

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA**

COMMON CAUSE, *et al.*,
PLAINTIFFS,

v.

ROBERT A. RUCHO, in his official capacity as
Chairman of the North Carolina Senate
Redistricting Committee for the 2016 Extra
Session and Co-Chairman of the Joint Select
Committee on Congressional Redistricting,
et al.,
DEFENDANTS.

CIVIL ACTION
No. 1:16-CV-1026-WO-JEP

THREE-JUDGE COURT

LEAGUE OF WOMEN VOTERS OF NORTH
CAROLINA, *et al.*,
PLAINTIFFS,

v.

ROBERT A. RUCHO, in his official capacity as
Chairman of the North Carolina Senate
Redistricting Committee for the 2016 Extra
Session and Co-Chairman of the 2016 Joint
Select Committee on Congressional
Redistricting, *et al.*,
DEFENDANTS.

CIVIL ACTION
No. 1:16-CV-1164-WO-JEP

THREE JUDGE PANEL

**LEAGUE OF WOMEN VOTERS OF NORTH CAROLINA PLAINTIFFS'
PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW**

In accordance with Civil L.R. 40.1(c) the League of Women Voters of North Carolina plaintiffs, through their undersigned counsel, submit the following proposed findings of fact and conclusions of law.

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PROPOSED FINDINGS OF FACT

I. PARTIES OF INTEREST

(a) Plaintiffs Are Democrats Across North Carolina

1. The individual plaintiffs are qualified, registered voters in the State of North Carolina, who reside in various counties and congressional districts. LWVNC Pls. Exs. 4045-47, 4049-4060, 4062; Collins Dep. (Dkt. 54-2) 14:22-15:10; Evans Dep. (Dkt. 54-3) 8:19-9:1; Feldman Dep. (Dkt. 54-4) 7:18-7:21, 16:1-16:23; Fox Dep. (Dkt. 54-5) 8:17-8:25, 9:24-10:2; Love Dep. (Dkt. 54-6) 7:8-7:16; Palmer Dep. (Dkt. 54-7) 10:5-10:13, 11:15-11:17; Phelps Dep. (Dkt. 54-9) 7:11-7:15, 18:9-18:13; Quinn Dep. (Dkt. 54-10) 16:12-19:10; Sarver Dep. (Dkt. 54-11) 7:15-8:6; Sumpter Dep. 11:1-11:11, 12:6-12:8; and Williams Dep. (Dkt. 54-14) 6:18-6:21 and 34:23-34:25.

2. Plaintiffs are all supporters of the Democratic Party and of Democratic candidates and policies, and they almost always vote for Democratic candidates in North Carolina elections. LWVNC Pls. Exs. 4045-47, 4049-4060, 4062; Collins Dep. (Dkt. 54-2) 29:5-29:14; Evans Dep. (Dkt. 54-3) 12:24-13:11; Feldman Dep. (Dkt. 54-4) 11:14-11:24, 13:1-13:4; Fox Dep. (Dkt. 54-5) 35:18-20; Love Dep. (Dkt. 54-6) 18:19-18:21; Palmer Dep. (Dkt. 54-7) 10:5-10:13; Phelps Dep. (Dkt. 54-9) 12:15-13:24; Quinn Dep. (Dkt. 54-10) 24:13-25:12; Sarver Dep. (Dkt. 54-11) 48:25-53:12; Sumpter Dep. (Dkt. 54-12) 16:21-17:4, 25:11-25:15; Williams Dep. (Dkt. 54-14) 8:25-10:16.

3. Plaintiff League of Women Voters of North Carolina, an organizational plaintiff, is a nonpartisan community-based organization that works to ensure a fair, open, and

transparent democratic process that allows all voters to be fairly represented. The mission of LWFNC is to promote political responsibility through informed and active participation in government and to act on selected governmental issues. Currently, LWFNC has 17 local leagues and over 1,400 members, each of whom, upon information and belief, is a registered voter in North Carolina. Individual league members invest substantial time and effort in voter training and civic engagement activities, including voter registration and get-out-the-vote (GOTV) efforts. LWFNC Pls. Ex. 4047; Klenz Dep. (Dkt. 54-13) 35:25-37:25, 43:8-43:16, 44:15-45:18, 47:2-47:23, and 93:14-95:5.

4. Plaintiff Carol Faulkner-Fox is a U.S. citizen and resident and registered voter in Congressional District 1 in Durham, Durham County, North Carolina. LWFNC Pls. Ex. 4045, 4062.

5. Plaintiff Aaron Sarver is a U.S. citizen and resident and registered voter in Congressional District 11 in Asheville, Buncombe County, North Carolina. LWFNC Pls. Ex. 4046.

6. Plaintiff Maria Palmer is a U.S. citizen and resident and registered voter in Congressional District 4 in Chapel Hill, Orange County, North Carolina. LWFNC Pls. Ex. 4049, 4050.

7. Plaintiff Gunther Peck is a U.S. citizen and resident and registered voter in Congressional District 1 in Durham, Durham County, North Carolina. LWFNC Pls. Ex. 4051, 4052.

8. Plaintiff John Quinn III is a U.S. citizen and resident and registered voter in Congressional District 10 in Asheville, Buncombe County, North Carolina. LWNVC Pls. Ex. 4053.

9. Plaintiff Willis Williams is a U.S. citizen and resident and registered voter in Congressional District 1 in Jamesville, Martin County, North Carolina. LWNVC Pls. Ex. 4054.

10. Plaintiff Elliot Feldman is a U.S. citizen and resident and registered voter in Congressional District 9 in Charlotte, Mecklenberg County, North Carolina. LWNVC Pls. Ex. 4055.

11. Plaintiff Annette Love is a U.S. citizen and resident and registered voter in Congressional District 1 in Durham, Durham County, North Carolina. LWNVC Pls. Ex. 4056.

12. Plaintiff Ersila Phelps is a U.S. citizen and resident and registered voter in Congressional District 2 in Wilson, Wilson County, North Carolina. LWNVC Pls. Ex. 4057.

13. Plaintiff Janie Sumpter Smith is a U.S. citizen and resident and registered voter in Congressional District 12 in Charlotte, Mecklenberg County, North Carolina. LWNVC Pls. Ex. 4058.

14. Plaintiff Elizabeth Torres-Evans is a U.S. citizen and resident and registered voter in Congressional District 1 in Franklinton, Granville County, North Carolina. LWNVC Pls. Ex. 4059.

15. Plaintiff William Collins is a U.S. citizen and resident and registered voter in Congressional District 1 in Plymouth, Washington County, North Carolina. LWNVC Pls. Ex. 4060.

16. The individual plaintiffs are harmed by a district plan that skews North Carolina's congressional delegation in a Republican direction. Evans Dep. (Dkt. 54-3) 21:5-25:3; Feldman Dep. (Dkt. 54-4) 27:8-27:22; Fox Dep. (Dkt. 54-5) 22:3-26:7, 29:21-30:7, 30:22-31:23, 36:5-36:8, 54:4-54:24; Love Dep. (Dkt. 54-6) 12:10-12:18; Palmer Dep. (Dkt. 54-7) 27:4-29:21, 31:6-34:17, and 47:14-48:8; Peck Dep. 6:17-42:22, 51:8-54:11; Quinn Dep. (Dkt. 54-10) 37:16-38:5, 62:8-63:8; Sarver Dep. (Dkt. 54-11) 24:6-27:23, 29:12-31:3, 41:16-42:20; Sumpter Dep. (Dkt. 54-12) 39:17-40:2; Williams Dep. (Dkt. 54-14) 26:13-26:16.

17. Democratic members of organizational plaintiff the League of Women Voters of North Carolina, are harmed as Democrats. Klenz Dep. (Dkt. 54-13) 62:21-63:12.

18. Plaintiff, the League of Women Voters of North Carolina, is harmed as an organization that engages voters in voter registration and GOTV, and that wants districts that are reflective of the voting population in the state. Klenz Dep. (Dkt. 54-13) 30:22-32:9, 33:7-33:20, 35:25-37:25, 44:15-45:18, 47:2-47:23, 48:21-49:7.

b) Defendants

19. Defendant Sen. Robert A. Rucho ("Sen. Rucho") is being sued in his official capacity as Chairman of the North Carolina Senate Redistricting Committee for the 2016 Extra Session and Co-Chairman of the 2016 Joint Select Committee on Congressional

Redistricting. Pls. Am. Complt. (Dkt. 41) ¶ 31; Defs. Answer (Dkt. 49) ¶ 31; Rucho Dep. (Dkt. 54-19) 26:22-26:23.

20. Defendant Rep. David A. Lewis (“Rep. Lewis”) is being sued in his official capacity as Chairman of the North Carolina House of Representatives Redistricting Committee for the 2016 Extra Session and Co-Chairman of the 2016 Joint Select Committee on Congressional Redistricting. Pls. Am. Complt. (Dkt. 41) ¶ 32; Defs. Answer (Dkt. 49) ¶ 32; Lewis Dep. (Dkt. 54-15) 12:22-13:3.

21. Defendant Timothy K. Moore is being sued in his official capacity as Speaker of the North Carolina House of Representatives. Pls. Am. Complt. (Dkt. 41) ¶ 33; Defs. Answer (Dkt. 49) ¶ 33.

22. Defendant Philip E. Berger is being sued in his official capacity as President Pro Tempore of the North Carolina Senate. Pls. Am. Complt. (Dkt. 41) ¶ 34; Defs. Answer (Dkt. 49) ¶ 34.

23. Defendant A. Grant Whitney, Jr. is being sued in his official capacity as Chairman of the North Carolina State Board of Elections. Pls. Am. Complt. (Dkt. 41) ¶ 35; Defs. Answer (Dkt. 49) ¶ 35.

24. Defendant North Carolina State Board of Elections is the agency responsible for the administration of election laws of the State of North Carolina and charged with the duty of “general supervision over the primaries and elections in the State,” including elections of the thirteen members of the U.S. House of Representatives from North

Carolina. N.C. Gen. Stat § 162-22(a); Pls. Am. Compl. (Dkt. 41) ¶ 36; Defs. Answer (Dkt. 49) ¶ 36.

25. Defendant State of North Carolina is a sovereign state in the United States. Pls. Am. Compl. (Dkt. 41) ¶ 37; Defs. Answer (Dkt. 49) ¶ 37.

II. DISCRIMINATORY INTENT

(a) 2011 Plan

26. In 2011, the North Carolina General Assembly was under unified Republican control. Joint Ex. Row 40.

27. Under the 2011 Congressional Plan, “Rucho-Lewis Congress 3” (“2011 Plan”), Democrats won 51 percent of the statewide vote in 2012, but Republican candidates won nine of thirteen congressional seats. Joint Pls. Ex. Row 31; Joint Pls. Ex. Row 39; Joint Pls. Ex. Row 22.

28. Under the 2011 Plan, Republican candidates won a narrow majority of 54 percent of the vote in 2014, but received ten of thirteen congressional seats. Joint Pls. Ex. Row 30; Joint Pls. Ex. Row 38; Joint Pls. Ex. Row 22.

29. The Co-Chairs of the 2011 Joint Committee on Redistricting, Rep. Lewis and Sen. Rucho, wrote in a letter dated July 1, 2011 that “we have not been ignorant of the partisan impacts of the districts we have created.” LWVNC Pls. Ex. 4034.

30. Dr. Thomas Hofeller was retained by the North Carolina General Assembly Redistricting Committees to assist in redistricting the North Carolina Congressional,

State House, and State Senate Districts. Joint Pls. Ex. Row 65; Lewis Dep. (Dkt. 54-15) 21:19-22:7.

31. Dr. Hofeller, the “principal architect” of the 2011 Plan, *Harris v. McCrory*, 159 F. Supp. 3d 600, 607 (M.D.N.C. 2016), declared in his expert report in *Harris* that “[p]olitics was the primary policy determinant in the drafting of the . . . Plan.” Joint Pls. Ex. Row 68 at ¶ 29; Hofeller Dep. (Dkt. 54-17) 18:1-18:20, 116:5-10.

32. Dr. Hofeller added that “[t]he General Assembly’s overarching goal in 2011 was to create as many safe [or] competitive districts for Republican incumbents or potential candidates as possible.” Joint Pls. Ex. Row 68 at ¶ 68.

33. He also admitted that “[t]he Republicans’ primary goal was to create as many districts as possible in which GOP candidates would be able to successfully compete for office.” Joint Pls. Ex. Row 69 at ¶ 9.

34. Dr. Hofeller and Rep. Lewis applied the results of past elections to newly drawn districts for the 2011 plan before the maps were fully enacted. Lewis Dep. (Dkt. 54-15) 29:17-20.

35. While representing the State of North Carolina in oral argument before the U.S. Supreme Court in *McCrory v. Harris*, 15-1262, Paul Clement stated that in drawing the 2011 Congressional Plan, Dr. Hofeller “the whole time he drew the maps, he had political data up there. Precisely because race and politics are highly correlated, he drew the map to draw the Democrats in and the Republicans out.” Joint Pls. Ex. Row 76 at ¶ 120.

36. From April 2011 to March 2012, Dr. Hofeller was retained by the State Government Leadership Foundation (“SGLF”) “as a consultant to state legislatures and statewide elected officials in all aspects of their work on the 2011-2012 redistricting process.” Joint Pls. Ex. Row 46; Joint Pls. Ex. Row 49 at ¶ 8.

37. As part of his role as a consultant to the SGLF, Dr. Hofeller’s duties included “develop[ing] strategic and tactical plans for Legislatures and statewide elected officials to develop and defend redistricting plans for legislative and congressional districts” and “analysis of the effects of the [redistricting] process on future elections.” Joint Pls. Ex. Row 46; Joint Pls. Ex. Row 49 at ¶ 7.

38. Dr. Hofeller was also part of a “redistricting team” that the Republican State Leadership Committee (“RSLC”) offered as part of the Redistricting Majority Project (“REDMAP”), to assist state legislative chambers with “actual redistricting plan drafting and analysis.” Joint Pls. Ex. Row 48 at ¶ 13; Joint Pls. Ex. Row 66.

39. The rationale for REDMAP “was straightforward: Controlling the redistricting process in these states would have the greatest impact on determining how both state legislative and congressional district boundaries would be drawn. Drawing new district lines in states with the most redistricting activity presented the opportunity to solidify conservative policymaking at the state level and maintain a Republican stronghold in the U.S. House of Representatives for the next decade.” Joint Pls. Ex. Row 48 at ¶ 10; Joint Pls. Ex. Row 59.

40. Part of the REDMAP strategy for North Carolina was to “strengthen Republican redistricting power by flipping [the] chambers from Democrat to Republican control” and to “Neutralize Dem Advantage.” Joint Pls. Ex. Row 53; Joint Pls. Ex. Row 54.

41. While he was redistricting coordinator for the Republican National Committee (“RNC”), Dr. Hofeller authored a PowerPoint presentation titled “What I’ve Learned about Redistricting the Hard Way! January 24, 2011,” which he says is “generally” the advice he gives to state legislatures when he is retained for redistricting. Hofeller Dep. (Dkt. 54-17) 70:3-25; Joint Pls. Ex. Row 63.

42. Dr. Hofeller also authored a document titled “The Looming Redistricting Storm: How Will the Republican Party Fare?” while he was at the RNC. Hofeller Dep. (Dkt. 54-17) 29:9-18; Joint Pls. Ex. Row 47.

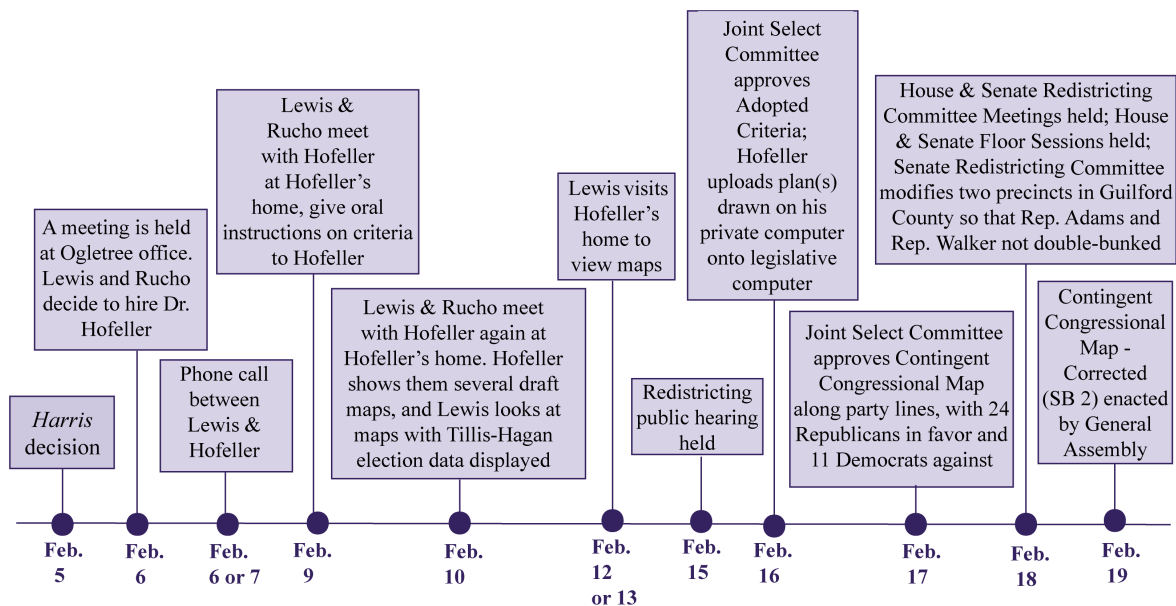
43. In “The Looming Redistricting Storm,” Dr. Hofeller states, “Why are these state level contests so important to the GOP? It is because it is in the states where the results of the 2010 census will be used to redraw the boundaries of congressional districts which will be used in 2012, 2014, 2016, 2018 and 2020 elections. The outcome of this battle will determine the electoral playing field for the next decade.” The document continues, “If the GOP wins big at the state and legislative level, it can be more assured of retaking and keeping control of the U.S. House. These critical election contests in 2010 are ‘the hidden national elections of 2010 and beyond’ and will determine GOP success in the 2012 elections following redistricting.” Joint Pls. Ex. Row 47.

(b) 2016 Plan

44. In February 2016, the North Carolina General Assembly was under unified Republican control. Joint Pls. Ex. Row 30.

45. On February 5, 2016, a federal three-judge panel issued a decision in *Harris v. McCrory*, No. 1:13-cv-949, 2016 WL 482052 (M.D.N.C. Feb. 5, 2016), declaring that Districts 1 and 12 of the 2011 Plan were unconstitutional racial gerrymanders and requiring the General Assembly to draw a new Congressional plan. *Harris v. McCrory*, No. 1:13-cv-949, 2016 WL 482052 (M.D.N.C. Feb. 5, 2016); Joint Pls. Ex. Row 23; Joint Pls. Ex. Row 76 at ¶ 27.

Exhibit 4061: Timeline of 2016 Map Drawing Process



LWVNC Pls. Ex. 4061.

46. Following the *Harris* decision, on February 6, 2016, a meeting to discuss redistricting was held at the Ogletree Deakins law office. Rep. Lewis, Brent Woodcox, and Ogletree counsel were present at the meeting, and Sen. Rucho was present via phone. Joint Pls. Ex. Row 23; LWFNC Pls. Ex. 4061; Lewis Dep. (Dkt. 54-15) 42:25-43:13; Rucho Dep. (Dkt. 54-19) 27:22-28:16.

47. Rep. Lewis made the decision to hire Dr. Hofeller as a consultant to assist in drawing the 2016 Congressional Plan (“2016 Plan”) on February 6, 2016. Lewis Dep. (Dkt. 54-15) 44:2-44:4; LWFNC Pls. Ex. 4061.

48. On February 6 or February 7, 2016, Rep. Lewis had a phone conversation with Dr. Hofeller to discuss drawing the 2016 Plan in response to the *Harris* decision. Lewis Dep. (Dkt. 54-15) 44:12-44:24; LWFNC Pls. Ex. 4061.

49. On February 9, 2016, Rep. Lewis and Sen. Rucho met with Dr. Hofeller at Dr. Hofeller’s private home to discuss drawing the 2016 Plan. Rep. Lewis and Sen. Rucho gave Dr. Hofeller oral instructions on the criteria to follow when drawing the 2016 Plan. Joint Pls. Ex. Row 23; Joint Pls. Ex Row 76 at ¶¶ 32, 38; Lewis Dep. (Dkt. 54-15) 48:19-49:7; Rucho Dep. (Dkt. 54-19) 170:13-170:17; LWFNC Pls. Ex. 4061.

50. On February 10, 2016, Rep. Lewis and Sen. Rucho met with Dr. Hofeller again at Dr. Hofeller’s private home. Sen. Rucho was at Dr. Hofeller’s home in the morning, before Dr. Hofeller had a medical appointment, and Lewis was there in the afternoon after Dr. Hofeller’s appointment. Joint Pls. Ex. Row 23; Joint Pls. Ex Row 76 at ¶ 32; Rucho Dep. (Dkt. 54-19) 31:16-18 and 37:7-8; LWFNC Pls. Ex. 4061.

51. At the separate meetings he had with each legislator on the 10th, Dr. Hofeller showed Rep. Lewis and Sen. Rucho draft maps with past election results displayed on the screen. Lewis Dep. (Dkt. 54-15) 59:22-60:13, 63:9-64:17; Rucho Dep. (Dkt. 54-19) 37:9-38:11.

52. At the February 10th meeting with Dr. Hofeller, Rep. Lewis requested that election results from the Tillis-Hagan 2014 race be displayed on the screen so that he could view the performance of individual districts and evaluate maps. Rep. Lewis stated “nearly every time I looked at the maps it was the political data from the Tillis-Hagan race in ’14 . . . on the screen most of the time.” Lewis Dep. (Dkt. 54-15) 63:9-64:17.

53. At the February 10th meeting, Rep. Lewis also observed Dr. Hofeller “using another combination of political races” to evaluate maps. Lewis Dep. (Dkt. 54-15) 63:22-64:17.

54. On February 11th, a redistricting “process” meeting was held to set deadlines for the following week. Lewis Dep. (Dkt. 54-15) 68:18-68:25; Joint Pls. Ex. Row 23.

