

EXHIBIT 1

**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 have testified at trial as an expert witness on redistricting and demographics in federal courts in about 50 voting rights cases since the late 1980s. Over 25 of the cases led to changes in local election district plans. Five of the cases resulted in changes to statewide legislative boundaries: *Rural West Tennessee*

African-American Affairs Council, Inc. v. McWherter, No. 92-cv-2407 (W.D. Tenn.); *Old Person v. Brown*, No. 96-cv-0004 (D. Mont.); *Bone Shirt v. Hazeltine*, No. 01-cv-3032 (D.S.D.); *Alabama Legislative Black Caucus v. Alabama*, No. 12-cv-691 (M.D. Ala.); and *Thomas v. Reeves*, No. 18-cv-441 (S.D. Miss.). In *Bone Shirt v. Hazeltine*, the court adopted the remedial plan I developed.

3. I served as the *Gingles* 1 expert for two post-2010 local-level Section 2 cases in Georgia, *Georgia State Conference of NAACP v. Fayette County Board of Commissioners*, No. 11-cv-123 (N.D. Ga.), and *Georgia State Conference of NAACP v. Emanuel County Board of Commissioners*, No. 16-cv-21 (S.D. Ga.). In both cases, the parties settled on redistricting plans that I developed (with input from the respective defendants). In the latter part of the decade, I served as the *Gingles* 1 expert in three additional Section 2 cases in Georgia, which were all voluntarily dismissed in advance of the 2020 elections: *Georgia State Conference of NAACP v. Gwinnett County Board of Commissioners*, No. 16-cv-2852 (N.D. Ga.); *Thompson v. Kemp*, No. 17-cv-1427 (N.D. Ga.); and *Dwight v. Kemp*, No. 18-cv-2869 (N.D. Ga.).

4. In 2022, I testified as an expert in redistricting and demographics in six cases challenging district boundaries under Section 2 of the Voting Rights Act: *Caster v. Merrill*, No. 21-1356-AMM (N.D. Ala.); *Alpha Phi Alpha Fraternity v. Raffensperger*, No. 21-05337-SCJ (N.D. Ga.); *Pendergrass v. Raffensperger*, No. 21-

05339-SCJ (N.D. Ga.); *NAACP v. Baltimore County*, No.21-cv-03232-LKG (D. Md.); *Christian Ministerial Alliance v. Hutchinson*, No. 4:19-cv-402-JM (E.D. Ark.); and *Robinson v. Ardoin*, No. 3:22-cv-00211-SDD-SDJ (M.D. La.). I also testified at trial this year as an expert on demographics in *NAACP v. Lee*, No. 4:21cv187-MW/MAF (N.D. Fla.), a case involving recent changes to Florida’s election law.

5. Since the release of the 2020 Census data, three county commission-level plans I developed as a private consultant have been adopted by local governments, in San Juan County, Utah; Bolivar County, Mississippi; and Washington County, Mississippi. In addition, a school board plan I developed was adopted by the Jefferson County, Alabama Board of Education (*Stout v. Jefferson County*).

6. My redistricting experience is further documented in **Exhibit A**.

7. I am being compensated at a rate of \$150.00 per hour. No part of my compensation is dependent upon the conclusions that I reach or the opinions that I offer.

A. Purpose of Declaration

8. The attorneys for the Plaintiffs in this case asked me to determine whether the African American¹ population in Georgia is “sufficiently large and

¹ In this declaration, “African American” refers to persons who are Single Race Black or Any Part Black (i.e., persons of two or more races and some part Black), including Hispanic Black. In some instances (e.g., for historical comparisons), numerical or percentage references identify Single Race Black as “SR Black” and Any Part Black as “AP Black.” Unless noted otherwise, “Black” means AP Black. It is my understanding that following the U.S. Supreme Court decision in

geographically compact”² to allow for the creation of an additional majority-Black congressional district in the Atlanta metropolitan area.

9. **Exhibit B** describes the sources and methodology I have employed in the preparation of this report and the Illustrative Plan. In short, I used the Maptitude for Redistricting software program as well as data and shapefiles from the U.S. Census Bureau and the Georgia Legislative and Congressional Reapportionment Office, among other sources.

B. Expert Conclusions

10. The Black population in metropolitan Atlanta is sufficiently numerous and geographically compact to allow for the creation of an additional majority-Black congressional district anchored in Cobb, Douglas, and Fulton Counties (CD 6 in the Illustrative Plan) consistent with traditional redistricting principles.

11. The additional majority-Black congressional district can be merged into the enacted 2021 Plan without making changes to six of the 14 districts: CD 1, CD 2, CD 5, CD 7, CD 8, and CD 12 are unaffected.

Georgia v. Ashcroft, 539 U.S. 461 (2003), the “Any Part” definition is an appropriate Census classification to use in most Section 2 cases.

² This is the first *Gingles* precondition. See *Thornburg v. Gingles*, 478 U.S. 30 (1986).

C. Organization of Declaration

12. The remainder of this declaration is organized as follows: **Section II** reviews state-level and Metro Atlanta 1990–2020 demographics, as defined by the 29-county Atlanta-Sandy Springs-Alpharetta MSA.³ **Section III** provides maps and population statistics for the 2012 Benchmark Plan and the enacted 2021 Plan. **Section IV** presents the Illustrative Plan that I have prepared, based on the 2020 Census, which includes an additional majority-Black district in Metro Atlanta.

II. DEMOGRAPHIC PROFILE

A. Georgia: 2010 to 2020

13. According to the 2020 Census, Georgia has a total population of 10,711,908 persons—up by 1.02 million since 2010.

³ In this declaration, Metro Atlanta refers to the 29-county Atlanta-Sandy Springs-Alpharetta Metropolitan Statistical Area (“MSA”). It includes the counties of Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Haralson, Heard, Henry, Jasper, Lamar, Meriwether, Morgan, Newton, Paulding, Pickens, Pike, Rockdale, Spalding, and Walton.

MSA is an abbreviation for “metropolitan statistical area.” Metropolitan statistical areas are defined by the U.S. Office of Management and Budget and reported in historical and current census data produced by the U.S. Census Bureau. As the Census Bureau has explained, “[m]etropolitan statistical areas consist of the county or counties (or equivalent entities) associated with at least one urbanized area of at least 50,000 population, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties.” Source: <https://www.census.gov/programs-surveys/metro-micro/about/glossary.html>.

14. **Figure 1** reveals that Georgia’s population growth since 2010 can be attributed entirely to gains in the overall minority population.

Figure 1
Georgia: Population by Race and Ethnicity (2010 Census to 2020 Census)

	2010 Population	Percent	2020 Population	Percent	2010–2020 Change (Persons)	2010–2020 Change (Percent)
Total Population	9,687,653	100.00%	10,711,908	100.00%	1,024,255	10.57%
NH White*	5,413,920	55.88%	5,362,156	50.06%	-51,764	-0.96%
Total Minority Population	4,273,733	44.12%	5,349,752	49.94%	1,076,019	25.18%
Latino	853,689	8.81%	1,123,457	10.49%	269,768	31.60%
NH Black*	2,910,800	30.05%	3,278,119	30.60%	367,319	12.62%
NH Asian*	311,692	3.22%	475,680	4.44%	163,988	52.61%
NH Hawaiian and Pacific Islander	5,152	0.05%	6,101	0.06%	949	18.42%
NH American Indian and Alaska Native*	21,279	0.22%	20,375	0.19%	-904	-4.25%
NH Other*	19,141	0.20%	55,887	0.52%	36,746	191.98%
NH Two or More Races*	151,980	1.57%	390,133	3.65%	238,153	156.70%
SR Black	2,950,435	30.46%	3,320,513	31.00%	370,078	12.54%
AP Black	3,054,098	31.53%	3,538,146	33.03%	484,048	15.85%

*Single race, non-Hispanic

15. Between 2010 and 2020, the Black population in Georgia increased by 484,048 persons. By contrast, during the same decade, the non-Hispanic White (“NH White”) population fell by 51,764 persons.

16. Georgia's Black population, as a share of the overall statewide population, increased between 2010 and 2020, from 31.53% in 2010 to 33.03% in 2020.

17. Non-Hispanic Whites are a razor-thin majority of the state's 2020 population (50.06%). Black Georgians account for one-third (33.03%) of the population and comprise the largest minority population, followed by Latinos (10.49%).

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B. Georgia: Voting Age and Citizen Voting Age

18. As shown in **Figure 2**, African Americans in Georgia constitute a slightly smaller percentage of the voting age population (“VAP”) than the total population. According to the 2020 Census, Georgia has a total VAP of 8,220,274 persons, of whom 2,607,986 (31.73%) are AP Black. The NH White VAP is 4,342,333 (52.82%).

Figure 2
Georgia: 2020 Voting Age and 2021 Estimated Citizen Voting Age
Populations by Race and Ethnicity⁴

	2020 VAP (Persons)	2020 VAP (Percent)	2021 CVAP (Percent)
Total	8,220,274	100.00%	100.0%
NH White	4,342,333	52.82%	55.7%
Total Minority	3,877,941	47.18%	44.3%
Latino	742,918	9.04%	5.9%
SR Black	2,488,419	30.27%	31.4%
AP Black	2,607,986	31.73%	33.3%

19. The rightmost column in Figure 2 reveals that both the Black and NH White populations comprise a higher percentage of the citizen voting age population

⁴ To prepare this table, I relied on the PL 94-171 redistricting file issued by the Census Bureau; Table S2901 of the 1-Year 2021 American Community Survey (“ACS”), available at <https://data.census.gov/cedsci/table?q=S2901&g=0400000US13&tid=ACSST1Y2021.S2901>; and the Public Use Microdata Sample of the 1-Year 2021 ACS, available at <https://data.census.gov/mdat/#/search?ds=ACSPUMS1Y2021&vv=AGEP%2800,18%3A99%29&cv=RACBLK%281%29&r v=ucgid,CIT%281,2,3,4,%29&wt=PWGTP&g=0400000US13>.

(“CVAP”) than the corresponding voting age population, owing to higher non-citizenship rates among other minority populations.

20. According to estimates from the 1-Year 2021 American Community Survey (“ACS”), African Americans represent 33.3% of the statewide CVAP—about 1.5 percentage points higher than the 2020 AP Black VAP. The NH White CVAP is 55.7%—nearly three percentage points higher than NH White VAP in the 2020 Census.

21. The Black CVAP in Georgia is poised to go up this decade. According to the 1-Year 2021 ACS, Black citizens of all ages represent 34.45% of all citizens.⁵

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⁵ Source: <https://data.census.gov/mdat/#/search?ds=ACSPUMS1Y2021&vv=AGEP&cv=RACBLK%281%29&rv=ucgid,CIT%281,2,3,4%29&wt=PWGTP&g=0400000US13>.

C. Black Population as a Component of Total Population: 1990 to 2020

1. Georgia

22. As shown in **Figure 3**, Georgia's Black population has increased significantly in absolute and percentage terms since 1990, from about 27% in 1990 to 33% in 2020. Over the same time period, the percentage of the population identifying as NH White has dropped from 70% to 50%.

Figure 3
Georgia: Population by Race and Ethnicity (1990 Census to 2020 Census)

	1990 Population	Percent	2000 Population	Percent	2010 Population	Percent	2020 Population	Percent
Total Population	6,478,216	100.00%	8,186,453	100.00%	9,687,653	100.0%	10,711,908	100.00%
NH White	4,543,425	70.13%	5,128,661	62.65%	5,413,920	55.88%	5,362,156	50.06%
Total Minority Population	1,934,791	29.87%	3,057,792	37.35%	4,273,733	44.12%	5,349,752	49.94%
Latino	108,922	1.68%	435,227	5.32%	853,689	8.81%	1,123,457	10.49%
Black*	1,746,565	26.96%	2,393,425	29.24%	3,054,098	31.53%	3,538,146	33.03%

*SR Black in 1990; AP Black 2000–2020

23. Since 1990, the Black population has more than doubled: from about 1.75 million to 3.54 million, an increase that is the equivalent of the populations of more than two congressional districts. The NH White population has also increased, but at a much slower rate: from 4.54 million to 5.36 million, amounting to an increase of only about 18% over the three-decade period.

2. Metro Atlanta

24. **Exhibit C** is a Census Bureau-produced map showing boundaries for the Atlanta MSA, along with other metropolitan and micropolitan areas in Georgia.

25. **Figure 4** demonstrates that the key driver of population growth in Georgia this century has been Metro Atlanta, led in no small measure by a large increase in the Black population.

Figure 4
Metro Atlanta: Population by Race and Ethnicity (1990 Census to 2020 Census)

	1990 Population	Percent	2000 Population	Percent	2010 Population	Percent	2020 Population	Percent
Total Population	3,082,308	100.00%	4,263,438	100.00%	5,286,728	100.00%	6,089,815	100.00%
NH White	2,190,859	71.08%	2,576,109	60.42%	2,684,571	50.78%	2,661,835	43.71%
Total Minority Population	891,449	28.92%	1,687,329	39.58%	2,602,157	49.22%	3,427,980	56.29%
Latino	58,917	1.91%	270,655	6.35%	547,894	10.36%	730,470	11.99%
Black*	779,134	25.28%	1,248,809	29.29%	1,776,888	33.61%	2,186,815	35.91%

*SR Black in 1990; AP Black 2000–2020

26. According to the 1990 Census, the area that today comprises the 29-county MSA was 25.28% Black, increasing to 35.91% in 2020. Since 2000, the Black population in Metro Atlanta has climbed by 75%: from 1.25 million in 2010 to 2.19 million in 2020.

27. According to the 2020 Census, a majority of Metro Atlanta residents are non-White, while NH Whites comprise 43.71% of the Metro Atlanta population. This is a major shift compared to the previous decade; in 2010, NH Whites represented 50.78% of the Metro Atlanta population.

28. According to the 2020 Census, the 11 core counties comprising the Atlanta Regional Commission (“ARC”) service area⁶ account for more than half (54.7%) of the statewide Black population. After expanding the region to include the 29 counties in the Atlanta MSA (including the 11 ARC counties), Metro Atlanta encompasses 61.81% of the state’s Black population.

29. **Exhibit D** breaks down Black population changes from 2010 to 2020 by county for each of the 29 counties in Metro Atlanta.

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⁶ Source: <https://atlantaregional.org/atlanta-region/about-the-atlanta-region>.

30. **Figure 5** shows that the population gain in Metro Atlanta between 2010 and 2020 amounted to 803,087 persons—greater than the population of one of the state’s congressional districts—with more than half of the gain coming from an increase in the Black population, which increased by 409,927 (or 23.07%). Meanwhile, over the same decade, the NH White population in Metro Atlanta fell by 22,736 persons.

Figure 5
Metro Atlanta: Population by Race and Ethnicity (2010 Census to 2020 Census)

	2010 Number	Percent	2020 Number	Percent	2010–2020 Change (Persons)	2010–2020 Change (Percent)
Total Population	5,286,728	100.00%	6,089,815	100%	803,087	15.19%
NH White*	2,684,571	50.78%	2,661,835	43.7%	-22,736	-0.85%
Total Minority Population	2,602,157	49.22%	3,427,980	56.3%	825,823	31.74%
Latino	547,894	10.36%	730,470	12.0%	182,576	33.32%
NH Black*	1,684,178	31.86%	2,019,208	33.16%	335,030	19.89%
NH Asian*	252,616	4.78%	397,009	6.52%	144,393	57.16%
NH Hawaiian and Pacific Islander*	2,075	0.04%	2,386	0.04%	311	14.99%
NH American Indian and Alaska Native*	10,779	0.20%	10,562	0.17%	-217	-2.01%
NH Other*	13,749	0.26%	39,254	0.64%	25,505	185.50%
NH Two or More Races*	126,322	2.39%	229,091	3.76%	102,769	81.35%
SR Black	1,712,121	32.39%	2,048,212	33.63%	336,091	19.63%
AP Black	1,776,888	33.61%	2,186,815	35.91%	409,927	23.07%

*Single race, non-Hispanic

31. As shown in **Figure 6**, according to the 2020 Census, the 29-county MSA has a total VAP of 4,654,322 persons, of whom 1,622,469 (34.86%) are AP Black. The NH White VAP is 2,156,625 (46.34%).

Figure 6
Metro Atlanta: 2020 Voting Age and 2021 Estimated Citizen Voting Age Populations by Race and Ethnicity⁷

	2020 VAP (Persons)	2020 VAP (Percent)	2021 CVAP (Percent)
Total	4,654,322	100.00%	100.00%
NH White	2,156,625	46.34%	49.8%
Total Minority	2,426,643	53.66%	50.2%
Latino	487,286	10.47%	6.6%
SR Black	1,541,370	33.12%	34.6%
AP Black	1,622,469	34.86%	N/A

32. According to estimates from the 1-Year 2021 ACS, SR African Americans represent 34.6% of the CVAP in Metro Atlanta—about 1.5 percentage points higher than the 2020 SR Black VAP. The NH White CVAP is 49.8%, about 3.5 percentage points higher than the NH White VAP in the 2020 Census.

33. Despite the significant Black population growth in Metro Atlanta, the region includes just three majority-Black districts under the 2021 Plan—CD 4, CD 5, and CD 13—the same number the region has had for the past two decades.

⁷ To prepare this table, I relied on the PL 94-171 redistricting file issued by the U.S. Census Bureau and Table S2901 of the 1-Year 2021 ACS, available at <https://data.census.gov/table?q=S2901&g=310XX00US12060>. The Census Bureau does not publish a citizenship estimate for the AP Black CVAP at the MSA level.

34. As shown in **Figure 7**, over the two decades since the last majority-Black district (CD 13) was drawn, Metro Atlanta’s population has grown by 1.8 million, with the Black population up by 938,006.

Figure 7
29-County MSA (Metro Atlanta): 2000 to 2020 Population Change

	2000 Population (Persons)	2000 Population (Percent)	2020 Population (Persons)	2020 Population (Percent)	2000–2020 Change (Persons)	2000–2020 Change (Percent)
Total Population	4,263,438	100.00%	6,089,815	100.00%	1,826,377	42.84%
NH White	2,576,109	60.42%	2,661,835	43.71%	85,726	3.33%
Total Minority Population	1,687,329	39.58%	3,427,980	56.29%	1,740,651	103.16%
Latino	270,655	6.35%	730,470	11.99%	459,815	169.89%
AP Black	1,248,809	29.29%	2,186,815	35.91%	938,006	75.11%

35. Given the dramatic increase in Georgia’s Black population in Metro Atlanta during this century, the obvious focal point for determining whether an additional majority-Black district can be created in the state is indeed Metro Atlanta. And, as shown below, a new majority-Black district can readily be created in and around Cobb, Douglas, and Fulton Counties.

III. 2012 BENCHMARK PLAN AND 2021 PLAN

A. 2012 Benchmark Plan

36. **Exhibit E** contains a map packet depicting the 2012 Benchmark Plan, with corresponding 2010 Census statistics, prepared by the Georgia Legislative & Congressional Reapportionment Office (“GLCRO”).

37. **Exhibit F** is a table that I prepared reporting 2020 Census population statistics for the 2012 Plan, as well as CVAP estimates from the Census Bureau’s 2015–2019 Special Tabulation.⁸

B. 2021 Plan

38. **Exhibit G** contains a map packet depicting the 2021 Plan, with corresponding 2020 Census statistics, prepared by GLCRO.

39. Additional 2021 Plan information regarding compactness scores, county splits, municipal splits, and VTD⁹ splits is reported for comparison with the Illustrative Plan described in the next section.

40. The 2021 Plan reduces CD 6’s BVAP from 14.6% under the 2012 Benchmark Plan to 9.9%. This decrease occurred in an area that has experienced significant growth in the Black population since the 2010 Census. Notably, the area is adjacent to two majority-Black districts (CD 4 and CD 13) with Black citizen voting age populations (“BCVAP”) in the 60% range under both the Benchmark 2012 Plan and the 2021 Plan.

41. According to the 2020 Census, the BVAP in the (by then overpopulated) Benchmark 2012 CD 13 was 62.65%. Under the 2021 Plan, the BVAP in CD 13

⁸ Source: <https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>.

⁹ “VTD” is a U.S. Census Bureau term; VTDs generally correspond to precincts. Statewide, in 2020, there were 2,698 VTDs in Georgia.

jumps to 66.75%. Indeed, the BVAP in CD 13 has steadily increased over the past two decades. According to the 2010 Census, under the then-overpopulated Benchmark 2006 Plan, the BVAP in CD 13 stood at 55.70%.

42. As shown in **Figure 8**, based on the 2020 Census, the combined Black population in Cobb, Fulton, Douglas, and Fayette Counties is 807,076 persons, more than necessary to constitute an *entire* congressional district—or, put differently, a majority in two congressional districts.

Figure 8
Four-County Area: 2010 Census to 2020 Census Population and Black Population Changes

	2020 Population	2020 Black Population	2010–2020 Population Change	2010–2020 Black Population Change	Black Population Change as Percentage of Total Change
Cobb	766,149	223,116	78,071	42,151	53.99%
Douglas	144,237	74,260	11,834	20,007	169.06%
Fayette	119,194	32,076	12,627	9,578	75.85%
Fulton	1,066,710	477,624	146,129	60,732	41.56%
Total	2,096,290	807,076	248,661	132,468	53.27%

43. More than half (53.27%) of the total population increase in the four counties since 2010 can be attributed to the increase in the Black population. Building off this growth, the Illustrative Plan described in the next section shows how an additional majority-Black congressional district can be drawn in the area encompassing Cobb, Fulton, Douglas, and Fayette Counties—with no meaningful

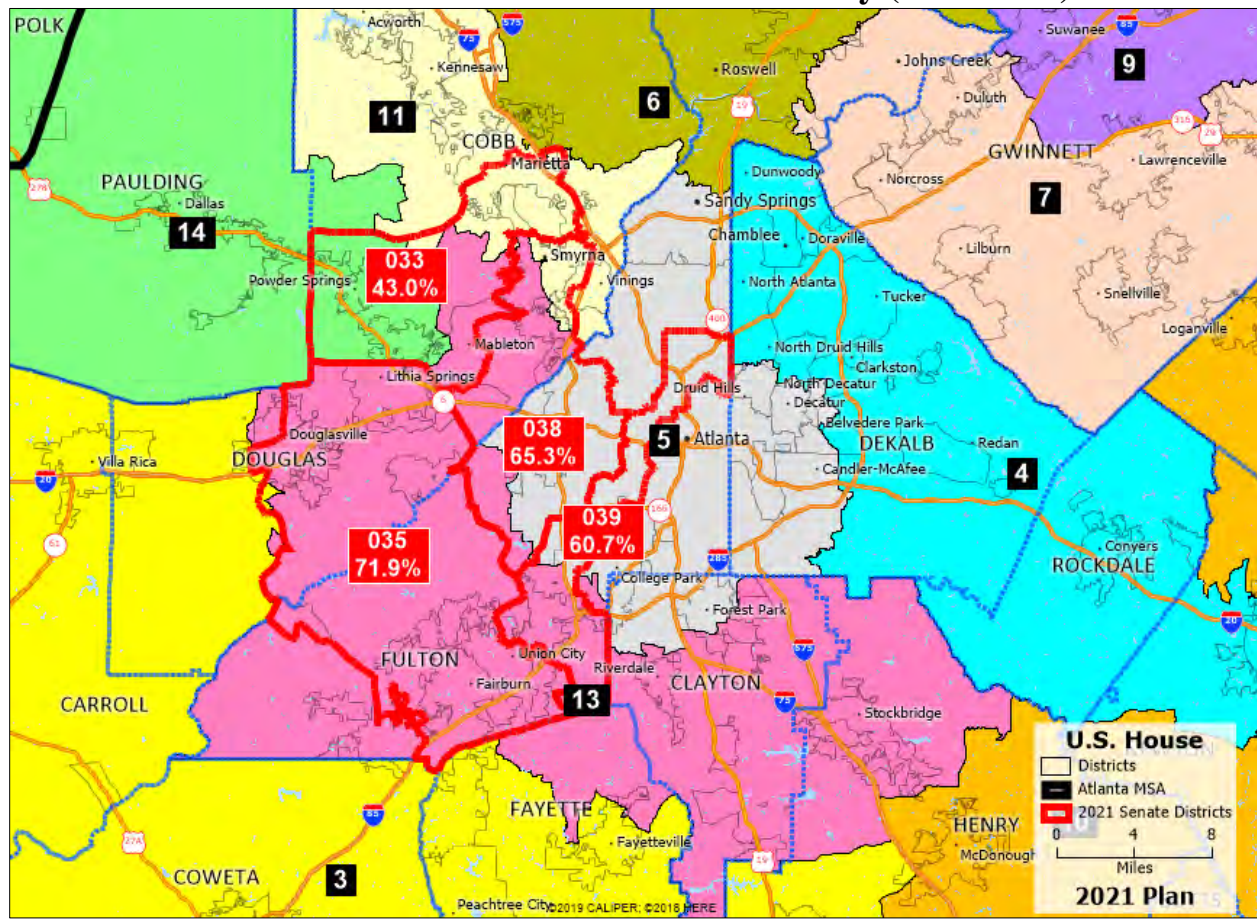
impact on compactness and fewer splits of political subdivisions (i.e., counties, VTDs, and municipalities).

