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

ALPHA PHI ALPHA FRATERNITY INC., et al., *Plaintiffs*, vs. BRAD RAFFENSPERGER, in his official capacity as Secretary of State of Georgia. *Defendant*.	Civ. No. 21-5337

DECLARATION OF WILLIAM S. COOPER

WILLIAM S. COOPER, acting in accordance with 28 U.S.C. § 1746, Federal Rule of Civil Procedure 26(a)(2)(B), and Federal Rules of Evidence 702 and 703, does hereby declare and say:

I. INTRODUCTION

1. My name is William S. Cooper. I have a B.A. in Economics from Davidson College. As a private consultant, I serve as a demographic and redistricting expert for the Plaintiffs.

2. I testified at trial as an expert witness on redistricting and demographics on behalf of the plaintiffs in this lawsuit in February 2022 (preliminary injunction) and at the full trial in September 2023.

3. To date, following the release of the 2020 Decennial Census, I have testified in federal court in nine Section 2 redistricting cases, including *Allen v. Milligan*. Since my September 2023 appearance in this case, I testified at trial on November 26, 2023 in *Nairne v. Ardoin*, a Section 2 lawsuit challenging post-2020 House and Senate districts in Louisiana. I was also deposed on December 5, 2023 in *NAACP State Conference v. State Board of Election Commissioners*, a Section 2 lawsuit challenging post-2020 House and Senate districts in Mississippi.

II. PURPOSE OF DECLARATION

4. The Defendants' Proposed Remedial Senate Plan ("2023 Proposed Senate") and House Plan ("2023 Proposed House") were signed into law by Governor Kemp on December 9, 2023.

5. I have also drawn remedial plans for the Georgia Senate and House ("APA Remedial Senate" and "APA Remedial House"), based on the Court's opinion rendered after trial and my own experience as a map-drawer. The APA Remedial Senate and APA Remedial House Plans are depicted in **Appendix 1**.

6. The attorneys for the Plaintiffs in this case asked me to evaluate the attributes of the various plans along standard redistricting metrics, including comparing them to the 2021 Enacted Senate and House Plans.

7. The requested redistricting metrics include district population statistics, measures of compactness, political subdivision splits (counties, VTDs,

municipalities), and changes in core constituencies of the respective districts as compared to the 2021 Enacted Plans.

8. For purposes of my analysis in this report, and unless otherwise noted, I define majority-Black districts as those that are majority-Black voting age ("BVAP").

III. SENATE ANALYSIS

9. This Court's October 26, 2023 order required the Defendants to create two additional majority-Black[1] Senate districts in south Metro Atlanta. Specifically, the court ruled that vote dilution is occurring within an area comprised of 10 Senate districts under the 2021 Plan in South Metro Atlanta—10, 16, 17, 25, 28, 30, 34, 35, 43, and 44—in violation of the Section 2 of the Voting Rights Act.

10. The **Exhibit A** series contains population summary reports for the 2021 Senate Plan, the 2023 Senate Plan, and the APA Remedial Senate Plan. **Exhibit A-1** summarizes population by race/ethnicity, voting age, and citizen voting age under

[1] In this declaration, "African American" refers to persons who are Single Race Black or Any Part Black (i.e., persons of two or more races and some part Black), including Hispanic Black. In some instances (e.g., for historical comparisons), numerical or percentage references identify Single Race Black as "SR Black" and Any Part Black as "AP Black." Unless noted otherwise, "Black" means AP Black. It is my understanding that following the U.S. Supreme Court decision in *Georgia v. Ashcroft*, 539 U.S. 461 (2003), the "Any Part" definition is an appropriate Census classification to use in most Section 2 cases.

the 2021 Senate Plan. **Exhibit A-2** (2023 Senate) and **Exhibit A-3** (APA Remedial Senate) provide the same demographic breakout.

A. Senate Vote Dilution Area

11. The 10-district vote dilution area identified by the Court is illustrated with shading in **Figure 1**. The task for the remedial plan drawer is to stay *inside* the 10-district vote dilution area to the extent practicable in order to bring a core group of Black voters into new majority BVAP districts from one or more majority white districts under the 2021 Plan and/or one or more majority-Black 2021 House districts packed with Black voters.

Figure 1[2]
2021 Senate Plan – 10-District Vote Dilution Area

[2] At my request, ACLU staff working at the direction of counsel created and provided these maps to me to illustrate the comparative changes discussed in this

B. 2023 Senate

12. Boundaries for 15 of the 56 districts in the 2021 Senate change under the 2023 Senate, *i.e.*, 41 Senate districts stay the same.