55. On February 12 or 13, Rep. Lewis again visited Dr. Hofeller’s home to view maps and “different scenarios.” Lewis Dep. (Dkt. 54-15) 73:7-74:24; Joint Pls. Ex Row 76 at ¶ 32; LWFNC Pls. Ex. 4061.

56. The maps that Rep. Lewis reviewed at the meeting on the 12th or 13th were near final versions of the 2016 Plan that Rep. Lewis intended to submit to the legislature. Lewis Dep. (Dkt. 54-15) 77:7-20.

57. The map that Dr. Hofeller drew and Rep. Lewis submitted to the legislature was ultimately adopted as the 2016 Plan with only a minor change to fix an incumbent pairing issue. Lewis Dep. (Dkt. 54-15) 77:21-24; Joint Pls. Ex Row 76 at ¶ 40; Joint Pls. Ex. Row 10 at 53:2-54:14.

58. On February 12, Rep. Lewis and Sen. Rucho were again appointed Co-Chairs of the 2016 Joint Select Committee on Congressional Redistricting (“Joint Committee”). The Committee consisted of 38 members, including Rep. Lewis and Sen. Rucho. Joint Pls. Ex. Row 26; Joint Pls. Ex Row 76 at ¶ 27; Lewis Dep. (Dkt. 54-15) 12:22-13:3.

59. On February 15, 2016, Rep. Lewis and Sen. Rucho convened a public hearing on redistricting. Joint Pls. Ex. Row 5; Joint Pls. Ex. Row 23; LWVNC Pls. Ex. 4061; Lewis Dep. (Dkt. 54-15) 81:11-17.

60. Dr. Hofeller was not present at the public hearing, nor did Rep. Lewis or Sen. Rucho convey to him any of the opinions that the attendees offered. Rucho Dep. (Dkt. 54-19) at 55:4-56:13 and 66:21-67:20; Lewis Dep. (Dkt. 54-15) 81:11-81:22.

61. At the time of the public hearing on the 15th, Rep. Lewis had not told the other members of the Joint Committee that Dr. Hofeller was drawing the 2016 Plan for Rep. Lewis and Sen. Rucho. Lewis Dep. (Dkt. 54-15) 81:23-82:7.

62. On February 16, 2016, the 2016 Joint Committee met for the first time. Joint Pls. Ex. Row 6; Joint Pls. Ex. Row 23; LWVNC Pls. Ex. 4061.

63. At this meeting, the Adopted Criteria, developed by Rep. Lewis and Sen. Rucho but previously unknown to the other members of the Joint Committee, were introduced

and voted on one by one. Joint Pls. Ex. Row 6 at 12:8-14:1, 18:9-24:18, 24:19-47:5, 47:6-69:23, 69:24-78:7, 78:8-94:17, 94:18-98:20.

64. Dr. Hofeller received oral instructions from Rep. Lewis and Sen. Rucho consistent with the Adopted Criteria before the criteria were presented to and adopted by the Joint Committee. Joint Pls. Ex Row 76 at ¶38; Lewis Dep. (Dkt. 54-15) 162:24:163:7; Hofeller Dep. (Dkt. 54-17) 20:7-23.

65. The text of the “Incumbency” criterion of the Adopted Criteria passed by the Joint Committee on February 16 stated:

Incumbency

Candidates for Congress are not required by law to reside in a district they seek to represent. However, reasonable efforts shall be made to ensure that incumbent members of Congress are not paired with another incumbent in one of the new districts constructed in the 2016 Contingent Congressional Plan.

Joint Pls. Ex. Row 8.

66. The text of the “Political Data” criterion of the Adopted Criteria passed by the Joint Committee on February 16 stated:

Political data

The only data other than population data to be used to construct congressional districts shall be election results in statewide contests since January 1, 2008, not including the last two presidential contests. Data identifying the race of individuals or voters shall not be used in the construction or consideration of

districts in the 2016 Contingent Congressional Plan. Voting districts (“VTDs”) should be split only when necessary to comply with the zero deviation population requirements set forth above in order to ensure the integrity of political data.

Joint Pls. Ex. Row 8.

67. The text of the “Partisan Advantage” criterion of the Adopted Criteria passed by the Joint Committee on February 16, 2016 stated:

Partisan Advantage

The partisan makeup of the congressional delegation under the enacted plan is 10 Republicans and 3 Democrats. The Committee shall make reasonable efforts to construct districts in the 2016 Contingent Congressional Plan to maintain the current partisan makeup of North Carolina’s congressional delegation.

Joint Pls. Ex. Row 8.

68. The “Political data” and “Partisan Advantage” criteria were passed by the Joint Committee on party-line votes. Joint Pls. Ex. Row 6 at 43:21-47:5, 66:13-69:23.

69. At the February 16th Joint Committee meeting, Rep. Lewis “acknowledge[d] freely” that a map crafted according to the Adopted Criteria “would be a political gerrymander.” Joint Pls. Ex. Row 6 at 48:4-6.

70. Rep. Lewis further “propose[d] that to the extent possible, the map drawers create a map which is perhaps likely to elect 10 Republicans and 3 Democrats.” Joint Pls. Ex. Row 6 at 48:1-4.

71. Rep. Lewis continued, “I propose that we draw the maps to give a partisan advantage to 10 Republicans and 3 Democrats because I do not believe it’s possible to draw a map with 11 Republicans and 2 Democrats.” Joint Pls. Ex. Row 6 at 50:7-10.

72. A goal of the 2016 plan was to achieve a 10-3 Republican advantage. Hofeller Dep. (Dkt. 54-17) 125:7-9, 175:19-24, 188:19-189:2, 189:20-22.

73. At the February 16th Joint Committee meeting, Rep. Lewis “ma[d]e clear that we to the extent are going to use political data in drawing this map, it is to gain partisan advantage.” Joint Pls. Ex. Row 6 at 53:24-54:4.

74. Democratic members of the Joint Committee did not learn that they would be given money to engage a map drawer until the end of the Joint Committee meeting on February 16th, less than 24 hours before the 2016 Plan would be introduced to the Joint Committee. Joint Pls. Ex. Row 6 at 130:1-139:25; Joint Pls. Ex. Row 9 at 45:7-11; Rucho Dep. (Dkt. 54-19) 214:25-215:25.

75. After a motion was passed at the Joint Committee meeting to hire a consultant to draw new map(s), an engagement letter was sent to Dr. Hofeller to “produce a contingent Congressional Map or Maps using the attached...Adopted Criteria.” The engagement letter was dated February 16, 2016, and Dr. Hofeller signed the letter the same day. Joint Pls. Ex. Row 26.

76. On February 16 at 3:09 PM, Rep. Lewis sent an email to Dan Frey, Dennis McCarty, legislative staff and counsel for Speaker Moore and Sen. Rucho, and the Police Chief, stating the following:

Per authorization from the Select Committee, Sen. Rucho and I have agreed to hire Dr. Thomas Hofeller as our consultant to draw the 2016 Contingent Congressional Map per the criteria adopted by the Committee today...Please establish a secure, lockable workplace with access to a computer and Maptitude...ONLY the data and criteria approved by the Committee should be loaded on the computer and made accessible to the consultant...Please restrict the access to the room in which Dr. Hofeller will work is accessible only by Dr. Hofeller, Sen. Bob Rucho, Brent Woodcox, whomever on your staff is necessary to comply with this request and me. The General Assembly Police should be informed of this request.

Joint Pls. Ex. Row 25.

77. On February 16, Dr. Hofeller loaded map(s) drawn on his private computer onto a legislative computer. Lewis Dep. II (Dkt. 54-16) 138:6-8; Joint Pls. Ex. Row 15 at 21:11-24; Joint Pls. Ex. Row 9 at 45:7-11; LWVNC Pls. Ex. 4061.

78. On February 17, 2016, the Joint Committee was reconvened to consider the 2016 Plan, which Dr. Hofeller had finished designing before the Committee had even met. Hofeller Dep. (Dkt. 54-17) 177:9-14; Lewis Dep. II (Dkt. 54-16) 162:24-163:7; Joint Pls. Ex. Row 23; Joint Pls. Ex. Row 15 at 22:2-7.

79. At the Joint Committee meeting on the 17th, data was distributed to the Committee members showing how the 2016 Plan's districts performed in twenty prior

statewide elections. Joint Pls. Ex. Row 9 at 17:4-30:24; Joint Pls. Ex. Row 72; Joint Pls. Ex. Row 28.

80. At the February 17th Joint Committee meeting, Rep. Lewis reiterated that “this map will produce an opportunity to elect ten Republican members of Congress.” Joint Pls. Ex. Row 9 at 12:3-5.

81. On February 17th, the 2016 Plan drawn by Dr. Hofeller was adopted by the Committee on another party-line vote. Joint Pls. Ex. Row 9 at 67:16-72:8; Joint Pls. Ex. Row 4; Joint Pls. Ex. Row 76 at ¶¶ 3, 35; L WVNC Pls. Ex. 4061.

82. The plan adopted by the Joint Committee on February 17th was drawn at Dr. Hofeller’s private home and on Dr. Hofeller’s personal computer loaded with Maptitude software. Joint Pls. Ex. Row 76 at ¶¶ 43, 44.

83. Dr. Hofeller did not attend any meetings of the Joint Committee. Joint Pls. Ex. Row 76 at ¶36.

84. On February 18th, House and Senate Redistricting Committee meetings were held, along with House and Senate Floor sessions. Joint Pls. Ex. Rows 10, 12, 14, 16; Joint Pls. Ex. Row 23; L WVNC Pls. Ex. 4061.

85. At the February 18th Senate Redistricting Committee meeting, a minor edit was made to the 2016 Plan adopted the previous day by the Joint Committee. Three precincts between District 6 and District 13 were modified so that Rep. Adams and Rep. Walker were no longer double-bunked. Joint Pls. Ex. Row 10 at 53:2-54:14; Lewis Dep. (Dkt.

54-15) 138:6-139:2; L WVNC Pls. Ex. 4061; Joint Pls. Ex Row 76 at ¶ 40; Joint Pls. Ex. Row 15 at 22:21-23:9.

86. On February 19th, House and Senate Redistricting Committee meetings were held along with House and Senate Floor sessions. Joint Pls. Ex. Rows 11, 13, 15, 17; Joint Pls. Ex. Row 23; L WVNC Pls. Ex. 4061.

87. At the House Redistricting Committee meeting on the 19th, Rep. Lewis stated that “we largely kept the [Twelfth] district as a strongly Democratic district...” Joint Pls. Ex. Row 15 at 36:1-3.

88. At the House Redistricting Committee meeting on the 19th, the following exchange between Rep. Stevens and Rep. Lewis took place:

REP: STEVENS: And did you take into account, in drawing each of these districts, the political data?

REP. LEWIS: Yes, ma’am.

REP. STEVENS: And in doing these districts, did you take into account partisan advantage?

REP. LEWIS: Yes, ma’am.

Joint Pls. Ex. Row 15 at 36:25-37:6.

89. At the House Floor session held on February 19th, Rep. Lewis stated that the 2016 Plan could be seen as an “evil sinister gerrymander.” Joint Pls. Ex. Row 17 at 29:19-21.

90. At the House Floor session held on February 19th, Rep. Lewis stated “Political data did play a part in drawing the map. We did seek partisan advantage in drawing the map.” Joint Pls. Ex. Row 17 at 29:11-13.

91. At the House Floor session held on February 19, Rep. Lewis said “we believe that election results, election outcomes are much better predictors of how the people vote than partisan registration is.” Joint Pls. Ex. Row 17 at 30:23-31:3.

92. At the House Floor session on February 19th, the following exchange took place between Rep. Martin and Rep. Lewis:

REP. MARTIN: Rep. Lewis, would it be accurate to say that the
 mapmakers considered every one of the races that’s
 listed in the charts that were presented at committee
 several times?

REP. LEWIS: Yes, sir.

Joint Pls. Ex. Row 17 at 37:3-7.

93. Sen. Rucho agrees with Rep. Lewis that the 2016 plan “would be a political gerrymander.” Rucho Dep. (Dkt. 54-19) 118:20-119:10.

94. The 2016 Plan (“Contingent Congressional Map – Corrected”) or Senate Bill 2, was introduced to the General Assembly on February 19. Joint Pls. Ex. Row 13 at 5:3-11; Joint Pls. Ex. Row 17 at 3:6-11; Joint Pls. Ex. Row 2; Joint Pls. Ex. Row 3.

95. The 2016 Plan was passed by the General Assembly on the 19th, with every Democrat opposing the Plan and every Republican (but one) supporting it. Joint Pls. Ex.

Row 76 at ¶¶ 1, 2, 25; Joint Pls. Ex. Row 13 at 11:8-21; Joint Pls. Ex. Row 17 at 81:6-16; Joint Pls. Ex. Row 2, Joint Pls. Ex. Row 3; L WVNC Pls. Ex. 4061.

96. There is no written or electronic documentation of any discussions between Dr. Hofeller and either Sen. Rucho or Rep. Lewis regarding the plan adopted by the Joint Committee on February 17th or the 2016 Plan which was enacted on February 19th. Joint Pls. Ex Row 76 at ¶ 41; Hofeller Dep. (Dkt. 54-17) 20:7 -20:23; Lewis Dep. (Dkt. 54-15) 21:25-22:10 .

97. “Maptitude Data Extractions from 2016 Plans.pdf” is a true and correct copy of data that Dr. Hofeller pulled from the Maptitude software on his computer, sent as an attachment to an email sent to plaintiffs counsel by Mr. Farr on February 24, 2017. Joint Pls. Ex. Row 21.

98. On January 11, 2017, Rep. Lewis stated, “I think partisanship is an inherent part of who we are. And I think it will always have some role in the decisions that we make and that includes redistricting. It should not be a predominant factor, but it will be always a factor. Whether you acknowledge it or not it’ll always be a factor and to not acknowledge that is either naïve or dishonest.” Joint Pls. Ex. Row 75.

(c) Racial or Ethnic Data Was Not Considered by Rep. Lewis, Sen. Rucho, or Dr. Hofeller When Drawing the 2016 Plan

99. The criteria adopted by the Joint Committee stated explicitly that “[d]ata identifying the race of individuals or voters *shall not be used* in the construction or consideration of districts in the 2016 Contingent Congressional Plan.” Joint Pls. Ex. Row 8 at 2.

100. Dr. Hofeller did not use any racial data in drawing the 2016 map adopted by the Joint Committee. Joint Pls. Ex Row 76 at ¶45; Hofeller 145:9-12, 146:4-8, 183:22-184:9; Rucho Dep. (Dkt. 54-19) 38:16-38:19, 43:19-44:21, 94:13-94:17; Lewis Dep. (Dkt. 54-15) 118:3-118:16.

101. Dr. Hofeller knew generally that District 1 would not be retrogressive because it was drawn in the same area in 2016 as 2011, but he did not look at whether any of the other districts were compliance with the Voting Rights Act, because there were no other “Voting Rights districts” in the state before in the previous benchmark plan. Hofeller Dep. (Dkt. 54-17) 185:2-18, 246:9-247:3.

102. Rep. Lewis and Sen. Rucho stated that their understanding was that the trial court in *Harris* had held that there was insufficient racial polarization in voting in North Carolina, meaning that the Voting Rights Act did not require the creation of any minority opportunity districts. Lewis Dep. (Dkt. 54-15) 38:15-19, 51:15-19, 86:2-4, and 179:13-19. Lewis Dep. II (Dkt. 54-16) 242:9-243:7; Rucho Dep. (Dkt. 54-19) 31:3-8.

103. Rep. Lewis stated to the Joint Committee that “the *Harris* opinion found that there was not racially polarized voting in the state, and therefore, the race of the voters should not be considered.” Joint Pls. Ex. Row 6 at 27:11-17.

104. At the House Floor session on February 19th, the following exchange took place between Rep. Michaux and Lewis:

REP. MICHAUX: And, David, honestly, this will be my last question to you. In drawing the maps, was anything made or said or asked to what extent we must preserve the existing minority percentages in order to maintain the minority's present ability to elect its candidate of choice?

REP. LEWIS: Representative, thank you for the question. It is my understanding of the Harris decision that they did not find the tests were met that racially polarized voting existed and, as such, we did not consider race in any way when we drew these districts.

Joint Pls. Ex. Row 17 at 62:9-20.

(d) Dr. Hofeller Drew the 2016 Plan for Partisan Advantage

105. Dr. Hofeller, Rep. Lewis, and Sen. Rucho used election results to analyze the electoral performance of the newly formed districts. Hofeller Dep. (Dkt. 54-17) 14:18-23; Lewis Dep. (Dkt. 54-15) 25:1-17; Rucho Dep. (Dkt. 54-19) 97:3-6.

106. In Dr. Hofeller's opinion, past election results are the best predictor of how a particular geographic area is likely to vote in a future election. Hofeller Dep. (Dkt. 54-17) 14:25-15:4.

107. In Hofeller's opinion, there is no more reliable indicator of future election results than how a particular geographic area voted in past elections. Hofeller Dep. (Dkt. 54-17) 15:15-19.

108. In Dr. Hofeller's opinion, the most important information if you were trying to give a party a partisan advantage over another in the redistricting process would be past election results. Hofeller Dep. (Dkt. 54-17) 16:8-12.

109. Election results are a better predictor of voting behavior than voter registration data. Lewis Dep. (Dkt. 54-15) 116:12-117:3; Rucho Dep. (Dkt. 54-19) 205:4-205:9 and 232:19-233:2; Gimpel Dep. 139:1-139:9.

110. Dr. Hofeller drew the 2016 plan using election data at the block level that was reaggregated back up to VTDs and other units of census geography like block groups, tracts, counties, and places. Hofeller Dep. (Dkt. 54-17) 10:20-101:6.

111. In addition to the election results from twenty statewide races, Dr. Hofeller also used his own seven-race formula (hereinafter "the Hofeller formula") to evaluate the partisan characteristics of the congressional districts he drew, including election data from the 2008 Governor, 2008 U.S. Senate, 2008 Commissioner of Insurance, 2012 Governor, 2012 Commissioner of Labor, 2010 U.S. Senate, and 2014 U.S. Senate races. Joint Pls. Ex Row 76 at ¶¶ 18, 47, 49, 50; Joint Pls. Ex. Row 18; Joint Pls. Ex. Row 72; Joint Pls. Ex. Row 28; Hofeller Dep. (Dkt. 54-17) 224:20-225:10; Hofeller Dep. II (Dkt. 54-18) 262:21-24.

112. In the Hofeller formula, the races Dr. Hofeller used were averaged “to get a pretty good cross section of what the past vote had been.” Hofeller Dep. (Dkt. 54-17) 212:16-213:9.

113. In the Hofeller formula, the sum of the Republican votes was in the numerator and the sum of Republican plus Democratic votes was in the denominator. Hofeller Dep. II 262:21-24.

114. The purpose that the Hofeller formula was designed to achieve was to give Dr. Hofeller an indication of the two-party partisan characteristics of VTDs. Hofeller Dep. II (Dkt. 54-18) 267:3-6.

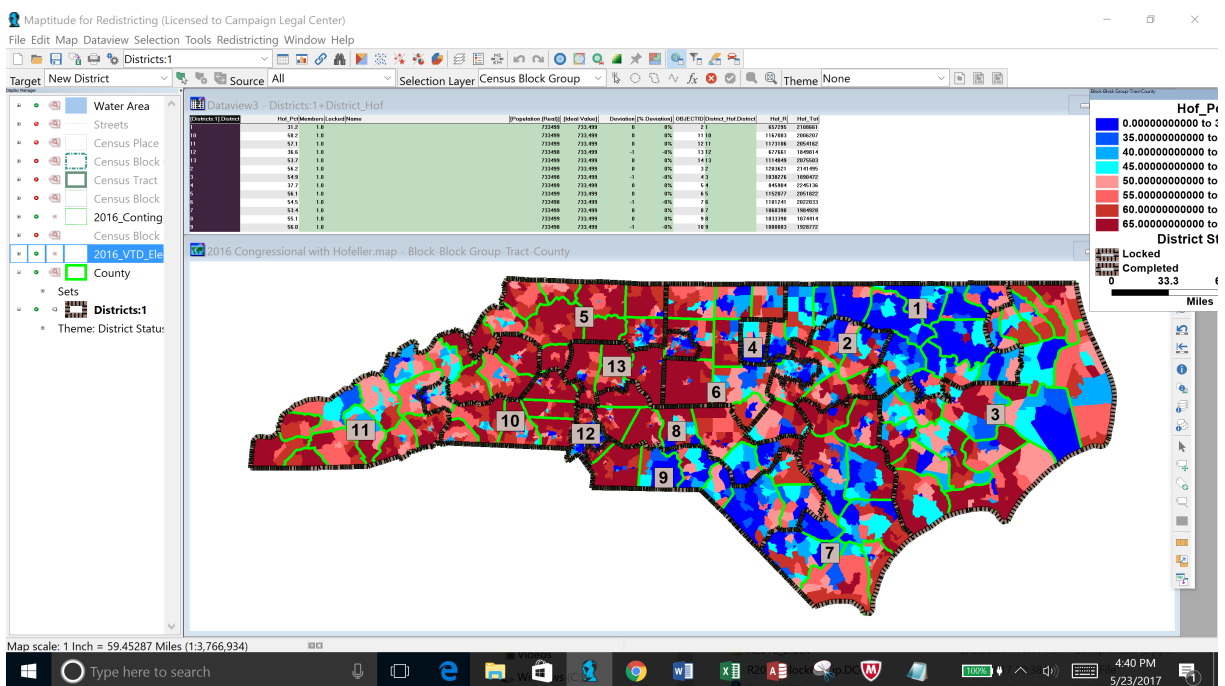
115. The underlying political nature of precincts will not change no matter what race you use to analyze them because precincts might all vote a little bit more one way or another, but they tend to carry the same characteristics through a string of elections. Hofeller Dep. (Dkt. 54-17) 149:5-18, Hofeller Dep II. (Dkt. 54-18) 274:9-16.

