

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ALABAMA
(SOUTHERN DIVISION)

LAKEISHA
CHESTNUT, *et al.*,

Plaintiffs,

v.

JOHN MERRILL, in his
official capacity as
Alabama Secretary of
State

Defendant.

Civil Action No. 2:18-cv-00907-
KOB

EXPERT REPORT OF DOUGLAS JOHNSON

I, Douglas Mark Johnson, affirm the conclusions I express in this report are provided to a reasonable degree of professional certainty. In addition, I do hereby declare the following:



1. I am over 18 years of age and I have personal knowledge of the facts stated herein.

I. Expert Qualifications

2. I graduated with a Bachelor of Arts in Government with Honors from Claremont McKenna College in 1992. I graduated with a Master's degree in Business Administration from the Anderson School at the University of California – Los Angeles in 1999, and, in 2015, I graduated with a Ph.D. in Political Science from Claremont Graduate University. Since 2001, I have served as a Fellow at the Rose Institute of State and Local Government at Claremont McKenna College. As Student Manager of the Rose Institute in 1991 and as a Fellow at the Rose Institute in 2001 and 2011, I have led political, demographic, and process research on state and local redistricting through three post-decennial census redistricting cycles. In that capacity, I have issued numerous white papers, op-ed pieces, in-depth analyses, and other reports on the Census, demographics, districting, and redistricting, including primary oversight of the Rose Institute's "Redistricting in America" report and website which remains widely quoted in state and national news coverage. These opinion pieces were printed by publications including the New York Times and the Los Angeles Times and I have been quoted in over one hundred national and local news articles and appeared on redistricting-related news pieces on CNN, Fox News, and several public and commercial television and radio news broadcasts.

3. I am, and at all times since 2006 have been, the owner and primary consultant for National Demographics Corporation ("NDC"). Prior to that, I was a Senior Analyst and later Vice President for NDC from 2001 until 2006. In these roles, I have acted as demographic and technical consultant on matters related to analysis of demographics, polarized voting, and potential Voting Rights liability for over 300 California jurisdictions, along with numerous jurisdictions in other states. I have worked on the districting or redistricting of over 200 state and local jurisdictions, ranging in size from California's tiny Clay Elementary School District, to the city of San Diego, the counties of San Diego and Los Angeles, and Arizona's 2001 first-in-the-nation Independent Redistricting Commission.

4. In each of those more than 300 districting, redistricting, and liability studies, I have personally built, or supervised the building of, one or more databases combining demographic and election data from sources including the California Statewide Database, the 2000 and/or 2010 decennial Census, the Census Bureau's American Community Survey, and the Census Bureau's Special Tabulation of Citizen Voting Age Population Data, often along with local and/or county election records.
5. In connection with those redistricting processes, I have participated in the public process of soliciting and receiving public testimony through workshops and public hearings regarding what constitutes communities of interest within a given jurisdiction at the time district boundaries are being developed.
6. I have been a repeat speaker at redistricting discussions and seminars organized by the National Conference of State Legislatures. Some of the presentations I delivered have included "Communities of Interest in Redistricting: A Practical Guide" (Spring 2008), "Communities of Interest in Redistricting: A key to drawing 2011 plans (and for their defense)" (Spring 2010), and "Citizen Voting Age Data from a line-drawer's viewpoint" (Winter 2011).
7. I have testified on demographic matters as an expert witness for the City of Palmdale in *Jauregui, et al. v. City of Palmdale*, as an expert witness for the City of Highland in *Garrett v. City of Highland*, as an expert witness for Kern County (CA) in *Luna v. County of Kern*, and as the 30(b)(6) designee for the Arizona Independent Redistricting Commission in *Arizona Minority Coalition v. Arizona Independent Redistricting Commission*, which included seven days of direct testimony and cross-examination in the state court case. I also testified in the related federal court case regarding Arizona's 2001 redistricting.
8. In addition to those cases where I testified, I wrote an expert report and was deposed and accepted by the court as an expert witness in *Soliz v. Santa Clarita Community College District* (which settled), *North Carolina State Conference of NAACP Branches v. Lewis*, *City of Redondo Beach v. State of California*, and *Harris v. Arizona Independent*

Redistricting Commission.

9. My expert witness declarations were also accepted by the court in *Jamarillo v City of Fullerton* and *Diego v City of Whittier*.

10. My hourly rate is \$300 per hour for analysis, research and report writing, and \$350 per hour for depositions and testimony.

II. Task Description

11. For this case, I was asked to review the expert report and illustrative maps submitted by Mr. William Cooper for the plaintiffs and to share my opinions of them. My review focuses on whether Mr. Cooper's illustrative maps follow traditional redistricting principles, whether race predominated in drawing the illustrative maps, and whether the proposed two majority-African-American Congressional districts actually are majority-African-American and whether the majority-African American districts are geographically compact.

III. Opinions and Analysis

In Illustrative Maps 3 and 4, African-Americans Are a Majority of Voting Age Population in Only 1 District

11. The 2010 Census allowed respondents to self-declare their ethnic and racial identification:

In order to facilitate enforcement of the Voting Rights Act, the Census Bureau asks each person counted to identify their race and whether they are of Hispanic or Latino origin. For the 2010 Census, the racial categories are: White, Black, American Indian, Asian, Native Hawaiians and other Pacific Islanders, and Some Other Race. Persons of Hispanic or Latino origin might be of any race. Persons are given the opportunity to select more than one race.¹

The result is that the Census Bureau reports 263 different population counts for each Census Block in the country:

¹ "How to Draw Redistricting Plans That Will Stand Up In Court", National Conference of State Legislators (NCSL), January 22, 2011, p. 17.

In order to reduce the categories of racial data to a manageable number, and to provide guidance to states and local governments that must submit their redistricting plans for preclearance before they may take effect, the U.S. Department of Justice says that, in most of the usual cases, the Department will analyze only eight categories of race data:

Non-Hispanic White

Non-Hispanic Black plus Non-Hispanic Black and White

Non-Hispanic Asian plus Non-Hispanic Asian and White

Non-Hispanic American Indian plus Non-Hispanic American Indian and White

Non-Hispanic Pacific Islander plus Non-Hispanic Pacific Islander and White

Non-Hispanic Some Other Race plus Non-Hispanic Some Other Race and White

Non-Hispanic Other multiple-race (where more than one minority race is listed)

Hispanic²

12. Using this recommended definition of “Black/African-American” for redistricting purposes,³ African-Americans are not a majority of voting age population in District 2 in illustrative plan 4 or in District 7 in illustrative plan 3. In illustrative plan 3 and in illustrative plan 4, only one district has a voting-age population that is majority-African-American. Mr. Cooper’s claims of a second district rely on using the alternative “All parts Black” data, rather than the recommended definition of “Black / African-American” for redistricting.

13. Of the Alabama residents who marked “Black/African-American” on their 2010 Census form, 11,026, or 1.20%, of them also marked some other category. Mr. Cooper counts them all in his “BVAP” figures. But his report provides no analysis or even anecdotes that these 11,026 people vote cohesively with those who meet the traditional

² Ibid, page 17-18.

³ See Guidance Concerning Redistricting Under Section 5 of the Voting Rights Act, Federal Register Vol. 76, No. 27, February 9, 2011; and OMB Bulletin No. 00-02 - Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement, March 9, 2000. While both reports retain the option to follow Mr. Cooper’s approach as an alternative, the primary allocation method is as described in the NCSL guidance to legislators.

Department of Justice definition of African-American for redistricting purposes. Of those 11,026 who marked “Black/African-American” in addition to another ethnicity or race, 4,500 (41%) marked “Hispanic/Latino”; 371 (3%) marked “White/Caucasian” and “Hispanic/Latino”; 4,777 (43%) marked one other race; 1,575 (14%) marked two of the other race categories; and 174 (1.6%) marked three, four or five of the other race categories. Unless we assume that these residents who also consider themselves Latino, Asian-American, Native American, Pacific Islander, and/or “Other” should be counted as African-American, then illustrative maps 3 and 4 do not contain two majority-African-American voting age population districts.

14. As drawn, using the traditional definition of African-American for redistricting purposes, the voting age population in District 7 in illustrative plan 3 is only 49.9 percent African-American. And the voting age population in District 2 in illustrative plan 4 is only 49.8 percent African American. The numbers cited by Mr. Cooper of 50.99 percent and 50.33 percent, respectively, only cross the 50 percent mark by including those who also identified as White, Latino, and the other racial categories available. For illustrative maps 3 and 4, Mr. Cooper is counting someone who marked all six of the available racial and ethnic category on their 2010 Census form as an African-American, with no evidence or support to show those Alabama residents actually vote cohesively with those residents who meet the traditional definition of African-American for redistricting purposes.

15. This analysis also highlights the barely-majority districts the illustrative maps propose. Where over 60 percent of voting age population in the benchmark District 7 were African-American, the illustrative maps propose Districts that, using Mr. Cooper’s numbers, range from just 50.28 to 51.96 percent African-American. Mr. Cooper’s need to rely on counting residents who marked White, Latino, Asian-American, Native American and African-American as being cohesive voters with African-American voters reflect how thin the illustrative maps divide the African-American voters: even if those multi-race/multi-ethnic voters really do vote cohesively with African-American voters, a one percent error in the Census numbers would mean that illustrative maps 3 and 4 have zero

majority-African-American districts and illustrative map 1 would have only one. In pursuit of a stated goal to create two districts where African-American voters could elect their preferred candidates, the illustrative maps could end up with zero such districts.

Illustrative Maps Ignore the Traditional Redistricting Principle of Compactness

16. All four illustrative plans fail to comply with the traditional redistricting principle of compactness. This demonstrates that it is impossible to draw two compact majority-BVAP Congressional districts without racial gerrymandering. A simple visual review of districts in the illustrative map reveals they do not comply with the traditional redistricting principle of compactness, regardless of the specific definition or measure used to describe it (the following illustrations are shown in clearer detail in Exhibit 1 of this report):

