

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

COAKLEY PENDERGRASS; TRIANA
ARNOLD JAMES; ELLIOTT
HENNINGTON; ROBERT RICHARDS;
JENS RUECKERT; and OJUAN GLAZE,

Plaintiffs,

v.

BRAD RAFFENSPERGER, in his official
capacity as the Georgia Secretary of State,

Defendant.

CIVIL ACTION FILE
NO. 1:21-CV-05339-SCJ

**PLAINTIFFS' OBJECTIONS TO THE GEORGIA GENERAL
ASSEMBLY'S REMEDIAL CONGRESSIONAL PLAN**

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INTRODUCTION

The Court’s detailed ruling gave the General Assembly a simple task: create an additional majority-Black congressional district in an explicitly defined vote dilution area encompassing Congressional Districts (“CDs”) 3, 6, 11, 13, and 14 while maintaining the existing minority opportunity districts elsewhere in the state. Rather than follow this Court’s clear guidance, the General Assembly (1) shuffled Black voters from *outside* of the vote-dilution area into the new majority-Black district, while excluding over 50,000 Black voters from *within* the vote-dilution area from any remedy whatsoever, and (2) dismantled CD 7, a majority-minority district anchored in majority-minority Gwinnett County that it had no need to alter—let alone eliminate—in creating the new majority-Black district in west-metro Atlanta. In so doing, the General Assembly’s “remedial” congressional plan openly defies this Court’s order, fails to fully remedy the Section 2 violation, and independently violates Section 2.

This Court has engaged in nearly two years of proceedings leading up to its careful determination that Georgia’s congressional map violates Section 2 and its detailed instructions on the proper remedy for that violation. The General Assembly’s purported remedy makes a mockery of that process, the Court’s ruling, and the Voting Rights Act, and reflects the State’s continued refusal to afford minority voters equal opportunity to participate in the electoral process. Plaintiffs

have waited nearly two years and an entire election cycle for the relief to which they are entitled. This Court must enjoin the General Assembly’s new congressional plan and proceed to adopt a lawful congressional plan in time for the 2024 elections.

BACKGROUND

I. The Court struck down Georgia’s congressional plan and provided the State with clear guidance on a proper remedy.

On October 26, 2023, the Court found that Georgia’s 2021 congressional plan (SB 2EX) violated Section 2 of the Voting Rights Act. Doc. 286 at 273–74, *Pendergrass v. Raffensperger*, No. 1:21-CV-05339-SCJ (N.D. Ga. Oct. 26, 2023). The Court made several careful and critical determinations in coming to its conclusion. *First*, based on the illustrative map submitted by Plaintiffs’ expert Bill Cooper, the Court found that Georgia’s Black population is sufficiently large and geographically compact to constitute a majority in an additional congressional district in west-metro Atlanta, and that such a district could be drawn while adhering to traditional redistricting principles (*Gingles* 1). Doc. 286 at 174–75.

Second—relying on the analysis of Plaintiffs’ expert Dr. Maxwell Palmer and concessions from Defendant’s expert Dr. John Alford—the Court found that “Black voters in Georgia are extremely politically cohesive” (*Gingles* 2), Doc. 286 at 204, and that “white voters were highly cohesive in voting in opposition to the Black candidate of choice” (*Gingles* 3), *id.* at 206. The Court concluded that there was “‘very clear’ evidence of racially polarized voting” across the focus area as a whole

and in each individual congressional district Dr. Palmer examined. *Id.* at 207–08 (quoting *Allen v. Milligan*, 599 U.S. 1, 22 (2023)).

Third, in finding that the totality of the circumstances demonstrates that the political process is not currently equally open to Black Georgians, the Court endorsed Plaintiffs’ expert Dr. Vernon Burton’s observation “of a historical pattern that following an election, the General Assembly responsively passes voting laws that disproportionately impact Black voters in Georgia”—a pattern that continues to the present with the recent passage of SB 202. Doc. 286 at 230. The Court observed that “[d]espite the growth in the Black population in the affected areas and the voter polarization between white and Black Georgians . . . the Enacted Congressional Plan did not increase the number of majority-Black districts in the Atlanta metro area . . . [which] in effect dilutes and diminishes the Black population’s voting power in that area of the State.” *Id.* at 272.

Based on the well-established legal standard, the Court concluded that “SB 2EX violates Section 2 of the Voting Rights Act as to the following districts/areas: Enacted Congressional Districts 3, 6, 11, 13, and 14.” *Id.* at 514. The Court provided the General Assembly more than six weeks to adopt a remedial congressional plan “consistent with[its] Order.” *Id.* at 510; *see also id.* at 508–09 (“[T]he parameters and the instructions around what the State of Georgia is supposed to do to comply with Section 2 of the VRA is a critical part of this Court’s order.”). The Court held

that an appropriate remedy “involves an additional majority-Black congressional district in west-metro Atlanta.” *Id.* at 509. It further instructed that the “State cannot remedy the Section 2 violation[] described herein by eliminating minority opportunity districts elsewhere in the plan[].” *Id.* at 509–10.

II. The General Assembly adopted a congressional plan that defies this Court’s ruling.

On December 8, 2023, Georgia enacted purported remedial plan SB 3EX. Doc. 312. SB 3EX creates a new majority-Black CD 6 in west-metro Atlanta, encompassing parts of Cobb, Fulton, Douglas, and Fayette Counties. *See* Remedial Expert Report of Bill Cooper (“Cooper Remedial Rep.”) ¶ 8. Twenty-five percent of new CD 6 draws from old CD 5, a majority-Black district wholly outside the Section 2 violation area. *Id.* ¶ 21.

SB 3EX also drastically reconfigures CD 7, stretching it across six counties and transforming it from a majority-minority district to a majority-white district. Old CD 7 comprised a 57.81% minority citizen voting age population (CVAP). Cooper Remedial Rep. Ex. A-3. New CD 7, however, cuts the minority CVAP by more than half. *Id.* Ex. A-2.

SB 3EX thus eliminates a minority opportunity district. While minority voters in old CD 7 had the opportunity to elect their candidates of choice 76% of the time, new CD 7 will never enable minority voters to elect their preferred candidates. Remedial Expert Report of Dr. Maxwell Palmer (“Palmer Remedial Rep.”) at ¶ 17.

As a result, rather than creating “an additional opportunity district” as instructed by this Court, Doc. 286 at 511, SB 3EX maintains the same number of minority opportunity districts as the previous map.

LEGAL STANDARD

Section 2 violations demand relief that “completely remedies the prior dilution of minority voting strength and fully provides equal opportunity for minority citizens to participate and to elect candidates of their choice.” *United States v. Dall. Cnty. Comm’n*, 850 F.2d 1433, 1442 (11th Cir. 1988) (quoting S. Rep. No. 97-417 at 31, 97th Cong., 2d Sess. 31 (1982)); *see also White v. Alabama*, 74 F.3d 1058, 1069 n.36 (11th Cir. 1996) (same). “This Court cannot authorize an element of an election proposal that will not with certitude *completely* remedy the Section 2 violation.” *Dillard v. Crenshaw Cnty.*, 831 F.2d 246, 252–53 (11th Cir. 1987).

SB 3EX falls far short of this standard.

ARGUMENT

I. SB 3EX fails to fully remedy Georgia’s Section 2 violation.

By adopting a new congressional plan that purports to remedy the vote dilution in *west*-metro Atlanta by reaching *outside* the area where this Court found a Section 2 violation and simultaneously eliminating a minority opportunity district in *east*-metro Atlanta, the General Assembly has failed to adequately remedy the Section 2 violation identified by the Court.

A. SB 3EX does not sufficiently remedy the actual vote dilution identified by the Court.

Despite this Court’s detailed ruling specifying the precise location of the Section 2 violation—and thus the Section 2 remedy—new CD 6 only partially draws from that area, drawing in voters outside of the vote-dilution area who already had an opportunity to elect their preferred candidates at the expense of providing an opportunity district for those voters this Court found had suffered a vote-dilution injury. *See Shaw v. Hunt*, 517 U.S. 899, 917 (1996) (“If a § 2 violation is proved for a particular area . . . [t]he vote-dilution injuries suffered by these persons are not remedied by creating a safe majority-black district somewhere else in the State.”).

This Court specifically defined the area of Georgia where the Section 2 violation occurred: “Enacted CDs 3, 6, 11, 13, and 14.” Doc. 286 at 514. Plaintiffs’ illustrative majority-Black CD 6 drew exclusively from this area. *See Cooper Remedial Rep.* ¶ 21. As a result, all of the Black voters in Plaintiffs’ illustrative CD 6 were located in an area where their votes were diluted in violation of Section 2.

By contrast, the new majority-Black CD 6 under SB 3EX only partially draws from this area of proven vote dilution. More than a *quarter* of the district’s population is drawn from old CD 5—which lies entirely outside the location of the Section 2 violation, *id.*, and which, indeed, already elected Black-preferred congressional candidates under the previous map, *Palmer Remedial Rep.* ¶ 20 & fig.5. The 2023 Plan excludes 51,717 Black Georgians of voting age in the vote

dilution area who would have had an opportunity to elect their preferred candidates in Plaintiffs' Illustrative CD 6 but are shut out of a Section 2 remedy in the 2023 Plan. Cooper Remedial Rep. ¶ 22. Consequently, SB 3EX purports to remedy the Section 2 violation by ignoring Black Georgians whose voting strength was—and still is—unlawfully diluted, instead populating the new CD 6 with Black voters who already had the opportunity to elect their candidates of choice.

SB 3EX also reconfigures CD 7 in a manner antithetical to the vote dilution found in west-metro Atlanta. Old CD 7, like CD 5, fell entirely outside the area found to be in violation of Section 2. Nevertheless, new CD 7 takes 74% of its population from the vote dilution area, including CD 6, the majority of which are white voters. *See* Cooper Remedial Rep. ¶ 20. The remaining 26% of the new district's population (drawn from the previous CDs 5, 7, and 9) is also majority white. *See id.* In other words, new CD 7 stretches across six counties to draw in white voters as far north as Lumpkin County and connect them with Black voters who reside in the area where the Court ruled that their voting strength was unlawfully diluted. These Black voters are placed in a newly fabricated majority-white district where they are still denied the opportunity to elect their candidates of choice.

Thus, rather than “*completely* remed[ying] the prior dilution of minority voting strength,” *Dall. Cnty. Comm'n*, 850 F.2d at 1442 (emphases added), SB 3EX fails to fully remedy the “significant harm” suffered by those Black voters in Georgia

“whose voting rights have been injured by the violation of the Section 2.” Doc. 286 at 510. This Court should reject the General Assembly’s plan for failing to fully remedy the prior map’s Section 2 violation. *See, e.g., Cane v. Worcester County*, 35 F.3d 921, 927 (4th Cir. 1994) (affirming rejection of Section 2 remedy that perpetuated challenged vote dilution).

B. SB 3EX cannot remedy the Section 2 violation by denying minority electoral opportunities elsewhere in Georgia.

This Court’s ruling specified that “the State cannot remedy the Section 2 violation[.]” identified in SB 2EX “by eliminating minority opportunity districts elsewhere in the plan[.]” Doc. 286 at 509–10. This instruction is consistent with “controlling precedent,” which makes clear that the “appropriate remedy” in a Section 2 redistricting case “is a congressional redistricting plan that includes either an *additional* majority-Black congressional district, or an *additional* district in which Black voters otherwise have an opportunity to elect a representative of their choice.” *Singleton v. Allen*, No. 2:21-cv-1291-AMM, 2023 WL 6567895, at *1 (N.D. Ala. Oct. 5, 2023) (per curiam) (three-judge court) (emphases added) (citing *Bartlett v. Strickland*, 556 U.S. 1, 24 (2009); *see also, e.g., Wright v. Sumter Cnty. Bd. of Elections & Registration*, 979 F.3d 1282, 1309 (11th Cir. 2020) (affirming Section 2 remedy that included “one more” minority opportunity district than afforded by the previous plan). States cannot “trade off” “the rights of some minority voters under § 2 . . . against the rights of other members of the same minority class” by offsetting

minority gains in one part of the map with minority losses in other parts of the map. *Johnson v. De Grandy*, 512 U.S. 997, 1019 (1994); *see also LULAC v. Perry*, 548 U.S. 399, 441–42 (2006) (finding Section 2 violation where “[t]he State chose to break apart a Latino opportunity district to protect the incumbent congressman from the growing dissatisfaction of the cohesive and politically active Latino community” and “then purported to compensate for this harm by creating an entirely new district” elsewhere).

Rather than heed the Court’s direction, however, the General Assembly “chose to break apart” a minority opportunity district in east-metro Atlanta. Specifically, SB 3EX dismantled old CD 7, which was a majority-minority district, *see* Doc. 286 at 264, anchored in majority-minority Gwinnett County, Cooper Remedial Rep. ¶ 16. As Dr. Palmer explains, old CD 7 provided Black, Latino, and Asian voters the opportunity to elect their preferred candidates: Minority-preferred candidates “were able to win 76% of the elections from 2012 to 2022, . . . and every statewide election after 2016, with an average of 56.4% of the vote.” Palmer Remedial Rep. ¶ 17 & fig.4, tbl.3. This includes the 2022 congressional election, the only election actually conducted under the old CD 7. *Id.*

Under SB 3EX, CD 7 has been dismantled, stretched across six counties from the top of Fulton County up through Dawson and Lumpkin Counties, and redrawn as a majority-white district in which minority-preferred candidates would no longer

prevail in *any* of the elections analyzed. Cooper Remedial Rep. ¶ 20; Palmer Remedial Rep. ¶ 17 & fig.4, tbl.3. Accordingly, although new CD 6 provides (some) Black voters in the vote-dilution area the opportunity to elect their preferred candidates, the elimination of a minority-opportunity district in CD 7 means that Georgia’s purported “remedy” to the Section 2 violation zeroes out the number of minority-opportunity districts statewide.

Significantly, neither the dismantling of CD 7 nor the denial of preexisting minority opportunity generally was required to remedy the Section 2 violation in this case. Plaintiffs’ illustrative congressional plan, for instance, added a new majority-Black district in west-metro Atlanta without reaching outside the vote dilution area, without changing CD 7, and without eliminating or diminishing minority opportunity statewide. Cooper Remedial Rep. ¶ 9. In so doing, the illustrative plan better advanced the State’s own redistricting criteria than SB 3EX. The illustrative plan on balance scores higher on the Reock and Palsby-Popper scales than SB 3EX overall, Cooper Remedial Rep. ¶ 31 & fig.3, and with respect to CD 6 and CD 7 specifically. The illustrative plan also contains fewer split counties, individual county splits, municipality splits, and regional commission splits. *Id.* ¶¶ 33–37 & figs.4–5.

* * *

Ultimately, the General Assembly’s disregard for this Court’s order and insistence on capping minority voting strength is unsettlingly familiar. This is not the first time a state has openly defied a court order mandating a Section 2 remedy. *Singleton v. Allen*, No. 2:21-CV-1291-AMM, 2023 WL 5691156, at *3–4 (N.D. Ala. Sept. 5, 2023), *appeal dismissed sub nom. Milligan v. Co-Chairs of Alab. Permanent Legis. Comm. on Reapportionment*, No. 23-12922-D, 2023 WL 6568350 (11th Cir. Oct. 3, 2023) (“[W]e are deeply troubled that the State enacted a map that the State readily admits does not provide the remedy we said federal law requires. . . and [w]e are disturbed by the evidence that the State. . . ultimately did not even nurture the ambition to provide the required remedy.”). In fact, Section 2 itself “springs from the demonstrated ingenuity of state and local governments in hobbling minority voting power,” *De Grandy*, 512 U.S. at 1018, and was designed to combat states’ increasingly creative means of voting discrimination. The General Assembly’s attempt to minimize and zero out minority voting opportunity in a purported “remedy” to the State’s Section 2 violation is precisely the sort of gamesmanship Section 2 was meant to stamp out.

But fortunately for Georgia voters, it is the Court, and not the General Assembly, who determines “what the law is.” *Marbury v. Madison*, 5 U.S. 137, 177 (1803). Separation-of-powers principles and the basic rule of law foreclose the State

from ignoring a court order, even if the basis for its intransigence is the hope that the law might change. *See, e.g., Cooper v. Aaron*, 358 U.S. 1, 17–20 (1958) (per curiam) (“If the legislatures of the several states may, at will, annul the judgments of the courts of the United States, and destroy the rights acquired under those judgments, the constitution itself becomes a solemn mockery[.]” (quoting *United States v. Peters*, 9 U.S. 115, 136 (1809))). The General Assembly might not like what the Court has ordered, but it must abide by it. Here, it failed to do so. This Court must enjoin SB 3EX as an unlawful and insufficient remedy to the Section 2 violation.

II. SB 3EX independently violates Section 2.

“It is clear that any proposal to remedy a Section 2 violation must itself conform with Section 2.” *Dall. Cnty. Comm’n*, 850 F.2d at 1437 (quoting *Dillard*, 831 F.2d at 249). SB 3EX does not clear this bar: Because old CD 7 was protected under Section 2, its dismantling independently constitutes unlawful vote dilution.

A. *Gingles* One: The minority population in old CD 7 is sufficiently large and compact to form a majority in a single-member district.

Old CD 7 consisted of the southern portion of Gwinnett County and the northeastern tip of neighboring Fulton County. This iteration of the district satisfied the numerosity and compactness requirements of the first *Gingles* precondition.

Numerosity. Under the 2022 enacted plan, CD 7’s combined Black, Latino, and Asian CVAP¹ well exceeds 50%, *see* Cooper Remedial Rep. ¶ 13—thus satisfying the numerosity requirement of the first *Gingles* precondition. *See Bartlett*, 556 U.S. at 18 (numerosity requirement involves “straightforward,” “objective, numerical test: Do minorities make up more than 50 percent of the voting-age population in the relevant geographic area?”).

Significantly, the Eleventh Circuit has long recognized that Section 2 protects “coalition” districts, in which politically cohesive minority populations are aggregated to satisfy the numerosity requirement. In *Concerned Citizens of Hardee County v. Hardee County Board of Commissioners*, the Eleventh Circuit observed that “[t]wo minority groups (in th[at] case blacks and hispanics) may be a single section 2 minority if they can establish that they behave in a politically cohesive manner.” 906 F.2d 524, 526 (11th Cir. 1990). In other words, so long as different minority communities cohesively support the same candidates, they can be counted together for purposes of the first *Gingles* precondition. This holding has been consistently applied by this and other district courts in the Eleventh Circuit. *See, e.g.*,

¹ Although Plaintiffs’ original Section 2 claim primarily employed the Black voting-age population as the relevant metric for this precondition, courts have concluded that CVAP is the appropriate measure in Section 2 cases involving Latino, Asian, and other “population[s that] include[] a substantial number of immigrants.” *Negron v. City of Miami Beach*, 113 F.3d 1563, 1569 (11th Cir. 1997).

Ga. State Conf. of NAACP v. Gwinnett Cnty. Bd. of Registrations & Elections, No. 1:16-cv-2852-AT, 2017 WL 4250535, at *2 (N.D. Ga. May 12, 2017); *Ala. Legis. Black Caucus v. Alabama*, 989 F. Supp. 2d 1227, 1279–80 (M.D. Ala. 2013) (three-judge court), *vacated on other grounds*, 575 U.S. 254 (2015); *Broward Citizens for Fair Districts v. Broward County*, No. 12-60317-CIV, 2012 WL 1110053, at *6 (S.D. Fla. Apr. 3, 2012); *Johnson v. Hamrick*, 155 F. Supp. 2d 1355, 1368 (N.D. Ga. 2001).²

Compactness. Under the first *Gingles* precondition, compactness requires “an electoral district[] consistent with traditional districting principles.” There can be no dispute that old CD 7 satisfied this requirement. The population of old CD 7 was only one person greater than the ideal district population. *See Cooper Trial Rep.*, Ex. G. In terms of mathematical compactness, old CD 7 was more compact than the

² Although a recent decision of this Court suggested that *Hardee County*’s “assertion about coalition districts was dicta,” *Ga. State Conf. of NAACP v. Georgia*, No. 1:21-cv-05338-ELB-SCJ-SDG, 2023 WL 7093025, at *16 (N.D. Ga. Oct. 26, 2023) (per curiam) (three-judge court), another three-judge panel in this circuit concluded that they “[we]re bound by” *Hardee County* and its recognition of coalition claims. *Ala. Legis. Black Caucus*, 989 F. Supp. 2d at 1280. Moreover, the U.S. Supreme Court previously cited *Hardee County* when it “[a]ssum[ed] (without deciding) that it was permissible . . . to combine distinct ethnic and language minority groups for purposes of assessing compliance with § 2.” *Grove v. Emison*, 507 U.S. 25, 41 (1993). Courts in other circuits have cited to *Hardee County* for the same proposition. *See Pope v. County of Albany*, 687 F.3d 565, 572 n.5 (2d Cir. 2012); *Holloway v. City of Virginia Beach*, 531 F. Supp. 3d 1015, 1048 (E.D. Va. 2021), *vacated as moot*, 42 F.4th 266 (4th Cir. 2022); *Frank v. Forest Cnty.*, 336 F.3d 570, 575 (7th Cir. 2003).

average district in the old congressional plan using the Reock score and the *most* compact of the districts using the Polsby-Popper score, *see* Doc. 286 at 52—a conclusion confirmed using the eyeball test, *see id.* at 185. Old CD 7 included just two counties—Gwinnett and Fulton. Cooper Trial Rep., Ex. G. Finally, like Plaintiffs’ illustrative CD 6, old CD 7 “combine[d] areas of suburban metro Atlanta,” “communities [that were] relatively close in proximity.” *Id.* at 191. In short, there is little doubt that old CD 7—drawn by the General Assembly and preserved in Plaintiffs’ illustrative plan—was reasonably compact for purposes of the first *Gingles* precondition.

B. *Gingles* Two: The minority community in the old CD 7 was politically cohesive.

Old CD 7 consisted of a politically cohesive minority community, in satisfaction of the second *Gingles* precondition. As Dr. Palmer demonstrates, minority voters in the focus area that comprises old CD 7 vote cohesively for the same candidates in each of the 41 statewide electoral contests examined from 2012 to 2022. Palmer Remedial Rep. ¶¶ 13–14 & fig.3. Specifically, Black, Latino, and Asian voters all voted cohesively, individually and as a group, in support of the same candidates. *Id.* The estimated vote share of minority-preferred candidates in any given election Dr. Palmer analyzed was always significantly above 75% for Black, Latino, and Asian voters in the focus area. *Id.*; *see Thornburg v. Gingles*, 478 U.S. 30, 56 (1986) (“A showing that a significant number of minority group members

usually vote for the same candidates is one way of proving [] political cohesiveness[.]”).

Further, testimony from the Georgia General Assembly Special Session hearings bolster this statistical evidence. Jennifer Lee, the policy director for Asian Americans Advancing-Justice Atlanta, testified before the House Reapportionment and Redistricting Committee on December 5, 2023, explaining that western Gwinnett County is very racially and ethnically diverse, and 1 in 3 residents are immigrants. Hr’g on SB 3EX at 1:44:54 (Ga. 2023).³ She shared that one of her staff members, whose family originated from Mexico, was asked why he worked for an Asian American organization, and he replied that while attending a diverse high school in Lilburn, he realized his experience translating for his parents—who did not speak English and faced barriers as a result—was similarly shared by his Asian and Black immigrant friends, which drew him to an organization that worked in coalition with other immigrant communities to advance causes important to these minority groups, such as language accessibility. *Id.* at 1:45:45. This story highlights not only the coalition building that occurred in CD 7, but the shared lived experiences of these minority groups.

³ Available at <https://vimeo.com/showcase/8988912?video=891095002> (last accessed Dec. 11, 2023).

C. *Gingles* Three: White Georgians engage in bloc voting to defeat minority-preferred candidates in new CD 7.

Plaintiffs also satisfy the third *Gingles* precondition because in the focus area “the white majority votes sufficiently as a bloc to enable it . . . usually to defeat the minority’s preferred candidate.” *Gingles*, 478 U.S. at 51. Dr. Palmer found high levels of white bloc voting in new CDs 4, 7, 9, 10 and 13—portions of which together comprised old CD 7—in opposition to minority-preferred candidates. Palmer Remedial Rep. ¶¶ 11, 13 & figs. 2–3. The estimated white vote share for minority-preferred candidates in any given election Dr. Palmer analyzed never reached 25 % in the focus area. *Id.* fig.3.

As Dr. Palmer concluded, under old CD 7, minority-preferred candidates “were able to win 76% of the elections from 2012 to 2022, including the 2022 U.S. House election and every statewide election after 2016, with an average of 56.4% of the vote.” *Id.* ¶ 17. But under SB 3 EX, minority-preferred candidates “would not have won *any of these elections*, and average only 32.9% of the vote.” *Id.* (emphasis added). Thus, the evidence shows racially polarized voting in the focus area where white voters vote cohesively in opposition to defeat the minority preferred candidate, unless minority voters comprise the majority of the district. *Id.* ¶¶ 16–17.

D. Under the totality of the circumstances, SB 3EX denies minority voters equal opportunities to elect their preferred candidates to Congress.

Finally, this is not “the very unusual case in which the plaintiffs can establish the existence of the three *Gingles* [preconditions] but still have failed to establish a violation of § 2 under the totality of circumstances.” *Ga. State Conf. of NAACP v. Fayette Cnty. Bd. of Comm’rs*, 775 F.3d 1336, 1342 (11th Cir. 2015) (quotation omitted). This Court has already determined that both the past and present reality in Georgia demonstrate that the political process is not equally open to Black voters. Doc. 286 at 273; *See Dall. Cnty. Comm’n*, 850 F.2d at 1438–40 (readopting prior findings related to factors 2, 3, 5, and 7 to hold that a remedial plan “perpetuates rather than ameliorates the inequities” in the prior plan). The Court’s prior ruling applies with equal force to the minority coalition, as Plaintiffs are not required to demonstrate that each minority voter suffers the *exact* circumstances. *See Holloway v. City of Virginia Beach*, 531 F. Supp. 3d 1015, 1082 (E.D. Va. 2021), *vacated and remanded on other grounds*, 42 F.4th 266 (4th Cir. 2022) (acknowledging that “Asian, Hispanic, and Black communities have experienced different forms of discrimination” but nonetheless satisfied the Senate Factors as a coalition).⁴

⁴ *Cf. Holloway*, 42 F.4th at 300 (Gregory, C.J., dissenting) (noting that “the district court was not required to find evidence showing that all nine factors were met—much less evidence that *each* factor was satisfied with respect to *each* discreet minority group” because such a legal standard would result in “an inflexible rule that runs counter to the textual command of § 2, which requires that a determination of

Here, Plaintiffs supplement their evidence to demonstrate that the political process is also not equally open to Latino and Asian voters in the area in and around CD 7:

Senate Factor 1. Georgia has a history of passing laws that disproportionately impact minority communities, including Latino and Asian communities. In early 2007, for example, Georgia began providing lists to county officials of persons “flagged as potentially ineligible [to vote] based on, inter alia, non-citizenship.” Expert Rep. of Joseph Bagley, Ph.D. at 236–37, *Common Cause et al. v. Raffensperger*, No. 1:22-CV-00090 (Jan. 13, 2023), Doc. 82. After the matching system was submitted for Section 5 preclearance, the Justice Department found that: (1) the system was inaccurate, (2) the errors disproportionately affected minority voters, and (3) “applicants who are Hispanic, Asian or African American are more likely than white applicants, to statistically significant degrees, to be flagged for additional scrutiny.” *Id.* at 237 (citing *Morales v. Handel*, No. 1:08-CV-3 172-JTC (N.D. Ga., Oct. 27, 2008); Loretta King, Acting Assistant Attorney General, Civil Rights Division, to Hon. Thurbert E. Baker, May 29, 2009, Civil Rights Division Section 5 Objection Letters). As another example: Following the 2012 redistricting cycle, then-House Minority Leader Stacy Abrams argued that the new maps

whether a violation has occurred be based on the totality of the circumstances” (cleaned up)).

“destroyed any remaining coalition districts and amounted to ‘a resegregation of Georgia into a party of white Republicans and black Democrats, leaving Latinos and Asians to fend for themselves.’” Expert Rep. of Joseph Bagley, Ph.D., *Common Cause et al. v. Raffensperger*, No. 1:22-CV-00090 (Jan. 13, 2023) (citing Charles Bullock, “The History of Redistricting in Georgia,” *Georgia Law Review*, Vol. 52, No. 4, pp. 1095–96).

Senate Factor 5. As Dr. Loren Collingwood’s expert report demonstrates, “[w]hite households and individuals have clear socio-economic and health advantages over minorities in Gwinnett singly and Gwinnett and Fulton combined”—the two counties that comprised old CD 7. Remedial Expert Report of Loren Collingwood (“Collingwood Remedial Rep.”) at 1. Based on his analysis of a variety of metrics, Dr. Collingwood concludes that particularly in Gwinnett County, “minorities are broadly cohesive on a variety of socio-economic measures . . . and share experiences especially related to the poverty line and income.” *Id.* at 3.

Senate Factor 7. Lack of minority electoral success also supports the coalition. Just as Georgia has never had a Black Governor, Doc. 32-1 at 25, Georgia has also never had a Latino or Asian Governor.⁵ Nor has Georgia ever elected a

⁵ Former Georgia Governors, *Nat’l Governors Ass’n*, available at <https://www.nga.org/former-governors/georgia/> (last accessed Dec. 8, 2023).

Latino or Asian Georgian to the U.S. Senate or House of Representatives.⁶ Defendants themselves, in asking the Court to take judicial notice of minority candidate election results, only identified one Latino (Commissioner John King) and one Asian American (Justice Carla McMillian) as evidence of minority electoral success. Doc. 224 at 5–6.

Senate Factor 8. The State’s proposed remedy in response to the Section 2 injury suffered and proved by Black Georgians demonstrates its determination to impose a ceiling on minority opportunity in the State and only underscores how unresponsive elected officials are to the needs of the State’s minority voters.

Senate Factor 9. Finally, the policies underlying the State’s proposed remedial map are tenuous at best and reprehensible at worst. The General Assembly did not have to eliminate CD 7 in order to remedy vote dilution in west-metro Atlanta. Any suggestion to the contrary, *see, e.g.*, Hr’g on SB 3EX before the Georgia Senate on December 5, 2023 at 3:13:13, 2023 Gen. Assemb. (Ga. 2023)⁷ (Sen. John Kennedy claiming that “[d]rawing the new sixth district . . . impacted the surrounding districts, . . . [which] created pressure on the seventh district”), is

⁶ Members of the U.S. Congress from Georgia, available at <https://www.congress.gov/members?q=%7B%22member-state%22%3A%22Georgia%22%7D> (last accessed Dec. 8, 2023).

⁷ Available at <https://vimeo.com/showcase/9076378?video=891194231> (last accessed Dec. 11, 2023).

entirely pretextual. *See Veasey v. Abbott*, 830 F.3d 216, 235–36 (5th Cir. 2016) (explaining that pretextual justifications are circumstantial evidence of intentional discrimination). The General Assembly was well aware that the Illustrative Plan—found by this Court to be a lawful remedy to the Section 2 violation, Doc. 286 at 198–200, demonstrated the ability to draw a new minority opportunity district without undoing existing minority opportunities statewide. *See e.g.*, Hr’g on SB 3EX Before the House of Representatives on December 7, 2023 at 2:15:19, 2023 Ga. Assemb. (Ga. 2023)⁸ (minority leader stating that Plaintiffs’ illustrative map was introduced with a few changes and new map dismantles minority opportunity district in Gwinnett County).

Nor was the General Assembly’s reconfiguration of CD 7 in service of traditional districting principles. To the contrary, CD 7’s Reock score drops from 0.50 to 0.34, and its Polsby-Popper score drops from 0.39 to 0.24. Cooper Remedial Rep. fig.3. While it used to include just two counties, CD 7 now stretches across six counties, splitting six additional municipalities in the process. *Id.* fig.4.

The General Assembly not only disregarded its own redistricting criteria in redrawing CD 7, it also disregarded binding Eleventh Circuit precedent concluding that Section 2 protects coalition districts. *See Concerned Citizens of Hardee Cnty.*,

⁸ Available at <https://vimeo.com/showcase/8988696?video=891910081> (last accessed Dec. 11, 2023).

906 F.2d at 526. Despite this Court’s admonition that “the [S]tate cannot remedy the Section 2 violations described herein by eliminating minority opportunity districts elsewhere in the plans,” Doc. 286 at 509–10, several legislators insisted that “minority opportunity” meant “majority-Black” because Section 2 protects only majority-Black districts. 12/5 Senate Hr’g at 2:08:00 (statement of Senator Shelly Echols stating “while [Judge Jones] doesn’t define that term, it’s clear he’s referencing to existing majority-Black districts”), despite Eleventh Circuit precedent to the contrary, 12/7 Hr’g at 2:21:35 (Rep. James Beverly discussing *Concerned Citizens of Hardee County* as the “leading case” in the Eleventh Circuit recognizing the protection of coalition districts “like the one in Gwinnett”). The General Assembly’s decision to eliminate a coalition district thus rested on “a legal mistake.” *Cooper*, 581 U.S. at 306.

Indeed, the fact that the General Assembly “intentionally drew district lines in order to destroy” CD 7, an “otherwise effective” coalition district, “raise[s] serious questions under both the Fourteenth and Fifteenth Amendments.” *Bartlett*, 556 U.S. at 24. The General Assembly was well aware of CD 7’s status as a coalition district, *see, e.g.*, 12/7 Hr’g at 2:09:01 (noting SB 3EX “eliminates a minority opportunity district in Gwinnett County by obliterating Georgia’s 7th congressional district, a majority-minority district where 67% of the voting age population is comprised of Black, Hispanic, and Asian-American voters”); Doc. 286 at 264–65. The

contemporaneous statements of legislators indicate that race was top of mind when they decided to eliminate minority opportunity in CD 7. One legislator insisted that he “thought [the] 2021 plans were fair” because the state’s five Black members of Congress are “more than a third of the 14 [Georgia] ha[s],” even though Georgia is “a state with 31% [Black] population,” further stating that the new congressional plan “essentially guaranteed that there will be five [Black members of Congress] going forward if our racially polarized voting patterns continue, and Blacks still choose candidates of their own race.” Hr’g on SB 3EX before the Georgia Senate on December 5, 2023 at 2:54:20, Gen. Assemb. (Ga. 2023).⁹ These statements are not only eerily similar to remarks the Eleventh Circuit found “particularly disturbing” in *Dillard v. City of Greensboro* for perpetuating an unfounded belief in “the propensity of [B]lack voters allegedly to vote only for [B]lack candidates,” 74 F.3d 230, 234 (11th Cir. 1996), they completely disregard this Court’s thorough proportionality analysis, *see* Doc. 286 at 262-67, as well as Section 2’s emphasis on the rights of minority voters rather than the existence of minority candidates, *see id.* at 237 (“Race of a candidate is not dispositive for a polarization inquiry.”).

* * *

⁹ Available at <https://vimeo.com/showcase/9076378?video=891194231> (last accessed Dec. 11, 2023).

In sum, the totality of the circumstances supports a finding that SB 3EX fails to provide minority voters equal opportunity to elect their candidates of choice.