44. Indeed, that an additional majority-Black district can readily be drawn in this four-county area is confirmed by the composition of newly enacted Georgia State Senate districts in Metro Atlanta. The enacted 2021 Senate Plan includes three majority-Black districts that encompass parts of western Fulton County, southern Cobb County, and eastern Douglas County, and a fourth racially diverse Senate district in Cobb County.

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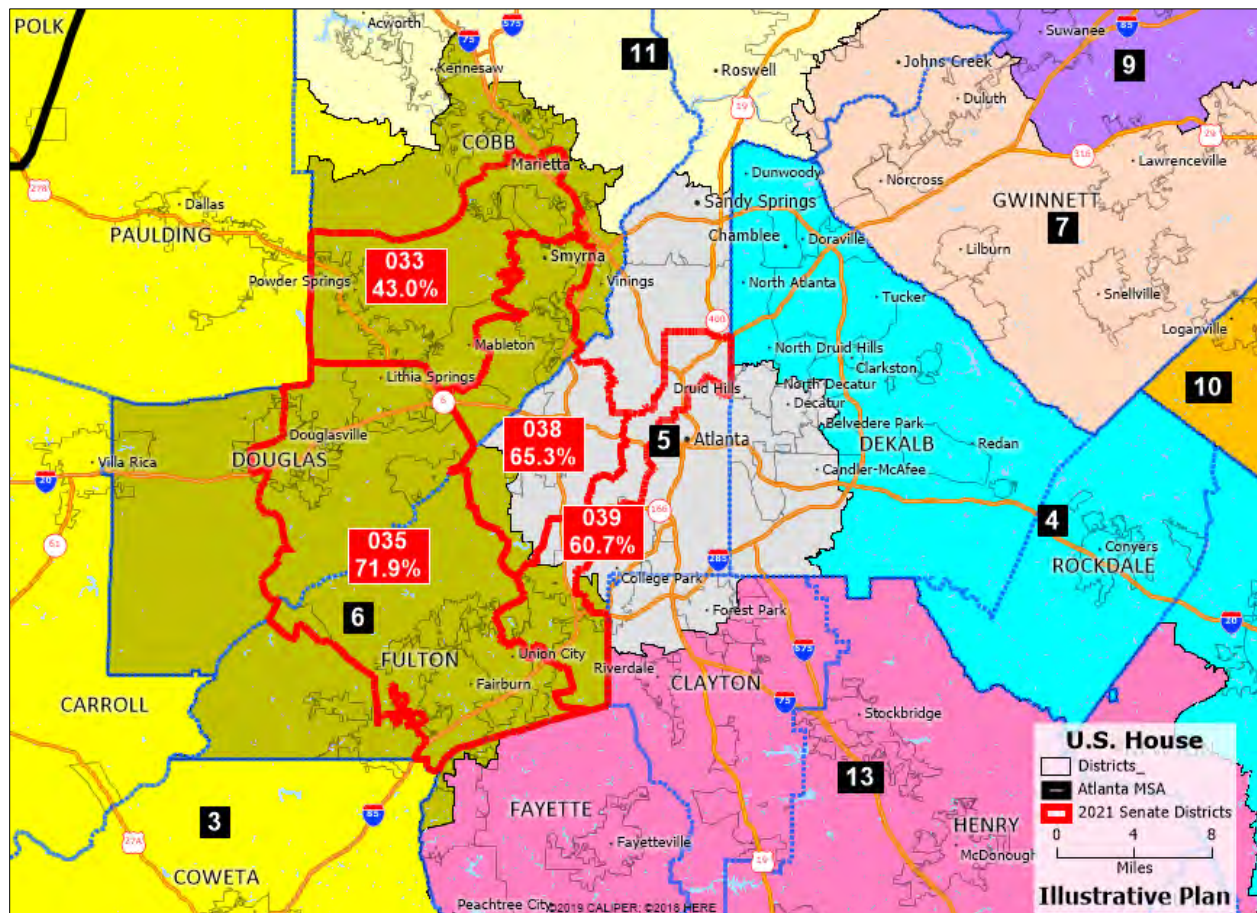
45. With respect to ideal district population size, four Senate districts are exactly the equivalent of one congressional district, given that 56 (the number of Senate districts) divided by 14 (the number of congressional districts) equals four. And, as shown in **Figure 9** below, there is ample room to create an additional majority-Black congressional district in the three-county area generally defined by three majority-Black and one racially diverse Senate districts in the enacted 2021 Senate Plan: SD 39 (approximately 61% BVAP), SD 35 (72% BVAP), SD 38 (60% BVAP), and Cobb County SD 42 (43% BVAP).

Figure 9
2021 Plan with Partial Senate Plan Overlay (Red Lines)



46. **Figure 10** below is a preview of the Illustrative Plan described in the next section. Note how majority-Black Illustrative CD 6 closely aligns with the four Senate districts displayed in Figure 8, and then extends west to include all of Douglas County, south to include all of southern Fulton County, and north into racially diverse areas of Cobb County.

Figure 10
Illustrative Plan with Partial Senate Plan Overlay (Red Lines)



IV. Illustrative Plan

A. Traditional Redistricting Principles

47. The Illustrative Plan I have prepared demonstrates that the Black population is sufficiently numerous and geographically compact to allow for the creation of an additional majority-Black congressional district in Metro Atlanta.

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

49. I drew the Illustrative Plan to follow, to the extent possible, county boundaries. Where counties are split to comply with one-person, one-vote requirements, I have generally used whole 2020 Census VTDs as sub-county components. Where VTDs are split, I have followed census block boundaries that are aligned with roads, natural features, municipal boundaries, census block groups, and post-2020 Census county commission districts.

50. In drafting the Illustrative Plan, I sought to minimize changes to the 2021 Plan while abiding by all of the traditional redistricting principles listed above. I balanced all of these considerations, and no one factor predominated in my drawing of the Illustrative Plan.

51. The result leaves intact six congressional districts in the enacted plan, modifying only eight districts in the 2021 Plan to create an additional majority-Black district (Illustrative CD 6) encompassing all of Douglas County and parts of Cobb, Fayette, and Fulton Counties. The eight districts that are changed under the Illustrative Plan are CD 3, CD 4, CD 6, CD 9, CD 10, CD 11, CD 13, and CD 14.

52. The districts in the Illustrative Plan are also contiguous.

53. As shown in **Figure 11**, the Illustrative Plan abides by the one-person, one-vote principle. Like the 2021 Plan, population deviations in the Illustrative Plan are plus or minus one person from the ideal population size of 765,136.

Figure 11
Illustrative Plan Population Summary

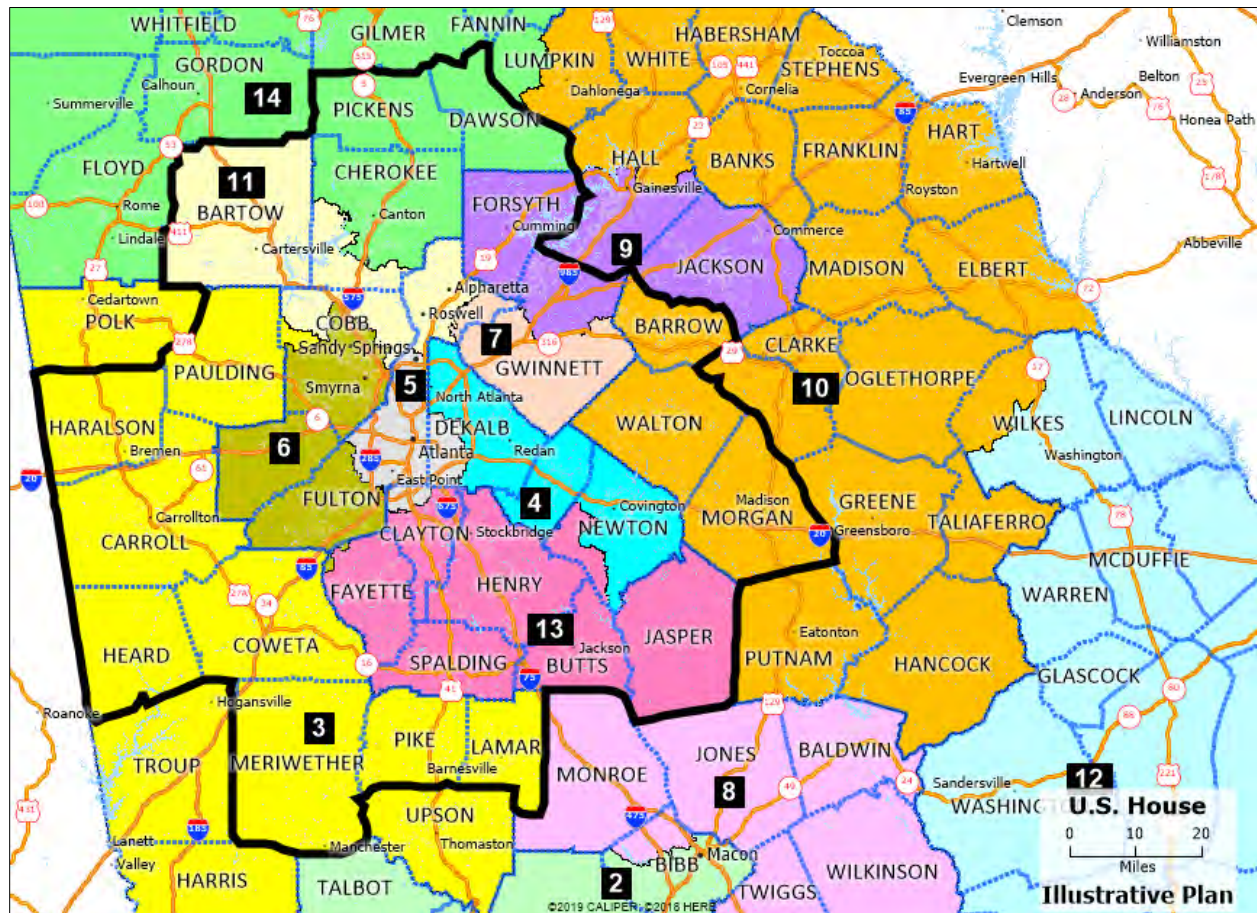
District	Population	Deviation	AP Black	% AP Black	Latino	% Latino	NH White	% NH White
1	765,137	1	230,783	30.16%	59,328	7.75%	440,636	57.59%
2	765,137	1	393,195	51.39%	45,499	5.95%	305,611	39.94%
3	765,135	-1	166,096	21.71%	49,935	6.53%	517,659	67.66%
4	765,136	0	410,019	53.59%	87,756	11.47%	212,004	27.71%
5	765,137	1	392,822	51.34%	56,496	7.38%	273,819	35.79%
6	765,137	1	396,891	51.87%	108,401	14.17%	225,985	29.54%
7	765,137	1	239,717	31.33%	181,851	23.77%	225,905	29.52%
8	765,136	0	241,628	31.58%	54,850	7.17%	443,123	57.91%
9	765,136	0	94,059	12.29%	128,393	16.78%	429,340	56.11%
10	765,137	1	118,199	15.45%	61,244	8.00%	548,312	71.66%
11	765,137	1	110,368	14.42%	81,466	10.65%	492,121	64.32%
12	765,136	0	294,961	38.55%	43,065	5.63%	398,843	52.13%
13	765,135	-1	404,963	52.93%	71,377	9.33%	253,135	33.08%
14	765,135	-1	44,445	5.81%	93,796	12.26%	595,663	77.85%
Total	10,711,908	N/A	3,538,146	33.03%	1,123,457	10.49%	5,362,156	50.06%

54. **Exhibit I-1** contains additional voting age and citizen voting age summaries by district.

B. Illustrative Plan Overview

55. The map in **Figure 12** depicts Metro Atlanta with an overlay of the Illustrative Plan. CD 6, the additional majority-Black district, is anchored in Cobb, Douglas, and Fulton Counties, along with a small part of Fayette County.

Figure 12
Illustrative Plan: Metro Atlanta



56. **Exhibit H-1** is a higher resolution of the Figure 10 map. **Exhibit H-2** is a statewide map that displays all 14 districts under the Illustrative Plan.

57. **Exhibit I-1** is a table reporting 2020 Census population statistics for the Illustrative Plan, as well as CVAP estimates from the Census Bureau’s 2016–2020 Special Tabulation.¹⁰

58. **Exhibit I-2** is a set of maps depicting the Illustrative Plan, zooming in on each of the 14 districts under the Illustrative Plan. Districts in the 2021 Plan that do not change are displayed with red line boundaries.

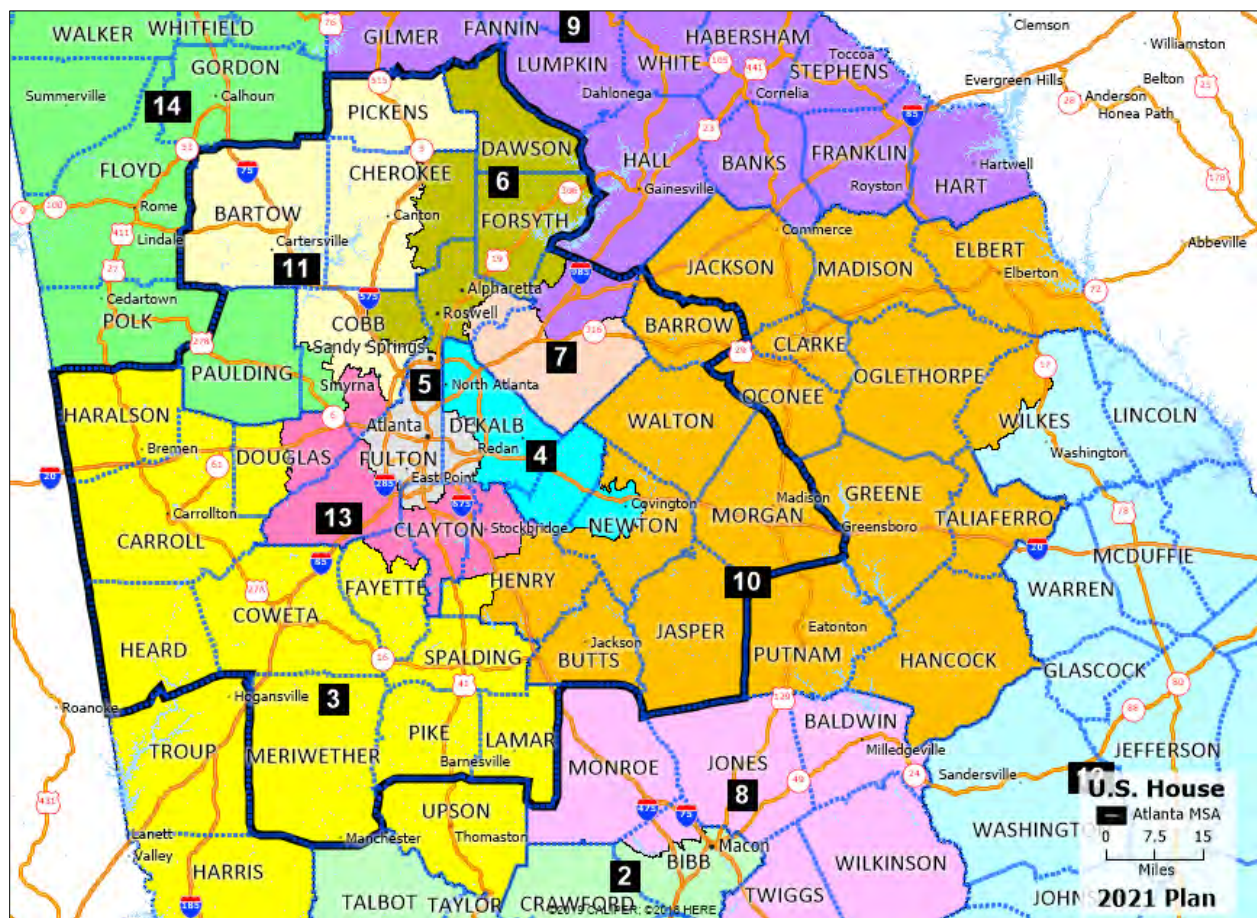
59. **Exhibit I-3** details district assignments by county population in the Illustrative Plan.

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¹⁰ In the summary population exhibits by plan that I have prepared, I also report the NH DOJ Black CVAP metric. The NH DOJ Black CVAP category includes voting age citizens who are either NH SR Black or NH Black and White. An “Any Part Black CVAP” category that would include Black Hispanics cannot be calculated from the 5-Year ACS Census Bureau Special Tabulation. The estimates are disaggregated from the block group level as published by the U.S. Census Bureau. The most current data available is from the 2016–2020 Special Tabulation, with a survey midpoint of July 1, 2018. Source: <https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>. The 2016–2020 estimates reflect 2020 Census population distribution. The 2017–2021 CVAP estimates will be released by the Census Bureau in early 2023.

60. For comparison, the map in **Figure 13** depicts Metro Atlanta and surrounding counties with an overlay of the 2021 Plan. The 2021 Plan splits majority-non-White Cobb County into parts of four districts: from south to north, CD 13, CD 14, CD 11, and CD 6. Southwest Cobb County is in CD 14, which stretches all the way to the suburbs of Chattanooga.

Figure 13
2021 Plan: Metro Atlanta



61. **Exhibit J-1** is a higher resolution of the **Figure 10** map. **Exhibit J-2** is a statewide map that displays all 14 districts under the 2021 Plan.

62. For comparison, **Exhibit K-1** is a table reporting 2020 Census population statistics for the 2021 Plan, as well as CVAP estimates from the Census Bureau's 2016–2020 Special Tabulation.

63. **Exhibit K-2** is a set of maps depicting the 2021 Plan, zooming in on each of the 14 districts under the 2021 Plan.

64. **Exhibit K-3** details district assignments by county population in the 2021 Plan.

C. Communities of Interest

65. In the development of the Illustrative Plan, I prioritized keeping counties whole and minimizing unnecessary county splits. For example, as Illustrative CD 6 (which includes just three Cobb County splits) makes clear, there is no reason to split Cobb County into four pieces (i.e., four splits), as under the 2021 Plan.

66. I also endeavored to keep municipalities intact and avoid splitting VTDs (in that order of priority) wherever possible. In many instances there are geographic conflicts between municipality lines and VTD lines, such that keeping one geographic level whole might require splitting the other.

67. These three levels of geography—counties, municipalities, and VTDs—together with census tracts and census block groups are the best way to achieve a quantifiable measure of the extent to which a redistricting plan respects communities of interest.

68. Going beyond these quantifiable measures of communities of interest, it simply makes more sense to anchor Illustrative CD 6 in the western part of Metro Atlanta. As the Illustrative Plan demonstrates, CD 6 can be drawn in a compact fashion that keeps Atlanta-area urban/suburban/exurban voters together. In sharp contrast, the 2021 Plan—its treatment of Cobb County in particular—inexplicably mixes Appalachian North Georgia with urban/suburban Metro Atlanta. In some redistricting plans, it might be necessary to mix urban and rural voters in a sprawling congressional district. But that is not the case here: Cobb County can be combined in a congressional district with all or part of Douglas, Fulton, and Fayette Counties, all of which are core Metro Atlanta counties under the Atlanta Regional Commission map. Illustrative CD 6 thus unites Georgians in the Metro Atlanta area with shared interests and concerns.

69. In Cobb County, the Illustrative Plan assigns all but noncontiguous zero-population areas of Marietta to CD 6. Kennesaw (population 33,036) is split between CD 6 and CD 11.¹¹ (See **Exhibit M-3**.) By contrast, the 2021 Plan divides populated areas of Marietta (population 60,972) between CD 6 and CD 11 and also divides

¹¹ I placed the east end of Kennesaw in Illustrative CD 6—namely, two whole VTDs (Big Shanty 01 and Kennesaw 1A) and part of another (Kennesaw 3A). Big Shanty 01 contains a group of noncontiguous populated blocks surrounded by the oddly shaped Kennesaw 3A; I split Kennesaw 3A following two census-defined block group boundaries.

populated areas of Smyrna (population 55,663) between CD 11 and CD 13. (See **Exhibit M-4.**)

70. Douglas County is entirely in CD 6 in the Illustrative Plan. The 2021 Plan divides Douglas County between CD 6 and CD 11, splitting Douglasville (population 34,650). (See **Exhibit M-4.**)

71. In Fulton County, the Illustrative Plan and the 2021 Plan follow the boundary of CD 5, which is identical in both plans.

72. Illustrative CD 6 extends into Fayette County to ensure that CD 13 is not overpopulated. In order to meet zero-deviation requirements, the dividing line between Illustrative CD 6 and Illustrative CD 13 generally follows the municipal boundary of Tyrone (population 7,658). (See **Exhibit M-3.**) By contrast, in Fayette County, the 2021 Plan divides populated areas of Fayetteville (population 18,957) between CD 13 and CD 3. (See **Exhibit M-4.**)

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D. BVAP and BCVAP by District

73. Notably, the Illustrative Plan does not reduce the number of preexisting majority-Black districts in the 2021 Plan. For reference, **Figure 14** compares BVAP and BCVAP under the Illustrative Plan and the 2021 Plan. The eight districts that change are identified with a bolded font.

Figure 14
BVAP and BCVAP Comparison: Illustrative Plan and 2021 Plan

District*	Illustrative Plan				2021 Plan		
	% BVAP	% NH BCVAP	% NH DOJ BCVAP		% BVAP	% NH BCVAP	% NH DOJ BCVAP
1	28.17%	29.16%	29.67%		28.17%	29.16%	29.67%
2	49.29%	49.55%	50.001%		49.29%	49.55%	50.001%
3	20.47%	19.64%	20.02%		23.32%	22.53%	22.86%
4	52.77%	55.62%	56.37%		54.52%	57.71%	58.46%
5	49.60%	51.64%	52.35%		49.60%	51.64%	52.35%
6	50.23%	50.18%	50.98%		9.91%	9.72%	10.26%
7	29.82%	31.88%	32.44%		29.82%	31.88%	32.44%
8	30.04%	30.46%	30.76%		30.04%	30.46%	30.76%
9	11.66%	11.29%	11.74%		10.42%	10.03%	10.34%
10	14.31%	15.09%	15.39%		22.60%	22.11%	22.56%
11	13.67%	12.91%	13.48%		17.95%	17.57%	18.30%
12	36.72%	36.60%	37.19%		36.72%	36.60%	37.19%
13	51.13%	49.64%	50.34%		66.75%	66.36%	67.05%
14	5.17%	4.80%	5.19%		14.28%	13.19%	13.71%

*Bold font identifies districts that are changed from the 2021 Plan configuration.

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E. VAP by Race in Majority-Black and Majority-White Districts

74. As shown in **Figure 15**, only about half (49.96%) of Black voters in Georgia reside in a majority-Black congressional district under the 2021 Plan. Under the Illustrative Plan, 57.48% of the Black VAP would reside in a majority-Black district—still far lower than the corresponding 75.50% NH White VAP residing in majority-White districts.

Figure 15
Same-Race VAP in Majority-Black and Majority-White Districts: 2021 Plan and Illustrative Plan

Redistricting Plan	% Black VAP in Majority-Black Districts	%NH White VAP in Majority-White Districts	Difference (% Black VAP minus % NH White VAP)
2021 Plan	49.96%	82.47%	-32.51%
Illustrative Plan	57.48%	75.50%	-18.01%

F. Online Interactive Map

75. The Illustrative Plan can be viewed in detail and analyzed on the Dave's Redistricting website at the following link: <https://davesredistricting.org/join/acc0684b-36b9-4b85-8049-ffb67a63aa57>.

76. For comparison, the 2021 Plan can also be viewed and analyzed on the Dave's Redistricting website at the following link: <https://davesredistricting.org/join/385b8d71-ecdb-4767-80d9-ebd75b8d8c63>.