116. While drawing the 2016 Plan, Dr. Hofeller displayed the Hofeller formula using approximately eight intervals centered on 50, and one way he might have showed the breaks was “50 to 55, 55 to 60, 65 to 100. And...50 to 45, 45 to 40, 40 to 35, 35 to 30, 30 to 25 and below.” Hofeller Dep II. (Dkt. 54-18) 267:18-24, 269:25-270:6.

117. While drawing the 2016 Plan, Dr. Hofeller assigned counties to congressional districts based on their performances in previous elections. Hofeller Dep. (Dkt. 54-17) at 214:13-216:7.

118. In drawing the 2016 Plan, Dr. Hofeller concentrated strong Democratic counties in just three districts (1, 4, and 12), while more evenly dispersing strong Republican counties across the map's remaining ten districts.

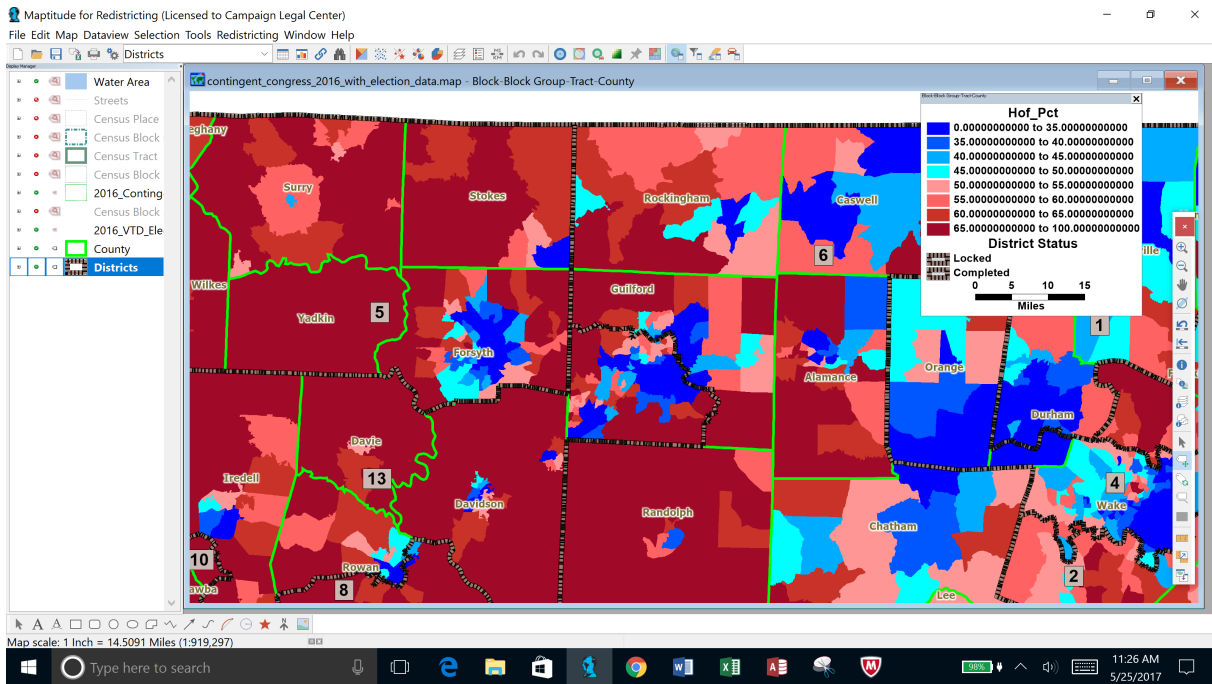
Exhibit 4007: Maptitude Screenshot, North Carolina



LWVNC Ex. 4007.

119. Where he split counties, Dr. Hofeller did so for the sake of partisan advantage. Hofeller Dep. (Dkt. 54-17) 203:1-5, 267:7-267:17; Lewis Dep. (Dkt. 54-15) 142:4-142:15, 158:13-159:2; Rucho Dep. (Dkt. 54-19) 107:20-108:4, 109:3-109:5.

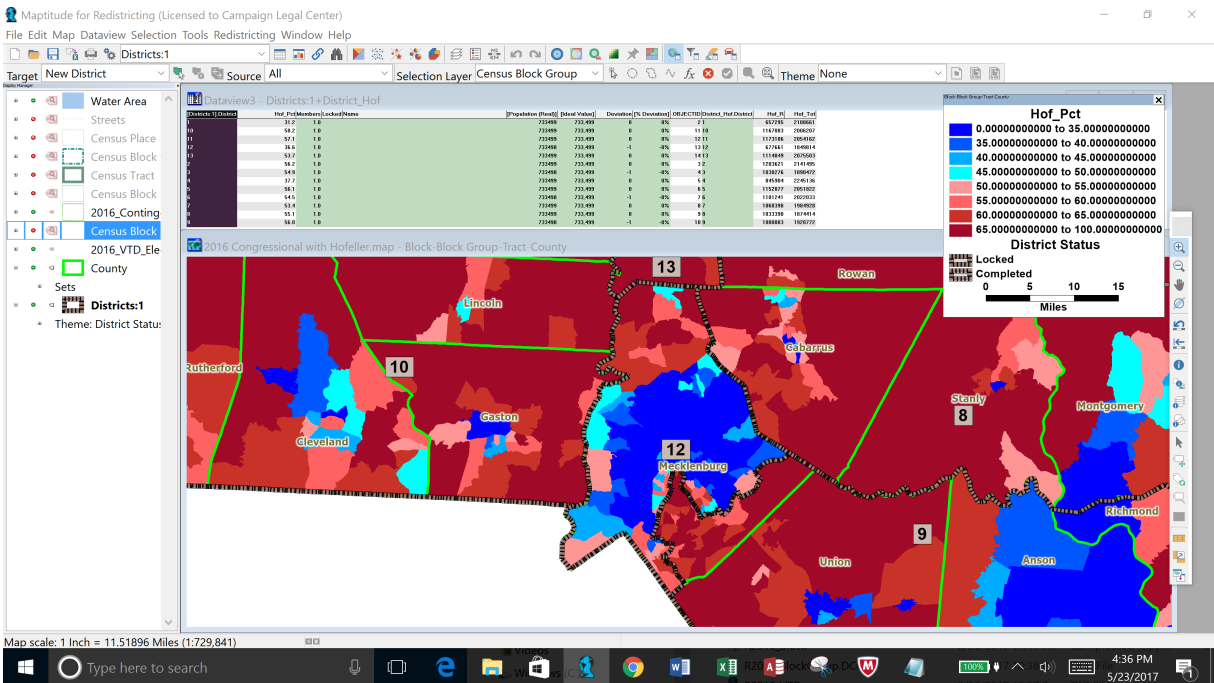
Exhibit 4010: Maptitude Screenshot, Guilford County



LWVNC Pls. Ex. 4010.

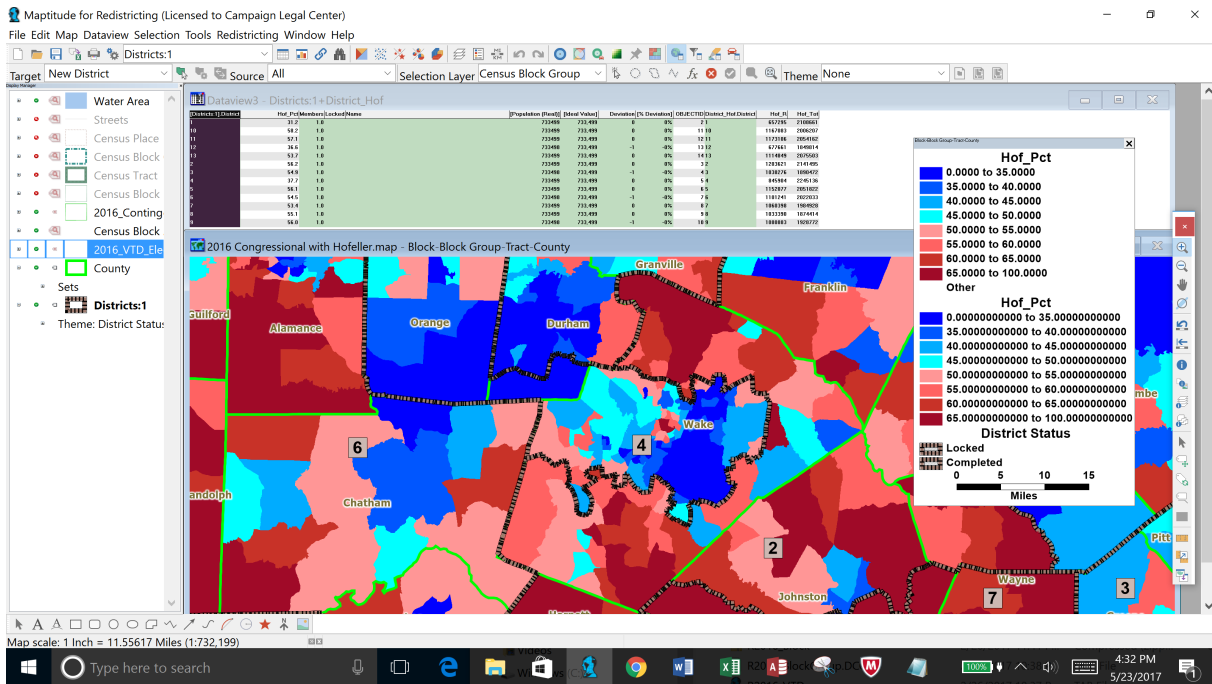
122. In the 2016 Plan, almost every Democratic precinct in Mecklenburg County was crammed into District 12, and almost every Democratic precinct in Wake County was crammed into District 4. Lewis Dep. (Dkt. 54-15) 50:20-51:1;

Exhibit 4012: Maptitude Screenshot, Mecklenburg County



LWVNC Pls. Ex.4012;

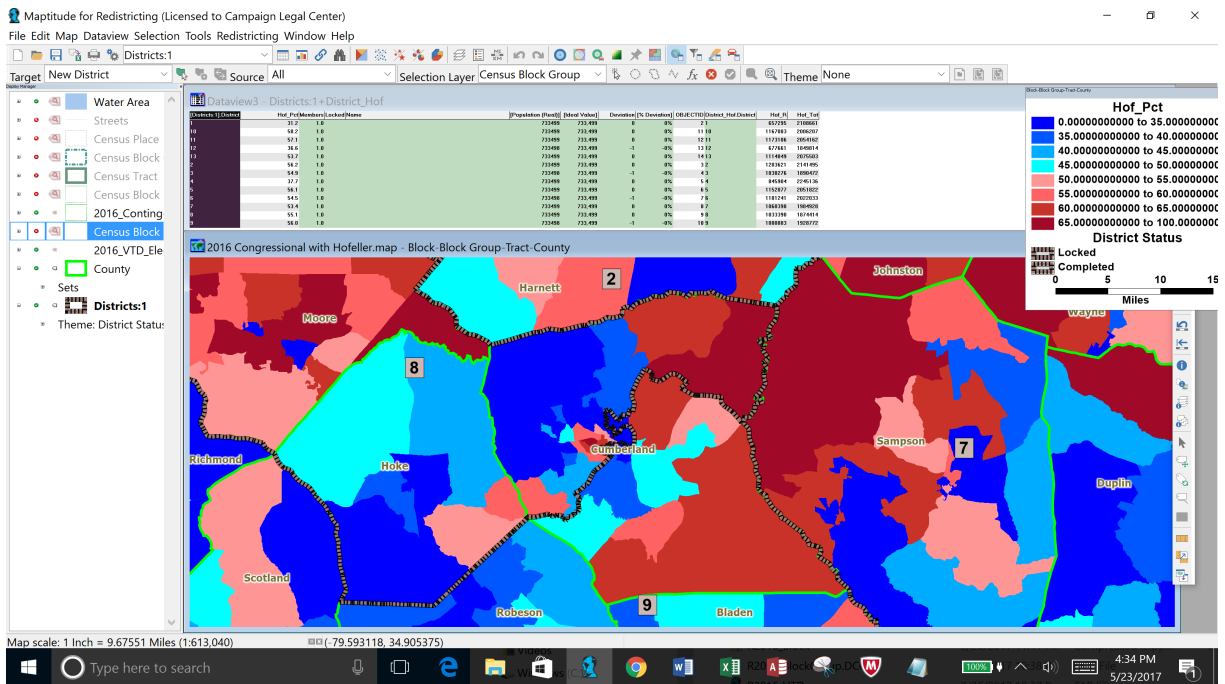
Exhibit 4014: Maptitude Screenshot, Wake County



LWVNC Pls. Ex. 4014.

123. In the 2016 Plan, the Democratic portion of Cumberland County was split between Districts 8 and 9. Joint Pls. Ex. Row 2;

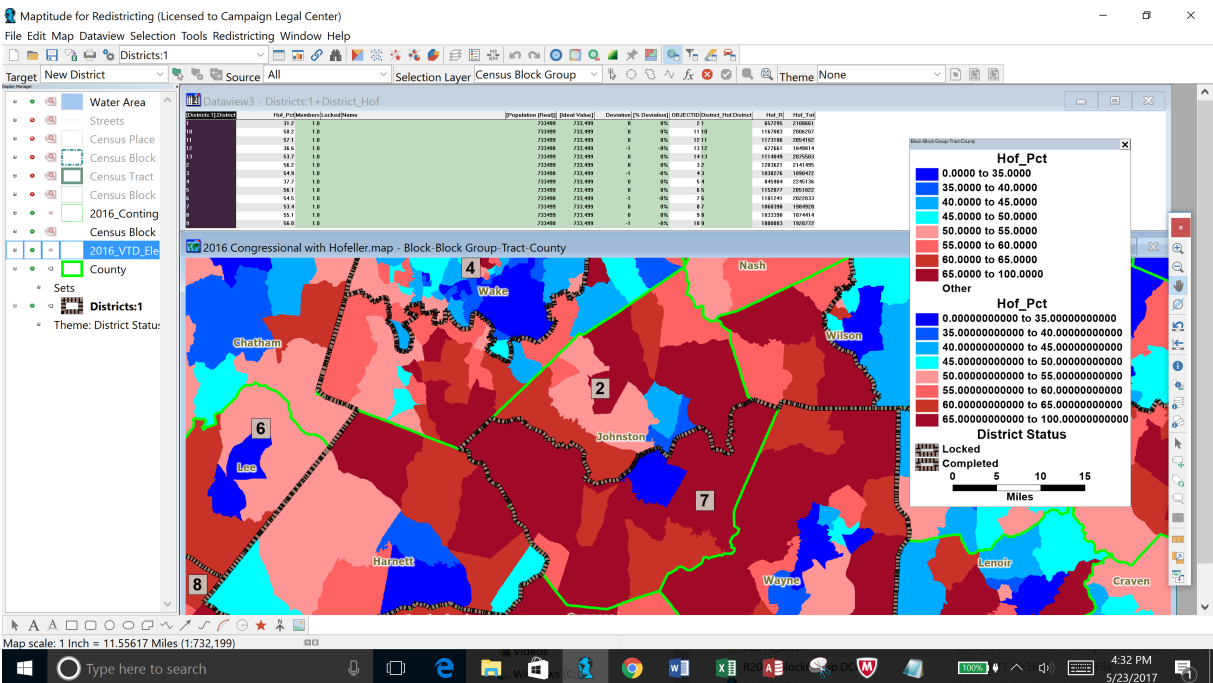
Exhibit 4009: Maptitude Screenshot, Cumberland County



LWVNC Pls. Ex. 4009.

124. In the 2016 Plan, the Democratic center of Johnston County was split down the middle between Districts 2 and 7. Joint Pls. Ex. Row 2;

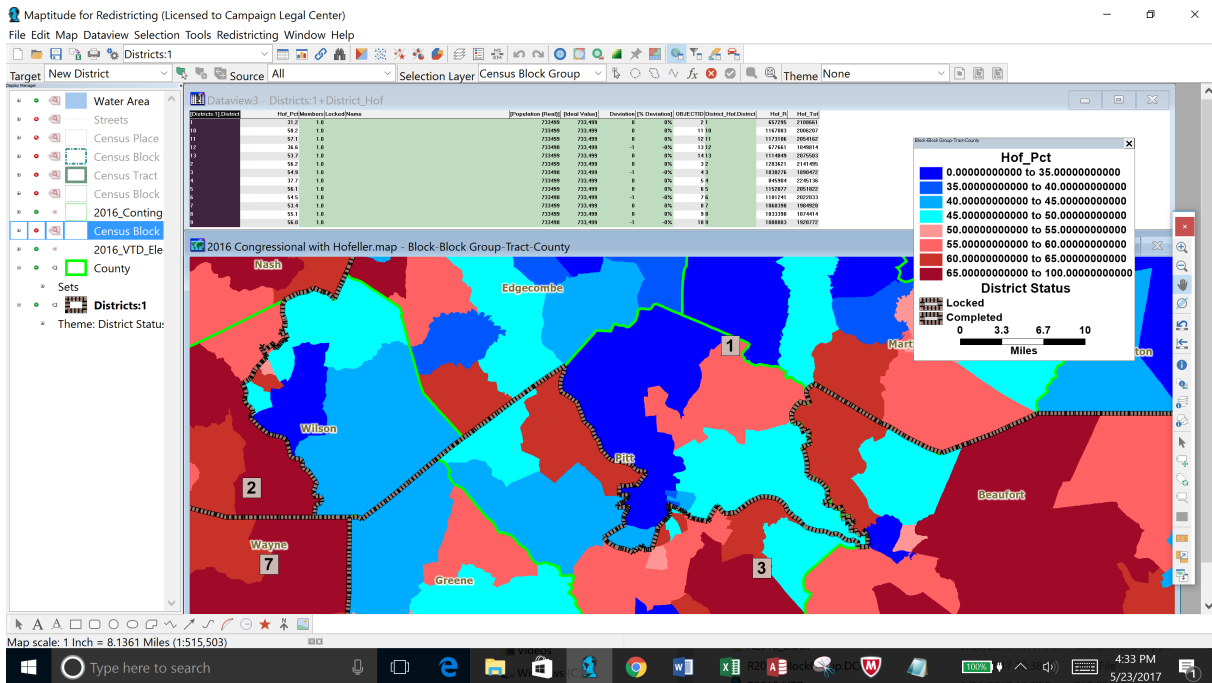
Exhibit 4011: Maptitude Screenshot, Johnston County



LWVNC Pls. Ex. 4011.

125. In the 2016 Plan, Democratic precincts in Pitt County were packed into District 1. Joint Pls. Ex. Row 2;

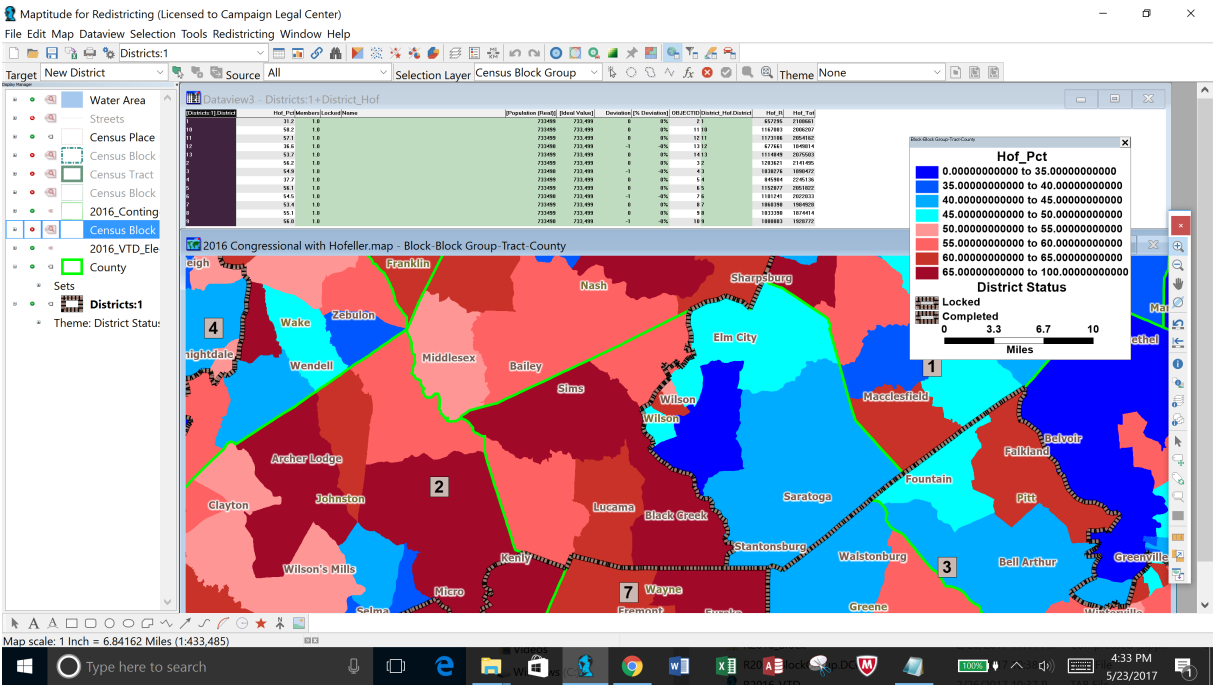
Exhibit 4013: Maptitude Screenshot, Pitt County



LWVNC Pls. Ex. 4013.

126. In the 2016 Plan, Democratic precincts in Wilson County were packed into District 1. Joint Pls. Ex. Row 2;

Exhibit 4015: Mapitude Screenshot, Wilson County



LWVNC Pls. Ex. 4015.

127. Shoring up District 4 as a Democratic district caused the surrounding districts to have an increased Republican advantage. Gimpel Dep. (Dkt. 54-20) 130:18-131:3.

128. Dr. Hofeller wanted to create districts in which Republicans would have an opportunity to elect Republican candidates, and conversely he wanted to minimize the number of districts in which Democrats would have an opportunity to elect a Democratic candidate. Hofeller Dep. (Dkt. 54-17) 127:14-22.

III. DISCRIMINATORY EFFECT

a) Measures of Partisan Asymmetry

129. Partisan asymmetry is the concept at the heart of partisan gerrymandering. It refers to district plans that treat the major parties asymmetrically in terms of how their statewide votes translate into legislative seats. LWNVC Pls. Ex. 4002 at 11, 18.

