

Affidavit of LaMar L. Lemmons III, dated March 28, 2023JA00521

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**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

DONALD AGEE, JR. et al.,

Plaintiffs,

v.

JOCELYN BENSON, et al.,

Defendants.

Case No. 1:22-CV-00272-PLM-RMK-JTN

EXPERT REPORT OF DR. LISA HANDLEY

I. Scope of Project

I was retained by lawyers for the Michigan Independent Citizens Redistricting Commission (MICRC) in *Agee v. Benson* to conduct an analysis of voting patterns by race in the 2022 Democratic primary and general election in Detroit area districts in the 2022 State House and State Senate Plans. In addition, I was asked to assess the opportunity that Black voters have to elect their candidates of choice in less than majority-Black legislative districts in the Detroit area in the 2022 State House and State Senate Plans based on the 2022 general and Democratic primary elections.¹

As a consultant for the MICRC in 2021-2022, I analyzed earlier elections conducted under the 2012 Congressional, State Senate, and State House Plans and prepared a report entitled “Report to the Michigan Independent Citizens Redistricting Commission” (“2021 Report” attached at Appendix A).² Included in my 2021 Report were the following conclusions: (1) voting in Michigan is racially polarized, and as a consequence, (2) “districts that provide minority voters

¹ I am being compensated at a rate of \$350 an hour for work on this project.

² I conducted the analysis and presented the results of my analysis to the MICRC during the redistricting process in 2021. My written report was completed and provided to the MICRC in January 2022.

with an opportunity to elect their candidates of choice must be drawn;”³ and (3) “in no county [analyzed] is a 50% BVAP district required for the Black-preferred candidates to carry the district in a general election.”⁴ I incorporate by reference the contents of Appendix A, including but not limited to my analysis and conclusions related to the existence of polarized voting in Michigan.

II. Professional Background and Experience

I have over thirty-five years of experience as a voting rights and redistricting expert. I have advised scores of jurisdictions and other clients on minority voting rights and redistricting-related issues. I have served as an expert in dozens of voting rights cases. My clients have included state and local jurisdictions, independent redistricting commissions (Arizona, Colorado, Michigan), the U.S. Department of Justice, national civil rights organizations, and such international organizations as the United Nations.

I have been actively involved in researching, writing, and teaching on subjects relating to voting rights, including minority representation, electoral system design, and redistricting. I co-authored a book, *Minority Representation and the Quest for Voting Equality* (Cambridge University Press, 1992), and co-edited a volume, *Redistricting in Comparative Perspective* (Oxford University Press, 2008), on these subjects. In addition, my research on these topics has appeared in peer-reviewed journals such as *Journal of Politics*, *Legislative Studies Quarterly*, *American Politics Quarterly*, *Journal of Law and Politics*, and *Law and Policy*, as well as law reviews (e.g., *North Carolina Law Review*) and a number of edited books. I hold a Ph.D. in political science from The George Washington University.

I have been a principal of Frontier International Electoral Consulting since co-founding the company in 1998. Frontier IEC specializes in providing electoral assistance in transitional democracies and post-conflict countries. In addition, I am a Visiting Research Academic at Oxford Brookes University in Oxford, United Kingdom. Attached to the end of this report is a copy of my curriculum vitae.

³ “2021 Report,” page 17.

⁴ “2021 Report,” page 21.

III. Voting Patterns and Electing Black Voters' Candidates of Choice in Recent District Elections Prior to the Adoption of the 2022 Redistricting Maps

General Elections in 2018-2020 I analyzed 31 district-level 2018 and 2020 general elections (congressional, state senate and state house) in Detroit area districts in the 2012 Congressional, State Senate, and State House Plans with Black voting age populations (BVAP) greater than 25%.⁵ The results of this analysis are found in my 2021 Report to the MICRC (Appendix A). Only five of these general election contests were racially polarized, with Black and White voters supporting different candidates.⁶ The candidates preferred by Black voters was successful in all of these polarized 2018 and 2020 elections. In summary, the candidates supported by Black voters won in all 35 of the Detroit area district general elections analyzed in districts with BVAPs greater than 25%. Clearly, general elections do not pose a barrier to electing Black voters' candidates of choice in Detroit area districts with substantial BVAPs.

Democratic Primaries in 2018-2020 I analyzed 22 district-level Democratic primaries in 2018 and 2020 in Detroit-area districts in the 2012 Congressional, State Senate, and State House Plans with BVAPs greater than 25% BVAP (Appendix A). Table 1 summarizes the results of this analysis.⁷

⁵ BVAP has been calculated here (as in my 2021 Report) by counting all persons 18 years and older who checked "Black or African American" on their census form, either alone or in conjunction with one or more additional races, but did not check that they were Hispanic.

⁶ My assessment regarding whether a contest was racially polarized is based on the most methodologically sophisticated and what are generally accepted as the most accurate estimates, the EI RxC estimates. These estimates are found in the final column of the summary tables (Appendix B) in the 2021 Report and in the first column of estimates in the Appendices of this report.

⁷ Table 1 considers all of the district-level elections – congressional, state senate and state house. I have combined all district elections to increase the number of observations. Tables 2 and 3 review state senate and state house districts separately with the addition of the earlier state senate and state house contests analyzed by Mr. Trende.

Table 1

2012 Districts	Percent BVAP	2020 Democratic Primary	2018 Democratic Primary
HD7	94.9	insufficient White voters for accurate estimates	insufficient White voters for accurate estimates
HD8	92.9	insufficient White voters for accurate estimates	insufficient White voters for accurate estimates
HD3	91.5	insufficient White voters for accurate estimates	insufficient White voters for accurate estimates
HD9	74.9	polarized - Black voters' choice won	not polarized (Black voters' choice won)
HD10	67.9	8 candidates, small vote variation, no accurate estimates	not polarized (Black voters' choice won)
HD1	65.2	no Democratic primary	not polarized (Black voters' choice won)
HD35	63.0	not polarized (Black voters' choice won)	polarized - Black voters' choice won
HD2	58.1	not polarized (Black voters' choice won)	7 candidates, small vote variation, no accurate estimates
HD5	55.2	not polarized (Black voters' choice won)	polarized - Black voters' choice won
SD5	54.7	no contest	polarized - Black voters' choice won
HD6	53.6	polarized - Black voters' choice won	10 candidates, small vote variation, no accurate estimates
CD14	53.5	not polarized (Black voters' choice won)	no Democratic primary
CD13	52.9	not polarized (Black voters' choice won)	polarized - Black voters' choice LOST
SD2	51.4	no contest	7 candidates, small vote variation, no accurate estimates
SD3	48.6	no contest	polarized - Black voters' choice won
HD4	47.7	11 candidates, small vote variation, no accurate estimates	14 candidates, small vote variation, no accurate estimates
SD4	47.6	no contest	not polarized (Black voters' choice won)
SD1	45.1	no contest	polarized - Black voters' choice LOST
HD29	36.8	no Democratic primary	polarized - Black voters' choice LOST
SD11	35.8	no contest	not polarized (Black voters' choice won)
HD12	27.4	not polarized (Black voters' choice won)	polarized - Black voters' choice LOST
HD11	26.9	no Democratic primary	polarized - Black voters' choice won

Voting in half of the primary contests analyzed in these districts (11 out of 22 contests) was not racially polarized. Of the 11 contests that were polarized, the candidate preferred by Black voters won in seven district primary elections. This included a contest in a district with a 26.9% BVAP (State House District 11 in 2018).

One of the four polarized Democratic primaries in which the Black-preferred candidate was not successful was in State House District 12, with a BVAP of only 27.4%. The three primary contests in districts with substantial Black populations that I analyzed in which the candidates supported by Black voters lost were as follows:

- *Congressional District 13 in 2018 (52.9% BVAP)* Six candidates competed in this contest, four of whom were Black candidates. Despite a larger number of Black voters than White voters (the district is majority Black and a higher percentage of the Black voting age citizens than White voting age citizens turned out to vote), Brenda Jones, the candidate who garnered the plurality of the Black vote (43.5%), lost to the White candidate of choice, Rashida Tlaib, by 900 votes.
- *State Senate District 1 in 2018 (45.1% BVAP)* This contest also included six candidates, several of whom were Black. The plurality choice of Black voters (47.1% of the Black vote), Alberta Tinsley Talabi, lost to Stephanie Chang, the candidate supported by a large majority of White voters (76.7%) and the distant second choice (27.1%) of Black voters.
- *State House District 29 in 2018 (36.8%)* Six Black candidates competed in this primary. White voters' support (58.4%) for their preferred candidate, Brenda Carter, was high enough to defeat the candidate of choice of Black voters, Kermit Williams, who garnered 49.8% of Black voters' support.

The 2018 and 2020 Democratic district-level primary elections did not yield a straightforward calculation of the BVAP needed to provide Black voters' with an opportunity to elect their candidates of choice. In my 2021 Report to the MICRC, I wrote:

As the percentage Black VAP of proposed districts decreases, it may become more challenging for Black-preferred candidates to win not only the general election but the Democratic primary – but only if voting in Democratic primaries is racially polarized. Unfortunately, it is not possible to ascertain exactly how much more difficult it would be – or even if it would be more difficult – given the lack of Democratic primary election data.

Overall, candidates supported by Black voters won in 18 of the 22 Detroit area district contests analyzed – 11 contests that were not polarized and seven that were, including a polarized primary in a district that had a BVAP of only 26.9%. However, Black-preferred candidates lost in four district-level primaries, including a primary in a majority Black district (Congressional District 12), as well as districts that with BVAPs of 45.1%, 36.8%, and 27.4%.

While the picture was less-than-straightforward, the pattern that emerged (albeit one with exceptions) was that the chances of the candidate of choice of Black voters' winning increased as the BVAP percentage increased. In districts with BVAP over 50%, the success rate of Black-preferred candidates was 92.9%; for districts in the 45-49.9% BVAP range, the Black-preferred candidate success rate was 66.7%; there were no districts in the 40 to 44.9% BVAP range; in the 35 to 39.9% BVAP range the Black-preferred success rate was 50%; but in the 25 to 34.9% BVAP range, the Black-preferred success rate increased to 66.7%.

Additional Democratic Primary Elections Included in the Trende Report Mr. Trende, in his report (“Expert Report of Sean P. Trende,” dated January 18, 2023) supplies the results of his analysis of some additional state senate (2014) and state house (2014 and 2016) Democratic primary elections in the 2012 State House and State Senate Plans. Without reflecting on the accuracy of his analysis or appropriateness of his approach, I have produced summary tables that combine the results of the state senate and state house contests each of us analyzed to determine if the addition of more contests shed more light on voting patterns in district-level Detroit area Democratic primaries. Table 2 summarizes the state senate contests.⁸

⁸ There are no state senate districts with BVAPs between 25 and 35%.

Table 2

2012 State Senate District	Percent BVAP	2018 Democratic Primary	2014 Democratic Primary (Trende Analysis)
5	54.7	polarized - Black voters' choice won	polarized - Black voters' choice LOST
2	51.4	7 candidates, small vote variation made valid statistical analysis impossible	not polarized (Black voters' choice won)
3	48.6	polarized - Black voters' choice won	no Democratic primary
4	47.6	not polarized (Black voters' choice won)	polarized - Black voters' choice won
1	45.1	polarized - Black voters' choice LOST	no Democratic primary
11	35.8	not polarized (Black voters' choice won)	polarized - Black voters' choice won

Mr. Trende's analysis of the state senate contests in 2014 adds one contest that was not polarized and two contests that were racially polarized and the candidates of choice of Black voters won. Neither of these primaries were in majority Black districts: Senate District 4, with a BVAP of 47.6%, and Senate District 11, with a BVAP of 35.8%. Mr. Trende also found one racially polarized contest in which the Black-preferred candidate lost: State Senate District 5, which was a majority Black district (54.7% BVAP). Overall, in the nine 2014-2018 state senate primaries analyzed between Mr. Trende and myself, the candidates preferred by Black voters won seven and lost two contests.

Strangely, the success rate for Black-preferred candidates in the 2014 and 2018 state senate primaries is precisely the opposite of what might be expected (this is likely due, at least in part, to the limited number of contests considered): the chances of the candidate of choice of Black voters' winning decreased as the BVAP percentage increased: over 50% BVAP (two districts, three elections), the Black-preferred candidate success rate was 66.7%; 45-49.9% BVAP (three districts, four elections), the Black-preferred candidate success rate was 75.0%; 35 to 39.9% BVAP (one district, two elections), the Black-preferred success rate was 100%. There were no state senate districts between 40 and 44.9% BVAP, or between 25 to 34.9% BVAP.

Table 3 reports our combined results for state house elections between 2014 and 2020. Mr. Trende identifies 11 additional contests that were racially polarized and eight that are not polarized. The candidate of choice of Black voters won all of the 11 polarized contests.

Because there are so few Democratic primary results for districts with BVAP less than 50% but greater than 25%, the success rate for Black-preferred candidates in the 2014, 2016, 2018, and 2020 state house primaries is also odd: the chances of the candidate of choice of Black voters' winning districts over 50% BVAP was 100% (10 districts, 27 elections); for districts between 45-49.9% BVAP (one district, two elections), the Black-preferred candidate success rate was also 100.0%; there were no Detroit area state house districts between 40 to 44.9% BVAP; districts between 35 to 39.9% BVAP (one district, one election), the Black-preferred success rate was 0%; and districts between 25 to 34.9% BVAP (two districts, three elections): the Black-preferred success rate was 66.7%.

Conclusion The additional pre-2022 primary contests analyzed by Mr. Trende do not alter my conclusions regarding whether majority Black districts are necessary to provide Black voters with an opportunity to elect their candidates of choice to the state legislature – they are not. Moreover, majority Black districts do not necessarily elect the candidates of choice of Black voters. While the BVAP in a district has an impact on the success rate of candidates preferred by Black voters, so does such contest-specific factors as the number of candidates competing and the cohesiveness of Black voters in supporting their preferred candidates.

Table 3

2012 State House District	Percent Black VAP	2020 Democratic Primary	2018 Democratic Primary	2016 Democratic Primary (Trende analysis)	2014 Democratic Primary (Trende analysis)
7	94.9%	insufficient White voters for accurate estimates	insufficient White voters for accurate estimates	not polarized (Black voters' choice won)	polarized - Black voters' choice won
8	92.9%	insufficient White voters for accurate estimates	insufficient White voters for accurate estimates	no Democratic primary	polarized - Black voters' choice won
3	91.5%	insufficient White voters for accurate estimates	insufficient White voters for accurate estimates	not polarized (Black voters' choice won)	polarized - Black voters' choice won
9	74.9%	polarized - Black voters' choice won	not polarized (Black voters' choice won)	polarized - Black voters' choice won	polarized - Black voters' choice won
10	67.9%	8 candidates, small vote variation, no accurate estimates	not polarized (Black voters' choice won)	not polarized (Black voters' choice won)	polarized - Black voters' choice won
1	65.2%	no Democratic primary	not polarized (Black voters' choice won)	polarized - Black voters' choice won	polarized - Black voters' choice won
35	63.0%	not polarized (Black voters' choice won)	polarized - Black voters' choice won	no Democratic primary	<i>Trende does not report results</i>
2	58.1%	not polarized (Black voters' choice won)	7 candidates, small vote variation, no accurate estimates	polarized - Black voters' choice won	polarized - Black voters' choice won
5	55.2%	not polarized (Black voters' choice won)	polarized - Black voters' choice won	polarized - Black voters' choice won	not polarized (Black voters' choice won)
6	53.6%	polarized - Black voters' choice won	10 candidates, small vote variation, no accurate estimates	not polarized (Black voters' choice won)	not polarized (Black voters' choice won)
4	47.7%	11 candidates, small vote variation, no accurate estimates	14 candidates, small vote variation, no accurate estimates	not polarized (Black voters' choice won)	not polarized (Black voters' choice won)
29	36.8%	no Democratic primary	polarized - Black voters' choice LOST	no Democratic primary	no Democratic primary
12	27.3%	not polarized (Black voters' choice won)	polarized - Black voters' choice LOST	<i>Trende does not report results</i>	no Democratic primary
11	26.9%	no Democratic primary	polarized - Black voters' choice won	no Democratic primary	<i>Trende does not report results</i>

IV. Voting Patterns and Electing Black Voters' Candidates of Choice in the 2022 Elections

2022 General Election Contests I analyzed 27 district-level 2022 general elections (congressional, state senate and state house) in Detroit area districts in the 2022 Congressional, State Senate, and State House Plans with Black voting age populations (BVAP) greater than 25%. The results of this analysis can be found in Appendix B1 (Congress), B2 (State Senate) and B3 (State House).⁹ Only one of these general election contests was racially polarized: State Senate District 10. The candidate of choice of Black voters was successful in this election contest. Overall, the candidates supported by Black voters won in all 27 of the Detroit area district general elections in districts with BVAPs greater than 25%. As was the case with the earlier general elections analyzed, the 2022 general election did not pose a barrier for electing Black voters' candidates of choice in districts with substantial BVAPs in the Detroit area.

2022 Democratic Primaries I analyzed 24 2022 district-level Democratic primaries in Detroit area districts in the 2022 Congressional, State Senate, and State House Plans with BVAPs greater than 25%. The results can be found in Appendix C1 (Congress), C2 (State Senate) and C3 (State House). Table 4 summarized the results of this analysis.

⁹ The Center for Shared Solutions has not yet released the precinct level returns for the 2022 general election – the Center is still in the process of, among other things, disaggregating the City of Detroit Absentee Vote Counting Board (AVCB) returns down to the precinct level. In the City of Detroit, absentee ballots cast in general elections are counted at a higher geographic level than the precinct – instead a number of precincts are combined into AVCBs. To report Detroit returns at the precinct level, the AVCB returns must be disaggregated down to the precinct level. The Center does this on the basis of the ratio of precinct absentee ballots provided to the total number of absentee ballots counted at the AVCB level for each AVCB. Because this process has not yet been completed, I conducted my analysis of voting patterns in the 2022 general election twice: once using Detroit AVCBs (aggregating the precinct level demographics and election day ballots up to the AVCB level) and a second time using the precinct ratios the Center provided and plans to use for the disaggregation process. The results of the two analyses are very similar, with no estimate varying by more than a percentage point or two between the two approaches. Appendix B1-3 reports the estimates arrived at using AVCBs in the City of Detroit.

Table 4

2022 Districts	Percent BVAP	2022 Democratic Primary
HD4	57.2%	polarized - Black voters' choice won
HD5	56.9%	polarized - Black voters' choice LOST
HD16	56.5%	not polarized (Black voters' choice won)
HD6	56.5%	not polarized (Black voters' choice won)
HD18	54.0%	not polarized (Black voters' choice won)
HD9	53.2%	not polarized (Black voters' choice won)
SD7	46.5%	not polarized (Black voters' choice won)
CD13	46.3%	not polarized (Black voters' choice won)
HD7	45.9%	polarized - Black voters' choice won
HD8	45.7%	polarized - Black voters not cohesive, top choices LOST
CD12	45.3%	not polarized (Black voters' choice won)
HD11	44.0%	polarized - Black voters not cohesive, top choices LOST
HD17	44.0%	no Democratic primary
SD3	43.7%	not polarized (Black voters' choice won)
HD14	42.7%	polarized - Black voters' choice won
HD12	42.6%	polarized - Black voters' choice won
SD10	41.7%	no Democratic primary
SD8	41.6%	polarized - Black voters' choice LOST
SD6	40.6%	not polarized (Black voters' choice won)
HD10	40.2%	not polarized (Black voters' choice won)
HD13	39.8%	not polarized (Black voters' choice won)
HD1	39.7%	not polarized (Black voters' choice won)
HD26	37.8%	polarized - Black voters' choice LOST
SD1	36.6%	polarized - Black voters' choice LOST
HD53	34.3%	no Democratic primary
HD3	34.0%	not polarized (Black voters' choice won)
SD2	25.5%	not polarized (Black voters' choice won)

The majority of these contests (14) were not racially polarized. When only state senate and state house contests are considered, 22 primaries were analyzed, 12 (54.5%) of which were not polarized.¹⁰

The candidates of choice of Black voters won four of the 10 polarized 2022 state legislative primary contests. Three of the racially polarized contests won by the Black candidate of choice were held in less-than-majority Black districts: State House District 7 (45.9% BVAP), State House District 14 (42.7% BVAP), and State House District 12 (42.6% BVAP).¹¹

In six of the state legislative primaries analyzed, the candidate preferred by Black voters was defeated. The range in the Black composition of these six districts was broad and included a majority Black district, State House District 5. The following provides a description of the polarized Democratic primaries lost by the candidates of choice of Black voters:

- *State House District 5 (56.9% BVAP)* Five candidates competed in this primary, two Black candidates and three White candidates. A majority of Black voters (55.2%) supported Black candidate Reggie Davis. He was defeated by a White candidate, Natalie Price, who was supported by a large majority (71.4%) of the White voters.
- *State House District 8 (45.7% BVAP)* Five candidates, two Black candidates and three White candidates, ran in this contest. A majority (56.5%) of the White voters supported one of the White candidates, Mike McFall. Black voters did not coalesce around a single candidate – they divided their support between the two Black candidates, with each receiving about 32% of the Black vote. (McFall received slightly less than 25% of the Black vote.) McFall won the election.
- *State House 11 (44.0% BVAP)* Nine candidates, including several Black candidates, several White candidates, and a Hispanic candidate, competed in this primary. Neither Black nor White voters coalesced around a single candidate. White voters primarily spread their votes across three candidates, with 27.1% supporting Hispanic candidate Veronica Paiz, 22.0% supporting Alex Manwell (White candidate), and 15.6% voting for

¹⁰ Neither of the 2022 congressional district primaries (Congressional Districts 12 and 13) were racially polarized.

¹¹ The candidate preferred by Black voters also won a polarized primary election in majority Black House District 4 (56.9% BVAP).

Black candidate Ricardo White. Black voters primarily spread their votes across four candidates: 24.2% for Black candidate Regina Williams, 22.2% for Ricardo White, and 18.7% and 17.1% for Black candidates Athena Lynn Thorton and Marvin Cotton Jr., respectively. Veronica Paiz won the nine candidate primary with 1844 (18.9%) votes out of the 9751 votes cast.

- *State Senate District 8 (41.6% BVAP)* In this contest, a large majority (75.8%) of Black voters supported Black candidate Marshall Bullock and an even larger majority (95.9%) of White voters, who turned out at a very high rate relative to other districts, supported his White opponent, Mallory McMorrow. McMorrow won the primary with 68.4% of the vote.
- *State House District 26 (37.8% BVAP)* In this four candidate contest, a majority (55.4%) of Black voters supported Black candidate Steven Chisholm and a large majority (76.2%) of White voters cast their vote for White candidate Dylan Wegela. Wegela won the primary with a plurality of the vote.
- *State Senate District 1 (36.6% BVAP)* Six candidates, four of whom were Black candidates, competed in this primary contest. The plurality of Black voters (34.0%) supported Black candidate Brenda Sanders; the second choice of Black voters (24.3%) was Black candidate Erika Geiss. A majority (55.9%) of White voters supported Geiss. Geiss won the primary with 32.3% of the vote.

Overall, candidates supported by Black voters won in 16 of the 22 state legislative primary contests analyzed. This includes contests in State Senate District 2 (25.5% BVAP), State House District 3 (34.0% BVAP), State House District 1 (39.7% BVAP), and State House District 13 (39.8% BVAP) – all district contests in which Black and White voters supported the same candidate. It also includes several polarized contests in non-majority Black districts: State House District 12 (42.6% BVAP), State House District 14 (42.7% BVAP), and State House District 7 (45.9% BVAP). However, candidates preferred by Black voters lost primaries in six districts, with BVAPs as follows: 56.9%, 45.7%, 44.0%, 41.6%, 37.8% and 36.6%. In some instances, contest-specific factors such as the number of candidates competing and a lack of cohesion on the part of Black voters contributed to the loss.

Overall, districts with more substantial BVAPs produced a higher likelihood of success for candidates preferred by Black voters. However, the success rate never dipped below 50% for any

of the ranges examined. Considering all district-level primaries together (which produces more observations): for districts over 50% BVAP (six district primaries), the Black-preferred candidate success rate was 83.3%; for districts between 45-49.9% BVAP (five district primaries), the success rate for Black-preferred candidates was 80.0%; for districts in the range of 40 to 44.9% BVAP (nine districts but only seven district primaries), the Black-preferred success rate was 71.4%; for districts between 35 to 39.9% BVAP (four district primaries), the Black-preferred candidates success rate was 50%; and for districts in the 25 to 34.9% BVAP range (three districts, but only two primaries), the Black-preferred candidate success rate was 100.0%.

V. Conclusion

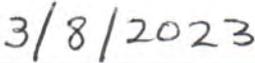
The district-level 2022 Democratic primary results reveal that majority Black districts are not necessary to provide Black voters with an opportunity to elect their candidates of choice to the Michigan state legislature in the Detroit area. Many less-than-majority districts elected the candidates supported by Black voters to legislative office. While this is obviously true in districts where voting was not polarized, it is also true in a substantial number of racially polarized primaries. On the other hand, majority Black districts did not necessarily elect the candidates of choice of Black voters. While districts with higher BVAPs are likely to produce more wins for candidates preferred by Black voters, candidates supported by Black voters were successful in 75% of the 2022 primary contests in Detroit area districts with between 40 and 49.9% BVAP and were successful in 68.8% of the primary contests in districts with between 35 and 49.9% BVAP.

CERTIFICATION

I certify that the statements and opinions provided in this report are true and accurate to the best of my knowledge, information, and belief.



Lisa Handley, Ph.D.



Date

Lisa R. Handley
CURRICULUM VITAE

Professional Experience

Dr. Handley has over thirty years of experience in the areas of redistricting and voting rights, both as a practitioner and an academician, and is recognized nationally and internationally as an expert on these subjects. She has advised numerous clients on redistricting and has served as an expert in dozens of redistricting and voting rights court cases. Her clients have included the U.S. Department of Justice, civil rights organizations, independent redistricting commissions and scores of state and local jurisdictions. Internationally, Dr. Handley has provided electoral assistance in more than a dozen countries, serving as a consultant on electoral system design and redistricting for the United Nations, UNDP, IFES, and International IDEA. In addition, Dr. Handley served as Chairman of the Electoral Boundaries Commission in the Cayman Islands.

Dr. Handley has been actively involved in research, writing and teaching on the subjects of redistricting and voting rights. She has co-written a book, Minority Representation and the Quest for Voting Equality (Cambridge University Press, 1992) and co-edited a volume (Redistricting in Comparative Perspective, Oxford University Press, 2008) on these subjects. Her research has also appeared in peer-reviewed journals such as *Journal of Politics*, *Legislative Studies Quarterly*, *American Politics Quarterly*, *Journal of Law and Politics*, and *Law and Policy*, as well as law reviews and edited books. She has taught political science undergraduate and graduate courses related to these subjects at several universities including the University of Virginia and George Washington University. Dr. Handley is a Visiting Research Academic at Oxford Brookes University in the United Kingdom.

Dr. Handley is the President of Frontier International Consulting, a consulting firm that specializes in providing electoral assistance in transitional and post-conflict democracies. She also works as an independent election consultant both in the United States and internationally.

Education

Ph.D. The George Washington University, Political Science, 1991

Present Employment

President, Frontier International Electoral Consulting LLC (since co-founding company in 1998).

Senior International Electoral Consultant, Technical assistance for clients such as the UN, UNDP and IFES on electoral system design and boundary delimitation

Visiting Research Academic, Centre for Development and Emergency Practice (CENDEP), Oxford Brookes University

U.S. Clients since 2000

American Civil Liberties Union – expert testimony in Voting Right Act challenges in several states, expert testimony in Ohio partisan gerrymander challenge and challenge to Commerce Department inclusion of citizenship question on 2020 census form

Lawyers Committee for Civil Rights Under Law – expert testimony in challenges to statewide judicial elections in Texas and Alabama

US Department of Justice – expert witness testimony in several Section 2 and Section 5 cases

Alaska: Redistricting Board (2001 and 2011) – redistricting consultation, expert witness testimony

Arizona: Independent Redistricting Board (2001 and 2021) – redistricting consultation

Boston (2022): City Attorney General, redistricting consultation

Colorado: Redistricting Commission (2021), Redistricting Board (2001 and 2011) – redistricting consultation

Connecticut: State Senate and State House of Representatives (2001 and 2011) – redistricting consultation

Florida: State Senate (2000) – redistricting consultation

Kansas: State Legislative Research Department (2001, 2011, 2021) – redistricting consultation

Louisiana: Louisiana Legislative Black Caucus (2001) – expert witness testimony

Massachusetts: State Senate (2001 and 2011) – redistricting consultation

Maryland: Attorney General (2001) – redistricting consultation

Michigan: Michigan Independent Citizens Redistricting Commission (2021) – redistricting consultation

Miami-Dade County, Florida: County Attorney (2001 and 2011) – redistricting consultation

Nassau County, New York: Redistricting Commission (2001) – redistricting consultation

New Mexico: State House (2001) – redistricting consultation, expert witness testimony

New York: State Assembly (2001), State Senate (2021) – redistricting consultation

New York City: Redistricting Commission and Charter Commission (2001, 2011, 2022) – redistricting consultation and Section 5 submission assistance

New York State Court: Expert to the Special Master (drew congressional lines for state court)

Rhode Island: State Senate and State House (2001 and 2021) – redistricting consultation

International Clients since 2000

United Nations

- Afghanistan – electoral system design and district delimitation expert
- Bangladesh (UNDP) – redistricting expert
- Sierra Leone (UNDP) – redistricting expert
- Liberia (UNMIL, UN peacekeeping mission) – redistricting expert
- Democratic Republic of the Congo (MONUC, UN peacekeeping mission) – election feasibility mission, electoral system design and redistricting expert
- Kenya (UN) – electoral system design and redistricting expert
- Haiti (UN) – election feasibility mission, electoral system design and redistricting expert
- Zimbabwe (UNDP) – redistricting expert
- Lead Writer on the topic of boundary delimitation (redistricting) for ACE (Joint UN, IFES and IDEA project on the Administration and Cost of Elections Project)

International Foundation for Election Systems (IFES)

- Afghanistan – district delimitation expert
- Sudan – redistricting expert
- Kosovo – electoral system design and redistricting expert
- Nigeria – redistricting expert
- Nepal – redistricting expert
- Georgia – electoral system design and district delimitation expert
- Yemen – redistricting expert
- Lebanon – electoral system design and redistricting expert
- Malaysia – electoral system design and redistricting expert
- Myanmar – electoral system design and redistricting expert
- Ukraine – electoral system design and redistricting expert
- Pakistan – consultant for developing redistricting software
- Principal consultant for the Delimitation Equity Project – conducted research, wrote reference manual and developed training curriculum
- Writer on electoral boundary delimitation (redistricting), Elections Standards Project
- Training – developed training curriculum and conducted training workshops on electoral boundary delimitation (redistricting) in Azerbaijan and Jamaica

International Institute for Democracy and Electoral Assistance (International IDEA):

- Consultant on electoral dispute resolution systems
- Technology consultant on use of GIS for electoral district delimitation
- Training – developed training material and conducted training workshop on electoral boundary delimitation (redistricting) for African election officials (Mauritius)
- Curriculum development – boundary delimitation curriculum for the BRIDGE Project

Other international clients have included The Cayman Islands; the Australian Election Commission; the Boundary Commission of British Columbia, Canada; and the Global Justice Project for Iraq.

Publications

Books:

Does Torture Prevention Work? Liverpool University Press, 2016 (served as editor and author, with Richard Carver)

Comparative Redistricting in Perspective, Oxford University Press, 2008 (first editor, with Bernard Grofman).

Delimitation Equity Project: Resource Guide, Center for Transitional and Post-Conflict Governance at IFES and USAID publication, 2006 (lead author).

Minority Representation and the Quest for Voting Equality, Cambridge University Press, 1992 (with Bernard Grofman and Richard Niemi).

Academic Journal Articles:

"Drawing Electoral Districts to Promote Minority Representation" Representation, forthcoming, published online DOI:10.1080/00344893.2020.1815076.

"Evaluating national preventive mechanisms: a conceptual model," Journal of Human Rights Practice, Volume 12 (2), July 2020 (with Richard Carver).

"Minority Success in Non-Majority Minority Districts: Finding the 'Sweet Spot'," Journal of Race, Ethnicity and Politics, forthcoming (with David Lublin, Thomas Brunell and Bernard Grofman).

"Has the Voting Rights Act Outlived its Usefulness: In a Word, "No," Legislative Studies Quarterly, volume 34 (4), November 2009 (with David Lublin, Thomas Brunell and Bernard Grofman).

"Delimitation Consulting in the US and Elsewhere," Zeitschrift für Politikberatung, volume 1 (3/4), 2008 (with Peter Schrott).

"Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence," North Carolina Law Review, volume 79 (5), June 2001 (with Bernard Grofman and David Lublin).

"A Guide to 2000 Redistricting Tools and Technology" in The Real Y2K Problem: Census 2000 Data and Redistricting Technology, edited by Nathaniel Persily, New York: Brennan Center, 2000.

"1990s Issues in Voting Rights," Mississippi Law Journal, 65 (2), Winter 1995 (with Bernard Grofman).

"Minority Turnout and the Creation of Majority-Minority Districts," American Politics Quarterly, 23 (2), April 1995 (with Kimball Brace, Richard Niemi and Harold Stanley).

"Identifying and Remediating Racial Gerrymandering," Journal of Law and Politics, 8 (2), Winter 1992 (with Bernard Grofman).

"The Impact of the Voting Rights Act on Minority Representation in Southern State Legislatures," Legislative Studies Quarterly, 16 (1), February 1991 (with Bernard Grofman).

"Minority Population Proportion and Black and Hispanic Congressional Success in the 1970s and 1980s," American Politics Quarterly, 17 (4), October 1989 (with Bernard Grofman).

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"Does Redistricting Aimed to Help Blacks Necessarily Help Republicans?" Journal of Politics, 49 (1), February 1987 (with Kimball Brace and Bernard Grofman).

Chapters in Edited Volumes:

"Effective torture prevention," Research Handbook on Torture, Sir Malcolm Evans and Jens Modvig (eds), Cheltenham: Edward Elgar, 2020 (with Richard Carver).

"Redistricting" in Oxford Handbook of Electoral Systems, Erik Herron Robert Pekkanen and Matthew Shugart (eds), Oxford: Oxford University Press, 2018.

"Role of the Courts in the Electoral Boundary Delimitation Process," in International Election Remedies, John Hardin Young (ed.), Chicago: American Bar Association Press, 2017.

"One Person, One Vote, Different Values: Comparing Delimitation Practices in India, Canada, the United Kingdom, and the United States," in Fixing Electoral Boundaries in India, edited by Mohd. Sanjeer Alam and K.C. Sivaramakrishnan, New Delhi: Oxford University Press, 2015.

"Delimiting Electoral Boundaries in Post-Conflict Settings," in Comparative Redistricting in Perspective, edited by Lisa Handley and Bernard Grofman, Oxford: Oxford University Press, 2008.

"A Comparative Survey of Structures and Criteria for Boundary Delimitation," in Comparative Redistricting in Perspective, edited by Lisa Handley and Bernard Grofman, Oxford: Oxford University Press, 2008.

"Drawing Effective Minority Districts: A Conceptual Model," in Voting Rights and Minority Representation, edited by David Bositis, published by the Joint Center for Political and Economic Studies, Washington DC, and University Press of America, New York, 2006.

“Electing Minority-Preferred Candidates to Legislative Office: The Relationship Between Minority Percentages in Districts and the Election of Minority-Preferred Candidates,” in Race and Redistricting in the 1990s, edited by Bernard Grofman; New York: Agathon Press, 1998 (with Bernard Grofman and Wayne Arden).

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"Racial Context, the 1968 Wallace Vote and Southern Presidential Dealignment: Evidence from North Carolina and Elsewhere," in Spatial and Contextual Models in Political Research, edited by Munroe Eagles; Taylor and Francis Publishing Co., 1995 (with Bernard Grofman).

"The Impact of the Voting Rights Act on Minority Representation: Black Officeholding in Southern State Legislatures and Congressional Delegations," in The Quiet Revolution: The Impact of the Voting Rights Act in the South, 1965-1990, eds. Chandler Davidson and Bernard Grofman, Princeton University Press, 1994 (with Bernard Grofman).

"Preconditions for Black and Hispanic Congressional Success," in United States Electoral Systems: Their Impact on Women and Minorities, eds. Wilma Rule and Joseph Zimmerman, Greenwood Press, 1992 (with Bernard Grofman).

Electronic Publication:

“Boundary Delimitation” Topic Area for the Administration and Cost of Elections (ACE) Project, 1998. Published by the ACE Project on the ACE website (www.aceproject.org).

Additional Writings of Note:

Amicus brief presented to the US Supreme Court in Gill v. Whitford, Brief of Political Science Professors as Amici Curiae, 2017 (one of many social scientists to sign brief)

Amicus brief presented to the US Supreme Court in Shelby County v. Holder, Brief of Historians and Social Scientists as Amici Curiae, 2013 (one of several dozen historians and social scientists to sign brief)

Amicus brief presented to the US Supreme Court in Bartlett v. Strickland, 2008 (with Nathaniel Persily, Bernard Grofman, Bruce Cain, and Theodore Arrington).

Recent Court Cases

Pending cases:

- Louisiana: *Nairne, et al., v. Ardoin* (Docket Number: 3:22-cv-00178-SDD-SDJ) (Middle District of Louisiana)
- Louisiana: *Robinson, et al., v. Ardoin* (Docket Number: 3:22-cv-0211-SDD-SDJ) (Middle District of Louisiana)
- Georgia: *Alpha Phi Alpha Fraternity, Inc., et al., v. Raffensperger, et al.* (Docket Number: 1:21-CV-05337-SCJ) (Northern District of Georgia)
- Arkansas: *Arkansas State Conference NAACP, et al., v. Arkansas Board of Apportionment, et al.* (Case Number: 4:21-cv-01239-LPR) (Eastern District of Arkansas, Eighth Circuit Court of Appeals)
- Ohio: *League of Women Voters of Ohio, et al., v. Ohio Redistricting Commission, et al.* (Case Number: 2021-1193) (Supreme Court of Ohio); *League of Women Voters of Ohio, et al., v. Governor DeWine* (Case Number: 2021-1449) (Supreme Court of Ohio)

Ohio Philip Randolph Institute v. Larry Householder (2019) – partisan gerrymander challenge to Ohio congressional districts; testifying expert for private plaintiffs on minority voting patterns

State of New York v. U.S. Department of Commerce (2018-2019) – challenge to inclusion of citizenship question on 2020 census form; testifying expert on behalf of private plaintiffs

U.S. v. City of Eastpointe (settled 2019) – minority vote dilution challenge to City of Eastpointe, Michigan, at-large city council election system; testifying expert on behalf of U.S. Department of Justice

Alabama NAACP v. State of Alabama (decided 2020) – minority vote dilution challenge to Alabama statewide judicial election system; testifying expert on behalf of private plaintiffs

Lopez v. Abbott (2017-2018) – minority vote dilution challenge to Texas statewide judicial election system; testifying expert on behalf of private plaintiffs

Personhuballuah v. Alcorn (2015-2017) – racial gerrymandering challenge to Virginia congressional districts; expert for the Attorney General and Governor of the State of Virginia

Perry v. Perez (2014) – Section 2 case challenging Texas congressional and state house districts; testifying expert for the U.S. Department of Justice

Jeffers v. Beebe (2012) – Arkansas state house districts; testifying expert for the Plaintiffs

State of Texas v. U.S. (2011-2012) – Section 5 case challenging Texas congressional and state house districts; testifying expert for the U.S. Department of Justice

Appendix A

Report to the Michigan Independent Citizens Redistricting Commission

Dr. Lisa Handley

Preface

This report outlines the analyses I conducted on behalf of the Michigan Independent Citizens Redistricting Commission (MICRC) and relays my findings. I also briefly explain the partisan fairness measures I advised the MICRC to adopt as a component of the redistricting software and why I made these recommendations. The legal implications of my findings and the assessment of any proposed plans have been left to the MICRC legal team.

I. The Voting Rights Act and Racially Polarized Voting

The Voting Rights Act of 1965 prohibits any voting standard, practice or procedure – including redistricting plans – that result in the denial or dilution of minority voting strength. Section 2 of the Voting Rights Act was amended in 1982 to establish that intentional discrimination need not be proven (as the Supreme Court determined was required under the 15th Amendment to the Constitution). The U.S. Supreme Court first interpreted the amended Act in *Thornburg v. Gingles*,¹ a challenge to the 1982 North Carolina state legislative plans. In this case the U.S. Supreme Court held that plaintiffs must satisfy three preconditions to qualify for relief:

- The minority group must be sufficiently large and geographically compact to form a majority in a single-member district
- The minority group must be politically cohesive
- Whites must vote as a bloc to usually defeat the minority-preferred candidates

What do we mean when we say minority voters must be politically cohesive? And how do we know if white voters usually vote as a bloc to defeat the candidates preferred by minority voters? According to the Court, racially polarized voting is the “evidentiary linchpin” of a vote dilution claim. Voting is racially polarized if minorities and whites consistently vote for different candidates. More specifically, if minorities consistently support the same candidates, they are said to be politically cohesive. If whites are consistently *not* supporting these candidates, they are said to be bloc voting against the minority-preferred candidates.

¹ 478 U.S. 30 (1986).

The Voting Rights Act requires a state or local jurisdiction to create districts that provide minority voters with an opportunity to elect their candidates of choice if voting is racially polarized and the candidates preferred by minority voters usually lose. If districts that provide minority voters with the opportunity to elect their preferred candidates already exist, these must be maintained.

A. Analyzing Voting Patterns by Race

An analysis of voting patterns by race serves as the foundation of two of the three elements of the “results test” as outlined in *Gingles*: a racial bloc voting analysis is needed to determine whether the minority group is politically cohesive; and the analysis is required to determine if whites are voting sufficiently as a bloc to usually defeat the candidates preferred by minority voters. The voting patterns of white and minority voters must be estimated using statistical techniques because direct information the race of the voters is not, of course, available on the ballots cast.

To carry out an analysis of voting patterns by race, an aggregate level database must be constructed, usually employing election precincts as the units of observation. Information relating to the demographic composition and election results in these precincts is collected, merged and statistically analyzed to determine if there is a relationship between the racial composition of the precincts and support for specific candidates across the precincts.

Standard Statistical Techniques Three standard statistical techniques have been developed over time to estimate vote choices by race: homogeneous precinct analysis, ecological regression, and ecological inference.² Two of these analytic procedures – homogeneous precinct analysis and ecological regression – were employed by the plaintiffs’ expert in *Gingles*, have the benefit of the Supreme Court’s approval in that case, and have been used in most subsequent voting rights cases. The third technique, ecological inference, was developed after the *Gingles* decision and was designed, in part, to address some of the disadvantages associated with ecological regression analysis. Ecological inference analysis has been introduced and accepted in numerous court proceedings.

² For a detailed explanation of homogenous precinct analysis and ecological regression see Bernard Grofman, Lisa Handley and Richard Niemi, *Minority Representation and the Quest for Voting Equality* (Cambridge University Press, 1992). See Gary King, *A Solution to the Ecological Inference Problem* (Princeton University Press, 1997) for a more detailed explanation of ecological inference.

Homogeneous precinct (HP) analysis is the simplest technique. It involves comparing the percentage of votes received by each of the candidates in precincts that are racially or ethnically homogeneous. The general practice is to label a precinct as homogeneous if at least 90 percent of the voting age population is composed of a single race.³ In fact, the homogeneous results reported are not estimates – they are the actual precinct results. However, most voters in Michigan do not reside in homogeneous precincts and voters who reside in homogeneous precincts may not be representative of voters who live in more racially diverse precincts. For this reason, I refer to these percentages as estimates.

The second statistical technique employed, ecological regression (ER), uses information from all precincts, not simply the homogeneous ones, to derive estimates of the voting behavior of minorities and whites. If there is a strong linear relationship across precincts between the percentage of minorities and the percentage of votes cast for a given candidate, this relationship can be used to estimate the percentage of minority (and white) voters supporting the candidate.

The third technique, ecological inference (EI), was developed by Professor Gary King. This approach also uses information from all precincts but, unlike ecological regression, it does not rely on an assumption of linearity. Instead, it incorporates maximum likelihood statistics to produce estimates of voting patterns by race. In addition, it utilizes the method of bounds, which uses more of the available information from the precinct returns as well as providing more information about the voting behavior being estimated.⁴ Unlike ecological regression, which can produce percentage estimates of less than 0 or more than 100 percent, ecological inference was designed to produce only estimates that fall within the possible limits. However, EI does not guarantee that the estimates for all of the candidates add to 100 percent for each of the racial groups examined.

In conducting my analysis of voting patterns by race in statewide elections in Michigan, I also used a more recently developed version of ecological inference, which I have labeled “EI

³ If turnout or registration by race is available, this information is used to identify homogenous precincts.

⁴ The following is an example of how the method of bounds works: if a given precinct has 100 voters, of whom 75 are Black and 25 are white, and the Black candidate received 80 votes, then at least 55 of the Black voters voted for the Black candidate and at most all 75 did. (The method of bounds is less useful for calculating estimates for white voters in this example as anywhere between none of the whites and all of the whites could have voted for the candidate.)

RxC” in the summary tables found in the Appendices at the end of the report. EI RxC expands the analysis so that more than two racial/ethnic groups can be considered simultaneously. It also allows us to take into account differences in the relative rates of minority and white turnout when, as is the case in Michigan, we do not have turnout by race but instead must rely on voting age population by race to derive estimates of minority and white support for each of the candidates.

Database To analyze voting patterns by race using aggregate level information, a database that combines election results with demographic information is required. This database is almost always constructed using election precincts as the unit of analysis. The demographic composition of the precincts is based on voter registration or turnout by race/ethnicity if this information is available; if it is not, then voting or citizen voting age population is used. Michigan does not collect voter registration data by race and therefore voting age population (VAP) by race and ethnicity as reported in the PL94-171 census redistricting data was used for ascertaining the demographic composition of the precincts.⁵

The precinct election returns for the general elections, as well as precinct shape files, census block-to-precinct assignment files,⁶ and election results disaggregated to the block level were supplied by the Michigan Secretary of State. The Democratic primary results had to be collected county by county and were either downloaded directly or cut and pasted from pdf files.

Geographic areas Producing reliable estimates of voting patterns by race requires an adequate number of minority and white voters, an adequate number of election precincts, and sufficient variation in the percentage of minority and white voters across the precincts. Only a few counties in Michigan satisfied these conditions, and only for one group of minority voters – Black voters. It was not possible to produce reliable statewide or countywide estimates for Hispanic or Asian voters in Michigan. However, estimates for Hispanics, as well as some additional minority groups, were produced for very localized areas in Michigan and this analysis is discussed below in a separate section entitled “Voting Patterns of Minority Voters other than Black Voters.” As a

⁵ Since the only minority group sufficiently large enough in the State of Michigan to produce estimates of voting patterns is Black residents and there is not a high non-citizenship rate to account for when conducting the analysis, estimates of citizen voting age population by race were not included in the database.