Figure 1. District 1 in each illustrative map

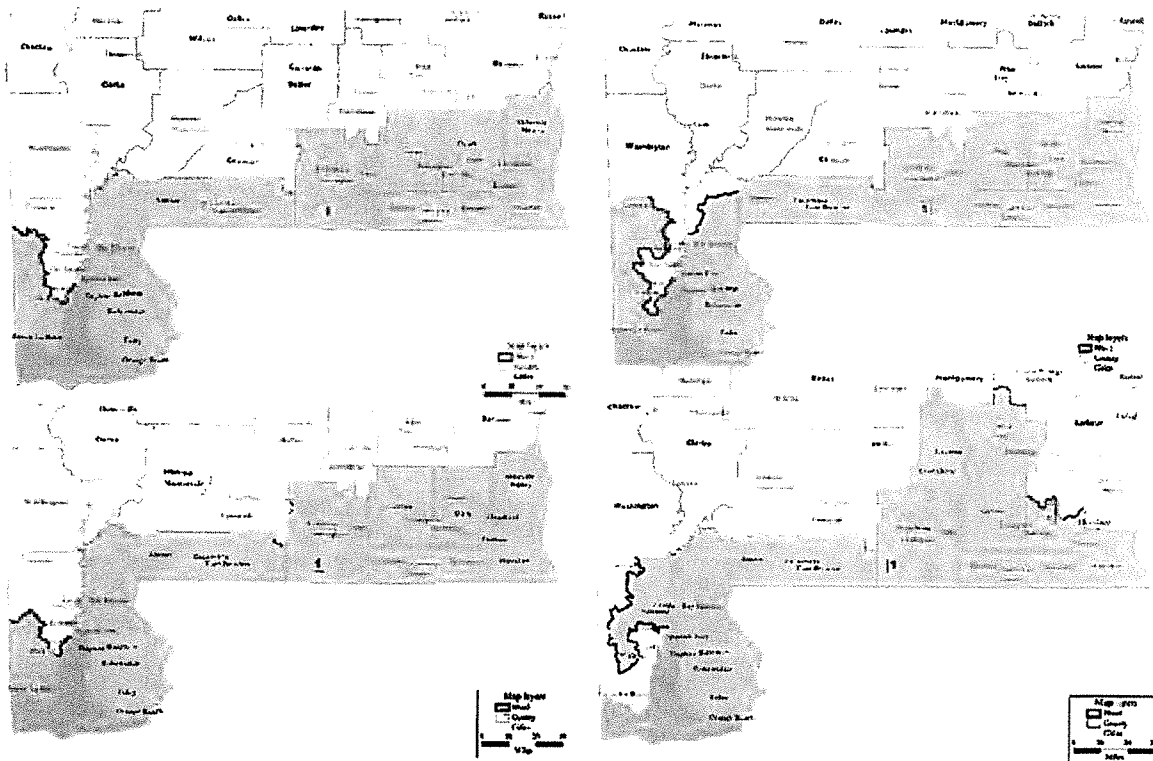
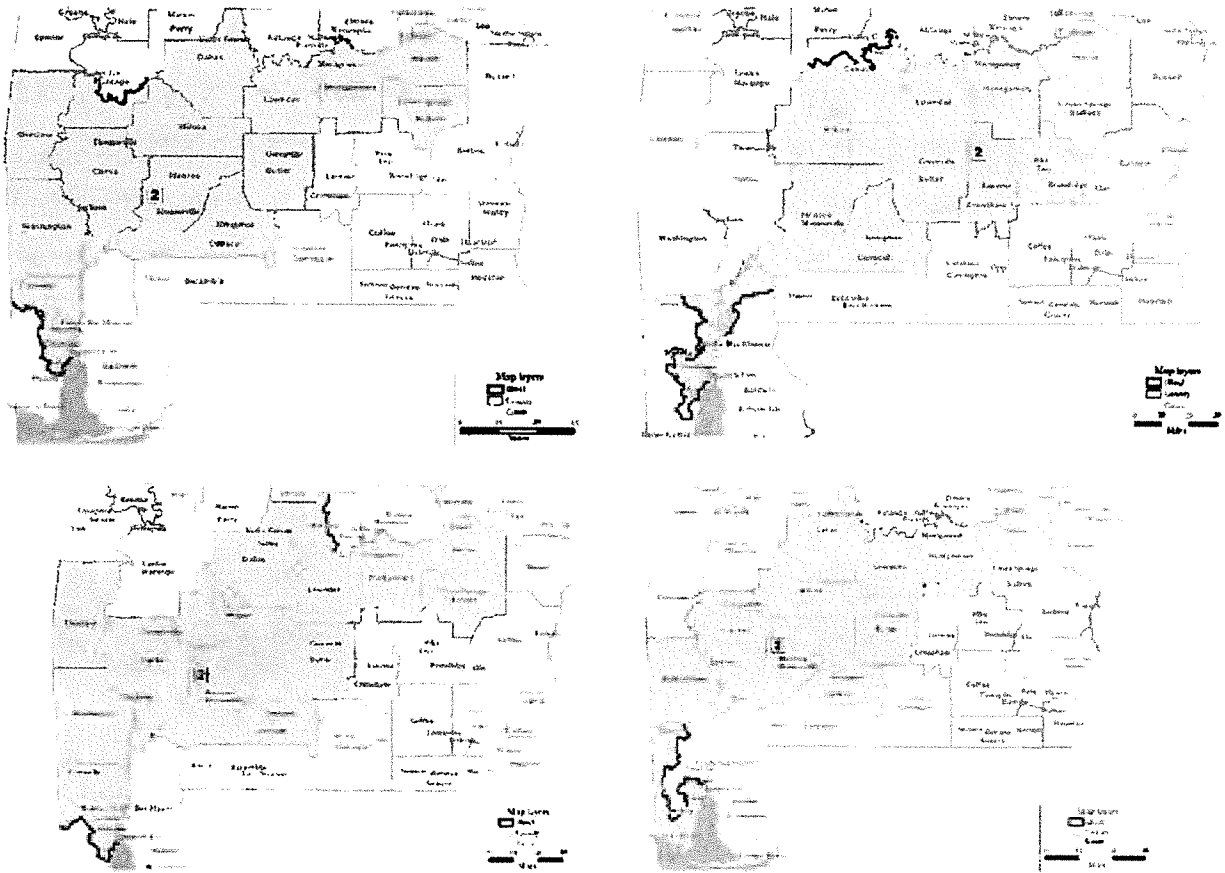
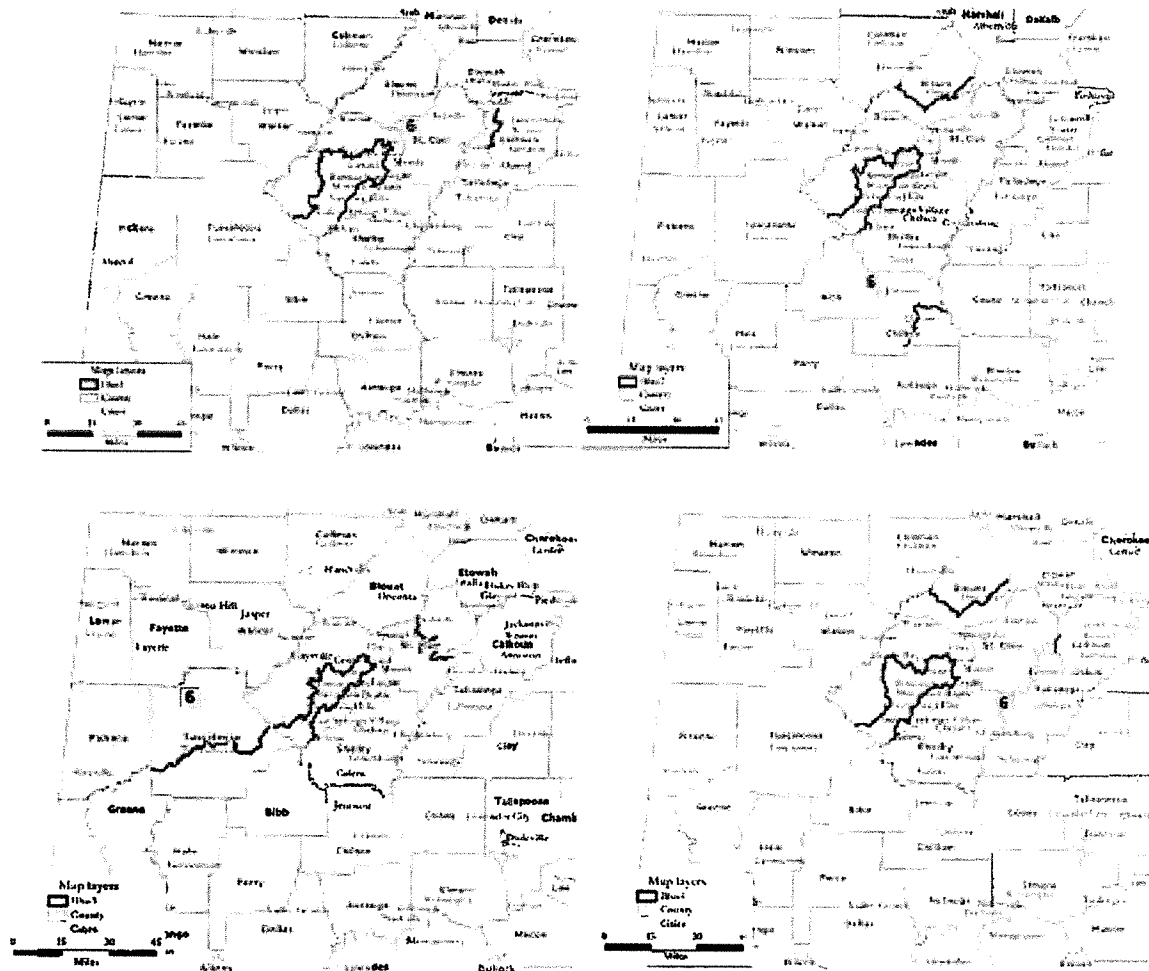


Figure 2. District 2 in each illustrative map

17. While the bulk of District 2 in the illustrative maps is a relatively compact grouping of counties, the way the District in each illustrative map dips down into Mobile County highlights the lack of geographic compactness (and potential use of race as the predominate factor) in each of the maps. Even District 2 in illustrative map 3, which lacks the prominent “foot” extension down into Mobile County, has the non-compact impact of forcing District 1 into a non-compact (and barely contiguous) wrapping around District 2.

Figure 3. District 6 in each illustrative map:



18. The compactness scores cited in Mr. Cooper's Figure 19 highlight that even the Adopted Map is less compact than the Board of Education and State Senate maps, which highlights the extensive non-compact 'arms' and 'necks' necessary to comply with the Federal Voting Rights Act Section 5 at the time the Adopted Map was voted on in 2011. Even though Section 5 no longer applies to Alabama, all four illustrative plans are significantly less compact than the already-non-compact Adopted Map. Not only do the average Reock scores drop by anywhere from 0.05 to .07 compared to the Adopted Map, the Reock scores for the key redrawn districts in the Illustrative maps (Districts 1 and 2)

see significant drop from a low drop of 0.14 (District 2 in illustrative 2) to 0.25 (District 2 in illustrative 4):

19. Both visually and mathematically, all four illustrative maps as a whole, and in particular Districts 2 and 7 in each, do not comply with the traditional redistricting principle of compactness.