130. The efficiency gap, partisan bias, and the mean-median difference are all measures of partisan asymmetry that social scientists have developed. LWNVC Pls. Ex. 4002 at 13, 17; LWNVC Pls. Ex. 4003 at 2.

131. In a two-party, single-member district system, a partisan gerrymander operates by effectively “wasting” more votes cast for one party than for the other. Wasted votes are votes for a party in excess of what the party needed to win a given district (packing) or votes cast for a party in districts that the party does not win (cracking). LWNVC Pls. Ex. 4002 at 5, 11.

132. The efficiency gap is one party’s total wasted votes in an election minus the other party’s total wasted votes, divided by the total number of votes cast. It captures in a single number the extent to which one party’s voters are more cracked and packed than the other party’s voters. LWNVC Pls. Ex. 4002 at 2, 17-18; LWNVC Pls. Ex. 4003 at 1; Joint Pls. Ex. Row 43 at 24; *Whitford v. Gill*, ___ F. Supp. 3d ___, 2016 WL 6837229, at *50-56.

133. An efficiency gap in favor of one party sees it wasting fewer votes than its opponent, thus translating its votes across the jurisdiction into seats more effectively than its opponent. LWNVC Pls. Ex. 4002 at 5, 18.

134. Partisan bias is the difference between the shares of seats that the major parties would win if they each received the same share (typically 50%) of the statewide vote. For example, if Democrats would win 55% of a plan's districts if they received 50% of the statewide vote (leaving 45% of the districts to be won by Republicans), then the plan has a pro-Democratic bias of 5%. LWNVC Pls. Ex. 4002 at 13-17.

135. Partisan bias is calculated first by obtaining district-by-district electoral results as well as the statewide vote share for each party. Next, the analyst *shifts* the observed vote share in each district by the same amount (a "uniform swing"): the amount necessary to simulate a tied statewide election. The analyst then tallies how many districts each party would have won and lost in this hypothetical election. The difference between the parties' seat shares and an even split of the seats in the hypothetical election is an estimate of the partisan bias of the underlying districting plan. LWNVC Pls. Ex. 4003 at 3.

136. The mean-median difference is the difference between a party's *mean* vote share and *median* vote share across all of the districts in a plan. When the mean and the median diverge significantly, the district distribution is skewed in favor of one party and against its opponent. For instance, if a plan's mean district has a Democratic vote share of

50%, and the plan's median district has a Democratic vote share of 45%, then the plan has a pro-Republican mean-median difference of 5%. LWNVC Pls. Ex. 4003 at 7-8.

137. Mean-median differences are smaller than efficiency gaps and partisan biases because they are denominated in units of vote share rather than seat share. LWNVC Pls. Ex. 4003 at 7-8.

138. The efficiency gap is not based on the principle that parties have a right to proportional representation based on their share of the statewide vote, nor does it measure the deviation from seat-vote proportionality. In fact, it is calculated without any reference to parties' statewide seat or vote shares. LWNVC Pls. Ex. 4002 at 11-17; LWNVC Pls. Ex. 4003 at 18-19.

139. Similarly, a low partisan bias score is achieved when both parties would win about the same share of seats if they each received the same fraction of the statewide vote. A party's seats can therefore be highly disproportionate to its votes—as long as the other party's seats would be as disproportionate to its votes if the parties' performances flipped. LWNVC Pls. Ex. 4002 at 13-17.

140. Likewise, the mean-median difference is simply a measure of the skew of the district vote share distribution. The metric does not even consider seats won or lost, meaning it cannot compel, or even encourage, proportional representation. LWNVC Pls. Ex. 4003 at 7-8.

b) Professor Jackman's Data and Methods

141. Prof. Jackman used congressional election results from 1972 to 2016 to calculate efficiency gaps, partisan biases, and mean-median differences for 512 observations spanning 25 states and 23 election years. LWNVC Pls. Ex. 4002 at 2, 26; LWNVC Pls. Ex. 4003 at 2-8.

142. As defendants' expert, Prof. Gimpel, testified, Prof. Jackman had a nice opportunity to study elections in other states, and it is important and instructive to look at the redistricting experiences in other states when coming to a decision about whether the 2016 Plan is a partisan gerrymander. Gimpel Dep. 38:15-39:3.

143. The efficiency gap can be calculated directly from a given election's results. It requires no counterfactual analysis. LWNVC Pls. Ex. 4002 at 5.

144. There are two methods that can be used to calculate the efficiency gap. Prof. Jackman used the "full method," which takes into account district-level variations in turnout and aggregates wasted votes district by district. Under the "simplified method," which Prof. Jackman did not use, only statewide seat and vote shares are incorporated. LWNVC Pls. Ex. 4003 at 16-17.

145. Defendants' expert, Mr. Trende, admits that the differences between the full method and the simplified method "are relatively small," and that the two methods have an R-squared of .9403. Trende Decl. ¶ 48; Trende Dep. 64:1-64:9.

146. Prof. Jackman found an even higher correlation of .98 between his estimates using the full method and Prof. Stephanopoulos and McGhee's estimates using the simplified method. LWNVC Pls. Ex. 4004 at 17.

147. When congressional races were uncontested, Prof. Jackman used two models in combination to estimate what each party's vote count would have been if the races had been contested. LWNVC Pls. Ex. 4002 at 20-26.

148. Prof. Jackman's first model predicted each party's vote share in each uncontested district using presidential vote share and incumbency status as independent variables. LWNVC Pls. Ex. 4002 at 20-24.

149. Prof. Jackman's second model predicted the total number of votes cast in each uncontested district using previous and future election results and incumbency status as independent variables. LWNVC Pls. Ex. 4002 at 24-26.

150. Prof. Jackman then combined the predictions from the two imputation models to produce estimated vote counts for each party in each uncontested district. LWNVC Pls. Ex. 4002 at 26.

151. Defendants' expert, Mr. Trende, cannot identify any errors in Professor Jackman's imputation methods. Trende Dep. 115:1-115:9.

c) Partisan Asymmetry Descriptive Statistics

152. Most district maps are reasonably symmetric in their treatment of the two major parties. LWNVC Pls. Ex. 4002 at 28.

153. Over the last fifty years, the distributions of the efficiency gap, partisan bias, and the mean-median difference have all been normal, with means and medians close to zero. LWVNC Pls. Ex. 4002 at 27; LWVNC Pls. Ex. 4003 at 5;

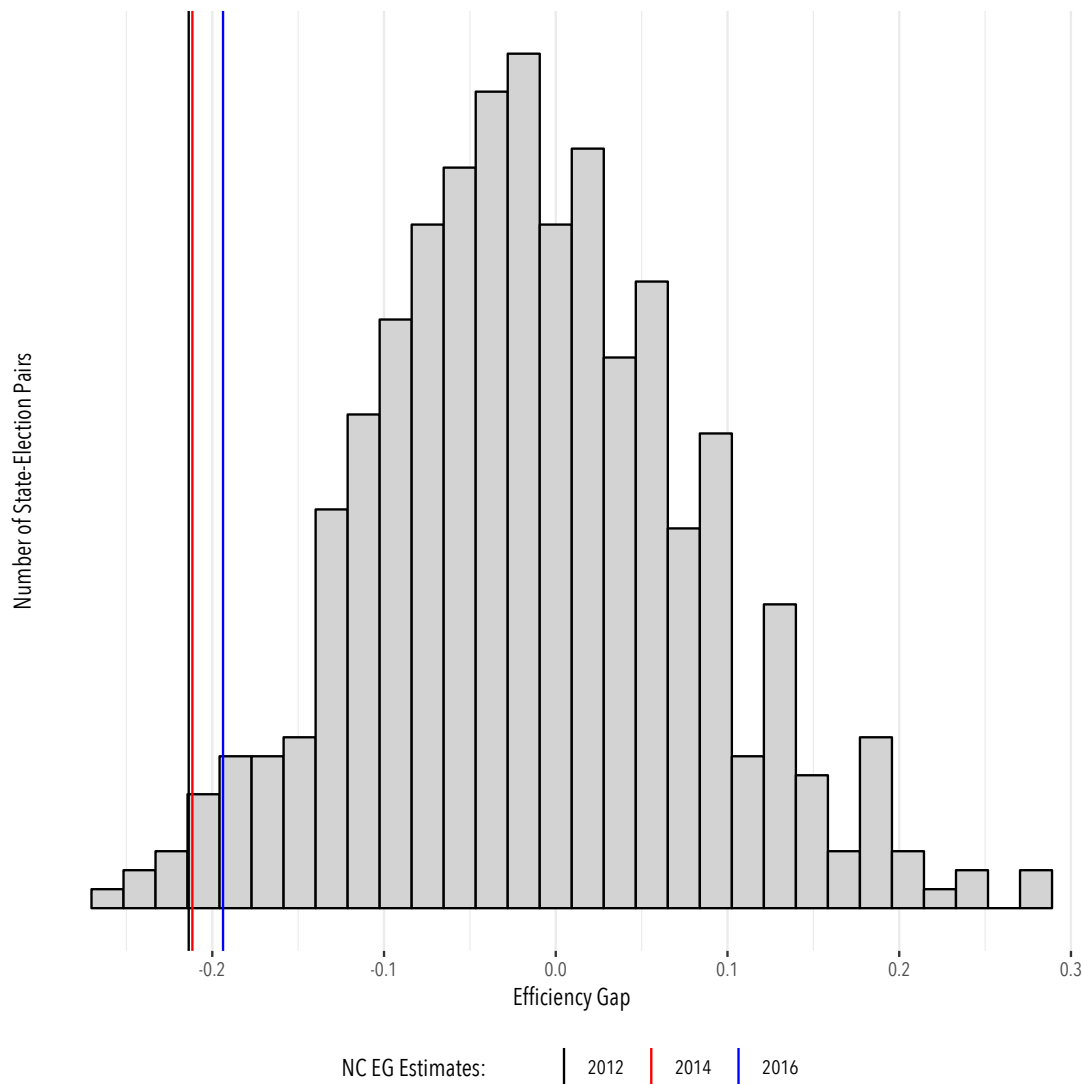


Figure 6: Histogram of efficiency gap estimates in 512 elections, 1972-2016. The three vertical lines indicate where North Carolina's three most recent elections lie in the distribution of efficiency gap scores.

LWVNC Pls. Ex. 4002, Figure 6;

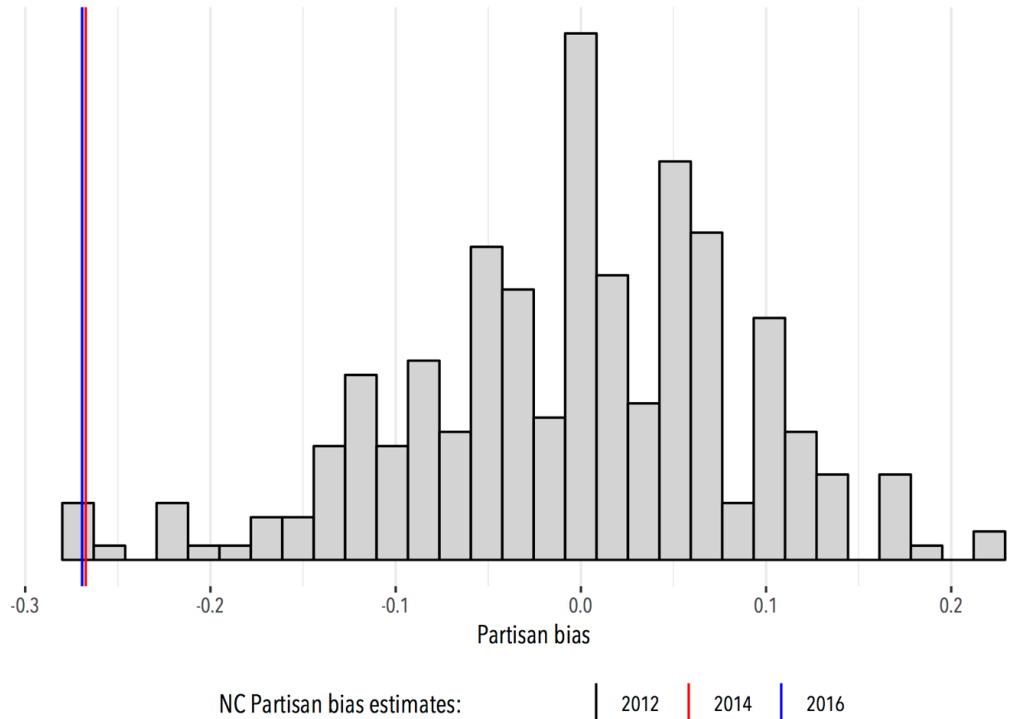


Figure 2: Histogram of partisan bias in 282 Congressional elections closer statewide than 55% to 45%, 1972-2016. The three vertical lines indicate North Carolina's scores in 2012, 2014, and 2016.

LWVNC Pls. Ex. 4003, Figure 2.

154. In competitive elections, i.e., those close to a 50-50 split statewide, the efficiency gap, partisan bias, and the mean-median difference are all highly correlated and lead to similar substantive conclusions about district plans. For example, there is a .77 correlation between the efficiency gap and partisan bias in states closer than 55-45, and a .60 correlation between the efficiency gap and the mean-median difference.

LWVNC Pls. Ex. 4002 at 60; LWVNC Pls. Ex. 4003 at 3-8.

155. Only the efficiency gap should be used in uncompetitive statewide settings. This is because in these settings the uniform swing that must be carried out to simulate a tied statewide election is unrealistic. In these settings, the correlations between the efficiency gap and partisan bias (.29) and the mean-median difference (.19) are both low. LWNVC Pls. Ex. 4003 at 3-8;

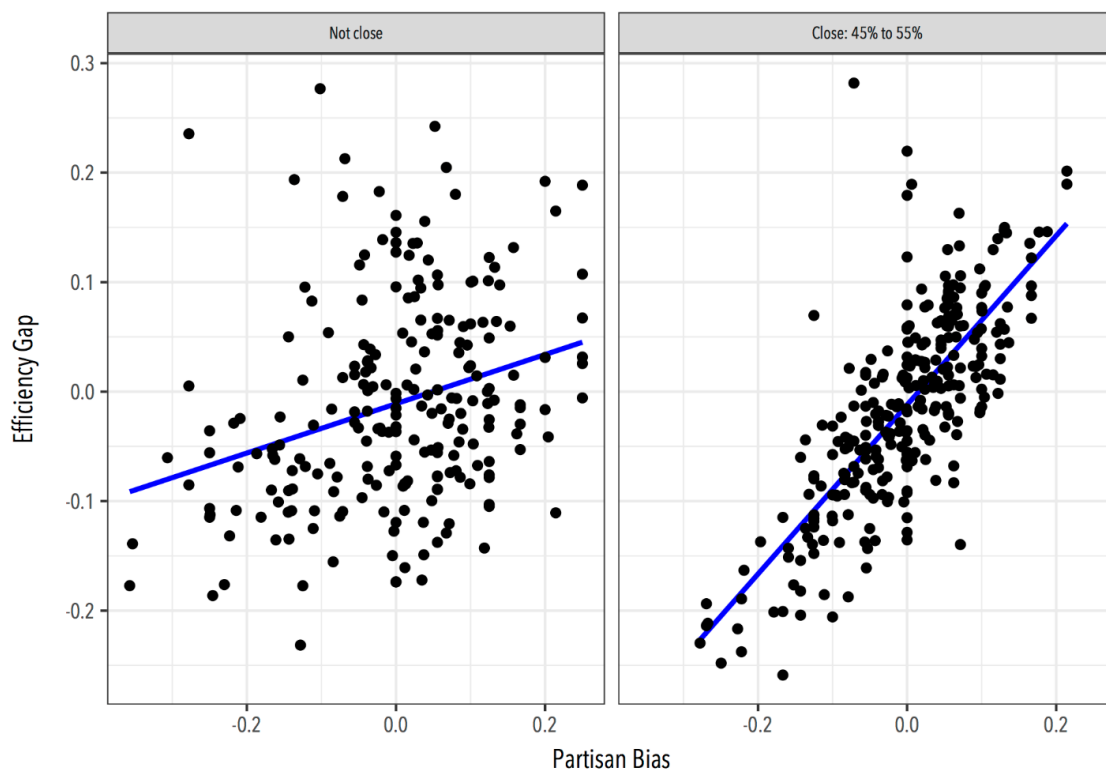


Figure 4: Efficiency gap versus partisan bias, Congressional elections, 1972-2016, competitive elections (closer than 55% to 45%) and uncompetitive elections.

LWNVC Pls. Ex. 4003, Figure 4.

156. Over the 1972-2016 period, the median efficiency gap of congressional district plans has become steadily more pro-Republican. It was pro-Democratic from the

1970s to the 1990s, and pro-Republican from the 1990s to the present. LWVNC Pls. Ex.

4002 at 29;

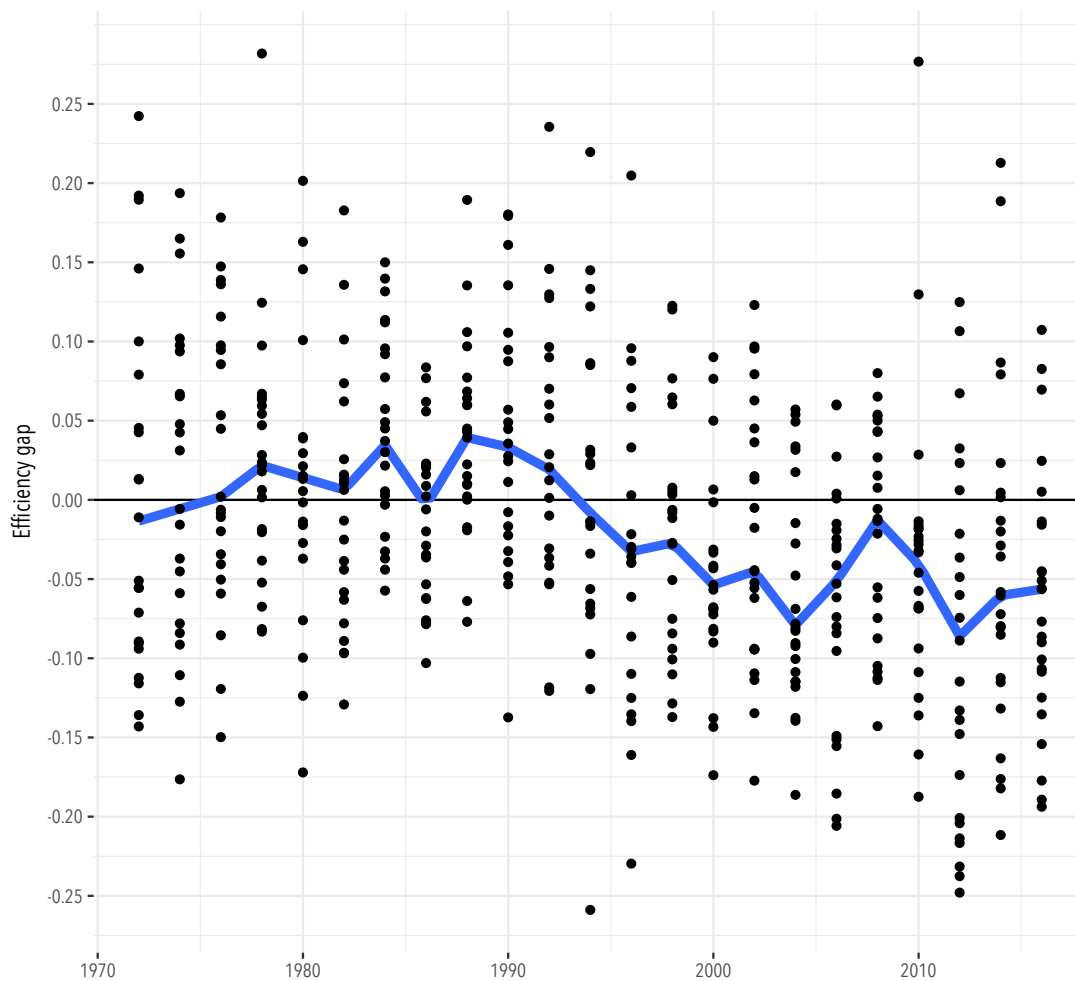


Figure 7: Efficiency gap estimates, over time. The line is a smoothed estimate of the median efficiency gap.

LWVNC Pls. Ex. 4002, Figure 7.