13. **Exhibit B** ("Core Constituencies") reflects the 2023 Senate core components built from districts in the 2021 Senate.[3]

14. Like the APA Remedial Senate reviewed *infra*, the 2023 Senate adds two new majority-Black districts into the Senate at a statewide level. But it does so almost entirely by combining Black population from existing majority-Black districts along the northern edge of the South Metro periphery with Black population that is *entirely outside* the vote dilution area, as depicted below in **Figure 2**.

report. A full set of maps depicting the various plans is included as **Appendix 2** to this Declaration.

[3] I define "core population" as the largest district-level subset of a population that is kept together in the shift from one plan to another (without considering changes in district numbers or changes in incumbent representation). The core population is identified with shading in the referenced tabular exhibits.

Figure 2
2023 Proposed Senate Plan –Vote Dilution Area x Black-Majority Districts

15. **Exhibit C** provides county-component demographic information for all 56 districts under the 2023 Proposed Senate Plan, including the two "new" majority Black Senate districts, Proposed 2023 SDs 17 (in Clayton and Henry Counties) and 28 (in Cobb, Douglas, and Fulton Counties).

16. **Exhibit B** confirms that over 75% of the population of 2023 Proposed SD 17 comes from 2021 Enacted SDs 10 and 44, which were already majority-Black. **Exhibit C** confirms that around 40% of the population in new 2023 Proposed Senate District 28 comes from Cobb County, which is outside of the vote-

dilution area entirely. Most of the rest comes from existing Black-majority District SD 35.

17. Under the 2023 Proposed Senate, the net gain in BVAP in majority Black districts within the 10-district vote dilution area, which can be derived from **Exhibit D**, is miniscule: 2,940 people.

18. **Appendix 3**, which identifies the net gain (or loss) in BVAP in majority-Black districts for each county as well as the changes inside and outside the vote dilution area, illustrates why this is the case. In the 2023 Proposed Senate, the bulk of the Black voters who are newly added to Black-majority districts come from outside of the vote dilution area. Within the vote dilution area, some Black voters from Henry County are newly added to Black-majority districts, but almost the same number are removed a Black majority-district in neighboring Newton County. No Black voters in Fayette or Spalding Counties are added to Black-majority districts.[4]

C. APA Remedial Senate

19. Like the 2023 Plan, boundaries for 15 of the 56 districts in the 2021 Senate change under the 2023 Senate. In other words, 41 Senate districts stay the same.

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[4] At my request, ACLU staff working at the direction of counsel derived the figures set out in **Appendix 3** using block-level Census population data.

20. **Exhibit E** ("Core Constituencies") reflects the APA Remedial Senate core components built from districts in the 2021 Senate.

21. As derived from **Exhibit E**, under the APA Remedial Senate, the net gain in BVAP in majority Black districts within the 10-district vote dilution area is 88,035, which is sufficient to constitute two additional majority-Black Senate districts in that area. This is achieved as shown by way of example in the map in Figure 3 by adding Black population in the southern part of South Metro Atlanta into majority-Black Districts 17 and 28. The green areas, which are entirely in the vote-dilution area, are newly included in Black-majority districts. In contrast to the 2023 Proposed Senate Plan, the number of Black voters who are brought into majority-Black districts from *outside* of the vote dilution area is *zero*.

Figure 3
South Metro Atlanta
Green area shifts into two new APA majority-Black Senate Districts

22. In sum, the APA Remedial Senate Plan changes the same number of districts as the 2023 Plan, while creating two additional majority Black districts *inside* the vote dilution area.

D. Supplemental Plan Metrics

23. The APA Remedial Senate adheres to traditional redistricting principles, including population equality, compactness, contiguity, respect for political subdivision boundaries, respect for communities of interest, and the non-dilution of minority voting strength.

24. Additional redistricting metrics comparing the APA Remedial Plan with the 2023 Plan are described below.

(a) Compactness

25. Compactness scores for the APA Remedial Senate are within the norm for a typical legislative Plan. **Exhibit G-1** contains district-by-district compactness scores generated by Maptitude for all districts in the APA Remedial Senate, alongside scores for the 2023 Plan (**Exhibit G-2)** and the 2021 Plan **(Exhibit G-3).**

26. The table in **Figure 4** (condensed from the Exhibit G series) reports mean and minimum Reock[5] and Polsby-Popper[6] scores.

27. On balance, the APA Remedial Plan scores higher than the 2023 Plan according to the widely referenced Reock and Polsby-Popper measures.