⁶ Shape files and block-to-precinct equivalency files made it possible to account for changes in precinct boundaries, and therefore precinct demographics, over time.

consequence of the three limitations listed above, I was able to reliably estimate the voting patterns of Blacks and whites statewide and in the four counties: Wayne, Oakland, Genesee, and Saginaw.

Elections analyzed All statewide elections held in the State during the preceding decade (2012-2020) were analyzed, both for voters within the state as a whole and in the four counties that had a sufficient number of Black VAP conduct the analysis – Wayne, Oakland, Genesee, and Saginaw. The general elections analyzed included: U.S. President (2012, 2016, 2020), U.S. Senate (2012, 2014, 2018, 2020), and the statewide offices of Governor, Secretary of State, and Attorney General in 2014 and 2018.

Four of these contests included African American candidates:⁷ the 2012 presidential election, the 2014 election contest for Secretary of State, and the U.S. Senate contests in 2018 and 2020. Only two of these four contests included African American candidates supported by Black voters, however: Barack Obama in his bid for re-election in 2012 and Godfrey Dillard in his race for Secretary of State in 2014. John James, an African American Republican who ran for U.S. Senate in 2018 and 2020, was not the candidate of choice of Black voters. In addition, two election contests included African American candidates as running mates: the 2018 gubernatorial race in which Garlin Gilchrist ran for Lieutenant Governor and Gretchen Whitmer as Governor, and the 2020 presidential race in which Kamala Harris ran for Vice President. Both sets of running mates were strongly supported by Black voters.

There was only one statewide Democratic primary for statewide office the previous decade: the 2018 race for governor. I analyzed this Democratic primary (as well as congressional and state legislative Democratic primaries) and not Republican primaries because the overwhelming majority of Black voters who choose to vote in primaries cast their ballots in Democratic rather than Republican primaries. As a consequence, Democratic primaries are far more probative than Republican primaries for ascertaining the candidates preferred by Black voters.⁸ Moreover, this

⁷ Courts consider election contests that include minority candidates more probative than contests that include only white candidates for determining if voting is racially polarized. This is because it is not sufficient for minority voters to be able to elect their candidates of choice only if these candidates are white. On the other hand, it is important to recognize that not all minority candidates are the preferred candidates of minority voters.

⁸ In addition, producing reliable estimates for Black voters in Republican primaries would not have been possible.

primary included two minority candidates: Abdul El-Sayed, who is of Egyptian descent, and Shri Thanedar, who is Indian-American.

In addition to these statewide elections, I also analyzed recent congressional and state legislative elections in districts that fell within Wayne, Oakland, Saginaw and Genesee Counties and had a Black VAP that was large enough to produce reliable estimates.⁹ Because of the very substantial changes in district boundaries between the current district boundaries and any of the proposed district plan boundaries, these election contests cannot be considered indicative of voting patterns in any proposed districts. However, they are important for at least two reasons. First, although few minority candidates ran for office statewide, there were many who ran in legislative elections, especially in Wayne County. Second, while there was only one statewide Democratic primary conducted over the course of the previous decade, there have been numerous recent Democratic primaries for congressional and state legislative office.

B. Statewide and County Results

Table 1, below, lists the number of statewide election contests that were racially polarized, both for Michigan as a whole, and for each of the four counties considered individually. This tabulation is based on the racial bloc voting summary tables found in Appendix A. The second column indicates the number of contests that included African American candidates that were polarized (over the total number of contests with African American candidates), the third column is the number of statewide general elections (out of the 13 analyzed) that were polarized and the final column reports the results of the only statewide Democratic primary.

Statewide, all election contests other than the 2012 US. Senate race won by Debbie Stabenow were racially polarized. (Her 2018 election contest, however, was racially polarized.) The candidate who obtained the lowest vote percentage statewide was African American candidate for Secretary of State in 2014, Godfrey Dillard. This was because he received less white crossover votes than any other candidate – the percentage of Black voters supporting him was comparable to the percentage of Black voters supporting the other Democratic candidates competing statewide.

⁹ In some state house districts, there was not enough whites of voting age to conduct an analysis of voting patterns by race.

Table 1: Number of Statewide Elections Analyzed that were Polarized

	General Elections with Minority Candidates	All Statewide General Election Contests	Statewide Democratic Primary
Statewide	6/6	12/13	1/1
Genesee	5/6	9/13	1/1
Saginaw	6/6	11/13	1/1
Oakland	6/6	13/13	0/1
Wayne	3/6	7/13	1/1

Every statewide general election contest analyzed was polarized in Oakland County – only in the Democratic primary for Governor in 2018 did Black and white voters support the same candidate (Gretchen Whitmer). Voting in Saginaw County was nearly as polarized: two U.S. Senate contests (2012 and 2014) were not polarized, but the gubernatorial primary was polarized. Black and white voters agreed on the same candidates slightly more often in Genesee County – in addition to supporting U.S. senate candidates Debbie Stabenow in 2012 and Gary Peters in 2014, they both supported Barack Obama in 2012 and Democrat Mark Schauer for Governor in 2014.

Voting in Wayne County was considerably less racially polarized than statewide or in the other three counties studied. However, slightly more than half of the general election contests and the one statewide Democratic primary analyzed were polarized, with Black and white voters supporting the same candidates in 2012, disagreeing on the three statewide offices, but supporting the same U.S. Senate candidate in 2014, supporting different candidates for U.S. President in 2016 and 2020, and voting for most of the same candidates in 2018.

C. Congressional and State Legislative Election Results

This section provides a summary of my racial bloc voting analysis of recent congressional and state legislative districts in the four-county area of Wayne, Oakland, Genesee and Saginaw. I analyzed 2018 and 2020 general elections, and the 2018 and 2020 Democratic primaries if at least one African American candidate competed in the election contest. However, for a number of state

legislative elections, there were too many candidates and too few votes cast to obtain reliable estimates. In addition, there were three state house districts – districts 3, 7, 8 – where there were an insufficient number of white voters to produce reliable estimates. The summary tables reporting each of estimates for these contests are found in Appendix B.

Table 2, below, summarizes the congressional district results for congressional districts 5, 9, 12, 13 and 14.¹⁰ In most instances, voting was not racially polarized – in 80% of the general elections and 75% of the contested Democratic primaries analyzed, Black and white voters supported the same candidates. Three of the contests analyzed were, however, polarized. The Black-preferred candidate won two of these contests: Districts 5 and 13 in the 2020 general election. The other polarized contest was the 2018 bid for the Democratic nomination for full two-year term the in District 13. Six candidates competed in this contest, four African American candidates, including the candidate of choice of a plurality of Black voters, Brenda Jones; Bill Wild, a white candidate; and Rashida Tlaib, an American of Palestinian descent. White voters divided their votes between Wild and Tlaib. Tlaib won the nomination with 27,841 votes (31.17%), and Benda Jones came in a close second with 26,941 votes (30.16%).¹¹

Table 2: Summary of Congressional District Racial Bloc Voting Analysis

Congress District	Location	Percent BVAP	2018 Democratic primary	2018 General election	2020 Democratic primary	2020 General election
5	Genesee & Saginaw, plus	16.63	no contest	not polarized	no contest	polarized - won
9	Oakland & Macomb	13.83	only white candidates	not polarized	no contest	not polarized
12	Wayne & Washtenaw	11.73	no contest	not polarized	not polarized	not polarized

¹⁰ Congressional District 11, which is also located in the area of interest (Oakland and Wayne), as well as Districts 8 (partially in Oakland) and 4 (partially in Saginaw), had too few Black voters to produce reliable estimates of their vote choices.

¹¹ A special election for filling the partial term for District 13 – left vacant when John Conyers resigned – was conducted at the same time with many of the same candidates. Brenda Jones won this contest with 32,769 (37.75%) votes; Rashida Tlaib came in second with 31,121 (35.85%) votes.

Congress District	Location	Percent BVAP	2018 Democratic primary	2018 General election	2020 Democratic primary	2020 General election
13	Wayne	54.78	polarized - lost	not polarized	not polarized	polarized - won
14	Wayne & Oakland	55.16	no contest	not polarized	not polarized	not polarized

The results of my analysis recent state senate elections is found in Table 3, below. There were no Democratic primaries in two districts (12 and 27), and no minority candidates competed in a third (District 32). In addition, there was one Democratic primary in which 11 candidates competed – too many to produce reliable estimates. Of the 16 contests analyzed, 10 were not polarized (three primaries and seven general elections), four were polarized but the Black-preferred candidate won (two primaries and two generals), and two were polarized and the candidates of choice of Black voters lost. One of these contests was the general election in District 32, which has only 13.45% BVAP.¹² The other polarized contest that the Black-preferred candidate lost was the Democratic primary in State Senate District 1 in 2018. Six candidates competed in this election. The plurality choice of Black voters was African American candidate, Alberta Tinsley Talabi. A very large majority of white voters supported the Asian candidates, Stephanie Chang, who was the second choice of Black voters. Chang won with 49.8% of the vote (Talabi received 26.4%).

Table 3: Summary of State Senate District Racial Bloc Voting Analysis

State Senate District	Location	Percent BVAP	2018 Democratic primary	2018 General election
1	Wayne	44.68	polarized - lost	not polarized
2	Wayne	50.82	<i>na</i> (11 candidates)	not polarized

¹² The Black VAP percentages listed throughout this report are from the MICRC redistricting GIS active matrix tab labeled “5A,” which indicates the percentage of non-Hispanic voting age population who indicated they were Black or Black in combination with any other race. This produces the maximum number of individuals within each racial group, including Black, but will result in totals over 100% since persons identifying as more than one race will be counted more than once.

State Senate District	Location	Percent BVAP	2018 Democratic primary	2018 General election
3	Wayne	48.14	polarized - won	not polarized
4	Wayne	47.00	not polarized	not polarized
5	Wayne	54.25	polarized - won	not polarized
6	Wayne	21.29	not polarized	polarized - won
11	Oakland	35.48	not polarized	not polarized
12	Oakland	14.87	no contest	polarized - won
27	Genesee	30.42	no contest	not polarized
32	Genesee & Saginaw	13.45	no minority candidates	polarized - lost

The final table in this section, Table 4, summarized the results of my analysis of recent state house election. A number of the cells in the table have “na” as an entry because estimates are not available. This was for one of two reasons: there were too many candidates and too few votes cast to obtain reliable estimates, or there were an insufficient number of white voters to produce reliable estimates (state house districts 3, 7, 8).

It was possible to produce estimates for 54 contests. The majority of these contests were not polarized – in 37 contests (68.5%), white and Black voters supported the same candidates. In another 13 contests, voting was polarized but the candidate preferred by Black voters won. There were four contests – all Democratic primaries – that were racially polarized and the Black-preferred candidate lost. In three of these contests, the BVAP of the districts was less than 30% (Districts 12, 16, and 37). The Black-preferred candidates also lost the 2018 Democratic primary in House District 29, which has a 36.04% BVAP. All six of the candidates competing were African Americans. The plurality choice of Black voters was Kermit Williams; Brenda Carter was the candidate of choice of a majority of white voters. Carter won with 30.7% of the vote and Williams came in second with 24.7% of the vote.

Table 4: Summary of State House District Racial Bloc Voting Analysis

State House District	Location	Percent BVAP	2018 Democratic primary	2018 General election	2020 Democratic primary	2020 General election
1	Wayne	64.76	not polarized	polarized - won	no contest	polarized - won
2	Wayne	57.70	<i>na</i> (7 candidates)	not polarized	not polarized	not polarized
3	Wayne	90.93	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
4	Wayne	47.27	<i>na</i> (15 candidates)	not polarized	<i>na</i> (13 candidates)	not polarized
5	Wayne	54.12	polarized - won	not polarized	not polarized	not polarized
6	Wayne	52.86	<i>na</i> (10 candidates)	not polarized	polarized - won	no contest
7	Wayne	94.27	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
8	Wayne	92.42	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>
9	Wayne	74.22	not polarized	not polarized	polarized - won	not polarized
10	Wayne	67.41	not polarized	not polarized	<i>na</i> (8 candidates)	not polarized
11	Wayne	26.53	polarized - won	not polarized	no contest	not polarized
12	Wayne	26.97	polarized - lost	polarized - won	not polarized	polarized - won
16	Wayne	23.25	polarized - lost	not polarized	no contest	not polarized
27	Oakland	24.35	not polarized	not polarized	<i>na</i> (8 candidates)	not polarized

State House District	Location	Percent BVAP	2018 Democratic primary	2018 General election	2020 Democratic primary	2020 General election
29	Oakland	36.04	polarized - lost	not polarized	no contest	not polarized
35	Oakland	62.50	polarized - won	not polarized	not polarized	not polarized
37	Oakland	17.91	no contest	not polarized	polarized - lost	not polarized
34	Genesee	60.96	not polarized	polarized - won	not polarized	polarized - won
49	Genesee	29.47	not polarized	not polarized	no contest	not polarized
95	Saginaw	35.50	no contest	not polarized	polarized - won	polarized - won

D. Voting Patterns of Minority Voters other than Black Voters

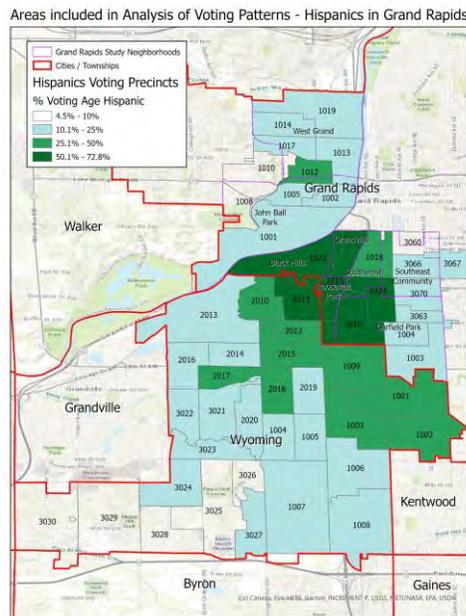
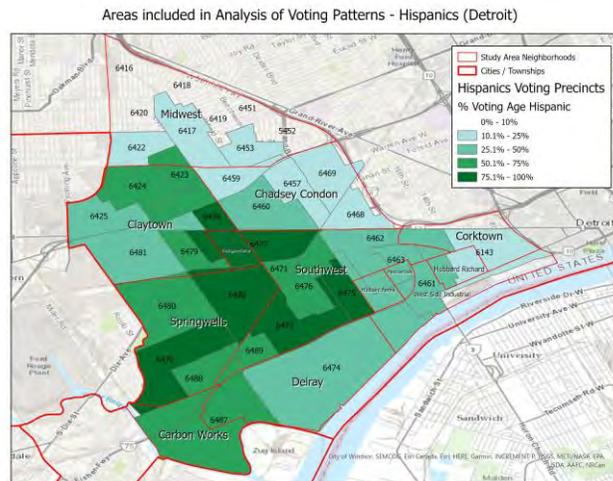
As noted above, it was not possible to produce estimates of voting patterns by race for any groups other than Blacks and whites (more specifically, non-Hispanic whites) statewide or by county. However, by localizing the analysis in geographic areas much smaller than counties, it was possible to derive estimates for several additional minority groups: Hispanics, Arab Americans, Chaldeans, and Bangladeshi Americans.¹³ Because these estimates could not be generated statewide, it is difficult to know if the voters included in the analysis are representative of the group as a whole statewide. The summary tables reporting the estimates for these groups can be found in the Appendix C.

Hispanic Voters Hispanics live in large enough concentrations to produce estimates in two areas of Michigan. Because these concentrations are in different areas of the state, I did not combine them. Instead, I have produced estimates for Hispanics living in the area of Detroit depicted in the first map below (“Areas included in Analysis of Voting Patterns – Hispanics

¹³ Interest in the voting patterns of Arab Americans, Chaldeans and Bangladeshi Americans was prompted by comments received in public hearings and on the public portal.

(Detroit)”) and in the Grand Rapids area depicted in the second map (“Areas included in Analysis of Voting Patterns – Hispanics in Grand Rapids”). In both maps, the precincts are shaded based on the percentage Hispanic in the precinct.¹⁴

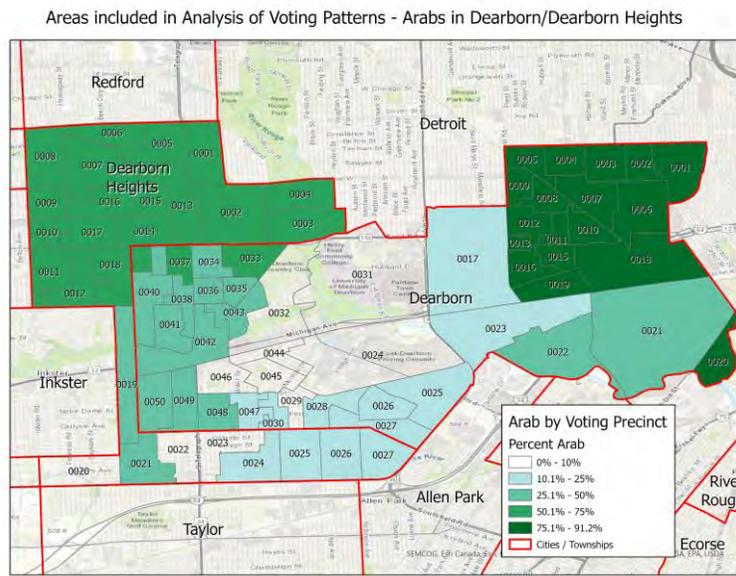
While the voting patterns do not appear to be very different – both groups provide strong support for Democratic candidates in general elections – the turnout levels differ. In the Grand Rapids area, turnout among Hispanics of voting age is lower than it is in the Detroit area.



¹⁴ The Hispanic VAP used for shading the map and conducting the racial bloc voting analysis was derived from the 2020 94-171 census redistricting data, which reports Hispanic VAP by census block. This data was then aggregated up to the precinct level.

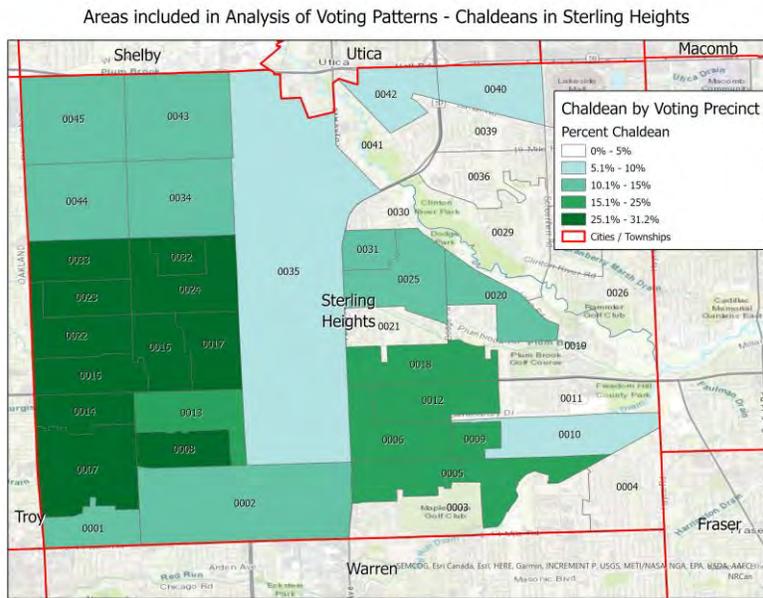
Arab American Voters Approximately 38% of the Arab American population in Michigan is concentrated in the Dearborn and Dearborn Heights area. Localizing the racial bloc voting analysis to this specific area offered sufficient variation across the precincts to produce estimates of the voting behavior of this group. The map below indicates the geographic area included in the analysis; the precincts are shaded by the percentage of residents who are Arab American.¹⁵

Arab Americans voters, at least in this area of Michigan, strongly support Democratic candidates in general elections – over 80% consistently supported the Democratic candidate in the six 2018-2020 general elections examined. These voters, unlike other groups of voters studied, were also very cohesive in 2018 Democratic primary for Governor – they strongly supported of Abdul El-Sayed in his bid for the nomination.



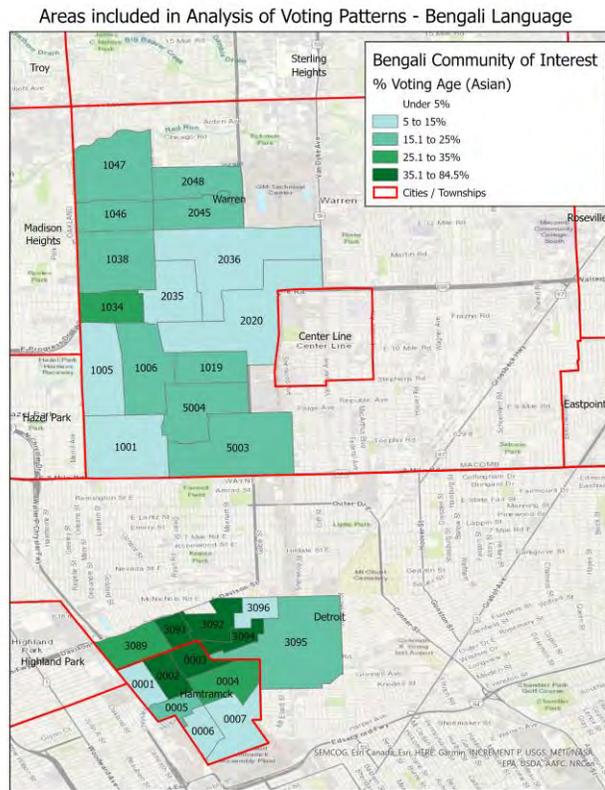
¹⁵ The Arab American data was derived from the U.S. Census Bureau’s American Community Survey (ACS), Table B04004, “People Reporting Single Ancestry.” This data, reported at the census tract level, was attributed down to the census block level and then aggregated up to the election precinct level.

Chaldeans, like Arab Americans in Michigan, tend to reside in a geographically concentrated area of Michigan – in this instance, Sterling Heights. Over 40% of the Chaldean population can be found here.¹⁶ Localizing the voting analysis to Sterling Heights produced reliable estimates of the voting patterns of this community. Chaldeans are not nearly as cohesive as Arab Americans – they consistently divided their support between the Democratic and Republican candidates. However, a clear majority of Chaldean voters supported Donald Trump in his bid for re-election in 2020.



¹⁶ The Chaldean data was derived from the U.S. Census Bureau’s American Community Survey (ACS), Table B04004, “People Reporting Single Ancestry” using the Assyrian/Chaldean/Syriac designation. This census tract level data was attributed down to the census block level and then aggregated up to the election precinct level.

Bangladeshi American Voters Using a map identifying the Bangladeshi American community of interest submitted to the MICRC,¹⁷ this localized analysis focused on West Warren and Hamtramck to produce estimates of the vote choices of this group. Bangladeshi American voting patterns are very similar to Arab American voting patterns.¹⁸ Both groups provided strong support for Democratic candidates in general elections and both groups were cohesive in their support of Abdul El-Sayed in the 2018 Democratic primary for Governor.



¹⁷ The map was submitted on the public comment portal on 9/8/2021 by Hayg Oshagan with the following comment “This is the Bengali community of SE MI. The area around Hamtramck (to the South) is most densely populated and is the center of the community.”

¹⁸ Asian VAP by census block as reported by the 2020 94-171 census redistricting data was used to create the shading on the map and the racial bloc voting database.

II. Drawing Minority Opportunity Districts

Because voting in Michigan is racially polarized, districts that provide minority voters with an opportunity to elect their candidates of choice must be drawn. If they already exist – as many do in Michigan – they must be maintained. But maintaining minority opportunity districts does not necessarily require that the districts be redrawn with the same percentage minority voting age population. In fact, many of the minority districts in the current plan are packed with far more Black VAP than needed to elect candidates of choice, as indicated by the percentage of votes the minority candidates are garnering. (See Tables 9 and 10, in the next section of this report, for the Black VAP of the current state house and senate districts, the current incumbents and their race and party, and the percentage of votes each of the incumbents received in 2020.)

An analysis must be undertaken to determine if a proposed district is likely to provide minority voters with an opportunity to elect their candidates of choice to office. This analysis must be district-specific – that is, must recognize there are likely to be differences in participation rates and voting patterns in districts across the state – and it must be functional – that is, it must be based on actual voting behavior of whites and minorities. There is no single universal or statewide demographic target that can be applied for Black voters to elect their candidates of choice in Michigan.¹⁹

There are two related approaches to conducting a district-specific, functional analysis, both of which take into account the relative turnout rates and voting patterns of minorities and whites. The first approach uses estimates derived from racial bloc voting analysis to calculate the percent minority population needed in a specific area for minority-preferred candidates to win a district in that area.

The second approach relies on election results from previous contests that included minority-preferred candidates (as identified by the racial bloc voting analysis) to determine if these candidates would win election in the proposed districts. The election results for these “bellwether elections” – racially polarized elections that include minority candidates who are preferred by minority voters – are disaggregated down from the election precinct to the census block level and then recompiled to reflect the boundaries of the proposed district. If the minority-

¹⁹ Establishing a demographic target (e.g., 55% black voting age population) for all minority districts across the jurisdiction was, in fact, expressly forbidden by the U.S. Supreme Court in *Alabama Legislative Black Caucus v. Alabama*, 575 U.S. 254 (2015).

preferred candidates in these bellwether elections win in the proposed district, this district is likely to provide minority voters with an opportunity to elect their candidates of choice. This latter approach can be used only if proposed district boundaries have been drawn. The former approach can be carried out before any new boundaries are drafted.

A. Calculating the Black VAP Needed to Elect Black-Preferred Candidates

The percentage of minority voting age population needed in a district to provide minority voters with the opportunity to elect minority-preferred candidates to congress or to the state legislature varies. Using the estimates produced from the racial bloc voting analysis, I calculated the Black VAP percentages needed to elect minority-preferred candidates in each of the general elections included in the summary tables in the Appendix. This calculation takes into account the relative participation rates of age eligible Blacks and whites, as well as the level of Black support for the Black-preferred candidate (the "cohesiveness" of Black voters), and the level of whites "crossing over" to vote for the Black-preferred candidate.

Equalizing minority and white turnout Because Blacks who are age eligible to vote often turn out to vote at lower rates than white voters in Michigan, the Black VAP needed to ensure that Black voters comprise at least half of the voters in an election is often higher than 50%. Once the respective turnout rates of Black and Whites eligible to vote have been estimated using the statistical techniques described above (HP, ER and EI), the percentage needed to equalize Black and white voters can be calculated mathematically.²⁰ But equalizing turnout is

²⁰ The equalizing percentage is calculated mathematically by solving the following equation:

- Let
- M = the proportion of the district’s voting age population that is Black
- W = 1-M = the proportion of the district’s voting age population that is white
- A = the proportion of the Black voting age population that turned out to vote
- B = the proportion of the white voting age population that turned out to vote

Therefore,

- M(A) = the proportion of the population that is Black and turned out to vote (1)
- (1-M)B = the proportion of total population that is white and turned out to vote (2)

To find the value of M that is needed for (1) and (2) to be equal, (1) and (2) are set as equal and we solve for M algebraically:

$$\begin{aligned}
 M(A) &= (1 - M) B \\
 M(A) &= B - M(B) \\
 M(A) + M(B) &= B \\
 M(A + B) &= B \\
 M &= B / (A+B)
 \end{aligned}$$

only the first step in the process – it does not take into account the voting patterns of Black and white voters. If voting is racially polarized but a significant number of white voters typically “crossover” to vote for Black voters’ preferred candidate, it may be the case that crossover voting can more than compensate for depressed Black turnout.

Incorporating Minority Cohesion and White Crossover Voting Even if Black citizens are turning out at lower rates than whites, and voting is racially polarized, if a relatively consistent percentage of white voters support Black-preferred candidates, the candidates preferred by Black voters can be elected in districts that are less than majority Black. On the other hand, if voting is starkly polarized, with few or no whites crossing over to vote for the candidates supported by Black voters, it may be the case that a district that is more than 50% Black VAP is needed to elect Black-preferred candidates. A district-specific, functional analysis should take into account not only differences in turnout rates, but also the voting patterns of Black and white voters.²¹

To illustrate this mathematically, consider a district that has 1000 persons of voting age, 50% of who are Black and 50% of who are white. Let us begin by assuming that Black turnout is lower than white turnout in a two-candidate general election. In our hypothetical election example, 42% of the Black VAP turn out to vote and 60% of the white VAP vote. This means that, for our illustrative election, there are 210 Black voters and 300 white voters. Further suppose that 96% of the Black voters supported their candidate of choice and 25% of the white voters cast their votes for this candidate (with the other 75% supporting her opponent in the election contest). Thus, in our example, Black voters cast 200 of their 210 votes for the Black-preferred candidate and their other 8 votes for her opponent; white voters cast 75 of their 300 votes for the Black-preferred candidate and 225 votes for their preferred candidate:

Thus, for example, if 39.3% of the Black population turned out and 48.3% of the white population turned out, $B = .483$ and $A = .393$, and $M = .483 / (.393 + .483) = .483 / .876 = .5513$, therefore a Black VAP of 55.1% would produce an equal number of Black and white voters. (For a more in-depth discussion of equalizing turnout see Kimball Brace, Bernard Grofman, Lisa Handley and Richard Niemi, “Minority Voting Equality: The 65 Percent Rule in Theory and Practice,” *Law and Policy*, 10 (1), January 1988.)

²¹ For an in-depth discussion of this approach to creating effective minority districts, see Bernard Grofman, Lisa Handley and David Lublin, “Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence,” *North Carolina Law Review*, volume 79 (5), June 2001.

	VAP	turnout	voters	support for Black- preferred candidate	votes for Black- preferred candidate	support for white- preferred candidate	votes for white- preferred candidate
Black	500	0.42	210	0.96	202	0.04	8
White	500	0.60	300	0.25	75	0.75	225
			510		277		233

The candidate of choice of Black voters would receive a total of 277 votes (202 from Black voters and 75 from white voters), while the candidate preferred by white voters would receive only 233 votes (8 from Black voters and 225 from white voters). The Black-preferred candidate would win the election with 55.4% (277/500) of the vote in this hypothetical 50% Black VAP district. And the Black-preferred candidate would be successful despite the fact that the election was racially polarized and that Blacks turned out to vote at a lower rate than whites.

The candidate of choice of Black voters would still win the election by a very small margin (50.9%) in a district that is 45% Black with these same voting patterns:

	VAP	turnout	voters	support for Black- preferred candidate	votes for Black- preferred candidate	support for white- preferred candidate	votes for white- preferred candidate
Black	450	0.42	189	0.96	181	0.04	8
White	550	0.60	330	0.25	83	0.75	248
			519		264		255

In a district with a 40% BVAP, however, the Black-preferred candidate would garner only 47.5% of the vote in this example.

Percent Black VAP needed to win recent general elections in Michigan Counties

Tables 5, 6, 7, and 8 utilize the results of the racial bloc voting analysis (see Appendix A) to indicate the percentage of vote a Black-preferred candidate would receive, given the turnout rates of Blacks and whites and the degree of black cohesion and white crossover voting for each

general election contests examined, in a 55%, 50%, 45%, 40% and 35% BVAP district in Wayne, Oakland, Genesee, and Saginaw Counties.²² Because voting patterns vary by county, the percentage of votes the Black-preferred candidates would receive also varies. However, in no county is a 50% BVAP district required for the Black-preferred candidates to carry the district in a general election.

Table 5 reports the percentage of votes the Black-preferred candidate would receive in Wayne County, given voting patterns in previous general elections. The Black-preferred candidate would win every general election in a district with a BVAP of 35% or more, and would win with at least 54.4% of the vote – and in most election contests, a substantially higher percentage of the vote. The variation in the percentage of votes received by the Black-preferred candidate is due to the variation in the white vote rather than the Black vote because in every election contest considered at least 95% of Black voters supported the Black-preferred candidate. The Black-preferred candidate of choice who would receive the lowest percentage of the vote would be African American Godfrey Dillard, a candidate for Secretary of State in 2014.

The voting patterns by race, and therefore the percent BVAP needed to win general elections is very similar in Genesee County, as shown in Table 6. Unlike Wayne County, however, the percentage of vote the Black-preferred candidate would garner in a 35% BVAP district in this county is declining slightly over the course of the decade – although the Black-preferred candidate would still win every general election in a 35% BVAP district.

In Oakland County, the Black-preferred candidate does not win every general election contest in a 35% BVAP district. It is not until the 40% BVAP column in Table 7 that the candidate of choice of Black voters wins every election examined. The most challenging election is again the race for Secretary of State in 2014. And even at 40% BVAP, Dillard would receive only 51.3% of the vote.

Saginaw County (Table 8) is similar to Oakland County in that it is only at 40% that the Black-preferred candidate wins every general election contest – and at 40% a couple of the contests are very close. Not only are the winning percentages for the Black-preferred candidates consistently lower in Saginaw County than they are for Oakland County, they have been decreasing over the course of the decade.

²² Tables 5, 6, 7, and 8 are generated using EI RxC estimates reported in the racial bloc voting tables in the Appendix.

Table 5: Percent BVAP Needed to Win, Wayne County

WAYNE COUNTY Percent Black VAP needed to win	race of B-P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B-P cand would have received if district was 55% black VAP	percent of vote B-P cand would have received if district was 50% black VAP	percent of vote B-P cand would have received if district was 45% black VAP	percent of vote B-P cand would have received if district was 40% black VAP	percent of vote B-P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B-P	all others	votes cast for office	B-P	all others					
GENERAL ELECTIONS												
2020 President	W	58.0	97.5	2.5	76.6	47.5	52.5	71.5	69.0	66.6	64.3	62.0
2020 US Senate	W	57.8	95.2	4.8	75.6	47.2	52.8	70.4	68.0	65.7	63.4	61.2
2018 Governor	W	33.2	97.0	3.0	63.2	53.5	46.5	70.5	68.5	66.6	64.8	63.1
2018 Secretary of State	W	33.1	97.0	3.0	62.2	53.6	46.4	70.7	68.7	66.8	65.0	63.3
2018 Attorney General	W	32.7	95.5	4.5	61.3	49.4	50.6	67.6	65.4	63.4	61.5	59.7
2018 US Senate	W	33.1	95.8	4.2	63.1	52.3	47.7	69.3	67.3	65.4	63.6	61.9
2016 President	W	57.0	98.4	1.6	64.0	39.7	60.3	70.3	67.4	64.4	61.6	58.7
2014 Governor	W	35.8	96.5	3.5	47.7	41.3	58.7	67.7	65.0	62.3	59.7	57.2
2014 Secretary of State	AA	35.5	96.8	3.2	46.1	36.8	63.2	65.9	62.9	60.0	57.2	54.4
2014 Attorney General	W	35.3	95.7	4.3	45.9	41.0	59.0	67.5	64.8	62.1	59.5	57.0
2014 US Senate	W	35.7	98.0	2.0	46.8	53.4	46.6	74.9	72.7	70.5	68.4	66.4
2012 President	AA	60.4	99.0	1.0	65.7	51.9	48.1	76.8	74.5	72.1	69.8	67.5
2012 US Senate	W	59.9	98.1	1.9	64.4	57.6	42.4	79.1	77.1	75.1	73.1	71.1

Table 6: Percent BVAP Needed to Win, Genesee County

GENESEE COUNTY Percent Black VAP needed to win	race of B-P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B-P cand would have received if district was 55% black VAP	percent of vote B-P cand would have received if district was 50% black VAP	percent of vote B-P cand would have received if district was 45% black VAP	percent of vote B-P cand would have received if district was 40% black VAP	percent of vote B-P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B-P	all others	votes cast for office	B-P	all others					
GENERAL ELECTIONS												
2020 President	W	53.0	96.1	3.9	79.6	42.1	57.9	66.3	63.7	61.1	58.7	56.4
2020 US Senate	W	56.6	95.0	5.0	78.7	43.5	56.5	67.6	65.0	62.6	60.2	57.9
2018 Governor	W	45.1	95.3	4.7	59.8	46.2	53.8	69.8	67.3	64.9	62.6	60.4
2018 Secretary of State	W	44.9	95.2	4.8	58.6	48.0	52.0	70.8	68.5	66.2	64.0	61.8
2018 Attorney General	W	44.6	94.1	5.9	58.4	41.1	58.9	66.7	64.0	61.5	59.0	56.5
2018 US Senate	W	45.1	95.2	4.8	59.6	45.8	54.2	69.5	67.1	64.7	62.4	60.1
2016 President	W	59.0	96.4	3.6	67.3	37.4	62.6	67.9	65.0	62.0	59.2	56.3
2014 Governor	W	35.8	95.8	4.2	47.5	51.8	48.2	72.9	70.7	68.6	66.5	64.5
2014 Secretary of State	AA	35.9	95.6	4.4	46.1	46.2	53.8	70.3	67.8	65.4	63.1	60.8
2014 Attorney General	W	35.9	95.6	4.4	45.5	45.2	54.8	69.9	67.4	65.0	62.6	60.2
2014 US Senate	W	36.1	95.6	4.4	47.1	58.6	41.4	76.5	74.7	72.9	71.1	69.4
2012 President	AA	61.0	97.6	2.4	68.4	53.7	46.3	76.6	74.4	72.2	70.1	67.9
2012 US Senate	W	60.7	96.7	3.3	67.5	60.2	39.8	79.3	77.5	75.7	73.9	72.1

Table 7: Percent BVAP Needed to Win, Oakland County

OAKLAND COUNTY Percent Black VAP needed to win	race of B-P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B-P cand would have received if district was 55% black VAP	percent of vote B-P cand would have received if district was 50% black VAP	percent of vote B-P cand would have received if district was 45% black VAP	percent of vote B-P cand would have received if district was 40% black VAP	percent of vote B-P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B-P	all others	votes cast for office	B-P	all others					
GENERAL ELECTIONS												
2020 President	W	71.6	93.4	6.6	86.4	45.9	54.1	69.8	67.4	65.1	62.8	60.6
2020 US Senate	W	71.4	92.1	7.9	85.4	43.5	56.5	68.1	65.6	63.2	60.9	58.6
2018 Governor	W	53.2	94.1	5.9	68.8	47.4	52.6	70.1	67.8	65.5	63.3	61.1
2018 Secretary of State	W	53.1	94.2	5.8	67.7	47.5	52.5	70.4	68.0	65.8	63.5	61.4
2018 Attorney General	W	52.5	93.8	6.2	67.0	43.0	57.0	67.9	65.3	62.8	60.4	58.1
2018 US Senate	W	53.2	93.0	7.0	68.7	45.5	54.5	68.6	66.2	63.9	61.7	59.5
2016 President	W	65.6	95.1	4.9	73.5	39.1	60.9	68.3	65.5	62.7	60.0	57.3
2014 Governor	W	46.3	94.8	5.2	54.6	30.6	69.4	63.3	60.1	56.9	53.8	50.7
2014 Secretary of State	AA	45.9	94.6	5.4	53.1	26.4	73.6	61.4	58.0	54.7	51.3	48.1
2014 Attorney General	W	45.8	94.1	5.9	52.6	32.9	67.1	64.5	61.4	58.4	55.4	52.4
2014 US Senate	W	46.5	95.0	5.0	53.7	46.7	53.3	71.5	69.1	66.7	64.4	62.1
2012 President	AA	68.9	95.7	4.3	75.7	42.1	57.9	70.3	67.6	65.0	62.3	59.7
2012 US Senate	W	67.8	95.8	4.2	74.0	47.6	52.4	73.1	70.6	68.3	65.9	63.5

Table 8: Percent BVAP Needed to Win, Saginaw County

SAGINAW COUNTY Percent Black VAP needed to win	race of B-P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B-P cand would have received if district was 55% black VAP	percent of vote B-P cand would have received if district was 50% black VAP	percent of vote B-P cand would have received if district was 45% black VAP	percent of vote B-P cand would have received if district was 40% black VAP	percent of vote B-P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B-P	all others	votes cast for office	B-P	all others					
GENERAL ELECTIONS												
2020 President	W	48.6	95.3	4.7	79.6	36.3	63.7	61.5	58.7	56.0	53.4	50.9
2020 US Senate	W	48.4	93.8	6.2	78.7	37.5	62.5	61.7	58.9	56.3	53.9	51.5
2018 Governor	W	37.7	93.6	6.4	63.0	40.9	59.1	63.2	60.6	58.2	55.9	53.7
2018 Secretary of State	W	38.0	93.7	6.3	61.4	39.2	60.8	62.7	60.0	57.5	55.1	52.8
2018 Attorney General	W	37.6	93.4	6.6	61.0	33.3	66.7	59.1	56.2	53.4	50.8	48.3
2018 US Senate	W	37.8	93.5	6.5	62.8	39.3	60.7	62.3	59.7	57.2	54.8	52.6
2016 President	W	52.3	95.0	5.0	70.2	30.6	69.4	61.3	58.1	55.0	52.0	49.0
2014 Governor	W	32.7	94.1	5.9	50.8	42.2	57.8	65.1	62.5	60.1	57.8	55.6
2014 Secretary of State	AA	32.6	94.4	5.6	49.2	36.3	63.7	62.3	59.5	56.7	54.1	51.6
2014 Attorney General	W	32.4	94.1	5.9	50.1	32.6	67.4	59.8	56.8	53.9	51.1	48.5
2014 US Senate	W	32.7	94.1	5.9	50.1	50.6	49.4	69.9	67.8	65.7	63.8	61.9
2012 President	AA	56.2	95.7	4.3	70.3	42.9	57.1	69.0	66.4	63.8	61.3	58.8
2012 US Senate	W	55.7	95.4	4.6	68.7	52.3	47.7	73.8	71.6	69.5	67.4	65.4

It is important to remember that winning office in the United States usually requires winning two elections: a primary and a general election. The tables above consider only general election contests. Producing a comparable set of tables for Democratic primaries is not possible. First, there was only one statewide Democratic primary – the 2018 primary contest for Governor. There were three candidates competing in this election and because 50% of the vote was not required to win the election, a mathematical equation setting the percentage needed to win 50% of the vote does not work. Second, Black voters were not cohesive in support of any one of these three candidates. In fact, the candidate preferred by even the plurality of Black voters was not the same in the four counties examined. Drawing a district that Black-preferred candidate could win this primary is not possible when there is no Black-preferred candidate.

In areas where most of the white voters are likely to vote in Republican primaries, the inability to calculate the percent needed to win in Democratic primaries is not particularly important. Black voters will dominate the Democratic primary unless they make up only a very small portion of the voters in the district. However, in the counties examined in Michigan, many white voters elect to participate in the Democratic primary, especially in Wayne County. As the percentage Black VAP of proposed districts decreases, it may become more challenging for Black-preferred candidates to win not only the general election but the Democratic primary – but only if voting in Democratic primaries is racially polarized. Unfortunately, it is not possible to ascertain exactly how much more difficult it would be – or even if it would be more difficult – given the lack of Democratic primary election data.

B. Threshold of Representation in the Current State House and Senate Districts

A useful check on the percent needed to win estimates found in Tables 5-8 that can be done prior to drawing any districts is to produce what have been referred to by some political scientists as “threshold of representation” tables. These tables are designed to identify the lowest minority percentage above which minority candidates are consistently elected. Tables 9 and 10, below, report the BVAP of the current Michigan state house and senate districts with over 20% BVAP, and indicate the race and party of the candidate elected to represent the district.²³ Sorted

²³ There are no African American state senators or representatives elected from districts that are less than 20% Black in VAP. However, there are other minority candidates (Hispanic, Asian, and Middle Eastern) elected to state house districts with considerably less than 20% BVAP.

by the percent BVAP, the tables can sometimes provide evidence of a clear breakpoint between those districts that are probably electing candidates of choice and those that are not.²⁴

An examination Table 9 indicates that every Michigan state house district with a BVAP of at least 35% elects a minority representative to the state house. In fact, every district with a BVAP of more than 26.53% elects a minority to office with the exception of District 49 in Genesee County. And the racial bloc voting analysis of House District 49 indicates that the white incumbent, John Cherry, is the candidate of choice of Black voters, even in the 2018 Democratic primary when he faced several African American candidates.

Table 9: Threshold of Representation for State House Districts, 2021

State House District	Total VAP	Black VAP	Percent Black VAP	Name	Party	Race	Percent of Vote 2020
7	60347	57256	94.27%	Helena Scott	D	Black	93.00%
8	62448	58042	92.42%	Stephanie A. Young	D	Black	96.70%
3	54130	49536	90.93%	Shri Thanedar	D	Asian	93.30%
9	62529	46806	74.22%	Karen Whitsett	D	Black	94.20%
10	69209	46977	67.41%	Mary Cavanagh	D	Hispanic	84.80%
1	59788	38993	64.76%	Tenisha R. Yancey	D	Black	75.80%
35	78306	49325	62.50%	Kyra Harris Bolden	D	Black	82.90%
34	49491	30419	60.96%	Cynthia R. Neeley	D	Black	86.70%
2	57031	33142	57.70%	Joe Tate	D	Black	74.10%
5	49290	27190	54.12%	Cynthia A. Johnson	D	Black	93.40%
6	67505	36182	52.86%	Tyrone Carter	D	Black	100.00%
4	68749	32761	47.27%	Abraham Aiyash	D	ME	89.80%
29	72319	26621	36.04%	Brenda Carter	D	Black	72.90%
95	58640	21320	35.50%	Amos O'Neal	D	Black	70.10%
49	64844	19308	29.47%	John D. Cherry	D	White	68.90%
54	72426	21212	28.79%	Ronnie Peterson	D	Black	77.70%
12	73883	20207	26.97%	Alex Garza	D	Hispanic	62.40%
11	73586	19760	26.53%	Jewell Jones	D	Black	65.20%
92	66135	16957	25.34%	Terry J. Sabo	D	White	65.30%
27	73337	18051	24.35%	Regina Weiss	D	White	74.40%
16	74617	17556	23.25%	Kevin Coleman	D	White	62.50%
75	76956	18127	22.56%	David LaGrand	D	White	74.60%
68	71672	16808	22.44%	Sarah Anthony	D	Black	75.90%
18	75251	16519	21.76%	Kevin Hertel	D	White	60.30%
22	68758	14588	21.00%	Richard Steenland	D	White	59.90%
60	74176	15887	20.97%	Julie M. Rogers	D	White	71.40%

²⁴ Without the confirmation provided by a racial bloc voting analysis, it could conceivably be the case that the minority legislator is not the candidate of choice of minority voters.

Interpreting Table 10, for the Michigan state senate, is less straightforward. The four districts with BVAP percentages over 47% elect African Americans to office. However, Stephanie Chang, the state senator in District 1, which is 44.68% BVAP, was not the candidate of choice of Black voters in the 2018 Democratic primary, though she is the candidate of choice in the general election.