Figure 4

Measures of Compactness

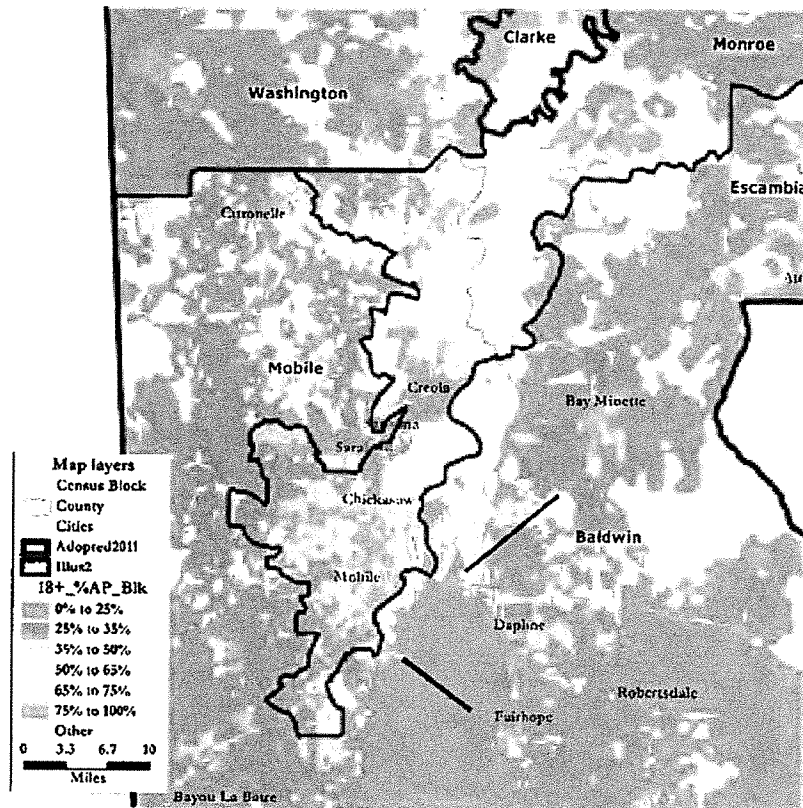
	Adopted	Illus1	Reock			
			Illus2	Illus3	Illus4	
1	0.42	0.21	0.21	0.20	0.25	
2	0.49	0.35	0.27	0.33	0.24	
3	0.36	0.35	0.46	0.26	0.34	
4	0.36	0.38	0.36	0.35	0.36	
5	0.22	0.22	0.22	0.22	0.22	
6	0.43	0.29	0.43	0.27	0.52	
7	0.38	0.38	0.31	0.31	0.35	
Mean	0.38	0.31	0.32	0.28	0.33	
Min	0.22	0.21	0.21	0.20	0.22	
max	0.49	0.38	0.46	0.35	0.52	

20. Mr. Cooper notes (incorrectly) that he treated incumbent Representatives the same as the Adopted Map, so that traditional redistricting principle cannot explain the reductions in compactness. None of the decreases in compactness result from any significant reductions in county, city or VTD splits, so those factors cannot explain the reductions in compactness. Mr. Cooper's decision to start his map-drawing with the Board of Education map, instead the Adopted Map, means he already abandoned all of the public input and legislative decisions that contributed to the development and passage of the Adopted Map, including preserving the core constituency of districts, so the decreased compactness cannot be explained by any of those considerations. Mr. Cooper cites no other consideration as an explanation for the bizarre district shapes and the corresponding reductions in compactness, leaving race as the apparently predominate factor in how the

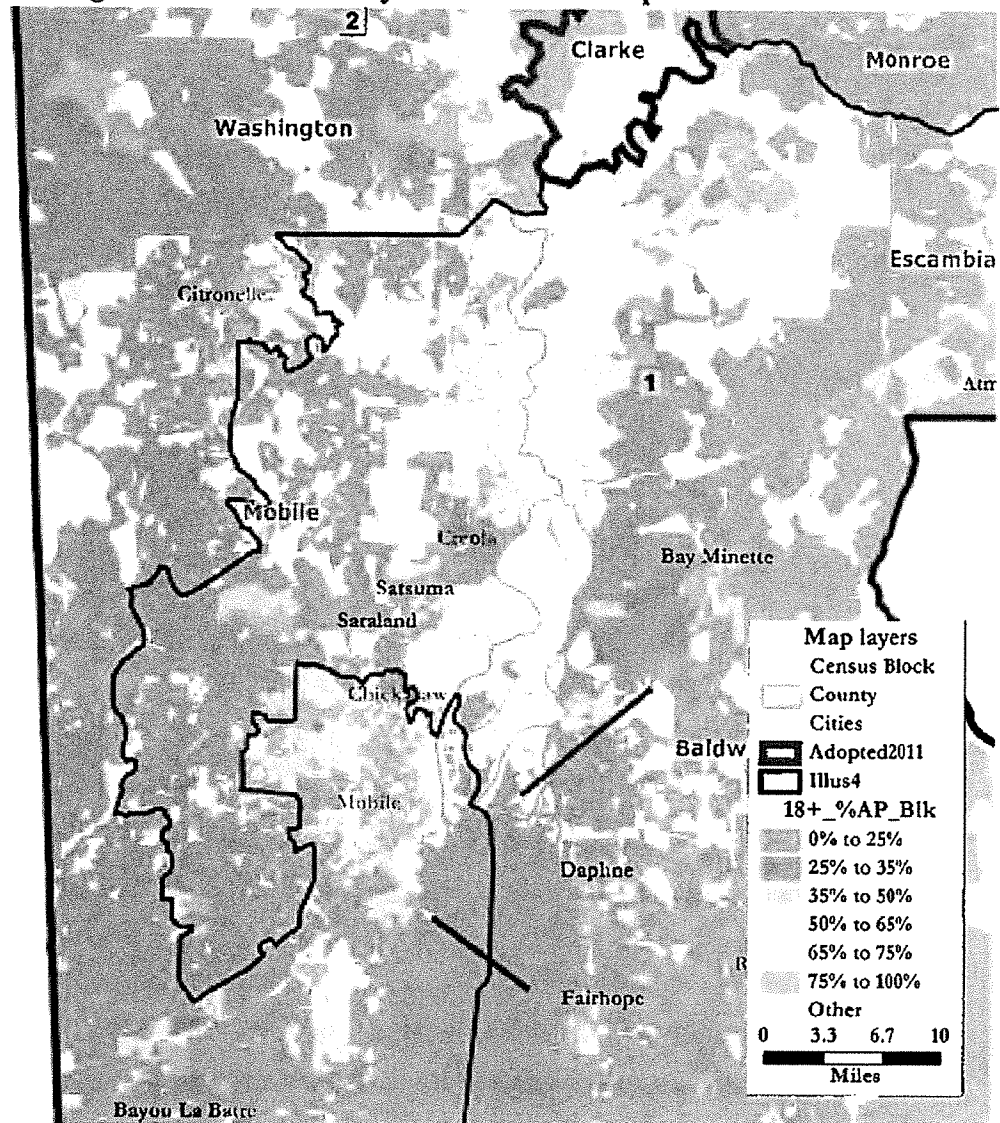
illustrative maps are configured. (Larger versions of District 1, 2 and 6 images are attached in Exhibit 2.)

21. Non-Compact “fingers” of Illustrative Maps Focus on Dividing Areas by Race

Figure 5. Mobile County in Illustrative Map 2



22. The only over-65% African-American area on the border of illustrative map 2 District 2, but not included in that District, is the area indicated by the blue arrow. And the clear reason that area is not included is contiguity: that area is in a narrow ‘neck’ of District 1 that must run up the west side of Mobile Bay to keep District 1 barely contiguous using the Interstate 10 bridge across the northern reaches of Mobile Bay. This same Bayside ‘neck’ extends up to Interstate 10 while picking up as few African-Americans as possible is included in illustrative maps 1, 2 and 3. Illustrative Map 4 takes an even less-compact approach than using that ‘neck’:

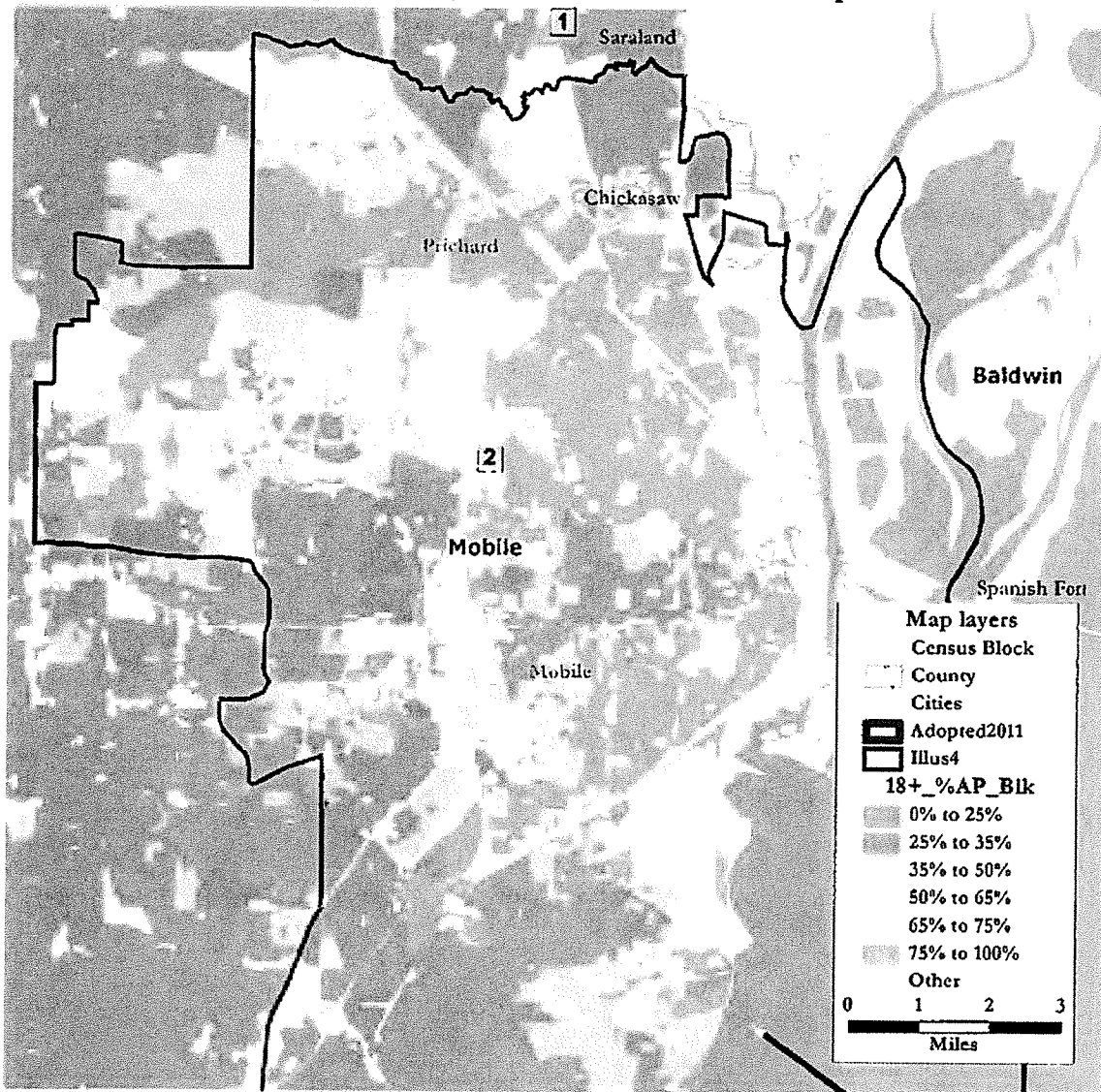
Figure 6: Mobile County in Illustrative Map 4

The red and blue arrows are in the same places for easy reference. But now the “neck” has swung over to the western edge of the County and State, where District 2 narrowly swings around the (heavily White) western suburbs of the City of Mobile to enter the heavily African-American Census Blocks in Mobile City.