77. Alternatively, the Illustrative Plan can be viewed with a red-line overlay of the 2021 Plan on the Maptitude Online website at the following link: <https://online.caliper.com/mas-874-drp-290-ujr/maps/lahchqqg000g8gqi3qx9>.

G. Supplemental Plan Information and Comparisons

78. Compactness scores for the Illustrative Plan are about the same as the 2021 Plan—and within the norm in Georgia and elsewhere.¹² **Exhibit L-1** contains compactness scores generated by Maptitude for the Illustrative Plan. Corresponding scores for the 2012 Benchmark Plan and 2021 Plan are in **Exhibit L-2** and **Exhibit L-3**.

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¹² See, for example, the comparison of compactness scores across all states by the geospatial firm Azavea in their white paper titled *Redrawing the Map on Redistricting: 2012 Addendum*, available at: https://redistricting.azavea.com/assets/pdfs/Azavea_Redistricting-White-Paper-Addendum-2012_sm.pdf.

79. **Figure 13** (condensed from the Exhibit L series) is a summary, reporting the mean averages and low scores for the Reock¹³ and Polsby-Popper¹⁴ metrics under both the Illustrative Plan and the 2021 Plan.

Figure 13
Compactness Comparison: Illustrative Plan, 2012 Benchmark, and 2021 Plan

	Reock		Polsby-Popper	
	Mean	Low	Mean	Low
Illustrative Plan	.43	.28	.27	.18
2012 Benchmark	.45	.33	.26	.16
2021 Plan	.44	.31	.27	.16

80. **Exhibit M-1** contains a county and VTD split report generated by Maptitude for the Illustrative Plan. **Exhibit M-2** and **Exhibit M-3** are corresponding split reports for the 2012 Benchmark Plan and the 2021 Plan. **Exhibit M-4** contains the Illustrative Plan’s municipal split report for the 531 incorporated cities and towns. **Exhibit M-5** and **Exhibit M-6** are corresponding split reports for the 2012 Benchmark Plan and the 2021 Plan.

¹³ As the Maptitude for Redistricting software documentation (authored by the Caliper Corporation) explains, “[t]he 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.”

¹⁴ As the Maptitude for Redistricting software documentation (authored by the Caliper Corporation) explains, “[t]he 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.”

81. **Figure 14** summarizes county, 2020 VTD, and municipal splits under the Illustrative Plan, the 2012 Benchmark Plan, and the 2021 Plan.

Figure 14
County, VTD, and Municipal Splits: Illustrative Plan, 2012 Benchmark, and 2021 Plan (All Districts)

	Split Counties*	County Splits*	2020 VTD Splits*	Split Cities/Towns[#]	City/Town Splits*
Illustrative Plan	15	18	43	37	78
2012 Benchmark Plan	16	22	43	40	85
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)

82. The Illustrative Plan and 2021 Plan both split 15 counties. But, as Figure 14 reveals, the Illustrative Plan is superior across the other four categories: **(1)** total county splits (counting multiple splits, i.e., unique county-district combinations in a single county)—18 vs. 21 splits; **(2)** 2020 VTD splits (counting multiple splits and excluding unpopulated areas)—43 vs. 46 splits, **(3)** split municipalities (out of 531)—37 vs. 43 splits; and **(4)** total municipal splits (excluding unpopulated areas)—78 vs. 91 splits.

H. County and Municipal Socioeconomic Characteristics

83. For background on socioeconomic characteristics by race and ethnicity at the state, MSA, county, municipal, and unincorporated-community levels in

Georgia, I have prepared charts based on the 5-Year 2015–2019 ACS. That data is available online.¹⁵

84. In addition, I have prepared charts and reproduced the U.S. Census Bureau’s Table S0201¹⁶ statistical summaries of socioeconomic characteristics from the 1-Year 2021 ACS for Georgia, the two most populous MSAs in the state (Atlanta and Augusta-Richmond County), and the four most populous counties of the Atlanta MSA (Cobb, Dekalb, Fulton, and Gwinnett). Statistics for other, less populous counties are not available in the S0201 series.

85. These charts and data tables document that socioeconomic disparities by race exist at the county and municipal levels throughout Georgia. In an almost unbroken fashion, NH Whites maintain higher levels of socioeconomic well-being.

V. CONCLUSION

86. The Black population in Metro Atlanta is sufficiently numerous and geographically compact to allow for the creation of an additional majority-Black congressional district consistent with traditional redistricting principles, anchored in

¹⁵ The county-level data is available at http://www.fairdata2000.com/ACS_2015_19/Georgia; the community-level data is available at http://www.fairdata2000.com/ACS_2015_19/Georgia/00_Places_2500+; and the state-, metro counties-, and MSA-level data is available at http://www.fairdata2000.com/ACS_2021/Georgia.

¹⁶ The full S0201 data is available at https://data.census.gov/cedsci/table?text=s0201&t=001%3A005%3A451&g=04000000US13,13%240500000_05000000US13067,13089,13121,13135_310XX00US12060,12260&y=2021.

Cobb, Fulton and Douglas Counties, without reducing the number of majority-Black districts in the 2021 Plan.

87. The Illustrative Plan creates an additional majority-Black district in Metro Atlanta, where the Black population has increased by 938,006 persons since 2000—accounting for 75.1% of the statewide Black population increase this century—and where, according to the Governor’s Office of Planning and Budget, the Black population will continue to increase over the course of this decade.¹⁷

#

¹⁷ Source: <https://opb.georgia.gov/census-data/population-projections>.

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 5, 2022

A handwritten signature in black ink that reads "Bill Cooper". The signature is written in a cursive, slightly slanted style.

WILLIAM S. COOPER

DECLARATION OF WILLIAM S. COOPER:
EXHIBIT A

November 30, 2022

William S. Cooper
P.O. Box 16066
Bristol, VA 24209
276-669-8567
bcooper@msn.com

Summary of Redistricting Work

I have a B.A. in Economics from Davidson College in Davidson, North Carolina.

Since 1986, I have prepared proposed redistricting maps of approximately 750 jurisdictions for Section 2 litigation, Section 5 comment letters, and for use in other efforts to promote compliance with the Voting Rights Act of 1965. I have analyzed and prepared election plans in over 100 of these jurisdictions for two or more of the decennial censuses – either as part of concurrent legislative reapportionments or, retrospectively, in relation to litigation involving many of the cases listed below.

From 1986 to 2022, I have prepared election plans for Section 2 litigation in Alabama, Connecticut, Florida, Georgia, Louisiana, Maryland, Mississippi, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, and Wyoming.

Post-2020 Redistricting Experience

Since the release of the 2020 Census, three county commission-level plans I developed as a private consultant have been adopted by local governments in San Juan County, Utah, Bolivar County, Miss., and Washington County, Miss. In addition, a school board plan I developed was adopted by the Jefferson County, Alabama Board of Education (*Stout v. Jefferson County*).

In 2022, I have testified at trial in seven Sec. 2 lawsuits: Alabama (Congress), Arkansas (Supreme and Appellate Courts), Florida (voter suppression), Georgia (State

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House, State Senate, and Congress), Louisiana (Congress) and Maryland (Baltimore County Commission).

2010s Redistricting Experience

I developed statewide legislative plans on behalf of clients in nine states (Alabama, Connecticut, Florida, Georgia, Kentucky, Mississippi, South Carolina, Texas, and Virginia), as well as over 150 local redistricting plans in approximately 30 states – primarily for groups working to protect minority voting rights. In addition, I have prepared congressional plans for clients in eight states (Alabama, Florida, Georgia, Louisiana, Maryland, Ohio, Pennsylvania, South Carolina, and Virginia).

In March 2011, I was retained by the Sussex County, Virginia Board of Supervisors and the Bolivar County, Mississippi Board of Supervisors to draft new district plans based on the 2010 Census. In the summer of 2011, both counties received Section 5 preclearance from the U.S. Department of Justice (DOJ).

Also in 2011, I was retained by way of a subcontract with Olmedillo X5 LLC to assist with redistricting for the Miami-Dade County, Florida Board of Commissioners and the Miami-Dade, Florida School Board. Final plans were adopted in late 2011 following public hearings.

In the fall of 2011, I was retained by the City of Grenada, Mississippi to provide redistricting services. The ward plan I developed received DOJ preclearance in March 2012.

In 2012 and 2013, I served as a redistricting consultant to the Tunica County, Mississippi Board of Supervisors and the Claiborne County, Mississippi Board of Supervisors.

In *Montes v. City of Yakima* (E.D. Wash. Feb. 17, 2015) the court adopted, as a remedy for the Voting Rights Act Section 2 violation, a seven single-member district plan

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that I developed for the Latino plaintiffs. I served as the expert for the Plaintiffs in the liability and remedy phases of the case.

In *Pope v. Albany County* (N.D.N.Y. Mar. 24, 2015), the court approved, as a remedy for a Section 2 violation, a plan drawn by the defendants, creating a new Black-majority district. I served as the expert for the Plaintiffs in the liability and remedy phases of the case.

In 2016, two redistricting plans that I developed on behalf of the plaintiffs for consent decrees in Section 2 lawsuits in Georgia were adopted (*NAACP v. Fayette County, Georgia* and *NAACP v. Emanuel County, Georgia*).

In 2016, two federal courts granted summary judgment to the plaintiffs based in part on my *Gingles 1* testimony: *Navajo Nation v. San Juan County, Utah* (C.D. Utah 2016) and *NAACP v. Ferguson-Florissant School District, Missouri* (E. D. Mo. August 22, 2016).

Also in 2016, based in part on my analysis, the City of Pasco, Washington admitted to a Section 2 violation. As a result, in *Glatt v. City of Pasco* (E.D. Wash. Jan. 27, 2017), the court ordered a plan that created three Latino majority single-member districts in a 6 district, 1 at-large plan.

In 2018, I served as the redistricting consultant to the Governor Wolf interveners at the remedial stage of *League of Women Voters, et al. v. Commonwealth of Pennsylvania*.

In August 2018, the Wenatchee City Council adopted a hybrid election plan that I developed – five single-member districts with two members at-large. The Wenatchee election plan is the first plan adopted under the Washington Voting Rights Acts of 2018.

In February 2019, a federal court ruled in favor of the plaintiffs in a Section 2 case regarding Senate District 22 in Mississippi, based in part on my *Gingles 1* testimony in *Thomas v. Bryant* (S.D. Ms. Feb 16, 2019).

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In the summer of 2019, I developed redistricting plans for the Grand County (Utah) Change of Form of Government Study Committee.

In the fall of 2019, a redistricting plan I developed for a consent decree involving the Jefferson County, Alabama Board of Education was adopted *Traci Jones, et al. v. Jefferson County Board of Education, et al.*

In May 2020, a federal court ruled in favor of the plaintiffs in a Section 2 case in *NAACP et al. v. East Ramapo Central School District, NY*, based in part on my *Gingles* 1 testimony. In October 2020, the federal court adopted a consent decree plan I developed for elections to be held in February 2021.

In May and June of 2020, I served as a consultant to the City of Quincy, Florida – the Defendant in a Section 2 lawsuit filed by two Anglo voters (*Baroody v. City of Quincy*). The federal court for the Northern District of Florida ruled in favor of the Defendants. The Plaintiffs voluntarily dismissed the case.

In the summer of 2020, I provided technical redistricting assistance to the City of Chestertown, Maryland.

I am currently a redistricting consultant and expert for the plaintiffs in *Jayla Allen v. Waller County, Texas*. I testified remotely at trial in October 2020.

Since 2011, I have served as a redistricting and demographic consultant to the Massachusetts-based Prison Policy Initiative for a nationwide project to end prison-based gerrymandering. I have analyzed proposed and adopted election plans in about 25 states as part of my work.

In 2018 (Utah) and again in 2020 (Arizona), I have provided technical assistance to the Rural Utah Project for voter registration efforts on the Navajo Nation Reservation.

Post-2010 Demographics Experience

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My trial testimony in Section 2 lawsuits usually includes presentations of U.S. Census data with charts, tables, and/or maps to demonstrate socioeconomic disparities between non-Hispanic Whites and racial or ethnic minorities.

I served as a demographic expert for plaintiffs in four state-level voting cases related to the Covid-19 pandemic (South Carolina, Alabama, and Louisiana) and state court in North Carolina.

I have also served as an expert witness on demographics in non-voting trials. For example, in an April 2017 opinion in *Stout v. Jefferson County Board of Education* (Case no.2:65-cv-00396-MHH), a school desegregation case involving the City of Gardendale, Ala., the court made extensive reference to my testimony.

I provide technical demographic and mapping assistance to the Food Research and Action Center (FRAC) in Washington D.C and their constituent organizations around the country. Most of my work with FRAC involves the Summer Food Program and Child and Adult Care Food Program. Both programs provide nutritional assistance to school-age children who are eligible for free and reduced price meals. As part of this project, I developed an online interactive map to determine site eligibility for the two programs that has been in continuous use by community organizations and school districts around the country since 2003. The map is updated annually with new data from a Special Tabulation of the American Community Survey prepared by the U.S. Census Bureau for the Food and Nutrition Service of the U.S. Department of Agriculture.

Historical Redistricting Experience

In the 1980s and 1990s, I developed voting plans in about 400 state and local jurisdictions – primarily in the South and Rocky Mountain West. During the 2000s and

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2010s, I prepared draft election plans involving about 350 state and local jurisdictions in 25 states. Most of these plans were prepared at the request of local citizens' groups, national organizations such as the NAACP, tribal governments, and for Section 2 or Section 5 litigation.

Election plans I developed for governments in two counties – Sussex County, Virginia and Webster County, Mississippi – were adopted and precleared in 2002 by the U.S. Department of Justice. A ward plan I prepared for the City of Grenada, Mississippi was precleared in August 2005. A county supervisors' plan I produced for Bolivar County, Mississippi was precleared in January 2006.

In August 2005, a federal court ordered the State of South Dakota to remedy a Section 2 voting rights violation and adopt a state legislative plan I developed (*Bone Shirt v. Hazeltine*).

A county council plan I developed for Native American plaintiffs in a Section 2 lawsuit (*Blackmoon v. Charles Mix County*) was adopted by Charles Mix County, South Dakota in November 2005. A plan I drafted for Latino plaintiffs in Bethlehem, Pennsylvania (*Pennsylvania Statewide Latino Coalition v. Bethlehem Area School District*) was adopted in March 2009. Plans I developed for minority plaintiffs in Columbus County, North Carolina and Montezuma- Cortez School District in Colorado were adopted in 2009.

Since 1986, I have testified at trial as an expert witness on redistricting and demographics in federal courts in the following voting rights cases (approximate most recent testimony dates are in parentheses). I also filed declarations and was deposed in most of these cases.

Alabama

Caster v. Merrill (2022)

Chestnut v. Merrill (2019)

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Alabama State Conference of the NAACP v. Alabama (2018)
Alabama Legislative Black Caucus et al. v. Alabama et al. (2013)

Arkansas

The Christian Ministerial Alliance v. Hutchinson (2022)

Colorado

Cuthair v. Montezuma-Cortez School Board (1997)

Florida

NAACP v. Lee (2022)

Baroody v. City of Quincy (2020)

Georgia

Pendergrass v. Raffensperger (2022)

Alpha Phi Alpha v. Raffensperger (2022)

Cofield v. City of LaGrange (1996)

Love v. Deal (1995)

Askew v. City of Rome (1995)

Woodard v. Lumber City (1989)

Louisiana

Galmon v. Ardoin (2022)

Terrebonne Parish NAACP v. Jindal, et al. (2017)

Wilson v. Town of St. Francisville (1996)

Reno v. Bossier Parish (1995)

Knight v. McKeithen (1994)

Maryland

NAACP v. Baltimore County (2022)

Cane v. Worcester County (1994)

Mississippi

Thomas v. Bryant (2019)

Fairley v. Hattiesburg (2014)

Boddie v. Cleveland School District (2010)

Fairley v. Hattiesburg (2008)

Boddie v. Cleveland (2003)

Jamison v. City of Tupelo (2006)

Smith v. Clark (2002)

NAACP v. Fordice (1999)

Addy v Newton County (1995)

Ewing v. Monroe County (1995)

Gunn v. Chickasaw County (1995)

Nichols v. Okolona (1995)

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Montana

Old Person v. Brown (on remand) (2001)

Old Person v. Cooney (1998)

Missouri

Missouri NAACP v. Ferguson-Florissant School District (2016)

Nebraska

Stabler v. Thurston County (1995)

New York

NAACP v. East Ramapo Central School District (2020)

Pope v. County of Albany (2015)

Arbor Hills Concerned Citizens v. Albany County (2003)

Ohio

A. Philip Randolph Institute, et al. v. Ryan (2019)

South Carolina

Smith v. Beasley (1996)

South Dakota

Bone Shirt v. Hazeltine (2004)

Cottier v. City of Martin (2004)

Tennessee

Cousins v. McWherter (1994)

Rural West Tennessee African American Affairs Council v. McWherter (1993)

Texas

Jayla Allen v. Waller County, Texas

Utah

Navajo Nation v. San Juan County (2017), brief testimony –11 declarations, 2 depositions

Virginia

Smith v. Brunswick County (1991)

Henderson v. Richmond County (1988)

McDaniel v. Mehfoud (1988)

White v. Daniel (1989)

Wyoming

Large v. Fremont County (2007)

In addition, I have filed expert declarations or been deposed in the following cases that did not require trial testimony. The dates listed indicate the deposition date or

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date of last declaration or supplemental declaration:

Alabama

People First of Alabama v. Merrill (2020), Covid-19 demographics only
Alabama State NAACP v. City of Pleasant Grove (2019)
James v. Jefferson County Board of Education (2019)
Voketz v. City of Decatur (2018)

Arkansas

Mays v. Thurston (2020)-- Covid-19 demographics only)

Connecticut

NAACP v. Merrill (2020)

Florida

Florida State Conference of the NAACP v. Lee, et al., (2021)
Calvin v. Jefferson County (2016)
Thompson v. Glades County (2001)
Johnson v. DeSoto County (1999)
Burton v. City of Belle Glade (1997)

Georgia

Dwight v. Kemp (2018)
Georgia NAACP et al. v. Gwinnett County, GA (2018)
Georgia State Conference NAACP et al v. Georgia (2018)
Georgia State Conference NAACP, et al. v. Fayette County (2015)
Knighton v. Dougherty County (2002)
Johnson v. Miller (1998)
Jones v. Cook County (1993)

Kentucky

Herbert v. Kentucky State Board of Elections (2013)

Louisiana

Power Coalition for Equity and Justice v. Edwards (2020), Covid-19 demographics only
Johnson v. Ardoin (2019)
NAACP v. St. Landry Parish Council (2005)
Prejean v. Foster (1998)
Rodney v. McKeithen (1993)

Maryland

Baltimore County NAACP v. Baltimore County (2022)
Benisek v. Lamone (2017)
Fletcher v. Lamone (2011)

Mississippi

Partee v. Coahoma County (2015)

November 30, 2022

Figgs v. Quitman County (2015)
West v. Natchez (2015)
Williams v. Bolivar County (2005)
Houston v. Lafayette County (2002)
Clark v. Calhoun County (on remand)(1993)
Teague v. Attala County (on remand)(1993)
Wilson v. Clarksdale (1992)
Stanfield v. Lee County(1991)

Montana

Alden v. Rosebud County (2000)

North Carolina

Lewis v. Alamance County (1991)
Gause v. Brunswick County (1992)
Webster v. Person County (1992)

Rhode Island

Davidson v. City of Cranston (2015)

South Carolina

Thomas v. Andino (2020), Covid-19 demographics only
Vander Linden v. Campbell (1996)

South Dakota

Kirkie v. Buffalo County (2004)
Emery v. Hunt (1999)

Tennessee

NAACP v. Frost, et al. (2003)

Virginia

Moon v. Beyer (1990)

Washington

Glatt v. City of Pasco (2016)
Montes v. City of Yakima (2014)

###

DECLARATION OF WILLIAM S. COOPER:
EXHIBIT B

Exhibit B – Methodology and Sources

1. In the preparation of this report, I analyzed population and geographic data from the Decennial Census and the American Community Survey.

2. For my redistricting analysis, I used a geographic information system (GIS) software package called *Maptitude for Redistricting*, developed by the Caliper Corporation. This software is deployed by many local and state governing bodies across the country for redistricting and other types of demographic analysis.

3. The geographic boundary files that I used with *Maptitude* are created from the U.S. Census 1990-2020 TIGER (Topologically Integrated Geographic Encoding and Referencing) files.

4. I used population data from the 1990-2020 PL 94-171 data files published by the U.S. Census Bureau. The PL 94-171 dataset is published in electronic format and is the complete count population file designed by the Census Bureau for use in legislative redistricting. The file contains basic race and ethnicity data on the total population and voting-age population found in units of Census geography such as states, counties, municipalities, townships, reservations, school districts, census tracts, census block groups, precincts (called voting districts or “VTDs” by the Census Bureau) and census blocks.

5. I obtained and used 2020 block-level disaggregated citizenship data (2015-2019 ACS and 2016-2020 ACS) from the Redistricting Data Hub via <https://redistrictingdatahub.org/>

6. The attorneys for the plaintiffs provided me with incumbent addresses.

7. For my analysis, I also relied on shapefiles for current and historical legislative plans available on the website of the Legislative and Congressional Reapportionment Office.

8. In addition, I obtained shapefiles for the House, Senate, and Congressional plans in effect during the early 2000's from the American Redistricting Project.

<https://thearp.org/blog/map-archive/>

9. I developed the illustrative plans presented in this report using *Maptitude for Redistricting*. The *Maptitude for Redistricting* software processes the TIGER files to produce a map for display on a computer screen. The software also merges demographic data from the PL 94-171 files to match the relevant decennial Census geography.