Table 10: Threshold of Representation for State Senate Districts, 2021

State Senate District	Total VAP	Black VAP	Percent Black VAP	Name	party	race	Percent of vote 2018
5	203828	111418	54.25%	Betty Alexander	D	Black	77.4%
2	169357	86961	50.82%	Adam Hollier	D	Black	75.7%
3	186758	90737	48.14%	Sylvia Santana	D	Black	81.8%
4	180199	85691	47.00%	Marshall Bullock	D	Black	78.3%
1	193087	87075	44.68%	Stephanie Chang	D	Asian	72.0%
11	229870	82336	35.48%	Jeremy Moss	D	White	76.7%
27	175918	54071	30.42%	Jim Ananich	D	White	71.2%
9	219325	50800	22.95%	Paul Wojno	D	White	65.9%
6	217734	46997	21.29%	Erika Geiss	D	Black	61.4%

C. Recompiled Election Results

As noted above, once draft districts have been drawn, there is a second approach available for ascertaining whether a proposed district is likely to provide minority voters with an opportunity to elect their candidates of choice to legislative or congressional office. This approach relies on recompiling election results from previous elections to see if the candidates preferred by minority voters would win in the draft district. This process entails (1) identifying “bellwether” elections, (2) disaggregating the precinct level results for these elections down to the census block level and then (3) re-aggregating the results up to conform to proposed district boundaries to determine if the minority-preferred candidate would win. This recompilation can only be done

for elections that cover a broad enough area to encompass all of the draft districts, hence only statewide elections can be used for this exercise. “Bellwether” elections are statewide elections that included minority candidates who were the candidates of choice of minority voters but were not supported by white voters.

Although there were six statewide general elections that included African American candidates or running mates, the African American was the candidate of choice of Black voters in only four of these contests: U.S. President in 2012 and 2020, Secretary of State in 2014, and Governor in 2018. All of these contests were racially polarized statewide, but only the 2014 Secretary of State contest was polarized in all four counties. This election contest was also the contest in which the candidate strongly preferred by Black voters garnered the least amount of white crossover votes. Thus, while recompiled elections results for all four elections provide important information for determining if a proposed district would provide Black voters with an opportunity to elect their preferred candidates in general elections, the single best “bellwether” contest for that purpose is the vote for Godfrey Dillard in 2014.

The redistricting software used by MICRC automatically included recompiled election results for all draft districts for all four of these elections – in fact, it included this information for every statewide general election conducted between 2012 and 2020. Ascertaining if the African American candidates of choice of Black voters, especially Dillard in 2014, carried a proposed district provides evidence that the proposed district in a draft plan will provide Black voters with an opportunity to elect their candidates of choice in general elections.

The redistricting software also reported recompiled election results for the one statewide Democratic primary conducted in the past decade: the 2018 race for Governor. However, because there were three candidates and because Black voters were not cohesive in supporting any of these candidates, these recompiled results are not particularly useful in ascertaining whether a proposed district would provide minority voters with an opportunity to elect their preferred candidates in Democratic primaries.

III. Measuring Partisan Fairness in Redistricting Plans

According to 13(d) of Article IV, Section 6 of the Michigan State Constitution: “Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.” A number of objective mathematical measures have been developed by social scientists and mathematicians to determine if an existing or proposed redistricting map disadvantages one political party relative to the other. Using these measures, we can compare an existing or proposed redistricting map to a large set of other possible maps to determine if the proposed map exhibits more or less political bias. The maps used for comparative purposes can be previous redistricting maps used in the state, or the redistricting maps of other states, or they can be computer simulated maps.

I proposed incorporating three measures of partisan fairness measures into the redistricting software used by the MICRC to draw redistricting maps. The reasons for my choice were as follows:

- The measures are easy to understand and straightforward to calculate. They produce scores that indicate both the direction and the magnitude of any political bias in the redistricting map.
- Because I easily calculated the scores for each of these measures in excel, I knew it would be possible to incorporate an automated report function into the redistricting software that could provide these scores for any draft plans drawn.
- Although these three measures have only recently been developed, they have all have been introduced and accepted by federal and state courts as useful tools for determining if a redistricting map is politically fair.

The three partisan fairness measures I selected are the lopsided margins test, the mean-median difference, and the efficiency gap.

In addition to these three measures, a simple metric for indicating whether a redistricting plan is fair is to compare the proportion of the statewide vote each party receives to the proportion of the districts each party wins or is likely to win under the proposed plan. The proportionality of a redistricting plan is calculated by subtracting the percentage of votes won by the party from the percentage of seats that party won (or would win) in congressional and state

legislative elections. So, for example, if Party A won 52.3% of the vote statewide but only won 44.7% of the seats in the state senate, the proportionality bias would be $44.7 - 52.3$ or -7.6 in favor of Party B.

Each of these measures use historical election results to evaluate the partisan fairness of redistricting plans. However, in the case of proposed districts, previous election results must be reconfigured to conform to the proposed district boundaries to evaluate the partisan fairness of the proposed plans.²⁵ A composite election index was constructed using the statewide general elections between 2012 and 2020 – all 13 of the election contests included in the GIS redistricting database and analyzed in the racial bloc voting analysis. The composite index was weighted to give each election cycle equal weight in the index. However, the partisan fairness report function in the redistricting software was designed so that any of the individual 13 elections could be substituted for the composite index in calculating the partisan fairness scores.

A. Lopsided Margins Test

In a perfectly fair plan – at least in a state in which the two political parties are competitive (closely divided) – we would expect a mix of districts, some strongly partisan districts, some moderately reliable districts, and some tossups – but each party would have a roughly similar mix. If one party has a smaller number of victories with larger margins of victory than the other party, this is an indication that one party is being disfavored over the other in the map. This pattern of outcomes can be quantified by sorting the districts into two groups, by winning party. Each party’s winning vote share can then be compared to see if one party has significantly higher margin of victories than the other.²⁶ The following is an example of how this is calculated:

²⁵ Both the efficiency gap and the mean-median difference have been used to evaluate computer simulated alternative redistricting maps for comparative purposes in partisan gerrymandering challenges. Election results for select statewide elections were reconfigured to determine how the candidates in these elections would have fared in the alternative districts.

²⁶ This measure was first discussed in Sam Wang, “Three Tests for Practical Evaluation of Partisan Gerrymandering,” *Stanford Law Journal*, 16, June 2016. Available at: <https://www.stanfordlawreview.org/print/article/three-tests-for-practical-evaluation-of-partisan-gerrymandering/>

District	Party A	Party B	Total Votes	Percent of Votes		Party Wins	
				Party A	Party B	Party A	Party B
1	279	120	399	69.9%	30.1%	69.9%	
2	172	198	370	46.5%	53.5%		53.5%
3	167	192	359	46.5%	53.5%		53.5%
4	148	212	360	41.1%	58.9%		58.9%
5	185	180	365	50.7%	49.3%	50.7%	
6	139	193	332	41.9%	58.1%		58.1%
7	169	201	370	45.7%	54.3%		54.3%
8	179	206	385	46.5%	53.5%		53.5%
9	234	99	333	70.3%	29.7%	70.3%	
10	178	199	377	47.2%	52.8%		52.8%
TOTAL	1850	1800	3650	50.7%	49.3%	63.6%	54.9%

Party A in the example is winning districts with a much higher average vote (63.6%) than Party B (54.9%) – and the difference between the two percentages is 8.7 (63.6 – 54.9). This indicates that Party A supporters are packed into a few districts that it wins by large margins. Party B, on the other hand, is winning substantially more districts with substantially lower vote margins.

B. Mean-Median Difference

Comparing a dataset’s mean and median is a common statistical analysis used to assess how skewed the dataset is – if the dataset is balanced, the mean will be very close in value to its median. As a dataset becomes more skewed, the mean and median begin to diverge; looking at the difference between the two can be used determine the extent to which the data is skewed.

Based on this principle, the mean-median district vote share difference compares a party’s mean district vote share to its median district vote share:²⁷

- Mean = average party vote share across all districts
- Median = party vote share in the median district when districts are sorted on share of party vote

²⁷ This approach to ascertaining political bias in redistricting maps was proposed by Michael D. McDonald and Robin Best in “Unfair Partisan Gerrymanders in Politics and Law: A Diagnostic Applied to Six Cases,” *Election Law Journal* 14(4), 2015 (available at: <https://www.liebertpub.com/doi/abs/10.1089/elj.2015.0358>). It was further quantified by Wang (see full citation above).

The difference between the mean and median vote shares provides a measure of whether the redistricting map produces skewed election results. The following is an example of how this is calculated:

Party A	Percentages l
	41.1%
	41.9%
	45.7%
	46.5%
	46.5%
	46.5%
	47.2%
	50.7%
	69.9%
	70.3%
District median percentage	46.5%
Statewide mean percentage	50.7%
Mean-Median Difference	4.2%

In this example, Party A received 50.7% of the statewide vote. Party A's median vote share (46.5%) is 4.2% lower than its mean vote share of 50.7%. This indicates that Party A must win more districts than Party B to win half of the seats – the redistricting map is skewed in favor of Party B. In fact, Party A would have had to win 54.2% ($50.0 + 4.2$) of the statewide vote to win 50% of the seats.

C. Efficiency Gap

This measure, introduced by University of Chicago law professor Nick Stephanopoulos and Public Policy Institute of California research fellow Eric McGhee, looks at the number of “wasted votes” across districts.²⁸

In any election, nearly 50 percent of votes are wasted: all votes cast for a losing candidate, and any votes cast for a winning candidate beyond the threshold needed to win (50 percent in a two-candidate contest). In a hypothetical map with perfect partisan symmetry, both

²⁸ Nicholas O. Stephanopoulos and Eric M. McGhee, “Partisan Gerrymandering and the Efficiency Gap,” *University of Chicago Law Review*: Vol. 82 (2), 2015. Available at: <https://chicagounbound.uchicago.edu/uclrev/vol82/iss2/4>.

parties would waste the same number of votes. A large difference between the parties’ wasted votes indicates one party is treated more favorably than the other by the redistricting map. This is because the plan packs and cracks one party’s supporters more than the other party’s supporters.

The efficiency gap is calculated by taking one party’s total wasted votes in an election, subtracting the other party’s total wasted votes, and dividing this by the total number of votes cast. It captures in a single number the extent to which district lines waste the two parties votes unequally.

$$\text{Efficiency Gap} = \frac{[\text{Party A wasted votes}] - [\text{Party B wasted votes}]}{\text{total number of votes cast statewide}}$$

Example:

District	Party A	Party B	Total Votes	Lost Votes		minimum	Surplus Votes		Total Wasted Votes	
				Party A	Party B	to win	Party A	Party B	Party A	Party B
1	279	120	399	0	120	200	79	0	79	120
2	172	198	370	172	0	185	0	13	172	13
3	167	192	359	167	0	180	0	12	167	12
4	148	212	360	148	0	180	0	32	148	32
5	185	180	365	0	180	183	2	0	2	180
6	139	193	332	139	0	166	0	27	139	27
7	169	201	370	169	0	185	0	16	169	16
8	179	206	385	179	0	193	0	13	179	13
9	234	99	333	0	99	167	67	0	67	99
10	178	199	377	178	0	189	0	10	178	10
TOTAL	1850	1800	3650	1152	399		148	123	1300	522

In this example, supporters of Party A cast 1152 votes for losing candidates and 148 surplus votes – votes beyond what was necessary to elect Party A candidates. Supporters of Party B, on the other hand, cast only 399 of their votes for losing candidates and 522 surplus votes. Adding together these two sets of votes, Party A had a total of 1300 wasted votes; Party B had a total of only 522 votes. The efficiency gap is therefore calculated as 21.3% ($1300-522/3650 = 778/3650 = .213$). This efficiency gap in favor of Party B can be interpreted as the percentage of seats Party B won above what would be expected in a politically fair or neutral map.

D. Court Acceptance of these Measures

These three measures have all been developed within the last decade and therefore do not have a long history of consideration by the courts. However, they have been introduced recently

in the context of partisan gerrymandering challenges. While recognizing each of the measures have some disadvantages, the courts in each instance relied on these measures (in addition to other measures introduced) to find the plans before them were politically biased towards one of the political parties at the expense of the other.²⁹

²⁹ Examples of court cases relying on at least one of the measures of political fairness described in this report include: *League of Women Voters of Michigan v. Benson*, in which the federal court held the congressional and state legislative plans in Michigan to be an unconstitutional gerrymander; *Ohio A. Philip Randolph Institute v. Householder*, which held the Ohio congressional map to be an unconstitutional partisan gerrymander; *League of Women Voters of Pennsylvania v. Commonwealth of Pennsylvania* in which the State Supreme Court held the Pennsylvania congressional districts to be in violation of the Pennsylvania Constitution; *Whitford v. Gill* in which the federal court determined the Wisconsin state assembly districts were unconstitutional; *Common Cause v. Rucho* in which the federal court found the North Carolina congressional district plan adopted in 2016 was an unconstitutional partisan gerrymander. This North Carolina decision, along with the Maryland case, *Lamone v. Benisek*, was later overturned by the U.S. Supreme Court on unrelated grounds, but grounds that served to moot all of the federal decisions discussed above. However, in a separate challenge before the North Carolina Superior Court, *Common Cause v. Lewis*, the court held that the state legislative districts violated the North Carolina State Constitution.

APPENDIX A

Statewide				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
2012 General											
U.S. President											
Barack Obama	D	AA	54.2%	98.6	106.5	99.2	97.8	44.0	42.7	43.3	44.5
Mitt Romney	R	W	44.7%	1.2	-6.6	0.4	1.2	54.8	55.9	55.3	54.6
others				0.2	0.2	1.1	1.1	1.3	13.8	1.2	1.0
<i>votes for office</i>				<i>62.1</i>	<i>57.3</i>	<i>59.1</i>	<i>59.1</i>	<i>69.2</i>	<i>66.1</i>	<i>68.1</i>	<i>68.1</i>
U.S. Senate											
Debbie Stabenow	D	W	58.8%	97.3	103.8	99.2	96.8	50.1	49.4	49.1	50.6
Peter Hoekstra	R	W	38.0%	1.2	-5.3	0.5	1.1	46.5	46.9	46.9	46.2
others				1.5	1.5	1.7	2.0	3.4	3.7	3.6	3.2
<i>votes for office</i>				<i>61.6</i>	<i>56.9</i>	<i>58.8</i>	<i>58.8</i>	<i>68.0</i>	<i>64.9</i>	<i>66.9</i>	<i>66.9</i>
2014 General											
Governor											
Mark Schauer	D	W	46.9%	94.4	101.3	97.4	95.7	38.7	37.1	36.2	38.4
Rick Snyder	R	W	50.9%	4.8	-2.2	2.1	2.5	58.9	60.2	61.3	59.4
others				0.8	0.8	1.4	1.8	2.4	2.7	2.5	2.1
<i>votes for office</i>				<i>36.9</i>	<i>31.6</i>	<i>35.1</i>	<i>35.1</i>	<i>49.6</i>	<i>46.7</i>	<i>49.1</i>	<i>49.1</i>
Secretary of State											
Godfrey Dillard	D	AA	42.9%	94.4	102.0	97.6	95.8	33.8	31.9	31.3	33.5
Ruth Johnson	R	W	53.5%	4.2	-3.3	1.5	2.1	62.3	63.9	64.7	62.9
others				1.4	1.3	1.2	2.1	3.9	4.3	4.0	3.6
<i>votes for office</i>				<i>36.5</i>	<i>31.3</i>	<i>34.8</i>	<i>34.8</i>	<i>48.3</i>	<i>45.4</i>	<i>47.8</i>	<i>47.8</i>
Attorney General											
Mark Totten	D	W	44.2%	93.3	101.3	97.0	95.2	34.7	32.8	33.0	35.0
Bill Schuette	R	W	52.1%	5.2	-2.9	2.1	2.5	61.3	62.8	62.9	61.2
others				1.5	1.6	1.2	2.2	4.0	4.4	4.1	3.8
<i>votes for office</i>				<i>36.4</i>	<i>31.2</i>	<i>34.6</i>	<i>34.6</i>	<i>48.3</i>	<i>45.5</i>	<i>47.8</i>	<i>47.8</i>

Statewide				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate											
Gary Peters	D	W	54.6%	96.8	103.9	99.1	96.5	46.2	44.8	45.1	47.3
Terry Lynn Land	R	W	41.3%	2.0	-5.0	0.5	1.6	49.4	50.3	50.2	48.5
others				1.2	1.1	1.0	2.0	4.5	4.8	4.6	4.2
<i>votes for office</i>				36.8	31.5	35.0	35.0	48.9	46.1	48.5	48.5
2016 General											
U.S. President											
Hillary Clinton	D	W	47.3%	96.8	106.3	98.9	97.3	33.6	30.2	32.0	34.3
Donald Trump	R	W	47.5%	2.0	-7.4	0.3	1.1	61.0	63.9	61.6	60.0
others				1.2	1.2	0.8	1.6	5.4	6.0	6.2	5.7
<i>votes for office</i>				58.9	53.6	54.1	54.1	68.2	65.8	67.2	67.2
2018 General											
Governor											
Whitmer/Gilchrist	D	W/AA	53.3%	95.6	104.3	98.6	95.3	41.1	38.9	40.6	44.8
Schuette/Lyons	R	W/W	43.8%	2.5	-6.4	0.6	1.8	56.0	57.9	56.2	52.8
others				1.9	2.1	2.6	2.9	2.9	3.2	2.9	2.5
<i>votes for office</i>				36.6	31.6	35.2	35.2	61.9	61.7	63.3	63.3
Secretary of State											
Jocelyn Benson	D	W	52.9%	95.7	104.7	98.7	95.6	40.1	38.0	39.9	43.9
Mary Treder Lang	R	W	44.0%	2.4	-6.6	0.6	1.8	56.5	58.3	56.4	53.1
others				1.9	1.9	1.7	2.7	3.4	3.7	3.5	2.9
<i>votes for office</i>				36.4	31.6	35.1	35.1	60.9	60.7	62.2	62.2
Attorney General											
Dana Nessel	D	W	49.0%	94.1	103.3	97.7	94.4	36.1	33.6	35.3	39.4
Tom Leonard	R	W	46.3%	2.4	-6.9	0.5	1.7	59.0	61.1	59.3	55.9
others				3.5	3.6	3.0	3.9	4.9	5.3	5.2	45.9
<i>votes for office</i>				36.0	31.2	34.6	34.6	60.4	60.1	61.7	61.7

Statewide				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate											
Debbie Stabenow	D	W	52.3%	93.9	102.5	97.5	94.3	40.3	38.1	39.5	43.7
John James	R	AA	45.8%	3.8	-5.1	1.1	2.0	57.8	59.9	58.4	55.1
others				2.3	2.5	2.4	3.7	1.9	2.0	1.7	1.2
<i>votes for office</i>				<i>36.5</i>	<i>31.5</i>	<i>35.0</i>	<i>35.0</i>	<i>61.8</i>	<i>61.6</i>	<i>63.1</i>	<i>63.1</i>
2020 General											
U.S. President											
Joseph Biden	D	W	50.6%	95.4	105.0	98.4	96.2	37.0	34.7	36.9	40.0
Donald Trump	R	W	47.8%	3.8	-5.4	1.1	1.9	61.5	63.6	61.2	59.1
others				0.8	0.8	1.3	1.9	1.6	1.7	1.6	1.0
<i>votes for office</i>				<i>61.2</i>	<i>53.3</i>	<i>55.2</i>	<i>55.2</i>	<i>79.1</i>	<i>77.7</i>	<i>79.0</i>	<i>79.0</i>
U.S. Senate											
Gary Peters	D	W	49.9%	93.4	102.3	97.2	93.9	36.9	34.8	36.4	39.4
John James	R	AA	48.2%	3.8	-5.6	1.1	1.7	61.5	63.5	61.7	59.8
others				2.7	3.1	3.7	4.4	1.6	1.6	1.4	0.9
<i>votes for office</i>				<i>59.9</i>	<i>53.0</i>	<i>55.0</i>	<i>55.0</i>	<i>78.3</i>	<i>76.8</i>	<i>78.1</i>	<i>78.1</i>

County: Genesee			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
2012 General										
U.S. President										
Barack Obama	D	AA	99.0	107.0	99.5	97.6	52.9	52.7	52.8	53.7
Mitt Romney	R	W	0.7	-6.7	0.5	1.3	46.1	46.0	46.0	45.5
others			0.2	0.3	0.7	1.1	1.1	1.3	0.9	0.8
<i>votes for office</i>			<i>64.1</i>	<i>57.4</i>	<i>61.0</i>	<i>61.0</i>	<i>70.1</i>	<i>65.1</i>	<i>68.4</i>	<i>68.4</i>
U.S. Senate										
Debbie Stabenow	D	W	97.8	103.9	99.7	96.7	59.7	59.8	59.4	60.2
Peter Hoekstra	R	W	0.9	-5.3	0.5	1.3	36.7	36.3	36.5	35.2
others			1.3	1.3	1.1	2.0	3.6	3.9	3.8	32.2
<i>votes for office</i>			<i>63.7</i>	<i>57.3</i>	<i>60.7</i>	<i>60.7</i>	<i>69.2</i>	<i>64.4</i>	<i>67.5</i>	<i>67.5</i>
2014 General										
Governor										
Mark Schauer	D	W	97.1	104.2	99.3	95.8	50.7	50.5	49.5	51.8
Rick Snyder	R	W	2.0	-5.0	0.6	2.3	46.5	46.5	47.5	45.8
others			0.9	0.9	1.1	1.9	2.8	3.0	2.8	2.4
<i>votes for office</i>			<i>37.6</i>	<i>31.4</i>	<i>35.8</i>	<i>35.8</i>	<i>48.8</i>	<i>44.6</i>	<i>47.5</i>	<i>67.5</i>
Secretary of State										
Godfrey Dillard	D	AA	96.1	104.3	99.0	95.6	45.3	45.8	44.2	46.2
Ruth Johnson	R	W	2.6	-5.3	0.3	2.2	50.7	50.5	51.5	50.2
others			1.3	1.1	1.1	2.2	4.1	4.3	4.1	3.6
<i>votes for office</i>			<i>37.4</i>	<i>31.5</i>	<i>35.9</i>	<i>35.9</i>	<i>47.4</i>	<i>43.3</i>	<i>46.1</i>	<i>46.1</i>
Attorney General										
Mark Totten	D	W	95.2	103.4	98.7	95.6	44.2	43.9	43.3	45.2
Bill Schuette	R	W	3.7	-4.4	0.8	2.4	52.6	52.6	53.3	51.9
others			1.1	1.1	0.9	2.0	3.3	3.5	3.3	2.9
<i>votes for office</i>			<i>37.3</i>	<i>31.4</i>	<i>35.9</i>	<i>35.9</i>	<i>46.8</i>	<i>42.8</i>	<i>45.5</i>	<i>45.5</i>

County: Genesee			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Gary Peters	D	W	97.2	103.9	99.5	95.6	57.0	57.0	56.4	58.6
Terry Lynn Land	R	W	1.7	-4.8	0.6	2.2	38.7	38.3	39.0	37.5
others			1.2	0.9	0.8	2.2	4.3	4.6	4.4	3.9
<i>votes for office</i>			<i>37.6</i>	<i>31.5</i>	<i>36.1</i>	<i>36.1</i>	<i>48.3</i>	<i>44.3</i>	<i>47.1</i>	<i>47.1</i>
2016 General										
U.S. President										
Hillary Clinton	D	W	97.5	106.0	99.5	96.4	37.8	34.5	35.3	37.4
Donald Trump	R	W	1.5	-7.0	0.4	1.7	57.0	59.4	58.5	57.1
others			1.0	1.1	1.0	1.9	5.2	6.1	6.1	5.5
<i>votes for office</i>			<i>70.6</i>	<i>59.8</i>	<i>59.0</i>	<i>59.0</i>	<i>70.9</i>	<i>63.5</i>	<i>67.3</i>	<i>67.3</i>
2018 General										
Governor										
Whitmer/Gilchrist	D	W/AA	96.2	103.6	99.2	95.3	46.7	45.5	45.8	46.2
Schuette/Lyons	R	W/W	2.2	-5.5	0.2	2.0	50.5	50.9	50.5	50.8
others			1.6	1.9	1.7	2.7	2.8	3.6	3.2	3.0
<i>votes for office</i>			<i>54.2</i>	<i>43.5</i>	<i>45.1</i>	<i>45.1</i>	<i>62.6</i>	<i>57.0</i>	<i>59.8</i>	<i>59.8</i>
Secretary of State										
Jocelyn Benson	D	W	96.5	103.7	99.2	95.2	45.7	44.7	44.9	48.0
Mary Treder Lang	R	W	2.0	-5.8	0.3	2.0	50.9	51.2	50.8	48.7
others			1.5	2.1	1.4	2.8	3.4	4.2	3.7	3.4
<i>votes for office</i>			<i>53.9</i>	<i>43.5</i>	<i>44.9</i>	<i>44.9</i>	<i>61.3</i>	<i>55.7</i>	<i>58.6</i>	<i>58.6</i>
Attorney General										
Dana Nessel	D	W	94.5	102.3	98.6	94.1	39.9	37.6	37.9	41.1
Tom Leonard	R	W	2.3	-5.8	0.6	2.0	55.3	56.3	55.9	53.7
others			3.2	3.5	3.8	3.9	47.7	6.0	5.1	5.1
<i>votes for office</i>			<i>53.7</i>	<i>43.2</i>	<i>44.6</i>	<i>44.6</i>	<i>61.0</i>	<i>55.6</i>	<i>58.4</i>	<i>58.4</i>

County: Genesee			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Debbie Stabenow	D	W	95.3	103.2	98.9	95.2	43.8	42.6	42.8	45.8
John James	R	AA	3.0	-5.3	0.7	2.1	54.3	54.8	54.6	52.6
others			1.7	2.2	1.7	2.8	1.9	2.6	1.8	1.6
<i>votes for office</i>			<i>54.2</i>	<i>43.8</i>	<i>45.1</i>	<i>45.1</i>	<i>62.4</i>	<i>56.8</i>	<i>59.6</i>	<i>59.6</i>
2020 General										
U.S. President										
Joseph Biden	D	W	96.5	104.4	99.3	96.1	39.9	37.7	38.6	42.1
Donald Trump	R	W	3.0	-5.1	0.5	2.1	58.7	60.5	59.6	56.7
others			0.5	0.7	0.9	1.8	1.4	1.8	1.8	1.2
<i>votes for office</i>			<i>67.3</i>	<i>54.8</i>	<i>53.0</i>	<i>53.0</i>	<i>81.5</i>	<i>75.4</i>	<i>79.6</i>	<i>79.6</i>
U.S. Senate										
Gary Peters	D	W	95.1	103.0	98.9	95.0	41.1	39.7	40.1	43.5
John James	R	AA	3.2	-5.3	0.7	1.8	57.4	58.4	57.6	55.5
others			1.7	2.1	2.7	3.2	1.6	2.0	1.5	1.1
<i>votes for office</i>			<i>67.1</i>	<i>54.8</i>	<i>56.6</i>	<i>56.6</i>	<i>80.6</i>	<i>74.4</i>	<i>78.7</i>	<i>78.7</i>

County: Saginaw			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
2012 General										
U.S. President										
Barack Obama	D	AA		114.3	99.5	95.7	41.6	39.2	41.1	42.9
Mitt Romney	R	W		-14.8	0.4	2.5	57.0	59.1	57.1	55.9
others				0.2	0.6	1.8	1.5	1.7	1.7	1.2
<i>votes for office</i>				56.7	56.2	56.2	71.4	69.5	70.3	70.3
U.S. Senate										
Debbie Stabenow	D	W		111.0	99.5	95.4	51.0	49.0	50.1	52.3
Peter Hoekstra	R	W		-11.6	0.7	2.2	46.0	47.6	46.3	44.9
others				0.7	0.0	2.4	2.9	3.3	3.3	2.8
<i>votes for office</i>				56.3	55.7	55.7	69.9	67.7	68.7	68.7
2014 General										
Governor										
Mark Schauer	D	W		11.2	99.6	94.1	41.1	38.4	39.1	42.2
Rick Snyder	R	W		-12.3	0.5	3.0	56.3	58.9	58.1	55.7
others				1.0	0.7	2.8	2.6	2.7	2.6	2.1
<i>votes for office</i>				31.1	32.7	32.7	51.5	49.9	50.8	50.8
Secretary of State										
Godfrey Dillard	D	AA		111.3	99.2	94.4	35.3	32.6	33.5	36.3
Ruth Johnson	R	W		-12.5	0.5	2.8	60.5	63.0	62.0	59.9
others				1.1	0.9	2.8	4.2	4.5	4.4	3.8
<i>votes for office</i>				31.4	32.6	32.6	49.9	48.4	49.2	49.2
Attorney General										
Mark Totten	D	W		110.7	98.6	94.1	32.1	28.9	29.8	32.6
Bill Schuette	R	W		-12.1	0.5	2.9	65.2	68.2	67.2	65.1
others				1.3	1.1	3.0	2.7	3.0	2.9	23.3
<i>votes for office</i>				31.0	32.4	32.4	50.8	49.3	50.1	50.1

County: Saginaw			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Gary Peters	D	W		110.3	99.5	94.1	48.3	46.7	47.6	50.6
Terry Lynn Land	R	W		-10.6	0.7	3.0	47.8	49.2	47.9	45.8
others				0.5	0.4	2.9	3.9	4.3	4.2	3.5
<i>votes for office</i>				<i>31.2</i>	<i>32.7</i>	<i>32.7</i>	<i>50.8</i>	<i>49.2</i>	<i>50.1</i>	<i>50.1</i>
2016 General										
U.S. President										
Hillary Clinton	D	W		116.7	99.6	95.0		25.1	28.1	30.6
Donald Trump	R	W		-17.2	0.5	2.5		69.0	66.1	64.0
others				0.4	0.0	2.5		5.8	5.6	5.4
<i>votes for office</i>				<i>55.5</i>	<i>52.3</i>	<i>52.3</i>		<i>69.0</i>	<i>70.2</i>	<i>70.2</i>
2018 General										
Governor										
Whitmer/Gilchrist	D	W/AA		112.4	99.4	93.6		34.8	36.4	40.9
Schuette/Lyons	R	W/W		-14.2	0.6	2.9		62.4	60.3	56.9
others				1.8	1.6	3.5		2.8	2.5	2.2
<i>votes for office</i>				<i>38.9</i>	<i>37.7</i>	<i>37.7</i>		<i>61.5</i>	<i>63.0</i>	<i>63.0</i>
Secretary of State										
Jocelyn Benson	D	W		113.3	99.6	93.7		33.6	35.4	39.2
Mary Treder Lang	R	W		-14.9	0.6	3.2		62.8	60.6	57.7
others				3.5	1.2	3.1		3.6	3.3	3.0
<i>votes for office</i>				<i>39.7</i>	<i>38.0</i>	<i>38.0</i>		<i>60.0</i>	<i>61.4</i>	<i>61.4</i>
Attorney General										
Dana Nessel	D	W		112.5	99.0	93.4		27.6	29.0	33.3
Tom Leonard	R	W		-15.5	0.5	2.6		66.8	64.6	61.7
others				3.0	2.1	4.0		5.6	5.5	5.0
<i>votes for office</i>				<i>38.7</i>	<i>37.6</i>	<i>37.6</i>		<i>59.7</i>	<i>61.0</i>	<i>61.0</i>

County: Saginaw			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Debbie Stabenow	D	W		110.6	99.3	93.5		33.7	34.6	39.3
John James	R	AA		-13.0	0.8	2.9		64.5	63.0	59.6
others				2.4	2.2	3.6		1.8	1.8	1.2
<i>votes for office</i>				<i>39.2</i>	<i>37.8</i>	<i>37.8</i>		<i>61.5</i>	<i>62.8</i>	<i>62.8</i>
2020 General										
U.S. President										
Joseph Biden	D	W		114.2	99.0	95.3		29.3	32.0	36.3
Donald Trump	R	W		-14.9	0.6	2.7		69.0	66.2	62.6
others				0.6	1.1	2.0		1.6	1.5	1.1
<i>votes for office</i>				<i>50.7</i>	<i>48.6</i>	<i>48.6</i>		<i>78.3</i>	<i>79.6</i>	<i>79.6</i>
U.S. Senate										
Gary Peters	D	W		112.5	99.5	93.8		31.1	33.1	37.5
John James	R	AA		-14.7	0.6	3.0		67.3	65.0	61.6
others				2.1	2.8	3.2		1.5	1.2	0.9
<i>votes for office</i>				<i>50.7</i>	<i>48.4</i>	<i>48.4</i>		<i>77.2</i>	<i>78.7</i>	<i>78.7</i>

County: Oakland			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
2012 General										
U.S. President										
Barack Obama	D	AA	98.2	111.7	99.4	95.7	43.9	39.5	40.7	42.1
Mitt Romney	R	W	1.6	-11.8	0.5	2.3	55.0	59.4	58.1	57.2
others			0.3	0.2	1.7	2.1	1.1	1.1	1.0	0.6
<i>votes for office</i>			<i>78.9</i>	<i>69.2</i>	<i>68.9</i>	<i>68.2</i>	<i>75.7</i>	<i>74.8</i>	<i>75.7</i>	<i>75.7</i>
U.S. Senate										
Debbie Stabenow	D	W	97.3	110.5	99.1	95.8	48.4	44.5	45.7	47.6
Peter Hoekstra	R	W	1.6	-11.4	0.0	1.9	47.9	51.8	50.3	49.2
others			1.1	0.9	0.8	2.3	3.7	3.7	3.5	3.2
<i>votes for office</i>			<i>78.3</i>	<i>69.2</i>	<i>67.8</i>	<i>67.8</i>	<i>74.0</i>	<i>73.0</i>	<i>74.0</i>	<i>74.0</i>
2014 General										
Governor										
Mark Schauer	D	W	94.5	108.9	99.1	94.8	33.9	27.9	28.2	30.6
Rick Snyder	R	W	5.0	-9.5	0.8	2.8	64.1	70.1	69.8	68.1
others			0.5	1.9	1.0	2.5	2.0	2.0	1.9	1.3
<i>votes for office</i>			<i>51.5</i>	<i>44.4</i>	<i>46.3</i>	<i>46.3</i>	<i>54.5</i>	<i>53.6</i>	<i>54.6</i>	<i>54.6</i>
Secretary of State										
Godfrey Dillard	D	AA	93.3	109.7	99.1	94.6	29.1	23.5	24.3	26.4
Ruth Johnson	R	W	5.4	-9.5	0.4	2.7	67.9	73.5	72.7	71.4
others			1.3	1.9	1.2	2.7	2.9	3.0	2.7	2.2
<i>votes for office</i>			<i>51.1</i>	<i>44.4</i>	<i>45.9</i>	<i>45.9</i>	<i>53.2</i>	<i>52.1</i>	<i>53.1</i>	<i>53.1</i>
Attorney General										
Mark Totten	D	W	93.0	107.5	98.8	94.1	35.0	30.1	30.3	32.9
Bill Schuette	R	W	5.6	-8.8	0.8	3.0	61.3	66.2	65.9	64.0
others			1.4	1.3	1.5	2.9	3.7	3.7	3.5	3.1
<i>votes for office</i>			<i>51.1</i>	<i>44.2</i>	<i>45.8</i>	<i>45.8</i>	<i>52.7</i>	<i>51.7</i>	<i>52.6</i>	<i>52.6</i>

County: Oakland			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Gary Peters	D	W	96.8	110.6	99.4	95.0	46.9	43.0	44.0	46.7
Terry Lynn Land	R	W	2.0	-10.9	0.0	2.4	48.7	52.6	51.5	49.7
others			1.2	0.3	0.5	2.6	4.4	4.4	4.4	3.6
<i>votes for office</i>			<i>51.5</i>	<i>44.7</i>	<i>46.5</i>	<i>46.5</i>	<i>53.7</i>	<i>53.7</i>	<i>53.7</i>	<i>53.7</i>
2016 General										
U.S. President										
Hillary Clinton	D	W	95.2	108.8	99.4	95.1	36.0	34.2	34.3	39.1
Donald Trump	R	W	3.4	-9.7	0.8	2.4	58.6	59.8	59.6	55.8
others			1.4	0.7	0.1	2.5	5.4	6.0	6.0	5.1
<i>votes for office</i>			<i>73.0</i>	<i>61.1</i>	<i>65.6</i>	<i>65.6</i>	<i>74.6</i>	<i>72.4</i>	<i>73.5</i>	<i>73.5</i>
2018 General										
Governor										
Whitmer/Gilchrist	D	W/AA	95.3	107.6	99.3	94.1	44.2	42.4	42.2	47.4
Schuetze/Lyons	R	W/W	3.5	-9.0	0.7	2.7	53.3	55.0	54.6	50.7
others			1.2	1.3	1.4	3.3	2.5	2.6	2.6	1.9
<i>votes for office</i>			<i>62.5</i>	<i>51.6</i>	<i>53.2</i>	<i>53.2</i>	<i>69.6</i>	<i>68.2</i>	<i>68.8</i>	<i>68.8</i>
Secretary of State										
Jocelyn Benson	D	W	95.2	108.1	99.1	94.2	44.3	42.4	42.3	47.5
Mary Treder Lang	R	W	3.4	-9.4	0.7	2.7	53.0	54.7	54.5	50.5
others			1.4	1.3	1.3	3.1	2.7	2.8	2.6	2.0
<i>votes for office</i>			<i>62.1</i>	<i>51.5</i>	<i>53.1</i>	<i>53.1</i>	<i>68.7</i>	<i>67.1</i>	<i>67.7</i>	<i>67.7</i>
Attorney General										
Dana Nessel	D	W	93.8	107.3	99.2	93.8	40.2	37.9	37.5	43.0
Tom Leonard	R	W	3.5	-9.7	0.6	2.6	55.4	96.8	57.5	53.0
others			2.7	2.4	2.0	3.6	4.4	0.5	4.4	4.0
<i>votes for office</i>			<i>61.4</i>	<i>50.7</i>	<i>52.5</i>	<i>52.5</i>	<i>67.9</i>	<i>66.4</i>	<i>67.0</i>	<i>67.0</i>

County: Oakland			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Debbie Stabenow	D	W	93.8	106.5	98.7	93.0	42.7	41.1	40.9	45.5
John James	R	AA	4.8	-8.4	0.8	2.8	55.9	57.5	57.5	53.6
others			1.5	1.7	1.6	4.2	1.4	1.4	1.5	0.9
<i>votes for office</i>			<i>62.5</i>	<i>51.5</i>	<i>53.2</i>	<i>53.2</i>	<i>69.5</i>	<i>68.1</i>	<i>68.7</i>	<i>68.7</i>
2020 General										
U.S. President										
Joseph Biden	D	W	94.2	105.1	99.0	93.4	42.0	41.6	41.2	45.9
Donald Trump	R	W	5.3	-5.7	1.3	3.6	56.4	56.8	57.2	53.1
others			0.6	1.6	1.7	3.0	1.5	1.6	1.6	1.0
<i>votes for office</i>			<i>76.1</i>	<i>64.6</i>	<i>71.6</i>	<i>71.6</i>	<i>85.7</i>	<i>84.9</i>	<i>86.4</i>	<i>86.4</i>
U.S. Senate										
Gary Peters	D	W	93.1	104.5	98.8	92.1	40.7	39.9	39.4	43.5
John James	R	AA	5.2	-6.7	0.8	2.9	57.9	58.9	59.3	55.7
others			1.8	2.2	2.2	5.0	1.4	1.2	1.2	0.8
<i>votes for office</i>			<i>75.7</i>	<i>64.7</i>	<i>71.4</i>	<i>71.4</i>	<i>84.8</i>	<i>84.1</i>	<i>85.4</i>	<i>85.4</i>

County: Wayne			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
2012 General										
U.S. President										
Barack Obama	D	AA	98.6	102.2	99.5	99.0	51.1	51.2	51.1	51.9
Mitt Romney	R	W	1.2	-2.4	0.5	0.6	48.0	47.8	47.7	47.3
others			0.2	0.2	0.3	0.4	0.9	1.1	0.9	0.8
<i>votes for office</i>			<i>61.3</i>	<i>58.3</i>	<i>60.4</i>	<i>60.4</i>	<i>68.9</i>	<i>63.4</i>	<i>65.7</i>	<i>65.7</i>
U.S. Senate										
Debbie Stabenow	D	W	97.3	100.2	98.9	98.1	56.8	57.2	56.6	57.6
Peter Hoekstra	R	W	1.2	-1.6	0.4	0.6	39.6	38.8	39.1	38.6
others			1.5	1.5	1.5	1.3	3.6	4.0	4.0	3.8
<i>votes for office</i>			<i>60.8</i>	<i>57.8</i>	<i>59.9</i>	<i>59.9</i>	<i>67.6</i>	<i>62.1</i>	<i>64.4</i>	<i>64.4</i>
2014 General										
Governor										
Mark Schauer	D	W	94.2	97.8	96.4	96.5	41.1	41.2	39.2	41.3
Rick Snyder	R	W	5.0	1.4	2.9	2.6	56.9	56.3	58.4	56.6
others			0.8	0.8	0.7	0.9	2.0	2.5	2.3	2.0
<i>votes for office</i>			<i>36.3</i>	<i>33.0</i>	<i>35.8</i>	<i>35.8</i>	<i>50.7</i>	<i>44.1</i>	<i>47.7</i>	<i>47.7</i>
Secretary of State										
Godfrey Dillard	D	AA	94.3	98.4	96.7	96.8	36.8	36.6	35.0	36.8
Ruth Johnson	R	W	4.3	0.3	2.1	1.9	59.7	59.2	61.2	59.6
others			1.4	1.4	1.3	1.3	3.4	4.1	3.8	3.6
<i>votes for office</i>			<i>35.9</i>	<i>32.7</i>	<i>35.5</i>	<i>35.5</i>	<i>49.0</i>	<i>42.5</i>	<i>46.1</i>	<i>46.1</i>
Attorney General										
Mark Totten	D	W	93.2	97.0	95.5	95.7	41.0	40.7	39.1	41.0
Bill Schuette	R	W	5.3	1.5	3.2	2.9	55.4	54.9	56.8	55.1
others			1.5	1.5	1.4	1.4	3.7	4.4	4.1	3.9
<i>votes for office</i>			<i>35.7</i>	<i>32.5</i>	<i>35.3</i>	<i>35.3</i>	<i>48.8</i>	<i>42.3</i>	<i>45.9</i>	<i>45.9</i>

County: Wayne			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Gary Peters	D	W	96.8	100.0	98.5	98.0	52.8	52.7	51.4	53.4
Terry Lynn Land	R	W	2.0	-1.1	0.6	1.0	42.7	42.0	43.4	41.8
others			1.2	1.1	1.0	1.1	4.5	5.3	5.0	4.7
<i>votes for office</i>			36.2	32.9	35.7	35.7	49.8	43.2	46.8	46.8
2016 General										
U.S. President										
Hillary Clinton	D	W	96.8	101.0	99.0	98.4	47.1	39.1	38.2	39.7
Donald Trump	R	W	2.0	-2.1	0.6	0.7	47.8	54.8	55.4	54.4
others			1.2	1.1	1.0	0.9	5.1	6.1	6.0	5.9
<i>votes for office</i>			57.7	55.7	57.0	57.0	72.2	61.6	64.0	64.0
2018 General										
Governor										
Whitmer/Gilchrist	D	W/AA	95.6	99.0	97.6	97.0	53.4	49.7	47.9	53.5
Schuetze/Lyons	R	W/W	2.5	-1.0	0.9	1.1	44.6	47.3	49.1	44.0
others			2.0	2.0	2.1	1.9	2.0	3.0	2.8	2.5
<i>votes for office</i>			33.9	30.9	33.2	33.2	67.2	59.8	63.2	63.2
Secretary of State										
Jocelyn Benson	D	W	95.7	99.0	97.7	97.0	53.1	50.0	49.1	53.6
Mary Treder Lang	R	W	2.4	-1.0	1.0	1.1	44.7	46.8	48.5	43.6
others			2.0	2.0	2.0	1.8	2.2	3.2	3.2	2.8
<i>votes for office</i>			33.7	30.8	33.1	33.1	66.2	58.8	62.2	62.2
Attorney General										
Dana Nessel	D	W	94.1	97.7	96.3	95.5	49.6	45.6	43.6	49.4
Tom Leonard	R	W	2.4	-1.3	0.8	1.0	47.2	49.9	51.8	46.6
others			3.6	3.6	3.5	3.5	3.3	44.9	4.3	4.1
<i>votes for office</i>			33.3	30.4	32.7	32.7	65.4	58.0	61.3	61.3

County: Wayne			Estimates for Black Voters				Estimates for White Voters			
	Party	Race	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
U.S. Senate										
Debbie Stabenow	D	W	93.8	97.1	95.9	95.8	52.4	48.9	47.1	52.3
John James	R	AA	3.8	0.4	1.9	1.5	46.5	49.4	52.2	46.5
others			2.4	2.5	2.4	2.7	1.1	1.7	1.4	1.3
<i>votes for office</i>			<i>33.7</i>	<i>30.8</i>	<i>33.1</i>	<i>33.1</i>	<i>67.2</i>	<i>59.6</i>	<i>63.1</i>	<i>63.1</i>
2020 General										
U.S. President										
Joseph Biden	D	W	95.4	99.0	97.9	97.5	53.3	45.9	44.5	47.5
Donald Trump	R	W	3.8	0.2	1.6	1.5	45.4	52.6	53.9	51.3
others			0.8	0.8	0.8	0.9	1.3	0.8	1.5	1.3
<i>votes for office</i>			<i>59.2</i>	<i>55.6</i>	<i>58.0</i>	<i>58.0</i>	<i>81.3</i>	<i>74.1</i>	<i>76.6</i>	<i>76.6</i>
U.S. Senate										
Gary Peters	D	W	93.3	96.0	95.3	95.2	51.7	46.6	44.4	47.2
John James	R	AA	3.8	0.3	1.7	1.6	47.0	52.1	53.7	51.5
others			2.8	3.0	2.9	3.2	1.3	1.9	1.8	1.4
<i>votes for office</i>			<i>58.9</i>	<i>55.3</i>	<i>57.8</i>	<i>57.8</i>	<i>80.6</i>	<i>73.0</i>	<i>75.6</i>	<i>75.6</i>