157. Over the 1972-2016 period, the absolute value of the median efficiency gap of congressional district plans rose slightly for several decades, but then spiked in the current cycle to the highest level recorded. LWVNC Pls. Ex. 4002 at 30;

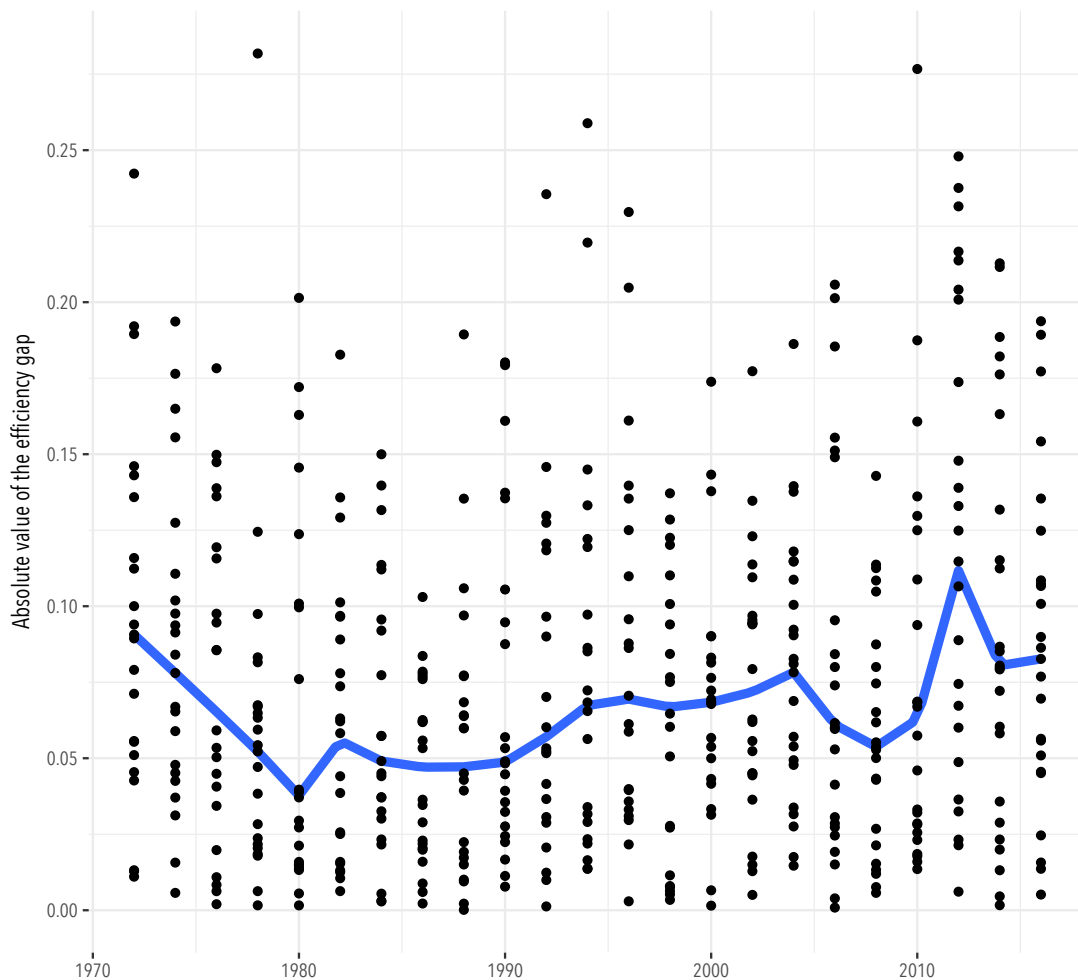


Figure 8: Absolute value of efficiency gap measures, over time. The blue line is a smoothed estimate of the median absolute value of the efficiency gap measure.

LWVNC Pls. Ex. 4002, Figure 8.

d) Partisan Asymmetry Drivers

158. To analyze the effect of party control of the redistricting process on the efficiency gap, Prof. Jackman created a series of regression models for different time periods. Each of these models included the efficiency gap as the dependent variable, and the institution responsible for redistricting and fixed effects for states and years as the independent variables. LWVNC Pls. Ex. 4002 at 33-35.

159. Over the last two cycles, both unified Democratic control and unified Republican control are statistically significant and substantively large drivers of the efficiency gap. Unified Democratic control results in a 11.9-point swing in the efficiency gap in a Democratic direction, while unified Republican control results in a 7.0-point swing in a Republican direction. LWVNC Pls. Ex. 4002 at 33.

160. Much of the observed change in the efficiency gap in recent decades is due to shifts in party control over redistricting. If the distribution of party control had stayed constant between the 1990s and the current cycle, then the average efficiency gap would have become more pro-Democratic (rather than much more pro-Republican) over this period. LWVNC Pls. Ex. 4002 at 35-37;



Figure 11: Average efficiency gap by decade and predicted efficiency gap had partisan control of redistricting stayed as it was in the 1990s. Vertical lines cover 95% credible intervals for predictions of the average efficiency gap.

LWVNC Pls. Ex. 4002, Figure 11.

161. Defendants' expert, Mr. Trende, could not identify any errors in Prof.

Jackman's analysis of party control and the efficiency gap. Trende Dep. 213:9-213:18.

162. Mr. Trende never attempted a statistical analysis of how party control of the redistricting process is related to the efficiency gap. Trende Dep. 215:8-11.

163. Defendants' expert, Prof. Gimpel, testified that performing a statistical analysis of how party control of the redistricting process is related to the efficiency gap would be the proper approach to the issue. Gimpel Dep. 265:23-267:17.

164. Prof. Jackman examined how the efficiency gap is related to the proportion of House members in a congressional delegation who are black or Latino. He found that there is essentially no relationship between the efficiency gap and black or Latino representation. Nationally, district plans' partisan fairness is simply unconnected to how well or poorly minority voters are represented. LWNVC Pls. Ex. 4003 at 10-12;

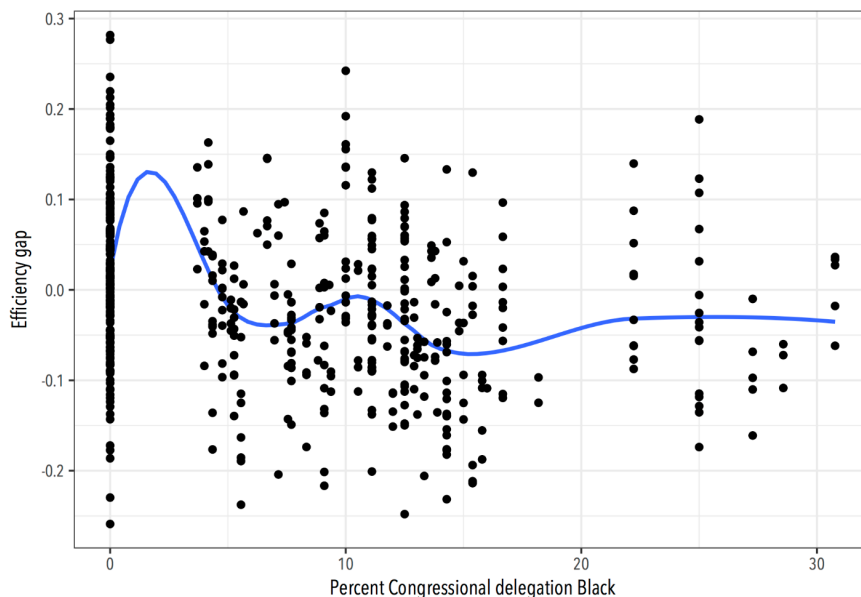


Figure 5: Efficiency gap versus proportion of Congressional seats held by African American members, Congressional elections by state and year, 1972-2016. The blue line is a loess curve summarizing the relationship between the two variables.

LWNVC Pls. Ex. 4003, Figure 5;

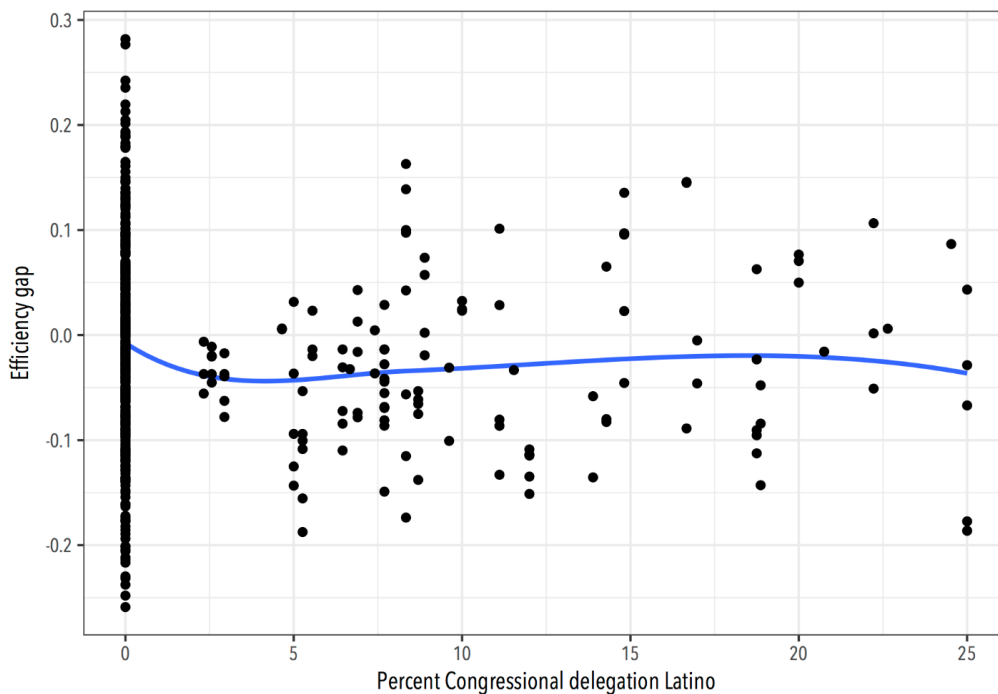


Figure 6: Efficiency gap versus proportion of Congressional seats held by Latino members, Congressional elections by state and year, 1972-2016. The blue line is a loess curve summarizing the relationship between the two variables.

LWVNC Pls. Ex. 4003, Figure 6.

e) Durability of Partisan Asymmetry

165. About three-fifths of the total variation in the efficiency gap is between congressional plans (rather than within plans). There is thus a moderate to strong plan-specific component to the variation in efficiency gap scores. LWVNC Pls. Ex. 4002 at 31.

166. Using all congressional plans in his database in effect for at least three elections, Prof. Jackman studied the relationship between plans' initial efficiency gaps and their average efficiency gaps over the remainder of their lifetimes. He found that this

relationship is quite strong: a correlation of about 0.75 over the last two cycles. LWNVC

Pls. Ex. 4002 at 47-50;

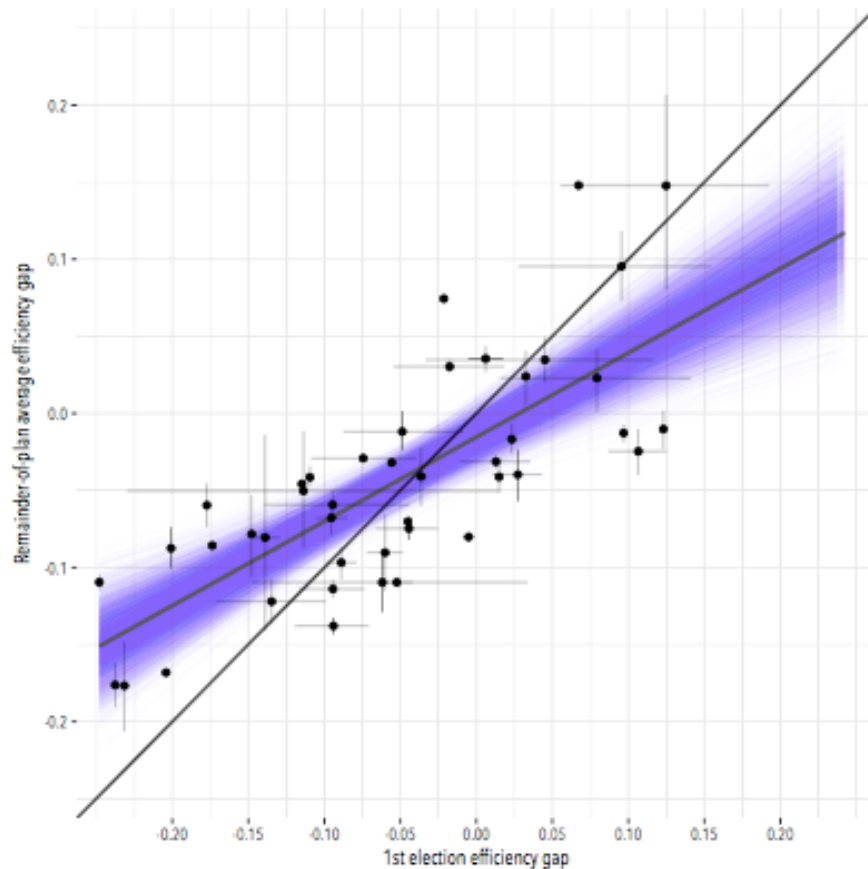


Figure 17: Scatterplot of first-election efficiency gap scores (horizontal axis) and remainder-of-plan average efficiency gap (vertical axis). The diagonal black line is a 45-degree line; the data would lie on this line if first-election efficiency gaps coincided with remainder-of-plan average efficiency gaps. The blue lines are linear regressions, which vary because the underlying data are subject to uncertainty stemming from imputations for uncontested districts. Vertical and horizontal lines extending from each data point cover 95% confidence intervals in either direction, summarizing the uncertainty in both first-election EG and remainder-of-plan average EG given the imputations for uncontested districts. Analysis restricted to plans with at least three elections, enacted after 2000. The EG in North Carolina in 2016 is -0.194.

49

LWNVC Pls. Ex. 4002, Figure 17.

167. Defendants' expert, Mr. Trende, could not identify any errors in Prof. Jackman's analysis of the relationship between plans' initial efficiency gaps and their remainder-of-plan average efficiency gaps. Trende Dep. 231:18-232:1.

168. Prof. Jackman conducted a series of prognostic tests to ensure that a congressional plan's large initial efficiency gap is a reliable guide to the plan's future performance. L WVNC Pls. Ex. 4002 at 41-47.

169. For maps like the 2016 Plan, the "false positive rate" is close to 0%, meaning there is virtually no chance that such maps will have small average efficiency gaps over the rest of their lifetimes. Similarly, the "true negative rate" for such maps is nearly 100%, indicating that almost all plans with small rest-of-life average efficiency gaps are not so unbalanced in their first elections. L WVNC Pls. Ex. 4002 at 41-47.

170. Defendants' expert, Mr. Trende, could not identify any errors in Jackman's prognostic tests (which produced the "false positive rate" and "true negative rate" estimates). Trende Dep. 146:23-147:12.

171. To further confirm that large efficiency gaps are durable, Prof. Jackman conducted sensitivity testing for all plans used in the current cycle. That is, he shifted the statewide vote by up to ten points in each direction for each plan, and then recorded the plan's resulting efficiency gap for each shift. L WVNC Pls. Ex. 4002 at 54-57.

172. For plans with small or medium efficiency gaps, this sensitivity testing revealed that their efficiency gaps may not be particularly durable. Given significant shifts in the statewide vote, these plans' simulated efficiency gaps were only modestly

correlated with their actual efficiency gaps, and their simulated efficiency gaps often flipped signs as well. LWNVC Pls. Ex. 4002 at 54-57.

173. But for plans with large efficiency gaps, this sensitivity testing revealed that their efficiency gaps are likely to be quite persistent. Given significant shifts in the statewide vote, these plans' simulated efficiency gaps were highly correlated with their actual efficiency gaps, and their simulated efficiency gaps flipped signs rarely as well. LWNVC Pls. Ex. 4002 at 54-57.

f) Efficiency Gap Thresholds

174. To recommend efficiency gap thresholds, Prof. Jackman first determined, using historical data, at what point a congressional plan's efficiency gap is associated with a deficit or surplus of at least half a congressional seat (which rounds to one seat). For congressional plans with fifteen or fewer seats, this point is an efficiency gap of +/- 8%, and for congressional plans with more than fifteen seats, this point is an efficiency gap of +/- 5%. LWNVC Pls. Ex. 4002 at 37-41.

175. Next, Prof. Jackman used his analysis of congressional plans' initial versus remainder-of-plan average efficiency gaps to identify the initial efficiency gap that corresponds to a remainder-of-plan average efficiency gap of at least half a congressional seat (which rounds to one seat). This initial efficiency gap is +/- 12% for congressional plans with fifteen or fewer seats, and +/- 7.5% for congressional plans with more than fifteen seats. LWNVC Pls. Ex. 4002 at 51-54.

176. Prof. Jackman thus recommended these figures as initial efficiency gap thresholds. A plan with fewer congressional seats and an initial efficiency gap above +/- 12% can be expected to have a remainder-of-plan average efficiency gap above +/- 8%, or at least half a congressional seat. Similarly, a plan with many congressional seats and an initial efficiency gap above +/- 7.5% can be expected to have a remainder-of-plan average efficiency gap above +/- 5%, or at least half a congressional seat. LWNVC Pls. Ex. 4002 at 51-54.

177. These thresholds are quite conservative, in that their false discovery rates are quite low. Notably, every plan with many congressional seats and an initial efficiency gap above +/- 7.5% in the post-2000 period went on to have a remainder-of-plan average efficiency gap above +/- 5%, or at least half a congressional seat. LWNVC Pls. Ex. 4002 at 53-54.

g) North Carolina Performance

178. At the statewide level, North Carolina has been very competitive in recent years. LWNVC Pls. Ex. 4003 at 12-13; Joint Pls. Exs. Rows 29-36; Hood Dep. 43:21-24, 78:22-79:10, 86:3-10.

179. It is therefore appropriate to use the efficiency gap, partisan bias, and the mean-median difference to assess the partisan asymmetry of North Carolina's congressional plans. LWNVC Pls. Ex. 4003 at 2-8.

180. In the 1970s and 1980s, North Carolina's congressional plans substantially favored Democratic candidates. LWNVC Pls. Ex. 4002 at 63-64; LWNVC Pls. Ex. 4003 at 4.

181. In the 1990s and 2000s, North Carolina's congressional plans were almost perfectly balanced. LWNVC Pls. Ex. 4002 at 63-64; LWNVC Pls. Ex. 4003 at 4.

182. In the current cycle, both the 2011 Plan and the 2016 Plan have massively advantaged Republicans. In the 2012 and 2014 elections, the 2011 Plan had an average efficiency gap of -21%, an average partisan bias of -27%, and an average mean-median difference of -7% (negative values being pro-Republican and positive values pro-Democratic). LWNVC Pls. Ex. 4002 at 63-66; LWNVC Pls. Ex. 4003 at 4-5, 8.

183. In the 2016 election, the 2016 Plan had an efficiency gap of -19%, a partisan bias of -27%, and a mean-median difference of -5%. LWNVC Pls. Ex. 4003 at 4-5, 8;

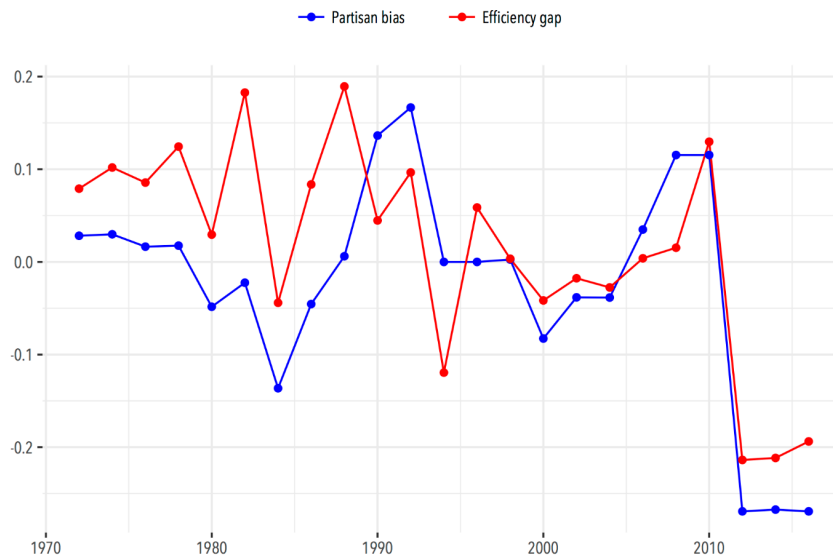


Figure 1: Efficiency gap and partisan bias for North Carolina Congressional elections, 1972-2016.

LWVNC Pls. Ex. 4003, Figure 1.

184. The 2011 Plan had the largest average efficiency gap of *any* of the 136 congressional plans in Prof. Jackman’s database. LWVNC Pls. Ex. 4002 at 10.

185. The 2016 Plan had the largest efficiency gap in the 2016 election of any map in the country analyzed by Prof. Jackman. LWVNC Ex. 4002 at 10, 64;

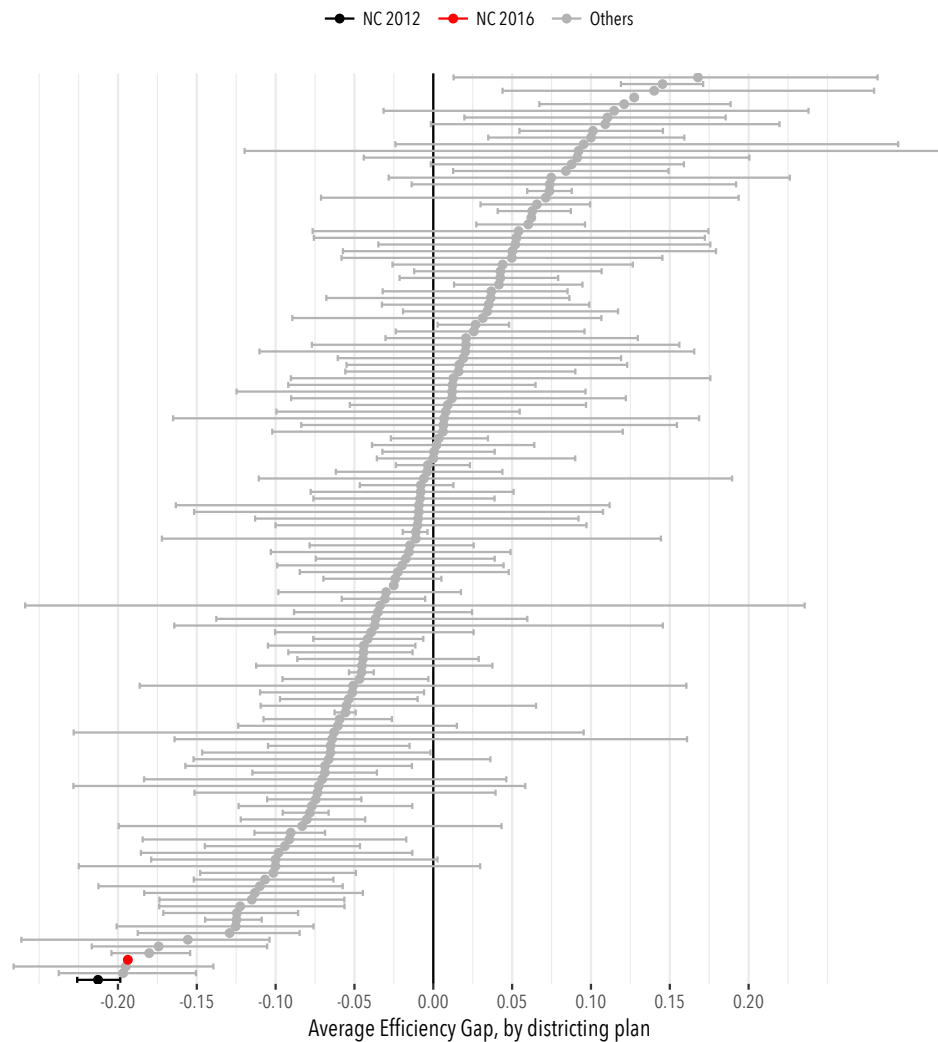


Figure 1: Average efficiency gap score, 136 districting plans, 1972-2016. Plans have been sorted from low average *EG* scores to high. Horizontal lines cover 95% confidence intervals. Negative efficiency gap scores are plans that disadvantage Democrats; positive efficiency gap scores favor Democrats. The North Carolina Plans from this decade are highlighted in red and black.