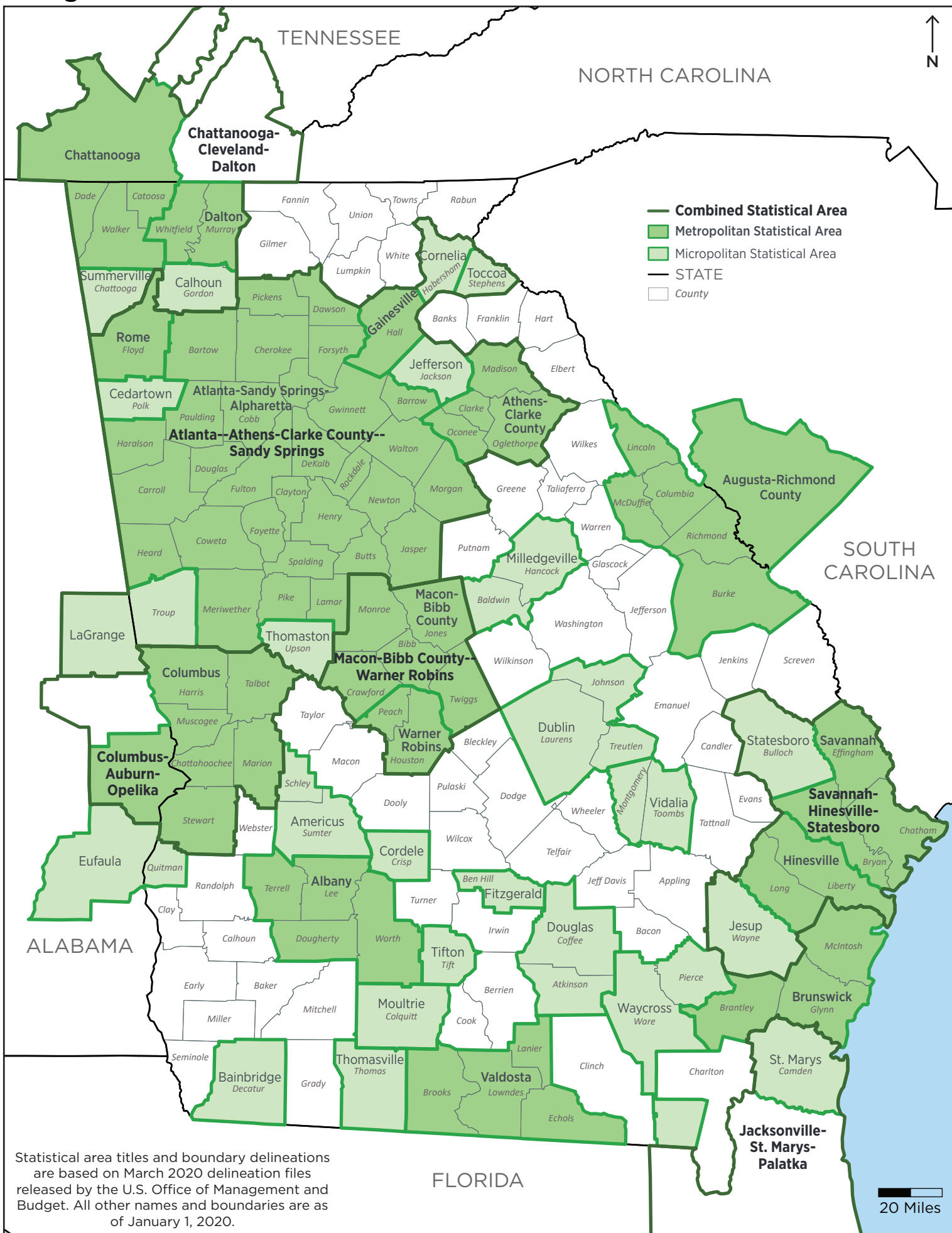
10. I also reviewed and used data from the American Community Survey ("ACS") conducted by the Census Bureau – specifically, the 1-year 2021 ACS, the 5-year 2015-2019 ACS, and the 5-year 2016-2020 ACS Special Tabulation of citizen population and voting age population by race and ethnicity (prepared by the

Census Bureau for the U.S. Department of Justice) and available from the link below:

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

#

DECLARATION OF WILLIAM S. COOPER:
EXHIBIT C



DECLARATION OF WILLIAM S. COOPER:
EXHIBIT D

Metro Atlanta Black Population Change 2010-2020 by County

Illustrative District 6 Counties with Highlight

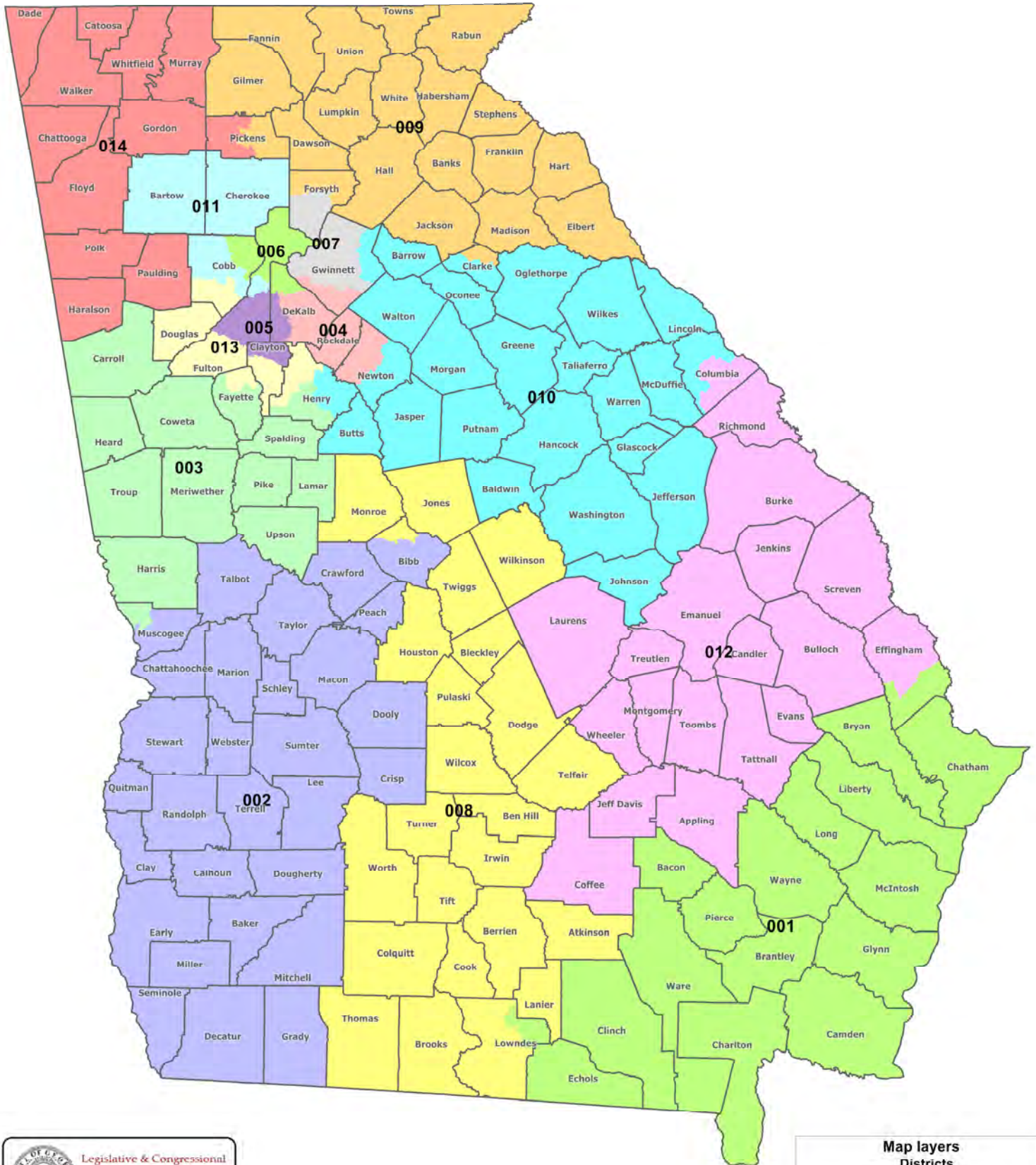
2010 -2020 Change

County (Metro Atlanta in Bold)	2020 Pop	AP Black	Latino	NH White	18+ Pop	18+ AP Black	18+ Latino	NH18+ White	Black Pop		Black		% Black
									Pop Change	Change	18+ Pop Change	18+Pop change	18+Pop change
BARROW	83505	11907	10560	55582	62195	8222	6726	43241	14138	3287	12417	2553	45.0%
BARTOW	108901	13395	10751	80159	83570	9377	6817	63759	8744	2365	10213	2083	28.6%
BUTTS	25434	7212	803	16628	20360	5660	559	13510	1779	595	2030	564	11.1%
CARROLL	119148	24618	9586	80725	90996	17827	6129	63803	8621	3049	8593	2916	19.6%
CHEROKEE	266620	21687	32111	197867	202928	14976	20915	156155	52274	7817	47502	6222	71.1%
CLAYTON	297595	216351	42546	25902	220578	158854	27378	23396	38171	40374	36133	37475	30.9%
COBB	766149	223116	111240	369182	591848	166141	74505	303300	78071	42151	80257	41430	33.2%
COWETA	146158	28289	11053	99421	111155	20196	7384	78073	18841	5130	18670	4501	28.7%
DAWSON	26798	392	1605	23544	21441	249	1047	19183	4468	203	4194	146	141.7%
DEKALB	764382	407451	81471	215895	595276	314230	55506	180161	72489	22898	68519	34330	12.3%
DOUGLAS	144237	74260	16035	49877	108428	53377	10212	41416	11834	20007	13558	17860	50.3%
FAYETTE	119194	32076	9480	68144	91798	23728	6168	55102	12627	9578	13330	8373	54.5%
FORSYTH	251283	13222	25226	159407	181193	8751	16204	122017	75772	7917	59087	5460	165.9%
FULTON	1066710	477624	86302	404793	847182	368635	61914	340541	146129	60732	146287	62029	20.2%
GWINNETT	957062	287687	220460	310583	709484	202762	146659	252041	151741	86155	138870	71745	54.8%
HARALSON	29919	1541	497	26825	22854	1106	323	20617	1139	13	1307	44	4.1%
HEARD	11412	1142	253	9589	8698	832	153	7407	-422	-101	-88	-60	-6.7%
HENRY	240712	125211	18437	86297	179973	89657	12030	69744	36790	46914	35708	38225	74.3%
JASPER	14588	2676	684	10771	11118	1966	402	8400	688	-466	693	-306	-13.5%
LAMAR	18500	5220	475	12344	14541	4017	323	9852	183	-611	93	-577	-12.6%
MERIWETHER	20613	7547	475	12084	16526	5845	299	9994	-1379	-1204	-256	-393	-6.3%
MORGAN	20097	4339	712	14487	15574	3280	434	11452	2229	20	2145	160	5.1%
NEWTON	112483	55901	7164	46746	84748	40433	4561	37631	12525	13634	13663	12748	46.0%
PAULDING	168661	41296	12564	108444	123998	28164	7974	83066	26337	15231	24768	11767	71.8%
PICKENS	33216	512	1198	30122	26799	319	755	24626	3785	124	4005	81	34.0%
PIKE	18889	1613	348	16313	14337	1254	207	12422	1020	-333	1306	-210	-14.3%
ROCKDALE	93570	57204	9540	24500	71503	41935	6089	21457	8355	16468	9202	14643	53.7%
SPALDING	67306	24522	3666	37105	52123	17511	2377	30612	3233	2894	4261	2752	18.6%
WALTON	96673	18804	5228	68499	73098	13165	3236	53647	12905	5086	11918	4068	44.7%
29-County MSA	6,089,815	2,186,815	730,470	2,661,835	4,654,322	1,622,469	487,286	2,156,625	803,087	409,927	768,385	380,629	30.7%

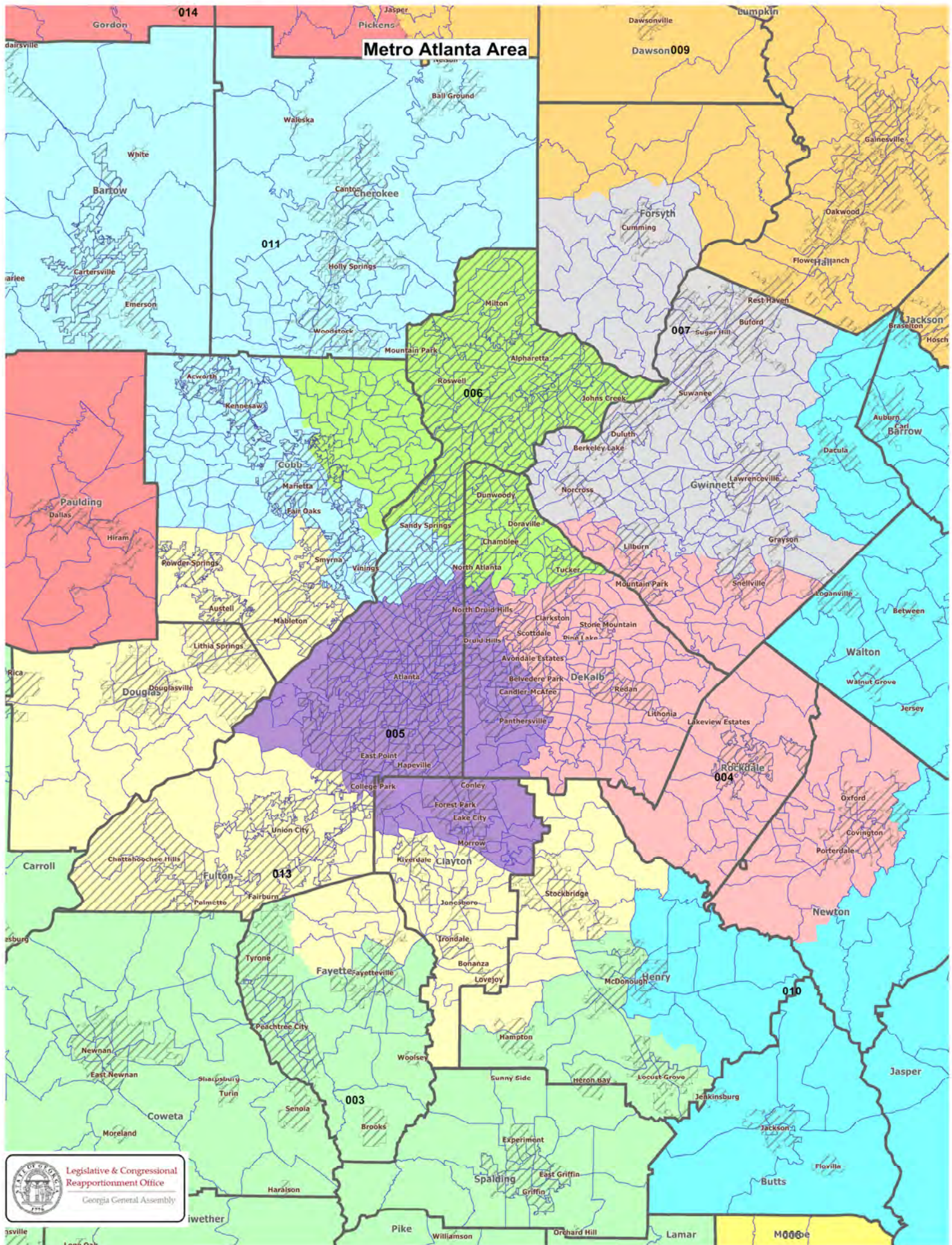
DECLARATION OF WILLIAM S. COOPER:
EXHIBIT E

Georgia Congressional Districts

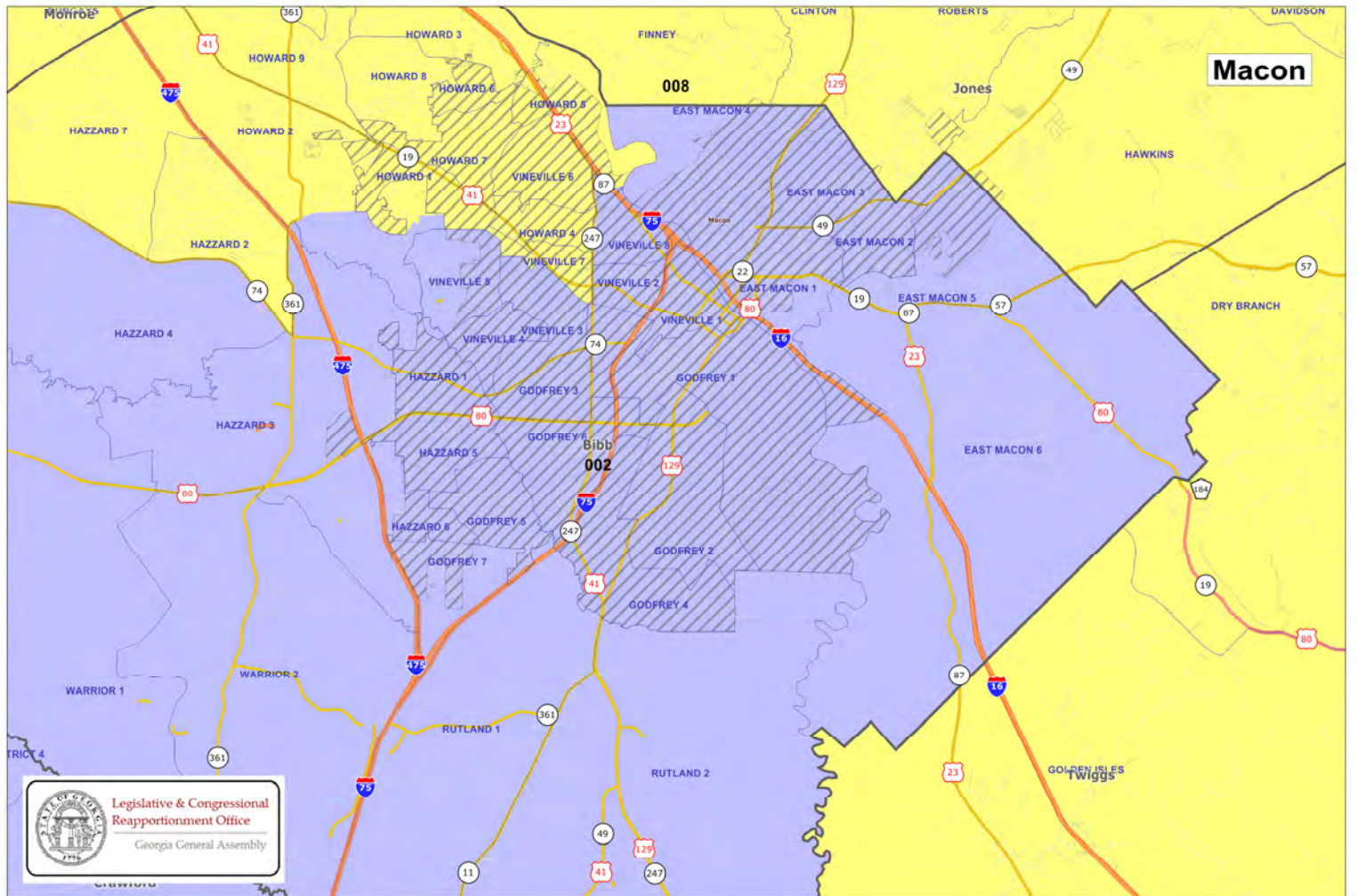
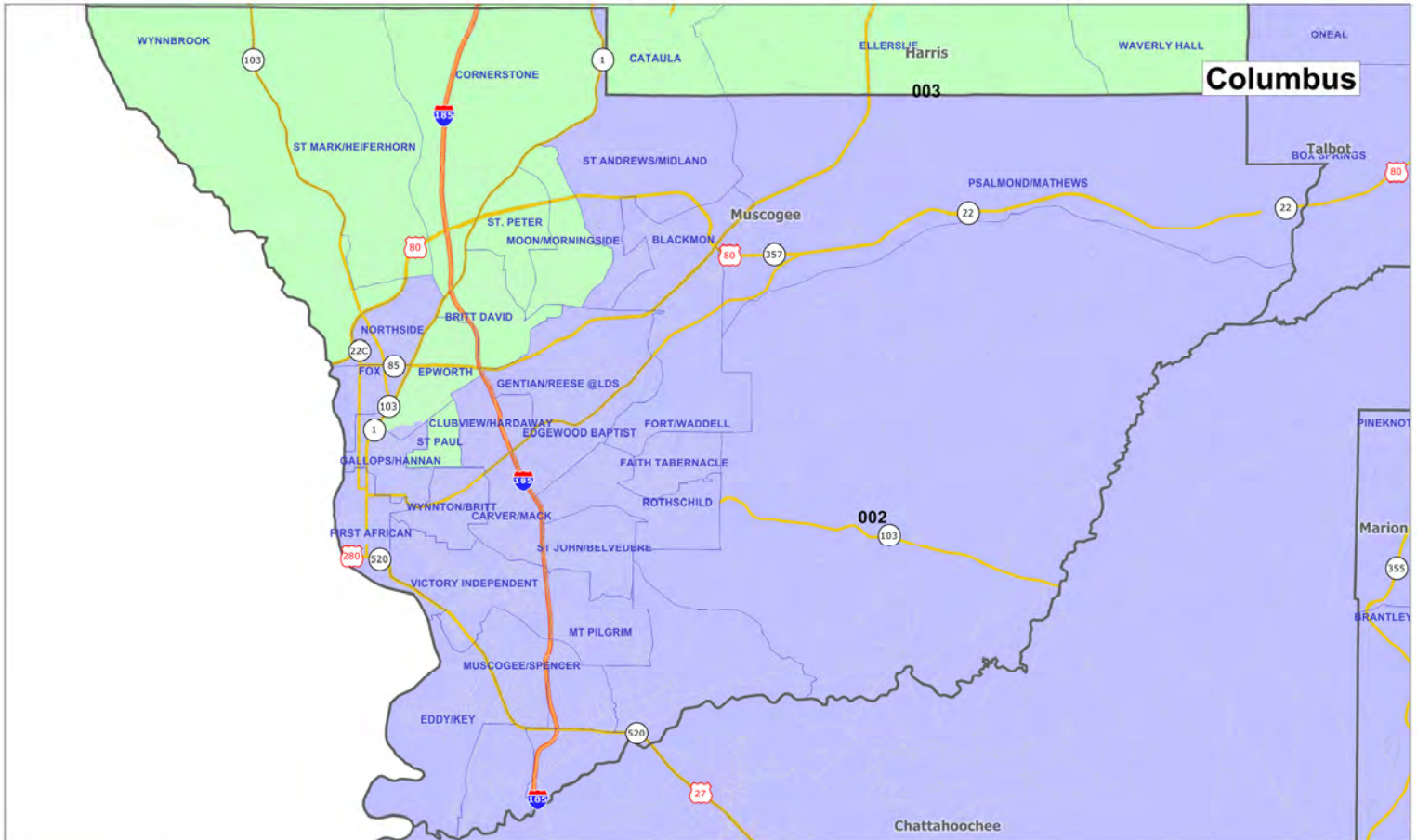
Client: State
Plan: Congress12
Type: Congress



Georgia Congressional Districts

Client: State
Plan: Congress12
Type: Congress

Georgia Congressional Districts



Plan Name: **Congress12**Plan Type : **Congress**User: **staff**Administrator: **State**

DISTRICT	POPULATION	DEVIATION	% DEVIATION	BLACK	% BLACK	BLACK COMBO	TOTAL BLACK	%TOTAL BLACK	HISP. OR LATINO	%HISP
001	691,974	-1	0.00%	207,711	30.02%	8,443	216,154	31.24%	39,767	5.75%
VAP	518,743			147,082	28.35%	3,105	150,187	28.95%	25,656	4.95%
002	691,976	1	0.00%	354,925	51.29%	6,835	361,760	52.28%	31,577	4.56%
VAP	516,392			252,570	48.91%	2,847	255,417	49.46%	20,824	4.03%
003	691,974	-1	0.00%	159,578	23.06%	7,034	166,612	24.08%	34,910	5.04%
VAP	511,518			112,315	21.96%	2,247	114,562	22.40%	22,243	4.35%
004	691,976	1	0.00%	397,911	57.50%	10,608	408,519	59.04%	64,605	9.34%
VAP	503,508			278,767	55.36%	5,240	284,007	56.41%	41,041	8.15%
005	691,976	1	0.00%	409,269	59.14%	9,031	418,300	60.45%	54,614	7.89%
VAP	541,900			306,497	56.56%	5,708	312,205	57.61%	37,210	6.87%
006	691,975	0	0.00%	86,265	12.47%	6,771	93,036	13.44%	92,409	13.35%
VAP	519,046			64,149	12.36%	3,330	67,479	13.00%	62,253	11.99%
007	691,975	0	0.00%	125,010	18.07%	8,298	133,308	19.26%	129,930	18.78%
VAP	489,868			83,770	17.10%	3,453	87,223	17.81%	82,112	16.76%
008	691,976	1	0.00%	204,995	29.62%	5,455	210,450	30.41%	39,578	5.72%
VAP	518,240			145,966	28.17%	1,898	147,864	28.53%	25,129	4.85%
009	691,975	0	0.00%	46,065	6.66%	3,675	49,740	7.19%	79,413	11.48%
VAP	520,856			33,384	6.41%	1,014	34,398	6.60%	46,597	8.95%
010	691,976	1	0.00%	172,398	24.91%	5,577	177,975	25.72%	32,589	4.71%
VAP	521,343			123,759	23.74%	1,963	125,722	24.12%	20,668	3.96%
011	691,975	0	0.00%	107,707	15.57%	7,554	115,261	16.66%	75,109	10.85%
VAP	512,598			76,732	14.97%	3,130	79,862	15.58%	47,452	9.26%
012	691,975	0	0.00%	238,190	34.42%	7,297	245,487	35.48%	36,890	5.33%
VAP	518,253			169,848	32.77%	2,741	172,589	33.30%	23,384	4.51%
013	691,976	1	0.00%	382,493	55.28%	11,657	394,150	56.96%	71,303	10.30%
VAP	495,652			262,130	52.89%	5,163	267,293	53.93%	43,142	8.70%
014	691,974	-1	0.00%	57,918	8.37%	5,428	63,346	9.15%	70,995	10.26%
VAP	508,184			40,501	7.97%	1,480	41,981	8.26%	41,291	8.13%

Plan Name: **Congress12**Plan Type : **Congress**User: **staff**Administrator: **State**

DISTRICT	POPULATION	DEVIATION	% DEVIATION	BLACK	% BLACK	BLACK COMBO	TOTAL BLACK	%TOTAL BLACK	HISP. OR LATINO	%HISP
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Total Population: 9,687,653