CONCLUSION

The General Assembly's task was clear: it must provide Black voters in the vote-dilution area the opportunity to elect their candidates of choice while preserving existing minority opportunity districts. It has failed. Plaintiffs respectfully ask the Court to enjoin SB 3EX for failing to remedy the original Section 2 violation and independently violating Section 2 anew. Because the State has proven "unwilling to enact [a] remedial plan . . . that satisf[ies] [the Court's] requirements," this Court should "proceed to draw or adopt remedial plans," Doc. 286 at 511, to ensure Plaintiffs obtain relief in time for the 2024 election.

Dated: December 12, 2023

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CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing **PLAINTIFFS' OBJECTIONS TO THE GEORGIA LEGISLATURE'S REMEDIAL CONGRESSIONAL PLAN** has been prepared in accordance with the font type and margin requirements of LR 5.1, N.D. Ga., using font types of Times New Roman, point size of 14, and Century Schoolbook, point size of 13.

Dated: December 12, 2023

Adam M. Sparks
Adam M. Sparks
Counsel for Plaintiffs

CERTIFICATE OF SERVICE

I hereby certify that I have on this date caused to be electronically filed a copy of the foregoing **PLAINTIFFS' OBJECTIONS TO THE GEORGIA LEGISLATURE'S REMEDIAL CONGRESSIONAL PLAN** with the Clerk of Court using the CM/ECF system, which will automatically send e-mail notification of such filing to counsel of record.

Dated: December 12, 2023

Adam M. Sparks
Adam M. Sparks
Counsel for Plaintiffs

Expert Report of William S. Cooper

Pendergrass v. Raffensperger, No. 1:21-CV-05339-SCJ (N.D. Ga.)

December 12, 2023

Bill Cooper

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

COAKLEY PENDERGRASS et al.,

Plaintiffs,

v.

BRAD RAFFENSPERGER, in his official
capacity as the Georgia Secretary of State,
et al.,

Defendants.

CIVIL ACTION FILE

NO. 1:21-CV-05339-SCJ

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 at trial 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 v. Reeves*, a Section 2 lawsuit challenging post-2020 House and Senate districts in Mississippi.

II. PURPOSE OF REPORT

4. The Defendants' 2023 Congressional Plan ("2023 Plan") was passed by the Georgia Legislature on December 7, 2023 and signed into law by Governor Kemp on December 8, 2023.

5. The Plaintiffs' attorneys asked me to assess the 2023 Plan vis-à-vis the 2021 Enacted Plan ("2021 Plan") and the Plaintiffs' Illustrative Plan presented at trial, including a comparison of the three plans along standard redistricting metrics.

III. SUMMARY CONCLUSION

6. This Court's October 26, 2023 order required the Defendants to create an additional majority-Black¹ Congressional district in western Metro Atlanta.

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

Specifically, the court ruled that an area comprised of five CDs -- 3, 6, 11, 13, and 14 -- in the 2021 Enacted Plan violates Section 2. Furthermore, the Court's order instructed that the "[t]he State cannot remedy the Section 2 violations described herein by eliminating minority opportunity elsewhere." (pp. 509-510)

7. Rather than limiting the bulk of the changes in the congressional map to the Section 2 violation area defined by the Court, the 2023 Plan reaches well outside that area to redraw congressional districts in other parts of the state. The 2023 Plan changes nine of the 14 districts, as compared to the 2021 Plan.

8. The 2023 Plan adds a new majority-Black district in western Metro Atlanta in Cobb, Fulton, Douglas, and Fayette Counties but also abolishes majority-minority CD 7 in Gwinnett and Fulton Counties under the 2021 Plan.

9. By contrast, the Illustrative Plan changes the boundaries of just eight of the 2021 Plan districts. The Illustrative Plan creates a new majority-Black District 6 in Cobb, Fulton, Douglas, and Fayette Counties, with no change to CD 7 under the 2021 Plan, which lies entirely outside the Section 2 violation area encompassed by the six CDs noted *supra*.

10. In sum, the 2023 Plan shifts population around to create new majority-Black CD 6, while simultaneously eliminating existing majority-minority CD 7 under the 2021 Plan and the Illustrative Plan.

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.

IV. ANALYSIS

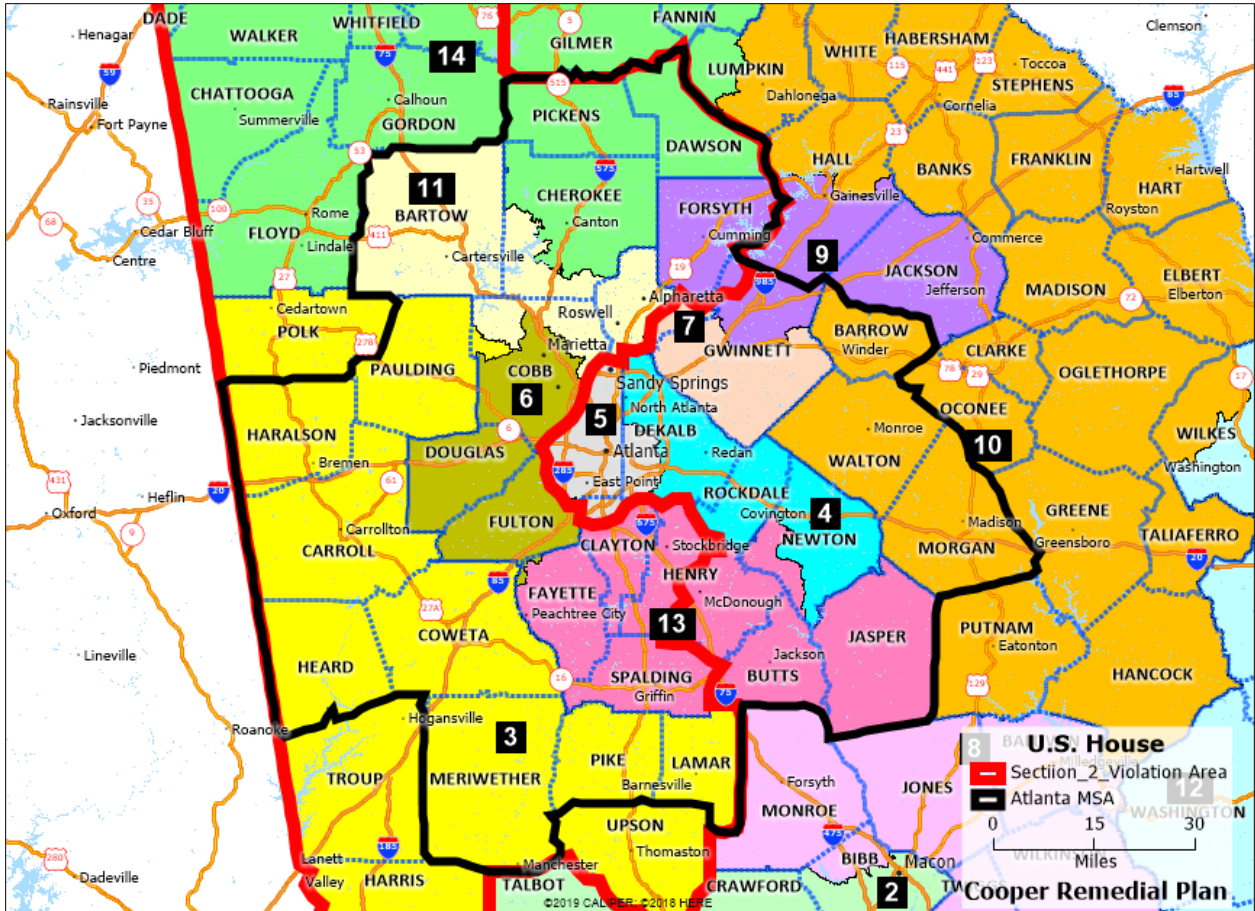
A. Vote Dilution Overview – Inside & Outside the Section 2 Violation Area

11. **Exhibit A-1** summarizes population by race/ethnicity, voting age, and citizen voting age under the Illustrative Plan. **Exhibit A-2** (2023 Plan) and **Exhibit A-3** (2021 Plan) provide the same demographic breakout.

12. The map in **Figure 1** depicts the Atlanta MSA (black lines) under the Illustrative Plan, with an overlay of the Section 2 violation area (red lines).

District 6, the additional majority-Black district, is anchored in Cobb, Douglas, and Fulton Counties, along with a small part of Fayette County. District 7 is in Gwinnett and Fulton Counties. District 7 remains outside the violation area and is exactly the same as CD 7 under the 2021 Plan. Gwinnett County encompasses CD 7 and CD 9 to the north.

Figure 1
Illustrative Plan: Atlanta MSA (Black lines)
Sec. 2 Violation Area (Red lines – partial display)



13. As the population and CVAP summaries in the Exhibit A series make clear, CD 7 in the 2021 Enacted Plan is a majority-minority district based on VAP (67.22% minority) and based on CVAP (58.21% minority).² CD 7 in the Enacted

² The citizen voting age population (“CVAP”) reported herein are based on block group level estimates published by the U.S. Census Bureau’s American Communities Survey (“ACS”). In the summary population exhibits that I have prepared for each plan, I report the “NH DOJ Black CVAP” metric. The “NH DOJ Black CVAP” category includes voting age citizens who are either non-Hispanic (“NH”) single-race (“SR”) Black or NH Black and White. An “Any Part NH Black CVAP” category cannot be calculated from the 5-Year ACS Census Bureau Special Tabulation.

The most current 5-year ACS data available is from the 2017-2021 ACS Special Tabulation, with a survey midpoint of July 1, 2019. It is available at:

<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>.

Plan is a majority-minority congressional district in Metro Atlanta, where the minority population has increased by 1.74 million persons since 2000³—accounting for two thirds (68.9%) of the statewide population increase this century—and where, according to the Governor’s Office of Planning and Budget, the minority population will continue to increase over the course of this decade.⁴

14. The Illustrative Plan preserves CD 7 as a majority-minority district. Thus, the Illustrative Plan contains six majority-minority districts – one more than the 2021 Plan and one more than the 2023 Plan.

15. By contrast, under the 2023 Plan, the minority CVAP in CD 7 drops to 23%. And CD 7’s Gwinnett County neighbor, CD 9, stretches north all the way from suburban Gwinnett County to rural Rabun Gap and the North Carolina state line. CD 9 has a minority CVAP of just 27.44%.

16. The map in **Figure 2** depicts the Atlanta MSA (black lines) under the 2023 Plan, with an overlay of the Section 2 violation area (red lines). The Figure 2 map shows how the area encompassed by CD 7 under the 2021 Plan has been modified in an area outside the Section 2 violation area. Gwinnett County— a

The block-level disaggregation is based on a publicly available file from the Redistricting Data Hub. It is available at:

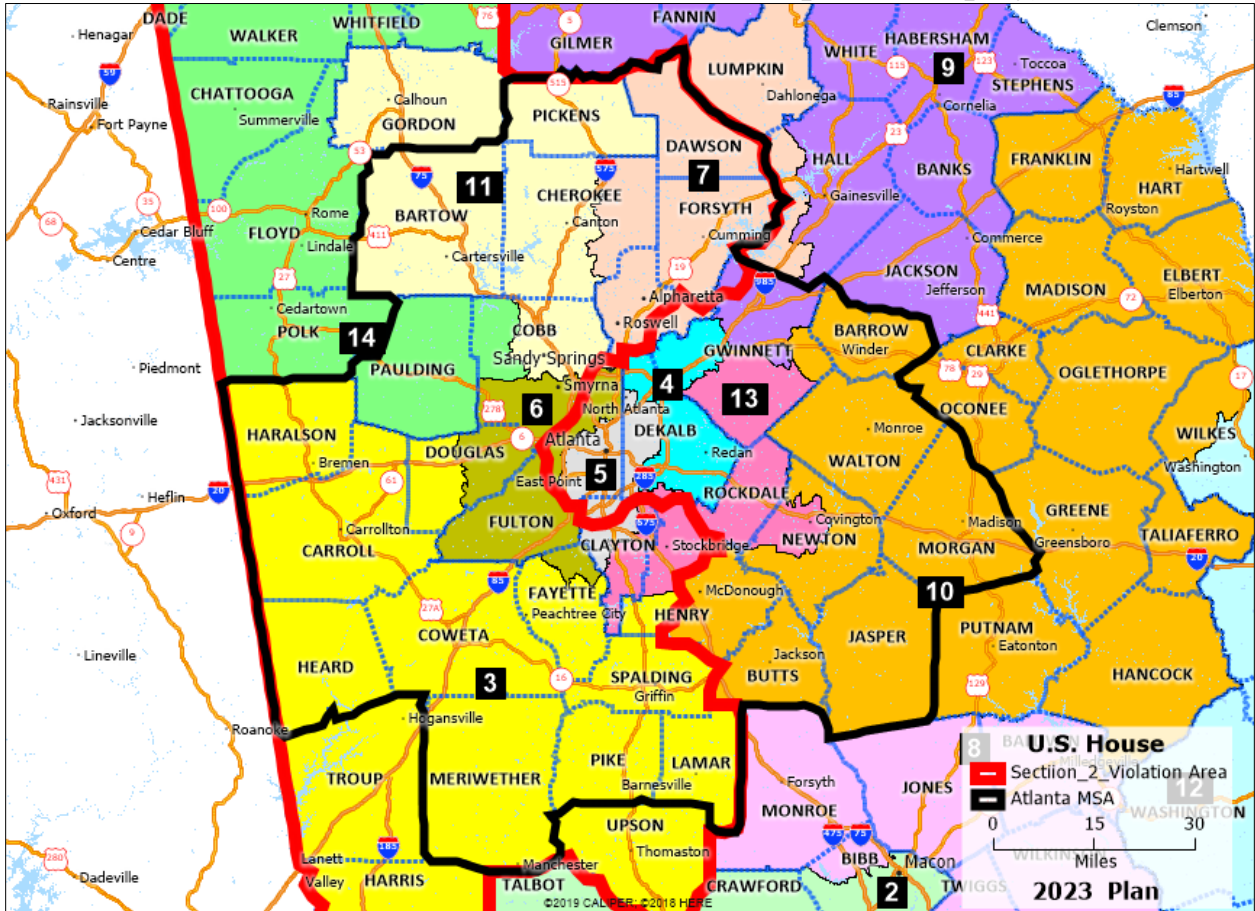
<https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-2020-block-level-2021/>.

³ See Figure 4, p.12, Cooper Declaration, Dec.4, 2023.

majority-minority county—is split into four pieces – CDs 4, 9, 10, and 13. In effect, the 2023 Plan replaces a 4-way split in diverse Cobb County in the 2021 Plan with a new 4-way split in diverse Gwinnet County.

Figure 2

**2023 Plan: Atlanta MSA (Black Lines)
Section 2 Violation Area (Red lines – partial display)**



17. County level population assignments by district are found in **Exhibit B-1** (Illustrative Plan), **Exhibit B-2** (2023 Enacted Plan) and **Exhibit B-3** (2021 Enacted Plan). **Exhibit B-4** is a table that reports 2020 county-level population by race and ethnicity.

18. Under the 2023 Plan, nearly half of CD 9’s population (321,360, of whom 183,335 (57.05%) are non-white) comes from Gwinnett County (see **Exhibit B-2**, p 18). This part of the 2023 Plan map in Gwinnett County thus “cracks” the

minority population from what used to be a majority-minority district into a majority white district.

19. Under the 2023 Plan, the bulk of the minority population in the Gwinnett County portion of prior CD 7 is assigned to CD 13, which wraps around the core of Metro Atlanta all the way to Clayton-Fayette-Spalding county line (see **Exhibit B-2**, p 28). This part of the 2023 Plan in Gwinnett County demonstrates “packing” of the minority population into an already existing majority-minority district.

20. As shown in **Exhibit C-1**, 2021 CD 7 is not part of the Section 2 violation area. But the 2023 Plan modifies CD 7 so that 74% of its population comes from inside the Section 2 violation area. The remaining 26% of its population comes from outside the Section 2 violation area – 2021 CDs 5, 7, and 9. Under the 2023 Plan CD 7, both the Section 2 violation area component and the non-Section 2 violation area component are majority-White – resulting in converting District 7 from a majority-minority district in the 2021 Plan to a majority-White district in the 2023 Plan.

21. As shown in **Exhibit C-2**, majority-Black District 6 under the Illustrative Plan is created entirely from the Section 2 violation area in the 2021 Plan. By comparison, under the 2023 Plan, only about 75% of District 6 comes from the Section 2 violation area, including part of CD 3 running from suburban Cobb County all the way to the Tennessee line and suburban Chattanooga. The remaining 25% draws from Enacted 2021 majority-Black District 5, which is unchanged in the Illustrative Plan and wholly outside the Section 2 violation area.

22. Furthermore, as shown in **Exhibit C-2**, the 2023 Plan excludes 51,717 Black voters in the vote dilution area who would have had an opportunity to elect their preferred candidates in Plaintiffs' Illustrative CD 6 but are not included in CD 6 (or any majority-minority district) under the 2023 Plan.

23. **B. Supplemental Plan Metrics**

24. **Exhibit D-1** contains a map packet included with my December 5, 2022 Declaration depicting the Illustrative Plan.

25. **Exhibit D-2** contains a map packet depicting the 2023 Enacted Plan, with corresponding Census 2020 statistics, prepared by the Georgia Legislative & Congressional Reapportionment Office (“GLCRO”). **Exhibit D-3** contains a map packet depicting the 2021 Enacted Plan, with corresponding Census 2020 statistics, prepared by GLCRO.

26. To view the Illustrative Plan core components built from districts in the 2021 Plan, refer to **Exhibit E-1** – “Core Constituencies”. Boundaries for six of the 14 districts in the 2021 Plan are the same under the Illustrative Plan –CDs 1, 2, 5, 7, 8, and 12.

27. To view the 2023 Plan core components built from districts in the 2021 Plan, refer to **Exhibit E-2** – “Core Constituencies”. Boundaries for five of the 14 districts in the 2021 Plan are the same under the 2023 Plan –CDs 1, 2, 3, 8, and 12.

28. Additional redistricting metrics comparing the Illustrative Plan with the 2023 Plan are described in below.

(a) Compactness

29. **Exhibit F-1** contains district-by-district compactness scores generated by Maptitude for all districts in the Illustrative Plan, alongside scores for the 2023 Plan (**Exhibit F-2**) and the 2021 Plan (**Exhibit F-3**)

30. The table in **Figure 3** (condensed from the Exhibit F series) reports mean and minimum Reock⁵ and Polsby-Popper⁶ scores.

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

32. As reported in Figure 3, the Illustrative Plan has higher compactness scores in both CD 6 and CD 7 than the 2023 Plan.

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: $4\pi\text{Area}/(\text{Perimeter}^2)$. 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 3
Compactness Scores

	Reock		Polsby-Popper	
	Mean	Low	Mean	Low
Cooper Illustrative Plan	.43	.28	.27	.18
Cooper Illustrative CD 6	.45	NA	.27	NA
Cooper Illustrative CD 7	.50	NA	.39	NA
2023 Plan	.42	.29	.24	.13
2023 CD 6	.40	NA	.25	NA
2023 CD 7	.34	NA	.24	NA
2021 Plan	.44	.31	.27	.16

(b) Political Subdivision Splits

33. This section summarizes Maptitude generated reports for splits of key geographic areas in Georgia—from VTDs to regional commissions—under the Illustrative Plan, the 2023 Plan, and the 2021 Plan.

34. **Exhibit G-1** contains a county and VTD split report for the Illustrative Plan. **Exhibit G-2** reports on the same for the 2023 Plan. **Exhibit G-3** reports on the 2021 Plan.

35. **Exhibit H-1** contains a split report for all 531 municipalities (including the 53 cities and towns that spill over into another county) for the Illustrative Plan. **Exhibit H-2** reports on the same for the 2023 Plan. **Exhibit H-2** reports on the 2021 Plan.

36. The table in **Figure 4** summarizes split counts for counties and 2020 VTDs. The Illustrative Plan scores better than the 2023 Plan on county and municipal splits.

Figure 4**County, VTD, and Municipal Splits**

	Split Counties*	County Splits*	2020 VTD Splits*	Split Cities/ Towns#	City/ Town Splits*
Illustrative Plan	15	18	43	37	78
2023 Plan	16	22	37	43	91
2021 Plan	15	21	46	43	91

*Excludes unpopulated areas

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

(c) Regional Splits

37. The table in **Figure 5** shows regional splits, defined by the 12 state-designated regional commissions and the 15 federally-designated metropolitan statistical areas (“MSAs”).⁷ Regional split reports are found in the **Exhibit I** series.

38. The Illustrative Plan scores higher than the 2023 Plan in two of the three categories, with the same number of whole MSAs.

⁷ <https://www2.census.gov/geo/pdfs/reference/GARM/Ch13GARM.pdf>

Figure 5
Split Regional Commissions and MSAs

	Regional Commission Splits	Whole MSAs	MSA Splits
Illustrative Plan	38	8	12
2023 Plan	39	8	22
2021 Plan	37	9	20

###

I reserve the right to continue to supplement my report in light of additional facts, testimony, and/or materials that might come to light.

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

Executed on: December 12, 2023

WILLIAM S. COOPER

Population Summary Report

Georgia U.S. House -- CVAP -- Illustrative Plan

District	% NH Single-Race Black CVAP*	% NH DOJ Black CVAP**	% Latino CVAP	% SR NH White CVAP	% SR NH Asian CVAP	% Minority CVAP
001	29.01%	29.52%	4.69%	62.75%	1.68%	37.25%
002	49.39%	49.830%	3.43%	44.46%	1.25%	55.54%
003	19.96%	20.36%	3.79%	73.64%	1.34%	26.36%
004	55.76%	56.49%	4.13%	34.57%	3.71%	65.43%
005	50.36%	51.05%	3.69%	40.51%	3.36%	59.49%
006	51.39%	52.34%	6.45%	37.69%	2.35%	62.31%
007	32.39%	33.16%	11.55%	42.19%	10.09%	57.81%
008	30.41%	30.80%	4.07%	62.88%	1.52%	37.12%
009	11.40%	11.79%	9.71%	70.03%	7.91%	29.97%
010	15.03%	15.42%	4.14%	77.83%	1.79%	22.17%
011	12.80%	13.34%	6.02%	74.62%	5.34%	25.38%
012	36.67%	37.37%	3.64%	56.34%	1.64%	43.66%
013	50.07%	50.97%	5.40%	39.38%	3.02%	60.62%
014	4.89%	5.27%	5.91%	86.61%	0.95%	13.39%

CVAP Source:

* 2017-2021 ACS Special Tabulation <https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-block-lev>

Note: Citizen Voting Age Population (CVAP) † <https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-t>

* Single race NH Black CVAP, **NH DOJ Black= SR NH Black CVAP+SR NH Black/White CVAP

el-2020/
block-level-2020/

Population Summary Report

Georgia U.S. House -- 2020 Census -- Illustrative Plan

District	18+ Pop	18+ SR Black	% 18+ SR Black	18+ AP Black	% 18+ AP Black	18+ Latino	% 18+ Latino	NH18_BLK	% NH18_BLK	NH18 ASN	% NH18 ASN	18+ NH White	% 18+ NH White
001	589266	157770	26.77%	166025	28.17%	39938	6.78%	155810	26.44%	13909	2.36%	355947	60.41%
002	587555	281564	47.92%	289612	49.29%	30074	5.12%	279765	47.62%	8281	1.41%	251047	42.73%
003	580018	112454	19.39%	118709	20.47%	31852	5.49%	111318	19.19%	8692	1.50%	405926	69.99%
004	590640	298897	50.61%	311670	52.77%	58947	9.98%	295959	50.11%	35933	6.08%	177832	30.11%
005	621515	295885	47.61%	308271	49.60%	41432	6.67%	293005	47.14%	28127	4.53%	235652	37.92%
006	587247	282051	48.03%	294976	50.23%	71798	12.23%	279023	47.51%	18798	3.20%	192370	32.76%
007	566934	157650	27.81%	169071	29.82%	120604	21.27%	155029	27.35%	84873	14.97%	185838	32.78%
008	585857	170421	29.09%	175967	30.04%	35732	6.10%	168984	28.84%	9389	1.60%	354572	60.52%
009	564244	59821	10.60%	65790	11.66%	83453	14.79%	58802	10.42%	66506	11.79%	335720	59.50%
010	602127	81481	13.53%	86178	14.31%	39876	6.62%	80886	13.43%	12594	2.09%	447109	74.25%
011	588795	72303	12.28%	80507	13.67%	55168	9.37%	71112	12.08%	41604	7.07%	393920	66.90%
012	588119	207872	35.35%	215958	36.72%	28628	4.87%	206189	35.06%	11446	1.95%	321394	54.65%
013	576337	283204	49.14%	294669	51.13%	46150	8.01%	280414	48.65%	21384	3.71%	207154	35.94%
014	591620	27046	4.57%	30583	5.17%	59266	10.02%	26637	4.50%	6069	1.03%	477852	80.77%
Total	8220274	2488419	30.27%	2607986	31.73%	742918	9.04%	2462933	29.96%	367605	4.47%	4342333	52.82%

EXPERT REPORT OF MAXWELL PALMER, PH.D.

1. My name is Maxwell Palmer. I am currently an Associate Professor of Political Science at Boston University. I previously submitted reports in this case on December 12, 2022 and December 22, 2022. My first report sets forth my qualifications in detail. A copy of my most recent curriculum vitae is attached as Exhibit A.
2. I testified in this matter in the February 2022 preliminary injunction proceedings and the October 2023 trial. I was accepted by the Court in both proceedings as an expert in redistricting and data analysis. The Court found me to be a credible expert witness and credited my testimony on racially polarized voting and performance in its October 26, 2023 opinion.
3. In my original report in this matter, I found strong evidence of racially polarized voting across the 3rd, 6th, 11th, 13th, and 14th Congressional Districts under the 2021 redistricting map. I found that Black and White voters consistently support different candidates and that Black-preferred candidates were largely unable to win elections except in the 13th District. I also found that under the Plaintiffs' illustrative map, Black-preferred candidates would be able to win elections in the new 6th Congressional District.
4. In its October 26, 2023 order, the Court required the drawing of an additional new Black-opportunity congressional district. I was asked by the plaintiffs in this litigation to evaluate the number of Black-opportunity districts under the 2021 Plan and the new Remedial Plan enacted by the Georgia legislature on December 7, 2023. I was also asked to offer an expert opinion on the extent to which voting is racially polarized in the area around the 7th Congressional District under the Enacted and Remedial Maps.
5. For clarity, I will refer to the plan used for the 2022 elections as the "Enacted Plan," and the 2023 plan passed by the state legislature as the "Remedial Plan."
6. To analyze the performance of districts under the Enacted and Remedial Plans, I relied on precinct-level election results from the 2012-2022 general and runoff elections. To analyze racially polarized voting I used ecological inference, a statistical procedure to infer group-level behavior from aggregate data, using precinct-level election results and data on voter turnout by race. My original report in this matter describes these datasets and my methodology.

Racially Polarized Voting and Cohesion Among Minority Groups in Georgia

7. I was asked to opine on the extent to which voting is racially polarized across the state of Georgia, and the extent to which different minority groups share the same candidates of choice. Using statewide data and ecological inference, I estimated the support for statewide candidates across 41 elections for Black, Hispanic, AAPI (Asian and Pacific Islanders), White, and Other voters.¹
8. Figure 1 presents the estimates of support for the Democratic candidate for each racial group for all 41 electoral contests. For each election, the solid dots correspond to an estimate in a particular election, and the horizontal lines behind each dot are the 95% confidence intervals for the estimate. The full results are provided in Table 1.
9. Examining Figure 1, the estimates for support for Democratic candidates for Black, Hispanic, AAPI, and Other voters are all significantly above 50%. There are high levels of cohesion among Black, Hispanic, AAPI, and Other voters. While each group is internally cohesive in support for a clear candidate of choice, there is also clear cohesion across the four groups of voters of color analyzed here; all four groups share the same candidate of choice in each election. In contrast to the four groups of voters of color, White voters are highly cohesive in voting in opposition to the candidate of choice of voters of color in every election. On average, White voters supported Democratic candidates with 14.3% of the vote, and in no election did this estimate exceed 20%.
10. These results demonstrate that Black, Hispanic, AAPI, and Other voters of color share the same preferred candidates in Georgia.

¹I submitted a report and testified on racially polarized voting in Georgia in *In Re: Georgia Senate Bill 202* (1:12-MI-55555-JPB) before the U.S. District Court for the Northern District of Georgia. The results below reproduce my results in that report.

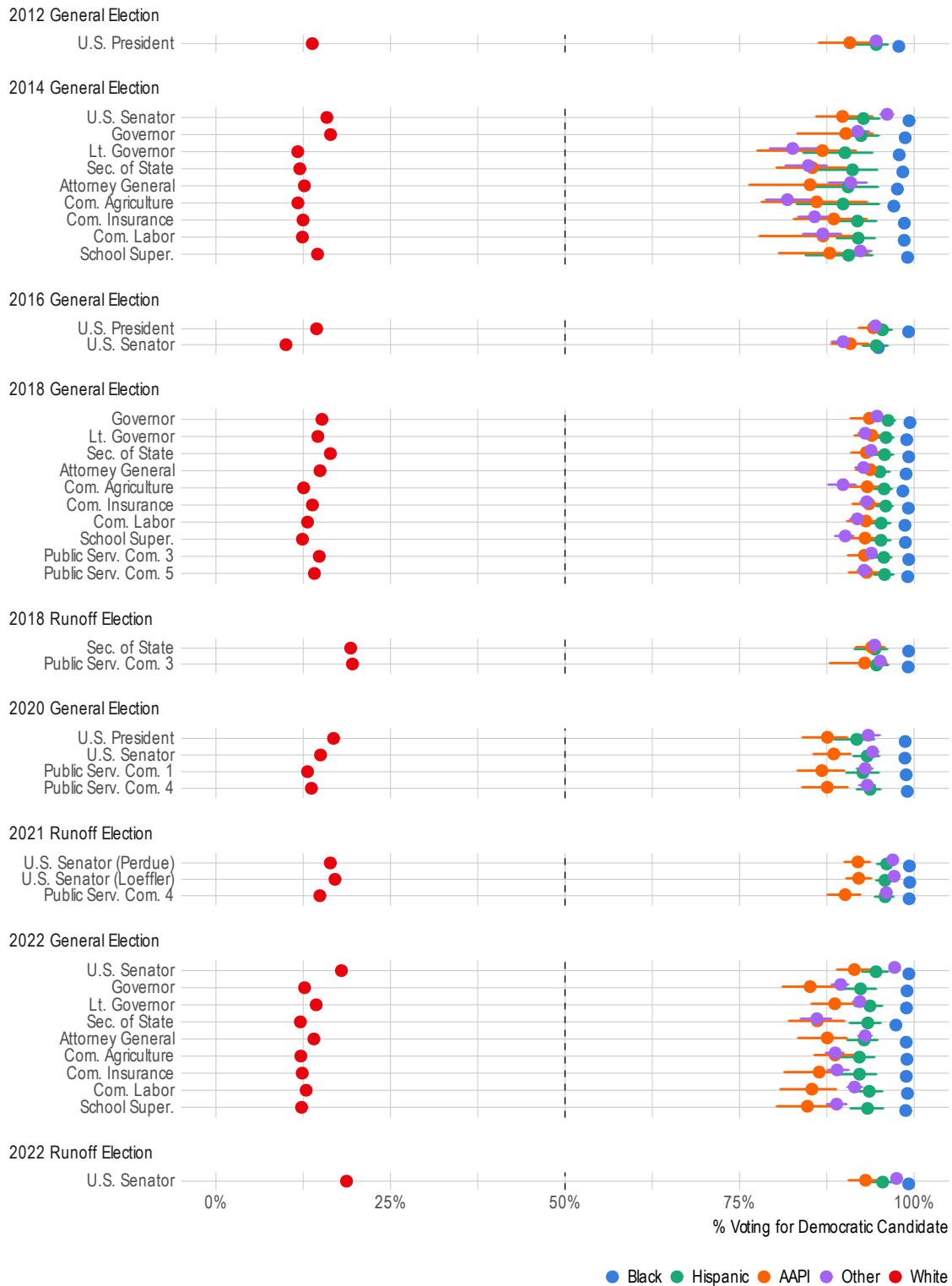


Figure 1: Racially Polarized Voting Estimates by Election, Statewide

Racially Polarized Voting and Performance for Minority-Preferred Candidates in the 7th Congressional District

11. I was asked to analyze racially polarized voting in the area around the Enacted 7th District. Under the Remedial Map, the Enacted District 7 was divided among the 4th, 7th, 9th, 10th, and 13th districts. Consistent with my prior reports in this matter, I defined a focus area consisting of these districts. Figure 2 plots the focus area, with Enacted District 7 outlined in black.

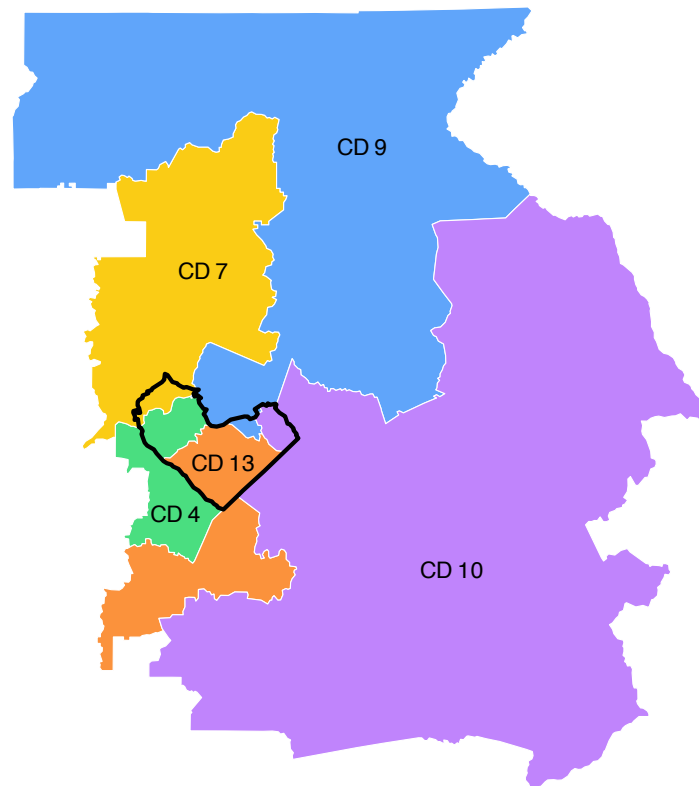


Figure 2: Map of Focus Area

12. I estimated ecological inference models for each of the 41 statewide contests in Georgia from 2012 to 2022. I analyzed five racial groups, based on voters' self-identified race when registering to vote: Black, Hispanic, Asian, White, and Other.
13. Figure 3 plots the results of this analysis. For each election, the solid dots correspond to an estimate in a particular election, and the horizontal lines behind each dot are the 95% confidence intervals for the estimate. In the District 7 Focus Area I find that all five racial or ethnic groups are politically cohesive; in all 41 elections I find that each group has a clearly identifiable candidate of choice. Furthermore in all 41 elections, Black, Hispanic, AAPI, and Other voters all share the same candidate of choice, and White voters strongly prefer the opposing candidate. The full results are provided in

Table 2.