2018 Democratic Primary for Governor				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
STATEWIDE											
Abdul El-Sayed	D	ME	30.2%	21.0	24.2	23.5	26.0	25.7	27.1	30.2	28.5
Shri Thanedar	D	A	17.7%	42.5	44.2	42.2	39.0	15.8	12.9	10.8	9.4
Gretchen Whitmer	D	W	52.0%	36.5	31.6	33.5	35.0	58.6	60.0	59.4	62.0
<i>votes for office</i>				23.0	22.5	24.5	24.5	13.9	12.0	14.0	14.0
Genesee											
Abdul El-Sayed	D	ME	22.9%	16.5	18.6	17.9	21.0	22.3	24.8	24.2	23.5
Shri Thanedar	D	A	23.6%	46.0	49.9	47.2	43.4	15.7	13.6	13.3	11.5
Gretchen Whitmer	D	W	53.4%	37.5	31.6	34.5	35.7	62.0	61.6	61.9	65.1
<i>votes for office</i>				26.9	23.4	25.9	25.9	15.5	13.3	14.8	14.8
Saginaw											
Abdul El-Sayed	D	ME	22.2%		18.9	17.5	21.0		21.9	23.6	21.0
Shri Thanedar	D	A	24.7%		51.5	51.1	44.7		16.8	14.7	14.5
Gretchen Whitmer	D	W	53.1%		29.6	31.3	34.4		61.4	61.8	64.5
<i>votes for office</i>					19.7	20.7	20.7		12.4	13.2	13.2
Oakland											
Abdul El-Sayed	D	ME	32.5%	23.2	24.1	23.2	25.3	29.8	34.2	36.0	34.9
Shri Thanedar	D	A	13.4%	32.7	38.5	37.5	34.7	8.4	4.3	4.3	3.0
Gretchen Whitmer	D	W	54.1%	44.1	37.5	39.0	40.0	61.8	61.4	61.0	62.1
<i>votes for office</i>				31.4	33.3	35.0	35.0	20.8	16.1	18.2	18.2
Wayne											
Abdul El-Sayed	D	ME	32.0%	21.2	20.8	21.0	22.2	43.4	41.3	41.3	41.6
Shri Thanedar	D	A	24.3%	42.8	45.6	43.8	42.5	7.5	4.8	5.4	3.9
Gretchen Whitmer	D	W	43.7%	36.1	33.7	34.8	35.3	49.2	53.9	54.0	54.5
<i>votes for office</i>				22.4	21.1	23.5	23.5	19.3	16.0	17.4	17.4

APPENDIX B

Congressional District General Elections				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
Congressional District 5											
2018 General											
Daniel Kildee	D	W	59.5%	96.2	104.4	99.1	95.0	48.4	46.5	47.5	50.5
Travis Wines	R	W	35.9%	1.3	-7.8	0.2	1.7	47.0	48.3	46.9	44.9
others				2.5	3.3	3.2	3.3	4.6	5.2	4.9	4.7
<i>votes for office</i>				53.8	42.7	43.8	43.8	59.2	56.5	58.3	58.3
2020 General											
Daniel Kildee	D	W	54.5%	95.4	105.2	99.0	95.0	41.6	39.6	41.0	44.2
Tim Kelly	R	W	41.8%	2.1	-8.4	0.6	1.6	54.8	56.3	54.4	52.3
others				2.6	3.2	3.0	3.4	3.6	4.1	3.9	3.5
<i>votes for office</i>				67.1	54.5	54.5	54.5	76.6	73.8	76.0	76.0
Congressional District 9											
2018 General											
Andy Levin	D	W	59.7%		95.2	98.2	71.5		50.2	48.9	55.7
Candius Stearns	R	W	36.8%		-3.5	0.3	62.9		47.5	47.4	43.2
others					8.4	9.4	22.2		2.4	2.3	1.1
<i>votes for office</i>					17.9	17.5	17.5		66.2	66.4	66.4
2020 General											
Andy Levin	D	W	57.7%		92.6	96.6	74.7		48.3	45.9	52.0
Charles Langworthy	R	W	38.4%		-0.6	0.5	5.6		48.8	50.0	46.7
others					7.9	8.1	19.7		3.0	2.7	1.3
<i>votes for office</i>					37.9	27.6	27.6		80.2	82.7	82.7
Congressional District 12											
2018 General											
Debbie Dingell	D	W	68.1%		91.9	97.3	75.5		58.4	57.5	63.3
Jeff Jones	R	W	28.9%		3.1	1.8	9.8		38.6	38.9	35.6
others					5.0	4.4	14.7		3.0	3.0	1.1
<i>votes for office</i>					33.4	37.1	37.1		58.9	62.4	62.4

Congressional District General Elections				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
2020 General											
Debbie Dingell	D	W	66.4%		91.2	95.9	75.3		56.4	55.3	58.7
Jeff Jones	R	W	30.7%		4.2	2.7	11.4		40.6	41.6	40.0
others					4.3	4.2	13.2		3.0	3.2	1.3
<i>votes for office</i>					50.3	58.2	58.2		73.8	75.0	75.0
Congressional District 13											
2018 General											
Rashida Tlaib	D	ME	84.2%	93.4	95.5	94.9	95.2		64.2	64.5	65.6
others				6.6	4.5	5.4	4.8		35.7	35.7	34.4
<i>votes for office</i>				32.5	32.3	34.7	34.7		39.1	41.3	41.3
2020 General											
Rashida Tlaib	D	ME	78.1%	94.6	97.8	96.5	96.1		46.5	47.0	46.9
David Dudenhoefer	R	W	18.7%	2.7	-0.4	1.1	1.2		49.2	48.7	49.0
others				2.7	2.7	2.6	2.7		4.4	4.2	4.1
<i>votes for office</i>				587.0	57.5	60.0	60.0		59.0	61.1	61.1
Congressional District 14											
2018 General											
Brenda Lawrence	D	AA	80.9%	96.3	99.3	98.1	96.7	40.8	51.3	52.3	61.1
Marc Herschfus	R	W	17.3%	1.7	-1.4	0.5	1.6	58.1	46.9	40.9	36.9
others				2.0	2.1	1.8	1.7	1.1	1.8	2.2	2.1
<i>votes for office</i>				36.1	33.8	40.0	40.0	74.3	72.6	74.5	74.5
2020 General											
Brenda Lawrence	D	AA	79.3%	95.0	97.9	96.6	96.5	41.6	49.3	50.3	55.6
Robert Vance Patrick	R	W	18.3%	2.6	-0.3	0.9	1.3	56.4	48.2	47.5	41.7
others				2.4	2.5	2.2	2.2	2.0	2.5	2.4	2.6
<i>votes for office</i>				59.9	57.4	61.7	61.7	90.7	85.0	86.3	86.3

2018 General: State Senate Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 1 (Wayne)											
Stephanie Chang	D	A	72.0%	91.3	97.8	94.1	93.2	47.2	49.0	48.8	53.3
Pauline Montie	R	W	24.2%	2.1	-4.2	0.8	1.1	51.0	49.4	48.6	44.6
others			3.8%	6.1	6.4	6.3	5.6	1.8	1.6	1.6	2.1
<i>votes for office</i>				33.3	27.8	31.0	31.0	66.6	54.7	57.3	57.3
District 2 (Wayne)											
Adam Hollier	D	AA	75.7%	96.4	99.5	98.0	97.9	37.7	47.7	46.5	52.8
Lisa Papas	R	W	24.3%	3.6	0.5	2.0	2.1	62.3	52.2	53.4	47.2
<i>votes for office</i>				31.3	28.0	30.9	30.9	74.1	69.6	73.3	73.3
District 3 (Wayne)											
Sylvia Santana	D	AA	81.8%	94.2	95.6	95.4	95.6	78.8	67.9	64.4	66.3
Kathy Stecker	R	W	15.3%	2.5	1.1	1.5	1.3	18.9	29.3	32.6	31.0
others			2.9%	3.9	3.3	3.3	3.1	2.3	2.8	2.7	2.7
<i>votes for office</i>				30.7	29.2	30.0	30.0	38.7	42.8	45.4	45.4
District 4 (Wayne)											
Marshall Bullock	D	AA	78.3%		97.0	100.2	98.7		45.3	46.1	51.1
Angela Savino	R	W	21.7%		3.0	-0.1	1.3		54.7	53.9	48.9
<i>votes for office</i>				32.4	30.6	32.2	32.2		50.2	51.2	51.2
District 5 (Wayne)											
Betty Jean Alexander	D	AA	77.4%	93.4	95.5	95.4	95.3		49.9	48.9	50.7
DeShawn Wilkins	R	AA	18.2%	3.3	1.2	1.6	1.6		43.7	44.5	43.1
others			4.4%	3.3	3.3	3.2	3.1		6.4	6.5	6.2
<i>votes for office</i>				34.9	36.2	39.4	39.4		44.2	44.1	44.1
District 6 (Wayne)											
Erika Geiss	D	AA	61.4%		107.3	99.4	92.8		42.6	43.8	47.8
Brenda Jones	R	AA	38.7%		-7.2	0.5	7.2		57.4	56.4	52.3
<i>votes for office</i>					38.3	35.9	35.9		50.0	52.9	52.9

2018 General: State Senate Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 11 (Oakland)											
Jeremy Moss	D	W	76.7%		99.0	99.2	96.3	80.9	60.2	56.9	60.2
Boris Tuman	R	W	20.9%		0.0	0.4	2.0	17.5	36.0	39.2	36.6
others			12.4%		1.0	1.0	1.7	1.6	3.7	3.8	3.2
<i>votes for office</i>					60.6	63.4	63.4	83.7	59.9	60.1	60.1
District 12 (Oakland)											
Rosemary Bayer	D	W	49.4%		122.0	99.6	87.9		33.2	33.3	42.1
Michael D. McCready	R	W	48.6%		-23.8	0.6	4.6		64.9	64.2	56.7
others			2.0%		1.7	2.0	7.4		2.0	2.0	1.2
<i>votes for office</i>					14.5	25.6	25.6		75.1	74.4	74.4
District 27 (Genesee)											
Jim Ananich	D	W	71.2%	97.6	103.0	99.3	97.7	53.9	53.3	54.2	55.6
Donna Kekesis	R	W	28.8%	2.4	-3.0	0.7	2.3	46.1	46.7	45.8	44.4
<i>votes for office</i>				53.7	46.5	50.5	50.5	58.7	46.9	49.9	49.9
District 32 (Genesee and Saginaw)											
Phil Phelps	D	W	44.5%		113.0	99.7	96.1		29.5	30.1	33.5
Ken Horn	R	W	55.5%		-13.0	0.4	3.9		70.5	69.9	66.5
<i>votes for office</i>					37.9	37.6	37.6		61.4	62.3	62.3

2018 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 1 (Wayne)											
Tenisha Yancey	D	AA	72.9%	96.3	101.0	99.1	97.3		33.3	36.2	47.0
Mark Corcoran	R	W	25.0%	2.2	-2.5	0.5	1.7		63.8	59.7	49.5
others			2.1%	1.5	1.5	1.6	0.9		2.9	3.9	3.5
<i>votes for office</i>				30.5	28.8	30.1	30.1		81.0	80.4	80.4
District 2 (Wayne)											
Joe Tate	D	AA	73.5%	97.4	101.5	98.8	98.8	41.6	46.8	47.2	53.0
John Palffy	R	W	26.5%	2.6	-1.4	1.1	1.2	58.5	53.1	53.1	47.0
<i>votes for office</i>				33.9	26.9	28.3	28.3	74.0	77.0	78.2	78.2
District 3 (Wayne)											
Wendell L. Byrd	D	AA	96.7%		97.4	97.8	98.8		89.6	87.3	80.4
Dolores Brodersen	R		3.3%		2.6	2.2	1.2		10.5	12.3	19.6
<i>votes for office</i>					28.5	32.0	32.0		76.7	67.4	67.4
District 4 (Wayne)											
Isaac Robinson	D	W	94.6%	97.6	97.3	97.7	97.2		89.5	86.3	85.5
Howard Weathington	R	AA	5.4%	2.4	2.7	2.2	2.8		10.4	13.6	14.5
<i>votes for office</i>				27.0	30.1	30.3	30.3		24.5	24.1	24.1
State House District 5											
Cynthia A. Johnson	D	AA	92.5%	97.0	97.8	98.2	97.7		72.4	62.2	na
Dorothy Patterson	R		5.5%	3.0	2.2	2.0	2.4		27.8	37.8	na
<i>votes for office</i>				29.8	30.2	31.3	31.3		na	na	
District 6 (Wayne)											
Tyrone Carter	D	AA	91.1%	95.6	98.4	98.2	96.3		66.3	65.0	66.0
Linda Sawyer	R	W	8.9%	4.4	1.7	1.9	3.7		33.5	35.0	34.0
<i>votes for office</i>				34.9	35.3	38.2	38.2		18.2	25.3	25.3

2018 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 7 (Wayne)				insufficient white voters to produce estimates of voting patterns by race							
LaTanya Garrett	D	AA	97.6%								
Marcelis Turner	R	AA	2.4%								
others											
<i>votes for office</i>											
District 8 (Wayne)				insufficient white voters to produce estimates of voting patterns by race							
Sherry Gay Dagnogo	D	AA	96.4%								
Valerie R. Parker	R	AA	3.7%								
others											
<i>votes for office</i>											
District 9 (Wayne)											
Karen Whitsett	D	AA	95.1%		97.5	97.7	98.5		85.2	84.1	78.8
James Stephens	R		4.9%		2.5	2.3	1.5		14.8	16.0	21.2
<i>votes for office</i>					30.8	31.4	31.4		18.1	17.6	17.6
District 10 (Wayne)											
Leslie Love	D	AA	84.0%		99.1	98.7	96.7		48.3	48.8	59.3
William Brang	R	W	14.2%		-0.3	0.6	2.2		47.8	46.1	37.5
others			1.8%		1.2	1.2	1.2		3.9	3.6	3.3
<i>votes for office</i>					33.4	34.8	34.8		65.1	69.4	69.4
District 11 (Wayne)											
Jewell Jones	D	AA	66.9%		106.0	99.2	96.2		50.4	51.0	51.9
James Townsend	R	W	33.1%		-6.0	0.8	3.8		49.8	49.1	48.1
<i>votes for office</i>					37.9	38.9	38.9		44.9	45.2	45.2
District 12 (Wayne)											
Alex Garza	D	H	66.6%		104.7	98.8	90.6		43.9	46.3	49.0
Michelle Bailey	R	W	33.4%		-4.7	1.1	9.4		56.1	54.1	51.0
<i>votes for office</i>					47.8	48.0	48.0		41.8	42.8	42.8

2018 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 16 (Wayne)											
Kevin Coleman	D	W	67.3%		111.8	99.1	81.5		50.2	51.5	60.1
Jody Rice-White	R	W	32.8%		-11.9	1.1	18.5		49.8	48.9	39.9
<i>votes for office</i>					18.3	48.0	18.7		56.1	57.0	57.0
District 27 (Oakland)											
Robert Wittenberg	D	W	78.5%		96.3	97.6	93.0	75.4	71.2	70.3	73.8
Janet Flessland	R	W	18.5%		1.7	1.0	3.0	22.5	35.6	26.2	24.3
others			3.0%		2.1	2.1	4.0	2.0	3.2	3.4	1.9
<i>votes for office</i>					53.6	58.1	58.1	78.1	67.4	65.8	65.8
District 29 (Oakland)											
Brenda Carter	D	AA	74.1%		114.5	99.2	94.5		36.7	41.8	54.6
Timothy D. Carrier	R	W	25.9%		-14.5	1.1	5.5		63.1	58.3	45.4
<i>votes for office</i>					32.8	46.3	46.3		54.5	52.1	52.1
District 34 (Genesee)											
Sheldon A. Neeley	D	AA	90.0%		101.5	99.5	98.7		58.9	64.0	46.7
Henry Swift	R		10.0%		-1.4	0.5	9.3		41.1	0.5	53.4
<i>votes for office</i>					52.6	54.7	54.7		18.8	22.1	22.1
District 35 (Oakland)											
Kyra Harris Bolden	D	AA	85.5%		102.7	99.6	98.2		53.5	57.2	63.1
Theodore Alfonsetti III	R	W	14.6%		-2.7	0.3	1.8		46.5	42.9	36.9
<i>votes for office</i>					56.1	55.6	55.6		74.5	77.2	77.2
District 37 (Oakland)											
Christine Greig	D	W	67.2%		111.4	98.2	69.5		59.6	61.5	68.2
Mitch Swoboda	R	W	32.8%		-11.2	2.2	30.5		40.6	38.7	31.8
<i>votes for office</i>					34.8	35.6	35.6		85.0	82.3	82.3

2018 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 49 (Genesee)											
John D. Cherry	D	W	72.4%		104.9	99.2	94.1		55.6	57.2	61.4
Patrick Duvendeck	R	W	27.6%		-5.0	0.8	6.0		44.4	42.7	38.7
<i>votes for office</i>					<i>40.0</i>	<i>42.3</i>	<i>42.3</i>		<i>53.0</i>	<i>57.8</i>	<i>57.8</i>
District 95 (Saginaw)											
Vanessa Guerra	D	H	73.1%		109.8	99.0	96.0		43.3	47.3	50.5
Dorothy Tanner	R	W	26.9%		-9.9	0.8	4.0		56.7	52.8	49.5
<i>votes for office</i>					<i>44.9</i>	<i>46.1</i>	<i>46.1</i>		<i>50.1</i>	<i>49.4</i>	<i>49.4</i>

2020 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 1 (Wayne)											
Tenisha R. Yancey	D	AA	75.8%	94.9	99.4	97.3	98.3		38.0	42.2	46.9
Latricia Ann Lanier	R	AA	22.2%	3.7	-0.7	1.5	0.9		59.0	55.7	49.5
others			2.0%	1.4	1.3	1.0	0.8		3.0	3.1	3.6
<i>votes for office</i>				53.8	52.3	53.0	53.0		94.2	92.4	92.4
District 2 (Wayne)											
Joe Tate	D	AA	74.1%	93.5	96.8	95.0	95.9	46.0	50.7	50.9	54.6
Mayra Rodriguez	R	H	23.8%	3.2	-0.2	1.3	1.0	53.1	48.7	47.9	44.4
others			2.1%	3.3	3.5	3.5	3.0	1.0	0.7	0.7	1.1
<i>votes for office</i>				55.8	51.5	51.9	51.9	89.8	92.0	92.9	92.9
District 3 (Wayne)											
Shri Thanedar	D	A	93.3%		95.0	95.0	97.7		73.1	72.9	55.4
Anita Vinson	R	AA	4.0%		3.3	3.3	1.4		12.3	12.6	25.1
others			2.7%		1.6	1.8	0.9		14.5	12.9	19.5
<i>votes for office</i>					50.8	55.8	55.8		117.2	97.7	97.7
District 4 (Wayne)											
Abraham Aiyash	D	ME	89.8%		95.9	96.7	95.5		92.9	90.3	86.6
Howard Weatherington	R	AA	5.7%		1.1	1.3	1.8		5.7	7.6	8.7
others			4.5%		3.0	3.0	2.8		1.3	1.4	4.7
<i>votes for office</i>					89.7	90.1	90.1		57.7	68.1	68.1
District 5 (Wayne)											
Cynthia A. Johnson	D	AA	93.0%	97.3	98.0	98.0	98.3		73.2	69.1	na
Harold M. Day	R		2.3%	2.7	2.1	2.0	1.7		27.1	32.7	na
<i>votes for office</i>				54.3	55.7	56.9	56.9		na	na	
District 6 (Wayne)											
Tyrone Carter	D	AA	100%								
<i>votes for office</i>											

2020 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 7 (Wayne)				insufficient white voters to produce estimates of voting patterns by race							
Helena Scott	D	AA	93.0%								
Ronald Cole	R		2.3%								
others			4.7%								
<i>votes for office</i>											
District 8 (Wayne)				insufficient white voters to produce estimates of voting patterns by race							
Stephanie A. Young	D	AA	96.7%								
Mirosława Teresa Gorak	R	W	3.3%								
<i>votes for office</i>											
District 9 (Wayne)											
Karen Whitsett	D	AA	94.2%		96.5	96.5	97.2		83.7	83.4	75.4
James Stephens	R		5.8%		3.5	3.4	2.8		16.3	16.1	24.5
<i>votes for office</i>					56.3	57.3	57.3		29.7	27.1	27.1
District 10 (Wayne)											
Mary Cavanagh	D	H	84.8%		99.1	98.9	98.3		51.1	50.8	53.7
Cathy L. Alcorn	R		15.3%		0.9	1.1	1.7		48.9	49.4	46.3
<i>votes for office</i>					62.9	65.3	65.3		69.1	68.3	68.3
District 11 (Wayne)											
Jewell Jones	D	AA	65.2%		104.7	99.0	96.9		48.8	48.5	50.7
James C. Townsend	R	W	34.8%		-4.6	1.0	3.1		51.2	51.5	49.3
<i>votes for office</i>					53.0	53.5	53.5		62.1	63.2	63.2
District 12 (Wayne)											
Alex Garza	D	H	62.4%		103.0	99.4	91.8		38.2	38.8	41.4
Michelle Bailey	R	W	37.7%		-3.0	0.6	8.2		61.8	60.9	58.6
<i>votes for office</i>					64.7	66.4	66.4		57.9	57.9	57.9

2020 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 16 (Wayne)											
Kevin Coleman	D	W	62.5%		111.3	99.0	84.8		44.4	45.6	54.2
Emily Bauman	R	W	37.5%		-11.4	1.0	15.2		55.7	54.4	45.8
<i>votes for office</i>					29.9	33.5	33.5		75.1	76.0	76.0
District 27 (Oakland)											
Regina Weiss	D	W	74.4%		95.4	97.3	93.3	68.7	64.2	63.4	66.4
Elizabeth Goss	R	W	22.4%		2.6	1.5	3.9	28.8	32.0	32.5	30.6
others			3.2%		1.7	1.6	2.8	2.5	3.9	4.1	33.0
<i>votes for office</i>					73.8	76.6	76.6	88.1	77.7	77.4	77.4
District 29 (Oakland)											
Brenda Carter	D	AA	72.9%		111.1	99.1	94.7		37.1	38.8	51.3
S. Dave Sullivan	R	W	27.1%		-11.0	0.8	53.3		62.7	61.5	48.7
<i>votes for office</i>					47.6	61.1	61.1		67.5	61.5	61.5
District 34 (Oakland)											
Cynthia R. Neeley	D	AA	86.7%		100.5	99.2	98.3		51.6	56.1	45.9
James Miraglia	R	W	13.3%		-4.8	0.7	1.7		48.4	43.8	54.1
<i>votes for office</i>					65.6	67.6	67.6		32.5	36.8	36.8
District 35 (Oakland)											
Kyra Harris Bolden	D	AA	82.9%		99.8	99.4	97.2		51.5	51.2	58.5
Daniela Davis	R	AA	15.9%		-0.4	0.3	2.3		46.4	46.2	39.3
others			1.0%		0.6	0.5	0.5		2.1	2.4	2.2
<i>votes for office</i>					70.1	68.4	68.4		93.4	94.5	94.5
District 37 (Oakland)											
Samantha Steckloff	D	W	63.9%		106.1	96.4	57.5		56.8	56.9	66.4
Mitch Swoboda	R	W	34.1%		-8.7	0.8	34.2		41.7	40.8	32.2
others			2.0%		2.5	6.3	8.3		1.7	1.3	1.4
<i>votes for office</i>					55.5	54.9	54.9		106.2	94.0	94.0

2020 General: State House Districts				Estimates for Black Voters				Estimates for White Voters			
	Party	Race	Vote	HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC
District 49 (Genesee)											
John D. Cherry	D	W	68.9%		104.3	98.8	94.8		50.2	51.9	56.6
Bryan Lutz	R	W	31.1%		-4.3	1.0	5.2		49.8	48.3	43.6
<i>votes for office</i>					<i>52.5</i>	<i>60.7</i>	<i>60.7</i>		<i>68.0</i>	<i>69.1</i>	<i>69.1</i>
District 95 (Saginaw)											
Amos O'Neal	D	AA	70.1%		111.7	99.2	96.6		34.7	41.1	42.7
Charlotte DeMaet	R	W	29.9%		-11.5	0.9	3.4		65.2	58.9	57.3
<i>votes for office</i>					<i>59.0</i>	<i>60.6</i>	<i>60.6</i>		<i>62.9</i>	<i>61.5</i>	<i>61.5</i>

Recent Democratic Primaries: Congress			Estimates for Black Voters			Estimates for White Voters		
	Race	Vote	HP	ER	EI	HP	ER	EI
2018								
Congressional District 13								
Ian Conyers	B	6.6	8.3	9.1	9.3		1.3	1.1
Shanelle Jackson	B	5.4	7.7	7.1	7.5		1.6	1.2
Brenda Jones	B	30.2	42.5	43.7	43.5		2.9	5.3
Rashinda Tlaib	ME	31.2	22.3	21.3	22.4		48.1	45.3
Bill Wild	W	14.1	1.6	-1.4	0.7		46.2	43.9
Coleman Young II	B	12.5	17.7	20.1	18.9		-0.3	1.1
<i>turnout of VAP</i>			23.0	22.2	24.3		12.2	14.1
2020								
Congressional District 12								
Debbie Dingell	W	80.9		81.4	81.2		87.9	87.7
Solomon Rajput	A	19.1		18.9	19.0		12.1	12.2
<i>turnout of VAP</i>				18.8	24.2		13.6	13.1
Congressional District 13								
Brenda Jones	B	33.7	37.8	37.7	37.3		27.0	27.9
Rashida Tlaib	ME	66.3	62.2	62.3	62.7		72.9	72.1
<i>turnout of VAP</i>			28.0	26.7	29.5		14.1	15.8
Congressional District 14								
Brenda Lawrence	B	93.2	92.7	92.7	92.8	92.1	91.6	92.0
Terrance Morrison		6.8	7.3	7.3	7.5	7.9	8.4	8.7
<i>turnout of VAP</i>			25.9	23.7	28.0	22.4	13.3	18.5

Recent Democratic Primaries: 2018 State Senate			Estimates for Black Voters			Estimates for White Voters		
	Race	Vote	HP	ER	EI	HP	ER	EI
State Senate District 1 (Wayne)								
Stephanie Chang	A	49.8	24.6	23.5	27.1	71.6	79.2	76.7
James Cole	B	5.2	6.2	7.8	6.2	4.3	3.6	3.9
Nicholas Rivera	H	2.9	1.3	0.9	0.8	4.3	5.9	5.2
Stephanie Roehm		4.4	2.1	1.0	1.5	8.6	9.9	8.7
Bettie Cook Scott	B	11.2	18.2	17.9	15.7	6.6	17.0	6.1
Alberta Tinsley Talabi	B	26.4	47.7	48.9	47.1	4.7	-2.7	2.9
<i>turnout of VAP</i>			20.0	20.9	23.3	17.4	13.3	13.9
State Senate District 3 (Wayne)								
Anita Belle	B	14.3	23.7	25.5	25.4	4.9	1.9	1.9
Terry Burrell	W	5.5	8.5	8.6	8.4	3.9	2.1	2.2
Sylvia Santana	B	41.5	56.6	60.2	60.3	20.2	19.9	18.7
Gary Woronchak	W	38.7	11.2	5.7	8.0	71.0	76.2	76.0
<i>turnout of VAP</i>			18.7	16.8	17.9	17.2	17.3	17.8
State Senate District 4 (Wayne)								
Marshall Bullock	B	44.3	46.8	44.5	47.2		39.2	38.6
Fred Durhal	B	38.3	39.4	42.6	40.6		30.8	31.3
Carron Pinkins	B	17.5	13.8	12.8	12.6		30.0	29.1
<i>turnout of VAP</i>			21.5	21.8	26.3		8.7	10.5
State Senate District 5 (Wayne)								
Betty Jean Alexander	B	54.5	66.9	69.1	68.1		27.2	27.5
David Knezek	W	45.5	33.1	30.9	31.9		72.8	72.6
<i>turnout of VAP</i>			22.2	21.6	23.1		10.7	11.4
State Senate District 6								
Erika Geiss	B	65.4		86.1	89.5		55.6	55.9
Robert Kosowski	W	34.6		13.9	10.3		44.4	44.0
<i>turnout of VAP</i>				19.5	18.0		12.4	14.3
State Senate District 11 (Oakland)								
Crystal Bailey	B	21.2	36.6	27.0	24.9	7.9	16.7	17.3
Jeremy Moss	W	51.8	35.4	49.0	53.1	78.1	51.9	51.0
Vanessa Moss	B	18.5	20.2	17.5	16.2	10.2	20.4	20.3
James Turner	B	8.6	7.8	6.5	5.8	3.7	11.0	10.9
<i>turnout of VAP</i>			29.0	30.8	33.4	43.3	20.5	20.6

APPENDIX C

Detroit area			Estimates for Hispanics	
	Party	Race	ER	EI 2x2
2020 General				
U.S. President				
Joseph Biden	D	W	75.4	76.0
Donald Trump	R	W	24.3	23.9
others			0.3	0.2
<i>votes for office</i>			13.9	14.8
U.S. Senate				
Gary Peters	D	W	73.6	74.8
John James	R	W	22.6	21.9
others			3.8	3.2
<i>votes for office</i>			13.5	14.6
2018 General				
Governor				
Gretchen Whitmer	D	W	83.1	80.0
Bill Schuette	R	W	15.3	14.8
others			1.5	1.8
<i>votes for office</i>			3.5	5.1
Secretary of State				
Jocelyn Benson	D	W	84.0	82.6
Mary Treder Lang	R	W	14.4	13.5
others			1.7	14.0
<i>votes for office</i>			3.3	4.4
Attorney General				
Dana Nessel	D	W	80.1	78.9
Tom Leonard	R	W	16.4	15.2
others			3.4	3.7
<i>votes for office</i>			3.4	4.8

Detroit area			Estimates for Hispanics	
	Party	Race	ER	EI 2x2
U.S. Senate				
Debbie Stabenow	D	W	82.5	82.2
John James	R	W	16.4	17.1
others			1.3	0.0
<i>votes for office</i>			3.3	4.5
2018 Democratic Primary				
Governor				
Abdul El-Sayed	D	ME	55.5	58.5
Shri Thanedar	D	A	13.6	12.7
Gretchen Whitmer	D	W	30.8	28.7
<i>votes for office</i>			-2.0	1.0

Grand Rapids area			Estimates for Hispanics	
	Party	Race	ER	EI 2x2
2020 General				
U.S. President				
Joseph Biden	D	W	98.6	94.8
Donald Trump	R	W	0.5	0.1
others			1.0	1.3
<i>votes for office</i>			<i>0.0</i>	<i>8.6</i>
U.S. Senate				
Gary Peters	D	W	96.1	93.3
John James	R	W	-1.6	3.2
others			5.3	9.2
<i>votes for office</i>			<i>0.0</i>	<i>7.3</i>
2018 General				
Governor				
Gretchen Whitmer	D	W	99.5	95.0
Bill Schuette	R	W	-4.5	1.6
others			5.6	6.1
<i>votes for office</i>			<i>-9.0</i>	<i>1.1</i>
Secretary of State				
Jocelyn Benson	D	W	102.1	97.0
Mary Treder Lang	R	W	-5.3	1.1
others			3.3	6.9
<i>votes for office</i>			<i>-9.0</i>	<i>0.3</i>
Attorney General				
Dana Nessel	D	W	97.2	93.1
Tom Leonard	R	W	-6.4	1.2
others			9.3	9.8
<i>votes for office</i>			<i>-9.0</i>	<i>0.8</i>

Grand Rapids area			Estimates for Hispanics	
	Party	Race	ER	EI 2x2
U.S. Senate				
Debbie Stabenow	D	W	97.2	93.2
John James	R	W	-3.4	2.0
others			6.2	10.4
<i>votes for office</i>			<i>-9.0</i>	<i>1.1</i>
2018 Democratic Primary				
Governor				
Abdul El-Sayed	D	ME	51.1	51.3
Shri Thanedar	D	A	39.8	42.4
Gretchen Whitmer	D	W	8.9	11.9
<i>votes for office</i>			<i>-2.3</i>	<i>0.1</i>

			Estimates for Arab Americans	
	Party	Race	ER	EI 2x2
2020 General				
U.S. President				
Joseph Biden	D	W	98.3	98.9
Donald Trump	R	W	1.3	0.8
others			0.6	1.0
<i>votes for office</i>			<i>24.1</i>	<i>26.7</i>
U.S. Senate				
Gary Peters	D	W	100.7	99.0
John James	R	W	-2.9	0.8
others			2.1	2.1
<i>votes for office</i>			<i>22.2</i>	<i>24.9</i>
2018 General				
Governor				
Gretchen Whitmer	D	W	103.9	99.3
Bill Schuette	R	W	-6.2	1.1
others			2.5	2.1
<i>votes for office</i>			<i>8.6</i>	<i>10.3</i>
Secretary of State				
Jocelyn Benson	D	W	104.7	99.3
Mary Treder Lang	R	W	-6.3	0.9
others			1.7	1.7
<i>votes for office</i>			<i>8.5</i>	<i>9.8</i>
Attorney General				
Dana Nessel	D	W	106.8	99.5
Tom Leonard	R	W	-8.0	0.6
others			1.3	1.3
<i>votes for office</i>			<i>8.6</i>	<i>10.1</i>

			Estimates for Arab Americans	
	Party	Race	ER	EI 2x2
U.S. Senate				
Debbie Stabenow	D	W	107.2	99.1
John James	R	W	-9.0	1.1
others			1.9	1.9
<i>votes for office</i>			<i>8.4</i>	<i>10.0</i>
2018 Democratic Primary				
Governor				
Abdul El-Sayed	D	ME	116.4	92.8
Shri Thanedar	D	A	-0.3	0.2
Gretchen Whitmer	D	W	-16.0	0.6
<i>votes for office</i>			<i>15.0</i>	<i>15.1</i>

			Estimates for Chaldeans	
	Party	Race	ER	EI 2x2
2020 General				
U.S. President				
Joseph Biden	D	W	19.5	20.5
Donald Trump	R	W	81.9	80.3
others			-0.8	2.0
<i>votes for office</i>			<i>31.2</i>	<i>29.6</i>
U.S. Senate				
Gary Peters	D	W	26.3	26.2
John James	R	W	74.0	72.8
others			-0.6	0.2
<i>votes for office</i>			<i>27.9</i>	<i>27.2</i>
2018 General				
Governor				
Gretchen Whitmer	D	W	52.9	48.9
Bill Schuette	R	W	47.9	47.4
others			0.2	8.0
<i>votes for office</i>			<i>-12.2</i>	<i>0.0</i>
Secretary of State				
Jocelyn Benson	D	W	55.3	53.7
Mary Treder Lang	R	W	44.7	42.0
others			0.4	7.9
<i>votes for office</i>			<i>-10.8</i>	<i>0.3</i>
Attorney General				
Dana Nessel	D	W	52.5	48.0
Tom Leonard	R	W	47.4	47.4
others			0.4	0.1
<i>votes for office</i>			<i>-10.3</i>	<i>2.5</i>

			Estimates for Chaldeans	
	Party	Race	ER	EI 2x2
U.S. Senate				
Debbie Stabenow	D	W	55.2	55.6
John James	R	W	43.2	44.0
others			0.7	0.9
<i>votes for office</i>			-11.4	0.4
2018 Democratic Primary				
Governor				
Abdul El-Sayed	D	ME	50.1	na
Shri Thanedar	D	A	11.2	na
Gretchen Whitmer	D	W	38.7	na
<i>votes for office</i>			-1.1	0.1

			Estimates for Bangladeshi Americans	
	Party	Race	ER	EI 2x2
2020 General				
U.S. President				
Joseph Biden	D	W	104.7	96.1
Donald Trump	R	W	-4.4	3.2
others			0.1	0.1
<i>votes for office</i>			31.6	25.2
U.S. Senate				
Gary Peters	D	W	104.4	96.2
John James	R	W	-5.2	3.3
others			0.9	1.1
<i>votes for office</i>			31.6	24.6
2018 General				
Governor				
Gretchen Whitmer	D	W	105.7	99.1
Bill Schuette	R	W	-7.4	1.1
others			1.1	1.1
<i>votes for office</i>			13.7	18.7
Secretary of State				
Jocelyn Benson	D	W	105.7	98.9
Mary Treder Lang	R	W	-7.1	1.3
others			2.5	2.4
<i>votes for office</i>			13.9	19.3
Attorney General				
Dana Nessel	D	W	107.5	98.2
Tom Leonard	R	W	-8.0	0.7
others			2.3	2.3
<i>votes for office</i>			13.8	19.2

			Estimates for Bangladeshi Americans	
	Party	Race	ER	EI 2x2
U.S. Senate				
Debbie Stabenow	D	W	107.1	99.1
John James	R	W	-7.7	0.9
others			1.7	0.7
<i>votes for office</i>			<i>13.9</i>	<i>18.4</i>
2018 Democratic Primary				
Governor				
Abdul El-Sayed	D	ME	98.8	97.3
Shri Thanedar	D	A	6.5	5.1
Gretchen Whitmer	D	W	-5.2	4.5
<i>votes for office</i>			<i>16.4</i>	<i>14.7</i>

Appendix B

Estimates of Voting Patterns by Race in 2022 General Election

APPENDIX B1
Michigan
2022 General Election
Congressional
Contests

Congress 12th District

Race	Party	Vote	Black Voters						White Voters						
			El ¹	95% confidence interval		El ²	ER	HP	El ¹	95% confidence interval		El ²	ER	HP	
Rashida Tliab	ME	D	70.8	97.8	97.2, 98.3		98.0	98.6	95.5	52.3	50.4, 54.0		44.8	46.0	50.5
Steven Elliot	W	R	26.3	1.4	1.0, 2.0		0.8	-0.2	2.8	46.7	45.0, 48.5		50.4	49.4	46.1
Gary Walkowicz	W	WC	2.9	0.8	.6, 1.0		1.5	1.6	1.7	1.0	.8, 1.3		4.6	4.6	3.4
<i>Turnout:votes/VAP</i>							44.7	43.9	42.0				57.4	53.5	59.9

Congress 13th District

Shri Thandedar	A	D	71.1	94.2	93.5, 94.8		94.6	96.1	91.4	55.6	54.4, 56.7		43.8	42.5	44.0
Martell Bivings	B	R	24.0	1.3	.9, 1.7		0.9	-1.5	3.5	42.8	41.8, 43.9		50.8	52.6	53.9
Others			4.9	4.5	4.0, 5.1		5.3	5.4	5.1	1.7	1.2, 2.3		4.8	4.9	2.1
<i>Turnout:votes/VAP</i>							36.2	34.6	35.8				57.4	56.3	74.6

Estimates of Voting Patterns by Race in 2022 General Election

APPENDIX B2 Michigan 2022 General Election State Senate Contests			Black Voters						White Voters				
Race	Party	Vote	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	
State Senate District 1													
Erika Geiss	B	D	71.6	98.3	97.2, 99.1	99.2	101.0	96.7	55.2	52.5, 57.5	43.2	42.5	-
Erik Soderquist		R	28.4	1.7	.9, 2.8	0.9	-1.1	3.3	44.8	42.5, 47.5	56.8	57.5	-
<i>Turnout:votes/VAP</i>					34.4	33.4	34.6			50.0	49.8	-	
State Senate District 2													
Sylvie Santana	B	D	68.0	95.0	92.7, 96.8	97.5	99.1	94.7	58.7	56.1, 61.2	52.1	53.3	59.8
Harry Sawicki		R	29.4	2.2	1.0, 3.9	0.5	-2.0	2.7	40.4	38.0, 43.0	44.8	43.9	37.5
Others			2.6	2.8	1.7, 4.4	2.8	3.0	2.6	0.8	.5, 1.3	2.8	2.8	2.7
<i>Turnout:votes/VAP</i>					35.2	32.8	36.3			41.6	39.3	35.4	
State Senate District 3													
Stephanie Chang	A	D	85.7	96.6	95.3, 97.6	96.8	97.8	94.2	78.8	75.0, 83.4	71.1	69.4	-
Linda Rayburn		R	14.3	3.4	2.4, 4.7	3.2	2.2	5.8	21.2	16.6, 25.0	28.9	30.5	-
<i>Turnout:votes/VAP</i>					36.2	34.9	36.8			37.4	37.2	-	
State Senate District 6													
Mary Cavanagh	H	D	68.0	94.3	93.0, 95.5	95.9	96.6	93.4	55.6	53.5, 57.8	45.8	46.1	50.5
Ken Crider		R	28.9	1.3	.8, 2.1	0.6	-1.3	2.8	43.6	41.4, 45.7	50.4	51.5	47.6
Kimberly Givens		WC	3.1	4.4	3.3, 5.5	4.6	4.7	3.8	0.8	.4, 1.4	2.3	2.4	1.8
<i>Turnout:votes/VAP</i>					41.4	40.3	44.5			70.9	69.2	72.0	
State Senate District 7													
Jeremy Moss	W	D	74.2	97.9	96.9, 98.7	99.1	102.8	96.8	57.6	55.7, 59.4	45.3	43.3	48.0
Corinne Khederian		R	25.8	2.1	1.3, 3.1	0.9	-2.9	3.2	42.4	40.6, 44.3	54.7	56.7	52.0
<i>Turnout:votes/VAP</i>					48.2	45.0	43.8			76.0	74.9	84.1	
State Senate District 8													
Mallory McMorro	W	D	78.9	99.0	98.4, 99.4	98.6	98.6	96.8	72.0	70.2, 73.8	66.3	66.2	70.0
Brandon Ronald Simpson		R	21.1	1.0	.6, 1.6	1.6	1.4	3.2	28.0	26.2, 29.8	33.7	33.9	30.0
<i>Turnout:votes/VAP</i>					43.4	42.7	43.8			73.4	73.0	78.4	

Estimates of Voting Patterns by Race in 2022 General Election

APPENDIX B2
Michigan
2022 General Election
State Senate Contests

State Senate District 10

			Black Voters						White Voters					
			95% confidence interval			95% confidence interval			95% confidence interval			95% confidence interval		
Race	Party	Vote	El ¹	interval		El ²	ER	HP	El ¹	interval		El ²	ER	HP
Paul Wojno	W	D	67.7	98.2	97.0, 99.1	98.7	100.5	95.6	49.1	44.3, 54.0	43.9	43.5	-	
Paul Smith		R	32.3	1.8	.9, 3.0	1.2	-0.5	4.4	50.9	46.0, 55.7	56.2	56.6	-	
<i>Turnout:votes/VAP</i>						32.5	30.8	33.7			55.2	54.4	-	

Estimates of Voting Patterns by Race in 2022 General Election

APPENDIX B3 Michigan 2022 General Election State House Contests			Black Voters						White Voters				
Race	Party	Vote	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	
State House District 1													
	B	D	87.5	95.5	92.3, 97.9	96.0	97.0	93.9	70.0	51.2, 83.6	48.4	46.4	-
		R	10.8	3.3	1.2, 6.5	3.0	1.6	4.2	26.7	13.8, 44.1	48.6	49.6	-
		L	1.7	1.1	.4, 2.0	1.3	1.2	1.9	3.4	1.1, 6.8	5.1	3.8	-
						41.7	40.9	37.2			39.5	27.1	-
<i>Turnout:votes/VAP</i>													
State House District 3													
	ME	D	74.6	94.6	89.0, 98.3	99.1	101.9	-	65.8	58.6, 73.0	55.6	57.2	-
		R	25.4	5.4	1.7, 11.0	0.8	-2.2	-	34.2	27.0, 41.4	44.3	42.8	-
						RF	25.9	-			39.2	39.9	-
<i>Turnout:votes/VAP</i>													
State House District 4													
	B	D	87.1	99.2	98.4, 99.7	98.3	98.1	96.5	66.2	57.8, 74.1	60.5	60.9	64.2
		R	12.9	0.8	.3, 1.6	1.7	1.9	3.5	33.8	25.9, 42.2	39.5	39.1	35.8
						37.7	37.1	36.8			19.8	19.8	21.0
<i>Turnout:votes/VAP</i>													
State House District 5													
	W	D	78.4	99.0	98.1, 99.6	98.8	98.9	97.2	62.5	59.8, 65.1	56.6	56.7	56.6
		R	21.7	1.0	.4, 1.9	1.3	1.1	2.8	37.5	34.9, 40.3	43.4	43.3	43.4
						42.9	42.7	44.5			75.8	75.2	77.3
<i>Turnout:votes/VAP</i>													
State House District 6													
	W	D	83.9	99.2	98.5, 99.7	99.0	99.5	97.4	72.8	70.1, 75.3	67.3	68.2	75.2
		R	16.1	0.8	.3, 1.5	1.4	0.6	2.6	27.2	24.7, 29.9	32.7	31.8	24.8
						42.7	41.9	43.8			75.1	75.2	79.1
<i>Turnout:votes/VAP</i>													
State House District 8													
	W	D	78.9	97.7	95.9, 99.0	97.4	100.5	95.8	65.8	60.8, 70.8	59.8	57.7	-
		R	21.1	2.3	1.0, 4.1	2.6	-0.5	4.2	34.2	29.2, 39.2	40.2	42.2	-
						34.9	34.2	36.9			50.0	49.2	-
<i>Turnout:votes/VAP</i>													

Estimates of Voting Patterns by Race in 2022 General Election

APPENDIX B3 Michigan 2022 General Election State House Contests				Black Voters					White Voters					
Race	Party	Vote		95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	EI ¹	95% confidence interval	EI ²	ER	HP	
State House District 9														
Abraham Aiyash	ME	D	91.6	97.2	95.0, 98.9	97.1	97.7	96.4	83.9	67.6, 94.9	73.7	76.8	-	
Michele Lundgren		R	8.4	2.8	1.1, 5.0	2.9	2.3	3.6	16.1	5.1, 32.4	26.2	23.1	-	
<i>Turnout:votes/VAP</i>						38.3	36.7	34.9			16.5	16.6	-	
State House District 10														
Joe Tate	B	D	68.4	98.2	96.6, 99.3	99.1	108.1	97.2	58.8	56.3, 60.9	52.2	46.8	45.1	
Mark Corcoran		R	31.6	1.8	.7, 3.4	0.5	-7.8	2.8	41.2	39.1, 43.7	47.8	53.3	54.9	
<i>Turnout:votes/VAP</i>						25.8	26.3	36.7			81.4	80.8	75.8	
State House District 11														
Veronica Paiz	H	D	66.6	97.9	95.6, 99.3	99.1	101.6	95.8	50.2	46.7, 53.7	44.3	43.4	46.8	
Mark Foster		R	33.4	2.1	.7, 4.4	0.9	-1.6	4.2	49.8	46.3, 53.3	55.6	56.6	53.2	
<i>Turnout:votes/VAP</i>						36.5	37.1	34.5			64.9	64.6	64.8	
State House District 12														
Kimberly Edwards	B	D	70.4	95.0	91.1, 97.6	98.8	101.9	95.2	51.7	43.7, 59.0	45.5	43.5	-	
Diane Saber		R	27.4	3.9	1.4, 7.8	0.9	-2.9	3.4	47.4	40.1, 55.3	51.4	53.3	-	
Gregory Creswell		L	2.2	1.1	.4, 2.0	1.0	1.0	1.4	0.9	.3, 1.9	3.1	3.2	-	
<i>Turnout:votes/VAP</i>						47.7	41.7	32.1			42.4	47.5	-	
State House District 13														
Lori Stone	W	D	67.4	95.2	90.1, 98.3	99.2	101.3	96.6	53.2	46.5, 59.2	44.5	43.7	-	
Ronald Singer		R	32.6	4.8	1.7, 9.9	0.4	-1.4	3.4	46.8	40.8, 53.5	55.4	56.3	-	
<i>Turnout:votes/VAP</i>						30.6	27.8	32.6			54.5	54.2	-	
State House District 14														
Donavan McKinney	B	D	71.4	94.5	90.7, 97.2	98.0	98.6	95.0	56.9	40.3, 71.6	40.0	40.0	-	
Wendy Jo Watters		R	27.0	3.8	1.4, 7.6	1.0	0.2	3.8	42.0	27.4, 58.5	57.4	57.6	-	
Jeff Sparling		G	1.7	1.6	.8, 2.7	1.2	1.4	1.2	1.1	.4, 2.0	2.3	2.4	-	
<i>Turnout:votes/VAP</i>						34.4	30.3	35.7			46.6	48.6	-	