Ideal Value: 691,975

Summary Statistics

Population Range: 691,974 to 691,976

Absolute Overall Range: 2

Relative Range: 0.00% to 0.00%

Relative Overall Range: 0.00%

DECLARATION OF WILLIAM S. COOPER:
EXHIBIT F

Population Summary Report

Georgia U.S. House -- 2020 Census -- 2012 Benchmark Plan

District	Population	Deviation	% Deviation	AP Black	% AP Black	Latino	% Latino	NH White	% NH White
01	755781	-9355	-1.22%	230595	30.51%	59037	7.81%	431902	57.15%
02	673028	-92108	-12.04%	357993	53.19%	38403	5.71%	259967	38.63%
03	763075	-2061	-0.27%	210025	27.52%	49428	6.48%	467888	61.32%
04	773761	8625	1.13%	478654	61.86%	84862	10.97%	160581	20.75%
05	788126	22990	3.00%	450410	57.15%	65869	8.36%	229087	29.07%
06	765793	657	0.09%	111594	14.57%	107495	14.04%	425616	55.58%
07	859440	94304	12.33%	192903	22.45%	179379	20.87%	327075	38.06%
08	719919	-45217	-5.91%	234178	32.53%	49867	6.93%	410808	57.06%
09	775367	10231	1.34%	58090	7.49%	102240	13.19%	580920	74.92%
10	775012	9876	1.29%	204453	26.38%	52350	6.75%	480661	62.02%
11	802515	37379	4.89%	147155	18.34%	101218	12.61%	501446	62.48%
12	738624	-26512	-3.47%	270885	36.67%	49500	6.70%	390796	52.91%
13	792916	27780	3.63%	509032	64.20%	95919	12.10%	164627	20.76%
14	728551	-36585	-4.78%	82179	11.28%	87890	12.06%	530782	72.85%
Total	10711908		24.37%	3538146	33.03%	1123457	10.49%	5362156	50.06%

District	18+ Pop	18+ SR Black	% 18+ SR Black	18+ AP Black	% 18+ AP Black	18+ Latino	% 18+ Latino	18+ NH White	% 18+ NH White
01	582105	157603	27.07%	165850	28.49%	39826	6.84%	349176	59.99%
02	518145	257952	49.78%	264896	51.12%	25509	4.92%	214262	41.35%
03	583475	144198	24.71%	151383	25.95%	32235	5.52%	373021	63.93%
04	587002	342687	58.38%	357025	60.82%	55810	9.51%	136384	23.23%
05	635913	337506	53.07%	350672	55.14%	47194	7.42%	200864	31.59%
06	589600	76565	12.99%	85256	14.46%	72875	12.36%	342630	58.11%
07	635791	125592	19.75%	136048	21.40%	120021	18.88%	261700	41.16%
08	549306	163622	29.79%	169305	30.82%	32639	5.94%	328086	59.73%
09	603376	37833	6.27%	41315	6.85%	64783	10.74%	471167	78.09%
10	599155	143138	23.89%	149396	24.93%	34397	5.74%	386676	64.54%
11	622759	100488	16.14%	109414	17.57%	67723	10.87%	404958	65.03%
12	565091	189400	33.52%	197124	34.88%	32450	5.74%	313867	55.54%
13	596630	359769	60.30%	373783	62.65%	62186	10.42%	140659	23.58%
14	551926	52066	9.43%	56519	10.24%	55270	10.01%	418883	75.89%
Total	8220274	2488419	30.27%	2607986	31.73%	742918	9.04%	4342333	52.82%

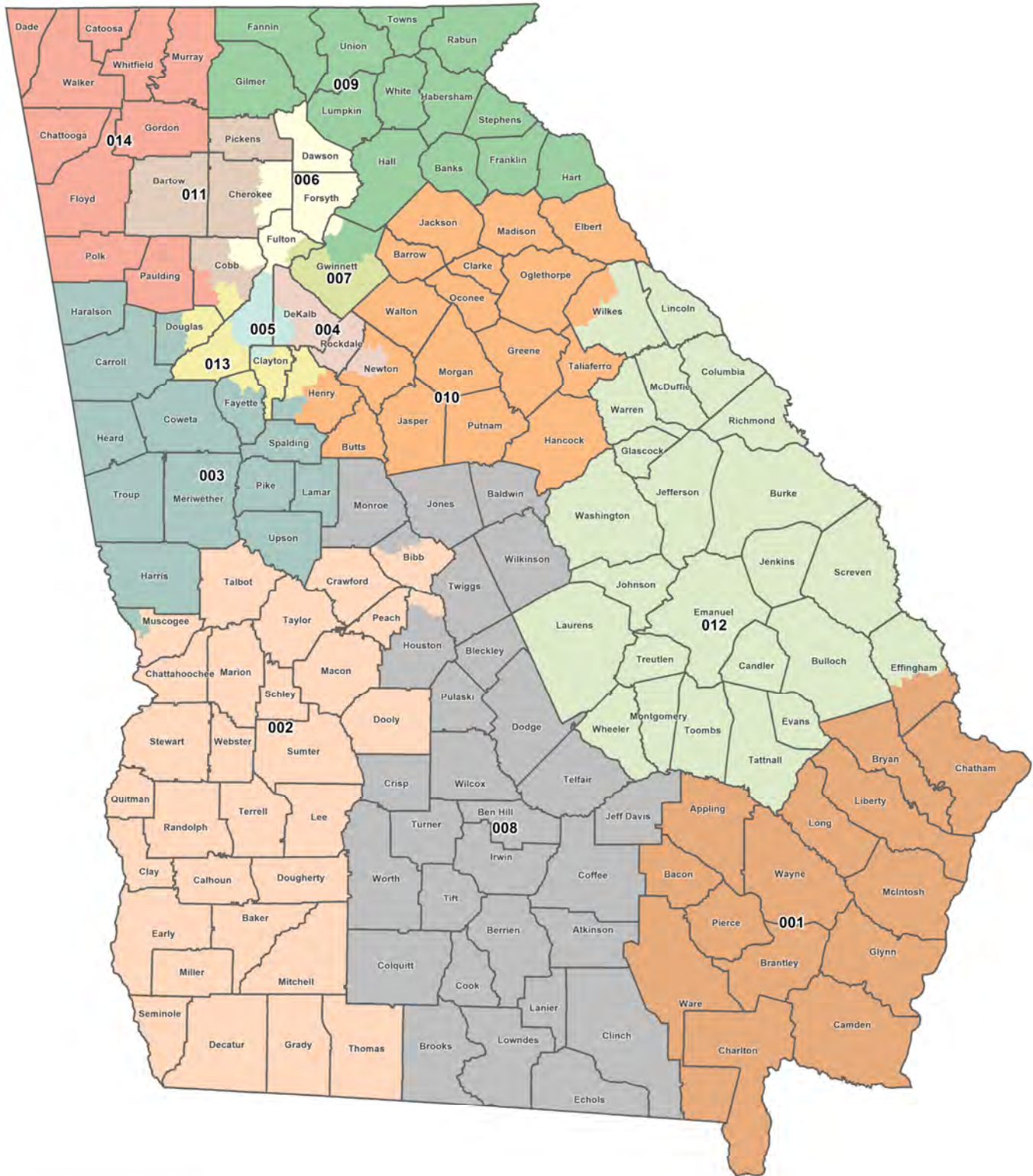
District	% NH Single-Race Black CVAP*	% Latino CVAP	% NH Single-Race Asian CVAP*	% SR NH White CVAP
001	30.09%	4.47%	1.55%	62.88%
002	51.78%	2.96%	1.00%	43.47%
003	24.88%	3.61%	1.60%	69.06%
004	63.91%	3.95%	3.45%	27.85%
005	59.21%	3.50%	3.41%	33.18%
006	15.20%	5.78%	8.07%	70.14%
007	22.46%	9.90%	11.84%	54.91%
008	31.28%	3.20%	1.28%	63.51%
009	7.15%	5.32%	1.12%	85.39%
010	25.49%	3.29%	1.89%	68.68%
011	17.37%	5.62%	2.67%	73.54%
012	35.23%	3.75%	1.45%	58.83%
013	61.85%	5.45%	2.46%	29.45%
014	9.57%	5.27%	0.85%	83.31%

Note: Citizen Voting Age Population (CVAP) percentages are disaggregated from block-group level ACS estimates (with a survey midpoint of July 2017)

Source for CVAP disaggregation: Redistricting Data Hub

<https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-2020-block-level-2019/>

DECLARATION OF WILLIAM S. COOPER:
EXHIBIT G

Proposed Joint Congressional Districts of GeorgiaLegislative and Congressional
Reapportionment OfficeGeorgia General Assembly
Suite 407 Coconello Legislative Office Bldg.

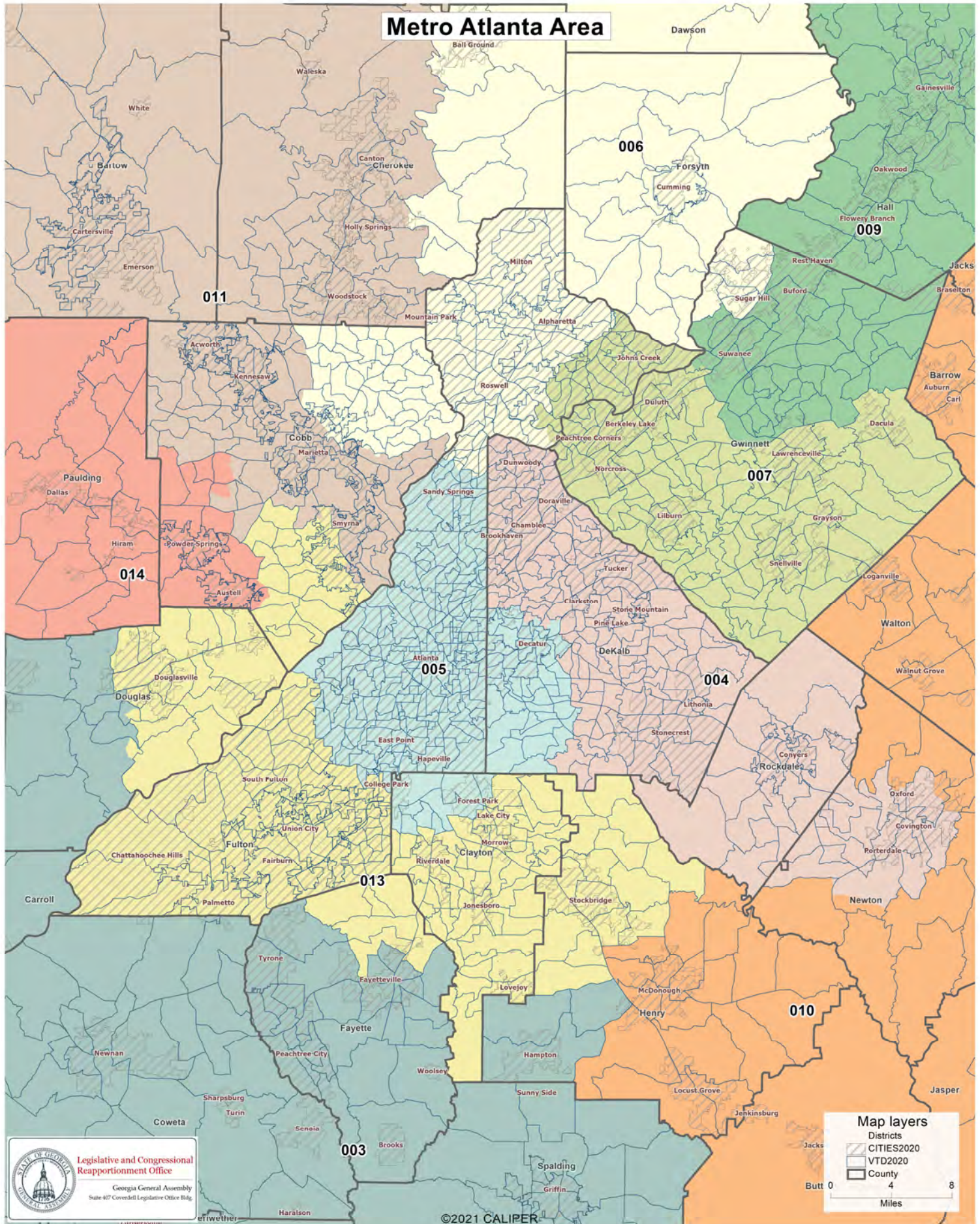
©2021 CALIPER

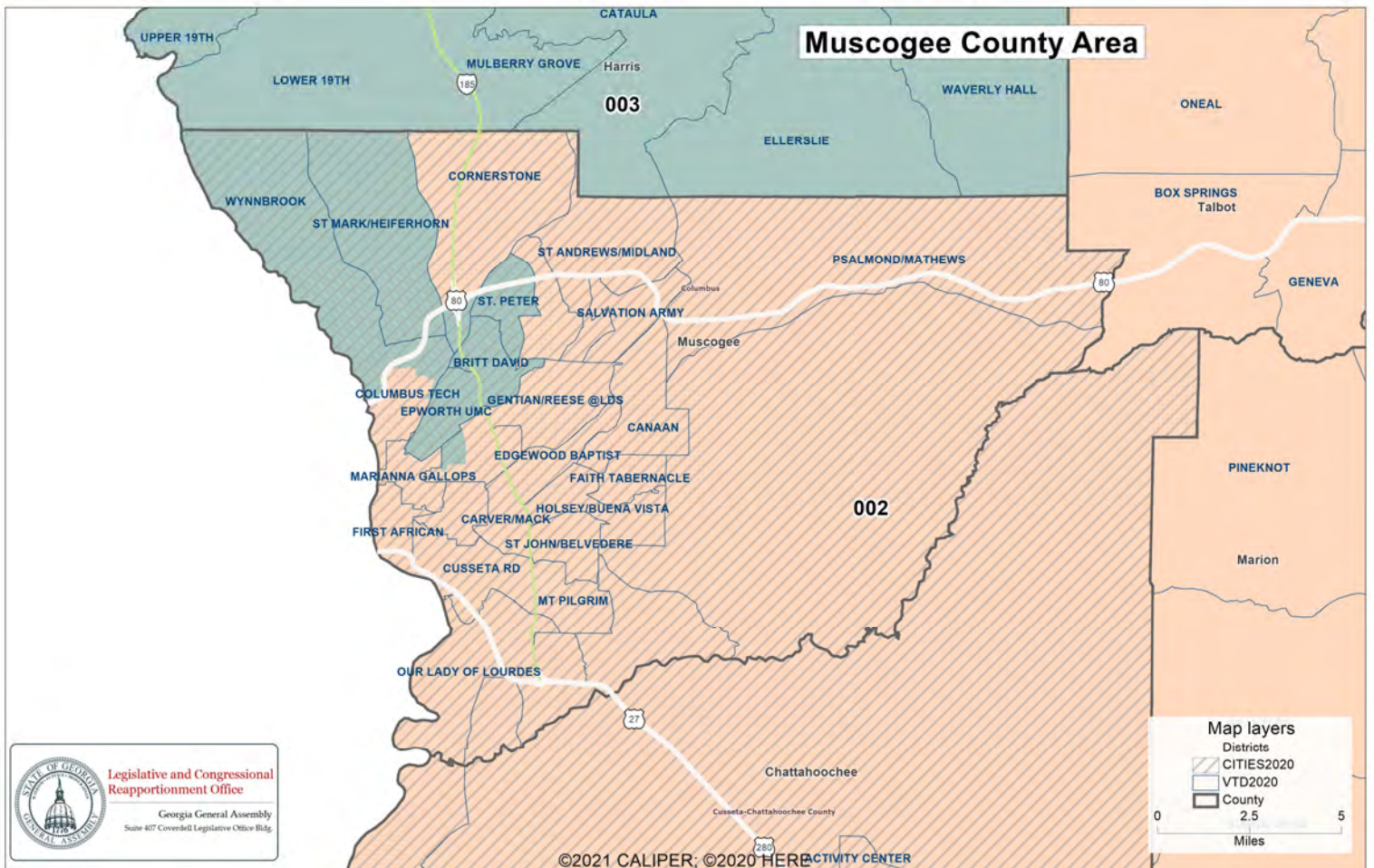
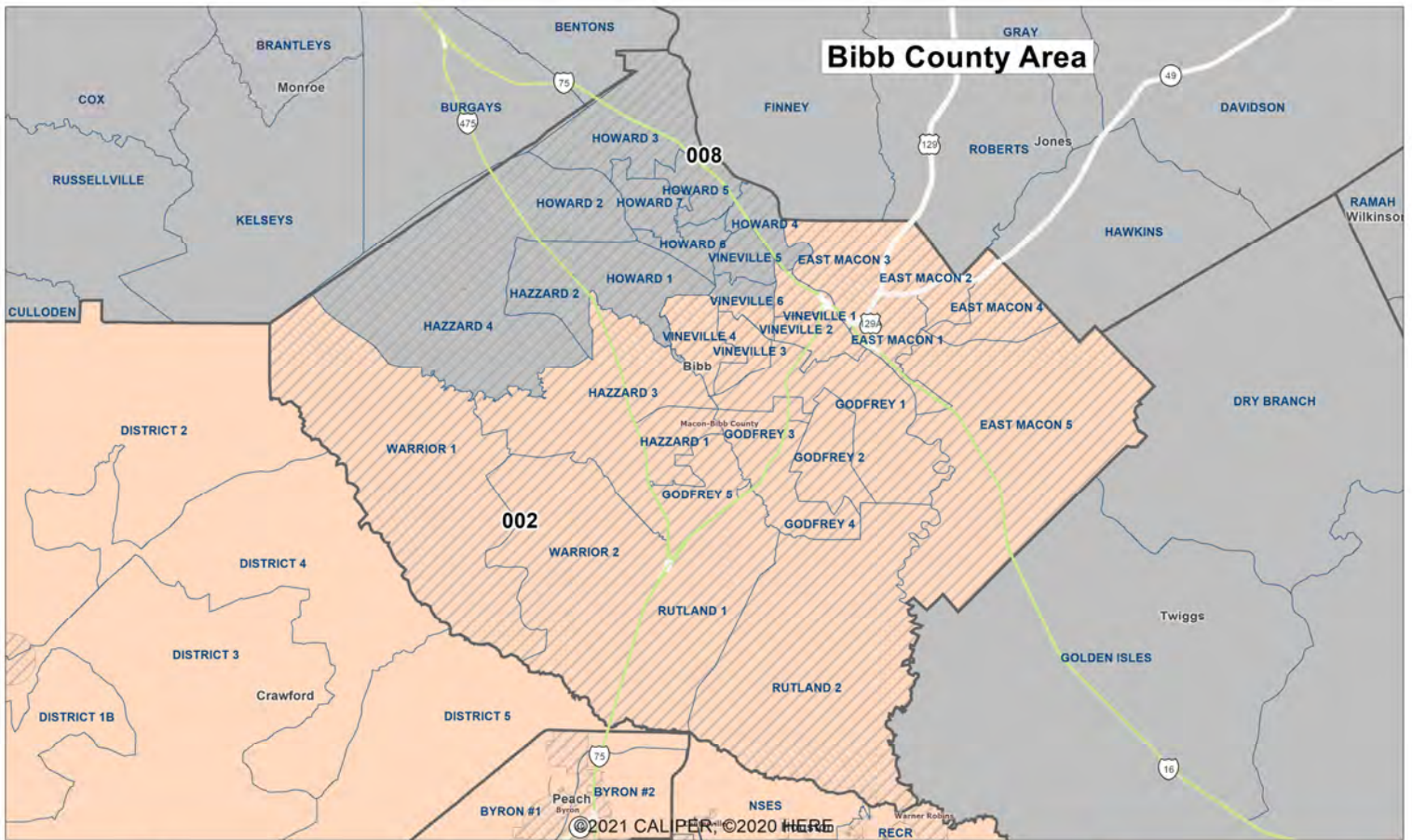
Map layers

Districts

County

0 20 40
Miles

Proposed Joint Congressional Districts of Georgia

Proposed Joint Congressional Districts of Georgia

User: S018

Plan Name: Congress-prop1-2021

Plan Type: Congress

Population Summary

Summary Statistics:

Population Range:	765,135 to 765,137
Ratio Range:	0.00
Absolute Range:	-1 to 1
Absolute Overall Range:	2
Relative Range:	0.00% to 0.00%
Relative Overall Range:	0.00%
Absolute Mean Deviation:	0.71
Relative Mean Deviation:	0.00%
Standard Deviation:	0.80

District	Population	Deviation	% Devn.	[18+_Pop]	[% 18+_Pop]	[% NH_Wht]	[% NH_Blkl]	[% Hispanic Origin]	[% NH_Asn]	[% NH_Ind]	[% NH_Hwn]	[% NH_Oth]	[% NH_2+ Races]
001	765,137	1	0.00%	589,266	77.01%	57.59%	27.54%	7.75%	2.19%	0.24%	0.16%	0.44%	4.1%
002	765,137	1	0.00%	587,555	76.79%	39.94%	49.03%	5.95%	1.34%	0.21%	0.1%	0.34%	3.09%
003	765,136	0	0.00%	586,319	76.63%	64.37%	22.61%	6.31%	2.09%	0.21%	0.04%	0.47%	3.91%
004	765,135	-1	0.00%	589,470	77.04%	25.82%	52.19%	11.63%	6.13%	0.16%	0.04%	0.65%	3.39%
005	765,137	1	0.00%	621,515	81.23%	35.79%	48.53%	7.38%	4.09%	0.16%	0.04%	0.52%	3.49%
006	765,136	0	0.00%	574,797	75.12%	63.7%	8.58%	10.23%	12.4%	0.16%	0.04%	0.69%	4.21%
007	765,137	1	0.00%	566,934	74.1%	29.52%	28.11%	23.77%	14.26%	0.16%	0.04%	0.69%	3.45%
008	765,136	0	0.00%	585,857	76.57%	57.91%	29.72%	7.17%	1.56%	0.19%	0.05%	0.31%	3.09%
009	765,137	1	0.00%	592,520	77.44%	64.7%	9.72%	15.39%	5.95%	0.2%	0.04%	0.42%	3.59%
010	765,135	-1	0.00%	588,874	76.96%	63.58%	22.12%	7.66%	2.26%	0.17%	0.04%	0.53%	3.63%
011	765,137	1	0.00%	595,201	77.79%	61.33%	16.33%	13.04%	3.76%	0.19%	0.04%	0.82%	4.49%
012	765,136	0	0.00%	588,119	76.86%	52.13%	36.12%	5.63%	1.83%	0.21%	0.11%	0.36%	3.61%
013	765,137	1	0.00%	574,789	75.12%	16.35%	64.26%	12.23%	3.17%	0.18%	0.05%	0.66%	3.1%
014	765,135	-1	0.00%	579,058	75.68%	68.07%	13.58%	12.69%	1.14%	0.22%	0.05%	0.4%	3.85%

Total: 10,711,908

Ideal District: 765,136

User: S018

Plan Name: Congress-prop1-2021

Plan Type: Congress

Population Summary

Summary Statistics:

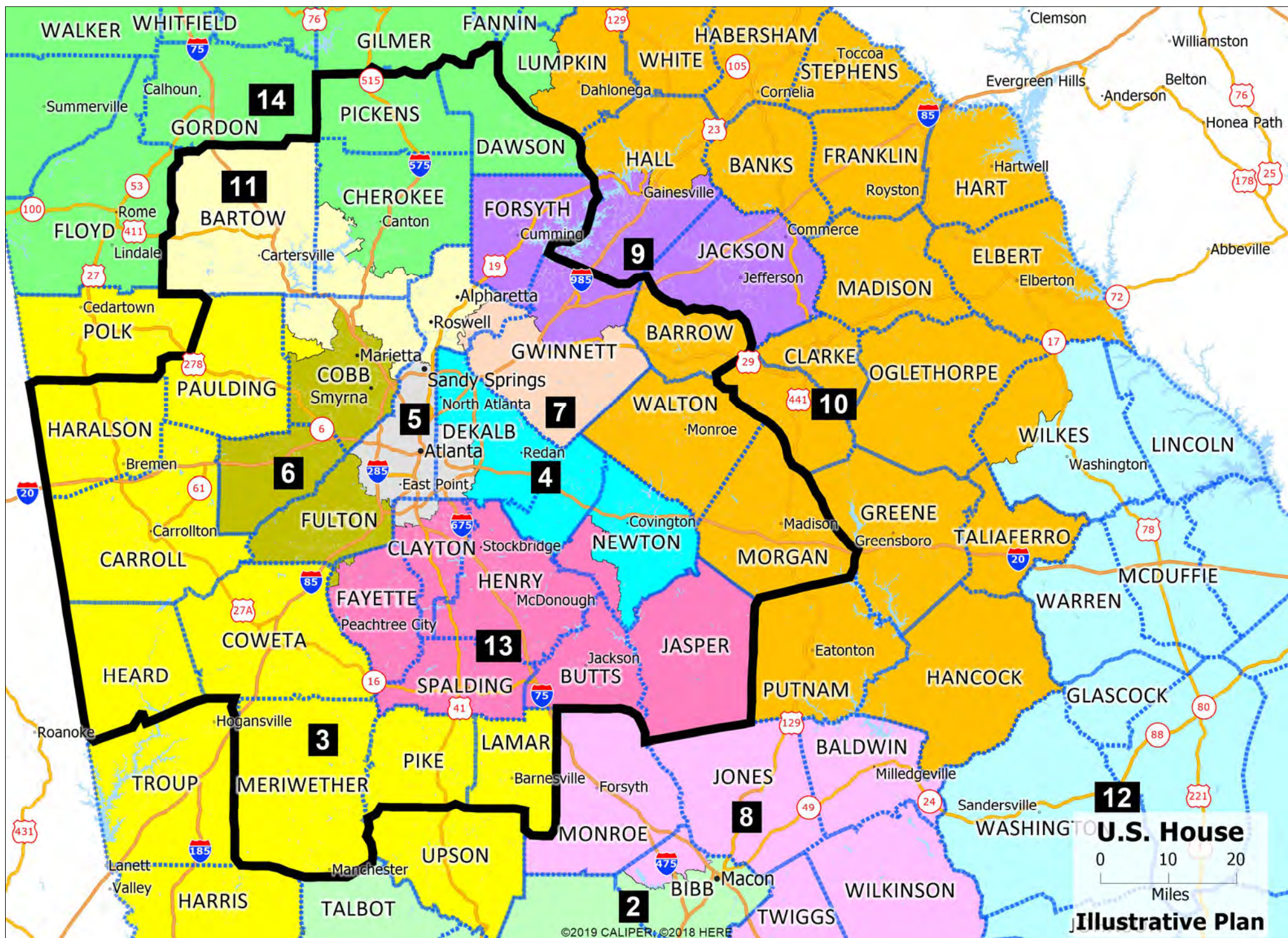
Population Range:	765,135 to 765,137
Ratio Range:	0.00
Absolute Range:	-1 to 1
Absolute Overall Range:	2
Relative Range:	0.00% to 0.00%
Relative Overall Range:	0.00%
Absolute Mean Deviation:	0.71
Relative Mean Deviation:	0.00%
Standard Deviation:	0.80