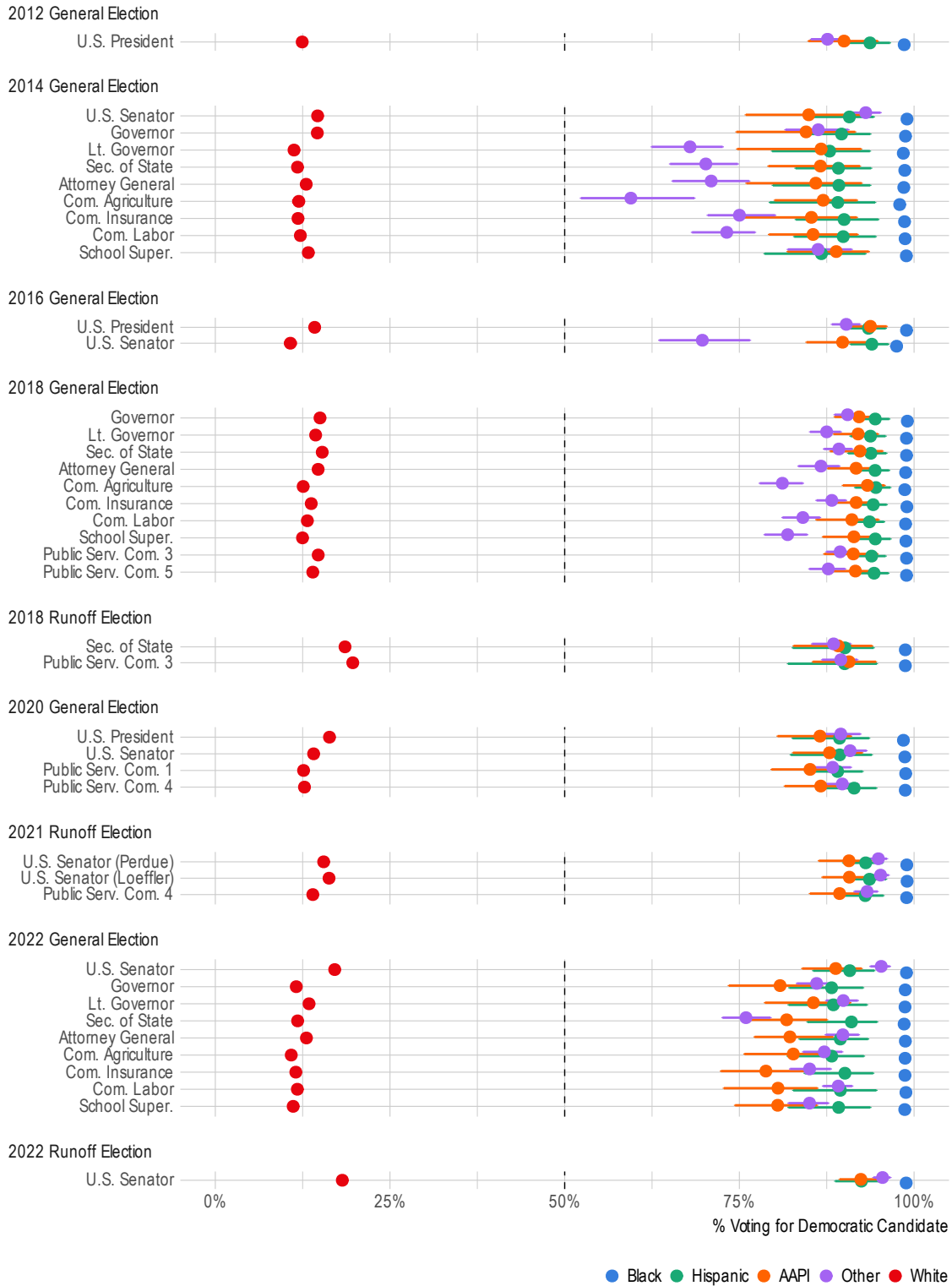


Figure 3: Racially Polarized Voting Estimates by Election, CD 7 Focus Area

14. As shown in Figure 3, there are high levels of cohesion among Black, Hispanic, AAPI, and Other voters. While each group is internally cohesive in support for a clear candidate of choice, there is also clear cohesion across the four groups of voters of color analyzed here; all four groups share the same candidate of choice in each election.
15. Having identified the Minority-preferred candidate in each election, I now turn to their ability to win elections in the focus area and in the 7th District under both plans. Figure 4 and Table 3 present the results of this analysis.

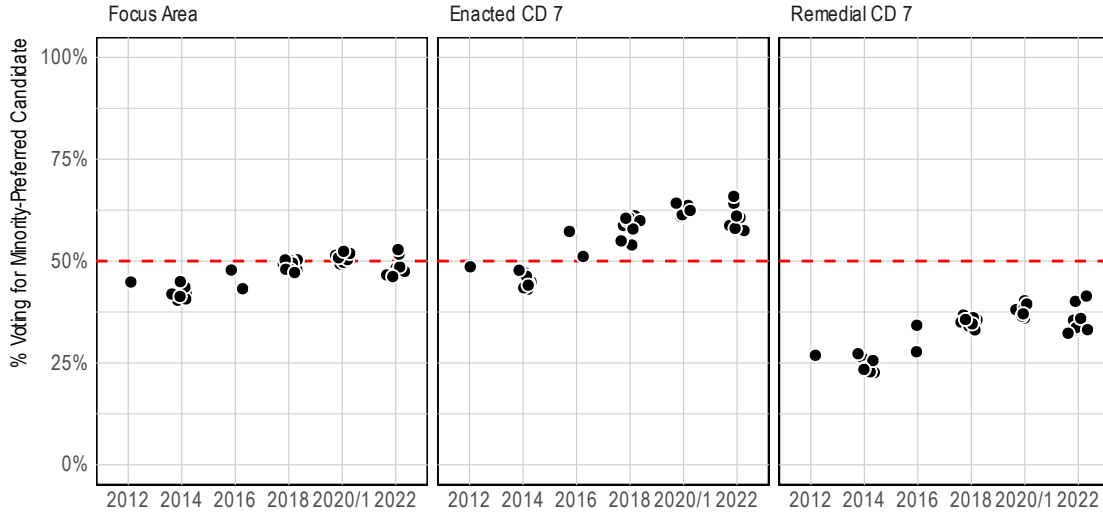


Figure 4: Performance of Minority-Preferred Candidates in the 7th District

16. Minority-Preferred candidates are generally not able to win elections in the Focus Area. Minority-preferred candidates averaged 47.4% of the vote in the Focus Area, and won 24% of the elections from 2012 to 2022.
17. In Enacted CD 7, Minority-preferred candidates were able to win 76% of the elections from 2012 to 2022, including the 2022 U.S. House election and every statewide election after 2016, with an average of 56.4% of the vote. In contrast, in Remedial CD 7, Minority-preferred candidates would not have won any of these elections, and average only 32.9% of the vote.

Performance of Minority-Preferred Candidates

18. I was also asked to analyze the performance of minority-preferred candidates in each district of the Enacted and Remedial Maps. This analysis requires two steps. First, I used ecological inference to identify the minority-preferred candidate in each district for each statewide election. Second, having identified the minority-preferred candidate, I calculated the share of the vote that candidate would receive. This analysis requires estimating 1,148 ecological inference models. I have included the full results as an attachment to this report.
19. Figure 5 presents the results of this analysis. The panel on the left shows the performance of each congressional district under the Enacted Map, and the panel on the right shows performance under the Remedial Map. Each gray circle corresponds to one of the 41 statewide contests analyzed, and the green circle is the average performance of Minority-preferred candidates in each district. Tables 4 and 5 provide the full results.
20. Figure 5 shows that there are five congressional districts (Districts 2, 4, 5, 7 and 13) where Minority-preferred candidates were able to win elections under the Enacted Map. Under the Remedial Map, there are also five districts where Minority-preferred candidates are able to win (Districts 2, 4, 5, 6, and 13).

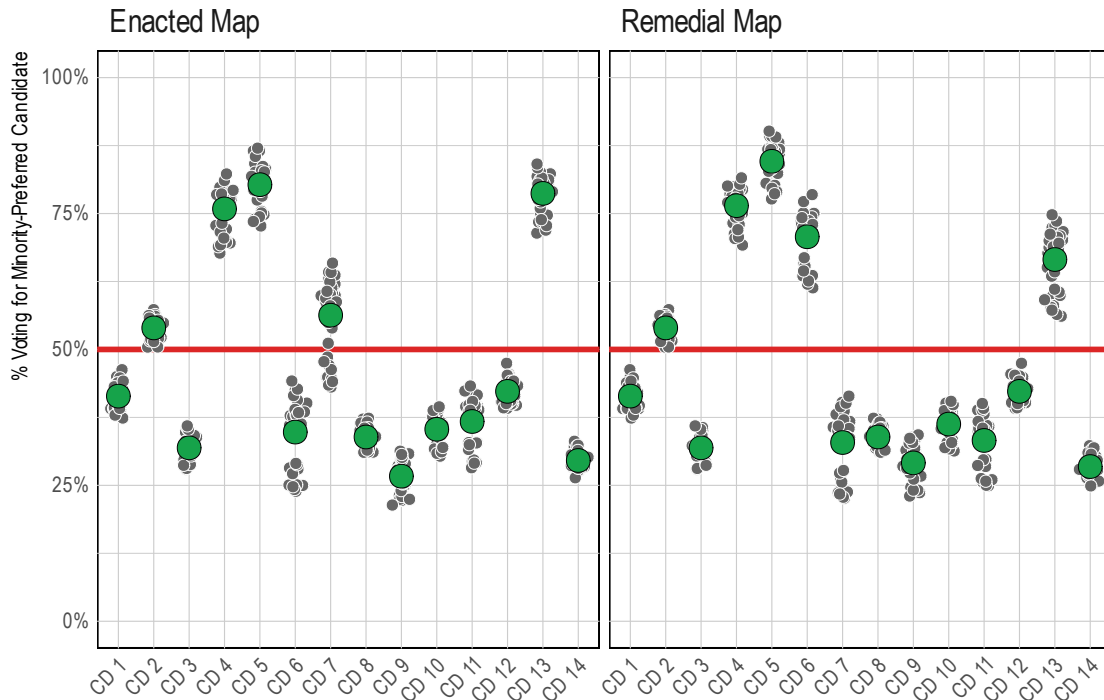


Figure 5: Performance of Minority-Preferred Candidates Under the Enacted and Illustrative Maps

Table 1: Ecological Inference Results — Statewide

		Black	Latino	AAPI	Other	White
2012 General	U.S. President	97.8% (97.6, 98.0)	94.6% (91.6, 96.3)	90.8% (86.3, 93.8)	94.6% (93.7, 95.3)	13.8% (13.6, 14.0)
2014 General	U.S. Senator	99.3% (99.1, 99.4)	92.7% (89.8, 95.1)	89.7% (85.9, 94.1)	96.1% (95.1, 97.0)	15.9% (15.7, 16.0)
	Governor	98.7% (98.5, 98.9)	92.4% (89.5, 94.9)	90.2% (83.2, 94.1)	91.9% (90.1, 93.5)	16.4% (16.2, 16.6)
	Lt. Governor	97.9% (97.5, 98.2)	90.1% (84.1, 94.0)	86.9% (77.5, 91.7)	82.6% (79.3, 86.1)	11.7% (11.5, 11.9)
	Sec. of State	98.4% (98.1, 98.7)	91.2% (86.0, 94.7)	85.4% (80.3, 90.3)	84.8% (81.6, 87.5)	12.0% (11.8, 12.2)
	Attorney General	97.6% (97.3, 97.9)	90.5% (85.7, 94.8)	85.1% (76.4, 91.7)	90.9% (87.7, 93.2)	12.7% (12.5, 12.9)
	Com. Agriculture	97.1% (96.7, 97.4)	89.8% (83.2, 95.0)	86.0% (78.1, 93.3)	81.8% (78.8, 86.0)	11.7% (11.5, 12.0)
	Com. Insurance	98.6% (98.4, 98.8)	91.9% (88.3, 94.6)	88.5% (82.8, 93.2)	85.7% (83.4, 88.2)	12.5% (12.3, 12.7)
	Com. Labor	98.6% (98.3, 98.8)	92.0% (88.9, 94.4)	87.0% (77.8, 92.1)	86.9% (84.0, 89.6)	12.4% (12.2, 12.6)
	School Super.	99.1% (98.9, 99.2)	90.6% (84.4, 94.1)	87.9% (80.6, 93.4)	92.3% (90.5, 93.9)	14.5% (14.4, 14.7)
2016 General	U.S. President	99.2% (99.1, 99.3)	95.5% (93.8, 96.8)	94.2% (92.1, 96.2)	94.5% (93.6, 95.2)	14.4% (14.3, 14.6)
	U.S. Senator	94.9% (94.6, 95.2)	94.6% (92.6, 96.2)	90.9% (88.1, 93.5)	89.8% (88.2, 91.1)	10.0% (9.8, 10.2)
2018 General	Governor	99.4% (99.3, 99.5)	96.3% (95.0, 97.3)	93.6% (90.9, 95.8)	94.7% (93.9, 95.3)	15.2% (15.0, 15.3)
	Lt. Governor	98.9% (98.8, 99.1)	96.0% (94.6, 97.1)	93.9% (91.5, 96.0)	93.0% (92.0, 93.9)	14.6% (14.4, 14.7)
	Sec. of State	99.2% (99.1, 99.3)	95.8% (94.1, 97.0)	93.2% (91.0, 95.2)	93.8% (93.0, 94.6)	16.4% (16.2, 16.5)
	Attorney General	98.9% (98.7, 99.0)	95.1% (93.5, 96.5)	93.7% (91.6, 95.7)	92.8% (91.6, 93.8)	14.9% (14.7, 15.1)
	Com. Agriculture	98.4% (98.1, 98.7)	95.7% (94.2, 96.9)	93.3% (90.7, 95.3)	89.8% (87.7, 91.7)	12.6% (12.4, 12.8)
	Com. Insurance	99.2% (99.0, 99.3)	95.9% (94.5, 97.0)	93.5% (91.2, 95.7)	93.2% (92.3, 94.1)	13.8% (13.7, 14.0)
	Com. Labor	98.7% (98.5, 98.8)	95.3% (93.7, 96.6)	93.1% (90.4, 95.2)	91.9% (90.8, 92.9)	13.1% (13.0, 13.3)
	School Super.	98.8% (98.6, 98.9)	95.3% (93.6, 96.6)	93.0% (89.9, 95.4)	90.1% (88.7, 91.3)	12.4% (12.2, 12.6)
	Public Serv. Com. 3	99.2% (99.1, 99.3)	95.7% (94.2, 96.8)	92.9% (90.5, 95.0)	93.9% (93.0, 94.6)	14.8% (14.7, 15.0)
Public Serv. Com. 5	99.1% (98.9, 99.2)	95.8% (94.2, 97.1)	93.2% (90.6, 95.4)	92.8% (91.9, 93.7)	14.1% (13.9, 14.3)	
2018 Runoff	Sec. of State	99.2% (99.1, 99.3)	94.4% (91.5, 96.2)	93.9% (91.6, 95.8)	94.3% (93.4, 95.2)	19.3% (19.1, 19.4)
	Public Serv. Com. 3	99.1% (99.0, 99.3)	94.6% (92.2, 96.3)	92.9% (87.9, 96.1)	95.1% (94.1, 96.0)	19.5% (19.4, 19.7)

Table 1: Ecological Inference Results — Statewide (*continued*)

		Black	Latino	AAPI	Other	White
2020 General	U.S. President	98.7% (98.5, 98.9)	91.8% (88.5, 94.3)	87.6% (84.0, 90.5)	93.4% (91.7, 95.1)	16.8% (16.6, 17.1)
	U.S. Senator	98.7% (98.5, 98.8)	93.3% (91.3, 95.0)	88.5% (85.6, 90.9)	94.0% (93.1, 94.9)	15.0% (14.8, 15.2)
	Public Serv. Com. 1	98.9% (98.7, 99.0)	92.7% (90.3, 95.0)	86.8% (83.3, 90.0)	93.0% (91.8, 94.1)	13.1% (12.9, 13.3)
	Public Serv. Com. 4	99.0% (98.9, 99.2)	93.7% (91.8, 95.2)	87.6% (83.9, 90.5)	93.3% (92.1, 94.4)	13.7% (13.5, 13.9)
2021 Runoff	U.S. Senator (Perdue)	99.3% (99.2, 99.4)	96.1% (94.7, 97.2)	91.9% (90.0, 93.7)	96.9% (96.4, 97.5)	16.4% (16.2, 16.5)
	U.S. Senator (Loeffler)	99.4% (99.3, 99.5)	95.8% (94.6, 96.9)	92.1% (90.3, 93.9)	97.1% (96.5, 97.7)	17.0% (16.9, 17.2)
	Public Serv. Com. 4	99.3% (99.2, 99.4)	95.8% (94.4, 97.1)	90.1% (87.6, 92.3)	96.0% (95.3, 96.7)	14.9% (14.7, 15.0)
2022 General	U.S. Senator	99.2% (99.1, 99.4)	94.5% (92.5, 96.3)	91.4% (88.9, 93.9)	97.2% (96.6, 97.7)	18.0% (17.8, 18.1)
	Governor	99.0% (98.8, 99.1)	92.3% (89.5, 94.6)	85.1% (81.1, 89.5)	89.5% (88.2, 90.6)	12.7% (12.5, 12.9)
	Lt. Governor	98.9% (98.7, 99.1)	93.7% (91.5, 95.4)	88.6% (85.3, 91.4)	92.2% (91.2, 93.2)	14.4% (14.2, 14.5)
	Sec. of State	97.4% (97.0, 97.8)	93.4% (90.7, 95.2)	86.1% (82.0, 90.0)	86.1% (83.7, 88.2)	12.1% (11.9, 12.3)
	Attorney General	98.9% (98.7, 99.0)	92.8% (90.4, 94.8)	87.6% (83.4, 90.4)	93.0% (92.0, 94.0)	14.0% (13.9, 14.2)
	Com. Agriculture	99.0% (98.8, 99.1)	92.2% (89.4, 94.3)	88.7% (85.7, 92.0)	88.7% (87.3, 89.9)	12.2% (12.0, 12.3)
	Com. Insurance	98.9% (98.7, 99.0)	92.2% (89.3, 94.6)	86.4% (81.4, 89.5)	89.0% (87.6, 90.7)	12.3% (12.2, 12.5)
	Com. Labor	99.0% (98.9, 99.2)	93.6% (91.4, 95.5)	85.4% (80.8, 88.9)	91.5% (90.4, 92.6)	12.9% (12.7, 13.1)
School Super.	98.8% (98.6, 99.0)	93.3% (90.9, 95.6)	84.7% (80.3, 88.2)	88.9% (87.5, 90.3)	12.3% (12.1, 12.5)	
2022 Runoff	U.S. Senator	99.2% (99.1, 99.3)	95.5% (93.7, 97.0)	93.0% (90.6, 95.1)	97.5% (96.9, 98.0)	18.7% (18.6, 18.9)

Table 2: Ecological Inference Results — CD 7 Focus Area

		Black	Latino	AAPI	Other	White
2012 General	U.S. President	98.6% (98.2, 98.9)	93.7% (89.5, 96.6)	90.0% (84.9, 94.8)	87.6% (85.3, 89.6)	12.4% (12.1, 12.8)
2014 General	U.S. Senator	99.0% (98.7, 99.2)	90.7% (85.4, 94.2)	84.9% (75.9, 92.5)	93.1% (90.8, 95.2)	14.6% (14.3, 14.9)
	Governor	98.8% (98.5, 99.0)	89.6% (84.6, 93.7)	84.5% (74.6, 91.6)	86.3% (81.6, 90.6)	14.6% (14.1, 15.1)
	Lt. Governor	98.5% (98.0, 98.9)	87.9% (79.7, 93.7)	86.7% (74.7, 92.4)	67.9% (62.5, 72.6)	11.3% (10.8, 11.8)
	Sec. of State	98.7% (98.3, 99.0)	89.2% (83.0, 93.9)	86.6% (79.2, 92.2)	70.2% (65.1, 74.8)	11.8% (11.3, 12.3)
	Attorney General	98.5% (98.2, 98.8)	89.2% (79.8, 93.7)	85.9% (76.0, 92.5)	71.0% (65.4, 76.4)	13.0% (12.4, 13.6)
	Com. Agriculture	97.9% (97.4, 98.4)	89.1% (79.4, 94.4)	87.0% (80.1, 91.8)	59.5% (52.3, 68.6)	11.9% (11.2, 12.6)
	Com. Insurance	98.6% (98.3, 98.9)	90.0% (83.1, 94.9)	85.3% (74.7, 91.8)	75.0% (70.5, 80.1)	11.8% (11.3, 12.3)
	Com. Labor	98.7% (98.4, 99.0)	89.9% (82.9, 94.5)	85.5% (79.2, 91.9)	73.2% (68.2, 77.2)	12.2% (11.7, 12.7)
	School Super.	98.9% (98.6, 99.1)	86.7% (78.6, 93.1)	88.9% (81.9, 93.5)	86.3% (81.9, 91.1)	13.3% (12.8, 13.8)
2016 General	U.S. President	98.9% (98.6, 99.2)	93.5% (90.2, 96.0)	93.7% (90.3, 96.1)	90.3% (88.2, 92.3)	14.2% (13.8, 14.6)
	U.S. Senator	97.5% (96.7, 98.1)	94.0% (90.9, 96.3)	89.8% (84.6, 93.7)	69.7% (63.5, 76.5)	10.7% (10.0, 11.5)
2018 General	Governor	99.0% (98.8, 99.3)	94.4% (91.5, 96.4)	92.1% (88.6, 95.0)	90.5% (88.6, 92.1)	15.0% (14.6, 15.4)
	Lt. Governor	98.9% (98.6, 99.2)	93.8% (90.9, 95.9)	92.0% (88.5, 94.8)	87.5% (85.1, 89.5)	14.4% (14.0, 14.8)
	Sec. of State	98.9% (98.6, 99.2)	93.8% (90.6, 96.0)	92.3% (88.0, 95.5)	89.2% (87.1, 91.1)	15.3% (14.9, 15.7)
	Attorney General	98.8% (98.5, 99.1)	94.4% (91.8, 96.4)	91.7% (87.6, 94.5)	86.7% (83.5, 89.3)	14.7% (14.2, 15.3)
	Com. Agriculture	98.7% (98.3, 99.0)	94.5% (91.6, 96.6)	93.3% (89.8, 95.8)	81.2% (77.9, 84.1)	12.6% (12.1, 13.1)
	Com. Insurance	99.0% (98.7, 99.2)	94.2% (91.8, 96.1)	91.7% (88.0, 94.7)	88.2% (86.0, 90.3)	13.7% (13.3, 14.1)
	Com. Labor	98.8% (98.5, 99.1)	93.6% (90.7, 95.7)	91.1% (86.0, 94.9)	84.1% (81.2, 86.5)	13.2% (12.7, 13.7)
	School Super.	98.8% (98.5, 99.1)	94.4% (91.5, 96.6)	91.4% (87.0, 94.6)	81.9% (78.6, 84.7)	12.5% (12.0, 13.0)
	Public Serv. Com. 3	98.9% (98.6, 99.2)	93.9% (91.5, 95.9)	91.3% (87.1, 94.8)	89.4% (87.5, 91.2)	14.7% (14.4, 15.1)
Public Serv. Com. 5	98.9% (98.6, 99.2)	94.3% (91.7, 96.3)	91.6% (87.1, 94.9)	87.7% (85.0, 90.1)	14.0% (13.5, 14.4)	
2018 Runoff	Sec. of State	98.7% (98.4, 99.1)	90.1% (82.6, 94.2)	89.1% (82.8, 94.0)	88.5% (85.4, 90.9)	18.6% (18.1, 19.0)
	Public Serv. Com. 3	98.7% (98.4, 99.1)	90.1% (82.0, 94.7)	90.7% (85.5, 94.5)	89.5% (86.8, 91.9)	19.7% (19.3, 20.1)

Table 2: Ecological Inference Results — CD 7 Focus Area (*continued*)

		Black	Latino	AAPI	Other	White
2020 General	U.S. President	98.5% (98.1, 98.8)	89.3% (82.6, 93.6)	86.5% (80.5, 91.0)	89.5% (86.4, 92.3)	16.3% (15.8, 16.9)
	U.S. Senator	98.7% (98.3, 99.0)	89.4% (82.4, 93.9)	87.9% (82.7, 92.6)	90.8% (88.2, 93.2)	14.1% (13.6, 14.6)
	Public Serv. Com. 1	98.8% (98.5, 99.0)	89.1% (84.4, 92.6)	85.1% (79.6, 89.5)	88.3% (85.3, 91.0)	12.6% (12.2, 13.2)
	Public Serv. Com. 4	98.7% (98.4, 99.0)	91.4% (87.1, 94.6)	86.6% (81.5, 90.7)	89.7% (87.3, 92.0)	12.8% (12.3, 13.3)
2021 Runoff	U.S. Senator (Perdue)	99.0% (98.7, 99.2)	93.1% (89.9, 95.5)	90.7% (86.4, 93.9)	94.9% (93.5, 96.1)	15.5% (15.1, 15.9)
	U.S. Senator (Loeffler)	99.0% (98.7, 99.2)	93.6% (90.3, 96.0)	90.7% (86.9, 94.1)	95.2% (93.9, 96.4)	16.3% (15.9, 16.7)
	Public Serv. Com. 4	98.9% (98.6, 99.2)	93.0% (89.9, 95.6)	89.3% (85.1, 92.7)	93.3% (91.5, 94.8)	14.0% (13.6, 14.4)
2022 General	U.S. Senator	98.9% (98.6, 99.2)	90.8% (85.6, 94.3)	88.8% (84.0, 92.5)	95.3% (93.8, 96.5)	17.1% (16.7, 17.5)
	Governor	98.7% (98.4, 99.0)	88.2% (82.2, 92.7)	80.8% (73.5, 86.8)	86.1% (83.2, 88.5)	11.6% (11.1, 12.1)
	Lt. Governor	98.7% (98.3, 99.0)	88.4% (82.1, 93.3)	85.6% (78.7, 90.9)	89.9% (87.4, 91.9)	13.4% (12.9, 13.9)
	Sec. of State	98.6% (98.2, 98.9)	91.0% (84.8, 94.7)	81.8% (75.7, 87.5)	75.9% (72.6, 79.5)	11.8% (11.2, 12.4)
	Attorney General	98.8% (98.4, 99.1)	89.4% (83.6, 93.4)	82.2% (77.2, 88.4)	89.8% (87.4, 92.1)	13.0% (12.6, 13.5)
	Com. Agriculture	98.7% (98.4, 99.0)	88.2% (81.9, 92.8)	82.7% (75.7, 88.6)	87.2% (84.1, 89.7)	10.9% (10.4, 11.4)
	Com. Insurance	98.7% (98.3, 99.0)	90.1% (84.3, 94.2)	78.8% (72.4, 84.9)	85.0% (82.3, 88.1)	11.5% (11.0, 12.0)
	Com. Labor	98.8% (98.5, 99.1)	89.4% (82.7, 94.6)	80.5% (72.8, 86.2)	89.2% (87.0, 91.1)	11.7% (11.2, 12.2)
School Super.	98.7% (98.3, 99.0)	89.2% (82.0, 93.7)	80.5% (74.4, 86.1)	85.0% (82.0, 87.7)	11.1% (10.7, 11.6)	
2022 Runoff	U.S. Senator	98.9% (98.6, 99.1)	92.5% (88.7, 95.3)	92.4% (89.3, 94.9)	95.5% (94.2, 96.6)	18.2% (17.9, 18.5)

Table 3: Election Results in the 7th Congressional District — Vote Share of Minority-Preferred Candidates

		Focus Area	Enacted CD 7	Remedial CD 7
2012 GEN	U.S. President	44.9%	48.6%	26.9%
2014 GEN	U.S. Senator	45.0%	47.7%	27.3%
	Governor	44.3%	47.0%	26.4%
	Lt. Governor	40.7%	43.4%	22.8%
	Sec. of State	41.3%	44.1%	23.4%
	Attorney General	42.1%	44.8%	24.1%
	Com. Agriculture	40.4%	43.1%	22.6%
	Com. Insurance	41.9%	44.9%	23.8%
	Com. Labor	41.9%	44.6%	23.6%
	School Super.	43.6%	46.3%	25.6%
2016 GEN	U.S. President	47.8%	57.3%	34.2%
	U.S. Senator	43.2%	51.1%	27.7%
2018 GEN	Governor	50.3%	61.1%	36.8%
	Lt. Governor	49.3%	59.9%	35.6%
	Sec. of State	50.3%	60.5%	36.1%
	Attorney General	49.6%	59.9%	35.7%
	Com. Agriculture	47.9%	58.3%	33.8%
	Com. Insurance	49.4%	60.0%	35.0%
	Com. Labor	48.5%	58.7%	34.0%
	School Super.	47.9%	57.9%	33.1%
	Public Serv. Com. 3	50.1%	60.6%	35.8%
	Public Serv. Com. 5	49.5%	59.9%	35.1%
2018 RUN	Sec. of State	47.2%	54.0%	34.6%
	Public Serv. Com. 3	48.0%	55.0%	35.7%
2020 GEN	U.S. President	51.4%	63.1%	40.3%
	U.S. Senator	50.4%	62.0%	38.1%
	Public Serv. Com. 1	49.3%	60.9%	36.0%
	Public Serv. Com. 4	49.7%	61.4%	36.5%
2021 RUN	U.S. Senator (Perdue)	51.9%	63.7%	38.7%
	U.S. Senator (Loeffler)	52.4%	64.2%	39.5%
	Public Serv. Com. 4	50.8%	62.4%	37.1%
2022 GEN	U.S. Senator	51.7%	64.2%	40.1%
	Governor	47.0%	58.7%	33.6%
	Lt. Governor	48.6%	60.7%	35.9%
	Sec. of State	46.2%	57.5%	32.3%
	Attorney General	48.3%	60.1%	35.5%
	Com. Agriculture	46.8%	58.7%	33.2%
	Com. Insurance	46.8%	58.4%	33.2%
	Com. Labor	47.5%	59.4%	34.0%
	School Super.	46.6%	58.0%	33.2%
	U.S. Representative	—	61.1%	—
2022 RUN	U.S. Senator	52.8%	65.9%	41.4%

Table 4: Election Results by Congressional Districts — Enacted Map — Vote Share of Minority-Preferred Candidates

		CD 1	CD 2	CD 3	CD 4	CD 5	CD 6	CD 7	CD 8	CD 9	CD 10	CD 11	CD 12	CD 13	CD 14
2012 GEN	U.S. President	43.0%	57.3%	31.8%	72.8%	78.2%	28.2%	48.6%	37.2%	24.7%	35.0%	32.9%	45.5%	75.1%	29.8%
2014 GEN	U.S. Senator	42.2%	55.6%	32.2%	73.2%	79.2%	28.8%	47.7%	36.0%	25.7%	35.0%	32.8%	43.3%	76.0%	30.6%
	Governor	42.1%	56.4%	32.6%	72.1%	78.0%	28.0%	47.0%	37.3%	24.9%	35.2%	32.9%	42.8%	75.1%	33.1%
	Lt. Governor	39.1%	52.8%	28.1%	68.9%	74.0%	24.2%	43.4%	32.9%	21.4%	30.9%	28.2%	39.7%	71.9%	27.8%
	Sec. of State	39.1%	53.1%	28.8%	69.2%	74.4%	24.8%	44.1%	33.2%	22.4%	31.2%	29.1%	40.0%	72.8%	28.3%
	Attorney General	39.4%	53.5%	29.7%	69.6%	74.8%	25.0%	44.8%	34.0%	23.1%	32.6%	29.2%	40.2%	73.5%	28.7%
	Com. Agriculture	39.1%	52.8%	28.0%	67.7%	72.7%	23.9%	43.1%	33.1%	22.2%	30.4%	28.3%	40.1%	71.4%	27.5%
	Com. Insurance	40.4%	53.6%	29.1%	70.0%	75.4%	25.1%	44.9%	33.8%	22.4%	31.7%	29.4%	40.9%	73.4%	28.6%
	Com. Labor	39.7%	53.5%	29.2%	69.7%	75.1%	25.1%	44.6%	33.5%	23.0%	32.1%	29.7%	40.4%	73.5%	28.9%
	School Super.	41.3%	55.1%	30.9%	71.6%	77.5%	27.2%	46.3%	35.2%	24.6%	33.8%	31.6%	42.7%	74.7%	30.8%
2016 GEN	U.S. President	41.5%	54.5%	31.6%	76.9%	83.5%	36.0%	57.3%	34.3%	26.5%	35.1%	37.1%	43.2%	77.9%	27.7%
	U.S. Senator	37.4%	50.4%	28.7%	70.5%	73.5%	29.0%	51.1%	31.1%	24.0%	32.0%	32.5%	39.2%	73.9%	26.4%
2018 GEN	Governor	42.5%	55.1%	32.9%	78.9%	84.2%	38.8%	61.1%	34.3%	28.2%	36.5%	40.1%	43.2%	81.1%	30.0%
	Lt. Governor	41.9%	53.9%	32.3%	77.5%	82.1%	37.6%	59.9%	33.6%	28.1%	36.0%	39.5%	42.4%	80.2%	30.0%
	Sec. of State	45.0%	55.8%	33.2%	78.5%	83.2%	38.1%	60.5%	35.9%	28.7%	37.5%	39.8%	47.5%	80.8%	30.6%
	Attorney General	42.2%	54.8%	33.3%	77.2%	81.2%	37.6%	59.9%	34.4%	28.6%	36.5%	39.6%	43.1%	80.1%	30.5%
	Com. Agriculture	40.9%	53.2%	31.4%	75.5%	78.8%	35.6%	58.3%	32.6%	26.7%	34.4%	37.7%	41.5%	79.0%	29.1%
	Com. Insurance	41.5%	54.4%	32.1%	77.7%	81.9%	36.9%	60.0%	33.7%	27.6%	35.9%	38.8%	42.3%	80.5%	29.9%
	Com. Labor	41.3%	53.8%	31.7%	76.3%	80.3%	36.0%	58.7%	33.4%	27.3%	35.3%	38.1%	42.1%	79.5%	29.6%
	School Super.	41.0%	53.5%	31.2%	75.7%	79.1%	35.0%	57.9%	32.8%	26.7%	35.2%	37.4%	41.8%	79.2%	29.1%
	Public Serv. Com. 3	42.1%	54.9%	32.9%	78.4%	82.6%	37.8%	60.6%	34.3%	28.4%	36.6%	39.7%	42.9%	80.9%	30.3%
	Public Serv. Com. 5	42.0%	54.6%	32.3%	77.7%	81.8%	37.0%	59.9%	34.0%	27.8%	36.1%	38.9%	42.8%	80.4%	30.0%
2018 RUN	Sec. of State	46.3%	55.6%	30.4%	77.2%	86.5%	36.6%	54.0%	33.6%	25.2%	35.7%	36.1%	45.3%	77.1%	28.1%
	Public Serv. Com. 3	44.8%	54.9%	31.5%	77.7%	86.6%	37.6%	55.0%	32.8%	26.5%	36.1%	37.2%	42.5%	77.6%	29.0%
2020 GEN	U.S. President	43.2%	55.2%	34.8%	79.2%	83.7%	42.5%	63.1%	36.0%	30.8%	38.1%	42.2%	44.9%	80.5%	31.1%
	U.S. Senator	42.7%	54.3%	33.9%	78.2%	81.6%	40.1%	62.0%	35.1%	29.8%	37.2%	40.8%	43.8%	80.6%	30.7%
	Public Serv. Com. 1	41.5%	54.0%	32.6%	77.6%	80.5%	38.0%	60.9%	34.0%	28.6%	36.2%	39.2%	43.0%	80.2%	29.6%
	Public Serv. Com. 4	41.9%	54.4%	33.1%	77.9%	80.8%	38.5%	61.4%	34.7%	29.0%	36.5%	39.7%	43.3%	80.7%	30.2%
2021 RUN	U.S. Senator (Perdue)	43.8%	56.1%	35.2%	79.3%	82.0%	40.7%	63.7%	36.5%	30.8%	38.6%	41.6%	45.1%	82.3%	32.2%
	U.S. Senator (Loeffler)	43.9%	56.2%	35.6%	79.8%	82.9%	41.5%	64.2%	36.6%	31.3%	39.0%	42.3%	45.3%	82.6%	32.4%
	Public Serv. Com. 4	42.9%	55.4%	34.2%	78.5%	81.1%	39.0%	62.4%	35.6%	29.8%	37.6%	40.4%	44.1%	81.8%	31.4%

