCE	)	
OF THE NAACP, ET AL.,	)	
	)	
PLAINTIFFS,	)	Case No. 1:21-CV-5338-
	)	ELB-SCJ-SDG
v.	)	
	)	
STATE OF GEORGIA, ET AL.,	)	
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DEFENDANTS.	)	
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COMMON CAUSE, ET AL.,	)	
	)	
PLAINTIFFS,	)	Case No. 1:22-CV-00090-
	)	ELB-SCJ-SDG
v.	)	
	)	
BRAD RAFFENSPERGER,	)	
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DEFENDANT.	)	
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VIDEO RECORDED DEPOSITION OF BENJAMIN SCHNEER  
(TAKEN by DEFENDANTS)  
ATTENDING VIA ZOOM IN MIDDLESEX COUNTY, MASSACHUSETTS  
MARCH 14, 2023

VIDEOGRAPHER: Krishan Patel  
REPORTED BY: Meredith R. Schramek  
Registered Professional Reporter  
Notary Public  
(Via Zoom in Mecklenburg County,  
North Carolina)

1 describing that pattern accurately. The leap that  
2 you're making though and that Dr. Alford is making is  
3 that you can attribute a cause, that the party is the  
4 cause of that. And what I'm saying is that there's not  
5 evidence to make that leap.

6 Q But there's also not evidence to suggest that  
7 changing the race of the candidate affects voter  
8 behavior in your analysis; right?

9 A I mean, I don't know that we need to go back  
10 over this all over again. But, again, the -- you know,  
11 that's -- I don't believe that's what you can -- the  
12 statement you just made I don't believe you can  
13 conclude what you're saying from my report, no.

14 Q So black voters in Georgia are uniformly  
15 voting in support of democratic candidates --  
16 correct? -- in the races that you analyzed?

17 A Yes. That's correct.

18 Q By a very large margin. Is that fair to say?

19 A Based on my analysis, yes, that is fair to  
20 say.

21 Q Okay. But it's not true that black voters in  
22 Georgia exclusively favor black candidates running for  
23 election in Georgia unless that black candidate is a  
24 Democrat? It is true to say that. Let me rephrase  
25 that because that's going to come out poorly.

1 view.

2 Q Okay. Is there -- do you see any benefit of  
3 maybe including it but not allowing it to alter your  
4 conclusions given its differences but still including  
5 it in the report?

6 A I don't know. I'm not sure. I mean, I  
7 guess, you know, ultimately, I didn't include it. I  
8 guess you could make an argument of putting it in the  
9 appendix. I don't think it matters really one way or  
10 the other.

11 Q Okay. Paragraph 20, just the next page over,  
12 you state in the second sentence that "Primary  
13 elections may be of use in racially polarized voting  
14 analysis, but in my view studying them is not necessary  
15 or sufficient for drawing conclusions about racially  
16 polarized voting in Georgia general elections."

17 If you're not studying primary elections, how  
18 are you able to determine -- or are you able to  
19 determine whether voters are simply voting for a  
20 candidate based on their party as opposed to based on  
21 their race?

22 A Well, again, that goes back to this kind of  
23 fundamental point I'm trying to make, which is I'm not  
24 trying to disentangle those things in my report. I'm  
25 describing how these different racial groups vote,

1 which, in my understanding is what I need to know to  
2 make this determination about racially polarized  
3 voting.

4 I think the issue with the primaries is --  
5 which I lay out in the report -- is that the -- you  
6 know, for one, the electorates differ. So ultimately  
7 what I'm interested in this report is electing  
8 candidates of choice, which occurs in the general  
9 election; right? And so to the -- you know, so there's  
10 an element to which the electorate in the general  
11 election is very different than in a primary election.  
12 And so you can draw inferences about a primary  
13 electorate that may or may not carry over to the  
14 general election and vice versa. So that's kind of --  
15 that's the caution I have with primaries. I don't  
16 think that it's necessarily wrong to look at primaries.  
17 But for -- in my view, for the -- what I'm doing in  
18 this report it, as I said, was not necessary, nor would  
19 it be sufficient to, for example, just look at  
20 primaries.

21 Q Okay. I bring you down to paragraph 27.

22 A Okay.

23 Q The second sentence in paragraph 27 states  
24 "When a minority candidate was not one of the two major  
25 party candidates, minority voters continued to vote