Estimates of Voting Patterns by Race in 2022 General Election

APPENDIX B3 Michigan 2022 General Election State House Contests			Black Voters						White Voters				
Race	Party	Vote	EI ¹	95% confidence interval	EI ²	ER	HP	EI ¹	95% confidence interval	EI ²	ER	HP	
State House District 16													
Stephanie Young	B	D	77.9	98.3	96.5, 99.4	99.0	100.5	96.1	57.1	52.6, 61.5	50.4	49.5	55.7
Keith Jones		R	22.1	1.7	.6, 3.5	0.8	-0.5	3.9	42.9	38.5, 47.4	49.6	50.5	44.3
<i>Turnout:votes/VAP</i>						46.0	46.4	45.0			64.7	63.7	66.3
State House District 17													
Laurie Pohutsky		D	69.0	97.4	94.9, 99.6	98.5	99.6	96.3	56.0	51.5, 60.1	47.3	46.9	49.9
Penny Crider		R	31.0	2.6	1.0, 5.1	1.5	0.4	3.7	44.0	39.9, 48.5	52.7	53.2	50.1
<i>Turnout:votes/VAP</i>						34.7	33.2	42.0			68.5	67.4	74.5
State House District 18													
Jason Hoskins	B	D	79.6	96.9	94.6, 98.6	98.4	97.7	95.3	60.6	53.2, 67.6	50.5	51.0	-
Wendy Webster Jackson		R	20.4	3.1	1.4, 5.5	1.6	2.4	4.7	39.4	32.4, 46.8	49.4	48.9	-
<i>Turnout:votes/VAP</i>						58.4	57.7	49.7			62.9	62.2	-
State House District 19													
Samantha Steckloff		D	67.1	94.8	89.7, 98.2	99.8	106.5	-	60.1	56.7, 63.2	50.1	48.5	-
Anthony Paesano		R	32.9	5.2	1.8, 10.3	0.0	-6.5	-	39.9	36.8, 43.3	50.3	51.6	-
<i>Turnout:votes/VAP</i>						42.7	41.2	-			82.5	82.5	-
State House District 26													
Dylan Wegela	W	D	67.8	96.4	93.2, 98.7	99.2	102.8	-	51.0	45.1, 56.5	44.3	43.4	-
James Townsend		R	32.2	3.6	1.3, 6.8	0.8	-2.8	-	49.0	43.4, 54.9	55.8	56.6	-
<i>Turnout:votes/VAP</i>						35.8	35.3	-			50.6	49.0	-
State House District 53													
Brenda Carter	B	D	67.4	95.4	90.5, 98.6	98.9	112.7	-	53.3	47.3, 58.8	38.9	37.6	-
Anthony Bartolotta		R	32.6	4.6	1.4, 9.5	1.0	-12.7	-	46.7	41.2, 52.7	61.4	62.4	-
<i>Turnout:votes/VAP</i>						38.2	24.7	-			60.6	57.6	-

Appendix C

APPENDIX C1 Michigan 2022 Congressional Democratic Primaries				Estimates of Voting Patterns by Race in 2022 Democratic Primary										
				Black Voters					White Voters					
				95% confidence					95% confidence					
Race	Party	Vote	EI ¹	interval	EI ²	ER	HP	EI ¹	interval	EI ²	ER	HP		
Congress 12th District														
Rashida Tliab	ME	D	63.8	57.7	56.7, 58.6	55.5	56.2	57.1	79.7	77.6, 81.8	74.2	76.0	72.5	
Janice Winfrey	B	D	22.4	30.6	29.8, 31.4	31.9	32.4	31.7	12.3	10.2, 13.8	10.6	9.8	13.5	
Kelly Garrett	B	D	8.6	6.2	5.6, 6.7	6.6	5.5	5.5	5.3	4.1, 6.9	11.3	10.6	10.0	
Shanelle Jackson	B	D	5.1	5.6	5.2, 6.1	6.1	5.9	5.7	2.7	2.1, 3.4	3.7	3.6	4.0	
<i>Turnout:votes/VAP</i>						22.6	18.5	19.4			15.8	14.1	16.4	
Congress 13th District														
Shri Thandedar	A	D	28.3	25.4	24.7, 26.1	25.2	26.8	28.9	34.0	32.9, 35.1	32.4	34.6	21.9	
Adam Hollier	B	D	23.5	24.5	23.8, 25.2	24.7	23.7	23.6	23.1	22.1, 24.1	22.4	20.9	28.6	
Portia Roberson	B	D	16.9	14.3	13.6, 14.9	14.2	12.2	10.7	20.4	19.4, 21.4	21.4	19.9	26.7	
John Conyers	B	D	8.6	9.6	9.1, 10.0	9.7	10.1	10.0	6.8	6.0, 7.6	6.8	7.7	3.6	
Sherry Gay-Dagnogo	B	D	8.2	11.5	11.1, 12.0	11.8	11.8	11.5	3.1	2.5, 3.7	2.6	3.1	2.5	
Sharon McPhail	B	D	6.4	8.3	7.9, 8.7	8.4	9.0	8.8	3.4	2.8, 4.0	3.1	3.3	2.7	
Michael Griffie	B	D	4.6	2.6	2.3, 2.9	2.4	2.1	2.3	6.8	6.2, 7.4	6.6	7.6	12.1	
Sam Riddle	B	D	2.3	3.2	3.0, 3.5	3.3	3.7	3.6	1.0	.8, 1.2	0.9	0.6	0.5	
Lorrie Rutledge	B	D	1.2	0.6	.5, .8	0.7	0.6	0.7	1.4	1.2, 1.6	1.6	2.1	1.3	
<i>Turnout:votes/VAP</i>						17.8	15.6	15.0			16.1	13.2	18.5	

APPENDIX C2 Michigan 2022 State Senate Democratic Primaries			Estimates of Voting Patterns by Race in 2022 Democratic Primary										
			Black Voters						White Voters				
			Race	Party	Vote	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	95% confidence EI ¹	95% confidence interval	EI ²
State Senate District 1													
Erika Geiss	B	D	32.3	24.3	21.6, 27.1	23.4	21.2	21.8	55.9	50.8, 60.6	45.6	47.3	-
Brenda Sanders	B	D	23.3	34.0	31.8, 36.1	33.7	38.7	40.1	16.8	13.5, 20.2	14.4	15.4	-
Frank Liberati	W	D	22.9	13.8	12.2, 15.5	15.4	9.8	5.5	11.0	7.3, 15.2	18.0	18.4	-
Shellee Brooks	B	D	9.9	13.4	12.0, 14.8	13.2	13.7	14.8	7.1	5.0, 9.3	7.2	9.1	-
Ricardo Moore	B	D	7.9	11.2	10.1, 12.3	10.6	12.7	14.3	5.7	4.2, 7.4	5.5	5.1	-
Carl Schwartz	W	D	3.7	3.4	2.6, 4.2	4.1	4.0	3.6	3.5	2.4, 4.8	3.8	4.7	-
<i>Turnout:votes/VAP</i>						18.3	14.2	14.3			9.2	7.8	-
State Senate District 2													
Sylvie Santana	B	D	80.7	79.9	76.5, 83.2	79.5	79.5	79.4	90.6	85.9, 94.0	81.3	80.0	80.1
Maurice Sanders		D	19.3	20.1	16.8, 23.5	20.4	20.4	20.6	9.4	6.0, 14.1	18.6	20.0	19.9
<i>Turnout:votes/VAP</i>						14.3	12.6	15.6			11.8	10.1	10.8
State Senate District 3													
Stephanie Chang	A	D	82.8	77.2	75.1, 79.2	76.3	73.5	73.0	93.4	90.8, 95.7	92.3	93.4	-
Toinu Reeves	B	D	17.2	22.9	20.8, 24.9	23.8	26.6	27.0	6.6	4.3, 9.2	7.7	6.6	-
<i>Turnout:votes/VAP</i>						16.8	15.3	15.0			13.2	11.5	-
State Senate District 6													
Mary Cavanagh	H	D	43.9	49.4	46.9, 52.0	47.4	47.9	46.6	50.0	43.8, 56.8	41.4	45.0	50.0
Vicki Barnett	W	D	35.8	13.1	10.9, 15.4	14.3	13.4	16.3	45.9	38.5, 52.4	57.2	52.2	43.2
Darryl Brown	B	D	20.2	37.5	35.2, 39.7	38.8	38.5	37.1	4.2	2.5, 6.2	3.2	2.7	6.8
<i>Turnout:votes/VAP</i>						19.7	17.2	19.4			17.3	16.7	17.4
State Senate District 7													
Jeremy Moss	W	D	82.9	85.2	82.9, 87.4	83.3	78.4	74.8	91.4	87.0, 94.8	85.8	84.5	89.4
Ryan Foster	B	D	17.1	14.8	12.6, 17.1	16.6	21.5	25.2	8.6	5.2, 13.0	14.2	15.3	10.6
<i>Turnout:votes/VAP</i>						25.7	21.8	18.3			20.5	19.0	20.3

APPENDIX C2 Michigan 2022 State Senate Democratic Primaries		Estimates of Voting Patterns by Race in 2022 Democratic Primary											
		Black Voters					White Voters						
		Race	Party	Vote	95% confidence interval	95% confidence interval	EI ¹	EI ²	ER	HP	EI ¹	EI ²	ER
State Senate District 8													
Mallory McMorrow	W	D	68.4	24.2	21.7, 26.6	26.0	27.2	30.9	95.9	94.3, 97.2	97.1	97.1	90.5
Marshall Bullock II	B	D	31.6	75.8	73.4, 78.3	73.9	72.8	69.1	4.1	2.8, 5.7	2.8	2.9	9.5
<i>Turnout:votes/VAP</i>						20.5	17.5	18.9			30.5	28.8	36.1

APPENDIX C3 Michigan 2022 State House Democratic Primaries			Estimates of Voting Patterns by Race in 2022 Democratic Primary										
			Black Voters					White Voters					
Race	Party	Vote	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	95% confidence EI ¹	95% confidence interval	EI ²	ER	HP	
State House District 1													
	B	D	78.4	83.1	79.5, 86.7	85.2	79.1	78.4	64.8	43.1, 81.6	59.2	64.5	-
	B	D	21.6	16.9	13.3, 20.5	14.9	21.0	21.6	35.2	18.4, 56.9	40.7	35.0	-
	<i>Turnout:votes/VAP</i>					18.0	15.5	14.3			7.9	2.3	-
State House District 3													
	ME	D	54.3	62.9	55.0, 70.3	61.9	61.1	60.8	57.8	48.5, 67.4	49.5	47.1	-
	ME	D	28.7	15.1	9.1, 22.2	15.8	16.4	17.9	30.0	20.2, 39.3	37.5	38.0	-
	ME	D	17.0	22.0	15.9, 28.5	21.8	22.5	21.4	12.2	6.9, 17.9	13.5	14.8	-
	<i>Turnout:votes/VAP</i>					10.5	8.4	12.6			13.0	11.7	-
State House District 4													
	B	D	55.2	65.4	63.3, 67.5	64.5	61.1	62.5	17.0	6.8, 30.8	27.4	27.0	28.1
	B	D	26.9	32.7	30.6, 34.8	32.6	36.0	31.7	11.0	4.4, 20.1	9.6	10.3	11.3
	ME	D	17.9	1.9	1.0, 3.0	3.3	3.2	5.8	72.0	56.1, 84.6	62.0	62.7	60.6
	<i>Turnout:votes/VAP</i>					15.6	13.9	15.2			5.6	5.4	6.2
State House District 5													
	W	D	38.4	16.7	14.1, 19.2	16.7	16.0	17.9	71.4	62.9, 78.4	66.0	63.4	54.7
	B	D	29.7	55.2	52.9, 57.4	51.6	54.6	51.6	4.2	2.0, 7.3	2.2	1.0	8.4
	W	D	18.9	10.5	8.6, 12.7	12.1	12.5	12.7	19.8	13.2, 27.9	27.5	28.6	30.4
	B	D	10.3	15.6	14.2, 17.1	15.6	14.2	15.1	3.0	1.4, 5.2	3.7	3.9	4.6
	W	D	2.8	2.0	1.3, 2.9	2.8	2.7	2.7	1.5	.7, 2.6	2.7	2.9	1.9
	<i>Turnout:votes/VAP</i>					19.2	17.5	19.3			25.1	24.7	22.6
State House District 6													
	W	D	62.0	44.1	41.4, 46.9	42.7	41.7	41.6	91.2	87.9, 94.0	82.0	82.1	84.6
	B	D	14.8	24.5	22.5, 26.4	23.8	23.3	24.4	3.4	1.6, 5.6	5.6	5.4	5.0
	B	D	14.8	21.5	19.6, 23.5	22.1	23.2	22.3	3.3	1.4, 5.9	7.0	6.8	5.9
		D	8.4	9.9	8.4, 11.4	11.1	11.8	11.7	2.1	.9, 3.9	5.5	5.7	4.5
	<i>Turnout:votes/VAP</i>					17.4	15.9	18.0			33.2	32.6	38.8

APPENDIX C3 Michigan 2022 State House Democratic Primaries			Estimates of Voting Patterns by Race in 2022 Democratic Primary												
			Black Voters						White Voters						
Race	Party	Vote	EI ¹	95% confidence interval		EI ²	ER	HP	EI ¹	95% confidence interval		EI ²	ER	HP	
State House District 7															
Helena Scott	B	D	53.2	87.5	84.0, 90.6		80.8	80.2	77.4	37.4	29.0, 45.5		33.4	31.9	-
Melanie Macey	W	D	40.1	10.1	7.0, 13.4		14.2	14.4	17.4	59.3	51.3, 67.7		58.8	60.4	-
Grant Rivet	W	D	6.7	2.5	1.4, 3.7		4.8	5.4	5.3	3.2	1.5, 5.4		8.0	7.8	-
<i>Turnout:votes/VAP</i>						20.4	15.3	13.6				31.7	30.4	-	
State House District 8															
Mike McFall	W	D	37.8	24.7	20.4, 29.1		24.5	23.5	27.6	56.5	47.9, 64.3		53.9	54.6	-
Durrel Douglas	B	D	21.6	31.6	27.5, 35.6		33.1	31.9	26.8	9.0	4.4, 14.9		8.1	9.7	-
Ernest Little	B	D	17.2	32.3	29.0, 35.7		33.6	33.2	29.3	3.9	1.7, 7.0		0.7	-1.1	-
David Soltis	W	D	14.0	3.8	2.4, 5.5		3.8	2.1	6.3	24.0	17.0, 30.4		26.5	26.7	-
Ryan Nelson	W	D	9.4	7.5	5.0, 10.2		8.8	9.5	10.0	6.6	3.2, 10.9		10.2	10.4	-
<i>Turnout:votes/VAP</i>						14.6	13.4	13.8				14.0	13.4	-	
State House District 9															
Abraham Aiyash	ME	D	61.3	50.5	46.8, 54.2		46.0	45.7	48.2	77.9	65.9, 85.9		91.7	98.4	-
Darnell Gardner	B	D	18.1	25.7	23.1, 28.4		27.6	26.4	24.7	6.3	2.5, 12.6		4.4	-3.0	-
Abraham Shaw	B	D	8.8	11.2	9.4, 12.9		12.6	13.3	12.9	5.4	2.5, 9.6		1.2	-1.0	-
William Phillips	B	D	6.1	6.9	5.3, 8.5		7.6	7.8	7.7	4.7	2.0, 8.7		2.2	2.1	-
Paul Smith	B	D	5.8	5.6	4.3, 7.1		7.2	6.8	6.5	5.7	2.7, 10.0		0.0	3.8	-
<i>Turnout:votes/VAP</i>						13.9	13.1	12.7				8.4	7.5	-	
State House District 10															
Joe Tate	B	D	81.3	83.2	77.8, 88.3		76.4	78.8	82.1	92.5	87.6, 96.1		84.5	84.1	88.0
Toni Mua	B	D	18.7	16.8	11.7, 22.2		23.2	21.2	17.9	7.5	3.9, 12.4		15.4	15.8	12.0
<i>Turnout:votes/VAP</i>						16.5	15.0	15.6				21.2	19.1	16.8	

APPENDIX C3 Michigan 2022 State House Democratic Primaries			Estimates of Voting Patterns by Race in 2022 Democratic Primary										
			Black Voters						White Voters				
Race	Party	Vote	EI ¹	95% confidence interval	EI ²	ER	HP	EI ¹	95% confidence interval	EI ²	ER	HP	
State House District 11													
Veronica Paiz	H	D	18.9	6.6	3.0, 10.9	12.6	9.5	6.9	27.1	16.3, 37.3	24.4	25.4	23.1
Ricardo White	B	D	18.1	22.2	18.5, 26.0	22.1	22.6	23.8	15.6	7.1, 24.5	14.7	14.2	14.4
Alex Manwell	W	D	15.3	6.7	4.2, 9.7	7.2	8.0	9.7	22.0	12.3, 31.2	22.2	22.0	21.1
Regina Williams	B	D	14.5	24.2	20.7, 27.7	23.3	23.6	21.7	6.5	2.8, 12.1	7.1	7.4	9.2
Athena Lynn Thornton	B	D	10.2	18.7	15.6, 21.7	18.4	17.1	15.6	4.1	1.7, 7.3	3.4	3.9	4.8
Marvin Cotton Jr.	B	D	7.8	17.1	14.3, 19.7	16.5	15.1	13.4	3.1	1.3, 5.6	1.1	1.0	2.2
David Maynard		D	7.2	1.7	.8, 2.9	2.4	2.5	4.4	9.0	4.1, 14.5	11.3	12.3	9.7
Paul Robert Francis	W	D	4.9	1.6	.8, 2.6	1.5	1.3	2.8	7.9	4.8, 11.2	7.5	8.5	10.6
Patrick Biange	W	D	3.0	1.2	.6, 2.1	1.0	0.5	1.5	4.6	2.3, 7.1	5.0	5.4	5.0
<i>Turnout:votes/VAP</i>						14.8	12.3	10.6			14.6	15.0	14.6
State House District 12													
Kimberly Edwards	B	D	51.9	83.4	73.1, 91.7	85.8	85.9	83.0	42.0	20.6, 65.6	17.9	18.0	-
Richard Steenland	W	D	48.1	16.7	8.3, 26.9	14.1	14.0	17.0	58.0	34.4, 79.4	82.2	82.0	-
<i>Turnout:votes/VAP</i>						14.3	12.0	10.3			8.4	10.0	-
State House District 13													
Lori Stone	W	D	73.7	53.0	48.9, 57.3	51.3	51.8	52.6	91.5	86.9, 95.3	91.7	93.0	-
Myles Miller	B	D	26.3	47.0	42.7, 51.1	48.4	48.3	47.4	8.5	4.7, 13.1	9.1	7.1	-
<i>Turnout:votes/VAP</i>						9.8	9.4	10.3			11.8	11.1	-
State House District 14													
Donavan McKinney	B	D	59.3	80.6	77.8, 83.2	82.8	82.2	80.4	39.5	31.1, 48.7	26.0	25.8	-
Kristina Lodovisi	W	D	28.4	13.9	11.7, 16.5	12.7	13.4	14.1	42.3	33.0, 50.2	50.5	49.5	-
Aaron Delikta	W	D	12.3	5.4	4.0, 7.1	4.7	4.5	5.6	18.2	12.7, 23.1	24.2	24.7	-
<i>Turnout:votes/VAP</i>						13.2	12.8	13.8			8.8	9.1	-

APPENDIX C3 Michigan 2022 State House Democratic Primaries			Estimates of Voting Patterns by Race in 2022 Democratic Primary										
			Black Voters						White Voters				
			95% confidence interval			95% confidence interval							
Race	Party	Vote	EI ¹	interval	EI ²	ER	HP	EI ¹	interval	EI ²	ER	HP	
State House District 16													
Stephanie Young	B	D	88.4	93.0	90.5, 95.1	89.2	89.3	90.7	91.4	84.2, 96.4	87.2	86.3	87.9
Ishmail Terry	B	D	11.6	7.0	4.9, 9.5	10.7	10.7	9.3	8.6	3.6, 15.8	13.0	13.8	12.1
<i>Turnout:votes/VAP</i>						22.7	19.9	21.9			15.6	14.2	16.8
State House District 18													
Jason Hoskins	B	D	55.1	53.1	47.6, 58.4	52.1	51.7	47.2	65.0	44.2, 83.6	61.5	61.6	-
Caprice Jackson	B	D	44.9	46.9	41.6, 52.4	47.7	48.1	52.8	35.0	16.4, 55.8	38.8	38.3	-
<i>Turnout:votes/VAP</i>						31.2	29.4	21.5			17.4	16.2	-
State House District 26													
Dylan Wegela	W	D	42.1	6.4	2.7, 11.5	1.2	-5.3	-	76.2	66.4, 84.3	78.2	82.3	-
Steven Chisholm	B	D	29.7	55.4	49.1, 62.0	59.6	64.4	-	9.1	4.3, 15.8	3.5	1.0	-
Allen Wilson	B	D	18.9	32.2	25.8, 38.1	32.7	32.2	-	9.0	4.0, 15.6	6.7	6.4	-
Stephen Patterson	W	D	9.3	5.9	2.9, 9.6	8.6	9.2	-	5.6	2.6, 10.2	9.9	9.8	-
<i>Turnout:votes/VAP</i>						15.1	14.9	-			11.6	10.2	-

**IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

DONALD AGEE, JR. et al.,

Plaintiffs,

v.

JOCELYN BENSON, et al.,

Defendants.

Case No. 1:22-CV-00272-PLM-RMK-JTN

EXPERT REPORT OF MAXWELL PALMER, PH.D.

March 8, 2023

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Introduction & Summary of Findings

I, Dr. Maxwell Palmer, declare as follows:

1. My name is Maxwell Palmer. I am currently an Associate Professor of Political Science at Boston University. I joined the faculty at Boston University in 2014, after completing my Ph.D. in Political Science at Harvard University. I was promoted to Associate Professor, with tenure, in 2021. I am also a Civic Tech Fellow in the Faculty of Computing & Data Sciences and a Faculty Fellow at the Initiative on Cities. I teach and conduct research on American politics and political methodology.
2. I have published academic work in leading peer-reviewed academic journals, including the *American Political Science Review*, *Journal of Politics*, *Perspectives on Politics*, *British Journal of Political Science*, *Journal of Empirical Legal Studies*, *Political Science Research and Methods*, *Legislative Studies Quarterly*, and *Urban Affairs Review*. My book, *Neighborhood Defenders: Participatory Politics and America's Housing Crisis*, was published by Cambridge University Press in 2019. I have also published academic work in the *Ohio State University Law Review*. My published research uses a variety of analytical approaches, including statistics, geographic analysis, and simulations, and data sources including academic surveys, precinct-level election results, voter registration and vote history files, and census data. My curriculum vitae is attached to this report.
3. I have served as an expert witness or litigation consultant on numerous cases involving redistricting or voting restrictions. I testified at trial, court hearing, or by deposition in *Bethune Hill v. Virginia* before the U.S. District Court for the Eastern District of Virginia (No. 3:14-cv-00852-REP-AWA-BMK); *Thomas v. Bryant* before the U.S. District Court for the Southern District of Mississippi (No. 3:18-CV-00441-CWR-FKB); *Chestnut v. Merrill* before the U.S. District Court for the Northern District of Alabama (No. 2:18-cv-00907-KOB); *Dwight v. Raffensperger* before the U.S. District Court for the Northern District of Georgia (No. 1:18-cv-2869-RWS); *Bruni v. Hughs* before the U.S. District Court for the Southern District of Texas (No. 5:20-cv-35); *Caster v. Merrill* before the U.S. District Court for the Northern District of Alabama (No. 2:21-cv-1536-AMM); *Pendergrass v. Raffensperger* before the U.S. District Court for the Northern District of Georgia (No. 1:21-CV-05339-SCJ); *Grant v. Raffensperger* before the U.S. District Court for the Northern District of Georgia (No. 1:22-CV-00122-SCJ); and *Galmon v. Ardoin* before the U.S. District Court for the Middle District of Louisiana (3:22-cv-00214-SDD-SDJ). I also served as the independent racially polarized voting analyst for the Virginia Redistricting Commission in 2021, and I have worked as a consultant to the United State Department of Justice on several matters. My expert testimony has been accepted and relied upon by courts; in no case has my testimony been rejected or found unreliable.
4. I am being compensated at a rate of \$500/hour for my work in this case. No part of my compensation is dependent upon the conclusions that I reach or the opinions that I offer.

5. I was asked by defendants in this litigation to opine on the report submitted by Mr. Trende on racially polarized voting in the Detroit Area and on the extent to which race predominated in the drawing of the Hickory and Linden Plans.
6. In this report I primarily focus on the analyses presented by Mr. Trende. In writing this report I relied on data and computer code provided by Mr. Trende to replicate his analyses, as well as election data from the website of the Michigan Secretary of State. Below, I address many of Mr. Trende's analyses. However, my silence on a particular point or analysis offered by Mr. Trende is not an indication of my agreement with that point.
7. Overall, I find that Mr. Trende has not found evidence of a consistent pattern of racially polarized voting in the Challenged Districts (House Districts 1, 2, 7, 8, 10, 11, 12, 13, 14, and 26 in the Hickory Map, and Senate Districts 1, 3, 5, 6, 8, 10, and 11 in the Linden Map). I also find that Mr. Trende has not demonstrated that race predominated in the drawing of the Hickory and Linden Maps. In particular, his simulation analysis fails to show that race predominated over partisan fairness considerations in the drawing of the maps.

Racially Polarized Voting

8. Racially polarized voting centers around the concept of a “candidate of choice.” Do voters from different racial or ethnic groups have a clear candidate of choice in an election, and, if so, are these candidates different? For example, suppose 80% of Black voters in a given geographic area support Candidate *A*, and 80% of White voters in that same area support Candidate *B*. Black and White voters each have a clear candidate of choice, and, because these candidates are different, voting is racially polarized. However, suppose that the White voters in this area are split, with about 50% of White voters supporting each candidate. In this case, while Black voters have a clear candidate of choice, White voters do not have a candidate of choice, and as a result there is not racially polarized voting in this election.
9. The above examples demonstrate that three things are required for racially polarized voting between two groups to exist. First, Group 1 must have a clear candidate of choice. Second, Group 2 must have a clear candidate of choice. Third, the candidates of choice of Group 1 and Group 2 must be different.
10. In my discussion below, I use the terms “candidate of choice” and “preferred candidate” interchangeably. Both mean a candidate who is preferred above all others by voters of a racial or ethnic group. I define “preferred” in two ways. First, a preferred candidate should receive a substantially larger vote share than the candidate receiving the second-highest vote share. For instance, a candidate winning support from a group with 51% of their votes while their opponent receives 49% of their votes may be preferred by a majority of the voters in the group, but this is not a substantively meaningful margin. Second, when estimating level of support using empirical methods, such as ecological

inference, the difference between vote shares of the top candidate for a group and the candidate receiving the second-highest vote share must be statistically significant. This can be determined using statistical tests of if the two candidates received the same vote share or if one was greater than the other.¹

11. Another important element in analyzing racially polarized voting is determining, when there is an identifiable Black-preferred candidate, if White voters vote as a bloc to defeat the Black-preferred candidate. This depends on both the level of polarization and the size of each group in the electorate. Suppose a district is 55% Black and 45% White, and two candidates, *X* and *Y*, run in the election. Black voters support *X* with 90% of the vote, and *Y* with 10% of the vote. White voters support *X* with 10% of the vote, and *Y* with 90% of the vote. Despite high levels of polarization, *X*, the Black-preferred candidate wins the election. Now, suppose that the share of White voters supporting candidate *X* increases to 25% of the vote. This increase in White support for the Black-preferred candidate, often called “White crossover voting,” increases the winning margin of the Black-preferred candidate when the district is 55% Black, and even allows the Black-preferred candidate to win if the Black population of the district were to decrease below 50%.

Racially Polarized Voting in Primaries

12. In general elections, analyzing racially polarized voting is straightforward, as there are usually only two competitive candidates in the election. For Black voters to have a candidate of choice, one candidate must get at least 50% of the vote from Black voters, and the other candidate will necessarily receive less than 50%.² However, primary elections may be contested by more than two candidates, such that no candidate receives a majority of the vote. When this occurs, the existence of a candidate of choice is less obvious. Suppose three candidates, *A*, *B*, and *C*, run in the election; Black voters support *A* with 40% of the vote, *B* with 35% of the vote, and *C* with 25% of the vote. Does there exist a Black-preferred candidate in this election? Mr. Trende treats *A* as the preferred candidate in cases like this, as they received the highest vote share (plurality winner). However, no candidate received a majority of the vote, and a majority of Black voters supported someone other than *A*, so there is not a Black-preferred candidate. If a candidate of choice can be identified based on receiving the plurality of the vote, rather than a majority, then it is possible, with more than three candidates, for a candidate of choice to be identified with a relatively small share of the vote.

¹In ecological inference, as used by Mr. Trende in his analysis, the model simulates thousands of draws with different possible values of vote shares for each candidate from each group. The mean of these draws for each group and candidate is reported as the estimate. The interval containing 95% of the values from the draws is used to determine the confidence intervals. I use these draws to conduct my statistical tests. Candidate 1 receives a statistically significant higher share of the vote than Candidate 2 from a group if the share for Candidate 1 is higher than the share for Candidate 2 in 95% or more of the simulations.

²Racially polarized voting is not a simple binary, but can be a matter of degree. When analyzing racially polarized voting, experts may differ on where to draw the line to identify polarization.

13. The analysis is further complicated when trying to identify if there is polarization between racial and ethnic groups in the primary. Continuing the above example, suppose White voters support *A* with 30% of the vote, *B* with 55% of the vote, and *C* with 15% of the vote. Candidate *B* is the White-preferred candidate. Suppose that we define candidate of choice to be winning the plurality, such that *A* is the Black-preferred candidate. Is there racially polarized voting in this case? Black and White voters have different candidates of choice, but we do not know if a majority of Black voters supports the White-preferred candidate. Suppose that the 25% of Black voters who supported *C* prefer *B* to *A* as their second choice. In that case, a majority of Black and White voters prefer *B* over *A*, despite *A* being the Black-preferred candidate.
14. These examples demonstrate some of the complexities of analyzing racially polarized voting in primaries with more than two candidates. How do we define candidates of choice, and is plurality vote enough? If so, how do we know when groups are actually polarized, compared to small pluralities having different preferences? There are other complexities to consider as well. Is polarization different when the Black-preferred candidate is the least preferred-candidate by White voters, instead of receiving the second-most votes? Or, suppose that Candidate *X* is the plurality winner for Black voters with 40% of the vote, and Candidate *Y* comes in second with Black voters with 35% of the vote. Suppose white voters are more fragmented, and their plurality winner is Candidate *Y*, with 35% of the vote. In this scenario, by plurality rule this election would be racially polarized, but Candidate *Y* receives the exact same percentage of the vote from Black and White voters.
15. A second obstacle is that primaries are highly idiosyncratic. Some primaries are uncontested, others have only two candidates, and others have three or more candidates. For example, Mr. Trende examined primary elections in 19 House Districts and eight Senate Districts under the Prior Maps, the 2011 House and Senate District Plans that governed elections from 2012-2020. Across the 19 House Districts, every district had at least one contested Democratic primary from 2012 to 2020, and 17 districts had at least one Democratic primary with three or more candidates. Among these districts, the average Democratic primary had 3.7 candidates, with a maximum of 14 (House District 4 in 2018). Across the eight Senate Districts, seven districts had at least one contested Democratic primary from 2012 to 2020, and five districts had at least one Democratic primary with three or more candidates. Among these districts, the average Democratic primary had 3.4 candidates, with a maximum of 11 (Senate District 2 in 2018).³
16. Figure 1 shows the number of candidates in the Democratic primary election for each of the Prior House Districts where Mr. Trende examined primary elections, and Figure 2 shows the number of candidates in each of the Prior Senate Districts. Both figures show significant variation in the number of candidates across districts and years.

³I exclude candidates that withdrew before the primary from this analysis, and only count candidates that received votes. I also exclude write-in candidates.

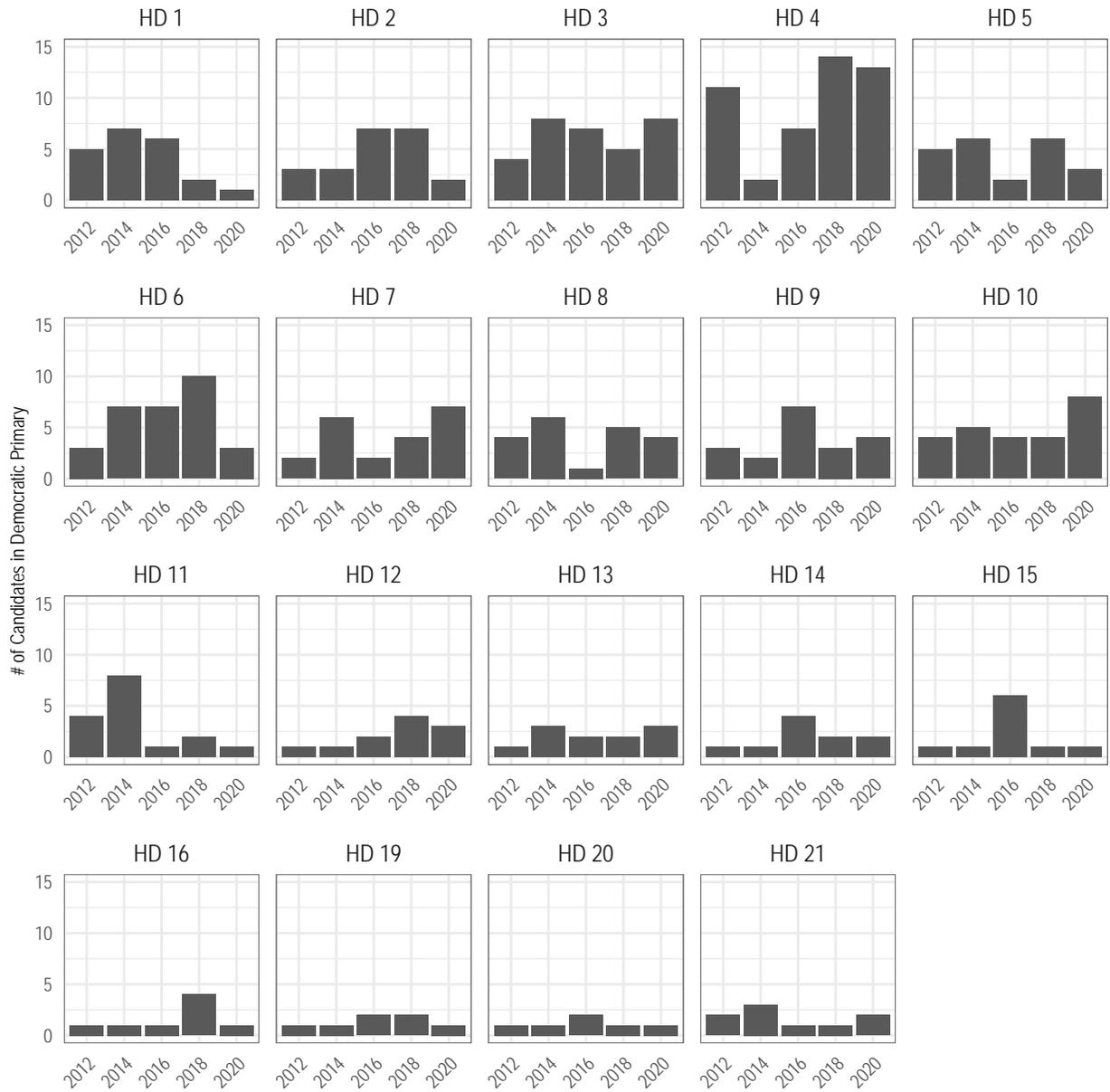


Figure 1: Number of Candidates in Democratic Primary Elections for State House, 2012-2020, Prior Map.

17. There is similar variation in the number of candidates running in the Democratic primary in 2022. Figure 3 shows the number of candidates running in each of the ten challenged Hickory Districts and the seven challenged Linden Districts. Among the ten challenged Hickory Districts, nine had a contested Democratic primary and five had at least three candidates. Among the seven challenged Linden Districts, six had a contested Democratic primary and two had at least three candidates.

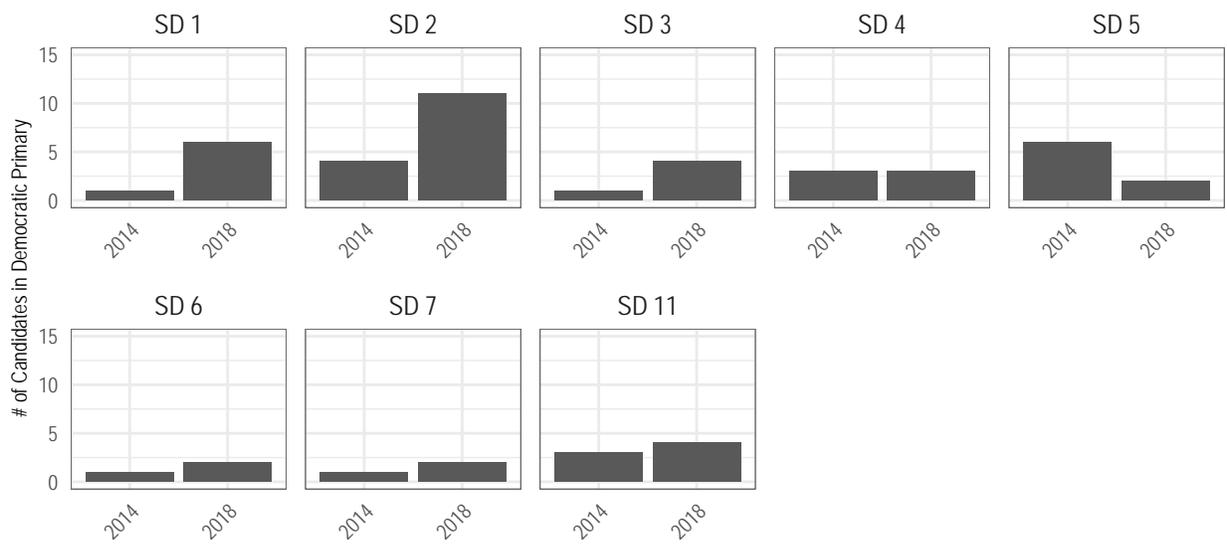


Figure 2: Number of Candidates in Democratic Primary Elections for State Senate, 2012, 2020, Prior Map.

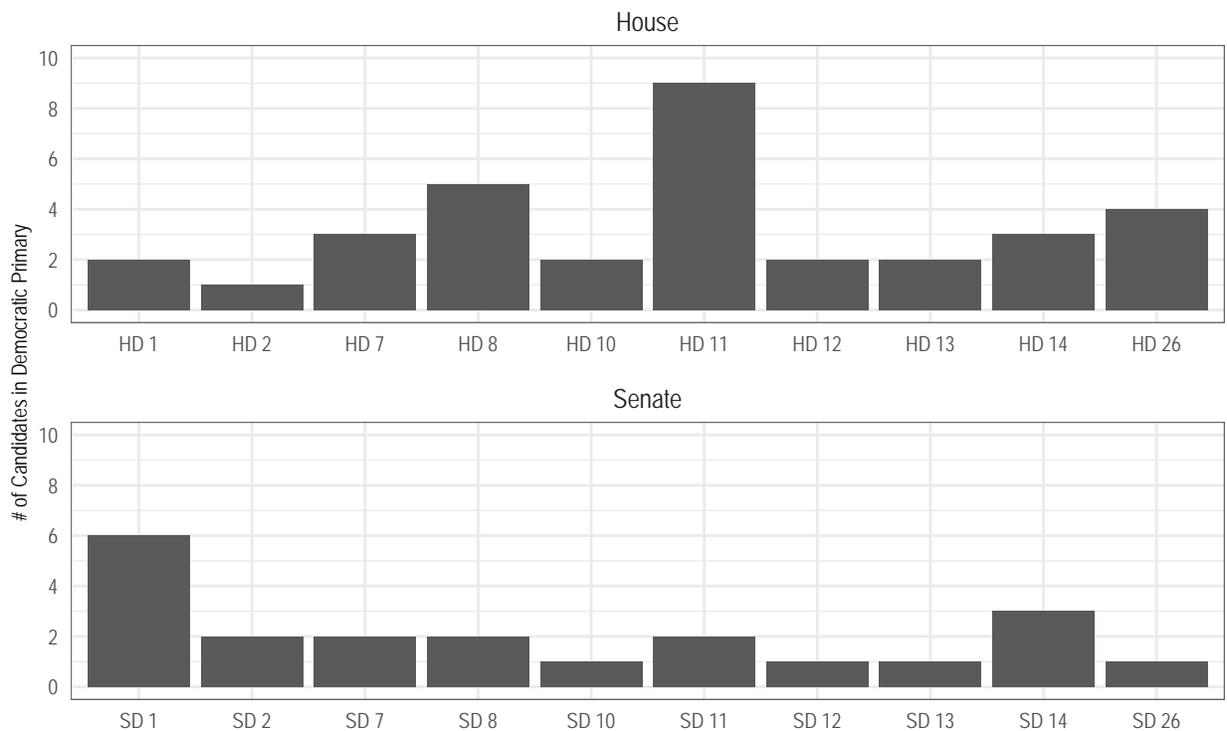


Figure 3: Number of Candidates in Democratic Primary Elections in Challenged House and Senate Districts, 2022

18. If a candidate of choice is defined as the plurality vote winner among each group, then the variation in the number of candidates in the Democratic primary creates further problems for creating districts where Black-preferred candidates can regularly win primaries in the presence of racially polarized voting. Consider the example in Table 1. This district is 60% Black and 40% White. In Scenario 1, suppose two candidates run in the primary. Black voters support Candidate X with 75% of the vote, and Candidate Y with 25% of the vote. White voters support Candidate X with 25% of the vote and Candidate Y with 75% of the vote. Black and White voters each have a clear candidate of choice (X for Black voters, Y for White voters), and voting is polarized. Candidate X, the Black-preferred candidate, wins the primary with 55% of the vote.

19. In Scenario 2, suppose a third candidate, Candidate Z, enters the primary, and divides support for Candidate X, but not for Candidate Y. Candidate X continues to be the Black-preferred candidate (under the plurality definition), but no candidate receives a majority of the vote from Black voters. Candidate Y is the White-preferred candidate. However, due to the split support by Black voters for Candidate X and Candidate Z, Candidate Y is able to win the primary with 45% of the vote. Holding support for each candidate constant, the district population would have to increase to more than 75% Black for Candidate X to win. But, even in that case, the entry of a fourth candidate who takes any support from Candidate X but not from Candidate Y would still allow Candidate Y to win the primary. This example illustrates how the idiosyncrasies of primaries can affect the ability of Black-preferred candidates to win primary elections. In Scenario 2, suppose that all of the voters who do not vote for Candidate Y prefer Candidate X and Candidate Z to Candidate Y. If either candidate X or candidate Z were to withdraw from the primary, the other candidate would then defeat candidate Y. However, due to a failure to coordinate behind a single candidate, Candidate Y wins instead. A Black-preferred candidate fails to win this primary not due to an insufficient Black voting population but due to candidate entry and a lack of coordination in the primary.

Table 1: Illustrative example of how the number of candidates affects the ability of Black-preferred candidates to win primary elections.

	Black Voters	White Voters	Total Vote
% of Population	60%	40%	
Scenario 1			
Support for Candidate X	75%	25%	55%
Support for Candidate Y	25%	75%	45%
Scenario 2			
Support for Candidate X	45%	15%	33%
Support for Candidate Y	25%	75%	45%
Support for Candidate Z	30%	10%	22%

20. District primaries are idiosyncratic, with different numbers of candidates, varying degrees of group cohesion in support of candidates, and levels of racially polarized voting. Mr. Trende recognizes this problem in his report, writing “[m]ost of the races here are difficult to interpret, because they often feature multiple candidates running” (Trende, p.36). Furthermore, the presence of polarized voting in one primary election may not predict polarization in future primaries. In contrast, polarization in general elections is relatively consistent and stable; if voters in a district are polarized in an election for one office in a given year, they are generally also polarized in the elections for other offices elected in that year, as well as polarized in future elections in that district.
21. A third obstacle to using primaries to identify racially polarized voting is the relatively low level of voter turnout in primary elections compared to general elections. Figure 4 shows the total number of voters participating in the August primary and November general elections from 2012 to 2022 statewide and in Wayne County. In 2018 about half the number of people voted in the primary as in the general election, and in every other year primary turnout was even lower relative to the general election. If we assume that every primary voter also voted in the general election, then racially polarized voting analyses of the primary only reveals the preferences of at most half of the general election voters. Racially polarized voting analyses using election results reveal no information about the primary election preferences of the people who only participated in the general election. These voters may or may not have had a preferred candidate in the primary, and that candidate may or may not have won the primary election. Furthermore, we cannot assume that the preferences of primary voters are representative of the preferences of voters who only voted in the general election. However, racially polarized voting analyses of the general election can reveal the preferences of all of the voters in the general election, if different groups had different preferred candidates, and, if so, if the Black-preferred candidate is able to win the election.
22. Figure 5 plots the ratio of primary election voters to general election voters in each of the Challenged Districts in 2022. In every challenged district, there were fewer than half the number of general election votes cast in the primary elections. This shows us that racially polarized voting analyses of primary elections can only inform us about the preferences of less than half of the general electorate.