Table 4: Election Results by Congressional Districts — Enacted Map — Vote Share of Minority-Preferred Candidates (*continued*)

		CD 1	CD 2	CD 3	CD 4	CD 5	CD 6	CD 7	CD 8	CD 9	CD 10	CD 11	CD 12	CD 13	CD 14
2022 GEN	U.S. Senator	43.1%	54.7%	35.3%	81.1%	85.5%	42.7%	64.2%	34.8%	30.1%	38.8%	42.4%	43.3%	83.4%	31.9%
	Governor	39.4%	51.9%	31.3%	77.1%	80.7%	36.0%	58.7%	31.8%	25.5%	34.8%	37.0%	40.2%	80.6%	27.8%
	Lt. Governor	40.2%	52.1%	32.4%	78.6%	82.7%	38.4%	60.7%	32.1%	27.2%	36.0%	38.8%	40.6%	81.5%	29.2%
	Sec. of State	37.9%	50.5%	30.8%	75.1%	78.2%	34.5%	57.5%	31.1%	25.5%	34.4%	36.3%	39.3%	79.1%	27.5%
	Attorney General	40.4%	52.2%	32.4%	77.9%	81.8%	37.9%	60.1%	32.6%	27.2%	36.0%	38.6%	41.0%	81.2%	29.2%
	Com. Agriculture	39.1%	51.5%	30.8%	76.8%	80.0%	35.5%	58.7%	31.2%	25.4%	34.3%	36.5%	40.0%	80.8%	27.9%
	Com. Insurance	39.3%	51.6%	31.2%	76.2%	79.3%	35.4%	58.4%	31.8%	25.9%	34.8%	36.7%	40.1%	80.3%	28.3%
	Com. Labor	39.7%	52.0%	31.5%	77.8%	81.2%	36.3%	59.4%	32.0%	26.1%	35.1%	37.3%	40.3%	81.2%	28.4%
	School Super.	39.2%	51.5%	31.1%	76.2%	79.1%	35.6%	58.0%	31.5%	25.8%	34.3%	37.0%	40.0%	80.4%	28.3%
2022 RUN	U.S. Senator	44.2%	55.8%	35.9%	82.3%	87.0%	44.2%	65.9%	35.5%	30.7%	39.4%	43.3%	44.2%	84.1%	32.1%

Table 5: Election Results by Congressional Districts — Remedial Map — Vote Share of Minority-Preferred Candidates

		CD 1	CD 2	CD 3	CD 4	CD 5	CD 6	CD 7	CD 8	CD 9	CD 10	CD 11	CD 12	CD 13	CD 14
2012 GEN	U.S. President	43.0%	57.3%	31.8%	75.1%	82.7%	65.9%	26.9%	37.2%	26.5%	35.8%	29.2%	45.5%	59.8%	27.6%
2014 GEN	U.S. Senator	42.2%	55.6%	32.2%	74.3%	84.1%	66.9%	27.3%	36.0%	27.4%	35.7%	29.7%	43.3%	60.5%	28.2%
	Governor	42.1%	56.4%	32.6%	73.2%	83.1%	65.8%	26.4%	37.3%	26.7%	35.9%	29.8%	42.8%	59.9%	30.3%
	Lt. Governor	39.1%	52.8%	28.1%	70.4%	79.0%	62.0%	22.8%	32.9%	23.0%	31.7%	25.0%	39.7%	56.4%	25.3%
	Sec. of State	39.1%	53.1%	28.8%	70.7%	79.6%	62.6%	23.4%	33.2%	24.1%	31.9%	25.8%	40.0%	57.2%	25.8%
	Attorney General	39.4%	53.5%	29.7%	70.9%	80.1%	63.0%	24.1%	34.0%	24.8%	33.3%	25.6%	40.2%	58.1%	26.1%
	Com. Agriculture	39.1%	52.8%	28.0%	69.2%	77.7%	61.3%	22.6%	33.1%	23.7%	31.3%	24.9%	40.1%	56.1%	25.1%
	Com. Insurance	40.4%	53.6%	29.1%	71.6%	80.6%	63.6%	23.8%	33.8%	24.1%	32.5%	26.0%	40.9%	57.9%	26.1%
	Com. Labor	39.7%	53.5%	29.2%	71.2%	80.2%	63.5%	23.6%	33.5%	24.7%	32.9%	26.3%	40.4%	57.7%	26.4%
	School Super.	41.3%	55.1%	30.9%	73.0%	82.4%	65.3%	25.6%	35.2%	26.3%	34.5%	28.5%	42.7%	59.1%	28.2%
2016 GEN	U.S. President	41.5%	54.5%	31.6%	78.5%	86.9%	71.9%	34.2%	34.3%	28.9%	36.0%	33.6%	43.2%	65.1%	26.8%
	U.S. Senator	37.4%	50.4%	28.7%	72.0%	78.6%	64.4%	27.7%	31.1%	26.1%	32.9%	28.7%	39.2%	61.1%	24.9%
2018 GEN	Governor	42.5%	55.1%	32.9%	80.0%	88.0%	74.4%	36.8%	34.3%	31.0%	37.5%	36.3%	43.2%	69.4%	29.2%
	Lt. Governor	41.9%	53.9%	32.3%	78.6%	86.3%	72.8%	35.6%	33.6%	30.8%	37.0%	35.7%	42.4%	68.4%	29.2%
	Sec. of State	45.0%	55.8%	33.2%	79.5%	87.2%	73.8%	36.1%	35.9%	31.5%	38.4%	36.1%	47.5%	69.2%	29.6%
	Attorney General	42.2%	54.8%	33.3%	78.3%	85.5%	72.5%	35.7%	34.4%	31.2%	37.5%	35.9%	43.1%	68.6%	29.5%
	Com. Agriculture	40.9%	53.2%	31.4%	76.8%	83.1%	70.8%	33.8%	32.6%	29.4%	35.4%	33.9%	41.5%	67.2%	28.1%
	Com. Insurance	41.5%	54.4%	32.1%	78.9%	86.2%	72.9%	35.0%	33.7%	30.4%	36.9%	34.9%	42.3%	68.7%	28.9%
	Com. Labor	41.3%	53.8%	31.7%	77.5%	84.5%	71.5%	34.0%	33.4%	30.0%	36.3%	34.2%	42.1%	67.7%	28.5%
	School Super.	41.0%	53.5%	31.2%	77.0%	83.4%	70.9%	33.1%	32.8%	29.4%	36.2%	33.5%	41.8%	67.2%	27.9%
	Public Serv. Com. 3	42.1%	54.9%	32.9%	79.4%	86.8%	73.5%	35.8%	34.3%	31.2%	37.5%	35.9%	42.9%	69.3%	29.2%
Public Serv. Com. 5	42.0%	54.6%	32.3%	78.8%	86.1%	72.8%	35.1%	34.0%	30.6%	37.1%	35.0%	42.8%	68.8%	28.9%	
2018 RUN	Sec. of State	46.3%	55.6%	30.4%	77.4%	89.2%	72.7%	34.6%	33.6%	27.3%	36.2%	33.7%	45.3%	63.5%	27.1%
	Public Serv. Com. 3	44.8%	54.9%	31.5%	78.0%	89.2%	73.1%	35.7%	32.8%	28.6%	36.6%	34.9%	42.5%	64.3%	28.0%
2020 GEN	U.S. President	43.2%	55.2%	34.8%	79.2%	86.8%	75.0%	40.3%	36.0%	33.7%	39.2%	38.8%	44.9%	70.5%	31.0%
	U.S. Senator	42.7%	54.3%	33.9%	78.3%	85.6%	73.5%	38.1%	35.1%	32.7%	38.3%	37.2%	43.8%	70.3%	30.4%
	Public Serv. Com. 1	41.5%	54.0%	32.6%	77.8%	84.7%	72.5%	36.0%	34.0%	31.4%	37.3%	35.4%	43.0%	69.8%	29.0%
	Public Serv. Com. 4	41.9%	54.4%	33.1%	78.1%	85.0%	73.0%	36.5%	34.7%	31.8%	37.7%	36.0%	43.3%	70.2%	29.6%
2021 RUN	U.S. Senator (Perdue)	43.8%	56.1%	35.2%	79.5%	86.4%	74.4%	38.7%	36.5%	33.8%	39.8%	38.1%	45.1%	72.4%	31.6%
	U.S. Senator (Loeffler)	43.9%	56.2%	35.6%	80.1%	87.0%	75.1%	39.5%	36.6%	34.3%	40.1%	38.8%	45.3%	72.8%	31.9%
	Public Serv. Com. 4	42.9%	55.4%	34.2%	78.7%	85.5%	73.5%	37.1%	35.6%	32.8%	38.7%	36.8%	44.1%	71.7%	30.7%

Table 5: Election Results by Congressional Districts — Remedial Map — Vote Share of Minority-Preferred Candidates
(continued)

		CD 1	CD 2	CD 3	CD 4	CD 5	CD 6	CD 7	CD 8	CD 9	CD 10	CD 11	CD 12	CD 13	CD 14
2022 GEN	U.S. Senator	43.1%	54.7%	35.3%	80.4%	89.1%	77.2%	40.1%	34.8%	32.9%	39.8%	39.2%	43.3%	73.6%	31.9%
	Governor	39.4%	51.9%	31.3%	76.3%	85.2%	72.3%	33.6%	31.8%	28.2%	35.9%	33.5%	40.2%	70.0%	27.4%
	Lt. Governor	40.2%	52.1%	32.4%	77.8%	86.8%	74.2%	35.9%	32.1%	29.9%	37.1%	35.5%	40.6%	71.2%	29.0%
	Sec. of State	37.9%	50.5%	30.8%	74.6%	82.8%	70.3%	32.3%	31.1%	28.1%	35.4%	32.7%	39.3%	68.9%	27.0%
	Attorney General	40.4%	52.2%	32.4%	77.2%	85.9%	73.7%	35.5%	32.6%	29.8%	37.1%	35.2%	41.0%	70.9%	28.9%
	Com. Agriculture	39.1%	51.5%	30.8%	76.2%	84.4%	72.2%	33.2%	31.2%	28.1%	35.4%	33.0%	40.0%	70.1%	27.5%
	Com. Insurance	39.3%	51.6%	31.2%	75.5%	83.8%	71.6%	33.2%	31.8%	28.5%	35.9%	33.2%	40.1%	69.8%	27.8%
	Com. Labor	39.7%	52.0%	31.5%	77.0%	85.7%	73.0%	34.0%	32.0%	28.8%	36.2%	33.8%	40.3%	70.6%	28.1%
	School Super.	39.2%	51.5%	31.1%	75.5%	83.5%	71.8%	33.2%	31.5%	28.4%	35.5%	33.5%	40.0%	69.5%	27.9%
2022 RUN	U.S. Senator	44.2%	55.8%	35.9%	81.6%	90.2%	78.5%	41.4%	35.5%	33.7%	40.5%	40.1%	44.2%	74.8%	32.3%

Ecological Inference Appendix Tables

Table A1: Ecological Inference Results — Enacted CD 1

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	97.6% (96.8, 98.3)	13.9% (13.4, 14.4)	Barack Obama
2014 General	U.S. Senator	97.9% (97.1, 98.5)	15.4% (15.0, 15.9)	Michelle Nunn
	Governor	97.1% (96.0, 98.0)	15.8% (15.2, 16.4)	Jason Carter
	Lt. Governor	97.5% (96.7, 98.2)	11.2% (10.8, 11.7)	Connie Stokes
	Sec. of State	97.1% (96.3, 97.9)	11.3% (10.8, 11.8)	Doreen Carter
	Attorney General	97.2% (96.2, 98.0)	11.8% (11.3, 12.3)	Gregory Hecht
	Com. Agriculture	97.0% (96.0, 97.8)	11.5% (11.0, 12.0)	Christopher Irvin
	Com. Insurance	98.0% (97.2, 98.7)	12.5% (12.1, 13.0)	Elizabeth Johnson
	Com. Labor	97.3% (96.4, 98.1)	11.9% (11.4, 12.4)	Robbin Shipp
	School Super.	97.8% (97.0, 98.4)	14.1% (13.7, 14.6)	Valarie Wilson
2016 General	U.S. President	97.4% (96.4, 98.2)	12.2% (11.7, 12.7)	Hillary Clinton
	U.S. Senator	93.5% (92.4, 94.6)	8.3% (7.7, 8.9)	Jim Barksdale
2018 General	Governor	96.7% (95.6, 97.6)	12.9% (12.4, 13.5)	Stacey Abrams
	Lt. Governor	96.5% (95.3, 97.5)	12.5% (12.0, 13.2)	Sarah Riggs Amico
	Sec. of State	97.1% (96.0, 98.1)	16.7% (16.2, 17.4)	John Barrow
	Attorney General	97.1% (96.0, 97.9)	12.4% (12.0, 13.1)	Charlie Bailey
	Com. Agriculture	95.9% (94.7, 96.9)	11.0% (10.5, 11.7)	Fred Swann
	Com. Insurance	96.7% (95.5, 97.6)	11.6% (11.1, 12.2)	Janice Laws
	Com. Labor	96.6% (95.4, 97.5)	11.3% (10.8, 11.9)	Richard Keatley
	School Super.	96.5% (95.3, 97.4)	11.0% (10.4, 11.6)	Otha Thornton
	Public Serv. Com. 3	97.1% (96.0, 98.0)	12.2% (11.7, 12.9)	Lindy Miller
	Public Serv. Com. 5	97.3% (96.1, 98.2)	11.9% (11.4, 12.6)	Dawn Randolph
2018 Runoff	Sec. of State	96.9% (95.6, 97.9)	15.9% (15.3, 16.7)	John Barrow
	Public Serv. Com. 3	97.2% (96.0, 98.1)	13.9% (13.3, 14.6)	Lindy Miller
2020 General	U.S. President	95.8% (94.3, 97.1)	10.8% (10.2, 11.6)	Joe Biden
	U.S. Senator	95.0% (93.5, 96.3)	10.4% (9.8, 11.2)	Jon Ossoff
	Public Serv. Com. 1	94.8% (93.1, 96.0)	8.9% (8.3, 9.7)	Robert Bryant
	Public Serv. Com. 4	95.2% (93.6, 96.4)	9.4% (8.8, 10.2)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	96.7% (95.2, 97.9)	11.6% (10.9, 12.3)	Jon Ossoff
	U.S. Senator (Loeffler)	96.6% (95.0, 97.8)	11.7% (11.0, 12.5)	Raphael Warnock
	Public Serv. Com. 4	96.8% (95.5, 97.9)	10.3% (9.7, 11.0)	Daniel Blackman
2022 General	U.S. Senator	95.9% (93.5, 97.7)	7.4% (6.7, 8.2)	Raphael Warnock
	Governor	92.0% (89.1, 94.1)	4.6% (3.9, 5.5)	Stacey Abrams
	Lt. Governor	93.6% (91.4, 95.4)	5.0% (4.4, 5.7)	Charlie Bailey
	Sec. of State	90.8% (88.1, 92.8)	3.7% (3.1, 4.6)	Bee Nguyen
	Attorney General	93.6% (91.2, 95.4)	5.3% (4.7, 6.1)	Jennifer "Jen" Jordan
	Com. Agriculture	91.8% (89.2, 93.9)	4.5% (3.8, 5.4)	Nakita Hemingway
	Com. Insurance	93.5% (90.9, 95.2)	4.4% (3.8, 5.2)	Janice Laws Robinson
	Com. Labor	93.5% (91.1, 95.2)	4.5% (4.0, 5.3)	William "Will" Boddie, Jr
	School Super.	92.6% (90.2, 94.6)	4.6% (3.9, 5.4)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	96.5% (94.5, 98.0)	7.5% (6.9, 8.2)	Raphael Warnock

Table A2: Ecological Inference Results — Enacted CD 2

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	99.2% (98.9, 99.5)	10.2% (9.8, 10.7)	Barack Obama
2014 General	U.S. Senator	99.0% (98.6, 99.3)	12.0% (11.5, 12.5)	Michelle Nunn
	Governor	98.5% (98.0, 98.9)	14.1% (13.6, 14.7)	Jason Carter
	Lt. Governor	98.0% (97.4, 98.5)	7.9% (7.4, 8.6)	Connie Stokes
	Sec. of State	98.4% (97.9, 98.8)	7.9% (7.4, 8.5)	Doreen Carter
	Attorney General	98.1% (97.6, 98.5)	9.1% (8.5, 9.7)	Gregory Hecht
	Com. Agriculture	98.0% (97.5, 98.5)	8.0% (7.4, 8.5)	Christopher Irvin
	Com. Insurance	98.5% (98.0, 98.9)	8.6% (8.1, 9.1)	Elizabeth Johnson
	Com. Labor	98.5% (98.1, 98.9)	8.4% (7.9, 8.9)	Robbin Shipp
	School Super.	98.8% (98.4, 99.2)	11.2% (10.7, 11.8)	Valarie Wilson
2016 General	U.S. President	98.9% (98.5, 99.2)	8.3% (7.9, 8.8)	Hillary Clinton
	U.S. Senator	94.7% (94.0, 95.4)	5.1% (4.4, 5.8)	Jim Barksdale
2018 General	Governor	99.2% (98.9, 99.5)	7.0% (6.5, 7.5)	Stacey Abrams
	Lt. Governor	98.7% (98.3, 99.1)	6.2% (5.8, 6.8)	Sarah Riggs Amico
	Sec. of State	99.0% (98.6, 99.3)	9.1% (8.6, 9.6)	John Barrow
	Attorney General	98.7% (98.3, 99.0)	7.3% (6.9, 7.9)	Charlie Bailey
	Com. Agriculture	98.2% (97.7, 98.6)	4.9% (4.4, 5.4)	Fred Swann
	Com. Insurance	99.1% (98.7, 99.3)	6.2% (5.8, 6.7)	Janice Laws
	Com. Labor	98.8% (98.4, 99.1)	5.2% (4.8, 5.6)	Richard Keatley
	School Super.	98.6% (98.2, 98.9)	4.8% (4.4, 5.3)	Otha Thornton
	Public Serv. Com. 3	99.0% (98.6, 99.3)	6.9% (6.4, 7.4)	Lindy Miller
	Public Serv. Com. 5	99.0% (98.6, 99.3)	6.4% (5.9, 6.9)	Dawn Randolph
2018 Runoff	Sec. of State	98.9% (98.4, 99.2)	10.4% (9.7, 11.1)	John Barrow
	Public Serv. Com. 3	98.8% (98.3, 99.2)	9.4% (8.8, 10.2)	Lindy Miller
2020 General	U.S. President	98.8% (98.4, 99.2)	8.0% (7.6, 8.6)	Joe Biden
	U.S. Senator	98.2% (97.7, 98.7)	7.0% (6.5, 7.5)	Jon Ossoff
	Public Serv. Com. 1	98.6% (98.2, 99.0)	5.6% (5.2, 6.1)	Robert Bryant
	Public Serv. Com. 4	98.8% (98.3, 99.1)	6.3% (5.9, 6.9)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	99.1% (98.7, 99.4)	9.0% (8.5, 9.6)	Jon Ossoff
	U.S. Senator (Loeffler)	99.1% (98.7, 99.4)	9.3% (8.8, 9.8)	Raphael Warnock
	Public Serv. Com. 4	99.1% (98.7, 99.4)	7.5% (7.0, 8.0)	Daniel Blackman
2022 General	U.S. Senator	98.7% (97.9, 99.2)	10.1% (9.5, 10.8)	Raphael Warnock
	Governor	98.4% (97.8, 98.9)	5.1% (4.6, 5.7)	Stacey Abrams
	Lt. Governor	98.3% (97.6, 98.8)	6.0% (5.4, 6.6)	Charlie Bailey
	Sec. of State	96.6% (95.7, 97.3)	4.4% (3.8, 5.1)	Bee Nguyen
	Attorney General	98.6% (98.0, 99.1)	5.9% (5.4, 6.5)	Jennifer "Jen" Jordan
	Com. Agriculture	98.2% (97.4, 98.7)	4.8% (4.3, 5.5)	Nakita Hemingway
	Com. Insurance	98.4% (97.8, 98.9)	4.8% (4.4, 5.4)	Janice Laws Robinson
	Com. Labor	98.6% (98.0, 99.0)	5.4% (4.9, 6.0)	William "Will" Boddie, Jr
	School Super.	98.1% (97.4, 98.6)	4.9% (4.4, 5.5)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.6% (97.9, 99.1)	10.0% (9.3, 10.7)	Raphael Warnock

Table A3: Ecological Inference Results — Enacted CD 3

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	96.1% (94.6, 97.1)	8.2% (7.7, 8.7)	Barack Obama
2014 General	U.S. Senator	97.2% (95.9, 98.2)	10.5% (10.1, 11.0)	Michelle Nunn
	Governor	96.5% (94.9, 97.7)	11.3% (10.8, 11.9)	Jason Carter
	Lt. Governor	96.0% (94.6, 97.1)	5.6% (5.2, 6.2)	Connie Stokes
	Sec. of State	96.2% (94.7, 97.3)	6.4% (6.0, 6.9)	Doreen Carter
	Attorney General	96.8% (95.6, 97.9)	7.4% (7.0, 7.9)	Gregory Hecht
	Com. Agriculture	94.9% (93.1, 96.3)	5.8% (5.3, 6.5)	Christopher Irvin
	Com. Insurance	96.6% (95.2, 97.7)	6.5% (6.1, 7.0)	Elizabeth Johnson
	Com. Labor	96.4% (95.0, 97.5)	6.9% (6.4, 7.4)	Robbin Shipp
	School Super.	96.9% (95.7, 98.0)	8.8% (8.4, 9.3)	Valarie Wilson
2016 General	U.S. President	98.0% (97.1, 98.7)	6.7% (6.4, 7.1)	Hillary Clinton
	U.S. Senator	95.1% (93.6, 96.3)	3.9% (3.5, 4.5)	Jim Barksdale
2018 General	Governor	98.0% (97.0, 98.7)	6.4% (6.1, 6.9)	Stacey Abrams
	Lt. Governor	97.7% (96.7, 98.4)	6.0% (5.7, 6.5)	Sarah Riggs Amico
	Sec. of State	98.0% (97.1, 98.7)	7.0% (6.6, 7.4)	John Barrow
	Attorney General	97.4% (96.4, 98.3)	7.4% (7.0, 7.9)	Charlie Bailey
	Com. Agriculture	97.3% (96.3, 98.0)	4.7% (4.3, 5.1)	Fred Swann
	Com. Insurance	97.9% (97.0, 98.6)	5.5% (5.2, 5.9)	Janice Laws
	Com. Labor	97.8% (96.9, 98.5)	4.9% (4.6, 5.4)	Richard Keatley
	School Super.	97.4% (96.4, 98.1)	4.4% (4.0, 4.8)	Otha Thornton
	Public Serv. Com. 3	98.1% (97.2, 98.7)	6.5% (6.1, 6.9)	Lindy Miller
	Public Serv. Com. 5	97.8% (97.0, 98.5)	5.8% (5.4, 6.2)	Dawn Randolph
2018 Runoff	Sec. of State	97.4% (96.3, 98.4)	8.6% (8.2, 9.2)	John Barrow
	Public Serv. Com. 3	97.4% (96.0, 98.4)	10.0% (9.5, 10.6)	Lindy Miller
2020 General	U.S. President	98.0% (97.1, 98.7)	8.1% (7.7, 8.5)	Joe Biden
	U.S. Senator	97.8% (96.9, 98.6)	6.9% (6.5, 7.4)	Jon Ossoff
	Public Serv. Com. 1	98.0% (97.1, 98.6)	5.0% (4.7, 5.5)	Robert Bryant
	Public Serv. Com. 4	98.1% (97.3, 98.7)	5.7% (5.4, 6.1)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.1% (97.2, 98.8)	8.5% (8.1, 9.0)	Jon Ossoff
	U.S. Senator (Loeffler)	98.1% (97.2, 98.8)	9.1% (8.7, 9.5)	Raphael Warnock
	Public Serv. Com. 4	98.2% (97.4, 98.8)	6.9% (6.6, 7.3)	Daniel Blackman
2022 General	U.S. Senator	97.8% (96.7, 98.6)	8.6% (8.2, 9.1)	Raphael Warnock
	Governor	96.4% (95.4, 97.3)	3.6% (3.3, 4.1)	Stacey Abrams
	Lt. Governor	97.1% (96.0, 97.9)	5.0% (4.5, 5.5)	Charlie Bailey
	Sec. of State	96.2% (95.3, 97.1)	3.1% (2.7, 3.5)	Bee Nguyen
	Attorney General	97.5% (96.7, 98.3)	4.6% (4.3, 5.1)	Jennifer "Jen" Jordan
	Com. Agriculture	96.0% (94.9, 96.9)	3.2% (2.8, 3.7)	Nakita Hemingway
	Com. Insurance	96.4% (95.4, 97.3)	3.5% (3.2, 4.0)	Janice Laws Robinson
	Com. Labor	96.5% (95.5, 97.4)	3.9% (3.5, 4.3)	William "Will" Boddie, Jr
	School Super.	96.5% (95.6, 97.3)	3.4% (3.1, 3.8)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	97.8% (96.7, 98.6)	8.8% (8.3, 9.3)	Raphael Warnock

Table A4: Ecological Inference Results — Enacted CD 4

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.6% (98.0, 99.1)	29.0% (28.2, 30.0)	Barack Obama
2014 General	U.S. Senator	98.1% (97.4, 98.7)	35.9% (34.9, 37.0)	Michelle Nunn
	Governor	97.0% (96.2, 97.7)	34.9% (33.9, 36.1)	Jason Carter
	Lt. Governor	95.4% (94.5, 96.2)	29.1% (28.0, 30.5)	Connie Stokes
	Sec. of State	95.8% (95.0, 96.5)	29.3% (28.2, 30.5)	Doreen Carter
	Attorney General	95.3% (94.4, 96.1)	30.9% (29.7, 32.3)	Gregory Hecht
	Com. Agriculture	93.8% (92.8, 94.6)	28.5% (27.3, 29.9)	Christopher Irvin
	Com. Insurance	95.9% (95.0, 96.6)	30.1% (28.9, 31.5)	Elizabeth Johnson
	Com. Labor	96.1% (95.2, 96.8)	29.5% (28.4, 30.8)	Robbin Shipp
	School Super.	97.5% (96.7, 98.2)	32.5% (31.4, 33.7)	Valarie Wilson
2016 General	U.S. President	97.6% (96.7, 98.4)	40.7% (39.4, 42.2)	Hillary Clinton
	U.S. Senator	93.8% (92.9, 94.7)	30.7% (29.3, 32.2)	Jim Barksdale
2018 General	Governor	98.1% (97.4, 98.8)	43.4% (42.1, 44.7)	Stacey Abrams
	Lt. Governor	97.3% (96.5, 98.1)	41.9% (40.4, 43.4)	Sarah Riggs Amico
	Sec. of State	97.9% (97.0, 98.5)	42.8% (41.6, 44.5)	John Barrow
	Attorney General	96.7% (95.8, 97.5)	41.6% (40.1, 43.3)	Charlie Bailey
	Com. Agriculture	95.8% (94.8, 96.6)	38.2% (36.7, 40.0)	Fred Swann
	Com. Insurance	97.6% (96.7, 98.3)	40.9% (39.5, 42.5)	Janice Laws
	Com. Labor	96.3% (95.3, 97.2)	39.6% (38.0, 41.3)	Richard Keatley
	School Super.	96.6% (95.6, 97.5)	37.2% (35.6, 39.1)	Otha Thornton
	Public Serv. Com. 3	97.6% (96.7, 98.4)	42.6% (41.2, 44.2)	Lindy Miller
	Public Serv. Com. 5	97.1% (96.2, 98.0)	41.5% (40.0, 43.3)	Dawn Randolph
2018 Runoff	Sec. of State	97.8% (96.7, 98.6)	49.8% (48.6, 51.3)	John Barrow
	Public Serv. Com. 3	97.9% (96.9, 98.7)	50.9% (49.8, 52.4)	Lindy Miller
2020 General	U.S. President	95.9% (94.9, 97.0)	46.3% (44.2, 48.6)	Joe Biden
	U.S. Senator	96.8% (95.7, 97.8)	42.6% (40.7, 44.9)	Jon Ossoff
	Public Serv. Com. 1	96.8% (95.8, 97.7)	40.5% (38.6, 42.7)	Robert Bryant
	Public Serv. Com. 4	97.0% (95.9, 97.9)	41.0% (39.0, 43.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.9% (96.8, 98.6)	44.3% (42.8, 46.6)	Jon Ossoff
	U.S. Senator (Loeffler)	98.4% (97.6, 98.9)	44.8% (43.6, 46.4)	Raphael Warnock
	Public Serv. Com. 4	98.0% (97.2, 98.6)	42.0% (40.5, 43.5)	Daniel Blackman
2022 General	U.S. Senator	98.1% (97.1, 98.8)	48.8% (47.2, 50.8)	Raphael Warnock
	Governor	96.2% (94.8, 97.4)	42.0% (39.6, 44.7)	Stacey Abrams
	Lt. Governor	97.0% (95.7, 98.0)	44.6% (42.5, 47.2)	Charlie Bailey
	Sec. of State	93.6% (92.4, 94.8)	41.5% (39.1, 44.0)	Bee Nguyen
	Attorney General	96.6% (95.4, 97.6)	43.6% (41.6, 46.1)	Jennifer "Jen" Jordan
	Com. Agriculture	97.1% (95.8, 98.1)	39.3% (37.3, 41.9)	Nakita Hemingway
	Com. Insurance	95.8% (94.7, 96.9)	40.5% (38.3, 42.9)	Janice Laws Robinson
	Com. Labor	97.2% (95.9, 98.1)	41.9% (39.8, 44.4)	William "Will" Boddie, Jr
	School Super.	95.9% (94.8, 97.0)	39.8% (37.6, 42.2)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.1% (97.0, 98.8)	51.8% (50.2, 54.1)	Raphael Warnock

Table A5: Ecological Inference Results — Enacted CD 5

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	99.1% (98.8, 99.3)	43.4% (43.0, 44.0)	Barack Obama
2014 General	U.S. Senator	98.6% (98.3, 98.9)	52.1% (51.5, 52.6)	Michelle Nunn
	Governor	97.3% (96.9, 97.7)	51.0% (50.4, 51.7)	Jason Carter
	Lt. Governor	95.4% (94.9, 95.9)	44.1% (43.4, 44.9)	Connie Stokes
	Sec. of State	96.5% (96.0, 96.9)	43.5% (42.8, 44.2)	Doreen Carter
	Attorney General	95.8% (95.4, 96.3)	45.5% (44.8, 46.3)	Gregory Hecht
	Com. Agriculture	94.7% (94.2, 95.2)	41.9% (41.1, 42.6)	Christopher Irvin
	Com. Insurance	96.4% (95.9, 96.8)	45.3% (44.7, 46.1)	Elizabeth Johnson
	Com. Labor	96.9% (96.5, 97.3)	44.0% (43.3, 44.7)	Robbin Shipp
	School Super.	97.8% (97.4, 98.2)	48.8% (48.1, 49.4)	Valarie Wilson
2016 General	U.S. President	98.0% (97.6, 98.4)	62.2% (61.6, 62.9)	Hillary Clinton
	U.S. Senator	93.3% (92.7, 93.9)	45.8% (44.9, 46.7)	Jim Barksdale
2018 General	Governor	98.7% (98.3, 99.0)	63.9% (63.4, 64.5)	Stacey Abrams
	Lt. Governor	97.7% (97.2, 98.1)	60.9% (60.3, 61.6)	Sarah Riggs Amico
	Sec. of State	98.0% (97.6, 98.4)	62.6% (62.0, 63.3)	John Barrow
	Attorney General	97.2% (96.7, 97.7)	59.2% (58.5, 60.0)	Charlie Bailey
	Com. Agriculture	96.8% (96.3, 97.2)	54.1% (53.4, 54.8)	Fred Swann
	Com. Insurance	98.1% (97.7, 98.5)	59.3% (58.7, 60.0)	Janice Laws
	Com. Labor	97.3% (96.8, 97.7)	56.6% (55.9, 57.3)	Richard Keatley
	School Super.	97.2% (96.7, 97.7)	53.9% (53.2, 54.6)	Otha Thornton
	Public Serv. Com. 3	98.2% (97.7, 98.6)	60.8% (60.2, 61.5)	Lindy Miller
	Public Serv. Com. 5	97.7% (97.2, 98.1)	59.5% (58.9, 60.2)	Dawn Randolph
2018 Runoff	Sec. of State	98.2% (97.7, 98.6)	73.6% (73.0, 74.2)	John Barrow
	Public Serv. Com. 3	98.1% (97.6, 98.6)	73.8% (73.2, 74.5)	Lindy Miller
2020 General	U.S. President	96.2% (95.6, 96.7)	66.8% (66.0, 67.5)	Joe Biden
	U.S. Senator	96.9% (96.3, 97.4)	61.3% (60.6, 62.1)	Jon Ossoff
	Public Serv. Com. 1	97.1% (96.6, 97.6)	58.3% (57.6, 59.0)	Robert Bryant
	Public Serv. Com. 4	97.4% (96.8, 97.9)	58.6% (57.9, 59.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.5% (98.0, 98.8)	60.6% (60.1, 61.3)	Jon Ossoff
	U.S. Senator (Loeffler)	98.6% (98.2, 98.9)	62.3% (61.8, 62.9)	Raphael Warnock
	Public Serv. Com. 4	98.3% (97.9, 98.7)	58.5% (57.9, 59.1)	Daniel Blackman
2022 General	U.S. Senator	98.3% (97.8, 98.6)	65.8% (65.2, 66.5)	Raphael Warnock
	Governor	97.4% (96.8, 97.9)	55.7% (55.0, 56.6)	Stacey Abrams
	Lt. Governor	97.5% (96.9, 98.0)	60.2% (59.4, 61.1)	Charlie Bailey
	Sec. of State	95.3% (94.7, 95.9)	52.5% (51.6, 53.4)	Bee Nguyen
	Attorney General	97.2% (96.7, 97.7)	58.7% (58.0, 59.5)	Jennifer "Jen" Jordan
	Com. Agriculture	97.7% (97.2, 98.2)	53.6% (52.9, 54.4)	Nakita Hemingway
	Com. Insurance	97.2% (96.6, 97.7)	52.8% (52.0, 53.6)	Janice Laws Robinson
	Com. Labor	97.9% (97.4, 98.4)	56.1% (55.4, 56.8)	William "Will" Boddie, Jr
	School Super.	97.3% (96.8, 97.8)	52.2% (51.5, 53.0)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.4% (98.0, 98.8)	69.3% (68.7, 70.0)	Raphael Warnock