LWVNC Ex. 4002, Figure 1.

186. The partisan biases exhibited by the 2011 Plan and the 2016 Plan are the second-largest in Prof. Jackman’s database. LWVNC Pls. Ex. 4003 at 4.

187. Defendants' expert, Prof. Gimpel, admitted that "it is obvious to visual inspection and a few minutes of data analysis" that the 2016 Plan "show[s] a Republican advantage" and that "it is not really worth disputing" that "the 2016 map adopted by the North Carolina legislature is the result of a partisan gerrymander." Gimpel Decl. at 2, 7.

188. In 2016, Democratic candidates contesting North Carolina's 13 House of Representative seats won 2,142,661 votes. Republican candidates won 2,447,326 votes. LWNVC Pl. Ex. 4002 at 7.

189. In the 2016 North Carolina Congressional election, Republican candidates won ten out of thirteen seats even though the statewide vote was close to tied. Joint Pls. Ex. Row 29; Joint Pls. Ex. Row 37; Joint Pls. Ex. Row 27.

190. Prof. Jackman established the durability of the 2016 Plan through sensitivity testing. Beginning with North Carolina's actual 2016 election results, he swung the statewide vote by up to ten percentage points in each party's direction. Next, he determined what each party's performance would be in each district if it swung by the same margin as the statewide vote. Using these district-level estimates, he then calculated the efficiency gap corresponding to each shift. LWNVC Pls. Ex. 4002 at 57-59.

191. Defendants' expert, Mr. Trende, also relied on sensitivity testing in his expert report. Trende Decl. ¶¶ 150-65.

192. "[T]here [is] consensus" that sensitivity testing is "the accepted method of testing how a particular map would fare under different electoral conditions." *Whitford*, 2016 WL 6837229, at *47 n.255.

193. Prof. Jackman's sensitivity testing showed that the 2016 Plan's efficiency gap would become even more pro-Republican, peaking at more than -30%, for pro-Democratic shifts in the statewide vote of up to six percentage points. The Plan's efficiency gap would also remain pro-Republican for pro-Republican shifts of up to ten percentage points. LWNVC Pls. Ex. 4002 at 58.

194. Only if the statewide vote swings by at least nine points in a Democratic direction—producing the best Democratic showing in North Carolina in more than thirty years—will the 2016 Plan's pro-Republican bias dissipate. LWNVC Ex. 4002 at 58;

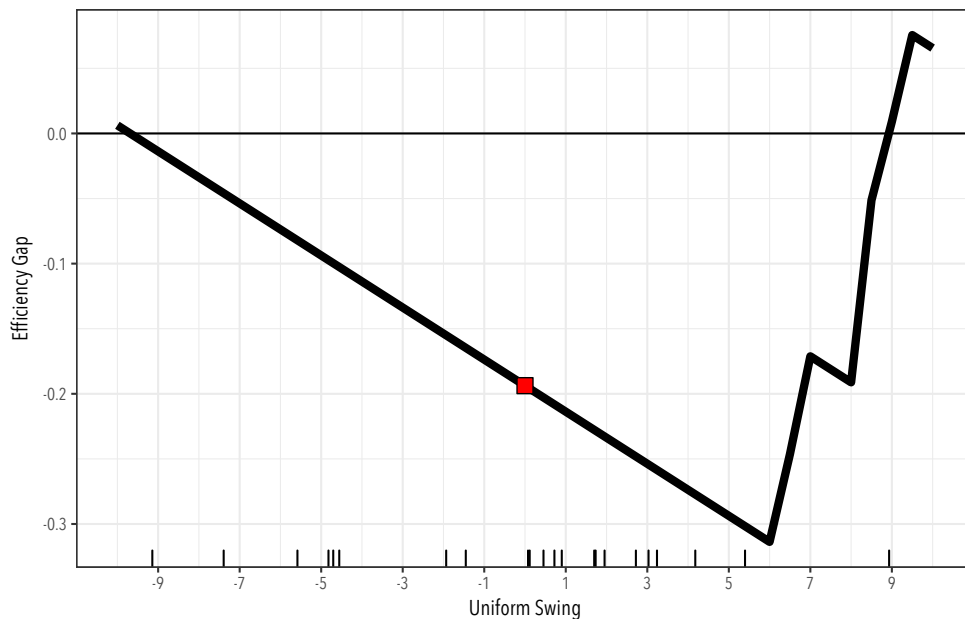


Figure 21: North Carolina efficiency gap scores generated by perturbing the actual 2016 result by varying degrees of uniform swing. The red square indicates the observed efficiency gap for North Carolina in 2016. Tick marks on the horizontal axis indicate swings in North Carolina Congressional elections 1972-2016.

LWNVC Ex. 4002, Figure 21.

195. Defendants' expert, Mr. Trende, admits that the 2016 Plan's pro-Republican skew will endure under almost any electoral scenario. L WVNC Pls. Ex. 4040; Trende Dep. 205:13-206:8.

196. The durability of the Republican edge under the 2016 Plan is confirmed by Prof. Jackman's analysis of how congressional plans' initial efficiency gaps are related to their average efficiency gaps over the remainder of their lifetimes. Based on this analysis, Prof. Jackman estimated that the 2016 Plan will have an average efficiency gap of roughly -12% if it remains in place in future elections. L WVNC Pls. Ex. 4002 at 47-50.

197. The durability of the Republican edge under the 2016 Plan is further confirmed by Prof. Jackman's prognostic tests. According to these tests, the false positive rate for the 2016 Plan is close to 0% and the true negative rate is nearly 100%. L WVNC Pls. Ex. 4002 at 41-47.

III. LACK OF JUSTIFICATION

a) Professor Chen's Simulations

198. Plaintiffs' expert, Prof. Jowei Chen, used a simulation technique that the Fourth Circuit has previously endorsed, *see Raleigh Wake Citizens Ass'n v. Wake Cty. Bd. of Elections*, 827 F.3d 333, 344-45 (4th Cir. 2016), to produce three thousand different congressional plans for North Carolina. Joint Pls. Ex. Row 43 at 12.

199. All three thousand of these maps matched or surpassed the 2016 Plan's performance in terms of district compactness, county splits, and VTD splits—the very criteria endorsed by the Joint Committee. Two thousand maps (Prof. Chen's second and

third simulation sets) also paired at least as few incumbents as the 2016 Plan, notwithstanding the concern that the Joint Committee used incumbency protection as a proxy for partisan advantage. Joint Pls. Ex. Row 43 at 12.

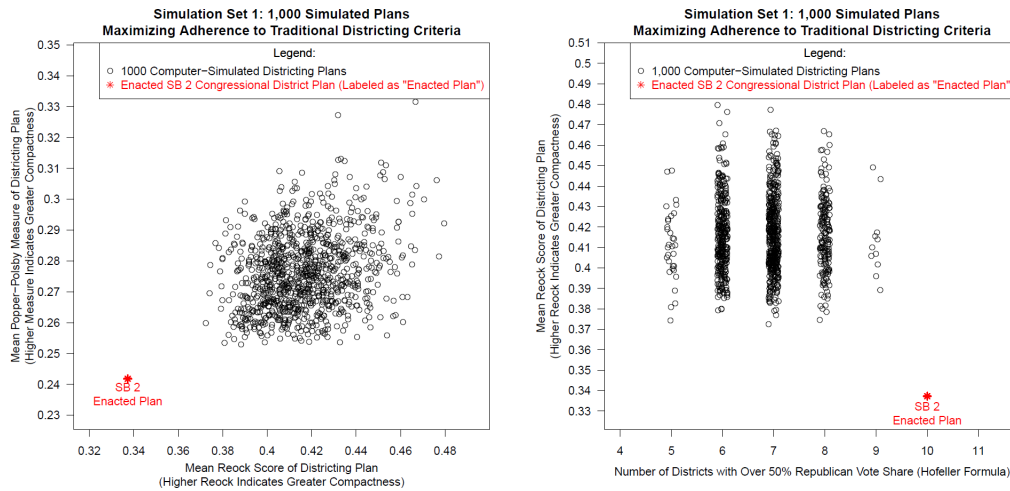
200. Not one of the three thousand maps ever resulted in a ten-three Republican edge or an efficiency gap as large as the 2016 Plan's. No matter which criteria were employed, no matter which past elections were included, and no matter how incumbents were treated, every single map simulated by Prof. Chen was more symmetric than the 2016 Plan. Joint Pls. Ex. Row 43 at 12-14, 16-17, 21-22, 32-37.

201. The modal simulated map from Prof. Chen using all twenty past elections available to Dr. Hofeller actually featured seven *Democratic* seats and an efficiency gap of almost exactly zero. Joint Pls. Ex. Row 43 at 12-14, 16-17, 21-22, 32-37.

202. In the first simulation set, Prof. Chen instructed his computer to follow all of the non-partisan criteria enumerated in the Adopted Criteria with the exception of incumbency protection. Prof. Chen then measured whether the 2016 Plan deviated from these 1,000 simulated plans with respect to the Adopted Criteria. Joint Pls. Ex. Row 43 at 10-14.

203. By comparing his first set of one thousand simulations to the 2016 Plan, Prof. Chen found that the 2016 Plan failed to minimize county splits and had less compact districts on average than all one thousand simulated plans. Joint Pls. Ex. Row 43 at 10-14;

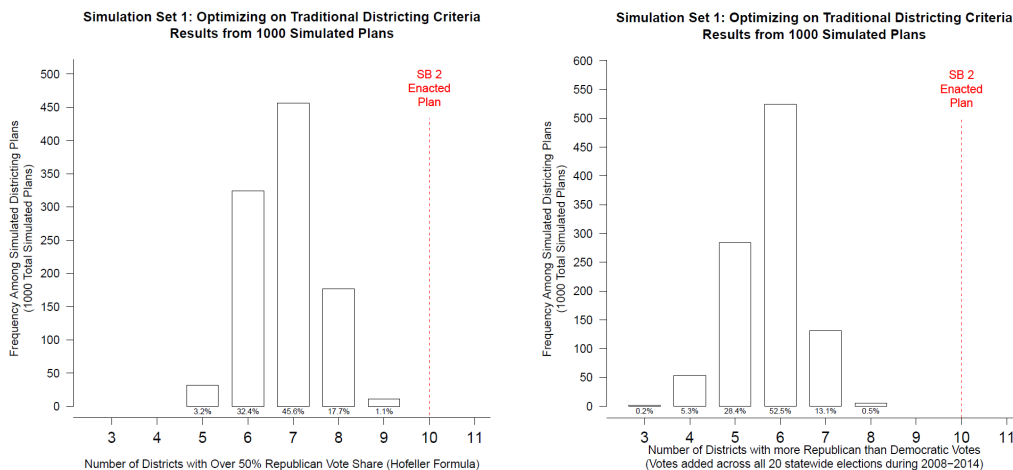
Figure 3:



Joint Pls. Ex. Row 43, Figure 3.

204. None of the one thousand plans in Prof. Chen's first simulation set produced a 10-3 Republican plan. Most of the simulated plans had either 5 or 6 Republican districts using the twenty past elections available to Dr. Hofeller. Joint Pls. Ex. Row 43 at 10-14;

Figure 2:



Joint Pls. Ex. Row 43, Figure 2.

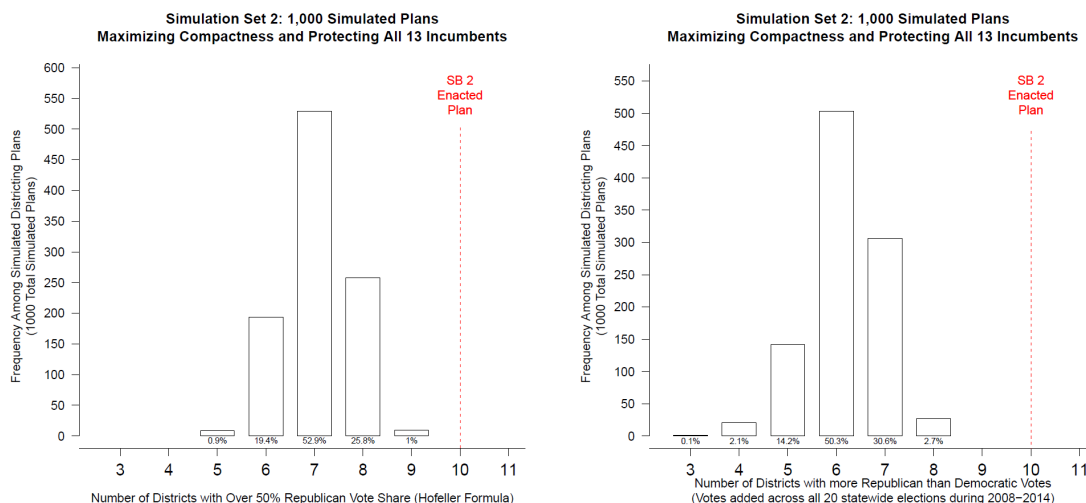
205. In the second simulation set, Prof. Chen followed the same criteria as the first set, but also avoided pairing *any* Congressional incumbents. Joint Pls. Ex. Row 43 at 12, 15-19.

206. The 2011 Plan paired four incumbents (all Democrats). Joint Pls. Ex. Row 2.

207. The 2016 Plan paired two incumbents. Joint Pls. Ex. Row 43 at 3; Joint Pls. Ex. Row 2; Joint Pls. Ex. Row 10 at 53:2-54:14; LWVNC Pls. Ex. 4061; Joint Pls. Ex. Row 76 at ¶ 40; Joint Pls. Ex. Row 15 at 22:21-23:9.

208. Despite not pairing any incumbents, not one of the one thousand simulations in Prof. Chen's second simulation set produced a 10-3 Republican plan. Most of the simulated plans had either 6 or 7 Republican districts using the twenty past elections available to Dr. Hofeller. Joint Pls. Ex. Row 43 at 15-19;

Figure 4:



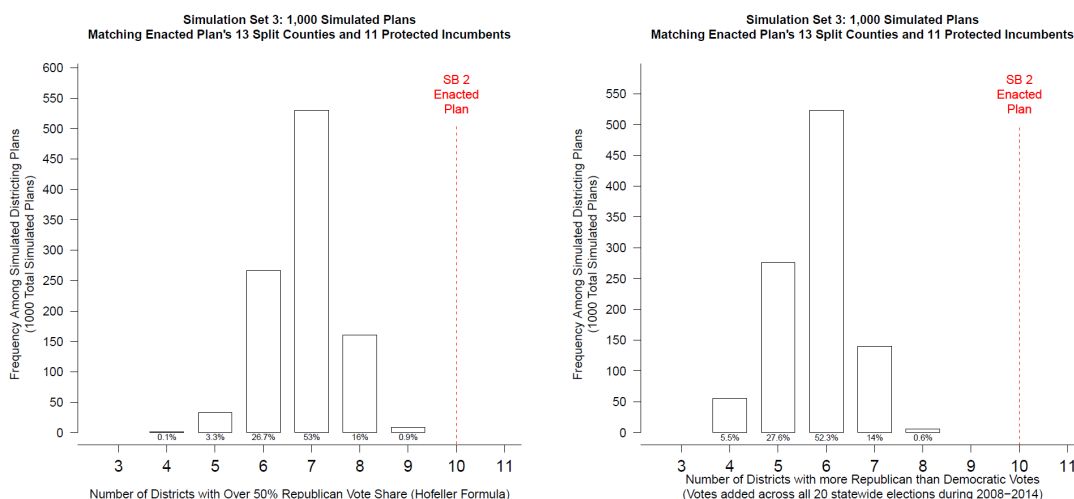
Joint Pls. Ex. Row 43, Figure 4.

209. Prof. Chen's third simulation set exactly matched the 2016 Plan in terms of incumbent protection as defined by the Adopted Criteria, protecting 11 of 13 incumbents. The third set also matched the 2016 Plan in terms of county splits, splitting 13 counties. Joint Pls. Ex. Row 43 at 12, 19-22.

210. Defendants' expert, Prof. Hood, agreed that a redistricting simulation would be reasonable if it protected 11 or more incumbents and would satisfy the incumbency protection criteria in the Adopted Criteria. Hood Dep. (Dkt. 54-21) 197:7-19.

211. None of the simulations in Prof. Chen's third simulation set produced a 10-3 Republican plan. Most of the simulated plans had either 5 or 6 Republican seats using the twenty past elections available to Dr. Hofeller. Joint Pls' Ex. Row 43 at 3, 12;

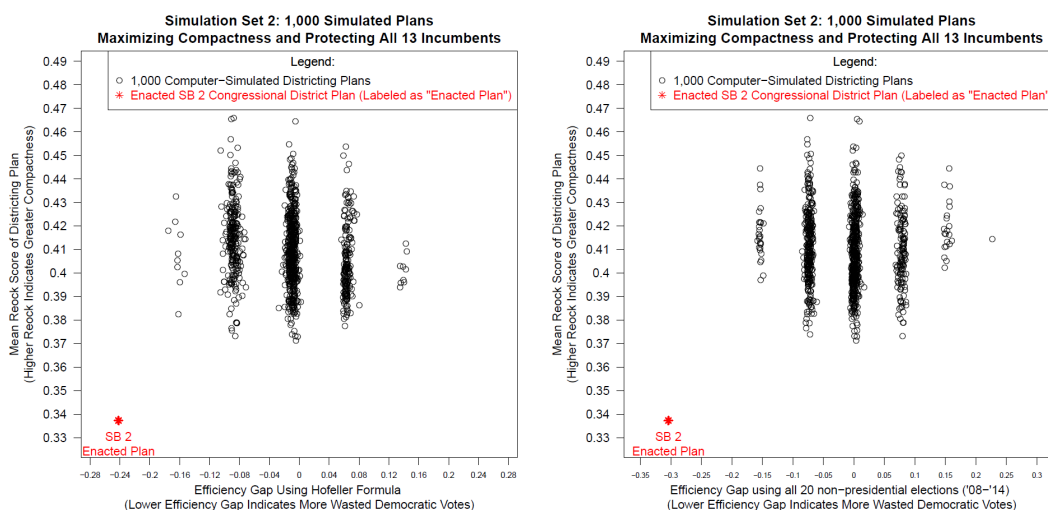
Figure 6:



Joint Pls' Ex. Row 43, Figure 6.

212. Over half of Prof. Chen's simulated plans in simulation set two (529 of the 1,000 plans) had an efficiency gap within 2% of zero, and thirty-one percent of the 1,000 plans had an efficiency gap between -1% and 1%, indicating de minimis electoral bias in favor of either party. Joint Pls. Ex. Row 43 at 25;

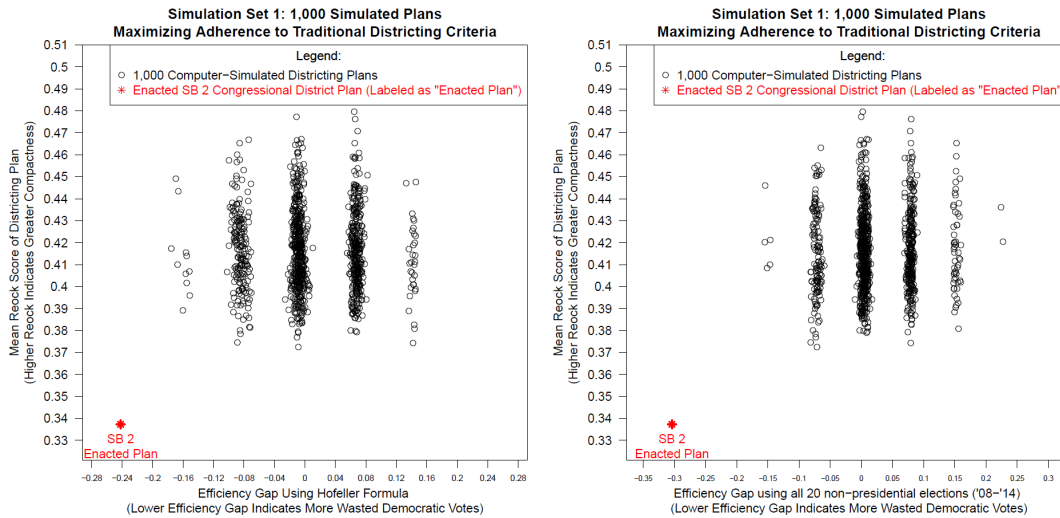
Figure 10:



Joint Pls' Ex. Row 43, Figure 10.

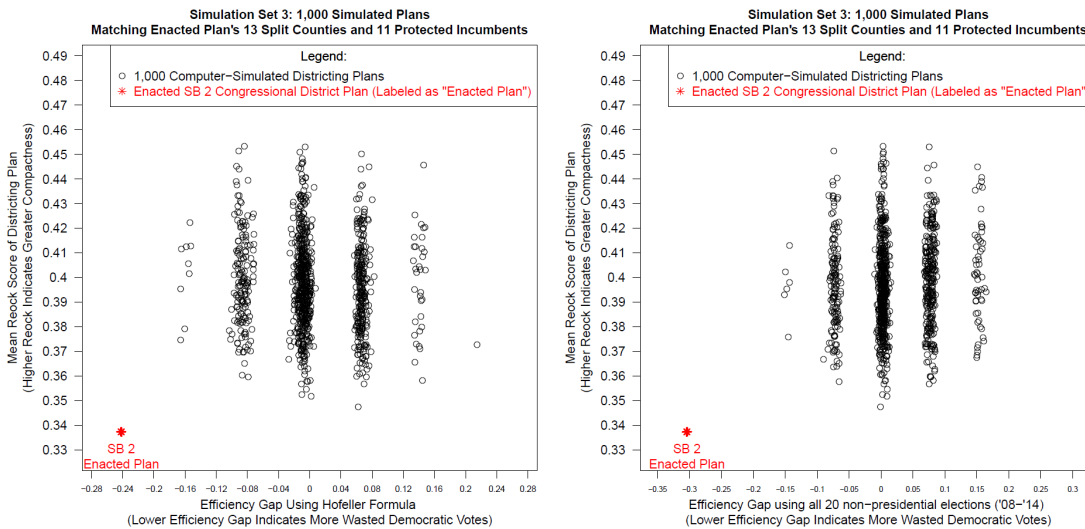
213. Similarly, the majority of Prof. Chen's simulated plans in simulation sets one and three had very small efficiency gaps, indicating de minimis electoral bias in favor of either party. Joint Pls. Ex. Row 43 at 32, 34;

Figure 9:



Joint Pls. Ex. Row 43, Figure 9;

Figure 11:



Joint Pls. Ex. Row 43, Figure 11.