23. A closer look at the areas of Mobile that illustrative map 4 carves out of District 1 to put into District 2 clearly illustrates that race is the predominate factor in the drawing

of these illustrative maps:

Figure 7: City of Mobile in Illustrative Map 4



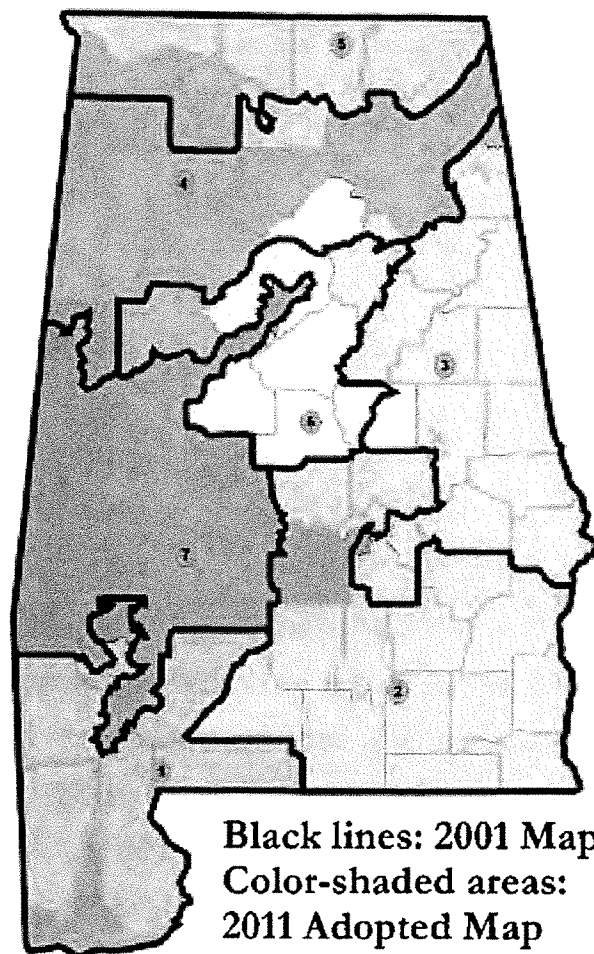
24. The illustrative map district borders do not follow freeways, highways, or (with small exceptions) city boundaries. The only apparent consistent factors in the border locations are contiguity, equal population, and race. Since contiguity and equal population are required, race is the predominate discretionary consideration. The same line-drawing focus is clear from my review of the illustrative map boundaries in Mobile for all four illustrative maps.

Illustrative Maps Ignore Traditional Redistricting Principle of Preserving the Core Constituency of Districts

25. A traditional redistricting principle is preserving the core constituency of districts. Since Representatives and constituents build up relationships and understandings of communities and issues over time, and since many projects undertaken by Representatives on their constituents' behalf are complicated multi-year efforts, traditionally efforts are made to minimize the disruption of those relationships in redistricting.

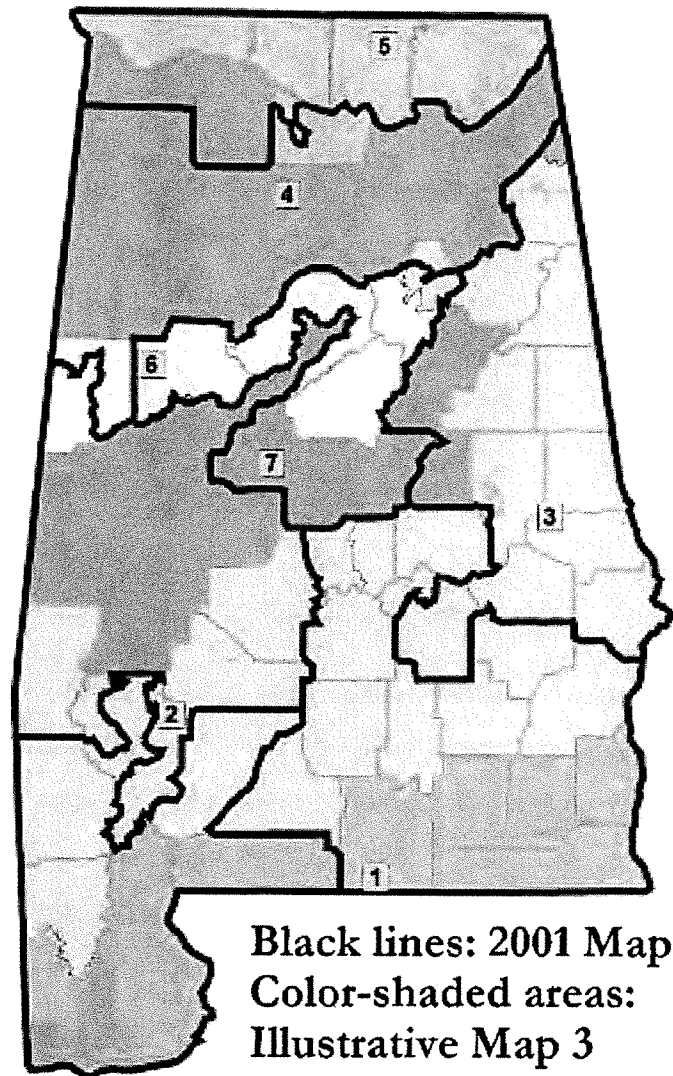
26. The Adopted Map clearly emphasized retaining the core of existing districts, with only small changes to each district.

Figure 8: Overlay of 2001 Districts on Adopted Map

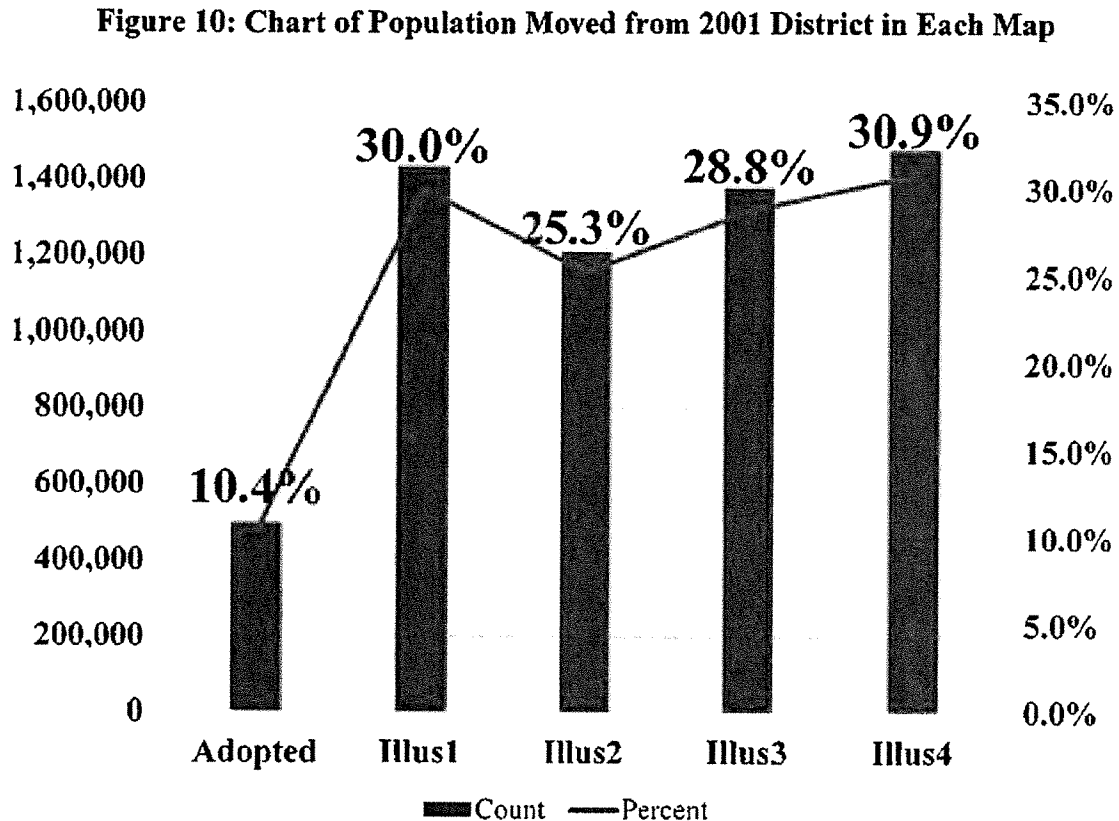


27. Contrast that with a sample illustrative map, illustrative map 1 in the image below:

Figure 9: Overlay of 2001 Districts on Illustrative Map 3



28. The numbers support the core-retention approach of the Adopted Map, as only 10.4 percent of the state's population moved from one district to another.



29. Mr. Cooper openly acknowledges that he completely ignored the 2001 Congressional Districts as a starting point for the illustrative maps, instead using the eight-district state Board of Education map as his starting point. He chose to start drawing his map of seven Congressional Districts from an eight-district statewide map drawn for an entirely different elected body. In so doing, he completely ignored the traditional redistricting principle of retaining the core constituency of each district. The results confirm that this traditional redistricting principle was ignored: where the Adopted Map moved only 10.4 percent of state residents, the illustrative maps assigned new districts to anywhere from 25.3 to 30.9 percent of state residents – 2.5 to nearly 3 times the number moved by the Adopted Map.

30. The scale of the changes proposed by the illustrative maps, and their race-focused nature, is even greater than illustrated by the numbers in the chart above. Since Districts 4

and 5 in all four illustrative maps are nearly identical to the Adopted Map, the 711,000 to 978,000 additional people moved by the illustrative maps are concentrated in only five districts.

31. While even the 10.4 percent figure might seem like significant change, it was driven primarily by the requirement to balance populations of the districts: by the time of the 2010 Census, the 2001 District 6 was over-populated by 71,663 people, and District 7 was under-populated by 79,467 people – 11.6 percent under the required 682,819 population for a 2011 Congressional District. Not only did the Adopted Map manage to add the nearly 80,000 residents needed in District 7, it did so while meeting the Section 5 requirement (at the time) to avoid diluting the African-American voters' ability to elect their preferred candidates compared to the under-populated benchmark 2001 District 7.

32. Yet again, we see that the changes made by the illustrative maps have no basis in a traditional redistricting principle – in this case, the illustrative maps moved nearly one-third of the state's residents into new districts with no concern for the traditional redistricting principle of maintaining the core constituencies of districts. If one-third of the state's voters are re-assigned and the explanation is not compactness, is not avoiding county, city, and VTD splits, is not avoiding pairing of Representatives, and has no basis in the public testimony and legislative decisions of the 2011 redistricting cycle, it again appears that race was the predominate consideration in changing the District assignments of one-third of the state's residents.

Illustrative Maps Place Alabama's African-American Incumbent Democrat in a Heavily White, Safely Republican District

33. Mr. Cooper's statement in his paragraph 51 is factually incorrect. Rather than "The illustrative plans avoid 2018 incumbent conflicts, i.e. no incumbents are paired in the same district," in fact the African-American incumbent Democratic Representative Terri Sewell is removed from her district and placed in heavily-White and safely-Republican District 6

in Illustrative maps 1, 2 and 3.⁴ Thus illustrative maps 1, 2 and 3 violate the traditional redistricting principle of avoiding removing incumbent Representatives from their districts and avoiding pairing current Representatives – and the paired incumbent is the African-American Representative.