Table A6: Ecological Inference Results — Enacted CD 6

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	88.6% (85.2, 91.3)	13.4% (12.6, 14.3)	Barack Obama
2014 General	U.S. Senator	94.5% (90.6, 97.1)	14.4% (13.7, 15.3)	Michelle Nunn
	Governor	94.3% (91.0, 96.8)	13.5% (12.9, 14.3)	Jason Carter
	Lt. Governor	91.5% (87.7, 94.3)	9.4% (8.8, 10.3)	Connie Stokes
	Sec. of State	92.3% (88.7, 95.1)	9.9% (9.2, 10.7)	Doreen Carter
	Attorney General	93.7% (90.5, 96.2)	9.9% (9.3, 10.6)	Gregory Hecht
	Com. Agriculture	90.4% (86.9, 93.3)	9.3% (8.6, 10.1)	Christopher Irvin
	Com. Insurance	91.9% (87.4, 94.8)	10.4% (9.7, 11.5)	Elizabeth Johnson
	Com. Labor	92.0% (88.1, 95.1)	10.3% (9.6, 11.3)	Robbin Shipp
	School Super.	94.2% (90.4, 96.7)	12.4% (11.8, 13.3)	Valarie Wilson
2016 General	U.S. President	88.4% (83.0, 92.7)	19.0% (17.5, 20.8)	Hillary Clinton
	U.S. Senator	85.5% (81.0, 88.9)	10.6% (9.5, 12.2)	Jim Barksdale
2018 General	Governor	81.4% (75.3, 86.2)	22.8% (20.9, 25.2)	Stacey Abrams
	Lt. Governor	80.4% (75.6, 84.5)	21.5% (19.9, 23.4)	Sarah Riggs Amico
	Sec. of State	80.2% (73.9, 85.7)	22.3% (20.2, 24.8)	John Barrow
	Attorney General	80.6% (74.6, 85.4)	21.5% (19.6, 23.9)	Charlie Bailey
	Com. Agriculture	80.2% (75.3, 84.6)	18.8% (17.1, 20.8)	Fred Swann
	Com. Insurance	80.9% (75.0, 86.1)	20.4% (18.4, 22.8)	Janice Laws
	Com. Labor	80.7% (75.8, 84.9)	19.1% (17.4, 21.0)	Richard Keatley
	School Super.	79.1% (74.7, 83.8)	18.4% (16.5, 20.1)	Otha Thornton
	Public Serv. Com. 3	80.8% (76.1, 85.6)	21.7% (19.8, 23.5)	Lindy Miller
	Public Serv. Com. 5	80.6% (75.1, 85.5)	20.6% (18.6, 22.8)	Dawn Randolph
2018 Runoff	Sec. of State	73.8% (63.9, 81.2)	25.9% (23.6, 28.9)	John Barrow
	Public Serv. Com. 3	74.4% (65.4, 82.3)	27.1% (24.7, 29.8)	Lindy Miller
2020 General	U.S. President	83.4% (78.9, 87.9)	25.4% (23.4, 27.4)	Joe Biden
	U.S. Senator	82.3% (76.5, 87.3)	22.5% (20.3, 25.0)	Jon Ossoff
	Public Serv. Com. 1	80.3% (75.0, 84.5)	20.4% (18.5, 22.7)	Robert Bryant
	Public Serv. Com. 4	80.8% (75.3, 85.3)	20.9% (18.9, 23.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	84.7% (79.0, 89.1)	23.0% (21.1, 25.3)	Jon Ossoff
	U.S. Senator (Loeffler)	84.7% (79.6, 90.1)	24.1% (21.9, 26.2)	Raphael Warnock
	Public Serv. Com. 4	82.3% (77.9, 86.5)	21.6% (19.8, 23.4)	Daniel Blackman
2022 General	U.S. Senator	85.8% (80.5, 91.0)	25.4% (23.3, 27.6)	Raphael Warnock
	Governor	77.3% (69.9, 83.0)	19.5% (17.2, 22.6)	Stacey Abrams
	Lt. Governor	81.3% (74.6, 86.1)	21.2% (19.2, 24.0)	Charlie Bailey
	Sec. of State	77.5% (71.5, 83.2)	17.4% (15.0, 19.9)	Bee Nguyen
	Attorney General	80.0% (73.4, 85.5)	21.0% (18.8, 23.8)	Jennifer "Jen" Jordan
	Com. Agriculture	77.6% (72.1, 82.5)	18.7% (16.7, 21.0)	Nakita Hemingway
	Com. Insurance	77.4% (71.8, 82.5)	18.7% (16.6, 21.0)	Janice Laws Robinson
	Com. Labor	77.7% (71.6, 83.3)	19.8% (17.5, 22.4)	William "Will" Boddie, Jr
	School Super.	76.7% (70.1, 81.9)	19.2% (17.1, 21.9)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	87.5% (80.9, 92.7)	26.8% (24.6, 29.5)	Raphael Warnock

Table A7: Ecological Inference Results — Enacted CD 7

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	97.1% (96.1, 97.9)	9.7% (9.0, 10.5)	Barack Obama
2014 General	U.S. Senator	96.8% (95.4, 97.9)	12.7% (11.9, 13.7)	Michelle Nunn
	Governor	96.9% (95.6, 97.9)	11.5% (10.7, 12.4)	Jason Carter
	Lt. Governor	94.9% (93.1, 96.2)	7.0% (6.1, 8.2)	Connie Stokes
	Sec. of State	95.7% (94.2, 96.9)	7.4% (6.6, 8.4)	Doreen Carter
	Attorney General	95.8% (94.3, 97.1)	8.6% (7.7, 9.6)	Gregory Hecht
	Com. Agriculture	94.6% (92.9, 95.9)	6.6% (5.7, 7.6)	Christopher Irvin
	Com. Insurance	96.7% (95.5, 97.7)	8.0% (7.2, 8.8)	Elizabeth Johnson
	Com. Labor	96.2% (94.8, 97.2)	7.8% (7.1, 8.8)	Robbin Shipp
	School Super.	96.8% (95.4, 97.8)	10.3% (9.5, 11.3)	Valarie Wilson
2016 General	U.S. President	96.9% (95.6, 97.9)	15.8% (14.8, 17.1)	Hillary Clinton
	U.S. Senator	93.9% (92.4, 95.0)	6.8% (5.8, 8.2)	Jim Barksdale
2018 General	Governor	97.1% (96.0, 98.0)	16.9% (15.8, 18.1)	Stacey Abrams
	Lt. Governor	96.6% (95.4, 97.5)	15.0% (13.9, 16.5)	Sarah Riggs Amico
	Sec. of State	96.7% (95.4, 97.7)	16.0% (14.8, 17.4)	John Barrow
	Attorney General	96.8% (95.5, 97.8)	14.6% (13.4, 16.1)	Charlie Bailey
	Com. Agriculture	96.5% (95.2, 97.4)	11.4% (10.4, 12.9)	Fred Swann
	Com. Insurance	96.4% (95.0, 97.5)	14.9% (13.7, 16.5)	Janice Laws
	Com. Labor	96.7% (95.6, 97.6)	12.1% (11.1, 13.4)	Richard Keatley
	School Super.	95.9% (94.6, 97.0)	11.2% (10.0, 12.7)	Otha Thornton
	Public Serv. Com. 3	97.2% (96.0, 98.0)	15.4% (14.4, 16.7)	Lindy Miller
	Public Serv. Com. 5	97.0% (95.9, 97.9)	14.2% (13.2, 15.6)	Dawn Randolph
2018 Runoff	Sec. of State	95.2% (93.1, 96.8)	20.3% (19.0, 22.0)	John Barrow
	Public Serv. Com. 3	95.6% (93.5, 97.2)	21.8% (20.5, 23.5)	Lindy Miller
2020 General	U.S. President	89.8% (87.4, 92.2)	24.6% (21.4, 27.9)	Joe Biden
	U.S. Senator	91.6% (89.2, 93.8)	19.6% (16.5, 22.8)	Jon Ossoff
	Public Serv. Com. 1	92.5% (90.5, 94.5)	15.4% (12.8, 18.1)	Robert Bryant
	Public Serv. Com. 4	92.7% (90.5, 94.5)	16.1% (13.8, 19.2)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	96.0% (94.5, 97.1)	18.7% (17.2, 20.7)	Jon Ossoff
	U.S. Senator (Loeffler)	96.4% (95.2, 97.4)	19.4% (18.2, 21.1)	Raphael Warnock
	Public Serv. Com. 4	95.6% (94.0, 96.8)	16.2% (14.6, 18.3)	Daniel Blackman
2022 General	U.S. Senator	94.2% (91.6, 96.4)	24.9% (22.0, 28.3)	Raphael Warnock
	Governor	90.9% (88.3, 93.1)	16.8% (14.0, 20.1)	Stacey Abrams
	Lt. Governor	91.9% (89.1, 94.4)	20.0% (16.8, 23.6)	Charlie Bailey
	Sec. of State	90.5% (88.1, 92.4)	14.5% (12.0, 17.5)	Bee Nguyen
	Attorney General	92.3% (89.4, 94.6)	18.3% (15.4, 22.0)	Jennifer "Jen" Jordan
	Com. Agriculture	91.9% (89.4, 93.9)	15.5% (12.9, 18.5)	Nakita Hemingway
	Com. Insurance	91.4% (89.0, 93.6)	15.3% (12.5, 18.5)	Janice Laws Robinson
	Com. Labor	91.9% (89.4, 94.1)	17.0% (14.2, 20.3)	William "Will" Boddie, Jr
	School Super.	91.0% (88.8, 92.8)	15.1% (12.7, 17.8)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	94.6% (92.5, 96.6)	27.5% (24.8, 30.2)	Raphael Warnock

Table A8: Ecological Inference Results — Enacted CD 8

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.2% (97.3, 98.8)	8.9% (8.5, 9.4)	Barack Obama
2014 General	U.S. Senator	97.5% (96.1, 98.4)	11.6% (11.1, 12.2)	Michelle Nunn
	Governor	97.3% (95.9, 98.4)	13.5% (13.0, 14.1)	Jason Carter
	Lt. Governor	97.4% (96.2, 98.3)	7.3% (6.9, 7.8)	Connie Stokes
	Sec. of State	97.2% (95.9, 98.2)	7.9% (7.4, 8.4)	Doreen Carter
	Attorney General	96.9% (95.5, 98.0)	9.0% (8.5, 9.7)	Gregory Hecht
	Com. Agriculture	96.6% (95.2, 97.7)	8.0% (7.4, 8.6)	Christopher Irvin
	Com. Insurance	97.7% (96.4, 98.6)	8.4% (7.9, 8.9)	Elizabeth Johnson
	Com. Labor	97.2% (95.9, 98.2)	8.2% (7.8, 8.8)	Robbin Shipp
	School Super.	97.5% (96.3, 98.5)	10.4% (9.9, 10.9)	Valarie Wilson
2016 General	U.S. President	98.1% (97.2, 98.8)	6.9% (6.5, 7.3)	Hillary Clinton
	U.S. Senator	95.3% (93.8, 96.5)	3.8% (3.4, 4.5)	Jim Barksdale
2018 General	Governor	98.1% (97.0, 98.8)	5.3% (4.9, 5.9)	Stacey Abrams
	Lt. Governor	97.3% (96.2, 98.1)	5.1% (4.7, 5.6)	Sarah Riggs Amico
	Sec. of State	98.0% (97.0, 98.8)	7.9% (7.5, 8.4)	John Barrow
	Attorney General	97.6% (96.6, 98.4)	5.8% (5.4, 6.3)	Charlie Bailey
	Com. Agriculture	97.0% (96.0, 97.8)	3.6% (3.2, 4.1)	Fred Swann
	Com. Insurance	98.0% (97.1, 98.6)	4.7% (4.3, 5.1)	Janice Laws
	Com. Labor	97.5% (96.3, 98.2)	4.4% (4.0, 5.0)	Richard Keatley
	School Super.	97.4% (96.5, 98.1)	3.7% (3.3, 4.1)	Otha Thornton
	Public Serv. Com. 3	97.8% (96.7, 98.5)	5.7% (5.2, 6.2)	Lindy Miller
	Public Serv. Com. 5	97.7% (96.6, 98.4)	5.2% (4.8, 5.7)	Dawn Randolph
2018 Runoff	Sec. of State	97.7% (96.5, 98.6)	8.2% (7.6, 8.8)	John Barrow
	Public Serv. Com. 3	97.9% (96.8, 98.7)	7.0% (6.5, 7.6)	Lindy Miller
2020 General	U.S. President	98.3% (97.4, 98.9)	6.6% (6.2, 7.0)	Joe Biden
	U.S. Senator	97.7% (96.6, 98.4)	5.6% (5.2, 6.1)	Jon Ossoff
	Public Serv. Com. 1	97.1% (96.1, 97.9)	4.2% (3.8, 4.7)	Robert Bryant
	Public Serv. Com. 4	97.7% (96.8, 98.4)	4.9% (4.5, 5.4)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.2% (97.3, 98.9)	7.2% (6.8, 7.7)	Jon Ossoff
	U.S. Senator (Loeffler)	98.5% (97.6, 99.1)	7.3% (6.9, 7.8)	Raphael Warnock
	Public Serv. Com. 4	98.3% (97.4, 98.9)	5.9% (5.5, 6.3)	Daniel Blackman
2022 General	U.S. Senator	98.1% (96.9, 98.9)	6.6% (6.2, 7.2)	Raphael Warnock
	Governor	96.5% (94.9, 97.5)	3.2% (2.7, 3.9)	Stacey Abrams
	Lt. Governor	96.7% (95.5, 97.6)	3.7% (3.2, 4.2)	Charlie Bailey
	Sec. of State	95.1% (93.7, 96.3)	2.8% (2.3, 3.4)	Bee Nguyen
	Attorney General	97.2% (96.0, 98.1)	4.0% (3.6, 4.6)	Jennifer "Jen" Jordan
	Com. Agriculture	94.5% (92.8, 95.8)	3.2% (2.7, 3.9)	Nakita Hemingway
	Com. Insurance	96.4% (95.0, 97.5)	3.2% (2.7, 3.8)	Janice Laws Robinson
	Com. Labor	96.3% (94.9, 97.3)	3.6% (3.1, 4.2)	William "Will" Boddie, Jr
	School Super.	96.2% (94.9, 97.2)	2.9% (2.5, 3.5)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.2% (97.2, 99.0)	6.4% (6.0, 7.0)	Raphael Warnock

Table A9: Ecological Inference Results — Enacted CD 9

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	89.8% (84.4, 94.2)	11.4% (10.5, 12.5)	Barack Obama
2014 General	U.S. Senator	86.3% (80.0, 91.8)	14.7% (13.6, 15.8)	Michelle Nunn
	Governor	85.7% (79.2, 91.4)	13.9% (12.8, 15.1)	Jason Carter
	Lt. Governor	78.9% (72.0, 85.2)	10.9% (9.8, 12.2)	Connie Stokes
	Sec. of State	80.2% (73.6, 85.8)	11.9% (10.8, 13.2)	Doreen Carter
	Attorney General	81.5% (75.4, 86.9)	12.5% (11.4, 13.6)	Gregory Hecht
	Com. Agriculture	76.8% (70.7, 83.1)	12.3% (11.1, 13.5)	Christopher Irvin
	Com. Insurance	83.5% (77.5, 89.2)	11.3% (10.3, 12.5)	Elizabeth Johnson
	Com. Labor	81.1% (74.8, 87.2)	12.3% (11.2, 13.5)	Robbin Shipp
	School Super.	85.2% (78.8, 91.0)	13.5% (12.5, 14.8)	Valarie Wilson
2016 General	U.S. President	94.7% (91.8, 96.8)	9.2% (8.6, 10.0)	Hillary Clinton
	U.S. Senator	84.5% (80.7, 88.0)	8.7% (7.8, 9.7)	Jim Barksdale
2018 General	Governor	96.9% (95.4, 98.2)	8.5% (8.1, 9.0)	Stacey Abrams
	Lt. Governor	96.3% (94.2, 97.9)	8.5% (8.0, 9.2)	Sarah Riggs Amico
	Sec. of State	96.7% (95.0, 98.0)	9.3% (8.8, 9.8)	John Barrow
	Attorney General	96.2% (94.3, 97.7)	9.1% (8.7, 9.7)	Charlie Bailey
	Com. Agriculture	95.5% (93.5, 97.1)	7.0% (6.5, 7.6)	Fred Swann
	Com. Insurance	96.4% (94.5, 97.9)	7.9% (7.5, 8.5)	Janice Laws
	Com. Labor	95.8% (93.7, 97.4)	7.6% (7.1, 8.3)	Richard Keatley
	School Super.	95.7% (93.6, 97.3)	6.9% (6.4, 7.5)	Otha Thornton
	Public Serv. Com. 3	96.7% (94.8, 98.2)	8.9% (8.4, 9.5)	Lindy Miller
	Public Serv. Com. 5	96.2% (94.3, 97.6)	8.3% (7.8, 8.8)	Dawn Randolph
2018 Runoff	Sec. of State	95.9% (93.2, 97.8)	11.6% (11.1, 12.2)	John Barrow
	Public Serv. Com. 3	95.8% (93.5, 97.5)	13.1% (12.6, 13.6)	Lindy Miller
2020 General	U.S. President	95.5% (93.5, 97.0)	9.2% (8.7, 10.0)	Joe Biden
	U.S. Senator	94.4% (92.4, 96.1)	8.3% (7.7, 9.0)	Jon Ossoff
	Public Serv. Com. 1	93.1% (90.9, 95.1)	7.2% (6.5, 8.0)	Robert Bryant
	Public Serv. Com. 4	93.5% (90.7, 95.3)	7.5% (6.8, 8.4)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.2% (95.7, 98.3)	9.7% (9.3, 10.2)	Jon Ossoff
	U.S. Senator (Loeffler)	97.4% (95.8, 98.5)	10.2% (9.8, 10.8)	Raphael Warnock
	Public Serv. Com. 4	96.4% (94.7, 97.7)	8.6% (8.1, 9.2)	Daniel Blackman
2022 General	U.S. Senator	96.2% (94.3, 97.6)	10.4% (9.9, 11.0)	Raphael Warnock
	Governor	92.7% (90.1, 94.7)	5.5% (4.9, 6.3)	Stacey Abrams
	Lt. Governor	94.9% (92.8, 96.6)	7.1% (6.5, 7.7)	Charlie Bailey
	Sec. of State	92.0% (89.6, 94.0)	5.4% (4.8, 6.2)	Bee Nguyen
	Attorney General	95.2% (93.2, 96.8)	6.9% (6.4, 7.5)	Jennifer "Jen" Jordan
	Com. Agriculture	93.0% (90.6, 94.8)	5.3% (4.7, 6.0)	Nakita Hemingway
	Com. Insurance	93.3% (90.8, 95.3)	5.8% (5.2, 6.5)	Janice Laws Robinson
	Com. Labor	93.8% (91.3, 95.7)	5.9% (5.4, 6.7)	William "Will" Boddie, Jr
	School Super.	92.7% (90.2, 94.8)	5.8% (5.2, 6.6)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	96.4% (94.4, 97.8)	11.1% (10.6, 11.7)	Raphael Warnock

Table A10: Ecological Inference Results — Enacted CD 10

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	89.8% (87.4, 91.7)	13.4% (12.6, 14.4)	Barack Obama
2014 General	U.S. Senator	96.2% (94.4, 97.6)	14.4% (13.8, 15.0)	Michelle Nunn
	Governor	96.3% (94.6, 97.7)	14.6% (14.0, 15.2)	Jason Carter
	Lt. Governor	91.1% (88.5, 93.2)	10.7% (10.0, 11.7)	Connie Stokes
	Sec. of State	92.4% (90.1, 94.3)	10.7% (10.0, 11.5)	Doreen Carter
	Attorney General	94.6% (92.7, 96.1)	11.8% (11.2, 12.5)	Gregory Hecht
	Com. Agriculture	91.7% (89.3, 93.7)	9.9% (9.1, 10.7)	Christopher Irvin
	Com. Insurance	93.1% (90.8, 95.0)	11.1% (10.4, 11.9)	Elizabeth Johnson
	Com. Labor	93.5% (90.9, 95.5)	11.5% (10.8, 12.4)	Robbin Shipp
	School Super.	95.4% (93.2, 97.0)	13.1% (12.5, 13.8)	Valarie Wilson
2016 General	U.S. President	93.7% (91.6, 95.3)	12.5% (11.9, 13.4)	Hillary Clinton
	U.S. Senator	89.9% (87.5, 91.9)	9.9% (9.1, 10.9)	Jim Barksdale
2018 General	Governor	95.3% (93.7, 96.6)	12.4% (11.8, 13.1)	Stacey Abrams
	Lt. Governor	93.9% (91.8, 95.5)	12.5% (11.8, 13.4)	Sarah Riggs Amico
	Sec. of State	94.7% (92.5, 96.3)	14.0% (13.3, 15.0)	John Barrow
	Attorney General	94.9% (92.7, 96.6)	12.7% (12.0, 13.6)	Charlie Bailey
	Com. Agriculture	93.3% (91.1, 94.8)	10.3% (9.7, 11.3)	Fred Swann
	Com. Insurance	94.2% (92.2, 95.7)	12.1% (11.4, 12.9)	Janice Laws
	Com. Labor	93.5% (91.6, 95.2)	11.5% (10.8, 12.3)	Richard Keatley
	School Super.	92.5% (90.5, 94.1)	11.8% (11.0, 12.6)	Otha Thornton
	Public Serv. Com. 3	95.1% (93.4, 96.5)	12.5% (11.9, 13.3)	Lindy Miller
	Public Serv. Com. 5	94.9% (92.9, 96.3)	12.0% (11.3, 12.8)	Dawn Randolph
2018 Runoff	Sec. of State	95.4% (93.3, 97.1)	18.3% (17.6, 19.0)	John Barrow
	Public Serv. Com. 3	96.4% (94.6, 97.8)	18.4% (17.9, 19.1)	Lindy Miller
2020 General	U.S. President	97.4% (95.9, 98.4)	13.1% (12.6, 13.8)	Joe Biden
	U.S. Senator	96.9% (95.5, 98.0)	12.1% (11.6, 12.8)	Jon Ossoff
	Public Serv. Com. 1	95.8% (94.2, 97.0)	11.1% (10.5, 11.8)	Robert Bryant
	Public Serv. Com. 4	96.3% (94.7, 97.5)	11.3% (10.8, 12.0)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.6% (96.3, 98.6)	13.9% (13.4, 14.6)	Jon Ossoff
	U.S. Senator (Loeffler)	97.6% (95.9, 98.6)	14.5% (14.0, 15.3)	Raphael Warnock
	Public Serv. Com. 4	97.4% (96.0, 98.3)	12.6% (12.1, 13.2)	Daniel Blackman
2022 General	U.S. Senator	97.1% (95.7, 98.3)	14.8% (14.2, 15.4)	Raphael Warnock
	Governor	93.8% (92.1, 95.2)	10.6% (10.0, 11.3)	Stacey Abrams
	Lt. Governor	95.6% (93.5, 97.0)	11.7% (11.1, 12.6)	Charlie Bailey
	Sec. of State	92.3% (89.9, 94.1)	10.5% (9.8, 11.5)	Bee Nguyen
	Attorney General	95.5% (93.7, 96.9)	11.7% (11.1, 12.5)	Jennifer "Jen" Jordan
	Com. Agriculture	93.2% (91.2, 94.7)	10.2% (9.5, 11.0)	Nakita Hemingway
	Com. Insurance	93.6% (91.8, 95.2)	10.7% (10.1, 11.5)	Janice Laws Robinson
	Com. Labor	94.0% (91.9, 95.5)	11.1% (10.5, 12.0)	William "Will" Boddie, Jr
	School Super.	93.4% (91.6, 94.9)	10.1% (9.5, 10.9)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	97.2% (95.8, 98.3)	15.4% (14.8, 16.0)	Raphael Warnock

Table A11: Ecological Inference Results — Enacted CD 11

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	95.8% (94.2, 97.1)	14.1% (13.6, 14.6)	Barack Obama
2014 General	U.S. Senator	96.8% (95.1, 98.1)	16.0% (15.5, 16.5)	Michelle Nunn
	Governor	96.8% (95.0, 98.2)	16.0% (15.5, 16.6)	Jason Carter
	Lt. Governor	97.1% (95.3, 98.4)	9.9% (9.5, 10.5)	Connie Stokes
	Sec. of State	96.9% (95.2, 98.2)	11.0% (10.6, 11.5)	Doreen Carter
	Attorney General	96.8% (95.0, 98.2)	11.1% (10.7, 11.7)	Gregory Hecht
	Com. Agriculture	97.1% (95.5, 98.2)	9.9% (9.4, 10.4)	Christopher Irvin
	Com. Insurance	96.7% (95.1, 98.0)	11.6% (11.2, 12.1)	Elizabeth Johnson
	Com. Labor	97.0% (95.4, 98.3)	11.7% (11.3, 12.3)	Robbin Shipp
	School Super.	97.0% (95.2, 98.3)	14.3% (13.8, 14.9)	Valarie Wilson
2016 General	U.S. President	96.9% (95.1, 98.2)	16.8% (16.3, 17.5)	Hillary Clinton
	U.S. Senator	97.8% (96.5, 98.8)	9.9% (9.4, 10.4)	Jim Barksdale
2018 General	Governor	96.6% (94.6, 98.0)	19.2% (18.6, 20.1)	Stacey Abrams
	Lt. Governor	96.7% (94.8, 98.2)	18.2% (17.6, 19.0)	Sarah Riggs Amico
	Sec. of State	97.1% (95.3, 98.4)	18.6% (18.0, 19.4)	John Barrow
	Attorney General	97.4% (95.8, 98.5)	18.0% (17.4, 18.7)	Charlie Bailey
	Com. Agriculture	97.0% (95.1, 98.2)	15.5% (14.9, 16.3)	Fred Swann
	Com. Insurance	97.0% (95.3, 98.2)	17.1% (16.6, 17.8)	Janice Laws
	Com. Labor	97.0% (95.2, 98.3)	16.0% (15.4, 16.8)	Richard Keatley
	School Super.	97.6% (96.2, 98.7)	14.8% (14.3, 15.5)	Otha Thornton
	Public Serv. Com. 3	97.0% (95.5, 98.3)	18.3% (17.8, 19.0)	Lindy Miller
	Public Serv. Com. 5	97.0% (95.3, 98.3)	17.2% (16.6, 17.9)	Dawn Randolph
2018 Runoff	Sec. of State	95.9% (93.7, 97.7)	19.8% (19.2, 20.6)	John Barrow
	Public Serv. Com. 3	95.6% (92.9, 97.5)	21.3% (20.6, 22.2)	Lindy Miller
2020 General	U.S. President	97.0% (95.2, 98.2)	20.1% (19.5, 20.9)	Joe Biden
	U.S. Senator	96.9% (95.3, 98.2)	18.1% (17.5, 18.8)	Jon Ossoff
	Public Serv. Com. 1	97.0% (95.3, 98.2)	15.7% (15.1, 16.4)	Robert Bryant
	Public Serv. Com. 4	97.4% (96.1, 98.4)	16.2% (15.7, 16.9)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.0% (95.4, 98.3)	19.7% (19.1, 20.5)	Jon Ossoff
	U.S. Senator (Loeffler)	97.3% (95.8, 98.4)	20.6% (20.1, 21.3)	Raphael Warnock
	Public Serv. Com. 4	97.1% (94.9, 98.4)	18.0% (17.4, 18.9)	Daniel Blackman
2022 General	U.S. Senator	96.6% (94.6, 98.1)	21.2% (20.6, 22.1)	Raphael Warnock
	Governor	96.0% (93.6, 97.6)	13.9% (13.2, 14.9)	Stacey Abrams
	Lt. Governor	96.2% (93.9, 97.9)	16.5% (15.7, 17.5)	Charlie Bailey
	Sec. of State	96.7% (94.9, 98.1)	12.5% (11.9, 13.3)	Bee Nguyen
	Attorney General	97.0% (95.1, 98.3)	15.9% (15.3, 16.7)	Jennifer "Jen" Jordan
	Com. Agriculture	96.1% (94.0, 97.7)	13.3% (12.6, 14.2)	Nakita Hemingway
	Com. Insurance	96.2% (94.2, 97.7)	13.4% (12.8, 14.3)	Janice Laws Robinson
	Com. Labor	96.4% (94.5, 97.8)	14.3% (13.7, 15.1)	William "Will" Boddie, Jr
	School Super.	96.7% (94.9, 98.1)	13.6% (13.0, 14.3)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	96.3% (94.1, 97.8)	22.2% (21.5, 23.1)	Raphael Warnock

Table A12: Ecological Inference Results — Enacted CD 12

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	94.8% (94.0, 95.6)	11.0% (10.4, 11.6)	Barack Obama
2014 General	U.S. Senator	97.9% (97.2, 98.5)	10.2% (9.8, 10.7)	Michelle Nunn
	Governor	97.0% (96.2, 97.7)	10.0% (9.5, 10.5)	Jason Carter
	Lt. Governor	97.3% (96.5, 97.9)	5.1% (4.7, 5.6)	Connie Stokes
	Sec. of State	97.4% (96.7, 98.0)	5.4% (5.0, 5.9)	Doreen Carter
	Attorney General	97.0% (96.2, 97.6)	6.0% (5.6, 6.5)	Gregory Hecht
	Com. Agriculture	97.3% (96.6, 97.9)	5.6% (5.2, 6.1)	Christopher Irvin
	Com. Insurance	97.7% (97.0, 98.2)	6.4% (6.0, 6.9)	Elizabeth Johnson
	Com. Labor	97.4% (96.7, 98.0)	5.9% (5.5, 6.4)	Robbin Shipp
	School Super.	97.9% (97.3, 98.5)	9.2% (8.7, 9.6)	Valarie Wilson
2016 General	U.S. President	98.7% (98.3, 99.1)	6.0% (5.6, 6.4)	Hillary Clinton
	U.S. Senator	94.4% (93.6, 95.0)	2.7% (2.4, 3.2)	Jim Barksdale
2018 General	Governor	98.8% (98.4, 99.2)	5.1% (4.8, 5.5)	Stacey Abrams
	Lt. Governor	98.2% (97.6, 98.6)	4.8% (4.4, 5.2)	Sarah Riggs Amico
	Sec. of State	98.5% (97.9, 98.9)	12.6% (12.1, 13.0)	John Barrow
	Attorney General	98.3% (97.8, 98.7)	5.5% (5.1, 5.9)	Charlie Bailey
	Com. Agriculture	97.6% (97.0, 98.1)	3.5% (3.2, 3.9)	Fred Swann
	Com. Insurance	98.4% (97.9, 98.8)	4.0% (3.7, 4.4)	Janice Laws
	Com. Labor	98.2% (97.7, 98.6)	3.9% (3.6, 4.3)	Richard Keatley
	School Super.	97.9% (97.3, 98.3)	3.6% (3.3, 4.0)	Otha Thornton
	Public Serv. Com. 3	98.6% (98.2, 99.0)	4.7% (4.4, 5.1)	Lindy Miller
	Public Serv. Com. 5	98.6% (98.1, 99.0)	4.6% (4.2, 4.9)	Dawn Randolph
2018 Runoff	Sec. of State	98.4% (97.7, 98.9)	11.8% (11.3, 12.4)	John Barrow
	Public Serv. Com. 3	98.4% (97.8, 98.9)	7.4% (6.8, 7.9)	Lindy Miller
2020 General	U.S. President	98.5% (98.0, 98.9)	7.3% (6.9, 7.8)	Joe Biden
	U.S. Senator	98.0% (97.4, 98.5)	6.2% (5.8, 6.7)	Jon Ossoff
	Public Serv. Com. 1	98.2% (97.7, 98.7)	4.5% (4.2, 4.9)	Robert Bryant
	Public Serv. Com. 4	98.4% (98.0, 98.8)	4.9% (4.5, 5.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.7% (98.2, 99.1)	7.7% (7.3, 8.2)	Jon Ossoff
	U.S. Senator (Loeffler)	98.7% (98.1, 99.1)	8.0% (7.6, 8.5)	Raphael Warnock
	Public Serv. Com. 4	98.7% (98.2, 99.0)	6.2% (5.8, 6.6)	Daniel Blackman
2022 General	U.S. Senator	98.5% (97.9, 99.0)	8.0% (7.5, 8.5)	Raphael Warnock
	Governor	97.4% (96.7, 98.0)	4.3% (3.9, 4.8)	Stacey Abrams
	Lt. Governor	97.2% (96.4, 97.8)	5.0% (4.6, 5.6)	Charlie Bailey
	Sec. of State	95.6% (94.8, 96.4)	3.7% (3.3, 4.3)	Bee Nguyen
	Attorney General	97.8% (97.2, 98.3)	5.2% (4.8, 5.7)	Jennifer "Jen" Jordan
	Com. Agriculture	97.2% (96.4, 97.8)	4.1% (3.7, 4.6)	Nakita Hemingway
	Com. Insurance	97.4% (96.6, 98.0)	4.1% (3.7, 4.6)	Janice Laws Robinson
	Com. Labor	97.7% (97.0, 98.3)	4.4% (4.0, 4.9)	William "Will" Boddie, Jr
	School Super.	97.0% (96.3, 97.6)	4.3% (3.9, 4.8)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.5% (97.9, 99.0)	7.9% (7.4, 8.4)	Raphael Warnock