214. According to a regression model constructed by Prof. Chen, incumbency provided a boost of only about three percentage points to congressional candidates in North Carolina's 2012 election. Joint Pls. Ex. Row 43 at 27, 38.

215. All of the congressional races in North Carolina in 2016 were won by at least 56.1% to 43.9%. Thus, even if Republican incumbents had not run in any districts (and the incumbency advantage of approximately three percentage points had been removed), ten of the thirteen congressional districts would still have been won by Republican candidates. Joint Pls. Ex. Row 29.

216. That Republican candidates would have won ten out of thirteen districts under the 2016 Plan, even without the benefit of incumbency, is confirmed by Prof. Chen's open seat model. In this model, Prof. Chen assumed that each seat was uncontested by any incumbent, and still found that Republicans would enjoy a ten-three advantage. Joint Pls. Ex. Row 43 at 30-31, 37.

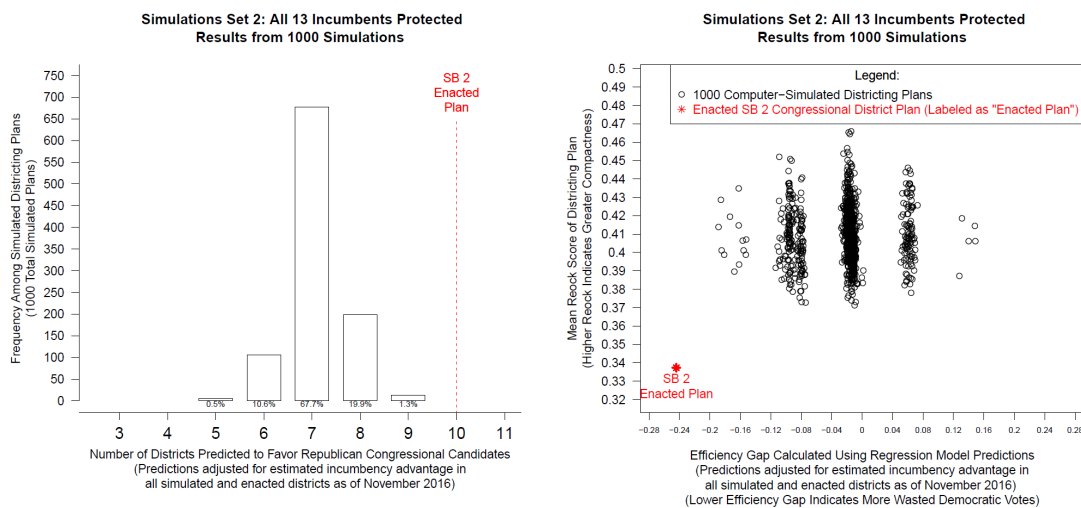
217. In his regression model, Prof. Chen used presidential election results, congressional incumbency status, turnout rate, and county fixed effects to predict the Republican vote share, all at the VTD level and using data from 2012. Joint Pls. Ex. Row 43 at 27, 38.

218. Prof. Chen also constructed an analogous regression model in which congressional turnout rate was the dependent variable, again at the VTD level and in 2012. Joint Pls. Ex. Row 43 at 27, 38.

219. Using these two models, Professor Chen analyzed the efficiency gaps of the one thousand simulated plans in his simulation set two, first taking into account the actual incumbency status of the candidates who ran in 2016 and then assuming that each district was open. Joint Pls. Ex. Row 43 at 29-31.

220. Taking into account the actual incumbency status of the candidates who ran in 2016, 603 of the one thousand simulated plans had an efficiency gap within 2% of zero. In contrast, the 2016 Plan had an efficiency gap of -24.4%, well outside the entire distribution of simulated plans. Joint Pls. Ex. Row 43 at 29, 36;

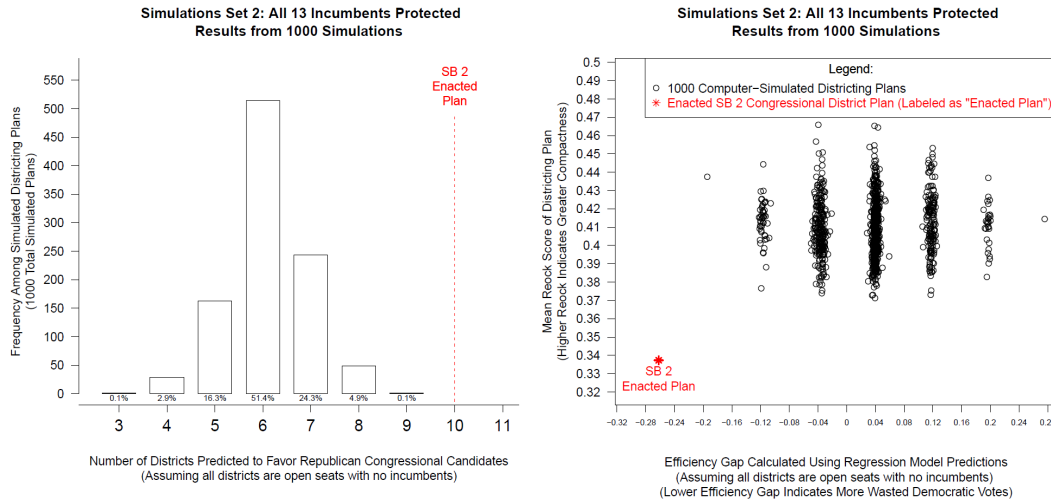
Figure 13:



Joint Pls. Ex. Row 43, Figure 13.

221. Assuming that each district was open, over 90% of the 1000 simulated plans produced 5 to 7 Republican districts. In contrast, the 2016 Plan continued to exhibit 10 Republican districts, a figure outside the entire distribution of simulated plans. Joint Pls. Ex. Row 43 at 30-31, 37;

Figure 14:



Joint Pls. Ex. Row 43, Figure 14.

b) Dr. Hofeller's Draft Plans

222. Over the course of designing the 2016 Plan, Dr. Hofeller created draft maps, including maps titled "Congress ST-B" and "Congress 17A." Joint Pls. Ex. Row 20; Joint Pls. Ex. Row 21; LWNVC Pls. Exs. 4018, 4021.

223. "2016 Contingent Congressional Plan.dbf" and "2016 Contingent Congressional Plan.xls" are true and correct copies of the underlying data files for the maps of the same name produced by Dr. Hofeller in DEF000042-000064.

224. "Congress 17A.dbf" and "Congress 17A.xls" are true and correct copies of the underlying data files for the maps of the same name produced by Dr. Hofeller in DEF000042-000064. LWNVC Pls. Exs. 4016-17.

225. “Congress ST-B.dbf” and “Congress ST-B.xls” are true and correct copies of the underlying data files for the maps produced by Dr. Hofeller in DEF000042-000064. LWNVC Pls. Exs. 4020-21.

226. Congress ST-B and Congress 17A are more symmetric than the 2016 Plan. Both of these maps include just seven Republican seats according to the twenty past elections available to Dr. Hofeller. Both of them are also more compact, on average, than the 2016 Plan, and split either somewhat fewer (10 versus 13) or slightly more (15 versus 13) counties.

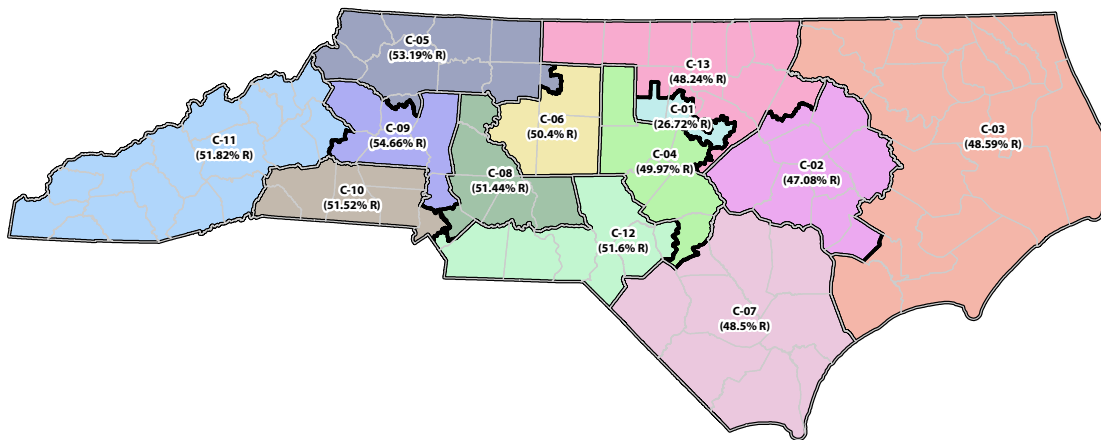
Exhibit 4022: Dr. Hofeller Draft Maps Summary

Plan Name	Total County Splits	Republican/ Democrat Seats using 20 election average	Average Reock Score
Congress 2016 Contingent	13	10R / 3D	0.36
Congress ST-B	10	7R / 6D	0.41
Congress 17A	15	7R / 6D	0.40

LWNVC Pls. Ex. 4022;

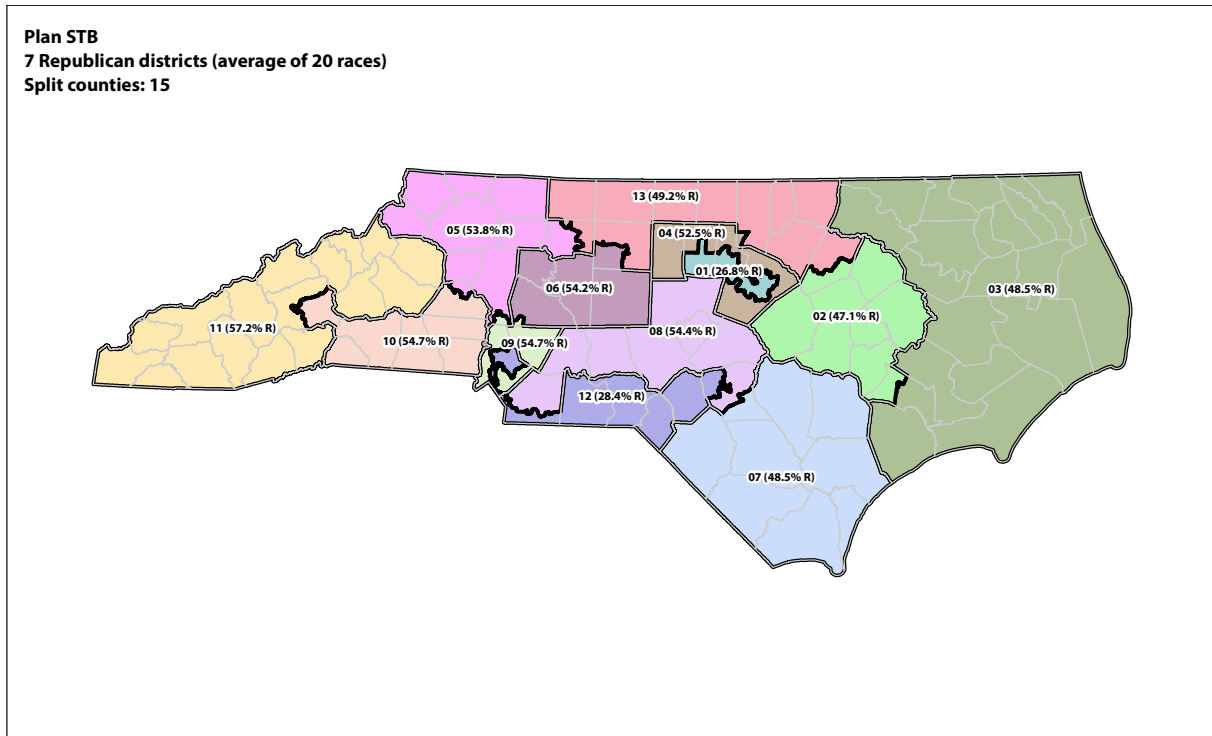
Exhibit 4023: Congress 17A Map with Election Data

Plan 17A
7 Republican districts (20-race average)
Split counties: 10



LWVNC Pls. Ex. 4023;

Exhibit 4024: Congress ST-B Map with Election Data



LWVNC Pls. Ex. 4024.

c) Former North Carolina Plans

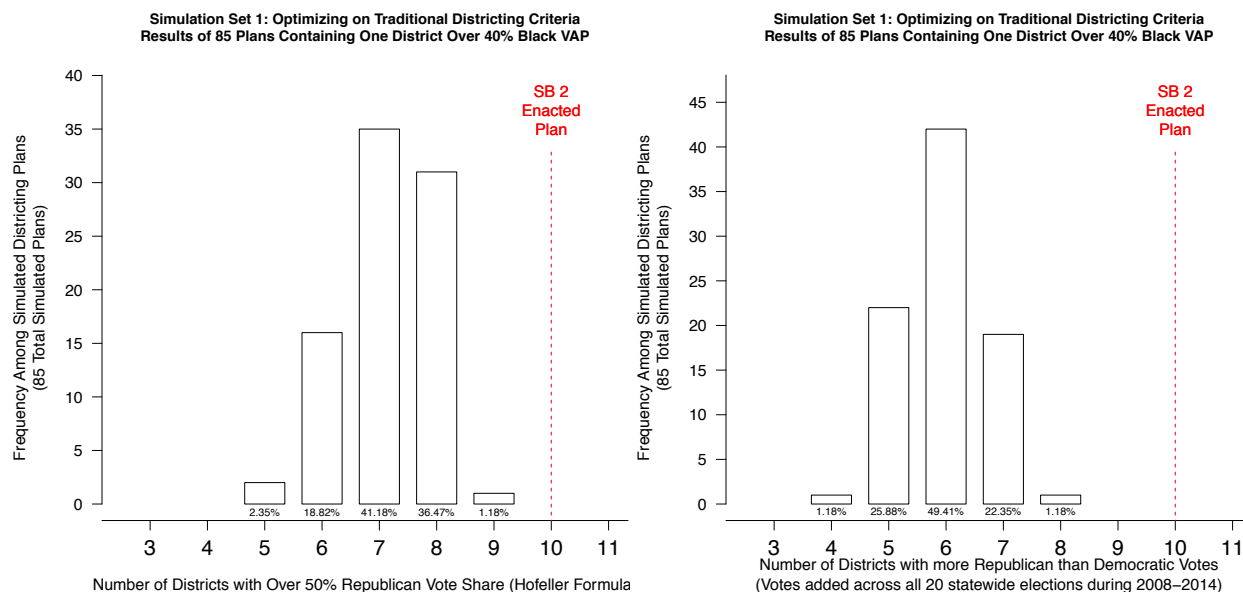
227. During the 2000s, North Carolina’s congressional plan had an average efficiency gap of just 2%, or very close to perfect symmetry. LWVNC Ex. 4002 at 63.

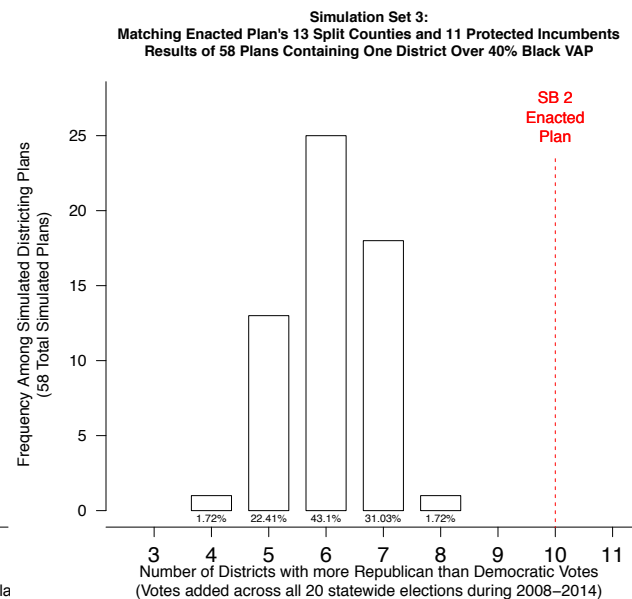
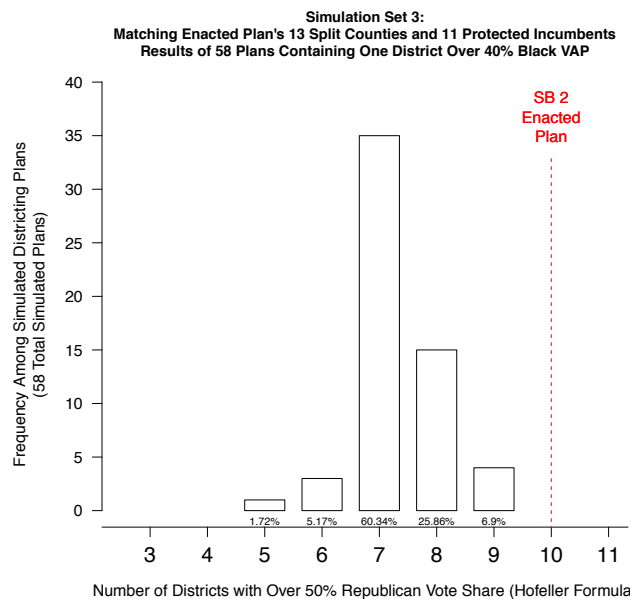
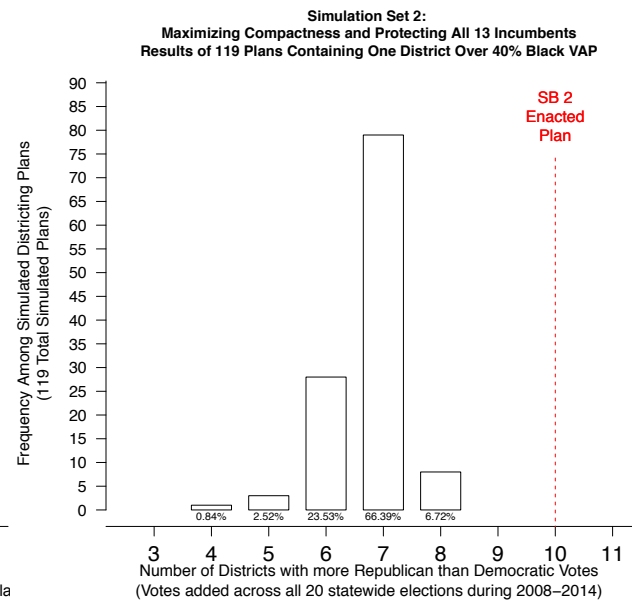
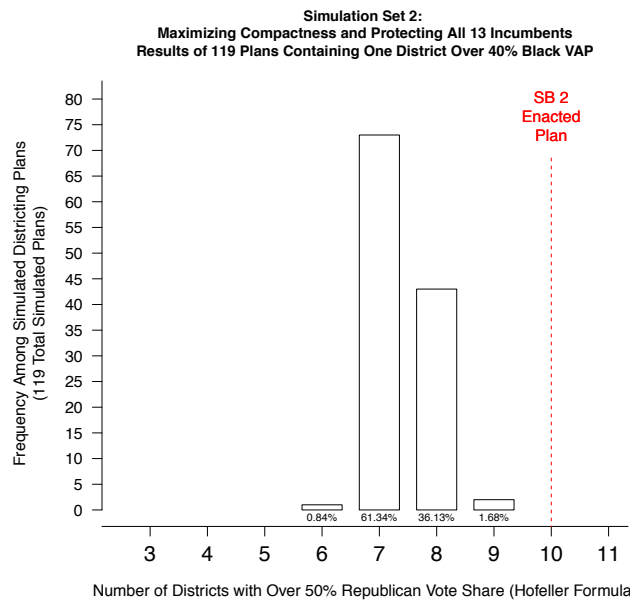
d) No Other Justification

228. Defendants’ expert, Prof. Hood, admitted that his spatial clustering analysis “doesn’t ultimately tell you anything about what is possible in terms of districting plans

and the ultimate composition of the districts in those plans.” Hood Dep. (Dkt. 54-21) 83:12-85:7.

229. For each of his three sets of simulations, Prof. Chen identified all maps containing one district with a black voting-age population (BVAP) of at least 40%. These 262 maps were indistinguishable from the full array of three thousand in their electoral consequences. Not a single one of these maps had ten Republican seats, and, the modal map using all twenty past elections available to Dr. Hofeller had six or seven *Democratic* seats.





Joint Pls. Ex. Row 44.

230. Defendants' experts Prof. Gimpel and Prof. Hood confirmed the lesser importance of candidate quality by analyzing the 2016 Plan using a range of non-

congressional statewide races (including, but not limited to auditor, governor, and president). “Because these races are statewide, not district-specific, they are entirely unaffected by district-level variations” in incumbency, fundraising ability, charisma, and other House member attributes. L WVNC Pls. Ex. 4003 at 14.

231. When non-congressional election results are used to evaluate the 2016 Plan, Republican candidates are advantaged in ten out of thirteen districts even though the statewide vote is nearly tied. Gimpel Decl. at 14; L WVNC Pls. Ex. 4038; Hood Decl. at 25; L WVNC Pls. Ex. 4039.

PROPOSED CONCLUSIONS OF LAW

I. Individual and Organizational Standing

1. The standing requirement is meant to ensure that the plaintiffs have “alleged such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which the court so largely depends for illumination of difficult constitutional questions.” *Baker v. Carr*, 369 U.S. 186, 204 (1962).