District	Population	Deviation	% Devn.	[18+_Pop]	[% 18+_Pop]	[% NH18+_Wht]	[% NH18+_Blk]	[% H18+_Pop]	[% NH18+_Asn]	[% NH18+_Ind]	[% NH18+_Hwn]	[% NH18+_Oth]	[% NH18+_2+ Races]
001	765,137	1	0.00%	589,266	77.01%	60.41%	26.44%	6.78%	2.36%	0.26%	0.14%	0.37%	3.24%
002	765,137	1	0.00%	587,555	76.79%	42.73%	47.62%	5.12%	1.41%	0.23%	0.09%	0.28%	2.53%
003	765,136	0	0.00%	586,319	76.63%	66.83%	22%	5.33%	2.08%	0.22%	0.04%	0.38%	3.11%
004	765,135	-1	0.00%	589,470	77.04%	28.25%	51.79%	10.12%	6.09%	0.16%	0.04%	0.58%	2.96%
005	765,137	1	0.00%	621,515	81.23%	37.92%	47.14%	6.67%	4.53%	0.16%	0.04%	0.48%	3.07%
006	765,136	0	0.00%	574,797	75.12%	66.63%	8.61%	9.11%	11.44%	0.14%	0.04%	0.63%	3.41%
007	765,137	1	0.00%	566,934	74.1%	32.78%	27.35%	21.27%	14.97%	0.16%	0.04%	0.59%	2.85%
008	765,136	0	0.00%	585,857	76.57%	60.52%	28.84%	6.1%	1.6%	0.2%	0.05%	0.25%	2.43%
009	765,137	1	0.00%	592,520	77.44%	68.29%	9.37%	12.89%	5.94%	0.21%	0.03%	0.34%	2.92%
010	765,135	-1	0.00%	588,874	76.96%	66.2%	21.34%	6.51%	2.3%	0.19%	0.03%	0.46%	2.98%
011	765,137	1	0.00%	595,201	77.79%	63.99%	16.25%	11.22%	3.82%	0.2%	0.04%	0.75%	3.73%
012	765,136	0	0.00%	588,119	76.86%	54.65%	35.06%	4.87%	1.95%	0.22%	0.1%	0.3%	2.86%
013	765,137	1	0.00%	574,789	75.12%	18.82%	63.75%	10.52%	3.38%	0.19%	0.05%	0.61%	2.68%
014	765,135	-1	0.00%	579,058	75.68%	71.33%	13.14%	10.58%	1.17%	0.23%	0.04%	0.32%	3.2%

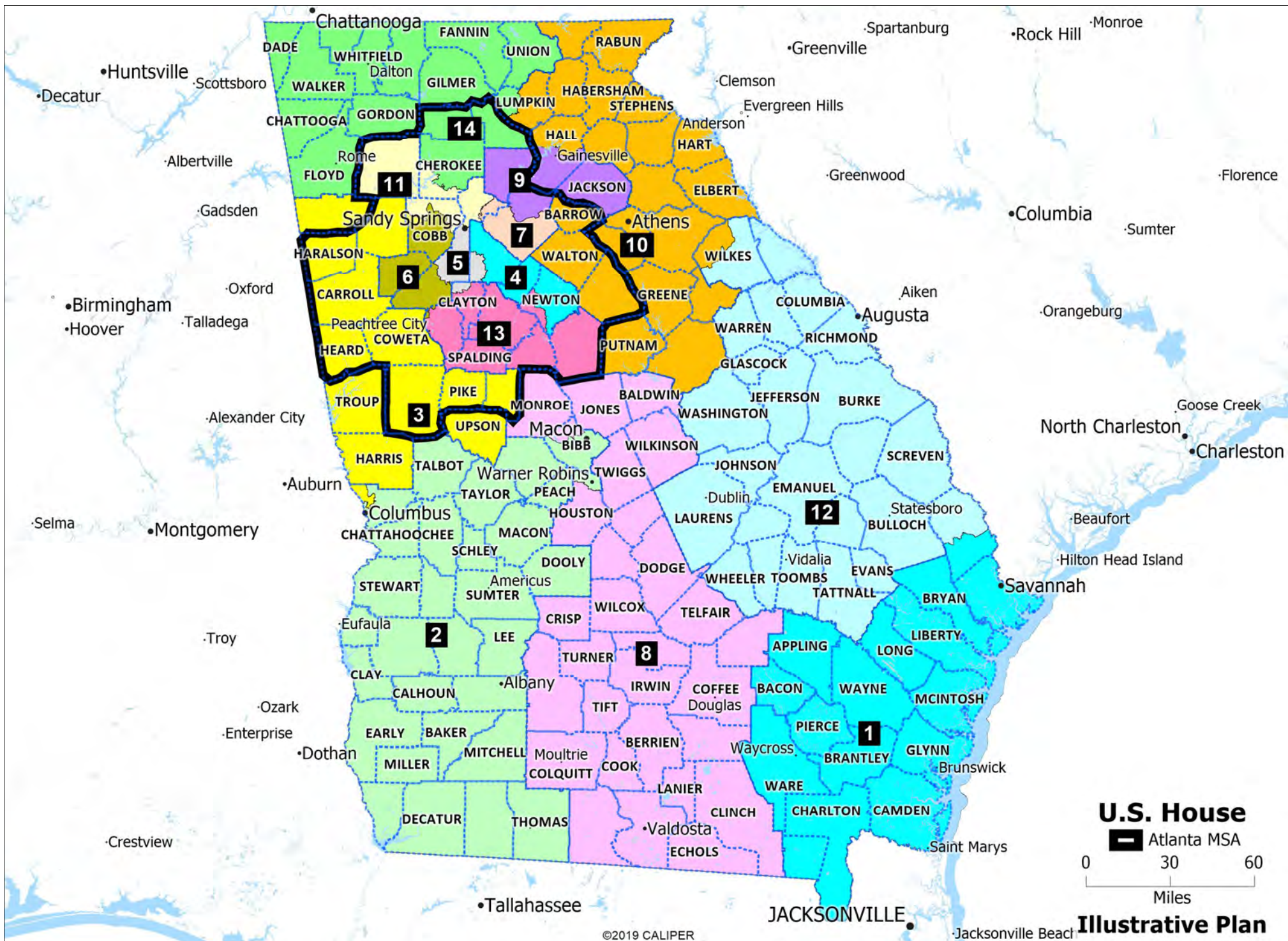
Total: 10,711,908

Ideal District: 765,136

DECLARATION OF WILLIAM S. COOPER:
EXHIBIT H-1



DECLARATION OF WILLIAM S. COOPER:
EXHIBIT H-2



DECLARATION OF WILLIAM S. COOPER:
EXHIBIT I-1

Population Summary Report

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

District	Population	Deviation	% Deviation	AP Black	% AP Black	Latino	% Latino	NH White	% NH White
001	765137	1	0.00%	230783	30.16%	59328	7.75%	440636	57.59%
002	765137	1	0.00%	393195	51.39%	45499	5.95%	305611	39.94%
003	765135	-1	0.00%	166096	21.71%	49935	6.53%	517659	67.66%
004	765136	0	0.00%	410019	53.59%	87756	11.47%	212004	27.71%
005	765137	1	0.00%	392822	51.34%	56496	7.38%	273819	35.79%
006	765137	1	0.00%	396891	51.87%	108401	14.17%	225985	29.54%
007	765137	1	0.00%	239717	31.33%	181851	23.77%	225905	29.52%
008	765136	0	0.00%	241628	31.58%	54850	7.17%	443123	57.91%
009	765136	0	0.00%	94059	12.29%	128393	16.78%	429340	56.11%
010	765137	1	0.00%	118199	15.45%	61244	8.00%	548312	71.66%
011	765137	1	0.00%	110368	14.42%	81466	10.65%	492121	64.32%
012	765136	0	0.00%	294961	38.55%	43065	5.63%	398843	52.13%
013	765135	-1	0.00%	404963	52.93%	71377	9.33%	253135	33.08%
014	765135	-1	0.00%	44445	5.81%	93796	12.26%	595663	77.85%
Total	10711908		0.00%	3538146	33.03%	1123457	10.49%	5362156	50.06%

District	18+ Pop	18+ SR Black	% 18+ SR Black	18+ AP Black	% 18+ AP Black	18+ Latino	% 18+ Latino	18+ NH White	% 18+ NH White
001	589266	157770	26.77%	166025	28.17%	39938	6.78%	355947	60.41%
002	587555	281564	47.92%	289612	49.29%	30074	5.12%	251047	42.73%
003	580018	112454	19.39%	118709	20.47%	31852	5.49%	405926	69.99%
004	590640	298897	50.61%	311670	52.77%	58947	9.98%	177832	30.11%
005	621515	295885	47.61%	308271	49.60%	41432	6.67%	235652	37.92%
006	587247	282051	48.03%	294976	50.23%	71798	12.23%	192370	32.76%
007	566934	157650	27.81%	169071	29.82%	120604	21.27%	185838	32.78%
008	585857	170421	29.09%	175967	30.04%	35732	6.10%	354572	60.52%
009	564244	59821	10.60%	65790	11.66%	83453	14.79%	335720	59.50%
010	602127	81481	13.53%	86178	14.31%	39876	6.62%	447109	74.25%
011	588795	72303	12.28%	80507	13.67%	55168	9.37%	393920	66.90%
012	588119	207872	35.35%	215958	36.72%	28628	4.87%	321394	54.65%
013	576337	283204	49.14%	294669	51.13%	46150	8.01%	207154	35.94%
014	591620	27046	4.57%	30583	5.17%	59266	10.02%	477852	80.77%
Total	8220274	2488419	30.27%	2607986	31.73%	742918	9.04%	4342333	52.82%

District	% NH Single-Race Black CVAP*	% NH DOJ Black CVAP**	% Latino CVAP	% SR NH White CVAP
001	29.16%	29.67%	4.49%	63.10%
002	49.55%	50.001%	3.17%	44.62%
003	19.64%	20.02%	3.61%	74.12%
004	55.62%	56.37%	3.89%	35.11%
005	51.64%	52.35%	3.48%	39.75%
006	50.18%	50.98%	6.45%	39.13%
007	31.88%	32.44%	11.20%	43.69%
008	30.46%	30.76%	3.79%	63.40%
009	11.29%	11.74%	8.78%	71.51%
010	15.09%	15.39%	3.93%	78.27%
011	12.91%	13.48%	5.92%	74.73%
012	36.60%	37.19%	3.39%	56.94%
013	49.64%	50.34%	4.96%	40.44%
014	4.80%	5.19%	5.57%	87.19%

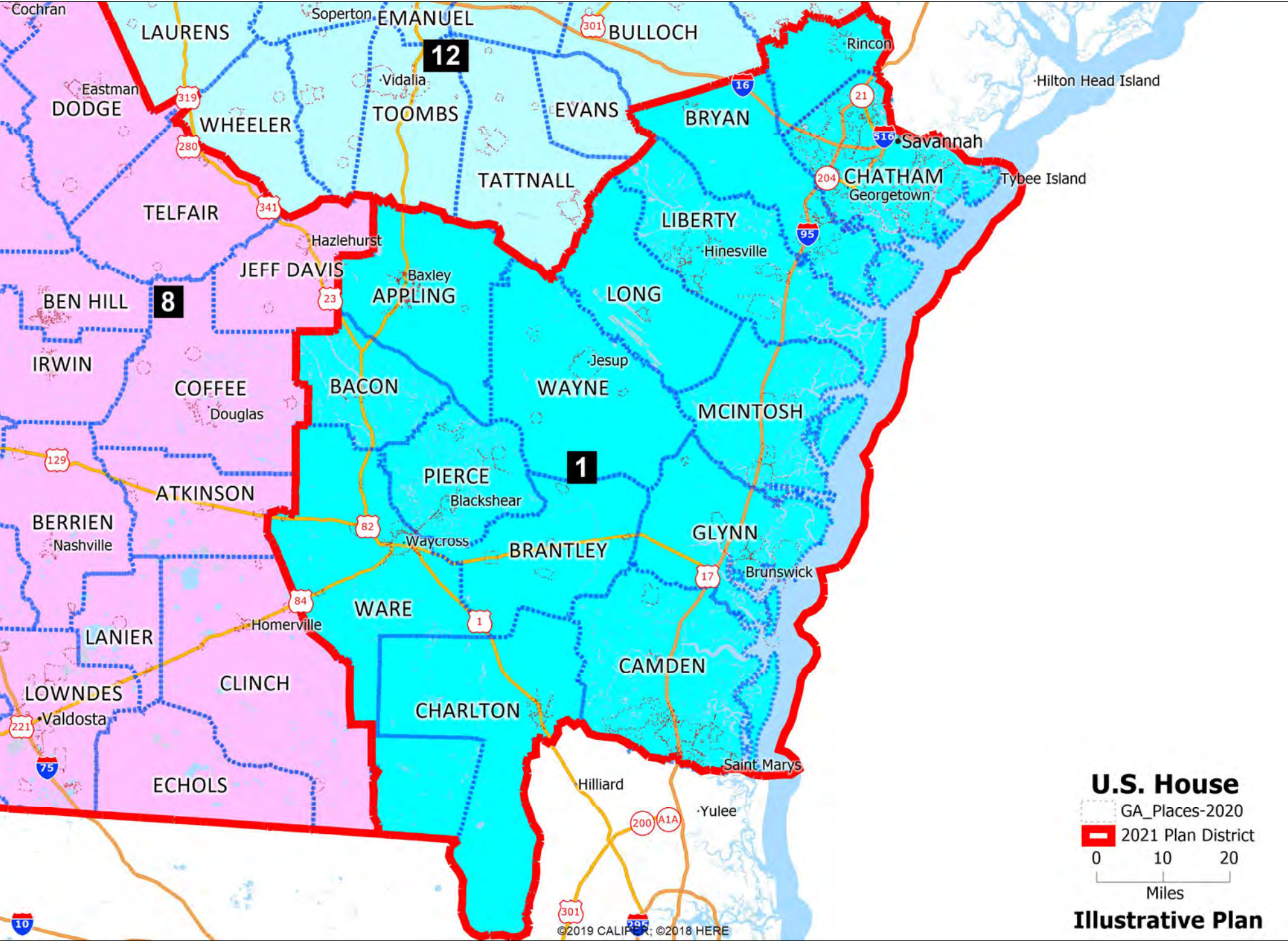
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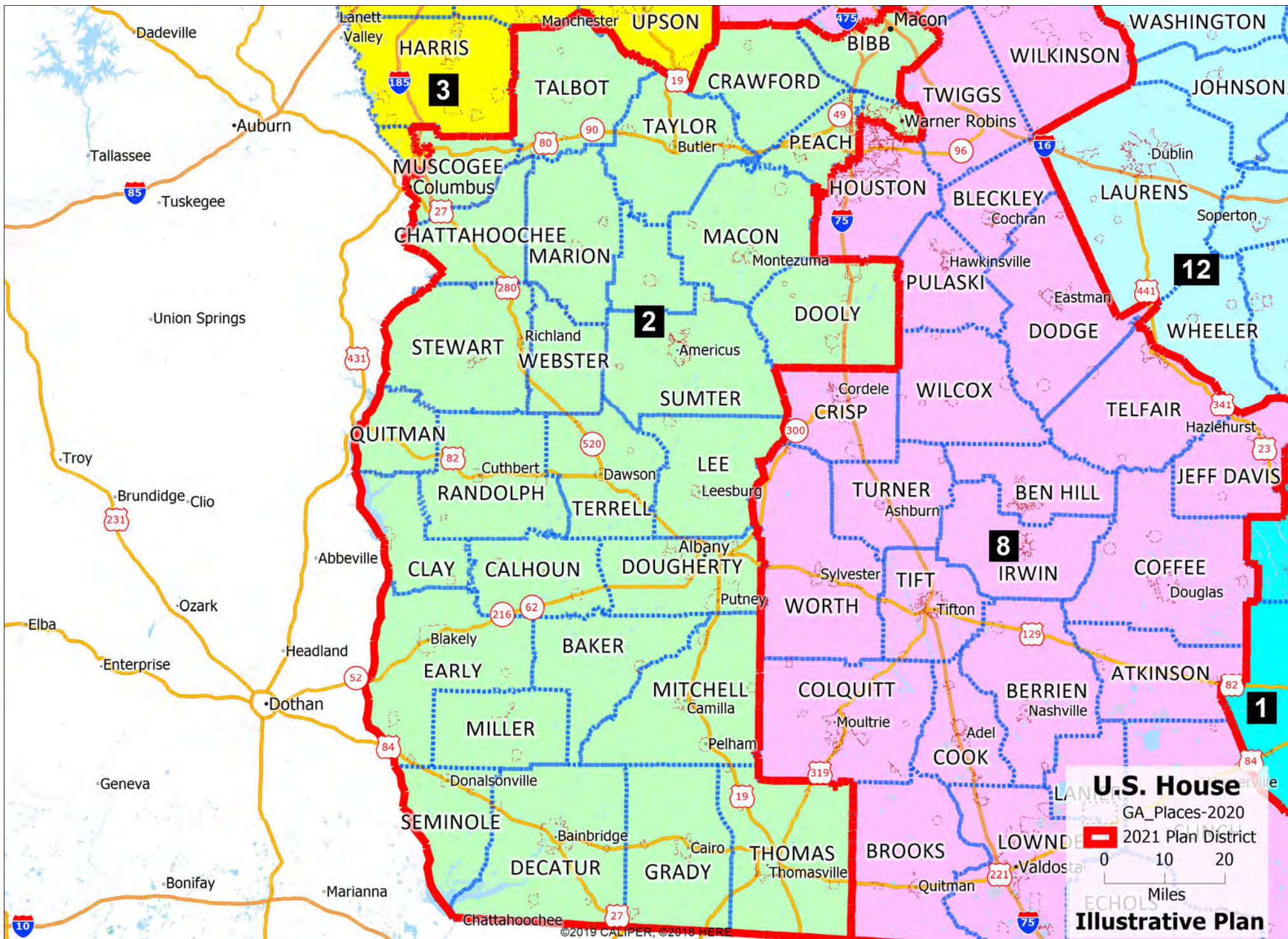
* 2016-20 ACS Special Tabulation <https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-block-level-2020/>

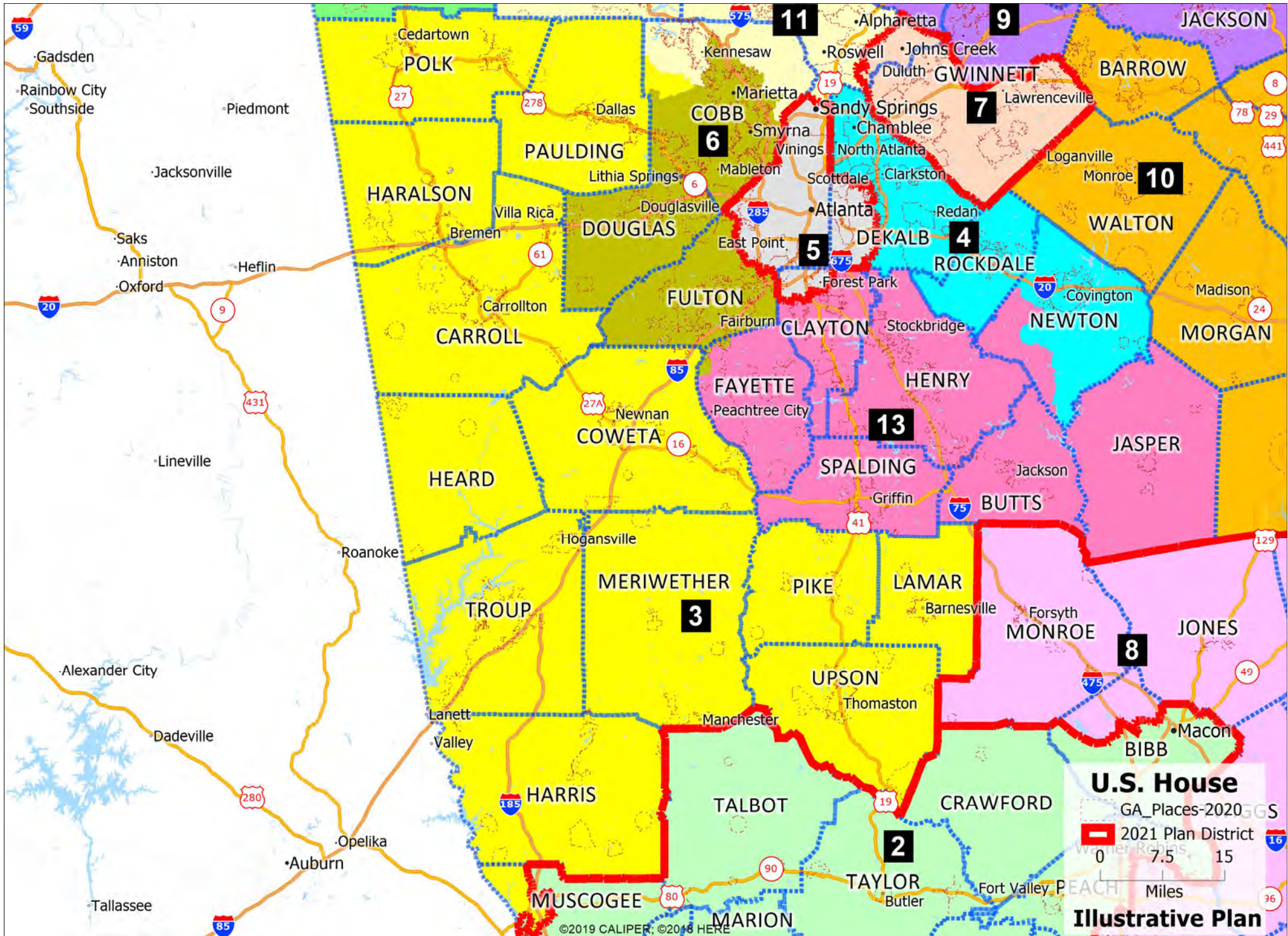
Note: Citizen Voting Age Population (CVAP) percentages are disaggregated from block-group level ACS estimates