Figure 4: Primary and General Election Turnout by Year

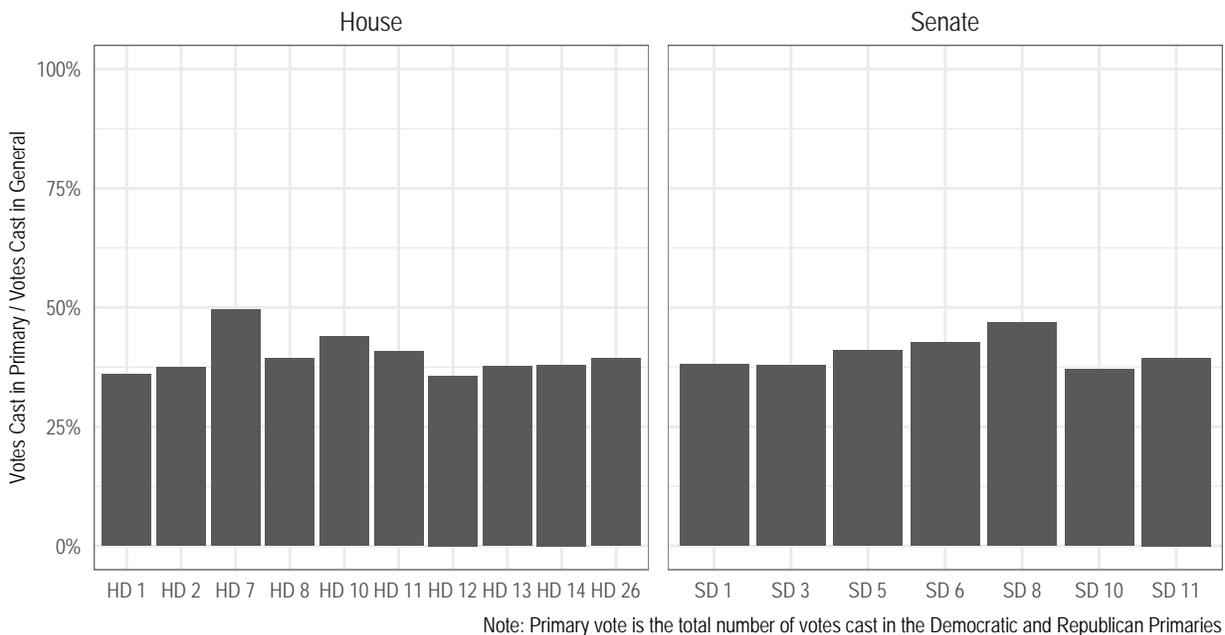


Figure 5: Ratio of Primary Voters to General Election Voters in Challenged House and Senate Districts, 2022

Mr. Trende's Racially Polarized Voting Analysis

23. Above, I outlined the reasons why primary elections are less useful for identifying racially polarized voting than general elections. While I disagree with Mr. Trende on the use of primaries for RPV, I now turn to examining Mr. Trende's RPV analysis under the assumption that winning a plurality of a group's vote is sufficient to identify a candidate of choice. Using Mr. Trende's methodology, I find that Mr. Trende has not demonstrated systematic evidence of racially polarized voting in the Detroit area.
24. Mr. Trende's RPV analysis can be categorized into four different groups: (1) analysis of the 2018 gubernatorial primary in Wayne County; (2) analysis of the 2018 gubernatorial primary in selected districts in Wayne County under the Prior Maps for House and Senate; (3) analysis of selected State House and State Senate primaries from 2014 to 2020 under the Prior Maps; and (4) analysis of selected 2022 primaries for State House and State Senate under the Hickory and Linden Maps.
25. Mr. Trende employs the same methodology across all of his RPV analyses. He uses Ecological Inference (EI), a statistical technique that seeks to estimate group-level preferences based on aggregate election data.⁴ Mr. Trende estimates preferences for five racial and ethnic groups: Black, Non-Hispanic White (hereafter "White"), Hispanic, Asian, and Other. Each election and geographic area is analyzed using a separate ecological inference model. The model produces estimates of the percentage of each group that voted for the candidate from each party in each election. The results include both a mean estimate (the most likely vote share), and a 95% confidence interval.⁵ Mr. Trende provides these results in some of his tables (e.g. Table 5). In other parts of his report, Mr. Trende only reports the mean estimates (e.g. Table 7) and omits the confidence intervals. It is also possible to estimate other quantities of interest from these models, such as the difference in support for two candidate by voters of a certain group.
26. Overall, Mr. Trende makes three significant errors in his RPV analysis. First, he ignores measures of statistical uncertainty, such as the confidence intervals that he calculated for each EI model, and identifies candidates of choice even when such a finding is not supported by the statistical results. Second, even when he does find a statistically significant result, he ignores the importance of substantive significance if the result is actually meaningful in the electoral context. Third, Mr. Trende cherry picks which analyses he includes in his report. He changes the scope of this analysis (which districts to examine) from one section to the next, without any justification.

⁴The specifics of Mr. Trende's EI analysis are not provided in his report. However, Mr. Trende provided all of his code in his replication materials. By reviewing and running his code I am able to identify exactly how Mr. Trende performed this analysis.

⁵The 95% confidence interval is a measure of uncertainty in the estimates from the model. For example, the model might estimate that 94% of the members of a group voted for a particular candidate, with a 95% confidence interval of 91-96%. This means that based on the data and the model assumptions, 95% of the simulated estimates for this group fall in the range of 91-96%, with 94% being the average value. Larger confidence intervals reflect a higher degree of uncertainty in the estimates, while smaller confidence intervals reflect less uncertainty.

He also omits analyses that he performed where the results do not match his narrative, including some that directly contradict his findings.

27. Below, I discuss each of Mr. Trende's RPV analyses. In many cases I replicated Mr. Trende's analysis by using his code, supplied with his report. This code reproduces all of Mr. Trende's results, both reported in his report and unreported.⁶ In all of the analysis below I am relying on Mr. Trende's code and results, rather than my own RPV analysis. I use Mr. Trende's RPV analysis so that this report is methodologically consistent with Mr. Trende's report and so that I can see the same results available to Mr. Trende. However, my use of Mr. Trende's code and RPV analysis should not be understood to be an endorsement of his methodology.
28. Mr. Trende begins his racially polarized analysis using the 2018 Democratic primary for governor. This is the only statewide office with a contested Democratic primary over the past decade. First, he looks at Wayne County as a whole. He estimates that 59.3% of Whites voted for Whitmer, 41.13% of Blacks voted for Thanedar, and 37.4% of Blacks voted for Whitmer in the gubernatorial primary. Mr. Trende declares that "Black voters expressed a clear preference for Thanedar over Whitmer" (p.29).⁷ While Mr. Trende is correct that the models show a statistically significant preference for Thanedar over Whitmer, this is a case of confusing statistical significance for substantive significance.⁸ Black voters are almost evenly divided between Thanedar and Whitmer, with only 4 percentage points separating their vote shares. Black voters are not voting as a cohesive bloc. Despite the statistically significant difference, this is not strong substantive evidence of racially polarized voting.

Racially Polarized Voting in House Districts

29. In addition to looking at RPV in Wayne County, Mr. Trende examines the results of the 2018 Democratic primary for governor at the district level, for the House and Senate districts located entirely in Wayne County under the Prior Map. Mr. Trende estimates ecological inference models for 21 districts. I replicated Mr. Trende's results, and find that only five districts have statically significant levels of polarization. In eight districts, White voters have a preferred candidate but there is not a clear Black-preferred candidate, and in two districts Black voters have a preferred candidate but there is not a clear White-preferred candidate. In five districts voters of neither group have a clear preferred candidate, and in one district voters of both groups have the same

⁶The EI results generated by Mr. Trende's code and presented here are nearly identical to those in Mr. Trende's report, but there are some small (and not statistically or substantively significant) differences caused by the random simulations used by the EI algorithm. Mr. Trende failed to set a random seed in his code, such that, due only to randomness, I cannot perfectly replicate his results and there may be a few trivial differences.

⁷While Mr. Trende does not report confidence intervals for these estimates, I replicated his analysis using his code, and produced confidence intervals.

⁸See Bueno de Mesquita, Ethan, and Anthony Fowler. *Thinking clearly with data: A guide to quantitative reasoning and analysis*. Princeton University Press, 2021, page 107.

preferred candidate. Mr. Trende’s conclusions from this analysis are not supported by his analysis (p.33). Table 6 presents the full results for this analysis.⁹

30. Mr. Trende examines the results of Democratic primaries in selected districts of the Prior Maps. He begins with the House primaries in 2018, and states that he focused on Prior House Districts 2, 4, 5, 6, 9, 10, and 35 (p.35). However, he only reports results for Districts 2 and 5, writing “most of the other races are difficult to interpret.” I replicated all of Mr. Trende’s House RPV analyses for 2018 by running his code and saving all of the model results.
31. Mr. Trende’s analysis of Prior District 2 illustrates a case where there is not racially polarized voting because Black voters did not have a preferred candidate. Seven candidates contested this primary election. Of these seven, four received similar levels of support from Black voters. Figure 6 presents the results, including confidence intervals. Given the level of uncertainty in these results, we cannot conclude that Carla Tinsley-Smith is the Black-preferred candidate. While she has the highest estimated mean level of support, we cannot reject the hypotheses that Carol Banks or Latisha Johnson received the same or higher levels of support from Black primary voters.¹⁰ Therefore, ecological inference does not identify a Black-preferred candidate, and Black voters are not cohesive in this primary. Without a Black candidate of choice, this election cannot be racially polarized.
32. Mr. Trende’s analysis of Prior House District 5 in 2018 also does not show racially polarized voting. Mr. Trende concludes that “Black voters generally backed Cynthia Johnson, while White voters favored Rita Ross.” (p.38) However, the confidence intervals on the estimates tell a different story. As Figure 7 shows, there is substantial overlap of the confidence intervals for Johnson and Ross for both Black and White voters. We cannot reject the hypotheses that the levels of support for these candidate are not equal for both groups.¹¹ By ignoring uncertainty in his estimates, Mr. Trende finds this election to be polarized, even though neither group has an identifiable candidate of choice.

⁹Tables 6-14 present district level EI results. For each district there are three sets of columns. First, I identify the top two candidates for Black voters, with the mean estimates of support and 95% confidence intervals for each. The following column $Pr(c1 > c2)$, indicates the probability that the first candidate listed has a higher vote share than the second candidate listed, across all of the EI simulations. The third following column then uses that result to determine if there is a candidate of choice for Black voters. The next set of columns repeats the analysis for White voters. The final column uses then identifies if the election is polarized.

¹⁰To test for statistical significance, I use the ecological inference simulation results, and calculate the percentage of draws where Candidate i received a higher vote share than Candidate j . Using a one-sided test, I reject that the levels of support are equal if the percentage of simulations where $v_i > v_j$ is 95% or higher.

¹¹Black voters supported Ross at a higher level than Johnson in 9% of the draws, and White voters supported Johnson at a higher level than Ross in 16% of the draws.

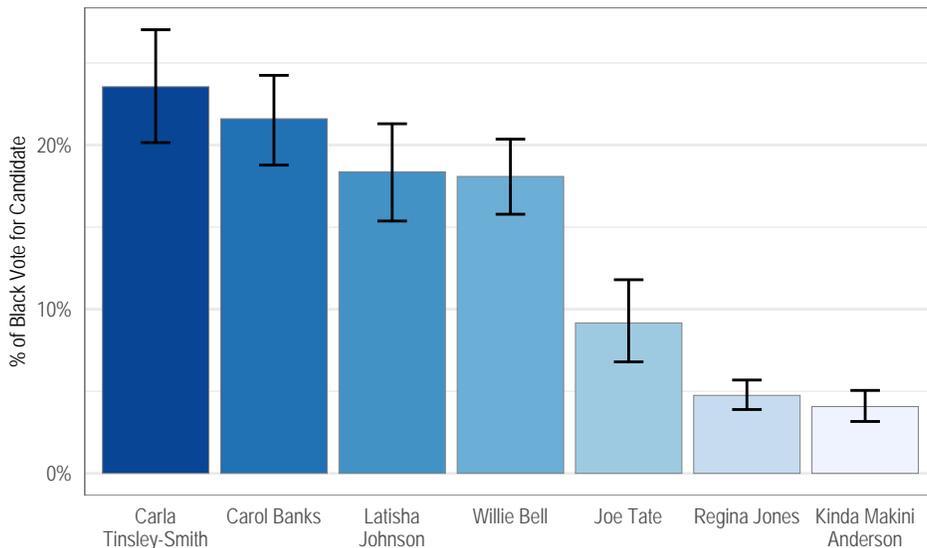


Figure 6: Estimates of Black Support for 2018 Democratic Primary Candidates in Prior House District 2

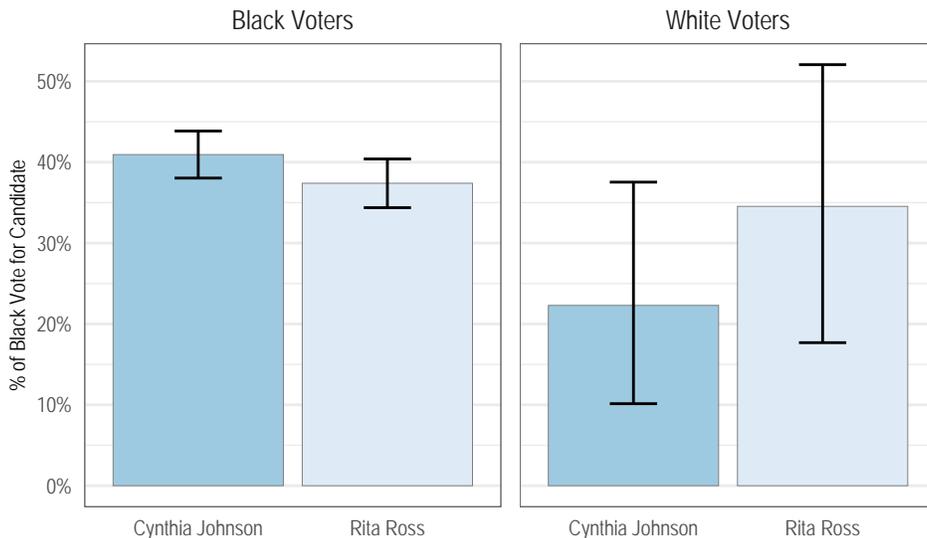


Figure 7: Estimates of Black Support for 2018 Democratic Primary Candidates in Prior House District 5

33. Mr. Trende writes in his report that he focused on Prior House Districts 2, 4, 5, 6, 9, 10, and 35 (p.35), but he only presents detailed results for Districts 2 and 5. However, Mr. Trende's code includes ecological inference analysis for Districts 4, 6, 9, and 10, as well as for Districts 3, 7, 8, and 11.¹² In Districts 1, 6, and 9 there is not racially polarized voting; Black and White voters share the same preferred candidates. In Districts 3, 7, 8, and 10 there is not racially polarized voting; the Black-preferred candidate wins and there is not a White-preferred candidate.
34. In Prior House District 4, there is evidence of racially polarized voting; Black and White voters have different identifiable candidates of choice. The Black-preferred candidate won the primary in House District 4. House District 4 is 45.6% BVAP. This is especially notable because Mr. Trende, reviewing Dr. Handley's report, states that "there is no evidence suggesting that the Black candidate of choice can win a polarized primary in a district with a BVAP below 47%" (p.35). Mr. Trende's analysis of the 2018 primary in District 4 is direct evidence contradicting this assertion. Furthermore, Mr. Trende wrote code to perform this analysis himself, including code to generate a table presenting the results, but these results are not included in his report (see Mr. Trende's file `07_house_rpv.R`, lines 1004 1137). Mr. Trende's table, as generated by running his replication code, is included in this report on page 62.
35. Mr. Trende also analyzed the 2018 primary in Prior House District 11, which is only 25.5% BVAP (and 65.6% White). Here, there is clear evidence of racially polarized voting, and the Black-preferred candidate defeated the White-preferred candidate. This is further evidence against Mr. Trende's claim that "there is no evidence suggesting that the Black candidate of choice can win a polarized primary in a district with a BVAP below 47%" (p.35). While Mr. Trende briefly notes that District 11 was polarized and the Black-preferred candidate won (contradicting his prior statement), he does not report his own analysis. Once again, Mr. Trende wrote code to perform this analysis himself, including code to generate a table presenting the results, but these results are not included in his report (see Mr. Trende's file `07_house_rpv.R`, lines 1580 1684). Mr. Trende's table, as generated by running his replication code, is included in this report on page 69.
36. The examples above show that Mr. Trende wrote code to analyze the 2018 primaries in eleven districts, but only reported the results for two districts, where he (erroneously) found evidence of racially polarized voting. The unreported districts include three districts where Black and White voters shared the same candidate of choice, and four districts where White voters did not have a candidate of choice. Most seriously, despite collecting the data and writing the code to do so, he did not include two districts where there was racially polarized voting, the Black-preferred candidate won the election, and the BVAP of the districts was below 47%.
37. Mr. Trende also examined the results of the 2014, 2016, and 2020 Democratic primaries

¹²All of these analyses can be found in Mr. Trende's replication code, in the file `07_house_rpv.R`. I cannot find any analysis of District 35 in Mr. Trende's report or replication code. To examine RPV in the unreported districts, I ran Mr. Trende's code and examined the results.

in Districts 1–10 under the Prior Map. Mr. Trende makes the same statistical errors in these analyses as discussed above: he ignores statistical uncertainty and identifies candidates of choice even when we cannot reject the hypothesis that the first and second choice candidates received the same vote share. Table 2 presents a summary of the results for each district, and Tables 8–11 present detailed results with confidence intervals and statistical results. Across these ten districts and four primary election cycles from 2014 to 2020, there are eight polarized contests (20%), two uncontested races (5%), and 30 contests that are not polarized (75%).¹³

38. Mr. Trende finds that seven Prior House districts had polarized primaries in 2014. When statistical uncertainty is taken into account, there is only evidence of polarization in three districts. Similarly, Mr. Trende finds that four House districts had polarized primaries in 2016. When statistical uncertainty is taken into account, there is only evidence of polarization in two districts.
39. Table 2 also shows that polarization is inconsistent across districts. The eight polarized cases are spread across four districts; in all of these districts there are some years with polarized contests, and some years with non-polarized contests.
40. Mr. Trende’s fourth RPV analysis examines the 2022 primaries under the Hickory Map. Mr. Trende examines the primary elections in 16 districts. He finds no evidence of polarization in nine districts. In three districts (HD 4, 7, and 12) he finds evidence of racially polarized voting, and that the Black-preferred candidate won the election. In four districts (HD 5, 8, 11, and 26) he finds evidence of racially polarized voting and

Table 2: Summary of RPV Analyses for Prior House Districts, 2014–2020

	2014	2016	2018	2020
HD 1	Polarized	Polarized	Same CoC	Uncontested
HD 2	Polarized	Polarized	No Black CoC	Same CoC
HD 3	No White CoC	No White CoC	No White CoC	No White CoC
HD 4	Same CoC	Same CoC	Polarized	Polarized
HD 5	No White CoC	No White CoC	No CoCs	No White CoC
HD 6	Same CoC	Same CoC	Same CoC	Same CoC
HD 7	No CoCs	No White CoC	No White CoC	No White CoC
HD 8	No White CoC	Uncontested	No White CoC	No White CoC
HD 9	No White CoC	No White CoC	Same CoC	No White CoC
HD 10	Polarized	No White CoC	No White CoC	Polarized

¹³In his replication code for his analysis of the 2020 elections Mr. Trende omitted the Prior House District 8 primary election. This appears to be an error, as the code for the District 7 primary election is repeated twice (see Mr. Trende’s file `12_2020_analysis.R`, lines 373–415). Using Mr. Trende’s data and exact EI methodology, I ran EI for the District 8 primary and included it in the analysis. There is not evidence of racially polarized voting in this election.

that the White-preferred candidate won the election. In these analyses Mr. Trende again fails to consider statistical uncertainty. In HD 12, which Mr. Trende reports as polarized with the Black-preferred candidate winning, there is no White-preferred candidate, and therefore no evidence of racial polarized voting. In HD 8 and HD 11, which Mr. Trende reports as polarized with White-preferred candidates winning, there are not statistically identifiable Black-preferred candidates, and therefore no evidence of racially polarized voting. Accounting for statistical uncertainty reduces the number of districts with racially polarized primaries from seven to four, and there are only two cases where a White-preferred candidate won the primary. Table 12 presents these results with confidence intervals and statistical tests.

Racially Polarized Voting in Senate Districts

41. Mr. Trende's RPV analysis for the Senate districts has the same errors as his analysis of the House districts.
42. Mr. Trende examines the results of the 2018 Democratic primary for governor at the district level. For the Prior Senate Map, Mr. Trende estimates ecological inference models for seven districts. I replicated Mr. Trende's results, and find that only four districts have statically significant levels of polarization. In two districts, White voters have a preferred candidate but there is not a clear Black-preferred candidate, and in one district neither group has a clear candidate of choice. Table 7 presents the full results for this analysis.
43. Mr. Trende examines the results of Democratic primaries in selected districts of the Prior Senate Map for the 2014 Democratic primary. He examines four districts (Districts 2, 4, 5 and 11). Mr. Trende determines that three districts were polarized, but after accounting for statistical uncertainty there is no evidence of polarization in District 11 because White voters do not have a candidate of choice. Table 13 presents the full results of this analysis.
44. Mr. Trende also examines the 2018 Democratic primaries for the Prior Senate Map. While he produced replication code for all of his analyses, including a file for 2018 (09_senate_spv.R), he appears to have used the 2018 primary results from Dr. Handley's report in his Table 19, rather than his own analysis. His replication code for 2018 appears incomplete and I was not able to run this code to produce his analysis. While this analysis does not include confidence intervals, it is clear from the table that Mr. Trende's finding of polarization in District 2 (in both the primary and special election) are not supported by the estimates of support for each candidate by Black voters. The table shows that Black voters supported Banks with an estimated 27.3% of the vote and Hollier with 25.65% of the vote in the primary election (28.8% and 27.5% in the special election). These differences are trivially small, and much smaller than the typical range of the confidence intervals in Mr. Trende's analyses. Consequently, it is highly unlikely that Black voters have a candidate of choice in these elections.

45. Mr. Trende's final RPV analysis examines the 2022 primaries under the Linden Map. Mr. Trende examines the primary elections in six districts (SD 1, 3, 6, 7, 8, and 11), but omits the results of District 11 from his report. Table 14 presents the full results of this analysis. He finds no evidence of polarization in two districts; Black and White voters both strongly support the same candidates. In District 1, Mr. Trende finds evidence of racially polarized voting, and that the Black-preferred candidate lost the election. However, voting is not polarized in this district because, when taking into account statistical uncertainty, there is no White-preferred candidate.
46. After accounting for these errors, there is only one district with evidence of racially polarized voting, Linden District 8. Here, as discussed by Mr. Trende, two incumbents faced each other in the primary election. Senator Mallory McMorrow, who is White, defeated Senator Marshall Bullock, who is Black, with 68.5% of the vote. This single election does not reflect a consistent pattern of racial polarization in this district, but rather demonstrates the idiosyncrasies of primary elections. Senator McMorrow's substantial margin of victory, and high level of support from White voters, may be at least partially due to the national attention she received after a widely publicized speech on transgender rights. Furthermore, while Black voters cohesively supported Senator Bullock in this election, 20% of Black voters supported McMorrow.
47. Mr. Trende also wrote code to analyze the primary election in Linden Senate District 11, which is one of the challenged districts, but did not include the results in his report. I ran Mr. Trende's replication code and find that District 11 was not polarized because Black voters did not vote cohesively in the primary. Once again, Mr. Trende wrote code to perform this analysis himself, including code to generate a table presenting the results, but these results are not included in his report (see Mr. Trende's file `10_2022_analysis.R`, lines 276-307). Mr. Trende's table, as generated by running his replication code, is included in this report on page 99.

Racially Polarized Voting in the Challenged Districts

48. While Mr. Trende analyzed the 2022 primaries in many districts, only some are challenged in this litigation. Table 3 shows the results for the challenged districts. Of the nine challenged House districts Mr. Trende analyzed, only two had primary elections where there is evidence of racially polarized voting. Of the six challenged Senate districts analyzed by Mr. Trende, only one had a primary election with evidence of racially polarized voting. In all of the other districts, either voting was not polarized, there were not identifiable candidates of choice, or there was not a contested primary. Mr. Trende has not demonstrated a consistent pattern or pattern of racially polarized voting for any individual challenged district or the set of challenged districts for neither the Hickory Map nor the Linden Map.

Table 3: Summary of RPV Analyses for Challenged Districts, 2022

Chamber	District	RPV Result
House	HD 1	No White CoC
	HD 7	Polarized
	HD 8	No Black CoC
	HD 10	Same CoC
	HD 11	No Black CoC
	HD 12	No White CoC
	HD 13	No Black CoC
	HD 14	No White CoC
	HD 26	Polarized
	Senate	SD 1
SD 3		Same CoC
SD 6		No White CoC
SD 8		Polarized
SD 11		No Black CoC

Racial Predominance

50. Mr. Trende seeks to analyze the role of race in the drawing of the enacted maps, and concludes that “[r]ace predominated in the drawing” of the Hickory and Linden Maps. He writes that “[t]his is confirmed by both qualitative and quantitative examinations of the districts.” (p.9) In this section I will show that (1) Mr. Trende’s quantitative examinations of the districts do not hold up to scrutiny, and (2) that Mr. Trende did not engage in sufficient qualitative examinations of the districts to show predominance.
51. Mr. Trende performs four quantitative analyses to identify racial predominance in the Hickory and Linden maps: (1) compactness; (2) county splits; (3) core preservation (for the Linden map only), and (4) redistricting simulations. These four analyses, either individually or together, fail to show that race predominated in the drawing of either plan.
52. The Michigan Constitution specifies seven redistricting criteria, in order of priority (Article 4, Section 6(13)). Compactness is the final, and least important criteria. County splits are in the sixth criteria. The fifth criteria specifies that “Districts shall not favor or disfavor an incumbent elected official or a candidate.” Core preservation often serves to protect incumbents. Thus, three of Mr. Trende’s four analyses of racial predominance focus on the three criteria that are constitutionally the least important when drawing maps. We should expect that all three are subordinated to the more important criteria of compliance with the voting rights act, representing communities of interest, and partisan fairness.
53. In the compactness, county split, and core preservation analyses, Mr. Trende compares the Hickory and Linden maps to the prior maps, and uses differences between the Prior Maps and the Commission Maps as evidence of racial predominance. But, such a comparison assumes that the prior maps were race-neutral maps themselves. Mr. Trende provides no evidence that the prior maps are race-neutral. However, one of the map makers in the 2011 redistricting cycle, Jeff Timmer, stated in an interview that the 2011 districts deliberately packed Black voters in the Detroit area to help Republicans win more seats in the state legislature.¹⁴

“Timmer says the reason those districts include such large African American majorities in the first place is because Republican gerrymanderers used the strategy of “packing” those voters into single districts to their own advantage, using minority representation requirements under the Voting Rights Act as an excuse.

“There were two main keys to gerrymandering in Michigan when I sat down to draw maps 10 and 20 years ago. Relying on county and city or township geography, keeping those intact, helps Republicans. The other thing that helped

¹⁴Neher, Jake. “Two Authorities on Gerrymandering Weigh in on Michigan’s Redistricting Commission.” WDET Interview, October 14, 2021. <https://wdet.org/2021/10/14/two-authorities-on-gerrymandering-weigh-in-on-michigans-redistricting-commission/>

Republicans was the Voting Rights Act packing those districts, those majority minority districts, into cities like Detroit,” says Timmer.

54. Given these statements, the prior maps are not a neutral baseline for identifying racial predominance.

Compactness

55. Mr. Trende’s analyzes the compactness of the districts in the Hickory and Linden Maps, as well as the Prior Maps, using three different measures of compactness: Reock, Polsby-Popper, and MAGiK. Mr. Trende claims that “the commission subverted compactness to the goal of drawing districts with particular racial characteristics in mind” (p.50). He seeks to demonstrate this claim by showing that there is a statistically significant relationship between the BVAP of the districts and their compactness scores.
56. Mr. Trende uses a statistical analysis to show that there is a negative correlation between BVAP and compactness: “But rather than relying on what we see with our eyes, we can more rigorously examine how compactness was sacrificed for race by conducting a simple regression analysis.” (p.60) For each map, he estimates three regressions. In each regression the dependent variable is the BVAP of the district, and the independent variable is a compactness measure.¹⁵
57. Mr. Trende incorrectly interprets the statistical significance of the correlations he estimates in his regressions. Describing the results of Table 11, the estimates for the Prior House Districts, he writes: “Under the Prior Map, we lack sufficient evidence to support a claim that there is a relationship between the BVAP and any of the three metrics.” (p.61) This is incorrect. Mr. Trende estimates a p-value of 0.048 for the regression using the MAGiK compactness measure. As Mr. Trende explains in this section, a p-value between .01 and 0.05 is “strong evidence against the null hypothesis” (p.61). Thus, he finds a statistically significant relationship between BVAP and MAGiK under the Prior House map. Describing the results in Table 14, the estimates for the Hickory Map districts in the Detroit area, he writes “when we look at the Hickory Plan districts in the Detroit area, all three metrics are statistically significant.” (p.62). However, the p-value for the Polsby-Popper regression is 0.139, which is not statistically significant.
58. Mr. Trende’s comparisons of the relationship between BVAP and compactness in the Prior Maps and the Commission Maps, both statewide and in the Detroit area, fail to show any evidence of racial predominance. All four analyses of the Prior Maps show a statistically significant relationship between BVAP and lack of compactness for at least one of the three measures Mr. Trende examines. Mr. Trende even finds that “the

¹⁵The choice of making BVAP the dependent variable, rather than the independent variable is odd, as it makes more sense to think of BVAP as an explanatory or predictive variable of the district’s compactness. However, for the purpose of estimating only if the correlation is statistically significant, it does not matter.

Linden plan is more compact, at least in the Detroit area, than the Benchmark Plan” (p.106)

59. Finally, Mr. Trende’s redistricting simulations, discussed below, demonstrate that a relationship between BVAP and lower compactness scores is not evidence of racial predominance at all. Using Mr. Trende’s race-neutral simulations, I randomly selected 100 simulated maps from the House and Senate simulations and calculated the Polsby-Popper and Reock scores for each district.¹⁶ I then ran regressions estimating the correlation between BVAP and each compactness score. As reported in Table 4, I find a negative and statistically significant relationship between BVAP and both compactness measures for both the House and the Senate. As these simulations are necessarily race-neutral, this relationship cannot be generated by any racial intent. If such a relationship occurs in race neutral maps, then its existence in the Hickory and Linden plans, to the extent Mr. Trende finds such relationships, cannot be attributed to racial predominance.

Table 4: Relationship Between BVAP and Compactness Using Trende’s Simulated Plans

	House		Senate	
	Polsby-Popper	Reock	Polsby-Popper	Reock
BVAP	-0.054*** (0.005)	-0.021*** (0.006)	-0.171*** (0.011)	-0.053*** (0.012)
Num.Obs.	5200	5200	1900	1900

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001
Each model includes plan-level fixed effects.

County Splits

60. Mr. Trende calculates the number of county splits in the Hickory and Linden plans, and compares them to the splits under the Prior Maps. He finds that there are significantly more county splits under the Hickory and Linden plans than the Prior Maps. However, this is exactly what we should expect to see if the Prior Maps were partisan gerrymanders. As Jeff Timmer, one of the map drawers in the 2011 cycle, explained in an interview, “Relying on county and city or township geography, keeping those intact, helps Republicans.”
61. Furthermore, the Michigan Constitution subordinates county splits to other redistricting criteria, including equal population, contiguity, diversity and communities of interest, partisan fairness, and incumbency.¹⁷

¹⁶I used Mr. Trende’s second set of simulations, which do not restrict county splits. However, this relationship also holds in his other two simulations for each chamber.

¹⁷Michigan Constitution, Article 4, Section 6.

Core Retention

62. Mr. Trende also examines core retention in the Hickory and Linden plans. As Mr. Trende notes, core retention is “not listed among the Michigan criterion” (p.106). Mr. Trende only reports statistical results for his analysis of core retention for the Linden map, because he finds, in an unreported analysis, “insufficient evidence to conclude that the Hickory Map subordinates this concern to racial factors.” (p.106) For the Linden Map, Mr. Trende finds a statistically significant correlation between increased BVAP in a district and lower core retention. While this analysis demonstrates that districts with higher BVAP were changed more than districts with lower BVAP relative to the Prior Map, this is entirely consistent with undoing a previous racial gerrymander. As Jeff Timmer, one of the map drawers in the 2011 cycle, explained in an interview, “The other thing that helped Republicans was the Voting Rights Act packing those districts, those majority minority districts, into cities like Detroit.” If the MICRC prioritized core preservation in high BVAP districts, then it would be preserving this prior gerrymander.

Simulation Analysis

63. Mr. Trende conducts a simulation analysis for both the Hickory and Linden Plans, and claims that the simulations reveal evidence of racial predominance in the drawing of both maps. However, the simulations do not show that race was the predominant factor in the drawing the maps. These simulations fail to consider, among other things, the role of partisan fairness in drawing the Hickory and Linden Plans.
64. Redistricting simulations create an ensemble of maps that are supposed to represent the distribution of maps that comply with a set of redistricting criteria. The analyst can choose what constraints to include in the simulations, including population equality, compactness, or county or other geographic splits. If the constraints in the simulations accurately reflect the constraints of the actual map-drawers, then the simulations can produce a set of maps that could plausibly have been produced through the actual map drawing process. By comparing various statistics from the simulations to the enacted map, we can see if the enacted map systematically deviates from the ensemble of plausible maps. However, if the constraints do not accurately reflect the map-drawing process, then differences between the enacted map and the simulations will not be informative.
65. Mr. Trende runs three sets of simulations for each plan, with different constraints in each. In his first simulation, Mr. Trende includes a constraint that seeks to minimize the number of county splits. As is clear from the enacted map, minimizing county splits in the Wayne County area was not one of the MICRC’s commissions goals, and, as discussed above, minimizing splits in Wayne County serves to maintain the 2011 partisan gerrymander. In his second simulation, Mr. Trende removes this county split constraint. In his third simulation, Mr. Trende adds a constraint that seeks to reduce splitting communities of interest (COIs). However, this constraint is extremely limited,

because he defines a COI only as any city or town that is *not split* in the enacted plans, and prevents these places from being split in his simulations. There are X such places in the Hickory Map, and Y such places in the Linden Map. However, this does not account for COIs within larger places (such as Detroit), or COIs that might span multiple municipalities.

66. Mr. Trende analyzes his simulations by looking at two different statistical measures: deviations in the distribution of BVAP, and deviations in the distribution of Democratic vote share, as defined by the results of the 2020 presidential election. He calculates a “gerrymandering index,” which other scholars have used to measure partisan gerrymandering. I am not aware of other academics or experts using this index to measure racial gerrymandering.
67. Mr. Trende provides several graphs of the deviations, but does not present the statistics that he calculates (the sum of squared deviations) for all of his simulations. I present these results, based on replicating Mr. Trende’s simulations, in Table 5. The fourth column in this table shows the sum of squared deviations for the enacted plans, which Mr. Trende calls the “gerrymandering index.” It is important to note that the values of the statistics for BVAP and Democratic vote share cannot be directly compared; these statistics are measured relative to the deviations in each simulation. In the fifth column, I use the deviations of the enacted plans and the simulated plans to calculate another statistics, the percentage of simulations with deviations higher than the deviations in the enacted plans. If the enacted plans were to look like the simulated plans, this value would be close to 0.5. If the enacted plans deviate significantly from the simulated plans, this value would be close to 0 or close to 1.
68. This table reveals two important features of the simulation results. First, as Mr. Trende’s constraints become closer to the actual practices of the MICRC (removing the county split constraint, respecting communities of interest), the deviation statistic decreases. In other words, the enacted maps, while still systematically

Table 5: Sum of Squared Deviations for Trende Simulations

Metric	Chamber	Constraints	Sum Sq. Dev.	% Sims. w/ Higher SSD
BVAP	House	County	0.707	0.000%
		None	0.634	0.000%
		COI	0.610	0.000%
	Senate	County	0.448	0.000%
		None	0.326	0.014%
		COI	0.346	0.022%
Dem Vote	House	County	0.242	0.000%
		None	0.220	0.000%
		COI	0.232	0.000%
	Senate	County	0.205	0.000%
		None	0.184	0.138%
		COI	0.177	0.052%

different from the simulated maps, look *closer* to the simulated maps as the simulation constraints become more realistic. It is likely that improving these constraints may further reduce the calculated deviations.

69. Second, Table 5 shows that the enacted maps differ from the simulated maps on both race and party. Mr. Trende dismisses the significance of the partisanship deviations because they are smaller than the racial deviations. As I explain above, the relative size of the deviations for race and party are not a useful comparison. Furthermore, the results are statistically significant for both measures; in all of the simulations for the House, and one of the three simulations for the Senate, the deviations for race and party are both large and significantly outside of the range of simulated deviations. Given the correlation between race and party in Michigan, we can't separate out the role of both factors in drawing the maps from this simulation analysis.
70. Additionally, the MICRC prioritized partisan fairness when drawing the enacted maps. Dr. Handley highlighted three tests for partisan fairness, the Lopsided Margins Test, the Mean-Median Difference, and the Efficiency Gap. Mr. Trende's simulations do not constrain for partisan fairness. Doing so likely requires running simulation for the entire state, rather than just the area examined by Mr. Trende, as these measures require the full set of districts rather than a subset to calculate. These constraints may have a substantial impact on the racial and partisan deviations measured in the simulations.

Qualitative Analysis

71. Finally, Mr. Trende's qualitative assessment of racial predominance in the Hickory plan is minimal, comprising only about 2 pages of text (and 4 maps) of the 120 pages in his report for the Hickory Plan. In this section, Trende comments on the number of county splits and the shapes of the districts (which is largely duplicative of his quantitative analysis to follow). While he briefly comments on the communities in HD 1, HD 8, HD 10, and HD 26 (one sentence on each), he does not provide any analysis of the communities of interest in the other challenged House districts. Mr. Trende also suggests that race predominated in the drawing of HD 7 and HD 5; neither district is challenged in this litigation, despite Mr. Trende describing HD 5 as "perhaps the most egregious district on the map." (p48)
72. Similarly, Mr. Trende conducts a minimal qualitative assessment of the Linden plan, confined primarily to comments on how districts cross county lines. Mr. Trende makes no mention at all of two of the challenged districts, SD 10 and SD 11.

Trende's Demonstration Plans

73. Mr. Trende's demonstration plans have ten majority-Black districts in the House, and five in the Senate. Using the logic of Mr. Trende's simulation analysis, both demonstration maps are extreme outliers with extremely large sums of squared deviations. Using the simulations without any county or COI constraints, less than 1% of the House simulations produced a map with ten majority-Black districts, and only 2% produced a map with 9 majority-Black districts. Similarly, none of the Senate simulations produced a map with five majority-Black districts, and less than 1% produced a map with four majority-Black districts.
74. Mr. Trende's House map also fails his own compactness test for predominance. There is a statistically significant negative correlations between BVAP and the Polsby-Popper compactness measure for the House plan.
75. The only statewide primary election available for analyzing racially polarized voting is the 2018 primary for Governor. In Wayne County, Mr. Trende finds that voting is racially polarized, with Gretchen Whitmer the White-preferred candidate and Shri Thanedar the Black-preferred candidate. Mr. Trende criticizes the Hickory Map for having zero districts won by Thanedar, while the Prior Map has four. However, Mr. Trende's demonstration map has only two districts that would be won by Thanedar; the other eight Black-majority districts would be won by Whitmer or El-Sayad.
76. Additionally, Mr. Trende fails to do any analysis of the performance of the new majority-Black districts under his demonstration maps. He does not provide any evidence that these districts will elect Black-preferred candidates in Democratic primaries. He also does not provide any evidence that Black voters in neighboring districts, which are also affected by this map, will not have their ability to elect Black-preferred candidates reduced.

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

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



Maxwell Palmer

Executed this 8th day of March, 2023, at Arlington, Massachusetts.

Table 6: RPV Analyses for 2018 Gubernatorial Primary in Prior House Districts

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
HD 1	Thanedar	46.1%	(40.6%, 52.2%)	97.27%	CoC	Whitmer	59.9%	(52.1%, 67.4%)	99.94%	CoC	Polarized
	Whitmer	36.4%	(30.1%, 42.3%)			El-Sayed	35.0%	(27.4%, 42.5%)			
HD 2	Thanedar	50.4%	(46.3%, 54.1%)	100.00%	CoC	Whitmer	59.3%	(53.5%, 65.2%)	100.00%	CoC	Polarized
	Whitmer	32.3%	(27.7%, 36.7%)			El-Sayed	37.7%	(31.9%, 43.3%)			
HD 3	Whitmer	41.3%	(33.5%, 47.7%)	61.31%	No CoC	El-Sayed	44.2%	(19.4%, 69.3%)	70.90%	No CoC	No CoCs
	Thanedar	39.8%	(34.4%, 44.9%)			Whitmer	31.7%	(11.5%, 58.2%)			
HD 4	Thanedar	50.0%	(44.4%, 55.5%)	99.96%	CoC	El-Sayed	78.2%	(67.6%, 86.3%)	100.00%	CoC	Polarized
	Whitmer	35.5%	(29.6%, 40.7%)			Whitmer	14.1%	(7.5%, 22.9%)			
HD 5	Thanedar	50.8%	(47.5%, 54.0%)	100.00%	CoC	El-Sayed	58.9%	(36.5%, 77.0%)	96.72%	CoC	Polarized
	Whitmer	34.4%	(31.1%, 37.9%)			Whitmer	22.6%	(8.9%, 41.6%)			
HD 6	Thanedar	40.8%	(36.3%, 45.6%)	86.96%	No CoC	El-Sayed	52.3%	(35.3%, 69.0%)	89.38%	No CoC	No CoCs
	Whitmer	35.9%	(30.2%, 41.6%)			Whitmer	31.8%	(15.8%, 49.3%)			
HD 7	Thanedar	42.9%	(39.0%, 46.8%)	95.33%	CoC	Thanedar	34.8%	(11.5%, 59.5%)	51.54%	No CoC	No White CoC
	Whitmer	37.3%	(33.7%, 40.4%)			Whitmer	34.5%	(14.4%, 60.9%)			
HD 8	Whitmer	40.5%	(37.5%, 43.2%)	81.51%	No CoC	El-Sayed	38.4%	(18.7%, 60.0%)	63.91%	No CoC	No CoCs
	Thanedar	38.1%	(35.3%, 41.1%)			Thanedar	32.6%	(13.3%, 58.4%)			
HD 9	Thanedar	50.1%	(46.7%, 53.3%)	100.00%	CoC	El-Sayed	73.5%	(62.7%, 83.3%)	100.00%	CoC	Polarized
	Whitmer	38.3%	(34.7%, 41.8%)			Whitmer	14.9%	(7.3%, 24.4%)			
HD 10	Whitmer	41.7%	(37.0%, 46.1%)	75.20%	No CoC	Whitmer	54.3%	(33.1%, 73.3%)	90.59%	No CoC	No CoCs
	Thanedar	39.2%	(35.3%, 42.9%)			El-Sayed	28.8%	(12.3%, 47.4%)			
HD 11	Thanedar	54.5%	(44.1%, 65.5%)	99.14%	CoC	El-Sayed	48.9%	(37.2%, 61.1%)	60.77%	No CoC	No White CoC
	Whitmer	29.8%	(18.9%, 41.5%)			Whitmer	45.0%	(32.3%, 57.3%)			
HD 12	Whitmer	43.8%	(29.8%, 56.5%)	83.47%	No CoC	Whitmer	65.9%	(49.4%, 80.3%)	99.91%	CoC	No Black CoC
	Thanedar	33.1%	(22.9%, 43.4%)			El-Sayed	19.2%	(9.1%, 32.7%)			
HD 13	Whitmer	42.1%	(18.4%, 66.5%)	62.22%	No CoC	Whitmer	55.2%	(41.9%, 68.2%)	90.05%	No CoC	No CoCs
	El-Sayed	34.6%	(15.1%, 57.1%)			El-Sayed	37.7%	(25.8%, 50.8%)			

HD 14	Whitmer El-Sayed	42.8% 40.5%	(19.1%, 68.6%) (16.6%, 65.2%)	53.97%	No CoC	Whitmer El-Sayed	63.7% 28.6%	(53.7%, 73.0%) (19.5%, 38.6%)	100.00%	CoC	No Black CoC
HD 15	Whitmer El-Sayed	45.5% 37.0%	(22.7%, 68.0%) (15.6%, 60.7%)	64.81%	No CoC	El-Sayed Whitmer	65.7% 31.8%	(60.7%, 70.8%) (26.7%, 36.8%)	100.00%	CoC	No Black CoC
HD 16	Whitmer Thanedar	37.2% 35.0%	(15.4%, 63.5%) (15.2%, 57.5%)	52.93%	No CoC	Whitmer El-Sayed	74.6% 14.0%	(63.9%, 83.8%) (6.7%, 22.9%)	100.00%	CoC	No Black CoC
HD 17	Whitmer El-Sayed	49.2% 25.8%	(21.9%, 71.1%) (6.9%, 48.5%)	86.10%	No CoC	Whitmer El-Sayed	72.3% 17.9%	(57.5%, 85.1%) (6.6%, 30.6%)	100.00%	CoC	No Black CoC
HD 19	Whitmer El-Sayed	47.2% 28.3%	(23.0%, 70.9%) (9.6%, 51.8%)	80.22%	No CoC	Whitmer El-Sayed	77.4% 19.3%	(69.2%, 84.5%) (12.3%, 27.8%)	100.00%	CoC	No Black CoC
HD 20	El-Sayed Whitmer	43.0% 35.2%	(17.2%, 69.4%) (13.2%, 61.4%)	61.90%	No CoC	Whitmer El-Sayed	69.7% 27.0%	(63.9%, 75.6%) (21.0%, 33.1%)	100.00%	CoC	No Black CoC
HD 21	Whitmer Thanedar	51.9% 24.1%	(29.5%, 70.0%) (11.7%, 39.1%)	95.13%	CoC	Whitmer El-Sayed	76.7% 15.4%	(61.1%, 86.6%) (7.2%, 28.6%)	100.00%	CoC	Same CoC
HD 23	Whitmer El-Sayed	51.2% 29.4%	(22.2%, 77.4%) (10.1%, 55.6%)	80.32%	No CoC	Whitmer El-Sayed	78.7% 16.1%	(70.9%, 84.7%) (10.7%, 23.2%)	100.00%	CoC	No Black CoC

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Table 7: RPV Analyses for 2018 Gubernatorial Primary in Prior Senate Districts

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
SD 1	Thanedar Whitmer	43.5% 33.8%	(40.9%, 46.1%) (30.9%, 36.7%)	100.00%	CoC	Whitmer El-Sayed	66.3% 27.8%	(60.4%, 72.1%) (21.7%, 33.6%)	100.00%	CoC	Polarized
SD 2	Thanedar Whitmer	49.6% 38.6%	(46.8%, 52.2%) (35.9%, 41.3%)	100.00%	CoC	Whitmer El-Sayed	53.1% 43.1%	(48.9%, 57.2%) (38.8%, 47.2%)	99.38%	CoC	Polarized
SD 3	Thanedar Whitmer	51.6% 37.7%	(49.6%, 53.7%) (35.5%, 40.1%)	100.00%	CoC	El-Sayed Whitmer	66.6% 29.7%	(63.5%, 70.0%) (26.5%, 32.9%)	100.00%	CoC	Polarized
SD 4	Thanedar Whitmer	41.9% 37.2%	(40.0%, 43.7%) (35.1%, 39.2%)	99.75%	CoC	Whitmer El-Sayed	72.8% 19.6%	(64.6%, 80.1%) (12.6%, 28.2%)	100.00%	CoC	Polarized
SD 5	Thanedar Whitmer	40.4% 39.2%	(38.7%, 42.0%) (37.1%, 41.3%)	78.03%	No CoC	El-Sayed Whitmer	49.9% 44.1%	(40.6%, 58.1%) (35.6%, 52.7%)	75.27%	No CoC	No CoCs
SD 6	Thanedar Whitmer	38.9% 37.7%	(28.9%, 48.8%) (25.9%, 49.5%)	53.70%	No CoC	Whitmer El-Sayed	76.6% 14.5%	(70.1%, 82.2%) (9.7%, 20.5%)	100.00%	CoC	No Black CoC
SD 7	El-Sayed Thanedar	35.8% 34.3%	(15.6%, 56.9%) (18.5%, 55.3%)	53.59%	No CoC	Whitmer El-Sayed	74.5% 22.5%	(69.2%, 79.1%) (17.5%, 28.1%)	100.00%	CoC	No Black CoC

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Table 8: RPV Analyses for Prior House Districts, 2014

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
HD 1	Banks* Thompson	68.5% 21.1%	(60.7%, 75.3%) (14.1%, 29.0%)	100.00%	CoC	Thompson Koester	54.6% 23.7%	(45.9%, 62.2%) (18.5%, 29.1%)	100.00%	CoC	Polarized
HD 2	Talabi* Casazza	93.2% 3.7%	(90.9%, 95.2%) (2.2%, 5.5%)	100.00%	CoC	Casazza Talabi*	78.2% 16.4%	(69.1%, 85.8%) (8.5%, 25.8%)	100.00%	CoC	Polarized
HD 3	Byrd* Gayles	31.0% 20.7%	(26.0%, 35.9%) (15.3%, 26.2%)	99.03%	CoC	Gayles Pinkins	31.0% 18.1%	(15.9%, 45.5%) (7.8%, 29.4%)	88.96%	No CoC	No White CoC
HD 4	Robinson* Hassan	93.5% 6.5%	(90.7%, 95.8%) (4.2%, 9.3%)	100.00%	CoC	Robinson* Hassan	74.5% 25.5%	(56.4%, 87.6%) (12.4%, 43.6%)	99.47%	CoC	Same CoC
HD 5	Durhal* Johnson	57.2% 32.9%	(53.2%, 61.2%) (29.0%, 36.9%)	100.00%	CoC	Durhal* Johnson	31.6% 25.3%	(16.4%, 47.8%) (12.6%, 39.9%)	67.36%	No CoC	No White CoC
HD 6	Chang* Carter	51.9% 39.2%	(45.3%, 57.8%) (34.0%, 44.9%)	97.99%	CoC	Chang* Carter	53.3% 21.3%	(35.9%, 68.7%) (10.1%, 34.2%)	98.51%	CoC	Same CoC
HD 7	Garrett* Stallworth	41.4% 38.2%	(38.2%, 44.2%) (35.4%, 40.8%)	90.42%	No CoC	Cole Garrett*	22.3% 19.9%	(10.2%, 38.0%) (8.5%, 34.9%)	59.52%	No CoC	No CoCs
HD 8	Gay-Dagnogo* Pugh	54.0% 28.3%	(50.2%, 57.7%) (24.6%, 32.1%)	100.00%	CoC	Pugh Gay-Dagnogo*	33.1% 28.9%	(16.3%, 50.7%) (13.8%, 46.3%)	60.29%	No CoC	No White CoC
HD 9	Santana* Berry	85.6% 14.4%	(81.9%, 89.4%) (10.6%, 18.1%)	100.00%	CoC	Berry Santana*	55.5% 44.5%	(35.8%, 74.7%) (25.3%, 64.2%)	70.20%	No CoC	No White CoC
HD 10	Love* McCalister	45.8% 35.5%	(42.7%, 49.0%) (32.6%, 38.4%)	100.00%	CoC	Johnson Love*	69.6% 10.9%	(57.9%, 79.7%) (4.4%, 18.8%)	100.00%	CoC	Polarized

* indicates the winning candidate.