2. The party invoking federal jurisdiction, here the plaintiffs, bears the burden of establishing Article III standing. *DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 342 (2006).

3. The constitutional requirements for standing are well-established. First, the plaintiff must have suffered an “injury in fact”—an invasion of a legally protected interest which is (a) concrete and particularized, and (b) “actual or imminent, not ‘conjectural’ or ‘hypothetical.’” Second, there must be a causal connection between the injury and the conduct complained of—the injury has to be “fairly . . . trace[able] to the challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court.” Third, it must be “likely,” as opposed to merely “speculative,” that the injury will be “redressed by a favorable decision.” *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-561 (1992).

4. Because they are supporters of the political party that is allegedly disadvantaged by the 2016 Congressional redistricting plan, Plaintiffs have suffered an “injury in fact”

that is “concrete and particularized” and “actual or imminent.” *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992) (internal quotation marks omitted).

5. Plaintiffs’ injury is concrete and particularized because as a result of the statewide partisan gerrymandering, Democrats do not have the same opportunity provided to Republicans to elect representatives of their choice to Congress. The electoral influence of plaintiffs and other Democratic voters statewide has been unfairly and disproportionately reduced for the rest of the decade. *See Whitford v. Gill*, 218 F. Supp. 3d 837, 927 (W.D. Wis. 2016); *see also Vieth v. Pennsylvania*, 188 F. Supp. 2d 532, 540 (M.D. Pa. 2002) (“The constitutional injury lies . . . in the configuration of the districts as a whole when they serve to disadvantage a certain class of voters.”).

6. This injury is plaintiffs’ assignment to districts on the basis of their political viewpoints, resulting in their diminished ability to convert their votes into legislative representation, and thus a reduction in the number of representatives affiliated with plaintiffs’ party. *See Baker v. Carr*, 369 U.S. 186, 207 (1962) (recognizing “injury” when “classification disfavors [certain] voters,” “placing them in a position of constitutionally unjustifiable inequality vis-à-vis [other] voters”).

7. This injury is also “fairly traceable to the challenged action of the defendant”—that is, the enactment of a plan that intentionally cracks and packs plaintiffs and supporters of plaintiffs’ party, thus diminishing their ability to translate their votes into representation due to their political viewpoints. *Lujan*, 504 U.S. at 660 (internal quotation marks and alterations omitted). And the injury would be “redressed by a favorable

decision,” which would entail the plan’s replacement with a map that does not intentionally crack or pack either party’s supporters, and thus treats both parties symmetrically. *Id.* at 561 (internal quotation marks omitted).

8. The individual plaintiffs are all longtime Democrats and supporters of the Democratic Party. They have been injured by their assignment to districts on the basis of their political views, and the consequent reduction in Democratic representation in Congress. This injury is attributable to the enactment of the 2016 Congressional redistricting plan and its purposeful cracking and packing of Democratic voters. *See Whitford*, 218 F. Supp. 3d at 928 (“Moreover, there can be no dispute that a causal connection exists between Act 43 and the plaintiffs’ inability to translate their votes into seats as efficiently as Republicans. The evidence has established that one of the purposes behind Act 43 was solidifying Republican control of the legislature for the decennial period. Indeed, the drafters had drawn other statewide maps that, their own analysis showed, would secure fewer Republican seats.”).

9. Plaintiffs’ injury would be remedied by declaratory and injunctive relief prohibiting the use of the 2016 Congressional redistricting plan and requiring the legislature to enact a neutral plan that treats both parties symmetrically. *See id.* (“Finally, adopting a different statewide districting map, perhaps one of those earlier maps or . . . [the] Demonstration Plan, would redress the constitutional violation by removing the state-imposed impediment on Democratic voters.”).

10. The individual plaintiffs have established their standing to bring a statewide partisan gerrymandering claim. *See Vieth v. Jubelirer*, 541 U.S. 267, 328 (2004) (Stevens, J., dissenting) (only one Justice opined that the plaintiffs lacked standing to bring a statewide partisan gerrymandering claim).

11. “An organization . . . can assert standing either in its own right or as a representative of its members.” *S. Walk at Broadlands Homeowner’s Ass’n, Inc. v. OpenBand at Broadlands, LLC*, 713 F.3d 175, 182 (4th Cir. 2013); *see Warth v. Seldin*, 422 U.S. 490, 511 (1975) (“There is no question that an association may have standing in its own right to seek judicial relief from injury to itself and to vindicate whatever rights and immunities the association itself may enjoy.”).

12. The organization need not prove that both it and its members have standing; either alone will suffice. However, under either form of standing, the “plaintiff must demonstrate standing separately for each form of relief sought.” *Friends of the Earth Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 185 (2000).

13. The standing analysis for an organization itself is more direct than that for “associational standing” on behalf of the organization’s members. “In determining whether an organization has standing,” the court “must conduct the same inquiry as in the case of an individual.” *Lane v. Holder*, 703 F.3d 668, 674 (4th Cir. 2012).

14. The plaintiff organization therefore must prove that it “(1) it has suffered an ‘injury in fact’ that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of

the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.” *S. Walk*, 713 F.3d at 182 (quoting *Friends of the Earth*, 528 U.S. at 180–81).

15. The organization itself, rather than its members, must be personally injured. A “‘broadly alleged’ impairment of an organization’s ability to advance its purposes combined with an alleged ‘consequent drain on the organization’s resources’” may be sufficient to demonstrate that an organization has standing in its own right. *S. Walk*, 713 F.3d at 183 (quoting *Havens Realty Corp. v. Coleman*, 455 U.S. 363, 379 (1982)).

16. The League of Women Voters of North Carolina has demonstrated how the organization’s ability to advance its purposes, including its goal of a fair redistricting plan for congressional districts that weighs the votes of all voters equally regardless of their partisan affiliation, is adversely affected by the 2016 Congressional redistricting plan. The all-volunteer organization’s resources are drained by the need to expend significant time and effort addressing redistricting reform. In addition, the organization’s goal of registering voters is impeded by non-competitive districts widely seen as rigged such that voters believe their votes do not matter. The League of Women Voters has sufficiently demonstrated the prerequisites for standing in its own right.

17. To claim associational standing on behalf of its members, an organization must prove that: “(1) its members would otherwise have standing to sue as individuals; (2) the interests at stake are germane to the group’s purpose; and (3) neither the claim made nor the relief requested requires the participation of individual members in the suit.” *White*

Tail Park, Inc. v. Stroube, 413 F.3d 451, 458 (4th Cir. 2005); accord *Ala. Legislative Black Caucus (ALBC) v. Alabama*, 135 S. Ct. 1257, 1268 (2015).

18. The first of these prongs requires the court to conduct the same standing inquiry cited above, but for at least one of the organization's members rather than for the organization itself. See *Friends of the Earth*, 528 U.S. at 180-81. The Supreme Court has noted that "a 'member' of an association 'would have standing to sue' in his or her 'own right' when that member 'resides in the district that he alleges was the product of a racial gerrymander.'" *ALBC*, 135 S. Ct. at 1268. Similarly, the League of Women Voters of North Carolina has Democratic members residing in the state of North Carolina who are thereby directly disadvantaged by the partisan gerrymander.

19. The second and third prongs of the associational standing test are easily satisfied in this case. The partisan gerrymandering claim is germane to the League's purpose, since one of its stated goals is "to promote transparent and accountable redistricting processes and to end hyper-partisan practices that don't benefit constituents." And the individual members are not required to participate as parties in the case: "neither the [equal protection] claim nor the request for declaratory and injunctive relief requires individualized proof and both are thus properly resolved in a group context." *Hunt v. Washington State Apple Advert. Comm'n*, 432 U.S. 333, 344 (1977).

II. Partisan Gerrymandering

20. The constitutionality of legislative apportionments is governed by (among other provisions) the Equal Protection Clause of the Fourteenth Amendment. *Reynolds v. Sims*, 377 U.S. 533 (1964).

21. The right to vote “is a fundamental matter in a free and democratic society. Especially since the right to exercise the franchise in a free and unimpaired manner is preservative of other basic civil and political rights, any alleged infringement of the right of citizens to vote must be carefully and meticulously scrutinized.” *Id.* at 561-62.

22. “Most citizens” exercise their “inalienable right to full and effective participation in the political process” by voting for their elected representatives. *Id.* at 565. “Full and effective participation by all citizens in state government requires, therefore, that each citizen have an equally effective voice in the election of members of his state legislature.” *Id.*

23. The concept of equal protection has been traditionally viewed as requiring the uniform treatment of persons standing in the same relation to the governmental action questioned or challenged. With respect to the allocation of legislative representation, all voters, as citizens of a State, stand in the same relation regardless of where they live. *Id.*

24. However, the requirement of equal treatment is not limited to where a voter resides. Instead, “[a]ny suggested criteria for the differentiation of citizens are insufficient to justify any discrimination, as to the weight of their votes, unless relevant to the permissible purposes of legislative apportionment.” *Id.*

25. “Since the achieving of fair and effective representation for all citizens is concededly the basic aim of legislative apportionment . . . the Equal Protection Clause guarantees the opportunity for equal participation by all voters in the election of state legislators.” *Id.* at 565-66 (citations omitted).

26. A districting plan may create multimember districts that are perfectly acceptable under equal population standards, but invidiously discriminatory because they are employed “to minimize or cancel out the voting strength of racial or political elements of the voting population.” *Gaffney v. Cummings*, 412 U.S. 735, 751 (1973).

27. “[A]n excessive injection of politics is unlawful.” *Vieth*, 541 U.S. at 293 (plurality opinion).

28. Excessive partisan gerrymandering raises concerns under the Equal Protection Clause, by discriminating against voters on the basis of their partisan affiliations, and under the First Amendment, by “burdening or penalizing citizens because of their participation in the electoral process, their voting history, their association with a political party, or their expression of political views.” *Id.* at 314 (Kennedy, J., concurring in the judgment).

29. “Under general First Amendment principles those burdens in other contexts are unconstitutional absent a compelling government interest.” *Id.* (citing *Elrod v. Burns*, 427 U.S. 347, 362 (1976) (plurality opinion)).

30. “Representative democracy . . . is unimaginable without the ability of citizens to band together in promoting among the electorate candidates who espouse their political

views.’” *Id.* (quoting *Cal. Democratic Party v. Jones*, 530 U.S. 567, 574 (2000)). First Amendment concerns arise where a State enacts a law that has the purpose and effect of subjecting a group of voters or their party to disfavored treatment by reason of their views. In the context of partisan gerrymandering, that means that First Amendment concerns arise where an apportionment has the purpose and effect of burdening a group of voters’ representational rights. *Id.*

31. In a First Amendment analysis, the inquiry is not whether political classifications were used. The inquiry instead is whether political classifications were used to burden a group’s representational rights. If a court were to find that a State did impose burdens and restrictions on groups or persons by reason of their views, there would likely be a First Amendment violation, unless the State shows some compelling interest. *Id.*

32. The First Amendment and the Equal Protection clause prohibit a redistricting scheme which (1) is intended to place a severe impediment on the effectiveness of the votes of individual citizens on the basis of their political affiliation, (2) has that effect, and (3) cannot be justified on other, legitimate legislative grounds. *Whitford*, 218 F. Supp. 3d at 884.

33. The discriminatory intent prong of plaintiffs’ proposed test for partisan gerrymandering—that is, whether a district plan “intentional[ly] discriminat[es] against an identifiable political group,” *Davis v. Bandemer*, 478 U.S. 109, 127 (1986) (plurality opinion)—is judicially discernible and manageable.

34. The intent prong is discernible because it stems from the “basic equal protection principle that the invidious quality of a law . . . must ultimately be traced to a . . . discriminatory purpose.” *Washington v. Davis*, 426 U.S. 229, 240 (1976); *see also Harris v. Indep. Redist. Comm’n*, 136 S. Ct. 1301, 1310 (2016) (suggesting that “partisanship is an illegitimate redistricting factor”); *Bandemer*, 478 U.S. at 141 (plurality opinion) (requirement of discriminatory intent is “consistent with our equal protection cases generally”).

35. The intent prong is manageable because courts have successfully distinguished for decades between district plans that aim to pursue partisan advantage and plans that do not.

36. When a single party has unified control over redistricting, “it should not be very difficult to prove that the likely political consequences of the reapportionment were intended.” *Bandemer*, 478 U.S. at 129 (plurality opinion); *see also id.* at 129 n.11 (“That discriminatory intent may not be difficult to prove in this context does not, of course, mean that it need not be proved at all . . .”). Conversely, when a district plan is enacted by divided government, by a bipartisan or nonpartisan commission, or by a court, partisan intent may well be absent. *See Vieth*, 541 U.S. at 350 (Souter, J., dissenting) (“I would . . . treat any showing of intent . . . as too equivocal to count unless the entire legislature were controlled by the governor’s party (or the dominant legislative party were vetoproof).”).

37. Justice Kennedy noted in *Vieth* that “[i]f a State passed an enactment that declared ‘All future apportionment shall be drawn so as most to burden Party X’s rights to fair and effective representation, though still in accord with one-person, one-vote principles,’ we would surely conclude the Constitution had been violated.” *Vieth*, 541 U.S. at 312 (Kennedy, J., concurring in the judgment). The North Carolina General Assembly did just that in adopting its “partisan advantage” redistricting criterion for the 2016 Congressional redistricting plan.

38. Much other evidence confirms that the intent prong is satisfied by the evidence in this case. This evidence includes the official criteria for the 2016 Congressional redistricting plan, statements by Dr. Thomas Hofeller, Representative David Lewis, Senator Bob Rucho, and the party-line votes by which the plan was passed.

39. The discriminatory effect prong of plaintiffs’ proposed test for partisan gerrymandering—that is, whether a district plan has exhibited a high and durable level of partisan asymmetry—is judicially discernible and manageable and satisfied by the evidence in this case.

40. In *LULAC v. Perry*, 548 U.S. 399 (2006), five Justices expressed interest in a partisan gerrymandering test based on the concept of partisan symmetry. See *id.* at 420 (opinion of Kennedy, J.) (not “discounting its utility in redistricting planning and litigation”); *id.* at 466, 468 n.9 (Stevens, J., concurring in part and dissenting in part) (observing that symmetry is “widely accepted by scholars as providing a measure of fairness in electoral systems” and is a “helpful (though certainly not talismanic) tool”); *id.*

at 483-84 (Souter, J., concurring in part and dissenting in part) (noting “utility of a criterion of symmetry as a test” and urging “further attention [to] be devoted to the administrability of such a criterion at all levels of redistricting and its review”); *id.* at 492 (Breyer, J., concurring in part and dissenting in part) (pointing out that asymmetry may cause a plan to “produce a majority of congressional representatives even if the favored party receives only a minority of popular votes”).

41. Further support for the discernibility of a test based on partisan symmetry comes from the Supreme Court’s definitions of partisan gerrymandering in other cases, all of which involve some notion of asymmetry. *See Ariz. State Legis. v. Ariz. Indep. Redist. Comm’n*, 135 S. Ct. 2652, 2658 (2015) (gerrymandering is “the drawing of legislative district lines to subordinate adherents of one political party and entrench a rival party in power”); *Vieth*, 541 U.S. at 271 n.1 (plurality opinion) (gerrymandering is “giv[ing] one political party an unfair advantage by diluting the opposition’s voting strength”); *Bandemer*, 478 U.S. at 127 (plurality opinion) (gerrymandering is “the manipulation of individual district lines” causing a party’s “voters over the State as a whole” to be “subjected to unconstitutional discrimination”).

42. The effect prong of plaintiffs’ test is judicially discernible not only because it is based on the concept of partisan symmetry, but also because it incorporates the Supreme Court’s concern about the durability of gerrymandering. *See LULAC*, 548 U.S. at 419 (opinion of Kennedy, J.) (criticizing a plan that “entrenched a party on the verge of minority status”); *Vieth*, 541 U.S. at 360 (Breyer, J., dissenting) (advocating a test based

on the “use of political factors to entrench a minority in power”); *Bandemer*, 478 U.S. at 132-33 (plurality opinion) (requiring a plan to “consistently degrade . . . a group of voters’ influence,” resulting in “continued frustration of the will . . . of the voters”).

43. The effect prong of plaintiffs’ test is judicially manageable because a plan’s partisan asymmetry can be reliably measured using metrics such as the efficiency gap, partisan bias, and the mean-median difference. These metrics can be used to determine both the magnitude of a plan’s asymmetry and the likelihood that the plan will remain asymmetric over its lifetime. *See LULAC*, 548 U.S. at 466 (Stevens, J., concurring in part and dissenting in part) (observing that “the symmetry standard . . . is undoubtedly a reliable standard for measuring a burden on the complainants’ representative rights” (internal quotation marks omitted)).

44. The durability of a plan’s partisan asymmetry can also be reliably measured through sensitivity testing, that is, shifting the statewide vote in each party’s direction and determining the asymmetry that results from each shift. “There [is] consensus” that sensitivity testing is “the accepted method of testing how a particular map would fare under different electoral conditions.” *Whitford*, 218 F. Supp. 3d at 899 n.255.

45. The effect prong of plaintiffs’ test is satisfied by the evidence in this case. In the 2016 election, the 2016 Congressional redistricting plan had the largest efficiency gap of any plan analyzed by plaintiffs’ expert. In the 2016 election, the plan also had the second-largest partisan bias in the entire database assembled by plaintiffs’ expert, spanning 512 cases from 1972 to 2016.

46. Sensitivity testing conducted by plaintiffs' expert (and confirmed by defendants' expert) further indicates that the 2016 Congressional redistricting plan will remain skewed in a Republican direction under almost any electoral scenario. It would take the largest Democratic wave in more than thirty years for the plan's asymmetry to disappear.

47. The justification prong of plaintiffs' proposed test for partisan gerrymandering—that is, whether a district plan's high and durable level of partisan asymmetry can be “justified by the State,” *Brown v. Thomson*, 462 U.S. 835, 843 (1983)—is judicially discernible and manageable and satisfied by the evidence in this case.

48. The justification prong of plaintiffs' test is judicially discernible because it is identical to the final stage of the test for determining whether state legislative plans comply with the one person, one vote requirement. At this stage, “larger disparities in population . . . create[] a prima facie case of discrimination and therefore must be justified by the State.” *Brown*, 462 U.S. at 842-43. The disparities are permitted only if they “may reasonably be said to advance the rational state policy” that is offered to justify them. *Mahan v. Howell*, 410 U.S. 315, 328 (1973).

49. The justification prong of plaintiffs' test is judicially manageable because courts have successfully employed its exact analogue in the one person, one vote context for decades. Under this framework, courts have ably distinguished between justified and unjustified population deviations. *See, e.g., Brown*, 462 U.S. at 844 (holding that “the State's apportionment formula ensures that population deviations are no greater than necessary to preserve counties as representative districts”); *Chapman v. Meier*, 420 U.S.

1, 24 (1975) (holding that “none of these factors . . . has been explicitly shown to necessitate the substantial population deviation”); *Mahan*, 410 U.S. at 326 (holding that “the legislature’s plan . . . produces the minimum deviation above and below the norm, keeping intact political boundaries” (internal quotation marks omitted)); *Kilgarlin v. Hill*, 386 U.S. 120, 123 (1967) (“[W]e are not convinced that the announced policy of the State of Texas necessitated the range of deviations between legislative districts which is evident here.”).

50. The evidence in this case demonstrated that neutral factors, or adherence to traditional redistricting criteria, cannot justify the enormous and durable partisan advantage produced for Republicans by the 2016 Congressional redistricting plan. Thousands of simulated maps created by plaintiffs’ expert perform at least as well as the plan on every nonpartisan criterion—but are much more symmetric in their electoral consequences. Hofeller himself produced draft maps with fewer county splits than the plan, more compact districts, and just seven Republican seats. And North Carolina’s Congressional redistricting plan in the 2000s complied with all federal and state requirements and had an average efficiency gap of just 2%.

51. The 2016 Congressional redistricting plan violates the First Amendment by “burdening or penalizing citizens because of their participation in the electoral process, their voting history, their association with a political party, or their expression of political views.” *Vieth*, 541 U.S. at 314 (Kennedy, J., concurring in the judgment).

52. The 2016 Congressional redistricting plan is an unconstitutional partisan gerrymander because the plan (1) intentionally disadvantages Democrats, (2) does so severely and durably, and (3) does so unjustifiably.

53. The 2016 Congressional redistricting plan violates the First and Fourteenth Amendments of the United States Constitution because it is an extreme partisan gerrymander, and so deprives plaintiffs of their civil rights under color of state law in violation of 42 U.S.C. §§ 1983, 1988.

54. Plaintiffs are entitled to immediate declaratory and injunctive relief. “[O]ur precedents recognize an important role for the courts when a districting plan violates the Constitution.” *LULAC*, 548 U.S. at 415 (opinion of Kennedy, J.).

Respectfully submitted this 5th day of June, 2017.

/s/ Anita S. Earls
Anita S. Earls (State Bar # 15597)
Allison J. Riggs (State Bar # 40028)
Emily Seawell (State Bar # 50207)
Southern Coalition for Social Justice
anitaearls@southerncoalition.org
allisonriggs@southerncoalition.org
emilyseawell@southerncoalition.org
1415 Highway 54, Suite 101
Durham, NC 27707
Telephone: 919-323-3380 ext. 115
Facsimile: 919-323-3942
Counsel for All Plaintiffs

/s/ Ruth M. Greenwood
Paul M. Smith
Ruth Greenwood
Annabelle Harless
Campaign Legal Center
1411 K Street NW, Suite 1400
Washington, DC 20005
(202) 736-2200
psmith@campaignlegalcenter.org
rgreenwood@campaignlegalcenter.org
aharless@campaignlegalcenter.org

/s/ Nicholas O. Stephanopoulos
Nicholas O. Stephanopoulos
University of Chicago Law School
1111 E 60th St.
Chicago, IL 60637
(773) 702-4226
nsteph@uchicago.edu

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the foregoing via electronic mail, addressed to counsel for all parties in this consolidated action.

This the 5th day of June, 2017.

/s/ Ruth M. Greenwood
Ruth M. Greenwood