Claims About the 2020 Redistricting Rely on a Faulty Analysis of the Data

34. Paragraphs 93 through 100 of Mr. Cooper's report allege that American Community Survey data indicate the African-American citizen voting age population is large enough to maintain two majority-African-American districts in the 2021 redistricting, even if Alabama goes down to six Congressional Districts.⁵

35. If we accept Mr. Cooper's projection that Alabama's 2020 population will be 4.9 million, then the required population for each Congressional District is 700,000 if Alabama keeps 7 districts and 816,667 if (as predicted) Alabama drops to 6 districts.

36. Given the significantly slower population growth in 2001 Adopted District 7 relative to the rest of the state from 2001 to 2010 (leaving it under-populated by 79,467 people, as noted above), it is highly likely that this trend has not reversed itself from 2011 to 2020, and Adopted District 7 is highly likely to be well below the required population level in 2020 (as would be the illustrative maps' Districts 2 and 7, which primarily overlay Adopted District 7). But even if we assume a 'best case' scenario and District 7's population growth from 2010 to 2020 roughly matches the statewide population growth rate, District 7 will be significantly short of the population required for a Congressional District in 2020:

⁴ Mr. Cooper states that he does not know the address of Representative Sewell. I was able to find her address through an online search at whitepages.com on April 20th, 2019. I was not able to find the other missing address, for Representative Mike Rogers, but his biography on www.house.gov says that he is from Calhoun County, and as long as he resides anywhere in Calhoun County he is not paired in any map.

⁵ "Seats Gaining / Losing Seats based upon 2020 Projections," Polidata, Dec. 2018.

Figure 11: 2021 Population Estimate for Adopted Map District 7

District	2010 Population	Statewide Growth Rate	Population Growth Using Est. Statewide Growth Rate	Resulting District 2020 Population Estimate	Over / (Under) Population
7	682,820	2.52%	17,181	700,001	-116,666 -14.29%

37. Simply to retain Adopted District 7 will require the addition of 116,666 residents in the 2021 redistricting – in other words, the addition of more than 14 percent of a 2021 district’s total population.

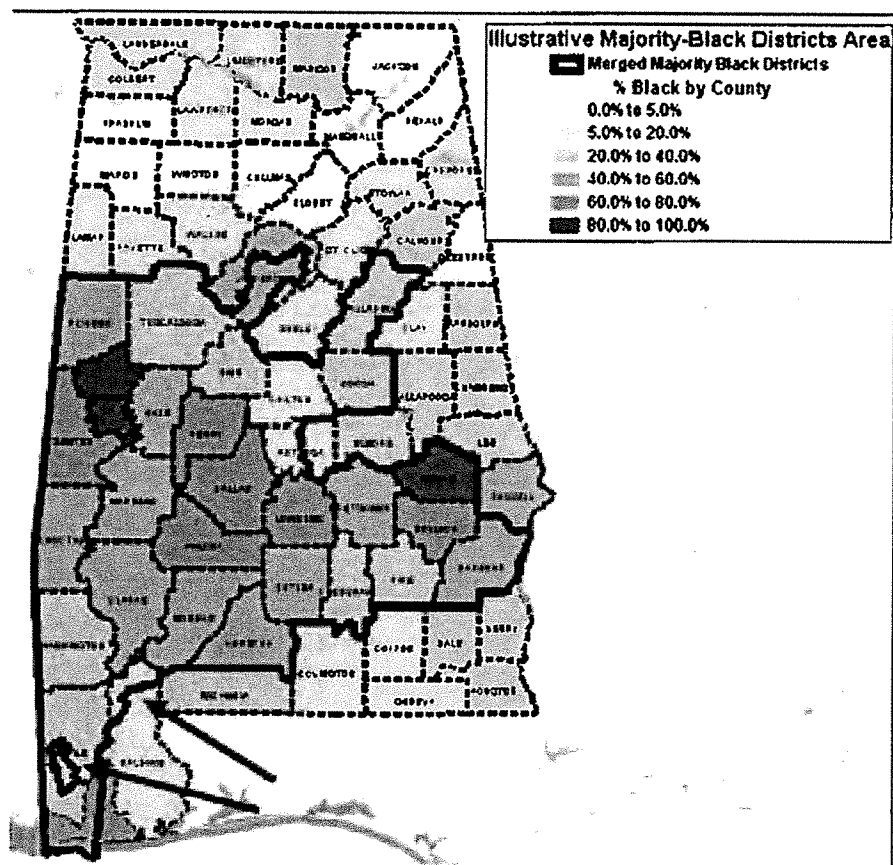
38. Given the clear challenges involved in simply keeping Adopted District 7 as viable majority-African-American district, it should be no surprise that the claims that two majority-African-American districts can be maintained are flawed.

39. The first flaw is a simple math error. Paragraph 94 of Mr. Cooper’s report correctly notes that the required population of a 2021 Congressional District if Alabama has a population of 4.9 million and six Congressional Districts is 816,667. Paragraph 95 then correctly notes that the area shown in Figure 12 has a population of 1,707,430. The next sentence of Paragraphs 95 is simply bad math: 1,707,430 is only 74,097 more than “the population necessary to create two congressional districts,” not Mr. Cooper’s claimed 114,184 more. (816,667 times two is 1,633,333, which is 74,097 less than 1,707,430). Then paragraphs 95 through 100 completely abandon analysis of whether the region shown in Figure 12 has enough population to maintain in 2021 the two allegedly majority-African-American districts in the illustrative plans.

40. The incorrect math in paragraph 95⁶ ignores the demographic reality of the region highlighted in Figure 12: it is not majority-African-American. In fact, only 45 percent of voting age residents in that area are African-American.

41. The map in Figure 12 also has an unexplained geographic “island” in Mobile County that is not included in the data presented for Figure 12. The map below is Mr. Cooper’s Figure 12 image, with two arrows that I added. The red arrow highlights the thick black border of Mr. Cooper’s “area encompassed by the illustrative majority-Black districts in the four illustrative plans.” (Cooper, page 21). The purple arrow highlights the isolated geographic area left out of the area cited by Mr. Cooper:

Figure 12: Mr. Cooper’s Figure 12 with Arrows



⁶ The data in Mr. Cooper’s Figure 3 on page 9 are also incorrect. The “2000 Number” for “Any Part Black (Including Hispanics)” is listed as 4,447,100. That number is the total Census 2000 population for Alabama, not the “Any Part Black” count.

42. That excluded area is geographically small but heavily populated – it contains 93,738 residents. Since this area cannot be left out of a Congressional Map, it clearly should have been included in the Figure 12-related analysis. Including it brings the total 2010 population of the area up from 1,707,414 to 1,801,152 – and reduces the African-American share of voting age population from 45 percent to 43 percent. The area has the total population to support two congressional districts even in a 2020 map of six Congressional districts – but it does not have the African-American numbers to support two majority-African-American districts. The data on the growth rates of African-Americans presented by Mr. Cooper in paragraphs 96 through 100 completely overlook the more important data: the starting point for those growth calculations. The County-wide growth numbers cited by Mr. Cooper are not sufficiently large to overcome the fact that the region as a whole starts at approximately 43 percent African-American by voting age population. Once the math is corrected and the non-contiguous carved-out island of nearly 100,000 residents is included in the analysis, it is highly likely that the Figure 12 region will be unable to include two majority-voting-age-African-American districts in 2021.

43. Despite all of Mr. Cooper's discussion about African-American growth rates, from 2000 to 2010 African-Americans increased their share of Alabama's total population by only one-tenth of one percent (0.1 percent), rising from 25.9 percent to 26.0 percent. Given the 2011 requirement to comply with Section 5 of the Federal Voting Rights Act by not risking African-American voters' ability to elect in the benchmark district, it is not a surprise that a 0.1 percent increase in the African-American population share of the state's total population did not result in doubling the number of majority-African-American Congressional Districts in 2011.

44. In summary, the illustrative maps fail to achieve Mr. Cooper's declared goals:

- a. Two of the four illustrative maps fail to include two majority-African-American by voting age population districts;
- b. All of the illustrative maps either make no significant improvement or even have significantly negative impacts on traditional redistricting principles of

compactness, preserving the core constituency of prior districts, following major visible features as District borders, avoiding pairings of current Representatives, or respecting communities of interest such as counties, cities and VTDs;

- c. By starting from a map drawn for another jurisdiction and containing eight districts (rather than the seven Congressional districts in Alabama), all of the illustrative maps wipe out all of the public comments and legislative goals incorporated in the Adopted Map (and surrender the chance to explain any violations of traditional redistricting principles as direct results of meeting those public or legislative decisions;
- d. Given both the text and context of Mr. Cooper's report, and in the absence of any other justification based in traditional redistricting principles for moving between 700,000 and 900,000 Alabama residents into different Congressional Districts, it is clear that the only remaining predominate factor in the drawing all four illustrative maps is race;
- e. Perhaps most importantly, Mr. Cooper's analysis of the likelihood that two majority-African-American districts could be drawn in 2021 even if Alabama drops to six Congressional districts starts from inaccurate math, follows with flawed geographic assumptions, and concludes with unsupported and incorrect conclusions; the reality under the currently known demographics (everything projected for 2020 Census results are speculative guesses and we will not know the actual 2020 data until its release in 2021) is that Alabama lacks sufficient numbers of geographically concentrated African-Americans of voting age to meet the higher numbers that are needed to be a majority in two out of six districts, even if one (incorrectly) agrees with Mr. Cooper that two such districts could be drawn among today's seven total districts.

DECLARATION

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.

Executed on April 22, 2019.