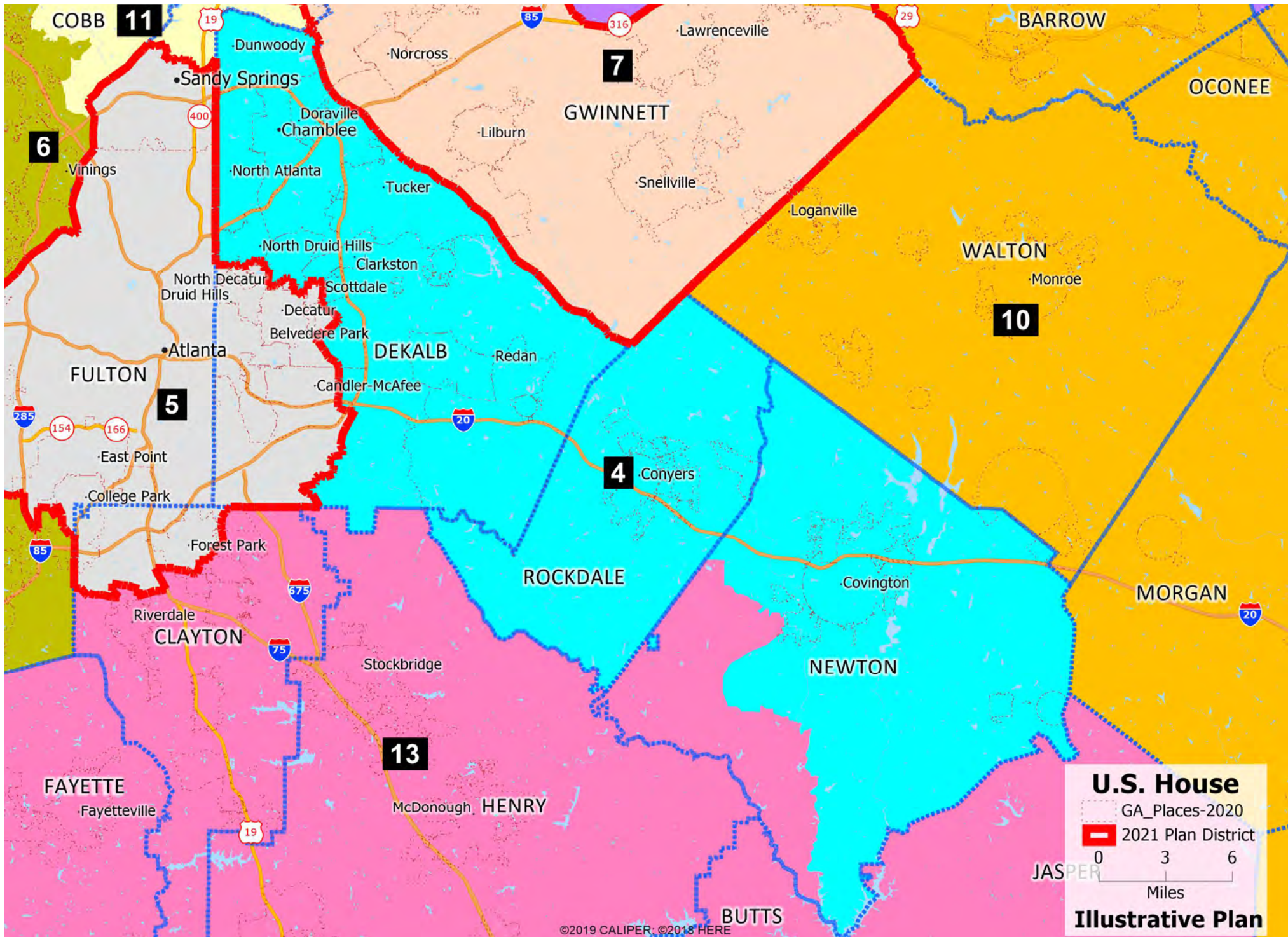
* Single race NH Black CVAP, **NH DOJ Black= SR NH Black CVAP+SR NH Black/White CVAP