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[5] "The Reock test is an area-based measure that compares each district to a circle, which is considered to be the most compact shape possible. For each district, the Reock test computes the ratio of the area of the district to the area of the minimum enclosing circle for the district. The measure is always between 0 and 1, with 1 being the most compact. The Reock test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan." Caliper Corporation, *Maptitude For Redistricting* Software Documentation.

[6] The Polsby-Popper test computes the ratio of the district area to the area of a circle with the same perimeter: 4pArea/(Perimeter2). The measure is always between 0 and 1, with 1 being the most compact. The Polsby-Popper test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan. *See* Caliper Corporation, *Maptitude For Redistricting* Software Documentation.

Figure 4
Compactness Scores

	Reock		Polsby-Popper	
	Mean	**Low**	**Mean**	**Low**
APA Remedial Plan	.42	.17	.28	.11
2023 Plan	.40	.13	.27	.08
2021 Plan	.42	.17	.29	.13

(b) Political Subdivision Splits

28. The **Exhibit H** series contains Maptitude generated reports for splits of key geographic areas in Georgia—from VTDs to regional commissions—under the APA Remedial Plan, the 2023 Plan, and the 2021 Plan.

29. The table in **Figure 5** summarizes split counts for counties and 2020 VTDs. The APA Remedial Plan scores better than the 2023 Plan across all six categories.

Figure 5
County, VTD, and Municipal Splits

	Split Counties*	Total County Splits*	2020 VTD Splits*	Split Cities/ Towns#	City/ Town Splits*
APA Remedial Senate	31	65	41	70	173
2023 Senate	30	65	53	71	176
2021 Senate	29	60	40	68	169

*Excludes unpopulated areas
Out of 531 municipalities (calculated by subtracting the number of whole cities in the Maptitude report from 531)

30. **Exhibit H-1** contains a county and VTD split report for the APA Remedial Senate. **Exhibit H-2** reports on the 2023 Senate. **Exhibit H-3** reports on the 2021 Senate.

31. **Exhibit H-4** contains a split report for all 531 municipalities (including the 53 cities and towns that spill over into another county) for the APA Remedial Senate. **Exhibit H-5** reports on the 2023 Senate. **Exhibit H-6** reports on the 2021 Senate.

IV. HOUSE ANALYSIS

32. This Court's October 26. 2023 order required the Defendants to create five additional majority-Black House districts in an area encompassing 11 districts under the 2021 House—61, 64, 74, 78, 117, 133, 142, 143, 145, 147, and 149—in violation of Section 2 of the Voting Rights Act.

33. **Exhibit I** series contains population summary reports for the 2021 House Plan, the 2023 House Plan, and the APA Remedial House Plan. **Exhibit I-1** summarizes population by race/ethnicity, voting age, and citizen voting age under the 2021 House Plan. **Exhibit I-2** (2023 House) and **Exhibit I-3** (APA Remedial House) provide the same demographic breakout.

A. House Vote Dilution Area

34. The 11- district vote dilution areas identified by the Court are illustrated with shading in Figure 6 and 7. The task for the remedial plan drawer is to stay *inside* the 11-district vote dilution area to the extent practicable in order to bring a core group of Black voters into new majority BVAP districts from one or more majority white districts under the 2021 House and/or one or more majority-Black 2021 House districts packed with Black voters.

35. Unlike the Senate vote dilution area, the House 11-district vote dilution is comprised of three non-contiguous areas encompassing the Macon-Bibb area, South Metro Atlanta and West Metro Atlanta.

36. The vote dilution area in South Metro Atlanta is reflected in **Figure 6.**

Figure 6
2021 Senate Plan – Vote Dilution Area in South Metro Atlanta

37. The vote dilution area in West Metro Atlanta is reflected in **Figure 7.**

Figure 7
2021 Senate Plan – Vote Dilution Area in West Metro Atlanta

B. 2023 House

38. Boundaries for 23 of the 180 districts are changed under the 2023 Proposed House Plan, *i.e.,* 167 House districts stay the same.

39. **Exhibit K-1** ("Core Constituencies") reflects the 2023 Proposed House Plan core components built from districts in the 2021 Enacted House Plan. To view the APA Remedial House Plan core components built from districts in the 2021 Enacted House Plan, refer to **Exhibit K-2** – "Core Constituencies."

40. Under the 2023 Proposed House, the net gain in BVAP in majority Black districts across the three vote dilution areas, as shown in **Appendix 3,** is just 46,104.