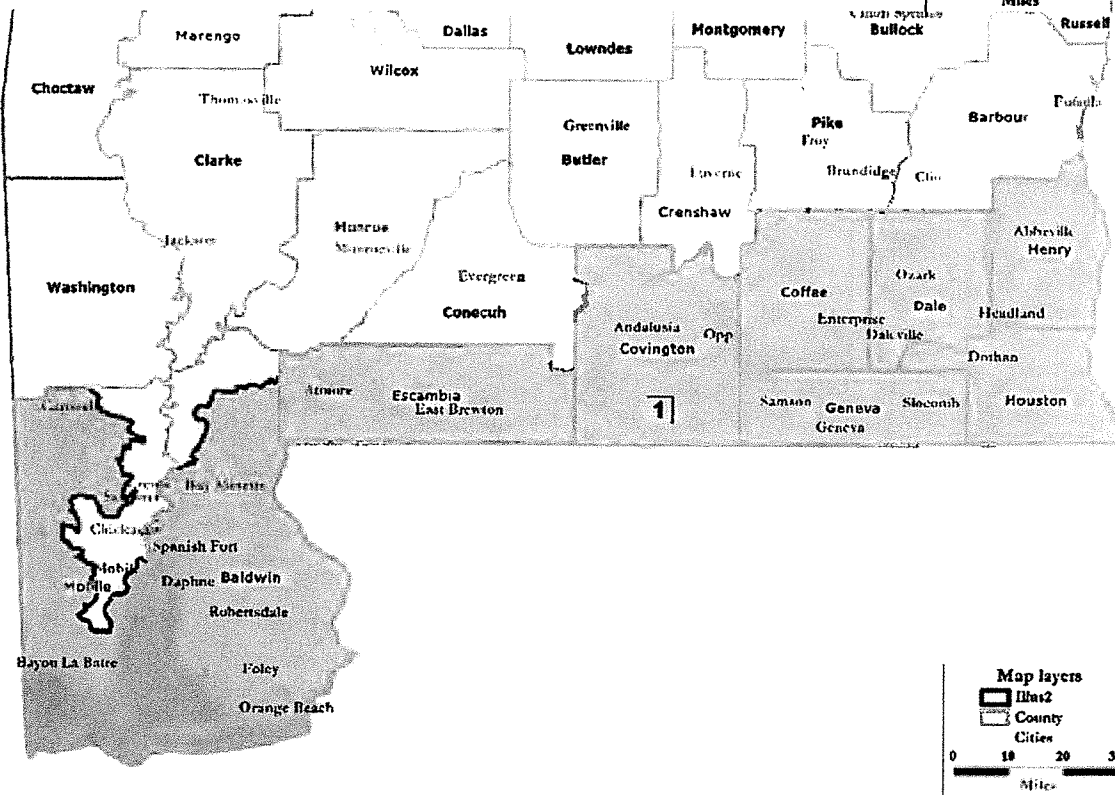
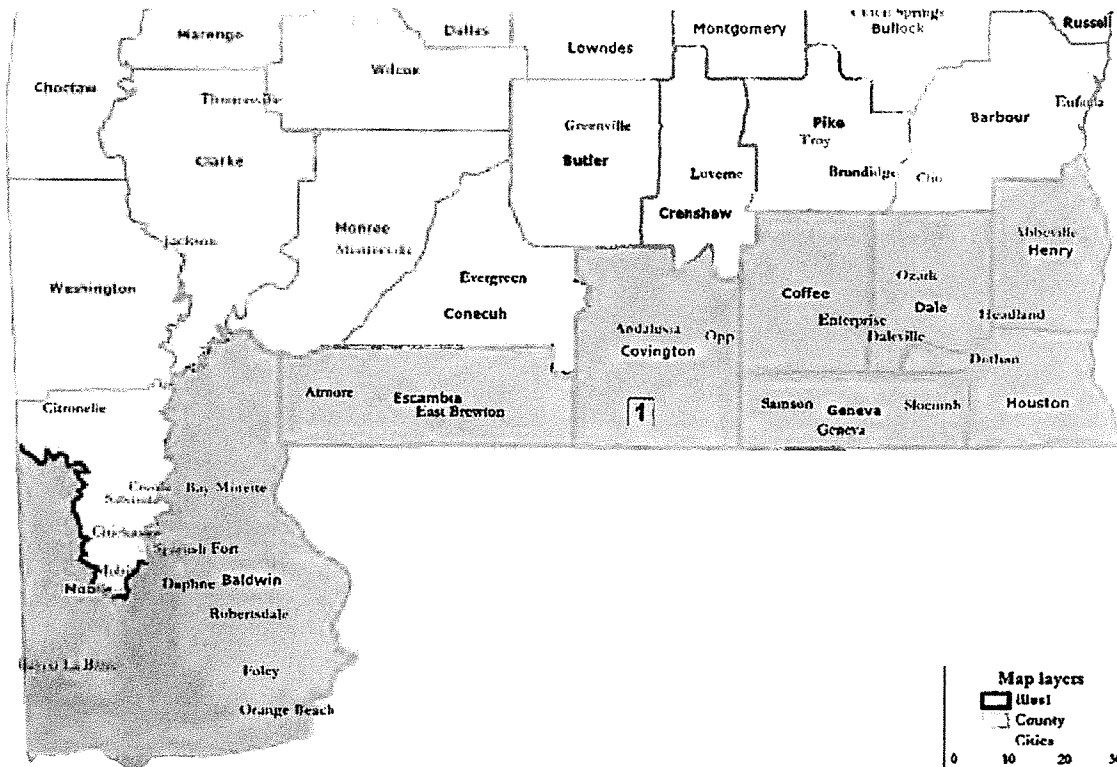
A handwritten signature in black ink, appearing to read 'Douglas Mark Johnson', is written over a horizontal line.

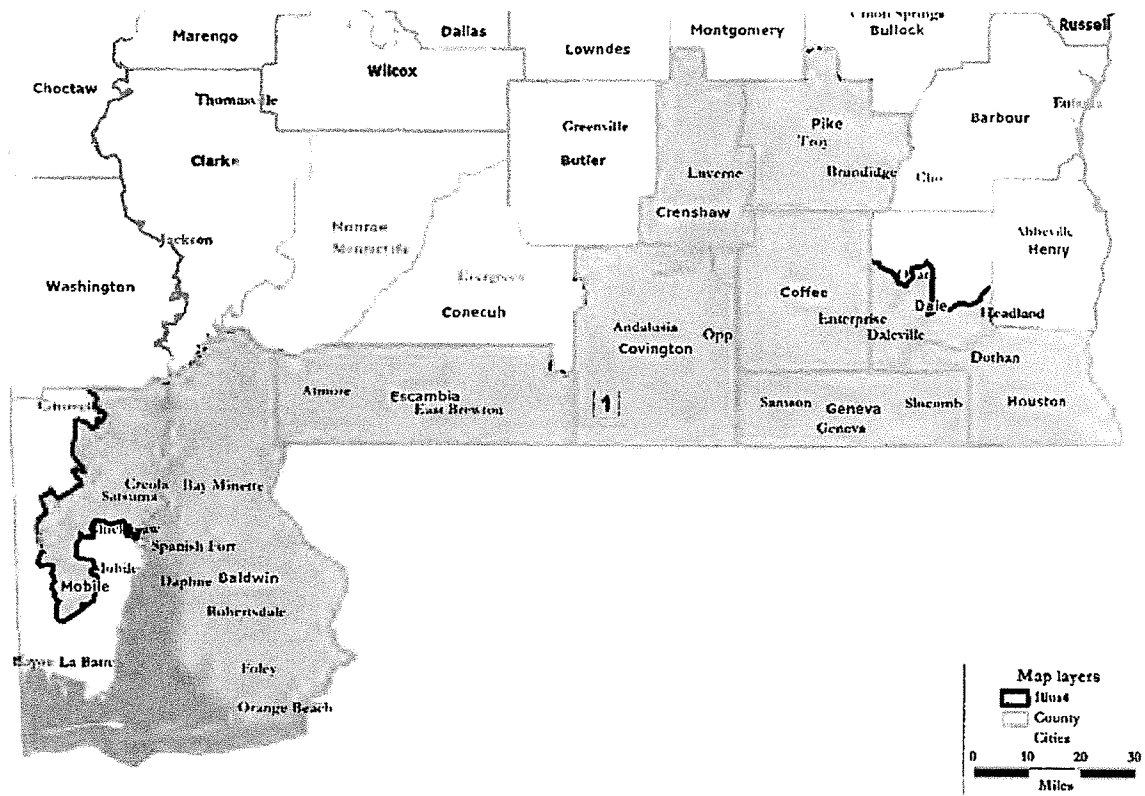
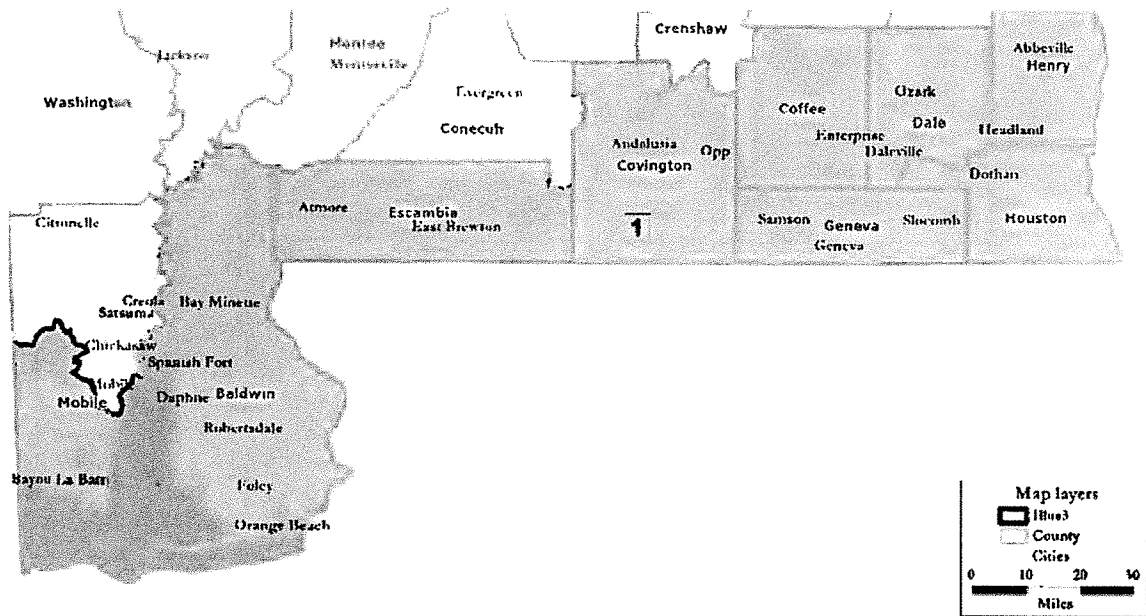
Douglas Mark Johnson