Table 9: RPV Analyses for Prior House Districts, 2016

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
HD 1	Banks* Youson	75.2% 10.3%	(69.4%, 80.6%) (7.3%, 13.4%)	100.00%	CoC	Sossi Banks*	81.6% 9.4%	(74.9%, 87.2%) (4.2%, 15.7%)	100.00%	CoC	Polarized
HD 2	Scott* Tinsley-Smith	42.6% 31.9%	(39.1%, 46.2%) (28.2%, 35.6%)	99.99%	CoC	Henner Tate	59.3% 18.6%	(53.2%, 65.3%) (13.0%, 24.4%)	100.00%	CoC	Polarized
HD 3	Byrd* Williams	53.3% 18.8%	(47.4%, 59.0%) (13.8%, 23.3%)	100.00%	CoC	Byrd* Williams	35.3% 24.8%	(15.2%, 53.9%) (10.3%, 42.7%)	72.32%	No CoC	No White CoC
HD 4	Robinson* Jones	64.7% 22.6%	(60.6%, 68.9%) (19.1%, 26.2%)	100.00%	CoC	Robinson* Jones	43.1% 18.8%	(26.1%, 58.5%) (8.9%, 30.9%)	96.50%	CoC	Same CoC
HD 5	Durhal* Johnson	59.5% 40.5%	(55.6%, 63.7%) (36.3%, 44.4%)	100.00%	CoC	Johnson Durhal*	52.4% 47.6%	(28.5%, 75.2%) (24.8%, 71.5%)	58.26%	No CoC	No White CoC
HD 6	Chang* Black	79.9% 7.0%	(77.1%, 82.5%) (5.5%, 8.6%)	100.00%	CoC	Chang* Jackson	54.1% 10.7%	(35.8%, 69.2%) (4.9%, 18.0%)	99.98%	CoC	Same CoC
HD 7	Garrett* Thompson	93.7% 6.3%	(91.0%, 95.8%) (4.2%, 9.0%)	100.00%	CoC	Garrett* Thompson	60.0% 40.0%	(33.3%, 82.8%) (17.2%, 66.7%)	78.26%	No CoC	No White CoC
HD 9	Santana* Pollard	54.1% 33.8%	(50.8%, 57.2%) (30.8%, 36.6%)	100.00%	CoC	Pollard Santana*	38.6% 17.8%	(26.3%, 50.4%) (6.7%, 34.1%)	93.93%	No CoC	No White CoC
HD 10	Love* Cavanagh	83.9% 11.6%	(79.0%, 88.4%) (7.2%, 16.7%)	100.00%	CoC	Love* Cavanagh	51.8% 28.4%	(32.5%, 69.7%) (14.3%, 44.6%)	91.39%	No CoC	No White CoC

* indicates the winning candidate.

Table 10: RPV Analyses for Prior House Districts, 2018

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
HD 1	Yancey* Maloy	93.9% 6.1%	(90.3%, 96.7%) (3.3%, 9.7%)	100.00%	CoC	Yancey* Maloy	79.5% 20.5%	(70.7%, 86.4%) (13.6%, 29.3%)	100.00%	CoC	Same CoC
HD 2	Tinsley-Smith Banks	23.6% 21.6%	(20.1%, 27.0%) (18.8%, 24.2%)	77.07%	No CoC	Tate* Johnson	68.0% 12.6%	(62.2%, 73.4%) (7.7%, 17.6%)	100.00%	CoC	No Black CoC
HD 3	Byrd* Cochran	69.3% 12.5%	(64.3%, 73.8%) (8.6%, 16.6%)	100.00%	CoC	Byrd* Cochran	36.3% 27.2%	(18.4%, 54.1%) (11.8%, 43.1%)	71.44%	No CoC	No White CoC
HD 4	Robinson* Jones	39.8% 13.0%	(36.7%, 43.0%) (11.1%, 15.0%)	100.00%	CoC	Almasmari Oberholtzer	40.2% 24.5%	(32.2%, 47.4%) (17.4%, 31.3%)	98.96%	CoC	Polarized
HD 5	Johnson* Ross	40.9% 37.4%	(38.0%, 43.9%) (34.4%, 40.4%)	90.38%	No CoC	Ross Johnson*	34.5% 22.3%	(17.7%, 52.1%) (10.1%, 37.5%)	79.36%	No CoC	No CoCs
HD 6	Carter* Wilson	35.5% 20.3%	(32.9%, 38.2%) (17.3%, 23.1%)	100.00%	CoC	Carter* Edevbie	28.9% 15.0%	(23.1%, 35.5%) (8.2%, 22.0%)	99.54%	CoC	Same CoC
HD 7	Garrett* Harvey-Quinn	92.1% 2.8%	(90.4%, 93.6%) (1.7%, 4.1%)	100.00%	CoC	Garrett* Harvey-Quinn	44.3% 19.3%	(19.8%, 65.5%) (7.4%, 37.5%)	89.66%	No CoC	No White CoC
HD 8	Gay-Dagnogo* Henry	76.0% 8.5%	(73.1%, 78.8%) (6.2%, 11.0%)	100.00%	CoC	Gay-Dagnogo* Henry	26.9% 23.7%	(12.3%, 44.3%) (11.0%, 39.1%)	58.73%	No CoC	No White CoC
HD 9	Whitsett* Pollard	59.9% 36.1%	(56.3%, 63.2%) (32.8%, 39.7%)	100.00%	CoC	Whitsett* Pollard	53.6% 32.8%	(40.7%, 65.9%) (21.7%, 44.4%)	95.82%	CoC	Same CoC
HD 10	Love* Barley	82.7% 11.8%	(79.4%, 85.9%) (9.1%, 14.7%)	100.00%	CoC	Love* Barley	58.8% 38.4%	(44.6%, 70.4%) (27.5%, 51.7%)	93.72%	No CoC	No White CoC
HD 11	Jones* Walker	90.0% 7.5%	(83.3%, 95.2%) (2.9%, 14.0%)	100.00%	CoC	Walker Jones*	61.9% 35.7%	(53.2%, 69.8%) (28.1%, 44.8%)	99.77%	CoC	Polarized

* indicates the winning candidate.

Table 11: RPV Analyses for Prior House Districts, 2020

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
HD 2	Tate* Harrell	66.4% 33.6%	(61.6%, 70.6%) (29.4%, 38.4%)	100.00%	CoC	Tate* Harrell	88.3% 11.7%	(82.9%, 92.8%) (7.2%, 17.1%)	100.00%	CoC	Same CoC
HD 3	Thanedar* McKinney	39.5% 19.4%	(36.2%, 43.2%) (16.1%, 22.6%)	100.00%	CoC	McKinney Thanedar*	26.9% 24.0%	(13.5%, 40.2%) (9.9%, 39.0%)	59.62%	No CoC	No White CoC
HD 4	Aiyash* Szczepkowski	22.6% 18.6%	(20.2%, 24.8%) (16.2%, 21.0%)	99.24%	CoC	Collins Simpson	69.6% 12.3%	(63.2%, 75.6%) (7.4%, 17.2%)	100.00%	CoC	Polarized
HD 5	Johnson* Ross	70.0% 27.1%	(66.9%, 73.1%) (24.2%, 30.0%)	100.00%	CoC	Johnson* Ross	57.3% 28.9%	(33.1%, 77.3%) (11.5%, 49.6%)	90.03%	No CoC	No White CoC
HD 6	Carter* Neal	75.3% 16.2%	(71.0%, 79.7%) (12.3%, 20.0%)	100.00%	CoC	Carter* Palmer	50.3% 26.2%	(34.7%, 66.3%) (15.3%, 39.0%)	96.99%	CoC	Same CoC
HD 7	Scott* Thornton	41.2% 19.0%	(38.8%, 43.4%) (16.8%, 21.0%)	100.00%	CoC	Scott* Thompson	21.6% 17.2%	(7.6%, 38.4%) (6.1%, 30.6%)	64.64%	No CoC	No White CoC
HD 8	Young* Davis	48.9% 32.3%	(46.2%, 51.3%) (29.3%, 34.8%)	100.00%	CoC	Young* Davis	35.3% 26.5%	(16.0%, 57.4%) (10.9%, 45.1%)	67.93%	No CoC	No White CoC
HD 9	Whitsett* Ogburn	48.9% 30.5%	(45.6%, 51.8%) (27.4%, 33.4%)	100.00%	CoC	Ogburn Whitsett*	37.1% 30.4%	(20.5%, 54.9%) (15.0%, 47.3%)	65.88%	No CoC	No White CoC
HD 10	Ruffin Harris	28.8% 24.7%	(26.2%, 31.2%) (22.0%, 27.3%)	97.67%	CoC	Cavanagh* Harris	61.8% 11.5%	(51.8%, 71.1%) (5.1%, 19.5%)	100.00%	CoC	Polarized

* indicates the winning candidate.

Table 12: RPV Analyses for Hickory House Districts, 2022

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
HD 1	Carter* Tobey	90.6% 9.4%	(86.1%, 94.1%) (5.9%, 13.9%)	100.00%	CoC	Carter* Tobey	66.6% 33.4%	(43.9%, 83.7%) (16.3%, 56.1%)	92.98%	No CoC	No White CoC
HD 3	Farhat* Othman	69.6% 18.2%	(60.8%, 78.1%) (11.1%, 26.4%)	100.00%	CoC	Farhat* Luqman	61.3% 29.6%	(53.2%, 69.2%) (21.5%, 37.7%)	99.98%	CoC	Same CoC
HD 4	Whitsett* Turner	65.9% 32.3%	(63.0%, 69.0%) (29.1%, 35.2%)	100.00%	CoC	Tarraf Whitsett*	81.0% 12.2%	(70.4%, 89.7%) (4.7%, 22.0%)	100.00%	CoC	Polarized
HD 5	Davis Hughes	62.4% 15.6%	(58.9%, 65.5%) (13.2%, 17.9%)	100.00%	CoC	Price* Wooddell	63.1% 22.5%	(57.1%, 69.1%) (17.8%, 27.4%)	100.00%	CoC	Polarized
HD 6	Weiss* Hall	46.1% 25.9%	(41.8%, 50.1%) (22.7%, 28.9%)	100.00%	CoC	Weiss* Jones	91.5% 3.8%	(88.8%, 93.7%) (2.1%, 5.9%)	100.00%	CoC	Same CoC
HD 7	Scott* Macey	90.4% 7.3%	(86.9%, 93.3%) (4.5%, 11.0%)	100.00%	CoC	Macey Scott*	62.6% 33.7%	(57.6%, 67.7%) (28.2%, 38.8%)	100.00%	CoC	Polarized
HD 8	Little Douglas	34.5% 33.2%	(29.9%, 39.3%) (28.0%, 38.5%)	62.34%	No CoC	McFall* Soltis	54.0% 29.8%	(43.8%, 62.0%) (23.5%, 37.4%)	99.30%	CoC	No Black CoC
HD 9	Aiyash* Gardner	49.6% 28.7%	(43.7%, 55.5%) (24.5%, 32.9%)	100.00%	CoC	Aiyash* Gardner	69.1% 10.8%	(50.5%, 82.7%) (4.2%, 21.5%)	99.99%	CoC	Same CoC
HD 10	Tate* Mua	88.1% 11.9%	(81.9%, 92.9%) (7.1%, 18.1%)	100.00%	CoC	Tate* Mua	93.3% 6.7%	(89.8%, 96.2%) (3.8%, 10.2%)	100.00%	CoC	Same CoC
HD 11	Williams White	23.9% 22.4%	(19.2%, 28.8%) (17.4%, 27.7%)	64.74%	No CoC	Paiz* Manwell	31.2% 20.9%	(24.1%, 37.6%) (14.9%, 26.7%)	97.68%	CoC	No Black CoC
HD 12	Edwards* Steenland	80.8% 19.2%	(69.5%, 90.1%) (9.9%, 30.5%)	100.00%	CoC	Steenland Edwards*	62.8% 37.2%	(38.5%, 84.0%) (16.0%, 61.5%)	84.25%	No CoC	No White CoC
HD 13	Stone* Miller	50.2% 49.8%	(38.8%, 60.6%) (39.4%, 61.2%)	51.87%	No CoC	Stone* Miller	87.3% 12.7%	(77.3%, 94.7%) (5.3%, 22.7%)	100.00%	CoC	No Black CoC
HD 14	McKinney* Lodovisi	85.1% 10.1%	(79.4%, 90.2%) (5.7%, 15.7%)	100.00%	CoC	McKinney* Lodovisi	44.4% 35.5%	(25.7%, 63.0%) (18.9%, 52.6%)	68.92%	No CoC	No White CoC
HD 16	Young* Terry	94.5% 5.5%	(92.4%, 96.3%) (3.7%, 7.6%)	100.00%	CoC	Young* Terry	92.8% 7.2%	(87.8%, 96.5%) (3.5%, 12.2%)	100.00%	CoC	Same CoC
HD 18	Hoskins* Jackson	53.6% 46.4%	(47.2%, 59.6%) (40.4%, 52.8%)	87.40%	No CoC	Hoskins* Jackson	67.6% 32.4%	(48.7%, 83.6%) (16.4%, 51.3%)	96.65%	CoC	No Black CoC
HD 26	Chisholm Wilson	54.4% 29.3%	(47.6%, 61.6%) (21.8%, 35.4%)	100.00%	CoC	Wegela* Wilson	79.2% 9.3%	(71.4%, 86.7%) (4.0%, 15.9%)	100.00%	CoC	Polarized

* indicates the winning candidate.

Table 13: RPV Analyses for Prior Senate Districts, 2014

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
SD 2	Johnson*	66.2%	(62.3%, 69.5%)	100.00%	CoC	Johnson*	74.1%	(69.2%, 78.7%)	100.00%	CoC	Same CoC
	Olumba	23.2%	(20.2%, 26.5%)			Olumba	14.5%	(10.7%, 19.0%)			
SD 4	Smith*	64.9%	(62.4%, 67.3%)	100.00%	CoC	Tlaib	54.9%	(44.8%, 64.9%)	99.55%	CoC	Polarized
	Tlaib	33.0%	(30.5%, 35.4%)			Smith*	31.4%	(22.4%, 40.5%)			
SD 5	Jackson	35.6%	(34.6%, 36.8%)	100.00%	CoC	Knezek*	85.7%	(82.9%, 88.2%)	100.00%	CoC	Polarized
	Nathan	30.6%	(29.6%, 31.6%)			O'Connor	3.5%	(2.3%, 4.9%)			
SD 11	Gregory*	62.3%	(57.7%, 66.7%)	100.00%	CoC	Lipton	44.1%	(38.3%, 49.4%)	55.91%	No CoC	No White CoC
	Lipton	20.2%	(16.6%, 23.8%)			Barnett	43.3%	(36.8%, 49.9%)			

* indicates the winning candidate.

Table 14: RPV Analyses for Linden Senate Districts, 2022

District	Black Voters					White Voters					Result
	Cand.	Est.	95% CI	Pr(c1>c2)	Status	Cand.	Est.	95% CI	Pr(c1>c2)	Status	
SD 1	Sanders	43.9%	(41.7%, 46.1%)	100.00%	CoC	Liberati	46.7%	(42.9%, 51.0%)	83.58%	No CoC	No White CoC
	Geiss*	18.5%	(15.5%, 20.9%)			Geiss*	42.6%	(38.0%, 46.6%)			
SD 3	Chang*	80.9%	(77.6%, 84.1%)	100.00%	CoC	Chang*	93.6%	(91.4%, 95.7%)	100.00%	CoC	Same CoC
	Reeves	19.1%	(15.9%, 22.4%)			Reeves	6.4%	(4.3%, 8.6%)			
SD 6	Cavanagh*	48.5%	(44.9%, 52.1%)	99.86%	CoC	Barnett	49.7%	(43.9%, 55.5%)	73.40%	No CoC	No White CoC
	Brown	38.7%	(35.6%, 41.8%)			Cavanagh*	46.2%	(40.3%, 52.0%)			
SD 7	Moss*	91.6%	(88.9%, 93.8%)	100.00%	CoC	Moss*	93.6%	(91.0%, 95.7%)	100.00%	CoC	Same CoC
	Foster	8.4%	(6.2%, 11.1%)			Foster	6.4%	(4.3%, 9.0%)			
SD 8	Bullock	80.1%	(75.9%, 83.6%)	100.00%	CoC	McMorrow*	96.2%	(94.7%, 97.3%)	100.00%	CoC	Polarized
	McMorrow*	19.9%	(16.4%, 24.1%)			Bullock	3.8%	(2.7%, 5.3%)			
SD 11	Owens	54.7%	(43.0%, 66.3%)	78.47%	No CoC	Klinefelt*	80.2%	(74.1%, 86.0%)	100.00%	CoC	No Black CoC
	Klinefelt*	45.3%	(33.7%, 57.0%)			Owens	19.8%	(14.0%, 25.9%)			

* indicates the winning candidate.

Ecological Inference, 1st House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Brian Banks	23.87%	12.59%	36.24%
Paul Fillmore	9.51%	3.88%	16.07%
Corey J. Gilchrist	5.75%	2.38%	9.98%
Taryn Jones	5.37%	2.08%	9.84%
Michael Koester	25.89%	12.20%	39.95%
Harry Scott	3.61%	1.32%	6.86%
Rebecca Thompson	26.00%	13.12%	39.31%
Black			
Brian Banks	68.46%	60.66%	75.34%
Paul Fillmore	1.09%	0.52%	1.93%
Corey J. Gilchrist	1.09%	0.52%	1.82%
Taryn Jones	3.20%	1.63%	4.96%
Michael Koester	3.26%	1.34%	5.80%
Harry Scott	1.82%	1.06%	2.75%
Rebecca Thompson	21.07%	14.15%	29.02%
Hispanic			
Brian Banks	21.72%	10.43%	35.33%
Paul Fillmore	4.73%	2.05%	8.51%
Corey J. Gilchrist	3.67%	1.47%	6.94%
Taryn Jones	9.05%	4.26%	14.83%
Michael Koester	6.13%	2.61%	11.22%
Harry Scott	7.12%	3.52%	11.58%
Rebecca Thompson	47.58%	33.10%	61.06%
NH White			
Brian Banks	13.98%	6.99%	22.56%
Paul Fillmore	1.83%	0.62%	3.33%
Corey J. Gilchrist	1.61%	0.77%	2.71%
Taryn Jones	2.81%	1.30%	4.74%
Michael Koester	23.72%	18.55%	29.12%
Harry Scott	1.47%	0.72%	2.46%
Rebecca Thompson	54.58%	45.93%	62.20%

Ecological Inference, 2nd House District Primary, 2014			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Andrew Casazza	32.51%	14.57%	52.32%
Bill Miller	20.24%	8.97%	33.17%
Alberta Tinsley Talabi	47.25%	28.43%	65.40%
Black			
Andrew Casazza	3.71%	2.25%	5.47%
Bill Miller	3.07%	1.73%	4.61%
Alberta Tinsley Talabi	93.22%	90.91%	95.23%
Hispanic			
Andrew Casazza	29.08%	11.62%	49.22%
Bill Miller	22.60%	10.60%	40.29%
Alberta Tinsley Talabi	48.32%	24.67%	69.82%
NH White			
Andrew Casazza	78.15%	69.10%	85.84%
Bill Miller	5.40%	2.71%	8.69%
Alberta Tinsley Talabi	16.45%	8.46%	25.80%

Ecological Inference, 3rd House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Wendell Byrd	15.67%	5.36%	29.26%
Jermaine Davis	8.11%	2.44%	16.07%
Clarence Gayles	13.29%	3.78%	28.29%
Melia Howard	11.21%	3.32%	22.43%
Steven Lett	19.18%	5.80%	33.90%
Simpson Vanessa	11.46%	3.71%	22.10%
Carron Pinkins	10.94%	2.88%	22.23%
Dorthea Thomas	10.14%	3.42%	19.79%
Black			
Wendell Byrd	30.97%	25.99%	35.94%
Jermaine Davis	2.44%	1.53%	3.66%
Clarence Gayles	20.72%	15.31%	26.19%
Melia Howard	2.82%	1.73%	4.24%
Steven Lett	12.51%	8.85%	16.60%
Simpson Vanessa	7.10%	4.73%	9.65%
Carron Pinkins	18.64%	14.08%	23.38%
Dorthea Thomas	4.80%	3.14%	6.78%
Hispanic			
Wendell Byrd	16.29%	6.67%	29.54%
Jermaine Davis	7.41%	2.45%	14.29%
Clarence Gayles	13.70%	3.17%	25.61%
Melia Howard	9.34%	3.15%	18.01%
Steven Lett	15.19%	4.90%	28.84%
Simpson Vanessa	11.51%	4.47%	20.81%
Carron Pinkins	14.22%	4.22%	27.49%
Dorthea Thomas	12.35%	4.97%	22.58%
NH White			
Wendell Byrd	16.57%	7.42%	27.09%
Jermaine Davis	3.88%	1.98%	6.57%
Clarence Gayles	30.97%	15.94%	45.47%
Melia Howard	4.37%	1.99%	8.05%
Steven Lett	11.90%	4.41%	21.04%
Simpson Vanessa	9.06%	4.26%	15.11%
Carron Pinkins	18.13%	7.79%	29.40%
Dorthea Thomas	5.11%	2.57%	9.03%

Ecological Inference, 4th House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Mohammed Hassan	28.13%	11.68%	50.88%
Rose Mary C. Robinson	71.87%	49.12%	88.32%
Black			
Mohammed Hassan	6.55%	4.23%	9.34%
Rose Mary C. Robinson	93.45%	90.66%	95.77%
Hispanic			
Mohammed Hassan	36.66%	17.90%	60.65%
Rose Mary C. Robinson	63.34%	39.35%	82.10%
NH White			
Mohammed Hassan	25.47%	12.40%	43.60%
Rose Mary C. Robinson	74.53%	56.40%	87.60%

Ecological Inference, 5th House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Ja'Meka Armstrong	13.33%	5.72%	22.86%
Fred Durhal	22.16%	9.92%	36.29%
Cynthia Johnson	27.90%	14.28%	41.91%
William Phillips	12.08%	4.78%	21.23%
Ishmael Terry	11.07%	4.00%	20.43%
Tonya Wells	13.47%	5.82%	22.86%
Black			
Ja'Meka Armstrong	1.60%	0.91%	2.45%
Fred Durhal	57.23%	53.20%	61.20%
Cynthia Johnson	32.94%	28.98%	36.87%
William Phillips	1.57%	0.92%	2.38%
Ishmael Terry	4.64%	2.95%	6.49%
Tonya Wells	2.01%	1.19%	2.97%
Hispanic			
Ja'Meka Armstrong	9.90%	4.93%	16.96%
Fred Durhal	34.32%	18.67%	51.67%
Cynthia Johnson	24.61%	12.03%	39.24%
William Phillips	8.58%	4.06%	14.75%
Ishmael Terry	11.90%	5.61%	20.18%
Tonya Wells	10.70%	5.37%	17.55%
NH White			
Ja'Meka Armstrong	7.25%	3.22%	12.72%
Fred Durhal	31.55%	16.37%	47.78%
Cynthia Johnson	25.34%	12.64%	39.94%
William Phillips	8.59%	4.31%	14.23%
Ishmael Terry	19.02%	9.38%	30.47%
Tonya Wells	8.25%	3.74%	14.29%

Ecological Inference, 6th House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Tyrone Carter	31.87%	20.74%	42.57%
Stephanie Chang	30.03%	17.94%	42.71%
Eze Ejelonu	5.18%	2.37%	8.44%
Elena Herrada	13.74%	7.36%	20.94%
Casondria Keith	8.08%	3.98%	12.58%
Patrick O'Connell	6.39%	3.20%	10.32%
Verl Pittman	4.72%	2.20%	7.75%
Black			
Tyrone Carter	39.20%	33.99%	44.91%
Stephanie Chang	51.91%	45.32%	57.76%
Eze Ejelonu	1.11%	0.61%	1.72%
Elena Herrada	3.56%	1.90%	5.52%
Casondria Keith	1.90%	1.10%	2.86%
Patrick O'Connell	1.51%	0.83%	2.31%
Verl Pittman	0.82%	0.39%	1.39%
Hispanic			
Tyrone Carter	23.48%	12.35%	37.16%
Stephanie Chang	39.17%	22.72%	55.37%
Eze Ejelonu	4.08%	1.94%	7.19%
Elena Herrada	16.28%	8.47%	25.73%
Casondria Keith	6.12%	2.80%	10.85%
Patrick O'Connell	7.21%	3.71%	11.87%
Verl Pittman	3.66%	1.71%	6.66%
NH White			
Tyrone Carter	21.27%	10.09%	34.17%
Stephanie Chang	53.33%	35.92%	68.75%
Eze Ejelonu	3.01%	1.41%	5.21%
Elena Herrada	11.20%	5.47%	19.24%
Casondria Keith	4.37%	2.06%	7.50%
Patrick O'Connell	4.32%	2.07%	7.29%
Verl Pittman	2.51%	1.10%	4.75%

Ecological Inference, 7th House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
James Cole	20.56%	6.14%	41.48%
LaTanya Garrett	21.87%	6.24%	43.28%
Nicole Stallworth	21.56%	6.13%	43.63%
Kurt Swanson	9.42%	2.93%	19.78%
Bernard Thompson	14.26%	3.11%	30.81%
Jeanette Williams	12.35%	2.82%	28.13%
Black			
James Cole	11.04%	8.03%	14.21%
LaTanya Garrett	41.40%	38.20%	44.19%
Nicole Stallworth	38.20%	35.38%	40.82%
Kurt Swanson	1.61%	1.04%	2.33%
Bernard Thompson	4.40%	3.16%	6.01%
Jeanette Williams	3.34%	2.26%	4.64%
Hispanic			
James Cole	21.44%	7.90%	37.41%
LaTanya Garrett	15.28%	4.05%	29.02%
Nicole Stallworth	15.14%	5.31%	31.87%
Kurt Swanson	13.54%	5.68%	22.64%
Bernard Thompson	15.24%	5.79%	27.78%
Jeanette Williams	19.37%	6.98%	33.13%
NH White			
James Cole	22.32%	10.16%	37.99%
LaTanya Garrett	19.93%	8.54%	34.87%
Nicole Stallworth	18.79%	8.07%	34.22%
Kurt Swanson	14.74%	7.56%	23.81%
Bernard Thompson	14.55%	5.70%	26.87%
Jeanette Williams	9.66%	3.77%	20.22%

Ecological Inference, 8th House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Sherry Gay-Dagnogo	19.82%	7.99%	31.92%
Mia Grillier	13.14%	5.43%	23.51%
Nichole Hampton	17.32%	7.61%	28.76%
Muhsin Muhammad	15.88%	6.68%	26.18%
Stacy Pugh	20.07%	8.45%	33.24%
Cyrus Wheeler	13.76%	5.86%	23.69%
Black			
Sherry Gay-Dagnogo	54.00%	50.21%	57.74%
Mia Grillier	3.76%	2.56%	5.21%
Nichole Hampton	5.15%	3.76%	6.80%
Muhsin Muhammad	7.52%	6.14%	8.90%
Stacy Pugh	28.32%	24.63%	32.12%
Cyrus Wheeler	1.24%	0.75%	1.82%
Hispanic			
Sherry Gay-Dagnogo	25.36%	12.46%	39.53%
Mia Grillier	12.65%	5.99%	21.04%
Nichole Hampton	15.15%	6.68%	24.64%
Muhsin Muhammad	11.48%	4.98%	18.87%
Stacy Pugh	28.29%	15.15%	43.24%
Cyrus Wheeler	7.08%	2.76%	12.42%
NH White			
Sherry Gay-Dagnogo	28.93%	13.82%	46.34%
Mia Grillier	11.50%	5.96%	19.40%
Nichole Hampton	10.37%	5.04%	18.08%
Muhsin Muhammad	11.49%	6.11%	18.39%
Stacy Pugh	33.11%	16.28%	50.74%
Cyrus Wheeler	4.61%	2.25%	7.83%

Ecological Inference, 9th House District Primary, 2014			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Hussein Berry	61.05%	33.72%	83.87%
Harvey Santana	38.95%	16.13%	66.28%
Black			
Hussein Berry	14.43%	10.58%	18.13%
Harvey Santana	85.57%	81.87%	89.42%
Hispanic			
Hussein Berry	27.83%	11.15%	51.85%
Harvey Santana	72.17%	48.15%	88.85%
NH White			
Hussein Berry	55.53%	35.78%	74.66%
Harvey Santana	44.47%	25.34%	64.22%

Ecological Inference, 10th House District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Ronald Cole	10.35%	2.94%	20.60%
Brandon Jessup	20.81%	7.33%	40.41%
Jay Johnson	24.88%	8.09%	48.66%
Leslie Love	20.10%	5.55%	39.57%
Roy McCalister, Jr.	23.86%	7.70%	44.17%
Black			
Ronald Cole	1.99%	1.19%	2.87%
Brandon Jessup	10.61%	8.23%	12.94%
Jay Johnson	6.13%	3.49%	9.52%
Leslie Love	45.77%	42.67%	48.97%
Roy McCalister, Jr.	35.51%	32.60%	38.44%
Hispanic			
Ronald Cole	7.88%	3.38%	15.13%
Brandon Jessup	14.75%	5.44%	28.36%
Jay Johnson	41.27%	18.76%	61.41%
Leslie Love	18.36%	6.24%	36.91%
Roy McCalister, Jr.	17.74%	7.10%	33.41%
NH White			
Ronald Cole	4.31%	2.00%	7.36%
Brandon Jessup	8.60%	3.75%	15.27%
Jay Johnson	69.64%	57.90%	79.69%
Leslie Love	10.95%	4.37%	18.76%
Roy McCalister, Jr.	6.51%	2.67%	11.89%

Ecological Inference, 2nd Senate District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Bert Johnson	41.85%	27.02%	56.39%
Georgia Lemmons	19.29%	11.48%	29.28%
Taras Nykoriak	16.10%	9.95%	23.65%
John Olumba	22.76%	13.52%	33.24%
Black			
Bert Johnson	66.15%	62.31%	69.52%
Georgia Lemmons	8.66%	6.88%	10.67%
Taras Nykoriak	1.96%	1.38%	2.63%
John Olumba	23.23%	20.24%	26.50%
Hispanic			
Bert Johnson	34.11%	23.42%	45.01%
Georgia Lemmons	22.94%	15.44%	32.04%
Taras Nykoriak	17.41%	11.68%	24.18%
John Olumba	25.54%	16.87%	35.52%
NH White			
Bert Johnson	74.12%	69.18%	78.69%
Georgia Lemmons	7.13%	4.99%	9.72%
Taras Nykoriak	4.21%	2.90%	5.64%
John Olumba	14.53%	10.67%	19.04%

Ecological Inference, 4th Senate District Primary, 2014			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Virgil Smith	36.46%	13.10%	56.66%
Rashida Tlaib	39.12%	18.98%	60.51%
Howard Worthy	24.42%	11.32%	43.34%
Black			
Virgil Smith	64.88%	62.38%	67.33%
Rashida Tlaib	32.98%	30.51%	35.42%
Howard Worthy	2.14%	1.59%	2.77%
Hispanic			
Virgil Smith	31.14%	19.88%	44.09%
Rashida Tlaib	44.85%	30.18%	59.98%
Howard Worthy	24.01%	14.73%	36.36%
NH White			
Virgil Smith	31.35%	22.36%	40.47%
Rashida Tlaib	54.92%	44.79%	64.91%
Howard Worthy	13.72%	9.05%	18.94%

Ecological Inference, 5th Senate District Primary, 2014

Party	Estimate	Lower 95%	Upper 95%
Asian			
Shanelle Jackson	7.90%	3.11%	14.68%
David Knezek	50.54%	30.98%	66.81%
David Nathan	10.35%	4.62%	18.99%
Carrie O'Connor	14.45%	5.86%	26.39%
Thomas Stallworth	6.70%	2.98%	13.30%
Frank Tomcsik	10.06%	4.77%	17.50%
Black			
Shanelle Jackson	35.63%	34.55%	36.76%
David Knezek	7.51%	5.84%	9.13%
David Nathan	30.57%	29.58%	31.56%
Carrie O'Connor	1.61%	1.14%	2.18%
Thomas Stallworth	23.91%	23.07%	24.78%
Frank Tomcsik	0.77%	0.55%	1.00%
Hispanic			
Shanelle Jackson	6.18%	2.93%	11.28%
David Knezek	53.93%	29.79%	72.13%
David Nathan	6.58%	3.37%	11.35%
Carrie O'Connor	20.04%	8.75%	36.12%
Thomas Stallworth	5.78%	2.89%	10.67%
Frank Tomcsik	7.50%	3.65%	13.11%
NH White			
Shanelle Jackson	2.88%	1.88%	4.17%
David Knezek	85.72%	82.91%	88.19%
David Nathan	3.02%	1.91%	4.36%
Carrie O'Connor	3.46%	2.28%	4.88%
Thomas Stallworth	2.08%	1.32%	3.02%
Frank Tomcsik	2.84%	1.92%	3.77%

Ecological Inference, 11th Senate District Primary, 2014			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Vicki Barnett	75.81%	65.40%	84.06%
Vincent Gregory	12.63%	7.47%	19.57%
Ellen Lipton	11.56%	6.82%	18.34%
Black			
Vicki Barnett	17.52%	13.45%	21.94%
Vincent Gregory	62.30%	57.67%	66.65%
Ellen Lipton	20.18%	16.57%	23.78%
Hispanic			
Vicki Barnett	35.98%	17.53%	54.33%
Vincent Gregory	26.26%	13.27%	43.57%
Ellen Lipton	37.76%	21.40%	58.71%
NH White			
Vicki Barnett	43.31%	36.82%	49.90%
Vincent Gregory	12.62%	8.33%	17.40%
Ellen Lipton	44.06%	38.34%	49.38%

Ecological Inference, 1st House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Kameshea Amos	4.09%	1.22%	8.78%
Brian R. Banks	28.75%	10.18%	48.11%
Corey J. Gilchrist	9.82%	3.82%	18.34%
Keith Hollowell	12.76%	4.02%	26.56%
Pamela Sossi	37.54%	16.55%	59.26%
Washington Youson	7.03%	2.60%	14.04%
Black			
Kameshea Amos	2.72%	1.49%	4.13%
Brian R. Banks	75.21%	69.37%	80.60%
Corey J. Gilchrist	2.04%	0.96%	3.50%
Keith Hollowell	2.96%	1.74%	4.58%
Pamela Sossi	6.82%	2.45%	12.38%
Washington Youson	10.26%	7.28%	13.40%
Hispanic			
Kameshea Amos	5.83%	2.08%	11.75%
Brian R. Banks	35.86%	14.03%	56.46%
Corey J. Gilchrist	8.37%	2.91%	16.79%
Keith Hollowell	19.27%	7.90%	32.77%
Pamela Sossi	21.30%	7.57%	39.71%
Washington Youson	9.37%	3.03%	18.35%
NH White			
Kameshea Amos	1.78%	0.80%	3.01%
Brian R. Banks	9.39%	4.25%	15.67%
Corey J. Gilchrist	1.58%	0.79%	2.65%
Keith Hollowell	2.85%	1.25%	4.93%
Pamela Sossi	81.61%	74.93%	87.20%
Washington Youson	2.79%	1.23%	4.83%

Ecological Inference, 2nd House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Willie Bell	25.26%	9.99%	43.12%
Jeremy Henner	11.05%	3.72%	22.24%
Angles Hunt	2.59%	0.91%	5.19%
E. Regina Jones	3.49%	1.39%	6.95%
Bettie Cook Scott	8.29%	2.77%	16.25%
Joe Tate	36.38%	17.76%	54.55%
Carla Tinsely-Smith	12.93%	4.03%	24.67%
Black			
Willie Bell	17.50%	13.52%	21.05%
Jeremy Henner	0.97%	0.54%	1.53%
Angles Hunt	1.44%	0.84%	2.13%
E. Regina Jones	2.30%	1.43%	3.27%
Bettie Cook Scott	42.60%	39.08%	46.23%
Joe Tate	3.32%	1.64%	5.34%
Carla Tinsely-Smith	31.88%	28.20%	35.56%
Hispanic			
Willie Bell	28.47%	11.41%	50.66%
Jeremy Henner	5.89%	2.35%	11.56%
Angles Hunt	4.79%	2.16%	8.97%
E. Regina Jones	5.18%	2.17%	9.94%
Bettie Cook Scott	5.25%	1.76%	15.29%
Joe Tate	25.69%	9.92%	44.67%
Carla Tinsely-Smith	24.72%	9.01%	42.66%
NH White			
Willie Bell	9.92%	4.83%	16.28%
Jeremy Henner	59.32%	53.22%	65.31%
Angles Hunt	1.71%	0.88%	2.77%
E. Regina Jones	1.64%	0.83%	2.70%
Bettie Cook Scott	3.92%	1.82%	6.88%
Joe Tate	18.58%	12.98%	24.43%
Carla Tinsely-Smith	4.90%	2.02%	8.87%

Ecological Inference, 3rd House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
April Bonner-Archer	15.30%	5.77%	28.02%
Wendell Byrd	27.74%	10.94%	47.73%
Burgess Foster	10.52%	3.96%	19.70%
Donavan McKinney	20.66%	7.80%	35.81%
Damian Christian Mitchell	7.01%	2.58%	14.35%
Lee Qualls	7.44%	2.33%	14.84%
Al Williams	11.34%	3.34%	23.27%
Black			
April Bonner-Archer	6.12%	3.72%	8.95%
Wendell Byrd	53.33%	47.42%	59.01%
Burgess Foster	3.15%	1.74%	4.64%
Donavan McKinney	15.55%	12.55%	18.83%
Damian Christian Mitchell	1.89%	1.25%	2.63%
Lee Qualls	1.18%	0.65%	1.76%
Al Williams	18.78%	13.80%	23.27%
Hispanic			
April Bonner-Archer	14.74%	5.16%	29.57%
Wendell Byrd	31.74%	13.54%	51.64%
Burgess Foster	8.53%	3.25%	17.16%
Donavan McKinney	19.45%	7.17%	35.05%
Damian Christian Mitchell	6.56%	2.41%	12.74%
Lee Qualls	6.05%	2.25%	11.80%
Al Williams	12.93%	4.09%	24.75%
NH White			
April Bonner-Archer	13.62%	6.51%	22.68%
Wendell Byrd	35.30%	15.16%	53.95%
Burgess Foster	8.54%	3.60%	15.26%
Donavan McKinney	11.10%	4.76%	20.35%
Damian Christian Mitchell	3.28%	1.56%	5.78%
Lee Qualls	3.34%	1.69%	5.72%
Al Williams	24.83%	10.29%	42.74%

Ecological Inference, 4th House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Charles A. Bell	6.62%	2.81%	12.07%
Mohammed Hassan	16.71%	7.16%	29.16%
Quincy Jones	13.31%	5.35%	24.69%
Jumar Motley	3.67%	1.52%	7.15%
Rose Mary C. Robinson	49.75%	29.23%	66.86%
Tracy Russell	5.81%	2.33%	11.16%
Abraham Shaw	4.13%	1.62%	7.92%
Black			
Charles A. Bell	4.40%	2.84%	6.11%
Mohammed Hassan	1.73%	1.03%	2.67%
Quincy Jones	22.62%	19.08%	26.21%
Jumar Motley	2.28%	1.41%	3.22%
Rose Mary C. Robinson	64.74%	60.56%	68.89%
Tracy Russell	3.37%	2.05%	4.75%
Abraham Shaw	0.88%	0.50%	1.34%
Hispanic			
Charles A. Bell	13.99%	5.35%	24.55%
Mohammed Hassan	9.25%	3.71%	17.03%
Quincy Jones	22.01%	7.80%	38.95%
Jumar Motley	4.39%	1.94%	8.01%
Rose Mary C. Robinson	40.18%	19.21%	60.48%
Tracy Russell	7.24%	1.93%	15.95%
Abraham Shaw	2.94%	1.33%	5.72%
NH White			
Charles A. Bell	9.54%	4.81%	16.07%
Mohammed Hassan	10.73%	4.86%	18.30%
Quincy Jones	18.76%	8.88%	30.91%
Jumar Motley	5.50%	2.53%	9.59%
Rose Mary C. Robinson	43.05%	26.12%	58.52%
Tracy Russell	8.84%	4.16%	15.31%
Abraham Shaw	3.58%	1.74%	6.14%

Ecological Inference, 5th House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Fred Durhal	46.43%	16.45%	80.18%
Cynthia Johnson	53.57%	19.82%	83.55%
Black			
Fred Durhal	59.48%	55.65%	63.74%
Cynthia Johnson	40.52%	36.26%	44.35%
Hispanic			
Fred Durhal	53.60%	28.51%	77.26%
Cynthia Johnson	46.40%	22.74%	71.49%
NH White			
Fred Durhal	47.60%	24.78%	71.49%
Cynthia Johnson	52.40%	28.51%	75.22%

Ecological Inference, 6th House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Dennis Black	12.95%	4.77%	23.79%
Stephanie Chang	38.70%	17.30%	59.30%
Deirdre Jackson	22.06%	9.61%	37.88%
Donnie Malone	3.66%	1.19%	8.07%
Dwayne Redding	5.09%	2.02%	9.60%
David Sanchez	8.56%	2.76%	17.24%
Casondria Walker-Keith	8.99%	2.75%	18.30%
Black			
Dennis Black	7.01%	5.54%	8.58%
Stephanie Chang	79.90%	77.10%	82.52%
Deirdre Jackson	4.69%	3.25%	6.37%
Donnie Malone	0.91%	0.52%	1.37%
Dwayne Redding	1.15%	0.72%	1.69%
David Sanchez	2.80%	1.67%	4.05%
Casondria Walker-Keith	3.54%	2.40%	4.74%
Hispanic			
Dennis Black	8.10%	3.88%	14.25%
Stephanie Chang	35.28%	18.75%	51.66%
Deirdre Jackson	9.11%	4.12%	15.68%
Donnie Malone	4.48%	2.07%	7.90%
Dwayne Redding	5.56%	2.80%	9.41%
David Sanchez	28.46%	17.05%	41.08%
Casondria Walker-Keith	9.03%	4.34%	15.69%
NH White			
Dennis Black	10.37%	4.55%	18.69%
Stephanie Chang	54.11%	35.84%	69.17%
Deirdre Jackson	10.69%	4.90%	18.02%
Donnie Malone	3.16%	1.48%	5.51%
Dwayne Redding	3.67%	1.80%	6.33%
David Sanchez	10.07%	4.63%	17.42%
Casondria Walker-Keith	7.92%	3.76%	13.82%