Table A13: Ecological Inference Results — Enacted CD 13

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	99.2% (98.9, 99.4)	11.5% (10.7, 12.3)	Barack Obama
2014 General	U.S. Senator	99.0% (98.7, 99.3)	14.4% (13.5, 15.3)	Michelle Nunn
	Governor	98.2% (97.7, 98.6)	13.6% (12.5, 14.9)	Jason Carter
	Lt. Governor	95.9% (95.4, 96.4)	8.2% (7.1, 9.5)	Connie Stokes
	Sec. of State	97.0% (96.4, 97.4)	8.3% (7.2, 9.6)	Doreen Carter
	Attorney General	97.1% (96.6, 97.6)	10.2% (9.0, 11.5)	Gregory Hecht
	Com. Agriculture	95.3% (94.7, 95.8)	8.0% (6.8, 9.4)	Christopher Irvin
	Com. Insurance	97.3% (96.8, 97.8)	9.2% (8.0, 10.6)	Elizabeth Johnson
	Com. Labor	97.5% (97.0, 98.0)	9.2% (8.1, 10.4)	Robbin Shipp
	School Super.	98.5% (98.1, 98.9)	11.1% (10.1, 12.2)	Valarie Wilson
2016 General	U.S. President	98.8% (98.5, 99.1)	14.6% (13.7, 15.6)	Hillary Clinton
	U.S. Senator	94.7% (94.1, 95.2)	10.7% (9.2, 12.4)	Jim Barksdale
2018 General	Governor	99.1% (98.7, 99.3)	16.9% (15.9, 18.1)	Stacey Abrams
	Lt. Governor	98.4% (98.0, 98.7)	15.9% (14.7, 17.3)	Sarah Riggs Amico
	Sec. of State	98.8% (98.5, 99.1)	16.3% (15.3, 17.5)	John Barrow
	Attorney General	98.0% (97.6, 98.4)	16.1% (14.7, 17.6)	Charlie Bailey
	Com. Agriculture	97.3% (96.8, 97.7)	13.7% (12.2, 15.3)	Fred Swann
	Com. Insurance	98.8% (98.4, 99.1)	14.5% (13.4, 15.8)	Janice Laws
	Com. Labor	97.8% (97.4, 98.2)	13.8% (12.5, 15.3)	Richard Keatley
	School Super.	97.6% (97.2, 98.0)	13.1% (11.9, 14.6)	Otha Thornton
	Public Serv. Com. 3	98.7% (98.4, 99.0)	16.6% (15.6, 17.9)	Lindy Miller
	Public Serv. Com. 5	98.5% (98.1, 98.8)	15.2% (14.1, 16.5)	Dawn Randolph
2018 Runoff	Sec. of State	98.9% (98.5, 99.2)	18.0% (16.9, 19.4)	John Barrow
	Public Serv. Com. 3	98.9% (98.4, 99.2)	19.9% (18.6, 21.3)	Lindy Miller
2020 General	U.S. President	96.5% (95.9, 97.0)	20.5% (18.7, 22.8)	Joe Biden
	U.S. Senator	97.2% (96.6, 97.7)	18.0% (16.2, 20.0)	Jon Ossoff
	Public Serv. Com. 1	97.2% (96.6, 97.6)	15.9% (14.3, 17.8)	Robert Bryant
	Public Serv. Com. 4	97.6% (97.1, 98.0)	16.5% (15.0, 18.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.7% (98.4, 99.0)	18.7% (17.6, 20.0)	Jon Ossoff
	U.S. Senator (Loeffler)	98.8% (98.5, 99.1)	19.9% (18.8, 21.3)	Raphael Warnock
	Public Serv. Com. 4	98.7% (98.4, 99.0)	16.3% (15.3, 17.5)	Daniel Blackman
2022 General	U.S. Senator	98.9% (98.5, 99.2)	22.8% (21.6, 24.2)	Raphael Warnock
	Governor	97.3% (96.9, 97.7)	14.8% (13.5, 16.4)	Stacey Abrams
	Lt. Governor	97.9% (97.5, 98.3)	17.6% (16.3, 19.2)	Charlie Bailey
	Sec. of State	95.2% (94.6, 95.7)	15.4% (13.4, 17.6)	Bee Nguyen
	Attorney General	97.5% (97.1, 97.9)	17.2% (15.8, 19.0)	Jennifer "Jen" Jordan
	Com. Agriculture	97.7% (97.3, 98.0)	14.0% (12.7, 15.6)	Nakita Hemingway
	Com. Insurance	97.0% (96.5, 97.5)	14.6% (13.0, 16.5)	Janice Laws Robinson
	Com. Labor	98.0% (97.5, 98.3)	15.3% (14.0, 16.9)	William "Will" Boddie, Jr
	School Super.	97.1% (96.7, 97.5)	14.9% (13.5, 16.6)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.9% (98.6, 99.2)	24.0% (22.6, 25.4)	Raphael Warnock

Table A14: Ecological Inference Results — Enacted CD 14

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	93.4% (89.5, 96.8)	15.0% (14.1, 16.0)	Barack Obama
2014 General	U.S. Senator	94.1% (90.2, 96.8)	15.7% (14.9, 16.7)	Michelle Nunn
	Governor	91.4% (86.7, 95.4)	19.4% (18.3, 20.6)	Jason Carter
	Lt. Governor	89.0% (84.0, 93.5)	13.4% (12.3, 14.7)	Connie Stokes
	Sec. of State	91.6% (87.2, 95.3)	13.5% (12.5, 14.6)	Doreen Carter
	Attorney General	90.5% (86.1, 94.3)	14.1% (13.2, 15.3)	Gregory Hecht
	Com. Agriculture	90.4% (85.3, 94.7)	12.7% (11.7, 14.0)	Christopher Irvin
	Com. Insurance	93.7% (90.6, 96.4)	13.3% (12.6, 14.1)	Elizabeth Johnson
	Com. Labor	93.3% (89.4, 96.2)	13.8% (13.0, 14.8)	Robbin Shipp
	School Super.	92.3% (88.3, 95.8)	16.4% (15.5, 17.4)	Valarie Wilson
2016 General	U.S. President	96.9% (95.0, 98.2)	8.1% (7.6, 8.7)	Hillary Clinton
	U.S. Senator	94.5% (92.0, 96.4)	6.9% (6.3, 7.7)	Jim Barksdale
2018 General	Governor	97.6% (96.2, 98.7)	8.6% (8.2, 9.2)	Stacey Abrams
	Lt. Governor	97.4% (95.7, 98.5)	8.8% (8.3, 9.4)	Sarah Riggs Amico
	Sec. of State	97.7% (96.2, 98.8)	9.5% (9.0, 10.0)	John Barrow
	Attorney General	97.4% (95.8, 98.5)	9.4% (8.9, 9.9)	Charlie Bailey
	Com. Agriculture	97.4% (95.9, 98.5)	7.5% (7.0, 8.0)	Fred Swann
	Com. Insurance	97.6% (96.1, 98.7)	8.5% (8.1, 9.1)	Janice Laws
	Com. Labor	97.6% (96.1, 98.7)	8.0% (7.6, 8.6)	Richard Keatley
	School Super.	97.5% (96.0, 98.6)	7.4% (7.0, 8.0)	Otha Thornton
	Public Serv. Com. 3	97.3% (95.7, 98.6)	9.1% (8.6, 9.7)	Lindy Miller
	Public Serv. Com. 5	97.4% (95.9, 98.6)	8.6% (8.2, 9.2)	Dawn Randolph
2018 Runoff	Sec. of State	96.8% (94.1, 98.5)	10.6% (10.0, 11.5)	John Barrow
	Public Serv. Com. 3	96.8% (94.5, 98.3)	11.7% (11.1, 12.4)	Lindy Miller
2020 General	U.S. President	97.3% (95.7, 98.4)	9.2% (8.8, 9.7)	Joe Biden
	U.S. Senator	97.0% (95.6, 98.1)	8.8% (8.4, 9.3)	Jon Ossoff
	Public Serv. Com. 1	97.1% (95.6, 98.2)	7.2% (6.7, 7.7)	Robert Bryant
	Public Serv. Com. 4	97.5% (96.1, 98.4)	7.8% (7.4, 8.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.4% (96.0, 98.5)	10.6% (10.2, 11.1)	Jon Ossoff
	U.S. Senator (Loeffler)	97.7% (96.3, 98.7)	10.7% (10.3, 11.2)	Raphael Warnock
	Public Serv. Com. 4	97.9% (96.5, 98.8)	9.4% (9.0, 9.9)	Daniel Blackman
2022 General	U.S. Senator	97.1% (95.3, 98.3)	11.3% (10.8, 11.8)	Raphael Warnock
	Governor	97.3% (95.8, 98.4)	5.7% (5.3, 6.2)	Stacey Abrams
	Lt. Governor	97.3% (95.3, 98.5)	7.8% (7.4, 8.5)	Charlie Bailey
	Sec. of State	97.4% (95.9, 98.4)	5.1% (4.7, 5.6)	Bee Nguyen
	Attorney General	97.2% (95.3, 98.4)	7.8% (7.3, 8.3)	Jennifer "Jen" Jordan
	Com. Agriculture	97.3% (95.9, 98.4)	6.0% (5.6, 6.4)	Nakita Hemingway
	Com. Insurance	97.4% (95.8, 98.4)	6.4% (6.0, 6.9)	Janice Laws Robinson
	Com. Labor	97.6% (96.3, 98.6)	6.7% (6.3, 7.1)	William "Will" Boddie, Jr
	School Super.	97.6% (96.3, 98.6)	6.3% (5.9, 6.8)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	97.1% (95.3, 98.3)	11.1% (10.7, 11.7)	Raphael Warnock

Table A15: Ecological Inference Results — Remedial CD 1

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	97.6% (96.7, 98.3)	13.9% (13.4, 14.4)	Barack Obama
2014 General	U.S. Senator	97.6% (96.7, 98.4)	15.6% (15.1, 16.1)	Michelle Nunn
	Governor	97.1% (96.1, 97.9)	15.8% (15.3, 16.3)	Jason Carter
	Lt. Governor	97.8% (97.0, 98.4)	11.1% (10.7, 11.5)	Connie Stokes
	Sec. of State	97.4% (96.6, 98.1)	11.2% (10.7, 11.6)	Doreen Carter
	Attorney General	97.4% (96.5, 98.1)	11.7% (11.2, 12.2)	Gregory Hecht
	Com. Agriculture	97.1% (96.2, 97.8)	11.5% (11.0, 12.0)	Christopher Irvin
	Com. Insurance	97.9% (97.1, 98.6)	12.5% (12.1, 13.0)	Elizabeth Johnson
	Com. Labor	97.6% (96.7, 98.2)	11.8% (11.4, 12.3)	Robbin Shipp
	School Super.	97.9% (97.1, 98.6)	14.0% (13.6, 14.5)	Valarie Wilson
2016 General	U.S. President	97.5% (96.4, 98.3)	12.2% (11.7, 12.8)	Hillary Clinton
	U.S. Senator	93.7% (92.5, 94.7)	8.2% (7.7, 8.8)	Jim Barksdale
2018 General	Governor	96.6% (95.4, 97.6)	13.0% (12.4, 13.6)	Stacey Abrams
	Lt. Governor	96.5% (95.3, 97.4)	12.5% (12.0, 13.2)	Sarah Riggs Amico
	Sec. of State	97.3% (96.1, 98.2)	16.6% (16.1, 17.3)	John Barrow
	Attorney General	96.9% (95.9, 97.7)	12.5% (12.0, 13.1)	Charlie Bailey
	Com. Agriculture	96.0% (94.8, 96.9)	11.0% (10.5, 11.7)	Fred Swann
	Com. Insurance	96.6% (95.4, 97.6)	11.6% (11.1, 12.3)	Janice Laws
	Com. Labor	96.5% (95.4, 97.4)	11.3% (10.8, 11.9)	Richard Keatley
	School Super.	96.1% (95.0, 97.1)	11.1% (10.6, 11.8)	Otha Thornton
	Public Serv. Com. 3	97.0% (95.9, 97.9)	12.3% (11.7, 12.9)	Lindy Miller
	Public Serv. Com. 5	97.1% (96.0, 97.9)	12.0% (11.5, 12.6)	Dawn Randolph
2018 Runoff	Sec. of State	96.9% (95.5, 97.9)	15.9% (15.3, 16.7)	John Barrow
	Public Serv. Com. 3	97.2% (95.9, 98.1)	13.9% (13.3, 14.6)	Lindy Miller
2020 General	U.S. President	95.6% (93.6, 96.9)	11.0% (10.3, 11.9)	Joe Biden
	U.S. Senator	95.0% (93.5, 96.3)	10.4% (9.8, 11.2)	Jon Ossoff
	Public Serv. Com. 1	94.8% (93.2, 96.0)	8.9% (8.3, 9.7)	Robert Bryant
	Public Serv. Com. 4	95.2% (93.3, 96.5)	9.4% (8.7, 10.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.1% (95.6, 98.2)	11.4% (10.8, 12.1)	Jon Ossoff
	U.S. Senator (Loeffler)	96.8% (95.3, 98.0)	11.6% (10.9, 12.3)	Raphael Warnock
	Public Serv. Com. 4	96.9% (95.5, 97.9)	10.3% (9.8, 11.0)	Daniel Blackman
2022 General	U.S. Senator	95.7% (93.4, 97.4)	7.4% (6.8, 8.2)	Raphael Warnock
	Governor	92.2% (89.6, 94.2)	4.5% (3.8, 5.4)	Stacey Abrams
	Lt. Governor	93.5% (90.9, 95.3)	5.1% (4.4, 5.9)	Charlie Bailey
	Sec. of State	90.7% (88.0, 92.7)	3.8% (3.1, 4.7)	Bee Nguyen
	Attorney General	93.7% (91.5, 95.5)	5.3% (4.7, 6.0)	Jennifer "Jen" Jordan
	Com. Agriculture	91.8% (89.1, 93.8)	4.5% (3.8, 5.4)	Nakita Hemingway
	Com. Insurance	93.0% (90.6, 94.9)	4.5% (3.9, 5.3)	Janice Laws Robinson
	Com. Labor	93.2% (90.7, 95.1)	4.6% (4.0, 5.5)	William "Will" Boddie, Jr
	School Super.	92.5% (90.1, 94.5)	4.6% (3.9, 5.4)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	96.5% (94.5, 97.9)	7.5% (6.9, 8.2)	Raphael Warnock

Table A16: Ecological Inference Results — Remedial CD 2

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	99.2% (98.9, 99.5)	10.2% (9.8, 10.6)	Barack Obama
2014 General	U.S. Senator	98.9% (98.5, 99.3)	12.1% (11.6, 12.7)	Michelle Nunn
	Governor	98.5% (98.1, 98.9)	14.1% (13.6, 14.7)	Jason Carter
	Lt. Governor	98.1% (97.6, 98.5)	7.9% (7.3, 8.4)	Connie Stokes
	Sec. of State	98.3% (97.9, 98.7)	8.0% (7.5, 8.5)	Doreen Carter
	Attorney General	98.2% (97.7, 98.6)	9.0% (8.4, 9.5)	Gregory Hecht
	Com. Agriculture	98.0% (97.5, 98.5)	8.0% (7.4, 8.6)	Christopher Irvin
	Com. Insurance	98.6% (98.2, 98.9)	8.5% (8.0, 9.0)	Elizabeth Johnson
	Com. Labor	98.5% (98.1, 98.9)	8.4% (7.9, 8.9)	Robbin Shipp
	School Super.	98.9% (98.5, 99.2)	11.1% (10.6, 11.7)	Valarie Wilson
2016 General	U.S. President	98.8% (98.4, 99.1)	8.4% (8.0, 8.9)	Hillary Clinton
	U.S. Senator	94.7% (93.9, 95.3)	5.1% (4.4, 5.9)	Jim Barksdale
2018 General	Governor	99.2% (98.8, 99.4)	7.0% (6.6, 7.5)	Stacey Abrams
	Lt. Governor	98.8% (98.4, 99.1)	6.2% (5.8, 6.7)	Sarah Riggs Amico
	Sec. of State	99.0% (98.6, 99.3)	9.1% (8.6, 9.6)	John Barrow
	Attorney General	98.8% (98.4, 99.1)	7.3% (6.8, 7.8)	Charlie Bailey
	Com. Agriculture	98.2% (97.8, 98.6)	4.8% (4.3, 5.3)	Fred Swann
	Com. Insurance	99.1% (98.7, 99.4)	6.1% (5.6, 6.6)	Janice Laws
	Com. Labor	98.4% (98.0, 98.8)	5.5% (5.0, 6.0)	Richard Keatley
	School Super.	98.7% (98.3, 99.0)	4.8% (4.4, 5.3)	Otha Thornton
	Public Serv. Com. 3	99.0% (98.5, 99.3)	6.9% (6.4, 7.5)	Lindy Miller
	Public Serv. Com. 5	99.0% (98.6, 99.3)	6.4% (5.9, 6.9)	Dawn Randolph
2018 Runoff	Sec. of State	98.9% (98.4, 99.3)	10.4% (9.7, 11.1)	John Barrow
	Public Serv. Com. 3	98.9% (98.4, 99.2)	9.3% (8.7, 10.0)	Lindy Miller
2020 General	U.S. President	98.9% (98.4, 99.2)	8.0% (7.5, 8.5)	Joe Biden
	U.S. Senator	98.2% (97.7, 98.6)	6.9% (6.4, 7.6)	Jon Ossoff
	Public Serv. Com. 1	98.7% (98.3, 99.0)	5.6% (5.2, 6.1)	Robert Bryant
	Public Serv. Com. 4	98.8% (98.4, 99.1)	6.3% (5.9, 6.8)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	99.0% (98.5, 99.3)	9.1% (8.6, 9.7)	Jon Ossoff
	U.S. Senator (Loeffler)	99.1% (98.6, 99.4)	9.3% (8.8, 9.9)	Raphael Warnock
	Public Serv. Com. 4	99.1% (98.7, 99.4)	7.5% (7.0, 8.0)	Daniel Blackman
2022 General	U.S. Senator	98.7% (98.0, 99.2)	10.1% (9.4, 10.8)	Raphael Warnock
	Governor	98.6% (97.9, 99.0)	5.0% (4.5, 5.5)	Stacey Abrams
	Lt. Governor	98.4% (97.7, 98.9)	5.9% (5.4, 6.5)	Charlie Bailey
	Sec. of State	96.6% (95.7, 97.3)	4.4% (3.9, 5.2)	Bee Nguyen
	Attorney General	98.5% (97.9, 99.0)	5.9% (5.4, 6.5)	Jennifer "Jen" Jordan
	Com. Agriculture	98.2% (97.5, 98.7)	4.8% (4.3, 5.5)	Nakita Hemingway
	Com. Insurance	98.3% (97.6, 98.8)	4.9% (4.4, 5.5)	Janice Laws Robinson
	Com. Labor	98.5% (97.8, 99.0)	5.4% (4.9, 6.1)	William "Will" Boddie, Jr
	School Super.	98.1% (97.2, 98.6)	4.9% (4.4, 5.6)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.6% (97.9, 99.2)	9.9% (9.2, 10.7)	Raphael Warnock

Table A17: Ecological Inference Results — Remedial CD 3

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	96.0% (94.5, 97.2)	8.2% (7.7, 8.8)	Barack Obama
2014 General	U.S. Senator	97.2% (95.9, 98.2)	10.5% (10.1, 11.1)	Michelle Nunn
	Governor	96.7% (95.2, 97.9)	11.2% (10.7, 11.8)	Jason Carter
	Lt. Governor	95.7% (94.1, 97.0)	5.7% (5.2, 6.3)	Connie Stokes
	Sec. of State	96.2% (94.8, 97.3)	6.4% (5.9, 6.9)	Doreen Carter
	Attorney General	96.9% (95.6, 98.0)	7.4% (6.9, 7.9)	Gregory Hecht
	Com. Agriculture	95.2% (93.6, 96.5)	5.7% (5.2, 6.3)	Christopher Irvin
	Com. Insurance	96.7% (95.5, 97.7)	6.5% (6.1, 6.9)	Elizabeth Johnson
	Com. Labor	96.4% (94.9, 97.6)	6.9% (6.4, 7.4)	Robbin Shipp
	School Super.	96.8% (95.4, 97.9)	8.9% (8.4, 9.4)	Valarie Wilson
2016 General	U.S. President	97.9% (97.0, 98.7)	6.8% (6.4, 7.2)	Hillary Clinton
	U.S. Senator	95.8% (94.4, 96.8)	3.7% (3.3, 4.2)	Jim Barksdale
2018 General	Governor	98.0% (97.0, 98.7)	6.4% (6.0, 6.9)	Stacey Abrams
	Lt. Governor	97.7% (96.8, 98.5)	6.0% (5.7, 6.5)	Sarah Riggs Amico
	Sec. of State	97.7% (96.6, 98.5)	7.1% (6.7, 7.6)	John Barrow
	Attorney General	97.7% (96.7, 98.5)	7.3% (6.9, 7.8)	Charlie Bailey
	Com. Agriculture	97.5% (96.6, 98.2)	4.6% (4.3, 5.0)	Fred Swann
	Com. Insurance	97.8% (97.0, 98.5)	5.5% (5.2, 5.9)	Janice Laws
	Com. Labor	97.9% (97.0, 98.6)	4.9% (4.5, 5.3)	Richard Keatley
	School Super.	97.4% (96.4, 98.1)	4.4% (4.0, 4.8)	Otha Thornton
	Public Serv. Com. 3	97.8% (96.9, 98.5)	6.6% (6.2, 7.1)	Lindy Miller
	Public Serv. Com. 5	97.9% (97.0, 98.6)	5.7% (5.4, 6.2)	Dawn Randolph
2018 Runoff	Sec. of State	97.4% (96.1, 98.3)	8.7% (8.2, 9.2)	John Barrow
	Public Serv. Com. 3	97.2% (95.8, 98.3)	10.1% (9.6, 10.7)	Lindy Miller
2020 General	U.S. President	97.9% (96.9, 98.6)	8.1% (7.7, 8.6)	Joe Biden
	U.S. Senator	98.1% (97.1, 98.8)	6.8% (6.4, 7.3)	Jon Ossoff
	Public Serv. Com. 1	98.0% (97.1, 98.6)	5.0% (4.6, 5.4)	Robert Bryant
	Public Serv. Com. 4	98.4% (97.6, 98.9)	5.6% (5.2, 5.9)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.1% (97.3, 98.8)	8.5% (8.1, 8.9)	Jon Ossoff
	U.S. Senator (Loeffler)	98.1% (97.2, 98.8)	9.1% (8.7, 9.5)	Raphael Warnock
	Public Serv. Com. 4	98.0% (97.1, 98.7)	7.0% (6.6, 7.5)	Daniel Blackman
2022 General	U.S. Senator	97.7% (96.7, 98.5)	8.6% (8.2, 9.1)	Raphael Warnock
	Governor	96.6% (95.6, 97.4)	3.5% (3.2, 4.0)	Stacey Abrams
	Lt. Governor	97.1% (96.1, 97.9)	4.9% (4.5, 5.4)	Charlie Bailey
	Sec. of State	96.1% (94.9, 96.9)	3.1% (2.8, 3.6)	Bee Nguyen
	Attorney General	97.6% (96.8, 98.3)	4.6% (4.2, 5.0)	Jennifer "Jen" Jordan
	Com. Agriculture	96.0% (95.0, 96.9)	3.2% (2.8, 3.6)	Nakita Hemingway
	Com. Insurance	96.5% (95.5, 97.3)	3.5% (3.1, 4.0)	Janice Laws Robinson
	Com. Labor	96.5% (95.5, 97.4)	3.9% (3.5, 4.4)	William "Will" Boddie, Jr
	School Super.	96.5% (95.6, 97.3)	3.4% (3.1, 3.9)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	97.9% (96.7, 98.7)	8.7% (8.3, 9.3)	Raphael Warnock

Table A18: Ecological Inference Results — Remedial CD 4

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.9% (98.5, 99.2)	23.5% (22.8, 24.4)	Barack Obama
2014 General	U.S. Senator	98.5% (98.1, 98.9)	29.5% (28.7, 30.4)	Michelle Nunn
	Governor	97.6% (97.1, 98.0)	28.1% (27.2, 29.1)	Jason Carter
	Lt. Governor	96.4% (95.9, 96.9)	22.3% (21.4, 23.4)	Connie Stokes
	Sec. of State	96.5% (96.0, 97.0)	22.7% (21.8, 23.7)	Doreen Carter
	Attorney General	96.1% (95.6, 96.6)	24.3% (23.3, 25.4)	Gregory Hecht
	Com. Agriculture	94.9% (94.3, 95.4)	21.6% (20.5, 22.6)	Christopher Irvin
	Com. Insurance	96.7% (96.2, 97.2)	23.9% (22.9, 24.9)	Elizabeth Johnson
	Com. Labor	96.8% (96.3, 97.3)	23.2% (22.3, 24.2)	Robbin Shipp
	School Super.	98.1% (97.6, 98.5)	26.1% (25.3, 27.0)	Valarie Wilson
2016 General	U.S. President	97.8% (97.2, 98.3)	35.6% (34.5, 36.9)	Hillary Clinton
	U.S. Senator	94.3% (93.6, 94.9)	23.6% (22.3, 25.0)	Jim Barksdale
2018 General	Governor	98.4% (97.9, 98.9)	38.2% (37.1, 39.5)	Stacey Abrams
	Lt. Governor	97.9% (97.3, 98.4)	35.9% (34.6, 37.2)	Sarah Riggs Amico
	Sec. of State	98.2% (97.6, 98.7)	37.0% (35.8, 38.4)	John Barrow
	Attorney General	97.3% (96.8, 97.8)	35.5% (34.3, 36.8)	Charlie Bailey
	Com. Agriculture	96.7% (96.1, 97.3)	31.9% (30.5, 33.3)	Fred Swann
	Com. Insurance	98.0% (97.5, 98.5)	35.1% (34.0, 36.4)	Janice Laws
	Com. Labor	97.1% (96.5, 97.7)	33.2% (31.9, 34.7)	Richard Keatley
	School Super.	97.1% (96.5, 97.7)	31.3% (30.0, 32.7)	Otha Thornton
	Public Serv. Com. 3	98.0% (97.5, 98.5)	37.0% (35.8, 38.4)	Lindy Miller
	Public Serv. Com. 5	97.7% (97.1, 98.2)	35.7% (34.5, 37.1)	Dawn Randolph
2018 Runoff	Sec. of State	98.3% (97.6, 98.8)	43.6% (42.5, 44.9)	John Barrow
	Public Serv. Com. 3	98.3% (97.7, 98.8)	45.1% (44.0, 46.3)	Lindy Miller
2020 General	U.S. President	95.4% (94.5, 96.4)	39.7% (37.2, 42.2)	Joe Biden
	U.S. Senator	96.2% (95.4, 97.0)	35.6% (33.6, 37.9)	Jon Ossoff
	Public Serv. Com. 1	96.3% (95.5, 97.0)	33.3% (31.3, 35.5)	Robert Bryant
	Public Serv. Com. 4	96.6% (95.8, 97.3)	33.6% (31.7, 35.7)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.9% (97.2, 98.4)	37.3% (35.9, 39.0)	Jon Ossoff
	U.S. Senator (Loeffler)	98.1% (97.4, 98.6)	38.4% (36.9, 40.1)	Raphael Warnock
	Public Serv. Com. 4	97.8% (97.1, 98.3)	34.7% (33.2, 36.5)	Daniel Blackman
2022 General	U.S. Senator	97.8% (97.0, 98.4)	41.4% (39.9, 43.2)	Raphael Warnock
	Governor	96.1% (95.3, 96.9)	32.5% (30.7, 34.5)	Stacey Abrams
	Lt. Governor	96.7% (95.8, 97.4)	36.1% (34.3, 38.2)	Charlie Bailey
	Sec. of State	94.6% (93.7, 95.3)	30.4% (28.6, 32.5)	Bee Nguyen
	Attorney General	96.5% (95.7, 97.3)	34.6% (32.8, 36.6)	Jennifer "Jen" Jordan
	Com. Agriculture	96.7% (95.8, 97.3)	30.7% (29.1, 32.7)	Nakita Hemingway
	Com. Insurance	96.0% (95.2, 96.7)	30.4% (28.8, 32.4)	Janice Laws Robinson
	Com. Labor	96.8% (96.1, 97.5)	33.0% (31.3, 34.8)	William "Will" Boddie, Jr
	School Super.	96.0% (95.1, 96.8)	30.2% (28.4, 32.4)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.0% (97.3, 98.6)	44.4% (43.0, 46.2)	Raphael Warnock

Table A19: Ecological Inference Results — Remedial CD 5

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.1% (97.6, 98.6)	54.3% (53.4, 55.3)	Barack Obama
2014 General	U.S. Senator	97.4% (96.8, 98.0)	63.3% (62.4, 64.2)	Michelle Nunn
	Governor	96.0% (95.4, 96.6)	62.9% (62.0, 63.8)	Jason Carter
	Lt. Governor	93.7% (93.0, 94.4)	56.1% (55.1, 57.2)	Connie Stokes
	Sec. of State	95.1% (94.4, 95.7)	55.6% (54.7, 56.6)	Doreen Carter
	Attorney General	94.6% (93.9, 95.2)	57.5% (56.6, 58.5)	Gregory Hecht
	Com. Agriculture	93.2% (92.5, 93.8)	53.5% (52.5, 54.6)	Christopher Irvin
	Com. Insurance	94.9% (94.2, 95.5)	57.6% (56.6, 58.7)	Elizabeth Johnson
	Com. Labor	95.5% (94.9, 96.1)	55.9% (55.0, 57.0)	Robbin Shipp
	School Super.	96.3% (95.7, 96.9)	60.4% (59.5, 61.4)	Valarie Wilson
2016 General	U.S. President	96.2% (95.6, 96.8)	71.6% (70.7, 72.6)	Hillary Clinton
	U.S. Senator	91.9% (91.1, 92.6)	57.8% (56.7, 59.0)	Jim Barksdale
2018 General	Governor	96.9% (96.3, 97.4)	74.1% (73.3, 75.0)	Stacey Abrams
	Lt. Governor	96.0% (95.3, 96.5)	71.4% (70.6, 72.4)	Sarah Riggs Amico
	Sec. of State	96.3% (95.7, 96.8)	73.1% (72.2, 74.0)	John Barrow
	Attorney General	95.4% (94.8, 96.0)	69.9% (69.1, 70.9)	Charlie Bailey
	Com. Agriculture	95.1% (94.5, 95.7)	64.5% (63.6, 65.5)	Fred Swann
	Com. Insurance	96.3% (95.7, 96.9)	70.2% (69.3, 71.2)	Janice Laws
	Com. Labor	95.5% (94.9, 96.1)	67.3% (66.3, 68.3)	Richard Keatley
	School Super.	95.5% (94.9, 96.1)	64.5% (63.6, 65.5)	Otha Thornton
	Public Serv. Com. 3	96.5% (95.9, 97.1)	71.6% (70.7, 72.5)	Lindy Miller
	Public Serv. Com. 5	95.9% (95.3, 96.5)	70.6% (69.7, 71.6)	Dawn Randolph
2018 Runoff	Sec. of State	95.7% (94.8, 96.6)	82.2% (81.1, 83.2)	John Barrow
	Public Serv. Com. 3	95.6% (94.7, 96.5)	82.3% (81.4, 83.4)	Lindy Miller
2020 General	U.S. President	93.5% (92.9, 94.2)	77.6% (76.6, 78.7)	Joe Biden
	U.S. Senator	94.4% (93.7, 95.0)	73.6% (72.6, 74.7)	Jon Ossoff
	Public Serv. Com. 1	94.6% (93.9, 95.2)	71.0% (70.0, 72.0)	Robert Bryant
	Public Serv. Com. 4	95.0% (94.3, 95.5)	71.1% (70.1, 72.1)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	96.3% (95.7, 96.8)	73.0% (72.2, 73.9)	Jon Ossoff
	U.S. Senator (Loeffler)	96.4% (95.9, 96.9)	74.4% (73.6, 75.3)	Raphael Warnock
	Public Serv. Com. 4	96.1% (95.4, 96.6)	71.3% (70.4, 72.2)	Daniel Blackman
2022 General	U.S. Senator	95.8% (95.2, 96.4)	79.3% (78.3, 80.3)	Raphael Warnock
	Governor	94.8% (94.1, 95.4)	71.3% (70.2, 72.5)	Stacey Abrams
	Lt. Governor	95.0% (94.3, 95.6)	75.0% (74.0, 76.1)	Charlie Bailey
	Sec. of State	93.0% (92.3, 93.7)	67.9% (66.8, 69.2)	Bee Nguyen
	Attorney General	94.7% (94.0, 95.3)	73.2% (72.2, 74.3)	Jennifer "Jen" Jordan
	Com. Agriculture	95.1% (94.4, 95.7)	69.2% (68.1, 70.3)	Nakita Hemingway
	Com. Insurance	94.7% (94.0, 95.3)	68.3% (67.3, 69.5)	Janice Laws Robinson
	Com. Labor	95.4% (94.7, 96.0)	71.7% (70.6, 72.8)	William "Will" Boddie, Jr
	School Super.	94.9% (94.3, 95.6)	67.2% (66.1, 68.3)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	96.1% (95.5, 96.6)	81.8% (80.9, 82.8)	Raphael Warnock

Table A20: Ecological Inference Results — Remedial CD 6

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.8% (98.3, 99.2)	19.5% (18.9, 20.3)	Barack Obama
2014 General	U.S. Senator	98.4% (97.9, 98.9)	22.2% (21.5, 23.1)	Michelle Nunn
	Governor	97.2% (96.5, 97.8)	21.4% (20.5, 22.4)	Jason Carter
	Lt. Governor	95.1% (94.3, 95.8)	15.4% (14.3, 16.4)	Connie Stokes
	Sec. of State	96.0% (95.3, 96.7)	15.3% (14.4, 16.3)	Doreen Carter
	Attorney General	96.1% (95.3, 96.7)	16.3% (15.3, 17.3)	Gregory Hecht
	Com. Agriculture	94.5% (93.7, 95.2)	14.5% (13.5, 15.6)	Christopher Irvin
	Com. Insurance	96.4% (95.7, 97.1)	16.4% (15.5, 17.4)	Elizabeth Johnson
	Com. Labor	96.8% (96.1, 97.4)	15.9% (15.1, 16.9)	Robbin Shipp
	School Super.	97.6% (96.9, 98.2)	19.2% (18.4, 20.2)	Valarie Wilson
2016 General	U.S. President	97.5% (96.7, 98.2)	30.1% (29.0, 31.3)	Hillary Clinton
	U.S. Senator	94.2% (93.4, 94.9)	17.8% (16.7, 19.0)	Jim Barksdale
2018 General	Governor	98.5% (97.9, 99.0)	31.4% (30.5, 32.5)	Stacey Abrams
	Lt. Governor	97.5% (96.7, 98.1)	29.8% (28.7, 31.1)	Sarah Riggs Amico
	Sec. of State	97.9% (97.3, 98.5)	30.7% (29.8, 31.9)	John Barrow
	Attorney General	97.2% (96.4, 97.8)	29.0% (27.8, 30.3)	Charlie Bailey
	Com. Agriculture	96.5% (95.8, 97.2)	25.4% (24.2, 26.7)	Fred Swann
	Com. Insurance	98.1% (97.5, 98.7)	27.8% (26.8, 29.0)	Janice Laws
	Com. Labor	96.9% (96.2, 97.6)	26.4% (25.2, 27.7)	Richard Keatley
	School Super.	97.0% (96.4, 97.6)	24.7% (23.6, 25.9)	Otha Thornton
	Public Serv. Com. 3	97.9% (97.2, 98.4)	29.9% (28.9, 31.1)	Lindy Miller
	Public Serv. Com. 5	97.6% (96.9, 98.2)	28.3% (27.3, 29.5)	Dawn Randolph
2018 Runoff	Sec. of State	97.9% (97.0, 98.6)	35.3% (34.2, 36.6)	John Barrow
	Public Serv. Com. 3	97.9% (97.0, 98.5)	36.4% (35.3, 37.7)	Lindy Miller
2020 General	U.S. President	95.8% (94.9, 96.6)	37.6% (36.1, 39.1)	Joe Biden
	U.S. Senator	96.7% (96.0, 97.4)	32.1% (30.9, 33.5)	Jon Ossoff
	Public Serv. Com. 1	96.8% (96.0, 97.5)	28.9% (27.7, 30.3)	Robert Bryant
	Public Serv. Com. 4	97.1% (96.3, 97.7)	29.6% (28.5, 31.0)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.5% (97.9, 98.9)	31.4% (30.5, 32.3)	Jon Ossoff
	U.S. Senator (Loeffler)	98.5% (97.9, 99.0)	33.2% (32.3, 34.2)	Raphael Warnock
	Public Serv. Com. 4	98.3% (97.7, 98.8)	29.1% (28.2, 30.2)	Daniel Blackman
2022 General	U.S. Senator	98.2% (97.6, 98.7)	39.8% (38.9, 41.0)	Raphael Warnock
	Governor	96.9% (96.1, 97.5)	28.9% (27.7, 30.3)	Stacey Abrams
	Lt. Governor	97.2% (96.4, 97.8)	33.7% (32.6, 35.1)	Charlie Bailey
	Sec. of State	94.5% (93.7, 95.2)	27.3% (26.1, 28.8)	Bee Nguyen
	Attorney General	96.7% (95.9, 97.4)	33.2% (31.9, 34.5)	Jennifer "Jen" Jordan
	Com. Agriculture	97.4% (96.7, 98.0)	27.2% (26.0, 28.5)	Nakita Hemingway
	Com. Insurance	96.6% (95.9, 97.3)	27.2% (26.0, 28.5)	Janice Laws Robinson
	Com. Labor	97.6% (96.9, 98.2)	29.2% (28.2, 30.5)	William "Will" Boddie, Jr
	School Super.	96.8% (96.1, 97.4)	27.6% (26.4, 28.9)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.3% (97.6, 98.8)	42.0% (40.9, 43.3)	Raphael Warnock