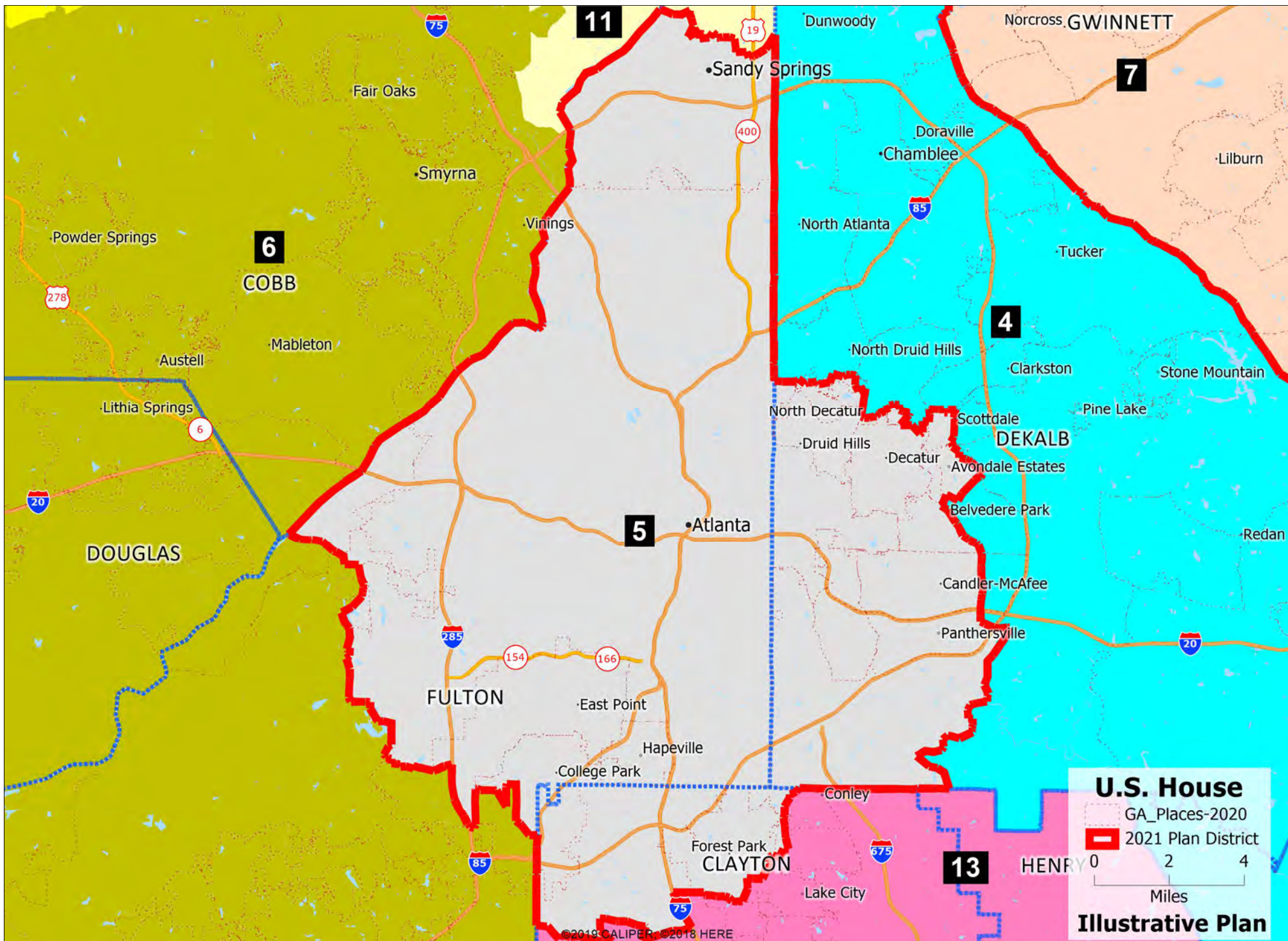
DECLARATION OF WILLIAM S. COOPER:
EXHIBIT I-2

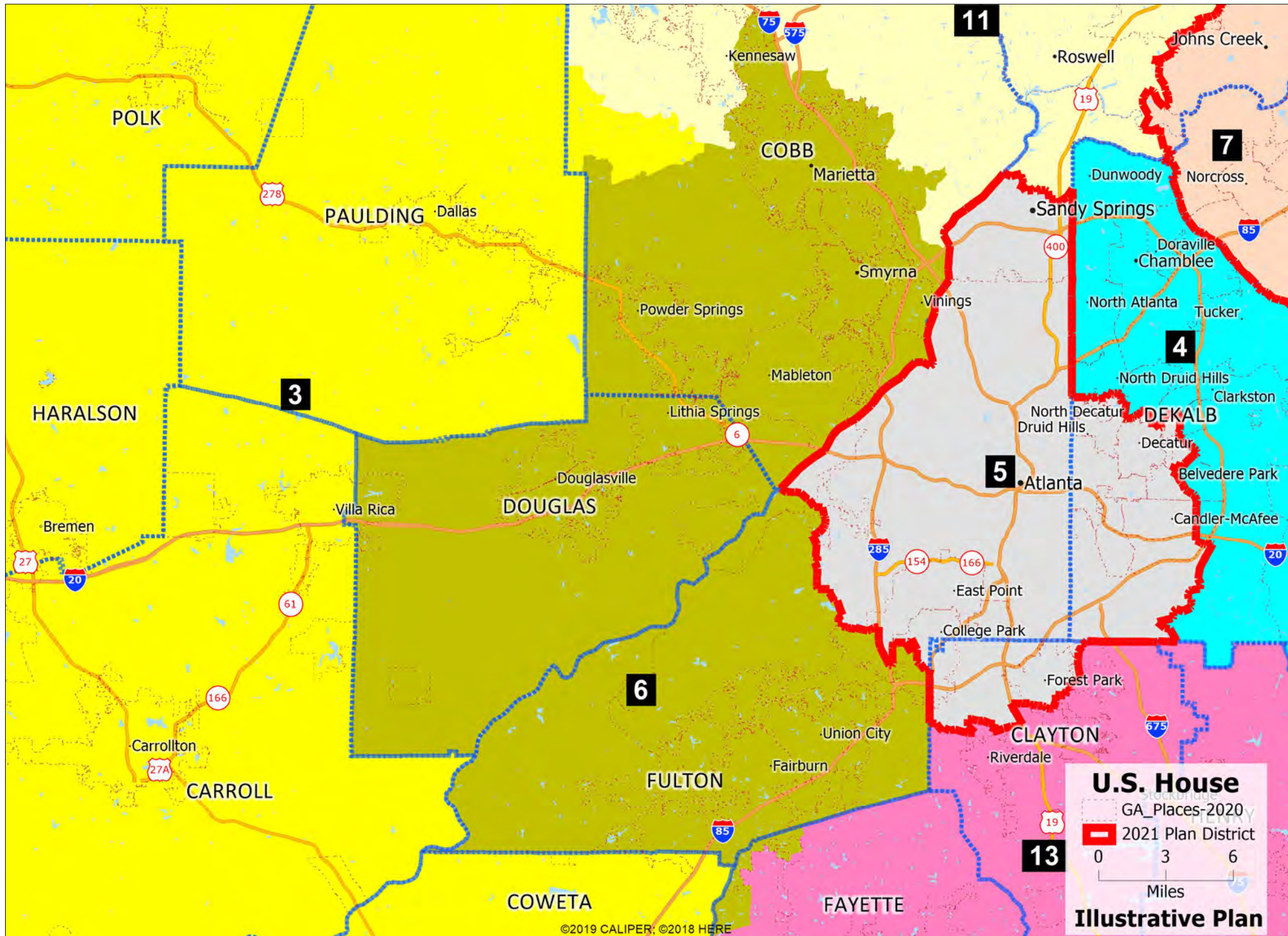


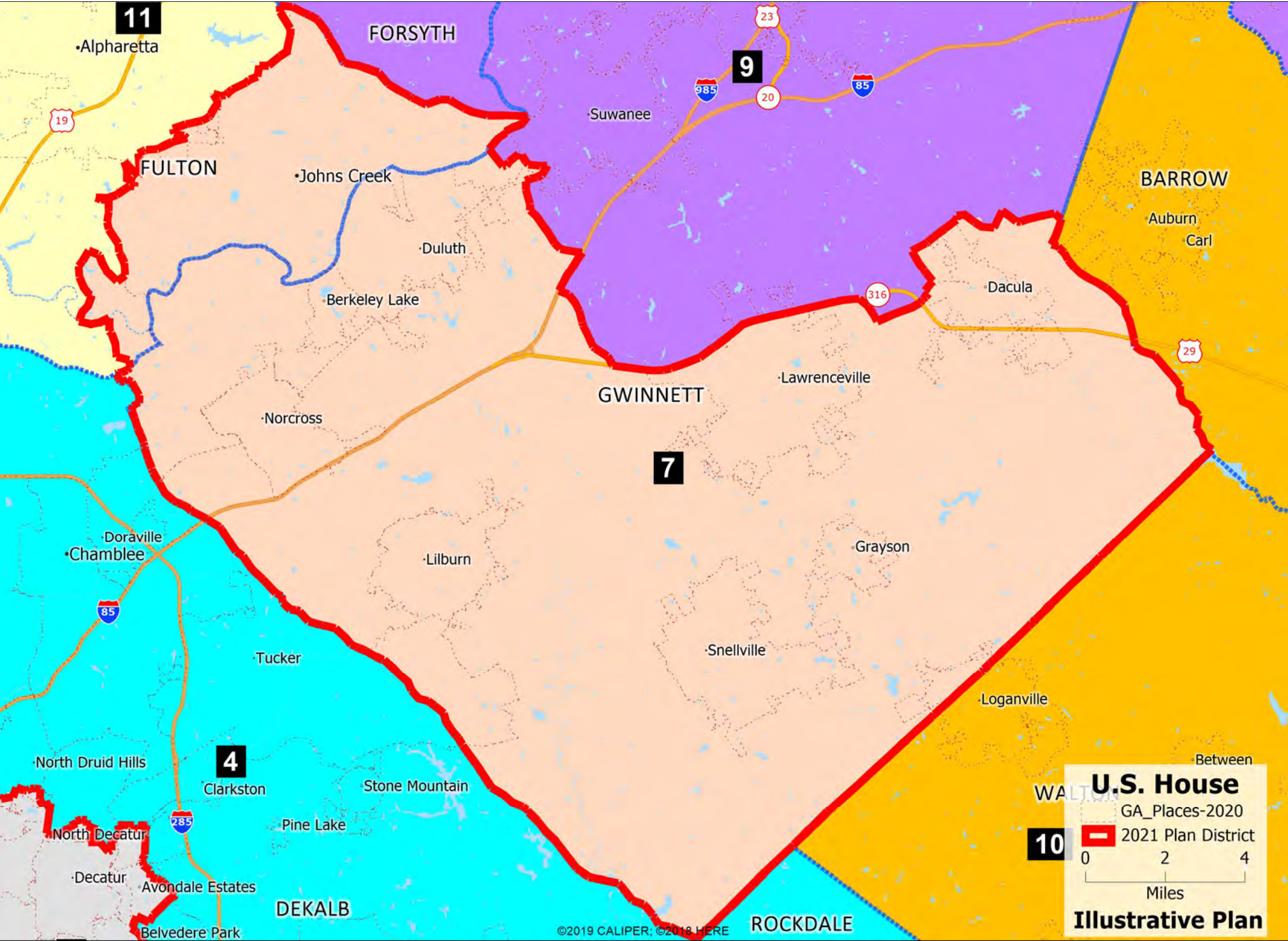


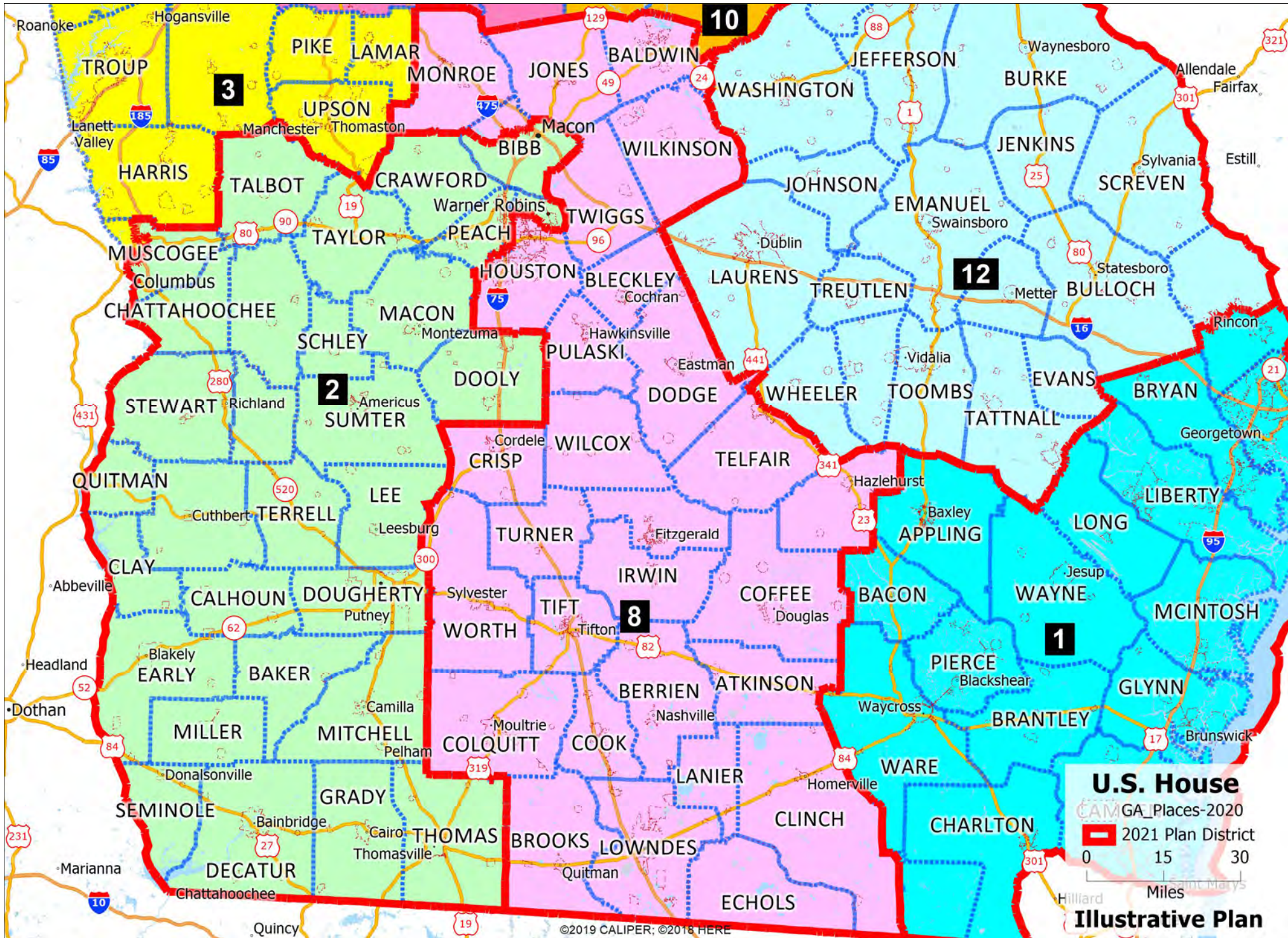


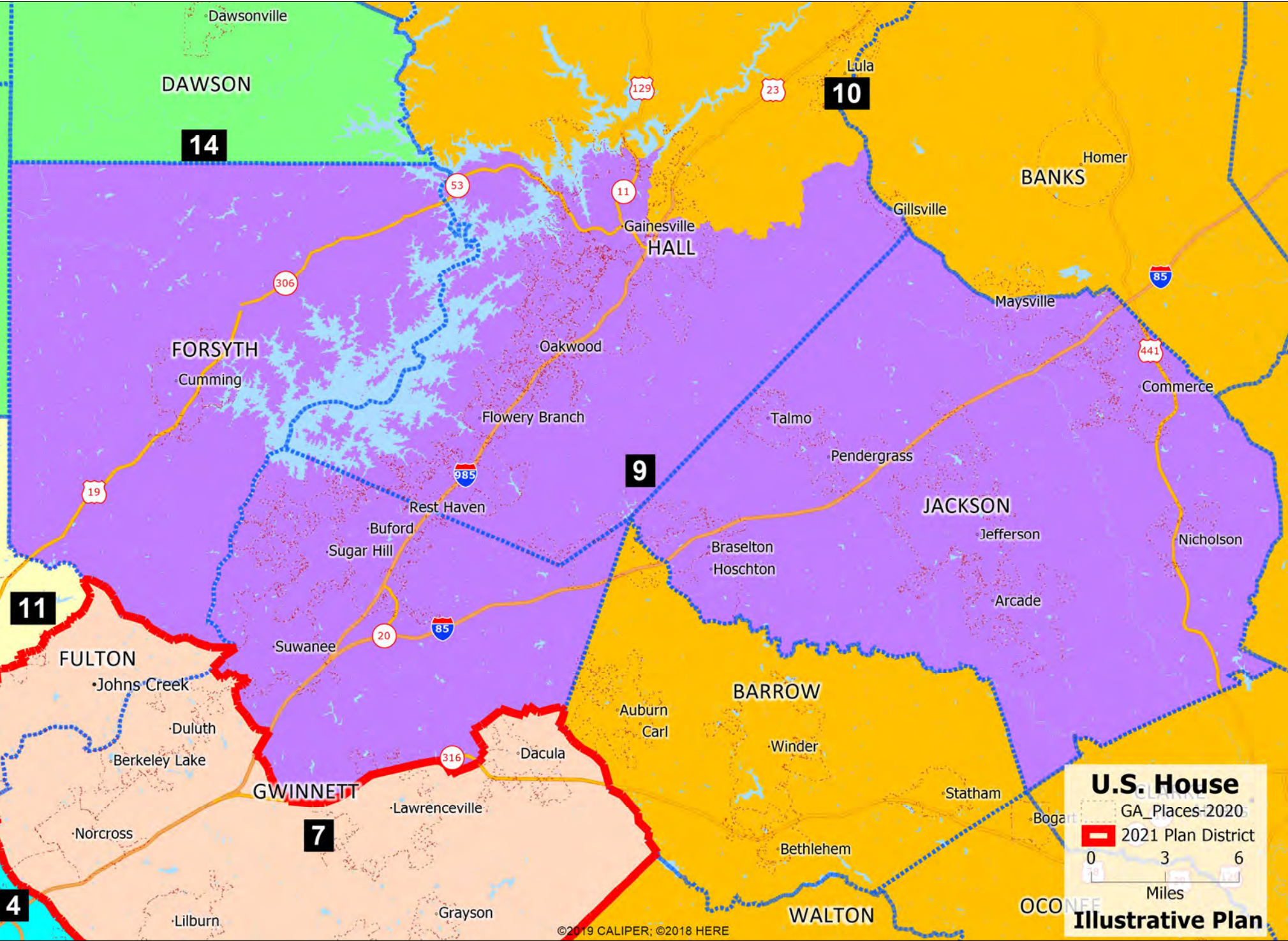


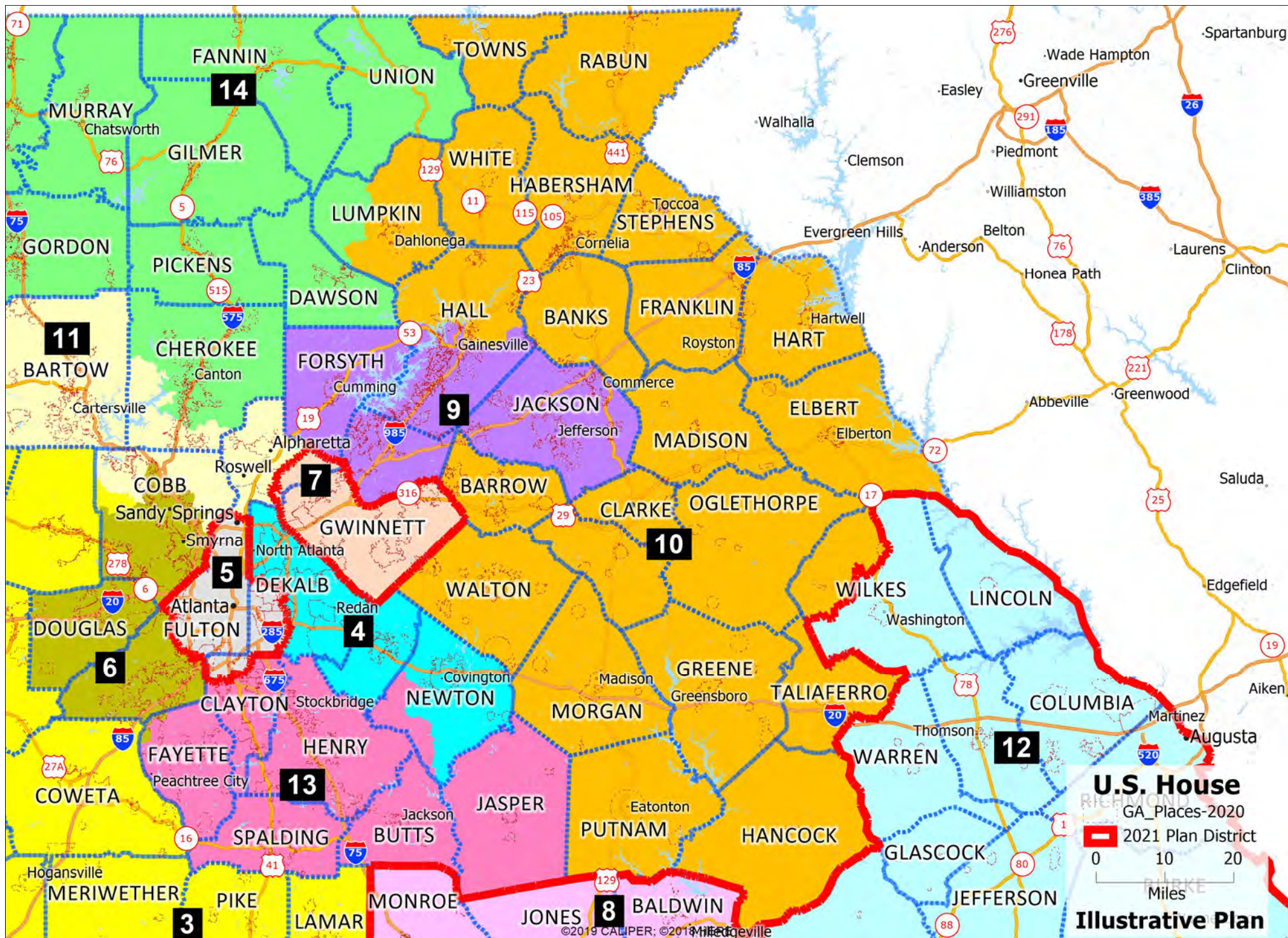


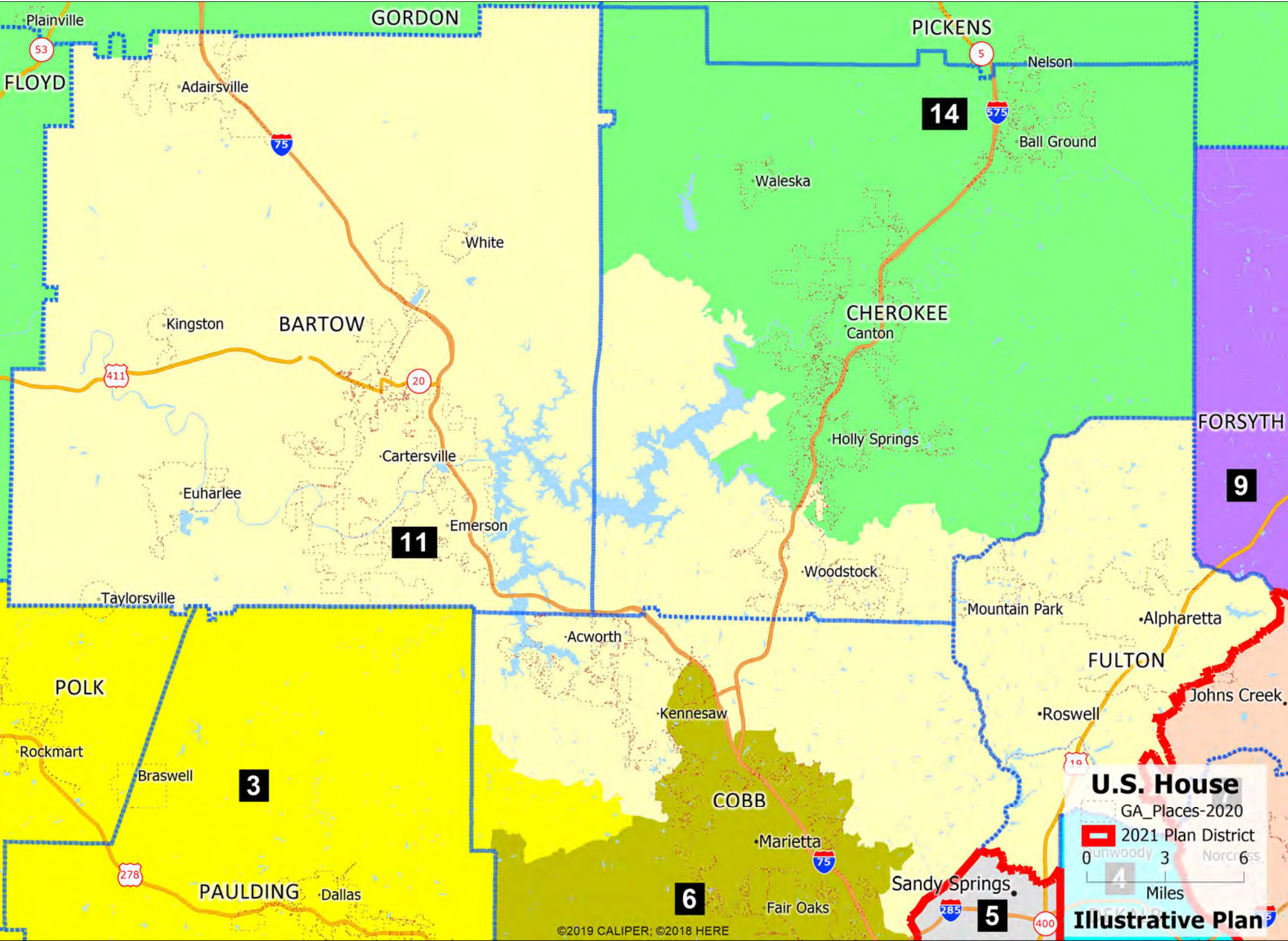


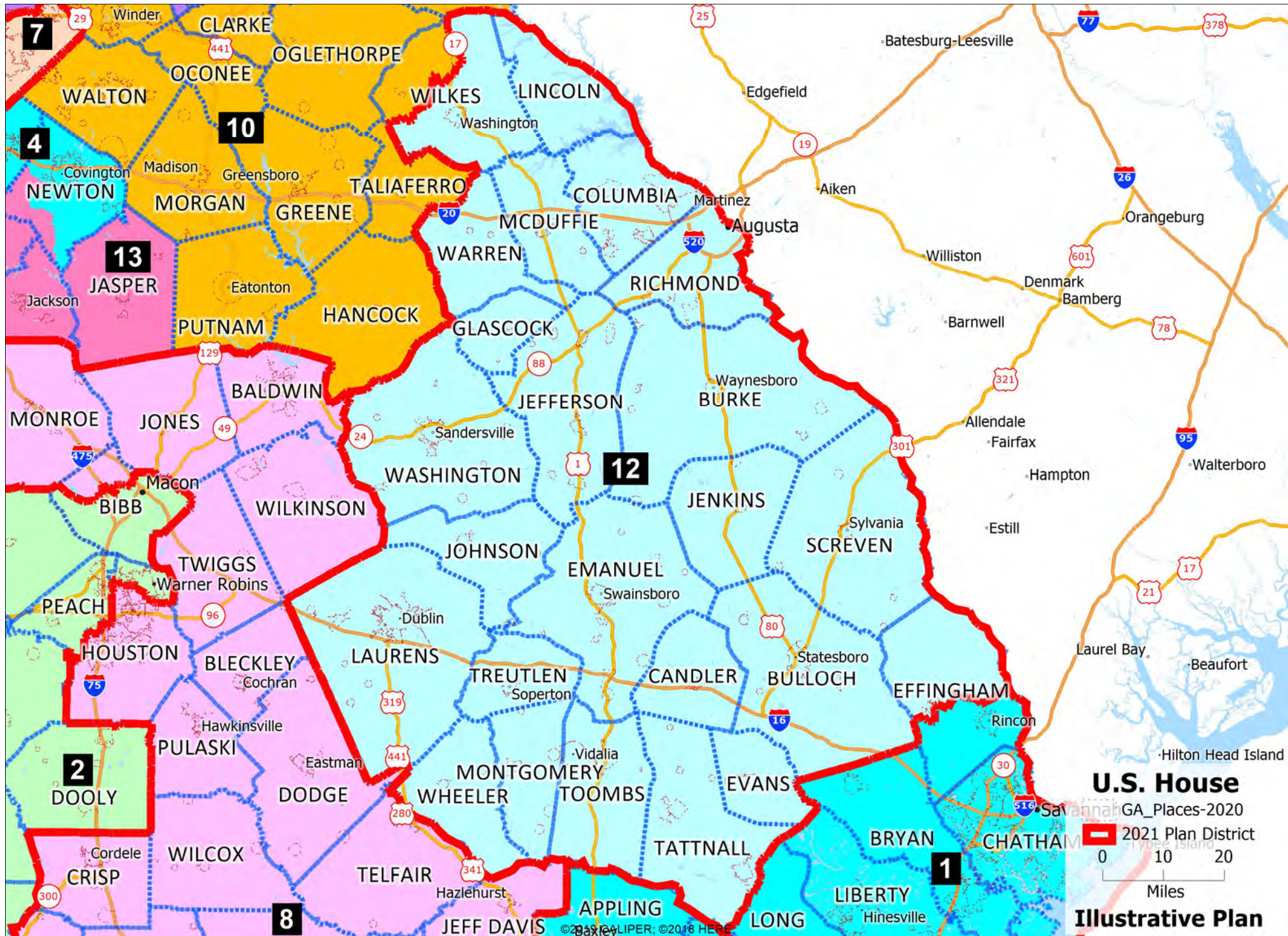


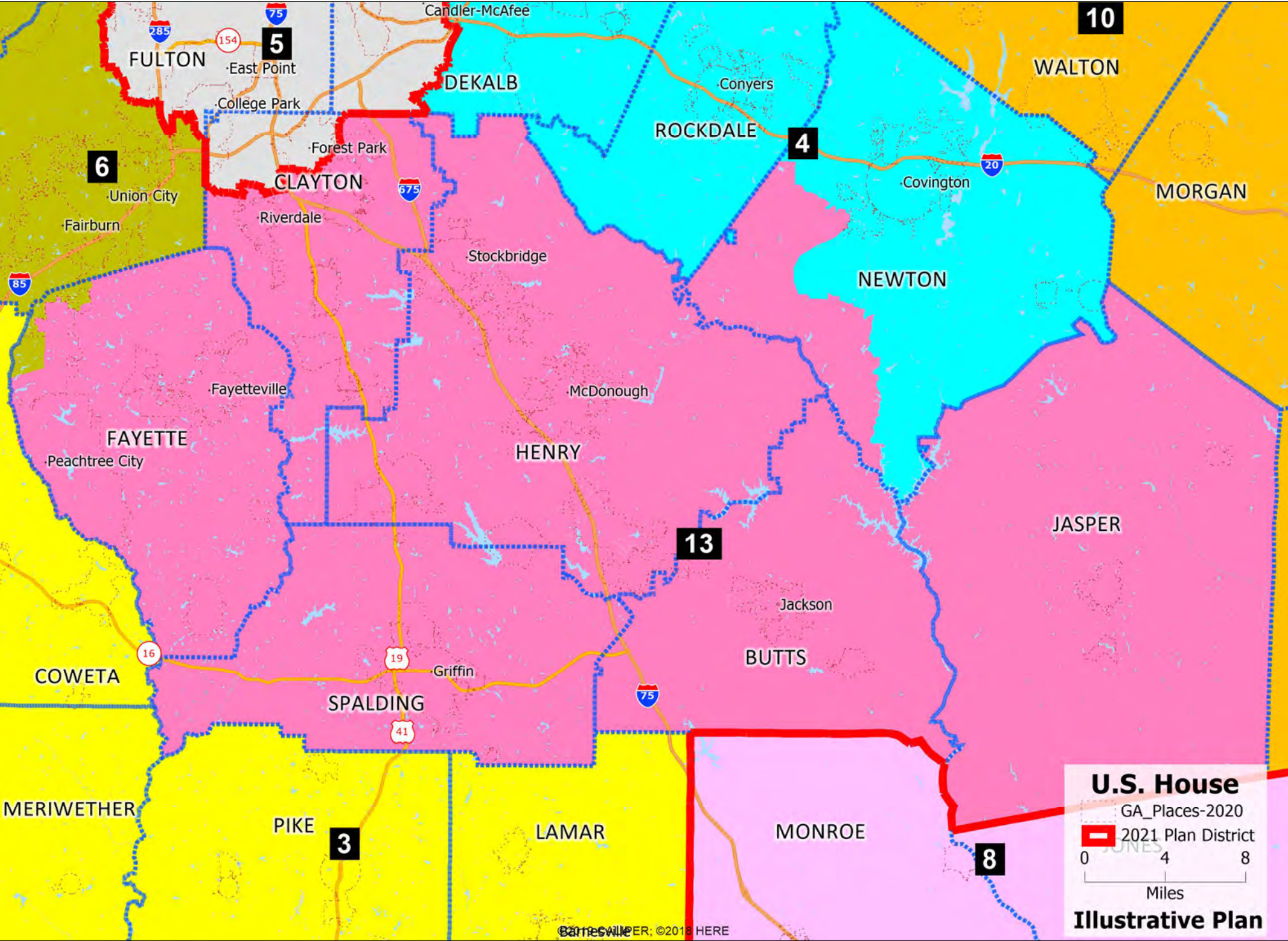


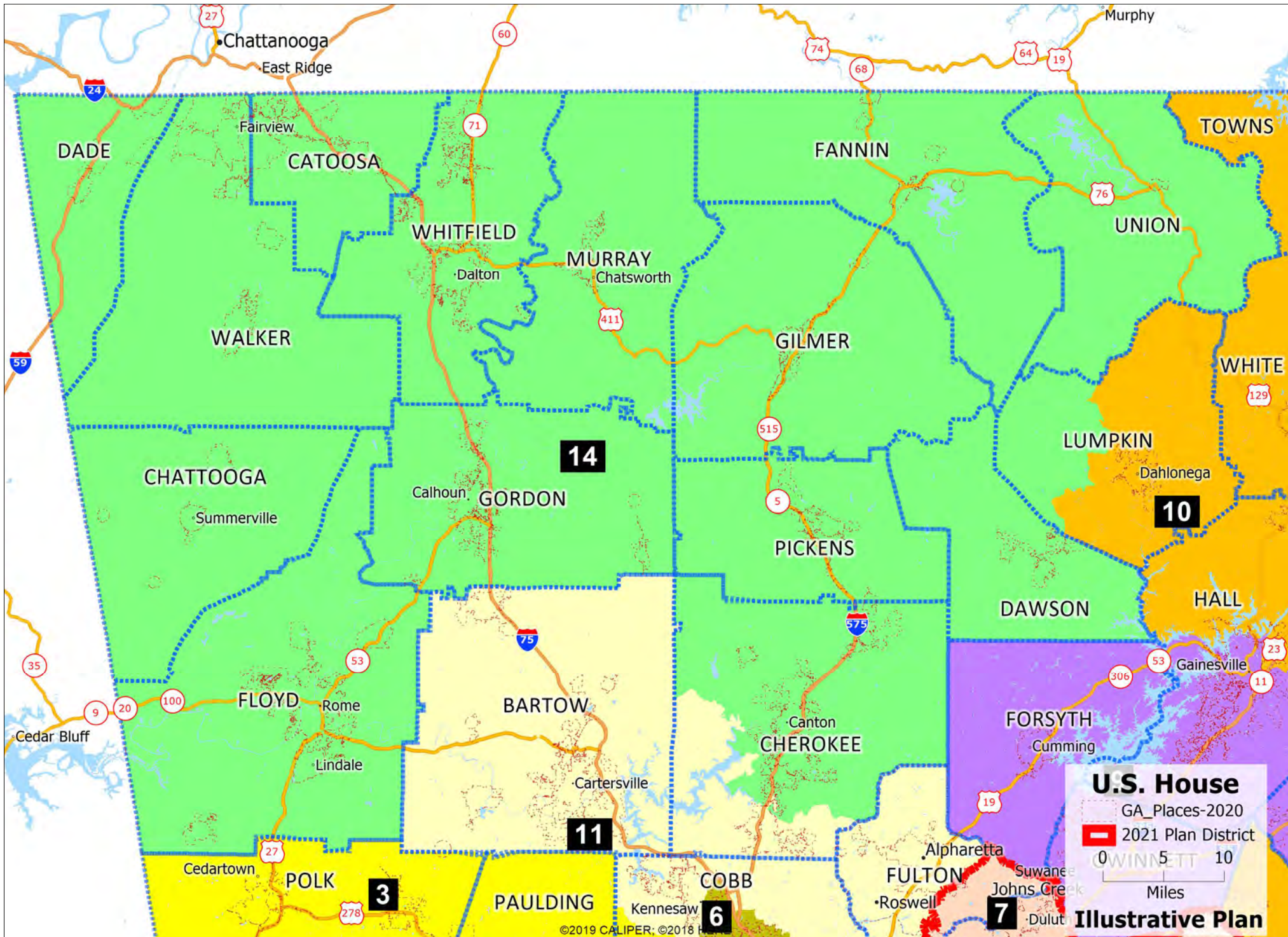












DECLARATION OF WILLIAM S. COOPER:
EXHIBIT I-3

User:

Plan Name: Illustrative Plan

Plan Type:

Plan Components with Population Detail

Monday, November 21, 2022

2:45 PM

	Total Population	NH_Wht	AP_Black	[Hispanic Origin]
District 001				
County: Appling GA				
Total:	18,444	12,674	3,647	1,825
		68.72%	19.77%	9.89%
Voting Age	13,958	10,048	2,540	1,118
		71.99%	18.20%	8.01%
County: Bacon GA				
Total:	11,140	8,103	1,970	875
		72.74%	17.68%	7.85%
Voting Age	8,310	6,374	1,245	547
		76.70%	14.98%	6.58%
County: Brantley GA				
Total:	18,021	16,317	733	326
		90.54%	4.07%	1.81%
Voting Age	13,692	12,522	470	212
		91.45%	3.43%	1.55%
County: Bryan GA				
Total:	44,738	31,321	7,463	3,269
		70.01%	16.68%	7.31%
Voting Age	31,828	23,033	5,025	1,919
		72.37%	15.79%	6.03%
County: Camden GA				
Total:	54,768	37,203	11,072	3,658
		67.93%	20.22%	6.68%
Voting Age	41,808	29,410	7,828	2,457
		70.35%	18.72%	5.88%
County: Charlton GA				
Total:	12,518	7,532	2,798	2,036
		60.17%	22.35%	16.26%
Voting Age	10,135	5,929	2,147	1,971
		58.50%	21.18%	19.45%
County: Chatham GA				
Total:	295,291	139,433	115,458	23,790
		47.22%	39.10%	8.06%
Voting Age	234,715	119,161	85,178	16,551
		50.77%	36.29%	7.05%
County: Effingham GA				
Total:	47,208	35,249	6,652	2,875
		74.67%	14.09%	6.09%
Voting Age	34,272	26,449	4,374	1,700
		77.17%	12.76%	4.96%

Plan Components with Population Detail

Nov14_GA_congress

	Total Population	NH_Wht	AP_Bl	[Hispanic Origin]
District 001				
County: Glynn GA				
Total:	84,499	52,987 62.71%	22,098 26.15%	6,336 7.50%
Voting Age	66,468	44,302 66.65%	15,620 23.50%	4,116 6.19%
County: Liberty GA				
Total:	65,256	24,004 36.78%	31,146 47.73%	7,786 11.93%
Voting Age	48,014	19,065 39.71%	21,700 45.20%	5,231 10.89%
County: Long GA				
Total:	16,168	8,774 54.27%	4,734 29.28%	1,979 12.24%
Voting Age	11,234	6,422 57.17%	3,107 27.66%	1,227 10.92%
County: McIntosh GA				
Total:	10,975	7,060 64.33%	3,400 30.98%	231 2.10%
Voting Age	9,040	5,998 66.35%	2,641 29.21%	166 1.84%
County: Pierce GA				
Total:	19,716	16,403 83.20%	1,801 9.13%	998 5.06%
Voting Age	14,899	12,662 84.99%	1,262 8.47%	595 3.99%
County: Ware GA				
Total:	36,251	22,275 61.45%	11,421 31.51%	1,612 4.45%
Voting Age	27,788	17,818 64.12%	8,226 29.60%	1,012 3.64%
County: Wayne GA				
Total:	30,144	21,301 70.66%	6,390 21.20%	1,732 5.75%
Voting Age	23,105	16,754 72.51%	4,662 20.18%	1,116 4.83%
District 001 Total				
Total:	765,137	440,636 57.59%	230,783 30.16%	59,328 7.75%
Voting Age	589,266	355,947 60.41%	166,025 28.17%	39,938 6.78%
District 002				
County: Baker GA				
Total:	2,876	1,514 52.64%	1,178 40.96%	143 4.97%
Voting Age	2,275	1,235 54.29%	932 40.97%	77 3.38%

Plan Components with Population Detail

Nov14_GA_congress

	Total Population	NH_Wht	AP_BlK	[Hispanic Origin]
District 002				
County: Bibb GA				
Total:	108,371	29,397 27.13%	72,197 66.62%	4,818 4.45%
Voting Age	82,489	25,121 30.45%	52,370 63.49%	3,351 4.06%
County: Calhoun GA				
Total:	5,573	1,766 31.69%	3,629 65.12%	149 2.67%
Voting Age	4,687	1,567 33.43%	2,998 63.96%	90 1.92%
County: Chattahoochee GA				
Total:	9,565	5,403 56.49%	1,825 19.08%	1,610 16.83%
Voting Age	7,199	4,212 58.51%	1,287 17.88%	1,160 16.11%
County: Clay GA				
Total:	2,848	1,143 40.13%	1,634 57.37%	41 1.44%
Voting Age	2,246	973 43.32%	1,231 54.81%	19 0.85%
County: Crawford GA				
Total:	12,130	8,866 73.09%	2,455 20.24%	415 3.42%
Voting Age	9,606	7,079 73.69%	1,938 20.17%	287 2.99%
County: Decatur GA				
Total:	29,367	14,280 48.63%	12,583 42.85%	1,911 6.51%
Voting Age	22,443	11,586 51.62%	9,189 40.94%	1,196 5.33%
County: Dooly GA				
Total:	11,208	4,611 41.14%	5,652 50.43%	797 7.11%
Voting Age	9,187	4,029 43.86%	4,526 49.27%	493 5.37%
County: Dougherty GA				
Total:	85,790	20,631 24.05%	61,457 71.64%	2,413 2.81%
Voting Age	66,266	17,909 27.03%	45,631 68.86%	1,591 2.40%
County: Early GA				
Total:	10,854	4,813 44.34%	5,688 52.40%	186 1.71%
Voting Age	8,315	3,985 47.93%	4,075 49.01%	113 1.36%

Plan Components with Population Detail

Nov14_GA_congress

	Total Population	NH_Wht	AP_Bl	[Hispanic Origin]
District 002				
County: Grady GA				
Total:	26,236	14,715 56.09%	7,693 29.32%	3,273 12.48%
Voting Age	19,962	11,968 59.95%	5,678 28.44%	1,857 9.30%
County: Houston GA				
Total:	48,521	19,375 39.93%	22,637 46.65%	4,663 9.61%
Voting Age	36,233	16,052 44.30%	15,657 43.21%	2,988 8.25%
County: Lee GA				
Total:	33,163	22,758 68.62%	7,755 23.38%	953 2.87%
Voting Age	24,676	17,356 70.34%	5,503 22.30%	603 2.44%
County: Macon GA				
Total:	12,082	4,078 33.75%	7,296 60.39%	472 3.91%
Voting Age	9,938	3,379 34.00%	6,021 60.59%	322 3.24%
County: Marion GA				
Total:	7,498	4,486 59.83%	2,223 29.65%	560 7.47%
Voting Age	5,854	3,643 62.23%	1,687 28.82%	337 5.76%
County: Miller GA				
Total:	6,000	3,949 65.82%	1,831 30.52%	136 2.27%
Voting Age	4,749	3,239 68.20%	1,358 28.60%	92 1.94%
County: Mitchell GA				
Total:	21,755	10,106 46.45%	10,394 47.78%	964 4.43%
Voting Age	17,065	8,284 48.54%	7,917 46.39%	615 3.60%
County: Muscogee GA				
Total:	175,155	58,991 33.68%	95,521 54.54%	13,791 7.87%
Voting Age	132,158	48,043 36.35%	69,548 52.62%	9,099 6.88%
County: Peach GA				
Total:	27,981	12,119 43.31%	12,645 45.19%	2,547 9.10%
Voting Age	22,111	10,071 45.55%	9,720 43.96%	1,788 8.09%