41. Most of those gains are in Macon. In the vote dilution area in South Metro Atlanta, the net gain is just 15,747, and in West Metro Atlanta it is just 2,661.

42. **Appendix 3**, which identifies the net gain (or loss) in BVAP in majority-Black districts for each county as well as the changes inside and outside the vote dilution area, illustrates that, in South Metro Atlanta and West Metro Atlanta region in the 2023 Proposed House, the bulk of the Black voters who are newly added to Black-majority districts come from outside of the vote dilution area. In South Metro Atlanta, for example, the 2023 House does not add *any* Black voters in Spalding and Fayette Counties to a majority-Black district, and the net number in Newton County is negative. The net 15,747 Black voters moved into majority-Black districts is not enough to bring any two non-majority-Black House Districts in the vote dilution area above 50% BVAP. In West Metro Atlanta, over 35,000 Black voters from Cobb, Gwinnett, and Dekalb Counties are moved into Black-majority districts, but there is only a 2,661 net increase in the number of Black voters in the vote dilution area living in a majority-Black districts—all in Douglas County.

C. APA Remedial House

43. Boundaries for 28 of the 180 districts in the 2023 House are changed under the APA Remedial House, i.e., 162 of the 2021 House districts are the same.

44. Under the APA Remedial House, the net gain in BVAP in majority Black House districts within the 11-district vote dilution area is 68,861.

D. South Metro/West Metro

45. **Figure 8** visually shows in green (and **Exhibit K-2** confirms) that the APA Remedial House adds additional Black voters in the South Metro/West Metro area into three new majority-Black Districts. Black voters in the southern and western part of the vote dilution area who are submerged in majority-White districts under the 2021 Plan are joined with Black voters who are packed in districts under the 2021 House to create the three additional House districts.

Figure 8
2021 House Plan – South Metro/West Metro
Green area shifts into three new APA majority-Black Districts

E. Supplemental Plan Metrics

46. APA Remedial House adheres to traditional redistricting principles, including population equality, compactness, contiguity, respect for political subdivision boundaries, respect for communities of interest, and the non-dilution of minority voting strength.

47. Additional redistricting metrics comparing the APA Remedial Plan with the 2023 Plan are described below.

(a) Compactness

48. Compactness scores for the APA Remedial House are within the norm for a typical legislative Plan. **Exhibit L-1** contains district-by-district compactness scores generated by Maptitude for all districts in the APA Remedial House, alongside scores for the 2023 Plan (**Exhibit L-2)** and the 2021 Plan **(Exhibit L-3).**

49. The table in **Figure 9** (condensed from the Exhibit L series) reports mean and minimum Reock and Polsby-Popper scores.

50. On balance, the APA Remedial Plan scores higher than the 2023 Plan according to the widely referenced Reock and Polsby-Popper measures.

Figure 9
Compactness Scores

	Reock		**Polsby-Popper**	
	Mean	**Low**	**Mean**	**Low**
APA Remedial House	.39	.12	.28	.10
2023 House	.38	.12	.27	.10
2021 House	.39	.12	.28	.10

(b) Political Subdivision Splits

51. The **Exhibit M** series contains Maptitude generated reports for splits of key geographic areas in Georgia—from VTDs to regional commissions—under the APA Remedial Plan, the 2023 Plan, and the 2021 Plan.

52. The table in **Figure 10** summarizes split counts for counties, 2020 VTDs and municipalities.

Figure 10
County, VTD, and Municipal Splits

	Split Counties*	County Splits*	2020 VTD Splits*	Split Cities/ Towns#	City/ Town Splits*
APA Remedial House	70	214	178	121	349
2023 House	68	210	164	140	255
2021 House	69	209	179	187	344

*Excludes unpopulated areas
Out of 531 municipalities (calculated by subtracting the number of whole cities in the Maptitude report from 531)

53. **Exhibit M-1** contains a county and VTD split report for the APA Remedial House. **Exhibit M-2** reports on the 2023 House. **Exhibit M-3** reports on the 2021 House. **Exhibit M-4** contains a split report for all 531 municipalities (including the 53 cities and towns that spill over into another county) for the APA Remedial House. **Exhibit M-5** reports on the 2023 House. **Exhibit M-6** reports on the 2021 House.

54. **Exhibit N** provides county-component demographic information for all 180 districts under the 2023 Proposed House Plan, including the two "new" majority Black districts in and around Macon-Bibb, the two "new" majority Black districts in south metro Atlanta, and one "new" majority Black district in western metro Atlanta.

# # #

I reserve the right to amend or 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 on December 12, 2023.

WILLIAM S. COOPER