Table A21: Ecological Inference Results — Remedial CD 7

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	91.9% (89.0, 94.3)	10.6% (10.0, 11.3)	Barack Obama
2014 General	U.S. Senator	94.8% (91.7, 97.1)	11.5% (11.0, 12.3)	Michelle Nunn
	Governor	93.7% (89.9, 96.3)	10.8% (10.2, 11.7)	Jason Carter
	Lt. Governor	91.9% (88.2, 94.6)	6.8% (6.2, 7.7)	Connie Stokes
	Sec. of State	92.6% (88.8, 95.2)	7.4% (6.8, 8.2)	Doreen Carter
	Attorney General	93.6% (90.3, 96.2)	8.0% (7.4, 8.8)	Gregory Hecht
	Com. Agriculture	90.3% (86.4, 93.5)	7.0% (6.3, 7.9)	Christopher Irvin
	Com. Insurance	93.5% (90.8, 95.8)	7.6% (7.1, 8.3)	Elizabeth Johnson
	Com. Labor	92.4% (88.5, 95.1)	7.7% (7.1, 8.6)	Robbin Shipp
	School Super.	94.2% (91.0, 96.5)	9.7% (9.1, 10.5)	Valarie Wilson
2016 General	U.S. President	91.2% (86.6, 94.6)	14.4% (13.3, 16.0)	Hillary Clinton
	U.S. Senator	85.9% (82.3, 88.6)	7.6% (6.7, 8.8)	Jim Barksdale
2018 General	Governor	85.1% (79.5, 89.1)	17.1% (15.5, 19.4)	Stacey Abrams
	Lt. Governor	85.2% (80.5, 88.8)	15.5% (14.1, 17.4)	Sarah Riggs Amico
	Sec. of State	84.7% (80.0, 88.9)	16.4% (14.7, 18.3)	John Barrow
	Attorney General	84.4% (78.9, 88.6)	16.0% (14.3, 18.2)	Charlie Bailey
	Com. Agriculture	84.5% (80.1, 88.1)	13.3% (11.8, 15.0)	Fred Swann
	Com. Insurance	83.9% (78.3, 88.1)	15.3% (13.6, 17.5)	Janice Laws
	Com. Labor	83.7% (78.7, 87.3)	14.0% (12.6, 16.0)	Richard Keatley
	School Super.	82.3% (77.8, 86.2)	13.2% (11.7, 15.0)	Otha Thornton
	Public Serv. Com. 3	84.2% (79.0, 88.6)	16.2% (14.4, 18.3)	Lindy Miller
	Public Serv. Com. 5	84.7% (79.6, 88.4)	15.0% (13.5, 17.0)	Dawn Randolph
2018 Runoff	Sec. of State	79.7% (73.0, 85.3)	20.1% (18.3, 22.2)	John Barrow
	Public Serv. Com. 3	80.6% (72.7, 86.9)	21.2% (19.2, 23.7)	Lindy Miller
2020 General	U.S. President	87.6% (82.2, 91.7)	19.5% (17.7, 21.8)	Joe Biden
	U.S. Senator	85.8% (80.2, 89.4)	17.1% (15.6, 19.5)	Jon Ossoff
	Public Serv. Com. 1	83.8% (79.6, 87.5)	15.1% (13.5, 16.9)	Robert Bryant
	Public Serv. Com. 4	84.0% (79.3, 87.6)	15.7% (14.1, 17.6)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	89.0% (84.6, 92.1)	17.4% (16.0, 19.2)	Jon Ossoff
	U.S. Senator (Loeffler)	89.6% (85.2, 93.4)	18.2% (16.6, 20.0)	Raphael Warnock
	Public Serv. Com. 4	85.3% (81.5, 89.1)	16.6% (15.0, 18.2)	Daniel Blackman
2022 General	U.S. Senator	88.8% (83.8, 92.4)	20.1% (18.6, 22.1)	Raphael Warnock
	Governor	80.5% (76.1, 84.8)	14.4% (12.7, 16.2)	Stacey Abrams
	Lt. Governor	83.8% (78.9, 87.9)	16.3% (14.7, 18.3)	Charlie Bailey
	Sec. of State	79.2% (74.8, 83.3)	13.0% (11.3, 14.8)	Bee Nguyen
	Attorney General	83.0% (77.4, 87.6)	16.0% (14.1, 18.3)	Jennifer "Jen" Jordan
	Com. Agriculture	80.3% (75.9, 84.4)	13.9% (12.3, 15.7)	Nakita Hemingway
	Com. Insurance	80.1% (74.3, 84.6)	14.0% (12.2, 16.3)	Janice Laws Robinson
	Com. Labor	80.5% (75.7, 84.7)	14.9% (13.2, 16.8)	William "Will" Boddie, Jr
	School Super.	80.7% (76.3, 84.7)	13.7% (12.1, 15.5)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	90.3% (85.4, 94.0)	21.3% (19.8, 23.3)	Raphael Warnock

Table A22: Ecological Inference Results — Remedial CD 8

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.4% (97.6, 99.0)	8.8% (8.4, 9.2)	Barack Obama
2014 General	U.S. Senator	97.5% (96.1, 98.5)	11.6% (11.1, 12.2)	Michelle Nunn
	Governor	97.3% (95.9, 98.3)	13.5% (13.0, 14.1)	Jason Carter
	Lt. Governor	97.4% (96.1, 98.3)	7.3% (6.9, 7.9)	Connie Stokes
	Sec. of State	97.2% (95.9, 98.2)	7.9% (7.4, 8.4)	Doreen Carter
	Attorney General	97.0% (95.6, 98.1)	9.0% (8.5, 9.6)	Gregory Hecht
	Com. Agriculture	96.2% (94.6, 97.5)	8.1% (7.6, 8.8)	Christopher Irvin
	Com. Insurance	97.3% (96.1, 98.3)	8.5% (8.0, 9.0)	Elizabeth Johnson
	Com. Labor	97.1% (95.8, 98.2)	8.3% (7.8, 8.9)	Robbin Shipp
	School Super.	97.3% (95.9, 98.3)	10.4% (9.9, 11.1)	Valarie Wilson
2016 General	U.S. President	98.0% (97.0, 98.8)	6.9% (6.5, 7.4)	Hillary Clinton
	U.S. Senator	95.1% (93.7, 96.2)	4.0% (3.5, 4.6)	Jim Barksdale
2018 General	Governor	98.1% (97.1, 98.8)	5.3% (4.9, 5.8)	Stacey Abrams
	Lt. Governor	97.3% (96.2, 98.1)	5.1% (4.6, 5.6)	Sarah Riggs Amico
	Sec. of State	97.7% (96.6, 98.5)	8.0% (7.6, 8.6)	John Barrow
	Attorney General	97.5% (96.6, 98.3)	5.8% (5.4, 6.3)	Charlie Bailey
	Com. Agriculture	97.0% (95.9, 97.8)	3.6% (3.2, 4.1)	Fred Swann
	Com. Insurance	97.8% (96.8, 98.5)	4.8% (4.4, 5.3)	Janice Laws
	Com. Labor	97.7% (96.8, 98.3)	4.3% (4.0, 4.8)	Richard Keatley
	School Super.	97.4% (96.5, 98.1)	3.7% (3.3, 4.1)	Otha Thornton
	Public Serv. Com. 3	97.9% (96.9, 98.6)	5.6% (5.2, 6.1)	Lindy Miller
	Public Serv. Com. 5	97.8% (96.7, 98.5)	5.1% (4.7, 5.6)	Dawn Randolph
2018 Runoff	Sec. of State	98.0% (96.9, 98.8)	8.1% (7.6, 8.6)	John Barrow
	Public Serv. Com. 3	97.8% (96.7, 98.6)	7.1% (6.6, 7.6)	Lindy Miller
2020 General	U.S. President	98.1% (97.1, 98.8)	6.6% (6.2, 7.2)	Joe Biden
	U.S. Senator	97.7% (96.6, 98.4)	5.6% (5.2, 6.1)	Jon Ossoff
	Public Serv. Com. 1	97.1% (96.0, 97.8)	4.2% (3.7, 4.7)	Robert Bryant
	Public Serv. Com. 4	97.9% (97.0, 98.6)	4.8% (4.5, 5.3)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.4% (97.3, 99.1)	7.1% (6.7, 7.7)	Jon Ossoff
	U.S. Senator (Loeffler)	98.5% (97.7, 99.1)	7.3% (6.9, 7.8)	Raphael Warnock
	Public Serv. Com. 4	98.2% (97.3, 98.9)	5.9% (5.5, 6.4)	Daniel Blackman
2022 General	U.S. Senator	98.0% (96.9, 98.8)	6.6% (6.2, 7.2)	Raphael Warnock
	Governor	96.4% (94.9, 97.5)	3.2% (2.7, 3.9)	Stacey Abrams
	Lt. Governor	96.9% (95.6, 97.8)	3.6% (3.1, 4.1)	Charlie Bailey
	Sec. of State	95.1% (93.7, 96.3)	2.8% (2.3, 3.4)	Bee Nguyen
	Attorney General	97.2% (96.0, 98.1)	4.0% (3.6, 4.5)	Jennifer "Jen" Jordan
	Com. Agriculture	94.3% (92.7, 95.6)	3.3% (2.8, 4.0)	Nakita Hemingway
	Com. Insurance	96.5% (95.1, 97.4)	3.2% (2.7, 3.8)	Janice Laws Robinson
	Com. Labor	96.1% (94.8, 97.3)	3.6% (3.1, 4.2)	William "Will" Boddie, Jr
	School Super.	96.3% (94.8, 97.3)	2.9% (2.5, 3.5)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.1% (97.0, 98.9)	6.5% (6.0, 7.1)	Raphael Warnock

Table A23: Ecological Inference Results — Remedial CD 9

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	92.8% (88.7, 96.2)	10.4% (9.6, 11.4)	Barack Obama
2014 General	U.S. Senator	90.3% (84.7, 94.6)	13.5% (12.5, 14.8)	Michelle Nunn
	Governor	89.5% (83.9, 94.7)	12.8% (11.6, 14.1)	Jason Carter
	Lt. Governor	84.0% (79.2, 88.4)	9.6% (8.6, 10.7)	Connie Stokes
	Sec. of State	84.9% (80.2, 89.1)	10.7% (9.7, 11.8)	Doreen Carter
	Attorney General	85.3% (79.8, 90.0)	11.4% (10.4, 12.7)	Gregory Hecht
	Com. Agriculture	82.7% (78.0, 87.1)	10.7% (9.7, 11.7)	Christopher Irvin
	Com. Insurance	87.2% (82.0, 91.7)	10.2% (9.2, 11.4)	Elizabeth Johnson
	Com. Labor	85.8% (80.9, 90.2)	11.1% (10.1, 12.3)	Robbin Shipp
	School Super.	88.5% (83.6, 92.6)	12.5% (11.6, 13.7)	Valarie Wilson
2016 General	U.S. President	95.7% (93.5, 97.3)	8.8% (8.2, 9.5)	Hillary Clinton
	U.S. Senator	86.6% (83.3, 89.7)	7.9% (6.9, 9.0)	Jim Barksdale
2018 General	Governor	97.0% (95.4, 98.2)	8.5% (8.0, 9.1)	Stacey Abrams
	Lt. Governor	96.8% (95.0, 98.1)	8.3% (7.8, 9.0)	Sarah Riggs Amico
	Sec. of State	97.4% (95.9, 98.4)	9.0% (8.5, 9.5)	John Barrow
	Attorney General	96.9% (95.2, 98.2)	8.7% (8.2, 9.3)	Charlie Bailey
	Com. Agriculture	96.3% (94.3, 97.7)	6.5% (5.9, 7.2)	Fred Swann
	Com. Insurance	96.7% (95.0, 98.1)	7.7% (7.2, 8.4)	Janice Laws
	Com. Labor	96.5% (94.6, 97.8)	7.2% (6.7, 7.9)	Richard Keatley
	School Super.	95.9% (94.0, 97.3)	6.6% (6.1, 7.3)	Otha Thornton
	Public Serv. Com. 3	97.0% (95.3, 98.3)	8.7% (8.2, 9.4)	Lindy Miller
	Public Serv. Com. 5	96.9% (95.4, 98.1)	7.9% (7.4, 8.5)	Dawn Randolph
2018 Runoff	Sec. of State	96.2% (93.9, 97.8)	11.5% (11.0, 12.1)	John Barrow
	Public Serv. Com. 3	96.5% (94.6, 98.1)	13.0% (12.5, 13.6)	Lindy Miller
2020 General	U.S. President	94.8% (92.9, 96.4)	9.4% (8.7, 10.2)	Joe Biden
	U.S. Senator	94.5% (92.5, 96.2)	8.2% (7.5, 9.0)	Jon Ossoff
	Public Serv. Com. 1	93.3% (91.2, 95.1)	7.0% (6.2, 7.9)	Robert Bryant
	Public Serv. Com. 4	93.9% (91.7, 95.8)	7.2% (6.4, 8.1)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.6% (96.4, 98.6)	9.5% (9.0, 10.0)	Jon Ossoff
	U.S. Senator (Loeffler)	97.3% (95.9, 98.4)	10.2% (9.8, 10.8)	Raphael Warnock
	Public Serv. Com. 4	97.2% (95.9, 98.3)	8.2% (7.7, 8.7)	Daniel Blackman
2022 General	U.S. Senator	96.4% (94.6, 97.8)	10.3% (9.8, 11.0)	Raphael Warnock
	Governor	92.7% (90.5, 94.5)	5.4% (4.8, 6.2)	Stacey Abrams
	Lt. Governor	95.8% (93.9, 97.2)	6.7% (6.1, 7.4)	Charlie Bailey
	Sec. of State	91.7% (89.6, 93.6)	5.5% (4.8, 6.3)	Bee Nguyen
	Attorney General	94.7% (92.8, 96.3)	6.9% (6.3, 7.6)	Jennifer "Jen" Jordan
	Com. Agriculture	93.1% (90.8, 94.9)	5.2% (4.6, 6.0)	Nakita Hemingway
	Com. Insurance	93.0% (90.7, 94.9)	5.7% (5.1, 6.5)	Janice Laws Robinson
	Com. Labor	93.8% (91.5, 95.6)	5.9% (5.2, 6.7)	William "Will" Boddie, Jr
School Super.	92.6% (90.3, 94.4)	5.7% (5.0, 6.5)	Alisha Thomas Searcy	
2022 Runoff	U.S. Senator	96.7% (95.1, 98.1)	11.1% (10.6, 11.8)	Raphael Warnock

Table A24: Ecological Inference Results — Remedial CD 10

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	90.2% (88.1, 91.9)	13.6% (12.8, 14.5)	Barack Obama
2014 General	U.S. Senator	96.1% (94.1, 97.6)	14.6% (14.0, 15.3)	Michelle Nunn
	Governor	96.3% (94.6, 97.7)	14.7% (14.2, 15.4)	Jason Carter
	Lt. Governor	90.7% (88.1, 92.8)	11.2% (10.5, 12.2)	Connie Stokes
	Sec. of State	92.4% (90.0, 94.4)	10.9% (10.2, 11.8)	Doreen Carter
	Attorney General	94.1% (92.0, 95.8)	12.2% (11.5, 13.0)	Gregory Hecht
	Com. Agriculture	91.0% (88.4, 93.1)	10.6% (9.9, 11.6)	Christopher Irvin
	Com. Insurance	92.9% (90.9, 94.7)	11.5% (10.8, 12.2)	Elizabeth Johnson
	Com. Labor	93.3% (91.1, 95.2)	11.8% (11.1, 12.6)	Robbin Shipp
	School Super.	95.3% (93.4, 96.9)	13.3% (12.7, 14.0)	Valarie Wilson
2016 General	U.S. President	94.1% (92.1, 95.6)	12.6% (12.0, 13.5)	Hillary Clinton
	U.S. Senator	89.4% (87.0, 91.4)	10.4% (9.6, 11.4)	Jim Barksdale
2018 General	Governor	95.4% (93.6, 96.7)	12.5% (11.9, 13.4)	Stacey Abrams
	Lt. Governor	94.7% (93.0, 96.0)	12.3% (11.7, 13.1)	Sarah Riggs Amico
	Sec. of State	95.2% (93.5, 96.6)	14.0% (13.3, 14.8)	John Barrow
	Attorney General	95.4% (93.8, 96.8)	12.6% (12.0, 13.3)	Charlie Bailey
	Com. Agriculture	93.4% (91.6, 94.8)	10.5% (9.9, 11.4)	Fred Swann
	Com. Insurance	95.0% (93.4, 96.2)	11.9% (11.3, 12.6)	Janice Laws
	Com. Labor	93.7% (92.0, 95.1)	11.7% (11.0, 12.4)	Richard Keatley
	School Super.	93.0% (91.1, 94.7)	11.7% (11.0, 12.6)	Otha Thornton
	Public Serv. Com. 3	96.1% (94.4, 97.2)	12.3% (11.7, 13.0)	Lindy Miller
	Public Serv. Com. 5	95.3% (93.7, 96.5)	12.0% (11.4, 12.7)	Dawn Randolph
2018 Runoff	Sec. of State	96.0% (94.2, 97.4)	18.1% (17.5, 18.7)	John Barrow
	Public Serv. Com. 3	96.7% (95.0, 98.0)	18.3% (17.7, 18.9)	Lindy Miller
2020 General	U.S. President	97.3% (96.1, 98.3)	13.3% (12.8, 13.9)	Joe Biden
	U.S. Senator	97.3% (96.1, 98.3)	12.0% (11.5, 12.6)	Jon Ossoff
	Public Serv. Com. 1	95.8% (94.3, 96.9)	11.3% (10.8, 12.0)	Robert Bryant
	Public Serv. Com. 4	96.6% (95.3, 97.6)	11.4% (10.9, 12.1)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.8% (96.4, 98.7)	14.0% (13.5, 14.7)	Jon Ossoff
	U.S. Senator (Loeffler)	97.8% (96.5, 98.7)	14.5% (14.0, 15.2)	Raphael Warnock
	Public Serv. Com. 4	97.4% (96.1, 98.3)	12.8% (12.3, 13.4)	Daniel Blackman
2022 General	U.S. Senator	97.4% (96.1, 98.4)	14.8% (14.3, 15.5)	Raphael Warnock
	Governor	93.7% (92.0, 95.1)	10.9% (10.3, 11.7)	Stacey Abrams
	Lt. Governor	95.0% (93.4, 96.3)	12.2% (11.7, 12.9)	Charlie Bailey
	Sec. of State	92.3% (90.5, 94.0)	10.7% (10.0, 11.5)	Bee Nguyen
	Attorney General	95.6% (93.9, 96.9)	11.9% (11.3, 12.7)	Jennifer "Jen" Jordan
	Com. Agriculture	93.6% (91.9, 94.9)	10.3% (9.7, 11.1)	Nakita Hemingway
	Com. Insurance	93.8% (92.1, 95.1)	10.9% (10.3, 11.7)	Janice Laws Robinson
	Com. Labor	94.5% (92.6, 96.0)	11.1% (10.5, 12.0)	William "Will" Boddie, Jr
	School Super.	94.1% (92.3, 95.4)	10.1% (9.5, 10.9)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	97.6% (96.3, 98.6)	15.4% (14.9, 16.0)	Raphael Warnock

Table A25: Ecological Inference Results — Remedial CD 11

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	90.7% (88.2, 92.8)	14.6% (14.0, 15.3)	Barack Obama
2014 General	U.S. Senator	95.7% (92.9, 97.6)	16.8% (16.4, 17.5)	Michelle Nunn
	Governor	95.7% (92.6, 97.8)	16.9% (16.4, 17.6)	Jason Carter
	Lt. Governor	96.1% (94.1, 97.8)	11.1% (10.7, 11.6)	Connie Stokes
	Sec. of State	95.8% (93.4, 97.6)	12.1% (11.6, 12.6)	Doreen Carter
	Attorney General	96.0% (93.7, 97.7)	11.8% (11.4, 12.4)	Gregory Hecht
	Com. Agriculture	96.5% (94.6, 98.0)	10.9% (10.6, 11.4)	Christopher Irvin
	Com. Insurance	96.1% (93.9, 97.8)	12.4% (11.9, 12.9)	Elizabeth Johnson
	Com. Labor	95.7% (93.2, 97.5)	12.7% (12.2, 13.2)	Robbin Shipp
	School Super.	95.6% (93.0, 97.6)	15.3% (14.9, 15.9)	Valarie Wilson
2016 General	U.S. President	95.8% (93.0, 97.7)	17.2% (16.6, 18.0)	Hillary Clinton
	U.S. Senator	96.7% (94.7, 98.1)	10.6% (10.1, 11.2)	Jim Barksdale
2018 General	Governor	96.2% (94.0, 97.9)	19.1% (18.5, 19.8)	Stacey Abrams
	Lt. Governor	95.8% (93.1, 97.6)	18.5% (17.9, 19.3)	Sarah Riggs Amico
	Sec. of State	96.1% (93.8, 97.8)	18.9% (18.3, 19.6)	John Barrow
	Attorney General	96.0% (93.3, 97.9)	18.6% (17.9, 19.4)	Charlie Bailey
	Com. Agriculture	96.5% (93.9, 98.1)	15.9% (15.3, 16.7)	Fred Swann
	Com. Insurance	96.5% (94.2, 98.1)	17.2% (16.7, 17.9)	Janice Laws
	Com. Labor	95.9% (93.5, 97.7)	16.5% (15.9, 17.3)	Richard Keatley
	School Super.	96.4% (94.2, 97.9)	15.3% (14.8, 16.0)	Otha Thornton
	Public Serv. Com. 3	96.0% (93.7, 97.6)	18.6% (18.1, 19.4)	Lindy Miller
	Public Serv. Com. 5	96.1% (93.7, 97.8)	17.4% (16.9, 18.2)	Dawn Randolph
2018 Runoff	Sec. of State	94.7% (91.2, 97.2)	20.8% (20.1, 21.6)	John Barrow
	Public Serv. Com. 3	95.1% (92.0, 97.3)	22.2% (21.6, 22.9)	Lindy Miller
2020 General	U.S. President	96.0% (93.7, 97.8)	20.3% (19.6, 21.1)	Joe Biden
	U.S. Senator	96.3% (94.1, 97.9)	18.1% (17.5, 18.8)	Jon Ossoff
	Public Serv. Com. 1	96.3% (94.1, 97.9)	15.7% (15.1, 16.4)	Robert Bryant
	Public Serv. Com. 4	96.3% (94.3, 97.8)	16.4% (15.9, 17.1)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	97.0% (95.0, 98.3)	19.5% (19.1, 20.2)	Jon Ossoff
	U.S. Senator (Loeffler)	96.4% (94.3, 97.9)	20.7% (20.2, 21.4)	Raphael Warnock
	Public Serv. Com. 4	95.8% (93.7, 97.6)	18.1% (17.5, 18.9)	Daniel Blackman
2022 General	U.S. Senator	95.5% (92.5, 97.4)	21.3% (20.7, 22.3)	Raphael Warnock
	Governor	94.8% (92.1, 96.8)	14.2% (13.5, 15.1)	Stacey Abrams
	Lt. Governor	95.5% (92.8, 97.4)	16.6% (16.0, 17.5)	Charlie Bailey
	Sec. of State	95.5% (92.6, 97.3)	12.9% (12.3, 13.9)	Bee Nguyen
	Attorney General	96.0% (93.8, 97.7)	16.1% (15.5, 16.8)	Jennifer "Jen" Jordan
	Com. Agriculture	94.9% (92.3, 97.0)	13.5% (12.8, 14.3)	Nakita Hemingway
	Com. Insurance	95.9% (93.6, 97.6)	13.5% (12.9, 14.2)	Janice Laws Robinson
	Com. Labor	95.7% (93.4, 97.5)	14.4% (13.8, 15.1)	William "Will" Boddie, Jr
	School Super.	96.2% (94.1, 97.8)	13.8% (13.2, 14.5)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	95.2% (92.6, 97.2)	22.4% (21.7, 23.3)	Raphael Warnock

Table A26: Ecological Inference Results — Remedial CD 12

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	94.9% (94.1, 95.6)	10.9% (10.3, 11.5)	Barack Obama
2014 General	U.S. Senator	98.0% (97.4, 98.5)	10.2% (9.7, 10.7)	Michelle Nunn
	Governor	97.3% (96.5, 97.9)	9.8% (9.3, 10.4)	Jason Carter
	Lt. Governor	97.3% (96.6, 97.9)	5.1% (4.7, 5.6)	Connie Stokes
	Sec. of State	97.6% (97.0, 98.1)	5.3% (4.9, 5.8)	Doreen Carter
	Attorney General	96.8% (96.0, 97.5)	6.1% (5.6, 6.7)	Gregory Hecht
	Com. Agriculture	97.0% (96.2, 97.7)	5.8% (5.3, 6.3)	Christopher Irvin
	Com. Insurance	97.8% (97.2, 98.4)	6.3% (5.9, 6.8)	Elizabeth Johnson
	Com. Labor	97.3% (96.6, 97.9)	6.0% (5.5, 6.5)	Robbin Shipp
	School Super.	98.0% (97.4, 98.5)	9.1% (8.7, 9.6)	Valarie Wilson
2016 General	U.S. President	98.6% (98.1, 99.0)	6.1% (5.7, 6.5)	Hillary Clinton
	U.S. Senator	94.7% (94.1, 95.3)	2.5% (2.2, 2.9)	Jim Barksdale
2018 General	Governor	98.8% (98.5, 99.2)	5.1% (4.8, 5.5)	Stacey Abrams
	Lt. Governor	98.2% (97.6, 98.6)	4.8% (4.5, 5.2)	Sarah Riggs Amico
	Sec. of State	98.5% (97.9, 99.0)	12.6% (12.1, 13.0)	John Barrow
	Attorney General	98.2% (97.7, 98.7)	5.5% (5.1, 5.9)	Charlie Bailey
	Com. Agriculture	97.6% (97.0, 98.1)	3.5% (3.1, 3.9)	Fred Swann
	Com. Insurance	98.5% (98.1, 98.9)	4.0% (3.7, 4.3)	Janice Laws
	Com. Labor	98.0% (97.5, 98.5)	4.1% (3.7, 4.5)	Richard Keatley
	School Super.	97.8% (97.3, 98.3)	3.6% (3.3, 4.0)	Otha Thornton
	Public Serv. Com. 3	98.5% (98.0, 98.9)	4.8% (4.4, 5.2)	Lindy Miller
	Public Serv. Com. 5	98.5% (98.1, 98.9)	4.6% (4.2, 5.0)	Dawn Randolph
2018 Runoff	Sec. of State	98.5% (97.8, 99.0)	11.7% (11.2, 12.3)	John Barrow
	Public Serv. Com. 3	98.5% (97.9, 98.9)	7.3% (6.8, 7.9)	Lindy Miller
2020 General	U.S. President	98.5% (98.0, 98.9)	7.3% (6.9, 7.8)	Joe Biden
	U.S. Senator	98.0% (97.4, 98.5)	6.2% (5.8, 6.7)	Jon Ossoff
	Public Serv. Com. 1	98.3% (97.7, 98.7)	4.6% (4.2, 5.0)	Robert Bryant
	Public Serv. Com. 4	98.4% (97.9, 98.8)	5.0% (4.6, 5.4)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.7% (98.2, 99.1)	7.7% (7.3, 8.2)	Jon Ossoff
	U.S. Senator (Loeffler)	98.8% (98.3, 99.2)	7.9% (7.5, 8.4)	Raphael Warnock
	Public Serv. Com. 4	98.6% (98.2, 99.0)	6.2% (5.8, 6.6)	Daniel Blackman
2022 General	U.S. Senator	98.6% (98.0, 99.0)	8.0% (7.5, 8.5)	Raphael Warnock
	Governor	97.3% (96.7, 97.9)	4.3% (3.9, 4.8)	Stacey Abrams
	Lt. Governor	97.6% (96.9, 98.1)	4.9% (4.4, 5.3)	Charlie Bailey
	Sec. of State	95.6% (94.8, 96.3)	3.7% (3.3, 4.2)	Bee Nguyen
	Attorney General	97.7% (97.1, 98.3)	5.3% (4.8, 5.7)	Jennifer "Jen" Jordan
	Com. Agriculture	97.3% (96.6, 97.9)	4.0% (3.6, 4.5)	Nakita Hemingway
	Com. Insurance	97.4% (96.6, 98.0)	4.1% (3.7, 4.6)	Janice Laws Robinson
	Com. Labor	97.6% (96.9, 98.2)	4.5% (4.1, 5.0)	William "Will" Boddie, Jr
	School Super.	97.0% (96.3, 97.7)	4.3% (3.9, 4.8)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.6% (98.0, 99.0)	7.9% (7.4, 8.4)	Raphael Warnock

Table A27: Ecological Inference Results — Remedial CD 13

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	98.9% (98.4, 99.3)	7.2% (6.6, 7.9)	Barack Obama
2014 General	U.S. Senator	98.8% (98.3, 99.2)	10.3% (9.6, 11.1)	Michelle Nunn
	Governor	98.6% (98.0, 99.1)	9.3% (8.5, 10.1)	Jason Carter
	Lt. Governor	96.2% (95.4, 96.9)	4.6% (3.8, 5.6)	Connie Stokes
	Sec. of State	97.4% (96.6, 98.0)	4.9% (4.1, 5.9)	Doreen Carter
	Attorney General	97.5% (96.8, 98.1)	6.5% (5.6, 7.4)	Gregory Hecht
	Com. Agriculture	95.6% (94.7, 96.3)	4.7% (3.8, 5.7)	Christopher Irvin
	Com. Insurance	97.9% (97.2, 98.5)	5.2% (4.4, 6.1)	Elizabeth Johnson
	Com. Labor	97.7% (97.0, 98.3)	5.4% (4.7, 6.4)	Robbin Shipp
	School Super.	98.6% (98.1, 99.0)	7.4% (6.7, 8.2)	Valarie Wilson
2016 General	U.S. President	98.8% (98.3, 99.2)	9.4% (8.6, 10.3)	Hillary Clinton
	U.S. Senator	95.7% (94.9, 96.3)	4.5% (3.5, 5.7)	Jim Barksdale
2018 General	Governor	98.8% (98.3, 99.1)	10.4% (9.6, 11.4)	Stacey Abrams
	Lt. Governor	98.5% (98.0, 98.9)	8.6% (7.7, 9.7)	Sarah Riggs Amico
	Sec. of State	98.6% (98.1, 99.0)	10.1% (9.2, 11.2)	John Barrow
	Attorney General	98.2% (97.7, 98.7)	9.3% (8.3, 10.5)	Charlie Bailey
	Com. Agriculture	97.5% (96.8, 98.1)	6.7% (5.6, 8.1)	Fred Swann
	Com. Insurance	98.7% (98.2, 99.0)	8.6% (7.8, 9.6)	Janice Laws
	Com. Labor	98.1% (97.5, 98.6)	7.0% (6.0, 8.3)	Richard Keatley
	School Super.	97.8% (97.2, 98.2)	6.1% (5.2, 7.2)	Otha Thornton
	Public Serv. Com. 3	98.6% (98.1, 99.0)	10.3% (9.4, 11.3)	Lindy Miller
	Public Serv. Com. 5	98.6% (98.1, 99.0)	8.8% (7.9, 9.9)	Dawn Randolph
2018 Runoff	Sec. of State	98.5% (97.8, 99.0)	12.6% (11.6, 13.7)	John Barrow
	Public Serv. Com. 3	98.4% (97.7, 99.1)	14.6% (13.6, 15.9)	Lindy Miller
2020 General	U.S. President	96.6% (95.7, 97.4)	10.8% (9.0, 12.9)	Joe Biden
	U.S. Senator	97.4% (96.7, 97.9)	8.7% (7.5, 10.3)	Jon Ossoff
	Public Serv. Com. 1	97.3% (96.6, 97.8)	6.8% (5.6, 8.3)	Robert Bryant
	Public Serv. Com. 4	97.7% (97.1, 98.1)	7.1% (6.1, 8.4)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	98.6% (98.2, 98.9)	11.7% (10.8, 12.7)	Jon Ossoff
	U.S. Senator (Loeffler)	98.6% (98.2, 99.0)	12.7% (11.8, 13.8)	Raphael Warnock
	Public Serv. Com. 4	98.4% (98.0, 98.8)	9.6% (8.7, 10.7)	Daniel Blackman
2022 General	U.S. Senator	98.4% (97.8, 98.8)	14.6% (13.5, 15.8)	Raphael Warnock
	Governor	97.0% (96.4, 97.5)	6.2% (5.1, 7.6)	Stacey Abrams
	Lt. Governor	97.7% (97.0, 98.2)	8.5% (7.3, 10.1)	Charlie Bailey
	Sec. of State	94.9% (94.1, 95.6)	7.1% (5.6, 9.1)	Bee Nguyen
	Attorney General	97.5% (96.9, 98.0)	7.9% (6.8, 9.3)	Jennifer "Jen" Jordan
	Com. Agriculture	97.3% (96.7, 97.8)	5.7% (4.7, 7.1)	Nakita Hemingway
	Com. Insurance	96.7% (95.9, 97.2)	6.4% (5.3, 8.0)	Janice Laws Robinson
	Com. Labor	97.7% (97.1, 98.1)	6.7% (5.6, 8.1)	William "Will" Boddie, Jr
	School Super.	96.5% (95.8, 97.0)	5.8% (4.7, 7.3)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	98.6% (98.1, 99.0)	15.7% (14.7, 17.0)	Raphael Warnock