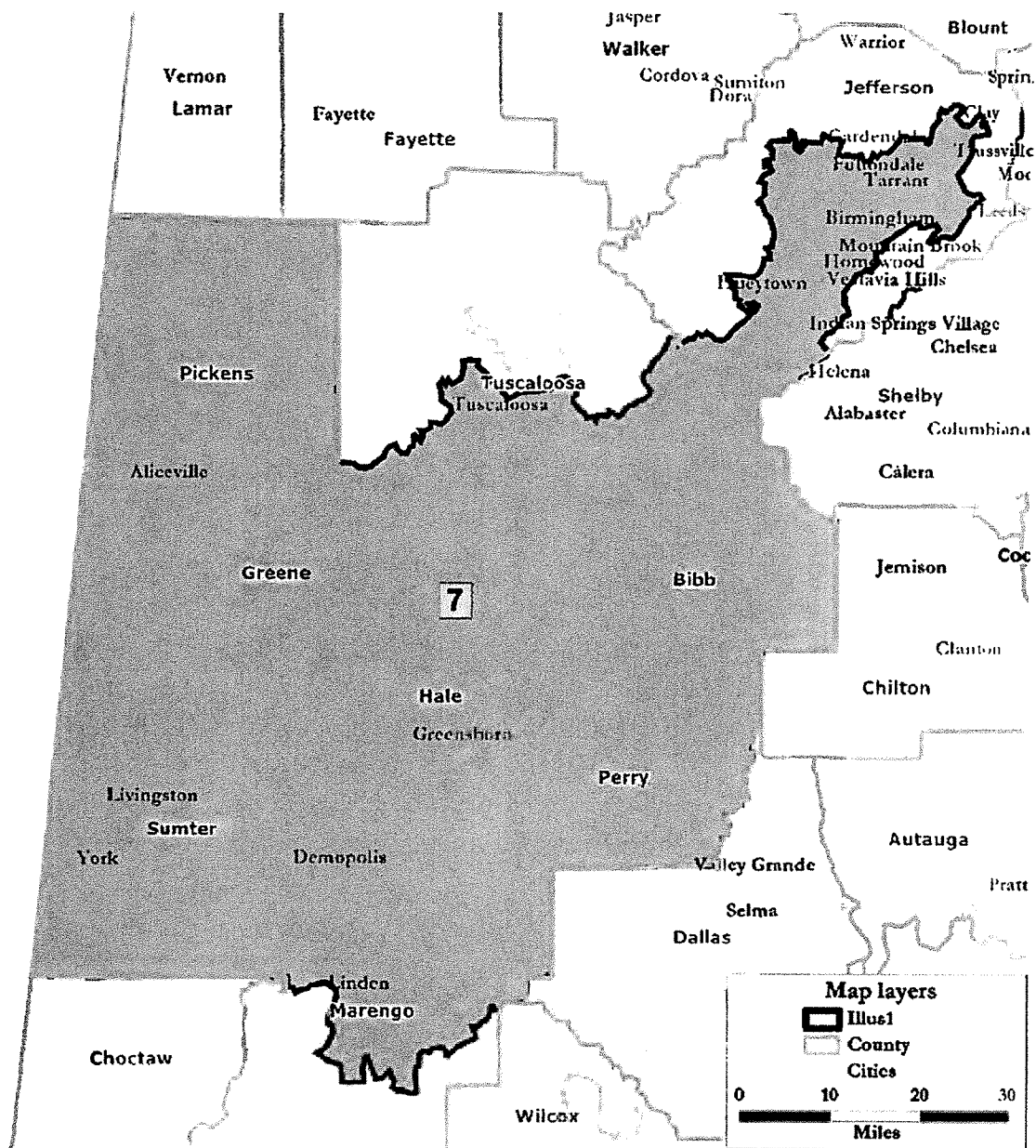
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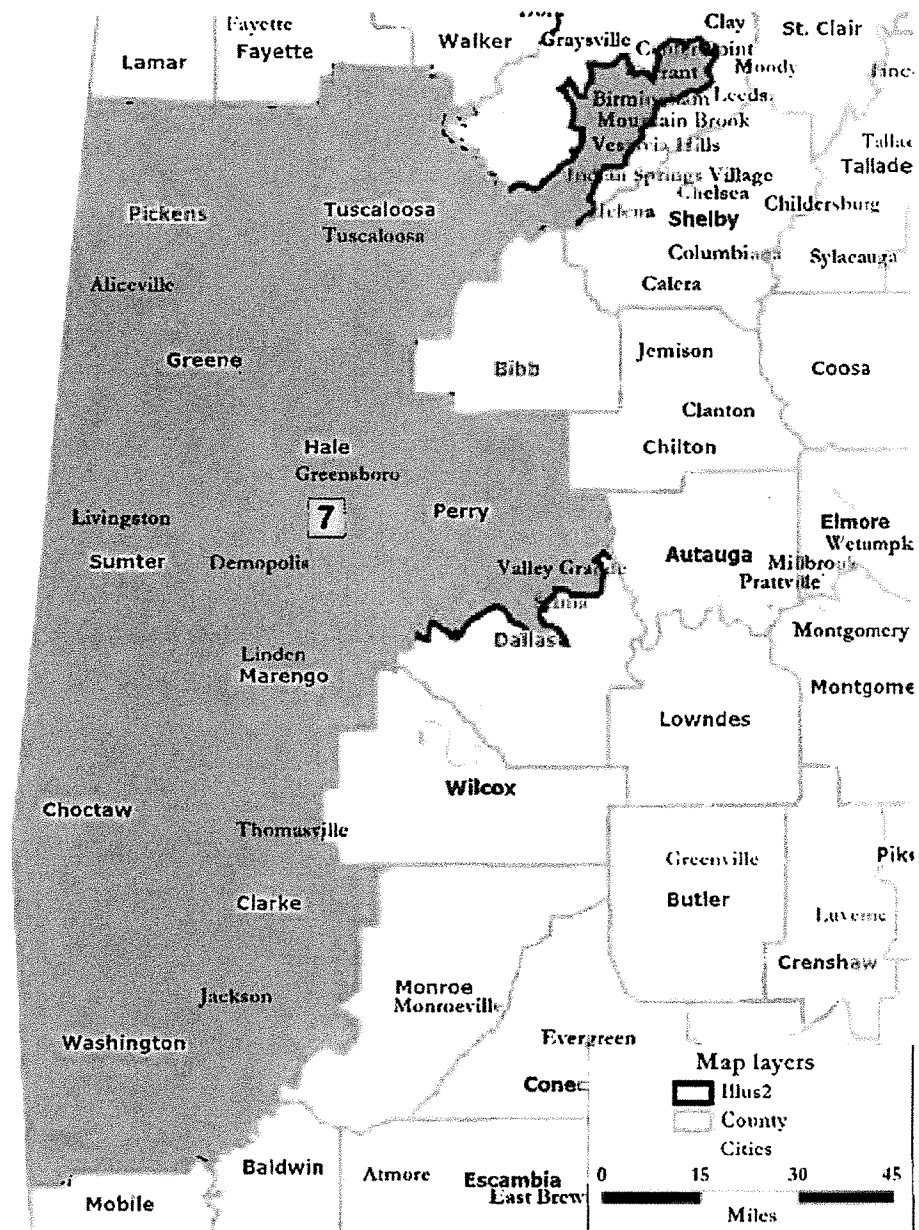
Exhibit 1