Table A28: Ecological Inference Results — Remedial CD 14

		Minority Voters	White Voters	Minority Pref. Cand.
2012 General	U.S. President	87.6% (80.8, 92.8)	14.6% (13.5, 16.1)	Barack Obama
2014 General	U.S. Senator	92.0% (86.5, 95.9)	15.2% (14.3, 16.3)	Michelle Nunn
	Governor	87.7% (79.3, 94.3)	18.5% (17.1, 20.3)	Jason Carter
	Lt. Governor	87.1% (79.8, 92.5)	12.7% (11.5, 14.2)	Connie Stokes
	Sec. of State	88.3% (81.5, 93.4)	13.0% (11.9, 14.5)	Doreen Carter
	Attorney General	89.0% (81.7, 94.7)	13.3% (12.0, 14.8)	Gregory Hecht
	Com. Agriculture	86.9% (78.9, 92.5)	12.5% (11.3, 14.2)	Christopher Irvin
	Com. Insurance	89.9% (84.1, 94.2)	13.0% (12.1, 14.3)	Elizabeth Johnson
	Com. Labor	89.8% (82.9, 94.6)	13.4% (12.4, 14.9)	Robbin Shipp
	School Super.	89.1% (81.9, 94.3)	15.8% (14.6, 17.3)	Valarie Wilson
2016 General	U.S. President	96.2% (93.7, 97.9)	9.3% (8.8, 10.0)	Hillary Clinton
	U.S. Senator	93.3% (89.6, 95.8)	7.5% (6.8, 8.4)	Jim Barksdale
2018 General	Governor	96.7% (94.8, 98.1)	10.5% (10.0, 11.1)	Stacey Abrams
	Lt. Governor	96.4% (94.1, 98.1)	10.5% (9.9, 11.2)	Sarah Riggs Amico
	Sec. of State	96.7% (94.5, 98.2)	10.9% (10.4, 11.6)	John Barrow
	Attorney General	96.5% (94.2, 98.2)	10.8% (10.3, 11.6)	Charlie Bailey
	Com. Agriculture	97.0% (95.1, 98.3)	8.8% (8.4, 9.4)	Fred Swann
	Com. Insurance	96.5% (94.2, 98.1)	10.0% (9.5, 10.7)	Janice Laws
	Com. Labor	96.8% (94.8, 98.3)	9.4% (8.9, 10.0)	Richard Keatley
	School Super.	96.9% (95.0, 98.3)	8.7% (8.2, 9.3)	Otha Thornton
	Public Serv. Com. 3	97.1% (95.0, 98.4)	10.4% (9.9, 11.0)	Lindy Miller
	Public Serv. Com. 5	96.5% (94.3, 98.2)	10.1% (9.5, 10.8)	Dawn Randolph
2018 Runoff	Sec. of State	95.1% (91.9, 97.4)	12.0% (11.3, 12.8)	John Barrow
	Public Serv. Com. 3	94.9% (91.6, 97.2)	13.1% (12.4, 14.0)	Lindy Miller
2020 General	U.S. President	95.8% (93.6, 97.4)	11.9% (11.4, 12.5)	Joe Biden
	U.S. Senator	95.8% (93.3, 97.5)	11.0% (10.5, 11.7)	Jon Ossoff
	Public Serv. Com. 1	96.7% (94.8, 98.0)	8.9% (8.4, 9.4)	Robert Bryant
	Public Serv. Com. 4	96.0% (93.8, 97.7)	9.8% (9.3, 10.5)	Daniel Blackman
2021 Runoff	U.S. Senator (Perdue)	96.4% (94.4, 97.9)	12.6% (12.1, 13.2)	Jon Ossoff
	U.S. Senator (Loeffler)	96.1% (93.8, 97.8)	13.0% (12.5, 13.7)	Raphael Warnock
	Public Serv. Com. 4	96.4% (94.3, 98.0)	11.4% (10.8, 12.0)	Daniel Blackman
2022 General	U.S. Senator	96.3% (93.9, 97.9)	13.4% (12.9, 14.1)	Raphael Warnock
	Governor	96.4% (94.4, 97.9)	7.5% (7.0, 8.0)	Stacey Abrams
	Lt. Governor	95.8% (93.4, 97.6)	9.8% (9.3, 10.5)	Charlie Bailey
	Sec. of State	96.4% (94.5, 97.9)	6.9% (6.4, 7.4)	Bee Nguyen
	Attorney General	96.3% (93.9, 97.9)	9.6% (9.1, 10.2)	Jennifer "Jen" Jordan
	Com. Agriculture	95.9% (93.5, 97.6)	7.8% (7.3, 8.5)	Nakita Hemingway
	Com. Insurance	95.7% (93.3, 97.5)	8.2% (7.7, 8.9)	Janice Laws Robinson
	Com. Labor	96.2% (94.2, 97.8)	8.5% (8.0, 9.1)	William "Will" Boddie, Jr
	School Super.	96.5% (94.4, 98.0)	8.1% (7.6, 8.7)	Alisha Thomas Searcy
2022 Runoff	U.S. Senator	96.5% (94.4, 98.0)	13.5% (13.0, 14.2)	Raphael Warnock

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- Associate Professor, **Department of Political Science**, 2021–Present
 - Associate Chair, **Dept. of Political Science**, July 2023–Present
 - Civic Tech Fellow, **Faculty of Computing & Data Sciences**, 2021–Present
 - Faculty Fellow, **Initiative on Cities**, 2019–Present
 - Director of Advanced Programs, **Dept. of Political Science**, July 2020–June 2023
 - Assistant Professor, **Department of Political Science**, 2014–2021
 - Junior Faculty Fellow, **Hariri Institute for Computing**, 2017–2020
- EDUCATION **Harvard University**, Cambridge, Massachusetts
- Ph.D., Political Science, May 2014.
 - A.M., Political Science, May 2012.
- Bowdoin College**, Brunswick, Maine
- A.B., Mathematics & Government and Legal Studies, May 2008.
- BOOK *Neighborhood Defenders: Participatory Politics and America’s Housing Crisis* (with Katherine Levine Einstein and David M. Glick). 2019. New York, NY: Cambridge University Press.
- Selected chapters republished in *Political Science Quarterly*.
 - Reviewed in *Perspectives on Politics*, *Political Science Quarterly*, *Economics 21*, *Public Books*, *City Journal*, and *Urban Studies*.
 - Covered in Vox’s “The Weeds” podcast, CityLab, Slate’s “Gabfest,” Curbed, Brookings Institution Up Front.
- REFEREED ARTICLES Palmer, Maxwell, Benjamin Schneer, and Kevin DeLuca. Forthcoming. “A Partisan Solution to Partisan Gerrymandering: The Define-Combine Procedure” (with Benjamin Schneer and Kevin DeLuca). *Political Analysis*.

de Benedictis-Kessner, Justin and Maxwell Palmer. 2023. “Driving Turnout: The Effect of Car Ownership on Electoral Participation.” *Political Science Research and Methods* 11(3): 654–662.

Einstein, Katherine Levine, Joseph Ornstein, and Maxwell Palmer. 2022. “Who Represents the Renters?” *Housing Policy Debate*.

Einstein, Katherine Levine, David Glick, and Maxwell Palmer. 2022. “Developing a pro-housing movement? Public distrust of developers, fractured coalitions, and the challenges of measuring political power.” *Interest Groups & Advocacy* 11:189–208.

Einstein, Katherine Levine, David Glick, Luisa Godinez Puig, and Maxwell Palmer. 2022. “Still Muted: The Limited Participatory Democracy of Zoom Public Meetings.” *Urban Affairs Review*.

Glick, David M. and Maxwell Palmer. 2022. “County Over Party: How Governors Prioritized Geography Not Particularism in the Distribution of Opportunity Zones.” *British Journal of Political Science* 52(4): 1902–1910.

Einstein, Katherine Levine and Maxwell Palmer. 2021. “Land of the Freeholder: How Property Rights Make Voting Rights.” *Journal of Historical Political Economy* 1(4): 499–530.

Godinez Puig, Luisa, Katharine Lusk, David Glick, Katherine L. Einstein, Maxwell Palmer, Stacy Fox, and Monica L. Wang. 2020. “Perceptions of Public Health Priorities and Accountability Among US Mayors.” *Public Health Reports* (October 2020).

Einstein, Katherine Levine, David M. Glick, and Maxwell Palmer. 2020. “Can Mayors Lead on Climate Change? Evidence from Six Years of Surveys.” *The Forum* 18(1).

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

Palmer, Maxwell and Benjamin Schneer. 2019. “Postpolitical Careers: How Politicians Capitalize on Public Office.” *Journal of Politics* 81(2): 670–675.

Einstein, Katherine Levine, Maxwell Palmer, and David M. Glick. 2019. “Who Participates in Local Government? Evidence from Meeting Minutes.” *Perspectives on Politics* 17(1): 28–46.

- Winner of the **Heinz Eulau Award**, American Political Science Association, 2020.

Einstein, Katherine Levine, David M. Glick, and Maxwell Palmer. 2019. “City Learning: Evidence of Policy Information Diffusion From a Survey of U.S. Mayors.” *Political Research Quarterly* 72(1): 243–258.

Einstein, Katherine Levine, David M. Glick, Maxwell Palmer, and Robert Pressel. 2018. “Do Mayors Run for Higher Office? New Evidence on Progressive Ambition.” *American Politics Research* 48(1) 197–221.

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

Edwards, Barry, Michael Crespin, Ryan D. Williamson, and Maxwell Palmer. 2017. “Institutional Control of Redistricting and the Geography of Representation.” *Journal of Politics* 79(2): 722–726.

Palmer, Maxwell. 2016. “Does the Chief Justice Make Partisan Appointments to Special Courts and Panels?” *Journal of Empirical Legal Studies* 13(1): 153–177.

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

Gerring, John, Maxwell Palmer, Jan Teorell, and Dominic Zarecki. 2015. “Demography and Democracy: A Global, District-level Analysis of Electoral Contestation.” *American Political Science Review* 109(3): 574–591.

OTHER
PUBLICATIONS

Einstein, Katherine Levine, David M. Glick and Maxwell Palmer. 2020. “Neighborhood Defenders: Participatory Politics and America’s Housing Crisis.” *Political Science Quarterly* 135(2): 281–312.

Ansolabehere, Stephen and Maxwell Palmer. 2016. “A Two Hundred-Year Statistical History of the Gerrymander.” *Ohio State Law Journal* 77(4): 741–762.

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

POLICY
REPORTS

Glick, David M., Katherine Levine Einstein, and Maxwell Palmer. 2023. *2022 Menino Survey of Mayors: Economic Opportunity, Poverty, and Well-Being*. Research Report. Boston University Initiative on Cities.

Glick, David M., Katherine Levine Einstein, and Maxwell Palmer. 2023. *2022*

Menino Survey of Mayors: Mayors and the Climate Crisis. Research Report. Boston University Initiative on Cities.

Einstein, Katherine Levine and Maxwell Palmer. 2022. *Greater Boston Housing Report Card 2022, Special Topic: Who Can Win the Lottery? Moving Toward Equity in Subsidized Housing*. Research Report. The Boston Foundation.

Glick, David M., Katherine Levine Einstein, and Maxwell Palmer. 2022. *Looking back on ARPA and America's Cities: A Menino Survey Reflection*. Research Report. Boston University Initiative on Cities.

Einstein, Katherine Levine and Maxwell Palmer. 2022. *Representation in the Housing Process: Best Practices for Improving Racial Equity*. Research Report. The Boston Foundation.

Glick, David M., Katherine Levine Einstein, and Maxwell Palmer. 2022. *2021 Menino Survey of Mayors: Closing the Racial Wealth Gap*. Research Report. Boston University Initiative on Cities.

Glick, David M., Katherine Levine Einstein, and Maxwell Palmer. 2021. *2021 Menino Survey of Mayors: Building Back Better*. Research Report. Boston University Initiative on Cities.

Glick, David M., Katherine Levine Einstein, Maxwell Palmer, Stacy Fox, Katharine Lusk, Nicholas Henninger, and Songhyun Park. 2021. *2020 Menino Survey of Mayors: Policing and Protests*. Research Report. Boston University Initiative on Cities.

Glick, David M., Katherine Levine Einstein, Maxwell Palmer, and Stacy Fox. 2020. *2020 Menino Survey of Mayors: COVID-19 Recovery and the Future of Cities*. Research Report. Boston University Initiative on Cities.

de Benedictis-Kessner, Justin and Maxwell Palmer. 2020. *Got Wheels? How Having Access to a Car Impacts Voting*. *Democracy Docket*.

Palmer, Maxwell, Katherine Levine Einstein, and David Glick. 2020. *Counting the City: Mayoral Views on the 2020 Census*. Research Report. Boston University Initiative on Cities.

Einstein, Katherine Levine, Maxwell Palmer, Stacy Fox, Marina Berardino, Noah Fischer, Jackson Moore-Otto, Aislinn O'Brien, Marilyn Rutecki and Benjamin Wuesthoff. 2020. *COVID-19 Housing Policy*. Research Report. Boston University Initiative on Cities.

Einstein, Katherine Levine, Maxwell Palmer, David Glick, and Stacy Fox. 2020.

Mayoral Views on Cities' Legislators: How Representative are City Councils? Research Report. Boston University Initiative on Cities.

Einstein, Katherine Levine and Maxwell Palmer. 2020. "Newton and other communities must reform housing approval process." *The Boston Globe*.

Einstein, Katherine Levine, David Glick, Maxwell Palmer and Stacy Fox. 2020. "2019 Menino Survey of Mayors." Research Report. Boston University Initiative on Cities.

Palmer, Maxwell, Katherine Levine Einstein, David Glick, and Stacy Fox. 2019. *Mayoral Views on Housing Production: Do Planning Goals Match Reality?* Research Report. Boston University Initiative on Cities.

Wilson, Graham, David Glick, Katherine Levine Einstein, Maxwell Palmer, and Stacy Fox. 2019. *Mayoral Views on Economic Incentives: Valuable Tools or a Bad Use of Resources?*. Research Report. Boston University Initiative on Cities

Einstein, Katherine Levine, David Glick, Maxwell Palmer and Stacy Fox. 2019. "2018 Menino Survey of Mayors." Research Report. Boston University Initiative on Cities.

Einstein, Katherine Levine, Katharine Lusk, David Glick, Maxwell Palmer, Christiana McFarland, Leon Andrews, Aliza Wasserman, and Chelsea Jones. 2018. "Mayoral Views on Racism and Discrimination." National League of Cities and Boston University Initiative on Cities.

Einstein, Katherine Levine, David Glick, and Maxwell Palmer. 2018. "As the Trump administration retreats on climate change, US cities are moving forward." *The Conversation*.

Einstein, Katherine Levine, David M. Glick, Maxwell Palmer, and Robert Pressel. 2018. "Few big-city mayors see running for higher office as appealing." LSE United States Politics and Policy Blog.

Einstein, Katherine Levine, David Glick, and Maxwell Palmer. 2018. "2017 Menino Survey of Mayors." Research Report. Boston University Initiative on Cities.

Williamson, Ryan D., Michael Crespin, Maxwell Palmer, and Barry C. Edwards. 2017. "This is how to get rid of gerrymandered districts." *The Washington Post*, Monkey Cage Blog.

Palmer, Maxwell and Benjamin Schneer. 2015. "How and why retired politicians get lucrative appointments on corporate boards." *The Washington Post*, Monkey Cage Blog.

CURRENT
PROJECTS

“Descended from Immigrants and Revolutionists: How Family Immigration History Shapes Legislative Behavior in Congress” (with James Feigenbaum and Benjamin Schneer).

“When are Mayors Polarized?” (with Katherine Levine Einstein and David M. Glick)

“The Gray Vote: How Older Home-Ownning Voters Dominate Local Elections.” (with Katherine Levine Einstein, Ellis Hamilton, and Ethan Singer).

“Who Should Make Decisions? Public Perceptions of Democratic Inclusion in Housing Policy.” (With Justin de Benedictis-Kessner and Katherine Levine Einstein).

“Renters in an Ownership Society: Property Rights, Voting Rights, and the Making of American Citizenship.” Book Project. With Katherine Levine Einstein.

“Menino Survey of Mayors 2023.” Co-principal investigator with David M. Glick and Katherine Levine Einstein.

GRANTS
AND AWARDS

The Boston Foundation Grant. “2022 Greater Boston Housing Report Card” (Co-principal investigator). 2022. \$70,000.

The Rockefeller Foundation, “Menino Survey of Mayors” (Co-principal investigator). 2021. \$355,000.

American Political Science Association, **Heinz Eulau Award**, for the best article published in *Perspectives on Politics* during the previous calendar year, for “**Who Participates in Local Government? Evidence from Meeting Minutes.**” (with Katherine Levine Einstein and David M. Glick). 2020.

Boston University Initiative on Cities, COVID-19 Research to Action Seed Grant. “How Are Cities Responding to the COVID-19 Housing Crisis?” 2020. \$8,000.

The Rockefeller Foundation, “Menino Survey of Mayors” (Co-principal investigator). 2017. \$325,000.

Hariri Institute for Computing, Boston University. Junior Faculty Fellow. 2017–2020. \$10,000.

The Rockefeller Foundation, “2017 Menino Survey of Mayors” (Co-principal investigator). 2017. \$100,000.

The Center for Finance, Law, and Policy, Boston University, Research Grant for

“From the Capitol to the Boardroom: The Returns to Office from Corporate Board Directorships,” 2015.

Senator Charles Sumner Prize, Dept. of Government, Harvard University. 2014.
Awarded to the best dissertation “from the legal, political, historical, economic, social or ethnic approach, dealing with means or measures tending toward the prevention of war and the establishment of universal peace.”

The Center for American Political Studies, Dissertation Research Fellowship on the Study of the American Republic, 2013–2014.

The Tobin Project, Democracy and Markets Graduate Student Fellowship, 2013–2014.

The Dirksen Congressional Center, Congressional Research Award, 2013.

The Institute for Quantitative Social Science, Conference Travel Grant, 2014.

The Center for American Political Studies, Graduate Seed Grant for “Capitol Gains: The Returns to Elected Office from Corporate Board Directorships,” 2014.

The Institute for Quantitative Social Science, Research Grant, 2013.

Bowdoin College: High Honors in Government and Legal Studies; Philo Sherman Bennett Prize for Best Honors Thesis in the Department of Government, 2008.

SELECTED
PRESENTATIONS

“A Partisan Solution to Partisan Gerrymandering: The Define-Combine Procedure.” MIT Election Data and Science Lab, 2020.

“Who Represents the Renters?” Local Political Economy Conference, Washington, D.C., 2019.

“Housing and Climate Politics,” Sustainable Urban Systems Conference, Boston University 2019.

“Redistricting and Gerrymandering,” American Studies Summer Institute, John F. Kennedy Presidential Library and Museum, 2019.

“The Participatory Politics of Housing,” Government Accountability Office Seminar, 2018.

“Descended from Immigrants and Revolutionists: How Immigrant Experience Shapes Immigration Votes in Congress,” Congress and History Conference, Princeton University, 2018.

“Identifying Gerrymanders at the Micro- and Macro-Level.” Hariri Institute for Computing, Boston University, 2018.

“How Institutions Enable NIMBYism and Obstruct Development,” Boston Area Research Initiative Spring Conference, Northeastern University, 2017.

“Congressional Gridlock,” American Studies Summer Institute, John F. Kennedy Presidential Library and Museum, 2016.

“Capitol Gains: The Returns to Elected Office from Corporate Board Directorships,” Microeconomics Seminar, Department of Economics, Boston University, 2015.

“A Two Hundred-Year Statistical History of the Gerrymander,” Congress and History Conference, Vanderbilt University, 2015.

“A New (Old) Standard for Geographic Gerrymandering,” Harvard Ash Center Workshop: How Data is Helping Us Understand Voting Rights After Shelby County, 2015.

“Capitol Gains: The Returns to Elected Office from Corporate Board Directorships,” Boston University Center for Finance, Law, and Policy, 2015.

“Capitol Gains: The Returns to Elected Office from Corporate Board Directorships,” Bowdoin College, 2014.

American Political Science Association: 2013, 2014, 2015, 2016, 2018, 2019, 2020, 2022

Midwestern Political Science Association: 2012, 2013, 2014, 2017, 2019, 2023

Southern Political Science Association: 2015, 2018

European Political Science Association: 2015

EXPERT
TESTIMONY
AND CONSULTING

Bethune-Hill v. Virginia (3:14-cv-00852-REP-AWA-BMK), U.S. District Court for the Eastern District of Virginia. Prepared expert reports and testified on racial predominance and racially polarized voting in selected districts of the 2011 Virginia House of Delegates map. (2017)

Thomas v. Bryant (3:18-CV-441-CWR-FKB), U.S. District Court for the Southern District of Mississippi. Prepared expert reports and testified on racially polarized voting in a district of the 2012 Mississippi State Senate map. (2018–2019)

Chestnut v. Merrill (2:18-cv-00907-KOB), U.S. District Court for the Northern District of Alabama. Prepared expert reports and testified on racially polarized voting in selected districts of the 2011 Alabama congressional district map. (2019)

Dwight v. Raffensperger (No. 1:18-cv-2869-RWS), U.S. District Court for the Northern District of Georgia. Prepared expert reports and testified on racially polarized voting in selected districts of the 2011 Georgia congressional district map. (2019)

Bruni, et al. v. Hughs (No. 5:20-cv-35), U.S. District Court for the Southern District of Texas. Prepared expert reports and testified on the use of straight-ticket voting by race and racially polarized voting in Texas. (2020)

Caster v. Merrill (No. 2:21-cv-1536-AMM), U.S. District Court for the Northern District of Alabama. Prepared expert report and testified on racially polarized voting in selected districts of the 2021 Alabama congressional district map. (2022)

Pendergrass v. Raffensperger (1:21-CV-05339-SCJ), U.S. District Court for the Northern District of Georgia. Prepared expert reports and testified on racially polarized voting in selected districts of the 2021 Georgia congressional district map. (2022)

Grant v. Raffensperger (1:22-CV-00122-SCJ), U.S. District Court for the Northern District of Georgia. Prepared expert reports and testified on racially polarized voting in selected districts of the 2021 Georgia state legislative district maps. (2022)

Galmon, et al. v. Ardoin (3:22-cv-00214-SDD-SDJ), U.S. District Court for the Middle District of Louisiana. Prepared expert reports and testified on racially polarized voting for the 2021 Louisiana congressional district map. (2022)

United States v. Robert Bowers (2:18-cr-00292-DWA), U.S. District Court for the Western District of Pennsylvania. Prepared expert reports on the demographics of the voter registration list and composition of the master jury wheel. (2020–2023)

Agee, et al. v. Benson, et al. (1:22-CV-00272-PLM-RMK-JTN), U.S. District Court for the Western District of Michigan. Prepared expert report on racially polarized voting and racial predominance in the Michigan House and Senate maps adopted by the Michigan Independent Citizens Redistricting Commission. (2023)

In Re: Georgia Senate Bill 202 (1:12-MI-55555-JPB), U.S. District Court for the Northern District of Georgia. Prepared expert report and testified on demographics and racially polarized voting in Georgia. (2023)

Vet Voice Foundation, et al., v. Hobbs, et al. (No. 22-2-19384-1 SEA), King County Superior Court, Washington. Prepared expert reports and testified on ballots rejected for non-matching signatures in Washington. (2023)

Vet Voice Foundation, et al., v. Griswold (No. 2022CV033456), District Court, City and County of Denver, State of Colorado. Prepared expert reports and testified on ballots rejected for non-matching signatures in Colorado. (2023)

”Brief Of Political Science Professors As *Amici Curiae* In Support Of Appellees,” in the case of *Alexander vs. South Carolina State Conference of the NAACP*, in the Supreme Court of the United States (No. 22-807). (with Stephen Ansolabehere, Bruce E. Cain, James M. Snyder, Jr., and Charles Stewart III)

Racially Polarized Voting Consultant, Virginia Redistricting Commission, August 2021.

The General Court of the Commonwealth of Massachusetts, Joint Committee on Housing, Hearing on Housing Production Legislation. May 14, 2019. Testified on the role of public meetings in housing production.

TEACHING

Boston University

- *Introduction to American Politics* (PO 111; Fall 2014, Fall 2015, Fall 2016, Fall 2017, Spring 2019, Fall 2019, Fall 2020)
- *Congress and Its Critics* (PO 302; Fall 2014, Spring 2015, Spring 2017, Spring 2019)
- *Data Science for Politics* (PO 399; Spring 2020, Spring 2021, Fall 2021, Fall 2022, Fall 2023)
- *Formal Political Theory* (PO 501; Spring 2015, Spring 2017, Fall 2019, Fall 2020)
- *American Political Institutions in Transition* (PO 505; Spring 2021, Fall 2021)
- *Prohibition* (PO 540; Fall 2015, Fall 2022)
- *Political Analysis (Graduate Seminar)* (PO 840; Fall 2016, Fall 2017)
- *Graduate Research Workshop* (PO 903/4; Fall 2019, Spring 2020)
- *Spark! Civic Tech Research Design Workshop* (CDS DS 290; Spring 2023)
- *Spark! Civic Tech Toolkit Workshop* (CDS DS 292; Spring 2023)

SERVICE

Boston University

- Research Computing Governance Committee, 2021–.
- Initiative on Cities Faculty Advisory Board, 2020–2022.
- Undergraduate Assessment Working Group, 2020-2021.

- College of Arts and Sciences
 - Ad Hoc Committee on the CAS BA-Level Curriculum, 2023.
 - CAS Conduct Liaison, 2023–.
 - Search Committee for the Faculty Director of the Initiative on Cities, 2020–2021.
 - General Education Curriculum Committee, 2017–2018.
- Department of Political Science
 - Associate Chair, 2023–.
 - Director of Advanced Programs (Honors & B.A./M.A.). 2020–2023.
 - Political Methodology Search Committee, 2021.
 - Delegate, Chair Selection Advisory Process, 2021.
 - Comprehensive Exam Committee, American Politics, 2019, 2023.
 - Comprehensive Exam Committee, Political Methodology, 2016, 2017, 2021, 2022.
 - American Politics Search Committee, 2017.
 - American Politics Search Committee, 2016.
 - Graduate Program Committee, 2014–2015, 2018–2019, 2020–2021.

Co-organizer, *Boston University Local Political Economy Conference*, August 29, 2018.

Editorial Board Member, *Legislative Studies Quarterly*, 2020–2023

Malcolm Jewell Best Graduate Student Paper Award Committee, Southern Political Science Association, 2019.

Reviewer: *American Journal of Political Science*; *American Political Science Review*; *Journal of Politics*; *Quarterly Journal of Political Science*; *Science*; *Political Analysis*; *Legislative Studies Quarterly*; *Public Choice*; *Political Science Research and Methods*; *Journal of Law, Economics and Organization*; *Election Law Journal*; *Journal of Empirical Legal Studies*; *Urban Affairs Review*; *Applied Geography*; *PS: Political Science & Politics*; Cambridge University Press; Oxford University Press.

Elected Town Meeting Member, Town of Arlington, Mass., Precinct 2. April 2021–Present.

Arlington Election Reform Committee Member, August 2019–April 2022.

Coordinator, **Harvard Election Data Archive**, 2011–2014.

OTHER
EXPERIENCE

Charles River Associates, Boston, Massachusetts

2008–2010

Associate, Energy & Environment Practice

Economic consulting in the energy sector for electric and gas utilities, private equity, and electric generation owners. Specialized in Financial Modeling, Resource Planning, Regulatory Support, Price Forecasting, and Policy Analysis.

Updated October 27, 2023

Expert Report of Dr. Loren Collingwood

Loren Collingwood

2023-12-12

Executive Summary

I have been retained by plaintiffs as an expert, and have been asked to analyze demographic characteristics pertaining to Senate Factor 5 in Gwinnett and Fulton Counties, the counties encompassing Congressional District 7 under the 2021 Enacted Plan.

My background and qualifications are set forth in my expert report submitted in this case on December 12, 2022. In its October 26, 2023 ruling, this Court credited me as an expert in demographics and political science and found my expert testimony credible. Since then, I have published three additional peer reviewed articles, and served as the RPV expert for plaintiff in *IE United et al. v. Riverside County, CVRI2202423*, where I filed a report and was deposed. I was the RPV expert for plaintiff in *Paige Dixon v. Lewisville Independent School District, et al., Civil Action No. 4:22-cv-00304*, where I filed two expert reports. I was the RPV expert for plaintiff in *Turtle Mountain Band of Chippewa Indians v. Jaeger No. 3:22-cv-00022-PDW-ARS*, where I filed two reports, was deposed, and testified at trial. I am the RPV expert in *Shafer et al. v. Pearland Independent School District, Civil Action No. 3:2022- cv-00387* where I have filed two reports.

I gathered data on demographic, socio-economic, and health characteristics of individuals residing in these counties using data drawn from the 2017-2021 American Community Survey (ACS). This is one of the same survey datasets I examined in my earlier two reports in this case and was questioned about at trial.

I conduct two separate analyses, all among white, Black, Hispanic, and AAPI (Asian and Pacific Islander) individuals, respectively.¹ First, I look at only people living in Gwinnett County, because Congressional District 7 under the 2021 Enacted Plan was anchored in Gwinnett County. Next, I examine demographic features of individuals in Gwinnett and Fulton combined since Congressional District 7 included part of Fulton County as well.

Based on my analysis, I conclude the following:

- White households and individuals have clear socio-economic and health advantages over minorities in Gwinnett singly and Gwinnett and Fulton combined.
- This includes white advantages when compared to Blacks, when compared to Hispanics, and when compared to Asians.
- Minorities are broadly cohesive on a variety of socio-economic measures.
- In this region, whites have a higher household income than do Blacks, Hispanics, and Asians.
- A greater share of whites compared to minorities reside in households making more than \$100K and \$125K.
- A greater share of Blacks, Hispanics, and Asians receive SNAP (food stamps) benefits than to whites.
- More Blacks, Hispanics, and Asians live below the poverty line than do whites.
- Fewer whites have less than a high school education than do Blacks, Hispanics, and Asians.
- A very similar percentage of whites and Asians are college educated (around 60% in the combined analysis). However, whites hold a strong education advantage on Blacks and Hispanics.
- Finally, fewer whites are uninsured relative to Blacks, Hispanics, and Asians – although the differences are largest between whites and Hispanics, and smallest between whites and Asians.

¹Household median income is calculated only among Asian individuals because there is some missing data for Pacific Islanders.

My opinions are based on the 2017-2021 ACS.

I am being compensated at a rate of \$400/hour. My compensation is not contingent on the opinions expressed in this report, on my testimony, or on the outcome of this case.

Gwinnett County

Table 1 reports findings among people living in Gwinnett County, GA. The rows include the following measures: Median household income,² Percentage household income greater than \$100K, Percentage household income greater than \$125K, Percentage household receiving SNAP benefits, Percentage household below the poverty line, Percentage household with children below the poverty line, Percentage household with adults only below the poverty line, Percentage with less than a high school diploma, Percentage with a Bachelor's Degree or greater, Percent of civilian labor force unemployed, Percent of people between ages 19-64 that are disabled, Percent of people between ages 19-64 that are uninsured.³

The results show that whites are better off on almost every measure than are Blacks, Hispanics, and Asians – although the differences are more stark between whites and Blacks and whites and Hispanics. Across almost every measure – except on education between whites and Asians – white households and individuals are situated in better socio-economic positions than racial minority households.

On several indicators, Blacks, Asians, and Hispanics are broadly cohesive in their socio-economic outcomes. This is particularly true of people living below the poverty line. Ten percent (10%) of Blacks live below the poverty line while 12% of Asians do, and nearly 18% of Hispanics. For members of these groups with children in the home, approximately 13% of Blacks live below the poverty line, 14% of Asians, and 26% of Hispanics. Moreover, even though Asians overall are better educated than Blacks and Hispanics, there are a relatively large subset of Asians with less than a high school education (approximately 16%), with Hispanics closer to 38%. Finally, on income, Asians and Blacks have comparable household incomes (low to mid \$70K's), and Hispanics are even worse off (mid \$50K's). Thus, the data show that gaps generally exist between whites and minorities overall, and that minorities share many similar socio-economic difficulties amongst themselves.

Table 1. Socio-economic indicators across Black, white, Hispanic, and AAPI individuals in Gwinnett County, Georgia, 2017-2021 American Community Survey (ACS).

	Black	White	Hisp.	AAPI	W – B	W – H	W – A
Med. HH Inc.	\$70007	\$94606	\$55508	\$73595	\$24599	\$39098	\$21011
P. HH Inc. > \$100K	0.327	0.472	0.216	0.37	0.145	0.256	0.102
P. HH Inc. > \$125K	0.216	0.354	0.133	0.27	0.138	0.221	0.084
P. HH SNAP	0.101	0.03	0.092	0.055	-0.071	-0.062	-0.025
P. HH < pov. line	0.1	0.059	0.178	0.117	-0.041	-0.119	-0.058
P. HH < pov. line, child	0.127	0.057	0.257	0.138	-0.07	-0.2	-0.081
P. HH < pov. line, VAP	0.09	0.059	0.134	0.111	-0.031	-0.075	-0.052
P. w/ Less HS Diploma	0.05	0.045	0.378	0.157	-0.005	-0.333	-0.112
P. w/ Bachelor's or +	0.388	0.449	0.175	0.458	0.061	0.274	-0.009
P. Unemployed	0.054	0.036	0.029	0.031	-0.018	0.007	0.005
P. Disabled	0.071	0.076	0.038	0.036	0.005	0.038	0.04
P. Uninsured	0.146	0.103	0.502	0.149	-0.043	-0.399	-0.046

²This is 2021 adjusted dollars.

³Note that the percentage disabled and uninsured are taken from ages 19-64, as that is how the ACS records that measure.

Gwinnett and Fulton Counties

Table 2 shows the findings pertaining specifically to Gwinnett and Fulton counties combined. The results are similar to the Gwinnett-only findings. For example, fully 45% of Hispanics are uninsured, so are 17% of Blacks, and nearly 11% of Asians. This compares against about 8% of whites who are uninsured. Even though Asians rival whites on achieving a college degree, more Asians have less than a high school diploma than do whites (11% vs. 3%). Further despite being on par with whites as regards to some measures of education and employment (unemployment rate), Asians still have a lower income than do whites, and a lower percentage make more than \$100K and \$125K respectively. Further, greater shares live below the poverty line.

Table 2. Socio-economic indicators across Black, white, Hispanic, and AAPI individuals in Fulton and Gwinnett Counties Georgia, 2017-2021 American Community Survey (ACS).

	Black	White	Hisp.	AAPI	W – B	W – H	W – A
Med. HH Inc.	\$59184.57	\$106490.196	\$62159.17	\$93553.248	\$47305.626	\$44331.026	\$12936.948
P. HH Inc. > \$100K	0.242	0.529	0.251	0.451	0.287	0.278	0.078
P. HH Inc. > \$125K	0.157	0.424	0.165	0.351	0.267	0.259	0.073
P. HH SNAP	0.194	0.022	0.087	0.042	-0.172	-0.065	-0.02
P. HH < pov. line	0.164	0.055	0.172	0.101	-0.109	-0.117	-0.046
P. HH < pov. line, child	0.227	0.046	0.246	0.098	-0.181	-0.2	-0.052
P. HH < pov. line, VAP	0.142	0.058	0.133	0.102	-0.084	-0.075	-0.044
P. w/ Less HS Diploma	0.083	0.03	0.332	0.112	-0.053	-0.302	-0.082
P. w/ Bachelor's or +	0.36	0.613	0.241	0.6	0.253	0.372	0.013
P. Unemployed	0.074	0.034	0.031	0.03	-0.04	0.003	0.004
P. Disabled	0.107	0.062	0.043	0.032	-0.045	0.019	0.03
P. Uninsured	0.172	0.078	0.45	0.108	-0.094	-0.372	-0.03

Conclusion

In sum, within the Gwinnett/Fulton County region, white households and individuals tend to fare better on socio-economics and health than do their Black, Hispanic, and Asian counterparts. While there are few notable exceptions to this – mainly the similarity in education rates between whites and Asians – overall the trendline reveals a racial gap in socio-economics and health between whites and minorities. Finally, minorities are broadly cohesive on a variety of socio-economic measures – which is particularly the case in Gwinnett County – the base of the Congressional District 7 under analysis. There, minorities share experiences especially related to the poverty line and income.