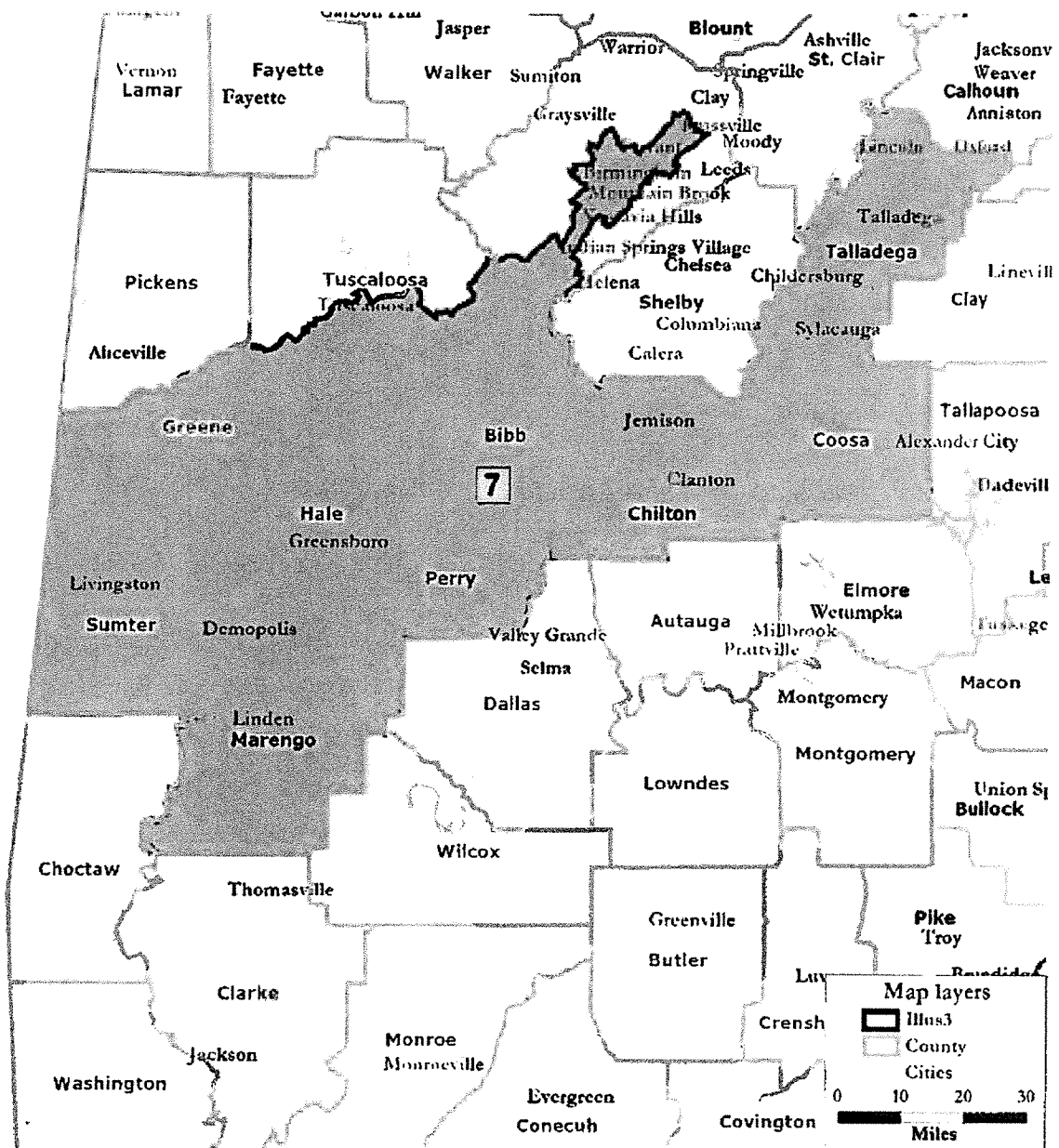
Higher-Resolution Compactness Maps

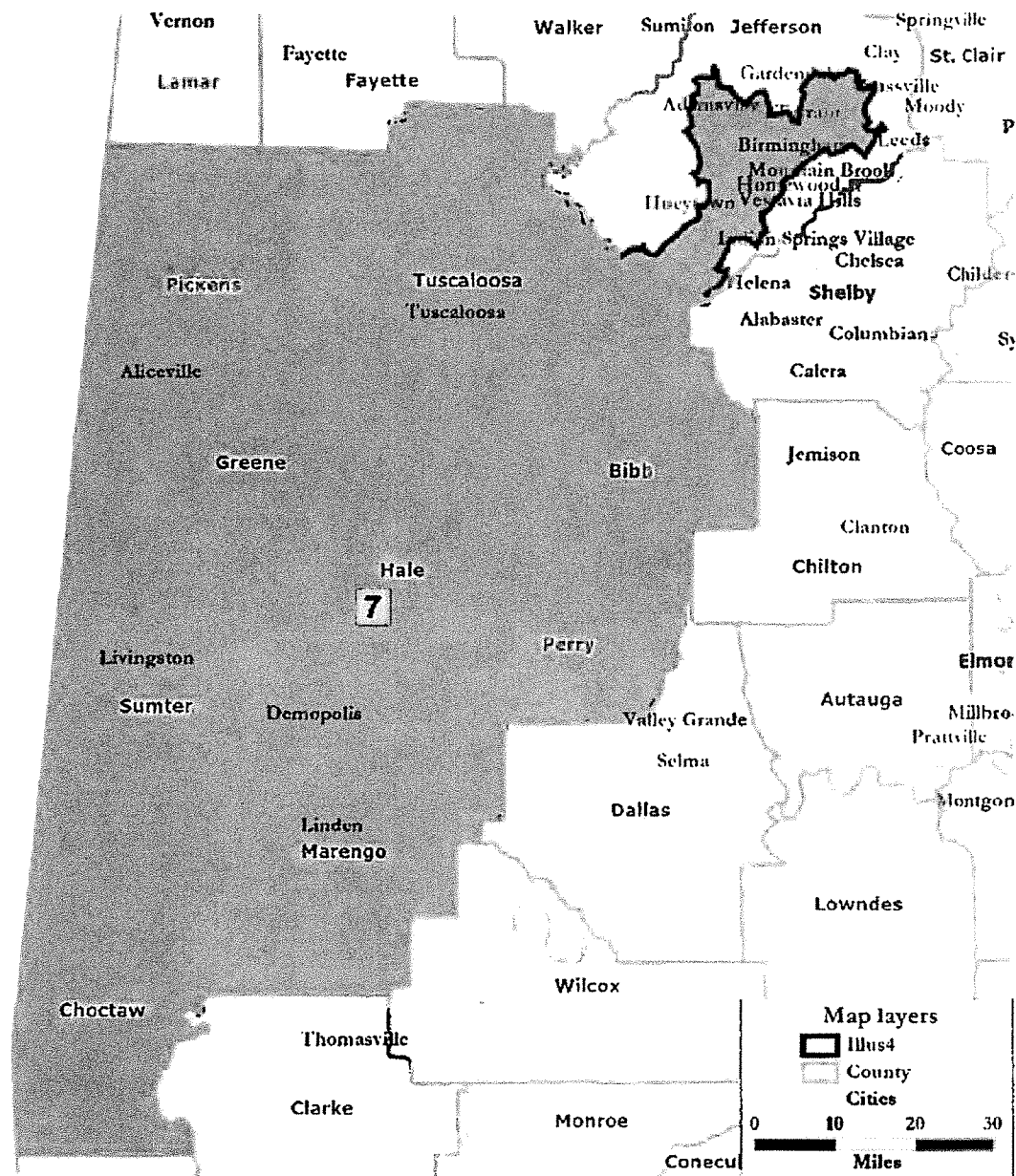


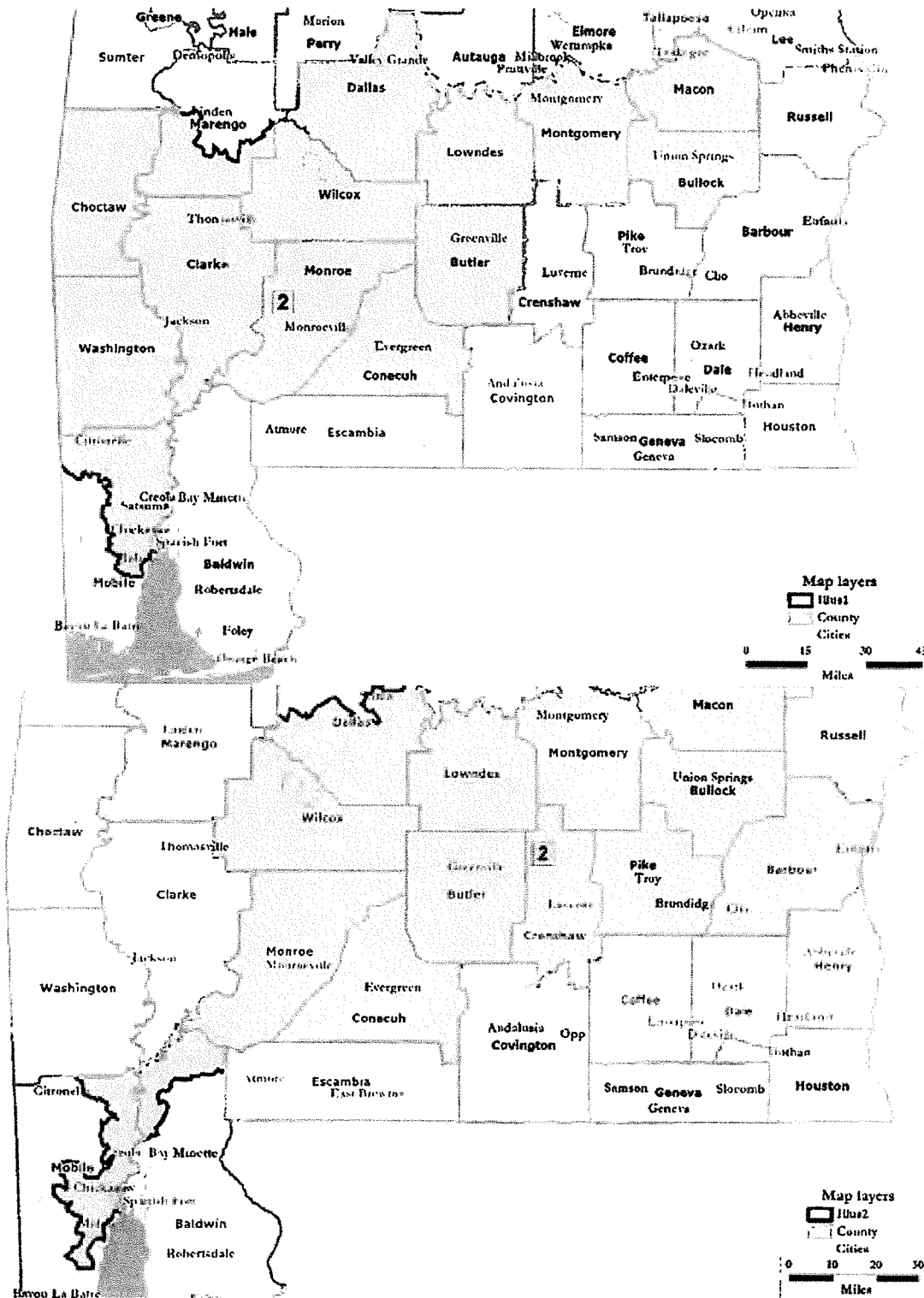












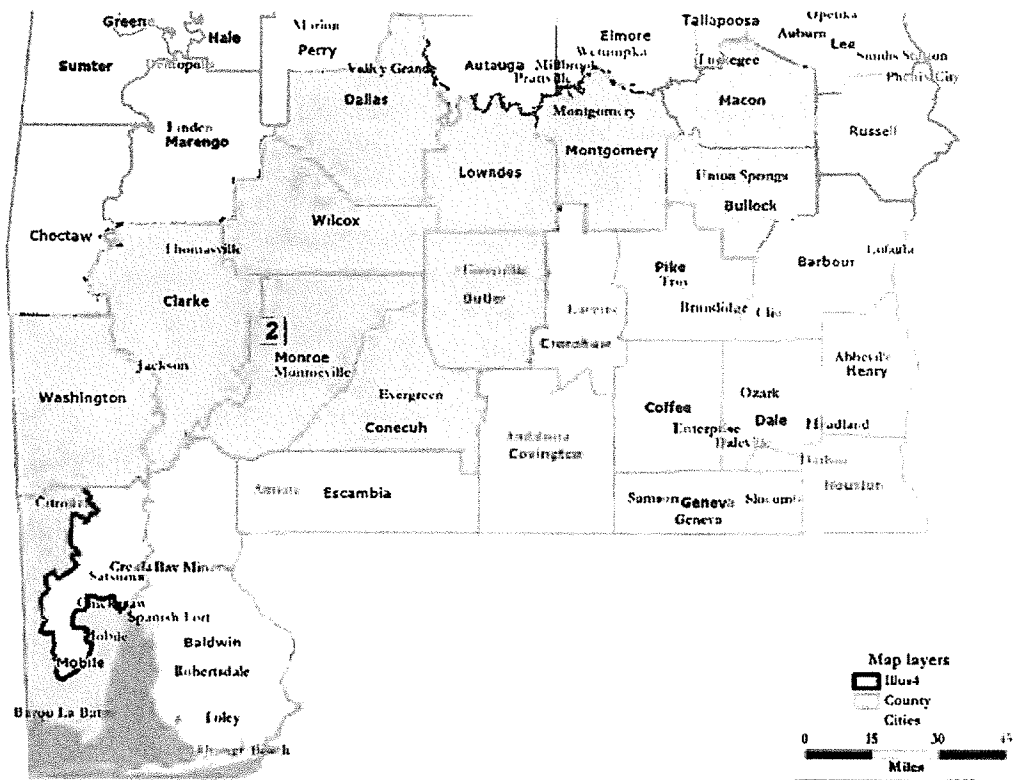
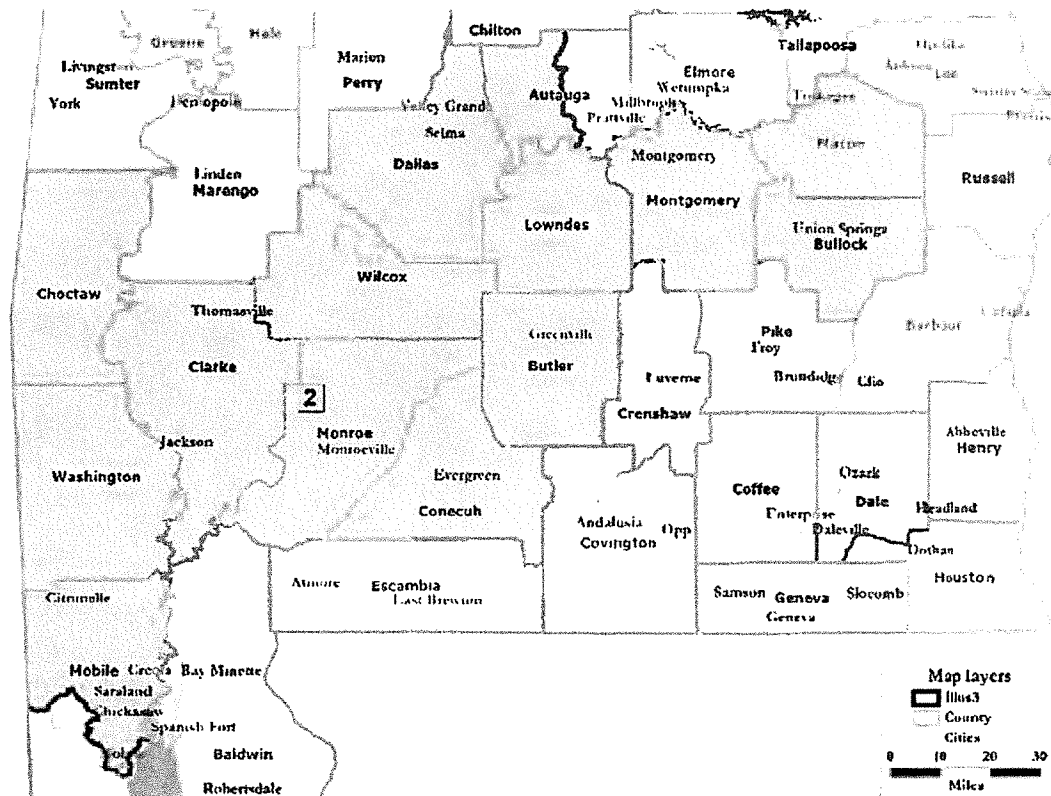


Exhibit 2

Higher-Resolution Maps Showing the Predominate Role of Race