Ecological Inference, 7th House District Primary, 2016			
Party	Estimate	Lower 95%	Upper 95%
Asian			
LaTanya Garrett	68.05%	35.90%	90.46%
Bernard Thompson	31.95%	9.54%	64.10%
Black			
LaTanya Garrett	93.68%	91.01%	95.84%
Bernard Thompson	6.32%	4.16%	8.99%
Hispanic			
LaTanya Garrett	50.21%	19.84%	82.67%
Bernard Thompson	49.79%	17.33%	80.16%
NH White			
LaTanya Garrett	59.97%	33.34%	82.77%
Bernard Thompson	40.03%	17.23%	66.66%

Ecological Inference, 9th House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Annie Carter	9.83%	2.98%	18.87%
Tijuana Morris	9.75%	3.12%	20.00%
Alicia Murphy	13.16%	4.03%	26.32%
William Phillips	6.82%	1.89%	15.06%
Gary S. Pollard	21.40%	5.78%	41.31%
Regina Ross	13.16%	3.99%	26.60%
Sylvia Santana	25.88%	8.20%	46.54%
Black			
Annie Carter	1.68%	1.09%	2.28%
Tijuana Morris	2.04%	1.28%	2.88%
Alicia Murphy	1.89%	1.09%	2.80%
William Phillips	0.65%	0.33%	1.04%
Gary S. Pollard	33.80%	30.76%	36.64%
Regina Ross	5.84%	4.07%	7.76%
Sylvia Santana	54.10%	50.77%	57.24%
Hispanic			
Annie Carter	7.83%	3.45%	14.33%
Tijuana Morris	6.79%	2.46%	13.09%
Alicia Murphy	12.02%	5.57%	21.45%
William Phillips	5.66%	2.50%	10.52%
Gary S. Pollard	15.67%	6.14%	30.05%
Regina Ross	14.35%	6.17%	26.60%
Sylvia Santana	37.67%	17.70%	58.79%
NH White			
Annie Carter	6.51%	3.13%	10.94%
Tijuana Morris	7.79%	4.00%	12.63%
Alicia Murphy	8.29%	4.13%	13.74%
William Phillips	8.56%	4.00%	13.49%
Gary S. Pollard	38.57%	26.31%	50.43%
Regina Ross	12.46%	4.66%	21.31%
Sylvia Santana	17.81%	6.75%	34.08%

Ecological Inference, 10th House District Primary, 2016

Party	Estimate	Lower 95%	Upper 95%
Asian			
Mary Cavanagh	27.44%	8.61%	56.59%
Elizabeth Jefferson	10.91%	3.39%	22.62%
Leslie Love	34.32%	11.36%	59.53%
Mary Mazur	27.33%	8.42%	48.11%
Black			
Mary Cavanagh	11.56%	7.16%	16.74%
Elizabeth Jefferson	2.29%	1.38%	3.25%
Leslie Love	83.95%	78.95%	88.40%
Mary Mazur	2.20%	1.17%	3.48%
Hispanic			
Mary Cavanagh	44.86%	22.40%	66.51%
Elizabeth Jefferson	8.12%	3.12%	15.85%
Leslie Love	33.25%	12.44%	56.49%
Mary Mazur	13.77%	4.92%	25.89%
NH White			
Mary Cavanagh	28.44%	14.28%	44.65%
Elizabeth Jefferson	6.85%	3.19%	12.38%
Leslie Love	51.84%	32.46%	69.74%
Mary Mazur	12.87%	6.06%	22.39%

Ecological Inference, 1st House District Primary, 2018			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Tenisha Yancey	77.41%	51.58%	93.19%
Shaun Maloy	22.59%	6.81%	48.42%
Black			
Tenisha Yancey	93.91%	90.26%	96.74%
Shaun Maloy	6.09%	3.26%	9.74%
Hispanic			
Tenisha Yancey	56.15%	18.61%	85.28%
Shaun Maloy	43.85%	14.72%	81.39%
NH White			
Tenisha Yancey	79.48%	70.69%	86.41%
Shaun Maloy	20.52%	13.59%	29.31%

Ecological Inference, 2nd House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Joe Tate	20.48%	6.70%	37.50%
Carla Tinsley-Smith	20.18%	7.20%	36.80%
Latisha Johnson	18.62%	5.78%	36.89%
Carol Banks	14.08%	4.69%	27.23%
Willie Bell	10.05%	2.78%	19.71%
Regina Jones	9.87%	3.68%	17.63%
Kinda Makini Anderson	4.92%	1.61%	10.03%
Black			
Joe Tate	9.16%	6.79%	11.79%
Carla Tinsley-Smith	23.55%	20.15%	27.03%
Latisha Johnson	18.37%	15.37%	21.30%
Carol Banks	21.60%	18.78%	24.25%
Willie Bell	18.09%	15.78%	20.36%
Regina Jones	4.75%	3.89%	5.69%
Kinda Makini Anderson	4.07%	3.16%	5.05%
Hispanic			
Joe Tate	21.31%	7.63%	41.23%
Carla Tinsley-Smith	24.04%	8.61%	41.42%
Latisha Johnson	16.54%	5.49%	31.67%
Carol Banks	18.31%	3.32%	32.65%
Willie Bell	10.25%	1.46%	20.45%
Regina Jones	5.72%	2.15%	10.64%
Kinda Makini Anderson	2.49%	0.81%	7.62%
NH White			
Joe Tate	67.97%	62.18%	73.37%
Carla Tinsley-Smith	8.01%	4.46%	12.93%
Latisha Johnson	12.57%	7.68%	17.58%
Carol Banks	3.84%	1.82%	6.70%
Willie Bell	2.73%	1.25%	4.93%
Regina Jones	3.09%	1.92%	4.37%
Kinda Makini Anderson	1.30%	0.65%	2.12%

Ecological Inference, 3rd House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Wendell Byrd	24.77%	8.67%	44.24%
China Cochran	22.14%	5.62%	41.35%
John Cromer	24.48%	9.87%	41.42%
Omar Proctor	13.72%	4.19%	26.75%
Christopher Owens	14.88%	5.01%	30.70%
Black			
Wendell Byrd	69.33%	64.30%	73.84%
China Cochran	12.52%	8.60%	16.65%
John Cromer	9.04%	6.66%	11.81%
Omar Proctor	5.91%	3.90%	7.95%
Christopher Owens	3.20%	2.07%	4.56%
Hispanic			
Wendell Byrd	25.39%	9.23%	46.42%
China Cochran	22.99%	9.13%	40.87%
John Cromer	17.71%	6.46%	35.65%
Omar Proctor	16.07%	6.25%	28.95%
Christopher Owens	17.83%	5.93%	34.42%
NH White			
Wendell Byrd	36.28%	18.36%	54.07%
China Cochran	27.20%	11.78%	43.14%
John Cromer	14.65%	6.43%	25.26%
Omar Proctor	13.47%	6.18%	23.13%
Christopher Owens	8.40%	4.22%	14.05%

Ecological Inference, 4th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Isaac Robinson	5.92%	2.46%	10.35%
Christopher Collins	1.43%	0.65%	2.53%
Ernest Little	0.78%	0.30%	1.50%
MD Rabbi Alam	3.61%	1.69%	6.01%
Derek Boston	0.66%	0.29%	1.20%
Justin Jessop	0.77%	0.29%	1.44%
Saad Almasmari	21.83%	8.41%	34.46%
Michele Oberholzer	9.63%	3.37%	17.92%
Rico Razo	-5.15%	2.48%	8.32%
Syed Rob	41.04%	31.31%	51.05%
Myya Jones	1.91%	0.80%	3.58%
Diane McMillan	2.93%	1.36%	5.07%
Jeffrey Nolish	1.86%	0.54%	3.78%
Matt Friedrichs	2.47%	0.89%	4.54%
Black			
Isaac Robinson	59.76%	56.74%	62.96%
Christopher Collins	3.37%	2.45%	4.32%
Ernest Little	2.70%	1.92%	3.51%
MD Rabbi Alam	0.74%	0.43%	1.16%
Derek Boston	-0.73%	0.41%	1.08%
Justin Jessop	-0.68%	0.41%	1.09%
Saad Almasmari	1.73%	0.98%	2.77%
Michele Oberholzer	9.43%	6.12%	12.83%
Rico Razo	12.27%	-9.75%	14.86%
Syed Rob	0.94%	0.49%	1.56%
Myya Jones	13.04%	11.13%	15.00%
Diane McMillan	8.44%	6.77%	10.13%
Jeffrey Nolish	4.49%	2.68%	6.45%
Matt Friedrichs	1.68%	0.97%	2.59%
Hispanic			
Isaac Robinson	9.70%	2.96%	19.54%
Christopher Collins	3.69%	1.36%	7.58%
Ernest Little	3.53%	1.26%	6.93%
MD Rabbi Alam	1.54%	0.59%	3.05%
Derek Boston	1.38%	0.58%	2.78%
Justin Jessop	1.22%	0.48%	2.47%
Saad Almasmari	3.49%	1.00%	7.30%
Michele Oberholzer	17.84%	7.26%	31.93%
Rico Razo	16.89%	6.62%	29.09%
Syed Rob	2.19%	0.85%	4.21%
Myya Jones	8.33%	3.05%	15.78%
Diane McMillan	7.84%	2.81%	15.10%
Jeffrey Nolish	12.19%	4.36%	21.48%
Matt Friedrichs	10.18%	4.92%	16.19%
NH White			
Isaac Robinson	4.24%	1.85%	7.49%
Christopher Collins	1.88%	1.02%	2.98%
Ernest Little	1.69%	0.89%	2.66%
MD Rabbi Alam	1.80%	0.80%	3.04%
Derek Boston	0.80%	0.42%	1.25%
Justin Jessop	0.76%	0.39%	1.25%
Saad Almasmari	40.20%	32.18%	47.37%
Michele Oberholzer	24.49%	17.42%	31.30%
Rico Razo	5.68%	2.93%	9.17%
Syed Rob	5.88%	2.20%	11.11%
Myya Jones	2.94%	1.51%	4.88%
Diane McMillan	2.50%	1.23%	4.24%
Jeffrey Nolish	4.37%	2.61%	6.81%
Matt Friedrichs	2.59%	1.30%	4.26%

Ecological Inference, 5th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Cynthia Johnson	17.57%	5.18%	34.98%
Rita Ross	21.77%	6.41%	41.39%
Mark Payne	17.85%	5.43%	37.51%
Cliff Woodward	9.32%	2.72%	19.40%
Mark Murphy	13.64%	3.75%	28.91%
Jermaine Tobey	13.85%	3.62%	27.61%
Black			
Cynthia Johnson	40.94%	38.03%	43.86%
Rita Ross	37.40%	34.38%	40.40%
Mark Payne	10.85%	8.54%	13.05%
Cliff Woodward	5.35%	4.18%	6.50%
Mark Murphy	3.87%	2.64%	5.17%
Jermaine Tobey	1.03%	0.61%	1.53%
Hispanic			
Cynthia Johnson	22.65%	10.05%	37.77%
Rita Ross	30.13%	14.65%	46.79%
Mark Payne	16.90%	7.79%	28.34%
Cliff Woodward	8.16%	3.79%	13.86%
Mark Murphy	8.15%	3.50%	14.27%
Jermaine Tobey	9.53%	3.87%	16.80%
NH White			
Cynthia Johnson	22.29%	10.14%	37.53%
Rita Ross	34.54%	17.69%	52.06%
Mark Payne	13.90%	5.79%	24.79%
Cliff Woodward	5.79%	2.51%	10.75%
Mark Murphy	8.06%	3.47%	15.09%
Jermaine Tobey	11.12%	5.32%	18.96%

Ecological Inference, 6th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Tyrone Carter	7.76%	2.36%	15.23%
Tom Choske	10.03%	4.09%	16.50%
Charlesetta Wilson	20.38%	8.23%	33.57%
Terra DeFoe	9.01%	3.24%	16.00%
Aghogho Edevbie	17.82%	7.02%	29.30%
Willie Burton	7.22%	2.56%	14.47%
Ricardo White	8.76%	3.42%	15.52%
David Sanchez	5.37%	2.05%	9.63%
Paula Humphries	8.34%	3.00%	14.46%
Samantha Magdaleno	5.32%	1.64%	10.05%
Black			
Tyrone Carter	35.49%	32.87%	38.24%
Tom Choske	1.85%	1.00%	2.80%
Charlesetta Wilson	20.33%	17.28%	23.09%
Terra DeFoe	12.11%	10.13%	14.03%
Aghogho Edevbie	7.64%	5.25%	10.22%
Willie Burton	9.49%	7.62%	11.28%
Ricardo White	5.34%	3.93%	6.84%
David Sanchez	1.88%	1.06%	2.90%
Paula Humphries	3.94%	2.96%	5.04%
Samantha Magdaleno	1.93%	1.14%	2.91%
Hispanic			
Tyrone Carter	9.80%	4.00%	18.42%
Tom Choske	6.59%	3.09%	10.93%
Charlesetta Wilson	9.54%	4.24%	16.80%
Terra DeFoe	6.68%	2.94%	12.56%
Aghogho Edevbie	10.98%	4.26%	19.24%
Willie Burton	3.54%	1.48%	6.47%
Ricardo White	6.06%	2.87%	10.66%
David Sanchez	30.26%	18.70%	40.32%
Paula Humphries	3.71%	1.65%	6.65%
Samantha Magdaleno	12.85%	7.18%	19.51%
NH White			
Tyrone Carter	28.93%	23.07%	35.49%
Tom Choske	6.04%	3.35%	9.30%
Charlesetta Wilson	11.42%	5.24%	19.17%
Terra DeFoe	7.81%	3.74%	12.29%
Aghogho Edevbie	15.04%	8.21%	22.01%
Willie Burton	6.99%	3.11%	11.68%
Ricardo White	6.36%	3.44%	9.80%
David Sanchez	6.55%	3.24%	10.86%
Paula Humphries	4.64%	2.31%	7.56%
Samantha Magdaleno	6.22%	3.47%	9.85%

Ecological Inference, 7th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
LaTanya Garrett	41.68%	14.01%	66.60%
Najanava Harvey-Quinn	23.70%	7.38%	45.94%
Jeff Jones	19.26%	6.04%	40.71%
Elene Robinson	15.36%	3.86%	31.56%
Black			
LaTanya Garrett	92.07%	90.42%	93.61%
Najanava Harvey-Quinn	2.81%	1.67%	4.11%
Jeff Jones	2.59%	1.74%	3.60%
Elene Robinson	2.52%	1.77%	3.36%
Hispanic			
LaTanya Garrett	33.86%	12.59%	54.98%
Najanava Harvey-Quinn	25.11%	8.07%	44.57%
Jeff Jones	23.88%	8.13%	41.21%
Elene Robinson	17.15%	5.64%	32.43%
NH White			
LaTanya Garrett	44.25%	19.80%	65.51%
Najanava Harvey-Quinn	19.31%	7.42%	37.50%
Jeff Jones	18.03%	8.04%	34.66%
Elene Robinson	18.41%	5.98%	36.17%

Ecological Inference, 8th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Sherry Gay-Dagnogo	18.70%	4.64%	40.20%
Jasmine Henry	19.81%	6.57%	38.44%
George Etheridge	20.46%	6.24%	42.28%
LaSonya Beaver	20.77%	6.04%	39.90%
Seydi Starr	20.26%	5.85%	38.25%
Black			
Sherry Gay-Dagnogo	76.04%	73.09%	78.75%
Jasmine Henry	8.50%	6.15%	10.95%
George Etheridge	8.36%	6.33%	10.45%
LaSonya Beaver	4.16%	3.01%	5.48%
Seydi Starr	2.93%	1.98%	4.01%
Hispanic			
Sherry Gay-Dagnogo	26.60%	8.21%	46.53%
Jasmine Henry	21.89%	7.46%	40.06%
George Etheridge	15.60%	5.79%	29.51%
LaSonya Beaver	20.53%	7.42%	36.54%
Seydi Starr	15.38%	5.51%	29.85%
NH White			
Sherry Gay-Dagnogo	26.93%	12.33%	44.31%
Jasmine Henry	23.73%	11.01%	39.10%
George Etheridge	17.89%	8.66%	29.74%
LaSonya Beaver	14.71%	6.73%	25.26%
Seydi Starr	16.74%	7.12%	27.89%

Ecological Inference, 9th House District Primary, 2018			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Karen Whitsett	33.54%	9.68%	62.44%
Gary Pollard	35.13%	9.94%	62.48%
Donald L. Stuckey	22.37%	7.16%	44.20%
Black			
Karen Whitsett	59.87%	56.30%	63.24%
Gary Pollard	36.15%	32.80%	39.75%
Donald L. Stuckey	3.53%	2.33%	5.14%
Hispanic			
Karen Whitsett	44.53%	20.64%	66.30%
Gary Pollard	28.44%	11.82%	50.12%
Donald L. Stuckey	22.75%	9.39%	41.66%
NH White			
Karen Whitsett	53.56%	40.69%	65.90%
Gary Pollard	32.83%	21.66%	44.39%
Donald L. Stuckey	10.59%	5.28%	17.45%

Ecological Inference, 10th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Leslie Love	85.85%	72.10%	94.54%
Rhonda Barley	7.40%	1.68%	17.69%
James Brenner	3.54%	0.99%	8.82%
Tyson Kelley	3.21%	1.12%	7.36%
Black			
Leslie Love	82.66%	79.44%	85.86%
Rhonda Barley	11.83%	9.10%	14.74%
James Brenner	3.38%	2.50%	4.22%
Tyson Kelley	2.13%	1.45%	2.85%
Hispanic			
Leslie Love	83.68%	63.92%	93.46%
Rhonda Barley	9.59%	3.03%	23.53%
James Brenner	3.85%	1.24%	9.28%
Tyson Kelley	2.88%	0.88%	7.06%
NH White			
Leslie Love	58.83%	44.63%	70.36%
Rhonda Barley	38.36%	27.50%	51.69%
James Brenner	1.37%	0.52%	2.63%
Tyson Kelley	1.43%	0.54%	2.94%

Ecological Inference, 11th House District Primary, 2018

Party	Estimate	Lower 95%	Upper 95%
Asian			
Jewell Jones	63.26%	33.38%	86.81%
Randy Walker	32.98%	9.90%	61.92%
Black			
Jewell Jones	90.05%	83.32%	95.20%
Randy Walker	7.49%	2.87%	14.01%
Hispanic			
Jewell Jones	64.53%	38.08%	84.39%
Randy Walker	33.12%	13.26%	59.73%
NH White			
Jewell Jones	35.67%	28.06%	44.81%
Randy Walker	61.95%	53.15%	69.83%

Ecological Inference, 2nd House District Primary, 2020			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Taylor Harrell	56.09%	20.74%	82.74%
Joe Tate	43.91%	17.26%	79.26%
Black			
Taylor Harrell	33.59%	29.38%	38.38%
Joe Tate	66.41%	61.62%	70.62%
Hispanic			
Taylor Harrell	55.74%	22.61%	85.37%
Joe Tate	44.26%	14.63%	77.39%
NH White			
Taylor Harrell	11.71%	7.16%	17.11%
Joe Tate	88.29%	82.89%	92.84%

Ecological Inference, 3rd House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
China Cochran	16.56%	5.74%	31.81%
John Cromer	9.96%	3.33%	19.34%
Steven Lett	4.18%	1.39%	8.48%
Donavan McKinney	16.89%	4.40%	33.60%
Keith McMurty	9.29%	2.99%	17.47%
Shri Thanedar	18.24%	5.74%	34.58%
Art Tyus	14.60%	4.60%	26.75%
Al Williams	10.26%	3.03%	21.29%
Black			
China Cochran	16.53%	13.74%	19.32%
John Cromer	2.47%	1.74%	3.20%
Steven Lett	0.53%	0.31%	0.79%
Donavan McKinney	19.39%	16.09%	22.63%
Keith McMurty	2.17%	1.10%	3.00%
Shri Thanedar	39.48%	36.18%	43.18%
Art Tyus	2.21%	1.62%	2.88%
Al Williams	17.22%	14.59%	19.75%
Hispanic			
China Cochran	17.20%	5.33%	35.28%
John Cromer	11.86%	4.10%	21.52%
Steven Lett	4.13%	1.85%	7.45%
Donavan McKinney	19.16%	6.26%	34.38%
Keith McMurty	7.04%	2.25%	14.79%
Shri Thanedar	21.05%	6.65%	40.94%
Art Tyus	7.37%	1.37%	16.89%
Al Williams	12.20%	2.80%	24.10%
NH White			
China Cochran	17.57%	6.55%	30.35%
John Cromer	3.03%	1.45%	5.88%
Steven Lett	1.60%	0.84%	2.65%
Donavan McKinney	26.87%	13.49%	40.25%
Keith McMurty	7.00%	2.99%	12.92%
Shri Thanedar	23.95%	9.85%	39.02%
Art Tyus	3.27%	1.61%	5.64%
Al Williams	16.70%	6.25%	29.83%

Ecological Inference, 4th House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
Shabab Hamid	31.01%	20.21%	41.98%
Abraham Aiyash	2.79%	1.12%	5.22%
Anthony Ali	2.91%	1.12%	5.29%
Christopher Collins	34.12%	17.11%	50.03%
Delorean Holmes	2.64%	1.14%	4.54%
Frazier Kempton	2.40%	1.00%	4.67%
Gregory Reyner	2.64%	0.99%	5.35%
Michele Oberholtzer	2.32%	0.78%	5.07%
Tonya Myers Phillips	1.30%	0.52%	2.54%
Tawanna Simpson	14.71%	5.77%	25.21%
Sigmunt Szczepkowski	3.16%	1.23%	5.92%
Black			
Shabab Hamid	1.92%	1.22%	2.80%
Abraham Aiyash	22.59%	20.23%	24.85%
Anthony Ali	0.72%	0.41%	1.11%
Christopher Collins	13.89%	9.33%	18.66%
Delorean Holmes	0.92%	0.60%	1.28%
Frazier Kempton	7.66%	6.17%	9.14%
Gregory Reyner	12.36%	10.37%	14.31%
Michele Oberholtzer	6.85%	5.41%	8.26%
Tonya Myers Phillips	0.57%	0.30%	0.92%
Tawanna Simpson	13.95%	10.86%	16.74%
Sigmunt Szczepkowski	18.58%	16.22%	20.95%
Hispanic			
Shabab Hamid	4.09%	1.60%	8.16%
Abraham Aiyash	7.30%	2.27%	15.07%
Anthony Ali	2.02%	0.91%	3.77%
Christopher Collins	21.25%	7.71%	36.65%
Delorean Holmes	2.53%	1.08%	4.70%
Frazier Kempton	8.39%	2.53%	15.96%
Gregory Reyner	11.55%	3.68%	21.80%
Michele Oberholtzer	4.10%	0.99%	9.54%
Tonya Myers Phillips	2.00%	0.90%	3.62%
Tawanna Simpson	22.23%	7.23%	37.45%
Sigmunt Szczepkowski	14.53%	6.12%	26.50%
NH White			
Shabab Hamid	3.90%	1.56%	7.14%
Abraham Aiyash	2.20%	1.04%	4.04%
Anthony Ali	1.07%	0.50%	1.75%
Christopher Collins	69.61%	63.22%	75.64%
Delorean Holmes	0.92%	0.45%	1.57%
Frazier Kempton	1.83%	0.93%	3.12%
Gregory Reyner	2.45%	1.19%	4.11%
Michele Oberholtzer	2.18%	0.84%	3.83%
Tonya Myers Phillips	0.67%	0.34%	1.11%
Tawanna Simpson	12.33%	7.43%	17.17%
Sigmunt Szczepkowski	2.84%	1.30%	5.05%

Ecological Inference, 5th House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
Cynthia Johnson	36.84%	11.60%	67.66%
Rita Ross	33.55%	9.99%	62.18%
Jermaine Tobey	29.61%	9.24%	56.94%
Black			
Cynthia Johnson	70.00%	66.86%	73.06%
Rita Ross	27.12%	24.17%	29.99%
Jermaine Tobey	2.87%	1.65%	4.35%
Hispanic			
Cynthia Johnson	49.59%	23.45%	71.02%
Rita Ross	36.18%	17.59%	58.14%
Jermaine Tobey	14.23%	5.59%	26.66%
NH White			
Cynthia Johnson	57.30%	33.08%	77.28%
Rita Ross	28.89%	11.47%	49.64%
Jermaine Tobey	13.81%	5.25%	27.08%

Ecological Inference, 6th House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
Tyrone Carter	41.38%	8.35%	69.28%
Ivy Nichole Neal	32.30%	11.16%	60.14%
David Palmer	26.32%	8.09%	49.72%
Black			
Tyrone Carter	75.34%	71.00%	79.66%
Ivy Nichole Neal	16.20%	12.32%	19.95%
David Palmer	8.47%	5.44%	11.86%
Hispanic			
Tyrone Carter	36.89%	19.16%	56.44%
Ivy Nichole Neal	26.10%	13.58%	41.86%
David Palmer	37.01%	18.99%	56.40%
NH White			
Tyrone Carter	50.33%	34.66%	66.32%
Ivy Nichole Neal	23.52%	12.43%	37.94%
David Palmer	26.15%	15.31%	38.97%

Ecological Inference, 7th House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
Nyia Bentley	8.95%	1.98%	18.79%
Elene Robinson	12.02%	3.60%	24.36%
Helena Scott	18.70%	5.16%	36.51%
Anistia Thomas	16.24%	4.98%	32.12%
Bernard Thompson	15.58%	3.98%	31.33%
Cynthia Thornton	15.35%	3.78%	31.66%
Lee Yancy	13.16%	2.93%	28.10%
Black			
Nyia Bentley	2.60%	1.83%	3.33%
Elene Robinson	2.67%	1.79%	3.64%
Helena Scott	41.15%	38.75%	43.36%
Anistia Thomas	8.65%	6.41%	10.56%
Bernard Thompson	15.25%	13.35%	16.98%
Cynthia Thornton	18.98%	16.82%	21.00%
Lee Yancy	10.70%	9.30%	11.95%
Hispanic			
Nyia Bentley	10.36%	3.92%	19.54%
Elene Robinson	11.46%	3.25%	21.97%
Helena Scott	17.09%	5.65%	35.46%
Anistia Thomas	19.05%	6.94%	33.29%
Bernard Thompson	16.46%	5.61%	32.37%
Cynthia Thornton	14.70%	5.04%	28.34%
Lee Yancy	10.88%	3.58%	22.43%
NH White			
Nyia Bentley	8.34%	2.59%	16.09%
Elene Robinson	13.25%	4.87%	24.67%
Helena Scott	21.59%	7.60%	38.38%
Anistia Thomas	11.68%	2.35%	32.25%
Bernard Thompson	17.16%	6.10%	30.62%
Cynthia Thornton	16.83%	6.20%	32.55%
Lee Yancy	11.14%	4.55%	21.61%

Ecological Inference, 9th House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
Marc Cummings	23.84%	7.09%	47.11%
Nicole Elock	20.32%	5.15%	41.60%
Roslyn Ogburn	27.00%	8.45%	55.38%
Karen Whitsett	28.83%	9.11%	56.71%
Black			
Marc Cummings	17.64%	15.32%	19.71%
Nicole Elock	3.00%	1.92%	4.27%
Roslyn Ogburn	30.49%	27.36%	33.39%
Karen Whitsett	48.86%	45.64%	51.76%
Hispanic			
Marc Cummings	25.99%	10.45%	45.13%
Nicole Elock	10.80%	4.19%	21.68%
Roslyn Ogburn	28.28%	11.46%	49.16%
Karen Whitsett	34.93%	15.53%	57.66%
NH White			
Marc Cummings	19.67%	9.49%	33.23%
Nicole Elock	12.86%	6.22%	23.15%
Roslyn Ogburn	37.09%	20.50%	54.85%
Karen Whitsett	30.38%	15.03%	47.26%

Ecological Inference, 10th House District Primary, 2020

Party	Estimate	Lower 95%	Upper 95%
Asian			
Mary Cavanagh	16.59%	4.93%	32.80%
Brenda Hill	10.87%	3.16%	22.78%
Kevin Lamont Harris	16.11%	4.72%	33.56%
Diajah Ruffin	15.63%	4.79%	30.16%
Tyson Kelley	9.45%	2.67%	19.97%
Marcus Cummings	11.36%	3.12%	23.31%
Steele Huhges	14.33%	3.80%	29.52%
Valli Smith	5.65%	1.92%	11.38%
Black			
Mary Cavanagh	21.72%	18.69%	24.95%
Brenda Hill	5.54%	4.06%	6.92%
Kevin Lamont Harris	24.71%	22.03%	27.28%
Diajah Ruffin	28.76%	26.22%	31.23%
Tyson Kelley	4.37%	3.66%	5.12%
Marcus Cummings	9.03%	7.82%	10.21%
Steele Huhges	5.03%	3.29%	6.92%
Valli Smith	0.84%	0.52%	1.19%
Hispanic			
Mary Cavanagh	26.12%	9.63%	44.31%
Brenda Hill	8.22%	2.44%	17.50%
Kevin Lamont Harris	15.09%	4.14%	29.78%
Diajah Ruffin	18.78%	6.11%	33.81%
Tyson Kelley	5.64%	1.86%	11.30%
Marcus Cummings	6.87%	2.18%	13.70%
Steele Huhges	17.40%	5.14%	33.51%
Valli Smith	1.87%	0.72%	4.37%
NH White			
Mary Cavanagh	61.81%	51.84%	71.12%
Brenda Hill	4.71%	2.03%	7.93%
Kevin Lamont Harris	11.46%	5.13%	19.51%
Diajah Ruffin	7.82%	3.13%	13.77%
Tyson Kelley	2.35%	1.03%	4.07%
Marcus Cummings	2.37%	0.79%	4.82%
Steele Huhges	8.47%	3.53%	13.77%
Valli Smith	1.01%	0.49%	1.69%

Ecological Inference, 1st House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Tyrone Carter	57.61%	26.07%	85.88%
Jermaine Tobey	42.39%	14.12%	73.93%
Black			
Tyrone Carter	90.61%	86.15%	94.08%
Jermaine Tobey	9.39%	5.92%	13.85%
Hispanic			
Tyrone Carter	65.31%	44.67%	82.97%
Jermaine Tobey	34.69%	17.03%	55.33%
NH White			
Tyrone Carter	66.63%	43.88%	83.67%
Jermaine Tobey	33.37%	16.33%	56.12%

Ecological Inference, 3rd House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Alabas Farhat	51.06%	25.43%	72.12%
Sam Luqman	34.87%	15.31%	57.49%
Khalil Othman	14.07%	5.41%	26.75%
Black			
Alabas Farhat	69.61%	60.83%	78.09%
Sam Luqman	12.20%	6.66%	19.12%
Khalil Othman	18.19%	11.14%	26.36%
Hispanic			
Alabas Farhat	42.98%	20.60%	65.71%
Sam Luqman	36.64%	16.31%	61.76%
Khalil Othman	20.39%	7.93%	38.25%
NH White			
Alabas Farhat	61.26%	53.16%	69.18%
Sam Luqman	29.64%	21.52%	37.67%
Khalil Othman	9.11%	-4.53%	14.49%

Ecological Inference, 4th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Karen Whitsett	34.45%	11.21%	65.49%
Lori L. Turner	19.55%	5.48%	44.04%
Gus Tarraf	46.00%	13.62%	72.03%
Black			
Karen Whitsett	65.87%	62.99%	69.00%
Lori L. Turner	32.30%	29.14%	35.20%
Gus Tarraf	1.82%	1.00%	2.84%
Hispanic			
Karen Whitsett	51.28%	26.60%	72.40%
Lori L. Turner	29.97%	10.87%	49.45%
Gus Tarraf	18.76%	7.39%	34.25%
NH White			
Karen Whitsett	12.20%	4.74%	21.97%
Lori L. Turner	6.76%	3.13%	11.96%
Gus Tarraf	81.04%	70.43%	89.66%

Ecological Inference, 5th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Reggie Davis	19.55%	5.72%	38.09%
Steele Hughes	20.47%	6.35%	38.44%
Ksenia Milstein	9.81%	2.93%	18.76%
Natalie Price	25.79%	8.45%	46.80%
Michelle Wooddell	24.39%	7.75%	43.55%
Black			
Reggie Davis	62.35%	58.91%	65.51%
Steele Hughes	15.60%	13.23%	17.90%
Ksenia Milstein	1.52%	0.79%	2.42%
Natalie Price	13.08%	9.60%	17.00%
Michelle Wooddell	7.45%	4.96%	10.11%
Hispanic			
Reggie Davis	17.93%	5.85%	33.88%
Steele Hughes	14.45%	3.84%	28.07%
Ksenia Milstein	8.74%	3.05%	16.96%
Natalie Price	28.25%	10.39%	49.54%
Michelle Wooddell	30.63%	12.54%	52.63%
NH White			
Reggie Davis	6.38%	2.71%	11.03%
Steele Hughes	5.25%	2.47%	8.63%
Ksenia Milstein	2.73%	1.21%	4.53%
Natalie Price	63.10%	57.10%	69.06%
Michelle Wooddell	22.54%	17.82%	27.44%

Ecological Inference, 6th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Danielle Hall	26.42%	8.71%	45.22%
Myya Jones	26.35%	9.28%	46.99%
Mark Murphy	5.48%	1.62%	12.22%
Regina Weiss	41.75%	15.57%	65.13%
Black			
Danielle Hall	25.90%	22.71%	28.92%
Myya Jones	20.97%	17.53%	24.16%
Mark Murphy	7.08%	4.25%	9.67%
Regina Weiss	46.05%	41.82%	50.11%
Hispanic			
Danielle Hall	20.89%	7.27%	39.63%
Myya Jones	23.30%	4.63%	43.48%
Mark Murphy	25.11%	9.72%	43.73%
Regina Weiss	30.70%	10.87%	54.23%
NH White			
Danielle Hall	2.77%	1.46%	4.46%
Myya Jones	3.80%	2.09%	5.87%
Mark Murphy	1.94%	0.82%	3.27%
Regina Weiss	91.49%	88.84%	93.75%

Ecological Inference, 7th House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Helena Scott	45.32%	16.60%	71.99%
Melanie Macey	29.46%	8.86%	56.54%
Grant Rivet	25.22%	9.03%	44.40%
Black			
Helena Scott	90.44%	86.87%	93.30%
Melanie Macey	7.29%	4.47%	10.95%
Grant Rivet	2.27%	1.29%	3.62%
Hispanic			
Helena Scott	52.83%	23.24%	82.76%
Melanie Macey	33.43%	11.89%	55.51%
Grant Rivet	13.73%	2.28%	35.91%
NH White			
Helena Scott	33.66%	28.21%	38.82%
Melanie Macey	62.61%	57.56%	67.75%
Grant Rivet	3.73%	2.26%	5.33%

Ecological Inference, 8th House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Mike McFall	26.16%	8.42%	48.87%
Durrel Douglas	22.97%	8.02%	44.76%
Ernest Little	14.60%	4.61%	28.88%
Ryan Nelson	15.41%	5.83%	29.48%
Dave Soltis	20.86%	5.67%	41.84%
Black			
Mike McFall	23.07%	16.79%	29.08%
Durrel Douglas	33.17%	28.02%	38.47%
Ernest Little	34.45%	29.85%	39.35%
Ryan Nelson	5.45%	2.96%	8.43%
Dave Soltis	3.85%	2.22%	6.09%
Hispanic			
Mike McFall	39.05%	18.47%	60.24%
Durrel Douglas	22.52%	8.01%	40.83%
Ernest Little	8.81%	3.11%	17.55%
Ryan Nelson	18.27%	6.03%	35.24%
Dave Soltis	11.36%	3.89%	22.51%
NH White			
Mike McFall	54.01%	43.77%	62.00%
Durrel Douglas	7.61%	3.29%	13.48%
Ernest Little	4.73%	2.15%	8.36%
Ryan Nelson	3.82%	1.66%	6.67%
Dave Soltis	29.83%	23.54%	37.39%

Ecological Inference, 9th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Abraham Aiyash	74.21%	52.84%	87.02%
Darnell Gardner	7.21%	2.08%	16.22%
Abraham Shaw	6.31%	1.98%	14.06%
William Phillips	5.37%	1.60%	11.74%
Paul Smith	6.90%	2.12%	14.78%
Black			
Abraham Aiyash	49.59%	43.71%	55.47%
Darnell Gardner	28.70%	24.53%	32.87%
Abraham Shaw	11.90%	9.37%	14.65%
William Phillips	5.62%	3.41%	7.93%
Paul Smith	4.18%	2.78%	5.75%
Hispanic			
Abraham Aiyash	37.77%	18.07%	60.31%
Darnell Gardner	19.27%	6.64%	35.24%
Abraham Shaw	14.38%	5.41%	25.05%
William Phillips	15.55%	6.14%	28.06%
Paul Smith	13.03%	3.76%	24.22%
NH White			
Abraham Aiyash	69.10%	50.54%	82.69%
Darnell Gardner	10.85%	4.16%	21.51%
Abraham Shaw	7.08%	2.87%	13.44%
William Phillips	6.12%	2.58%	11.65%
Paul Smith	6.85%	2.96%	12.61%

Ecological Inference, 10th House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Toni Mua	43.50%	16.56%	75.88%
Joe Tate	56.50%	24.12%	83.44%
Black			
Toni Mua	11.88%	7.07%	18.09%
Joe Tate	88.12%	81.91%	92.93%
Hispanic			
Toni Mua	75.99%	46.60%	92.66%
Joe Tate	24.01%	7.34%	53.40%
NH White			
Toni Mua	6.69%	3.82%	10.24%
Joe Tate	93.31%	89.76%	96.18%

Ecological Inference, 11th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Patrick Biange	7.13%	2.38%	14.42%
Marvin Cotton, Jr.	6.92%	2.09%	14.03%
Paul Robert Francis	8.60%	2.15%	17.81%
Alex Manwell	13.82%	3.63%	27.77%
David Maynard	9.60%	2.76%	19.35%
Veronica Paiz	14.71%	4.88%	27.52%
Athena Lynn Thornton	10.92%	2.77%	21.80%
Ricardo White	15.28%	4.84%	30.60%
Regina L. Williams	13.01%	4.00%	25.63%
Black			
Patrick Biange	1.35%	0.64%	2.29%
Marvin Cotton, Jr.	17.61%	14.06%	21.12%
Paul Robert Francis	1.53%	0.77%	2.50%
Alex Manwell	5.38%	2.83%	8.59%
David Maynard	1.82%	0.93%	2.95%
Veronica Paiz	7.23%	3.23%	12.36%
Athena Lynn Thornton	18.79%	14.56%	22.85%
Ricardo White	22.39%	17.37%	27.69%
Regina L. Williams	23.89%	19.22%	28.81%
Hispanic			
Patrick Biange	5.14%	1.65%	10.54%
Marvin Cotton, Jr.	4.96%	1.33%	10.59%
Paul Robert Francis	6.72%	1.68%	13.68%
Alex Manwell	15.51%	4.95%	28.42%
David Maynard	10.43%	3.45%	19.21%
Veronica Paiz	18.53%	6.60%	32.27%
Athena Lynn Thornton	9.66%	3.20%	18.60%
Ricardo White	15.79%	4.86%	29.80%
Regina L. Williams	13.27%	4.26%	25.74%
NH White			
Patrick Biange	4.22%	2.42%	6.19%
Marvin Cotton, Jr.	3.58%	1.45%	6.55%
Paul Robert Francis	6.59%	4.25%	9.13%
Alex Manwell	20.92%	14.87%	26.72%
David Maynard	9.56%	6.40%	12.72%
Veronica Paiz	31.17%	24.11%	37.59%
Athena Lynn Thornton	3.55%	1.37%	6.58%
Ricardo White	14.40%	7.24%	21.08%
Regina L. Williams	6.01%	2.77%	10.57%

Ecological Inference, 12th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Kimberly Edwards	44.83%	16.90%	74.34%
Richard Steenland	55.17%	25.66%	83.10%
Black			
Kimberly Edwards	80.79%	69.50%	90.15%
Richard Steenland	19.21%	9.85%	30.50%
Hispanic			
Kimberly Edwards	38.94%	13.47%	69.79%
Richard Steenland	61.06%	30.21%	86.53%
NH White			
Kimberly Edwards	37.16%	16.02%	61.53%
Richard Steenland	62.84%	38.47%	83.98%

Ecological Inference, 13th House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Lori Stone	84.91%	70.39%	94.71%
Myles W. Miller	15.09%	5.29%	29.61%
Black			
Lori Stone	50.17%	38.83%	60.64%
Myles W. Miller	49.83%	39.36%	61.17%
Hispanic			
Lori Stone	68.79%	38.44%	88.25%
Myles W. Miller	31.21%	11.75%	61.56%
NH White			
Lori Stone	87.32%	77.25%	94.66%
Myles W. Miller	12.68%	5.34%	22.75%

Ecological Inference, 14th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Aaron Delikta	13.94%	6.29%	24.61%
Kristina Lodovisi	35.90%	19.16%	53.19%
Donovan McKinney	50.16%	30.52%	67.94%
Black			
Aaron Delikta	4.73%	2.55%	7.51%
Kristina Lodovisi	10.14%	5.66%	15.68%
Donovan McKinney	85.13%	79.39%	90.19%
Hispanic			
Aaron Delikta	21.87%	7.67%	40.11%
Kristina Lodovisi	41.07%	17.13%	65.97%
Donovan McKinney	37.05%	13.71%	61.66%
NH White			
Aaron Delikta	20.09%	8.41%	34.34%
Kristina Lodovisi	35.53%	18.87%	52.63%
Donovan McKinney	44.38%	25.71%	62.99%

Ecological Inference, 16th House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Ishmail Terry	41.77%	16.30%	75.15%
Stephanie A. Young	58.23%	24.85%	83.70%
Black			
Ishmail Terry	5.51%	3.67%	7.56%
Stephanie A. Young	94.49%	92.44%	96.33%
Hispanic			
Ishmail Terry	36.15%	15.50%	64.13%
Stephanie A. Young	63.85%	35.87%	84.50%
NH White			
Ishmail Terry	7.25%	3.48%	12.16%
Stephanie A. Young	92.75%	87.84%	96.52%

Ecological Inference, 18th House District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Jason Hoskins	46.54%	15.63%	77.91%
Caprice Jackson	53.46%	22.09%	84.37%
Black			
Jason Hoskins	53.57%	47.21%	59.65%
Caprice Jackson	46.43%	40.35%	52.79%
Hispanic			
Jason Hoskins	46.46%	12.69%	77.48%
Caprice Jackson	53.54%	22.52%	87.31%
NH White			
Jason Hoskins	67.58%	48.68%	83.60%
Caprice Jackson	32.42%	16.40%	51.32%

Ecological Inference, 26th House District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Steven Chisholm	33.44%	12.26%	55.02%
Stephen Patterson	18.34%	6.62%	34.46%
Dylan Wegela	25.63%	10.09%	45.89%
Allen Wilson	22.59%	8.12%	41.24%
Black			
Steven Chisholm	54.44%	47.61%	61.63%
Stephen Patterson	5.42%	2.86%	8.43%
Dylan Wegela	10.83%	6.06%	17.09%
Allen Wilson	29.30%	21.79%	35.41%
Hispanic			
Steven Chisholm	22.86%	8.78%	39.25%
Stephen Patterson	23.80%	10.87%	38.89%
Dylan Wegela	37.68%	17.26%	58.23%
Allen Wilson	15.67%	5.19%	29.40%
NH White			
Steven Chisholm	7.09%	3.12%	12.36%
Stephen Patterson	4.37%	2.22%	7.05%
Dylan Wegela	79.23%	71.36%	86.69%
Allen Wilson	9.31%	4.02%	15.94%

Ecological Inference, 1st Senate District Primary, 2022

Party	Estimate	Lower 95%	Upper 95%
Asian			
Shellee Brooks	7.55%	3.44%	13.63%
Erika Geiss	59.08%	45.05%	71.26%
Frank Liberati	9.79%	3.79%	18.69%
Ricardo Moore	5.42%	2.49%	9.80%
Brenda Sanders	12.95%	5.47%	23.22%
Carl Schwartz	5.21%	2.66%	9.07%
Black			
Shellee Brooks	16.06%	14.66%	17.44%
Erika Geiss	18.46%	15.52%	20.95%
Frank Liberati	4.08%	3.14%	5.10%
Ricardo Moore	14.70%	13.53%	15.88%
Brenda Sanders	43.86%	41.67%	46.14%
Carl Schwartz	2.83%	2.11%	3.57%
Hispanic			
Shellee Brooks	14.51%	8.82%	21.21%
Erika Geiss	27.16%	16.65%	37.45%
Frank Liberati	20.04%	12.42%	28.87%
Ricardo Moore	8.93%	5.95%	12.53%
Brenda Sanders	18.51%	12.06%	26.81%
Carl Schwartz	10.85%	6.96%	15.62%
NH White			
Shellee Brooks	2.88%	1.97%	3.92%
Erika Geiss	42.57%	37.99%	46.56%
Frank Liberati	46.72%	42.91%	50.97%
Ricardo Moore	1.70%	1.11%	2.47%
Brenda Sanders	4.20%	2.72%	5.90%
Carl Schwartz	1.94%	1.30%	2.66%

Ecological Inference, 3rd Senate District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Stephanie Chang	70.18%	54.29%	83.59%
Toinu Reeves	29.82%	16.41%	45.71%
Black			
Stephanie Chang	80.86%	77.59%	84.11%
Toinu Reeves	19.14%	15.89%	22.41%
Hispanic			
Stephanie Chang	57.63%	41.80%	72.97%
Toinu Reeves	42.37%	27.03%	58.20%
NH White			
Stephanie Chang	93.61%	91.42%	95.67%
Toinu Reeves	6.39%	4.33%	8.58%

Ecological Inference, 6th Senate District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Vicki Barnett	69.05%	-49.34%	81.85%
Darryl Brown	13.23%	6.26%	23.98%
Mary Cavanagh	17.72%	8.30%	31.73%
Black			
Vicki Barnett	12.80%	9.51%	16.06%
Darryl Brown	38.71%	35.59%	41.77%
Mary Cavanagh	48.48%	44.90%	52.11%
Hispanic			
Vicki Barnett	38.25%	17.37%	60.74%
Darryl Brown	24.06%	12.48%	40.58%
Mary Cavanagh	37.70%	17.38%	63.70%
NH White			
Vicki Barnett	49.73%	43.92%	55.53%
Darryl Brown	4.06%	2.54%	5.91%
Mary Cavanagh	46.21%	40.32%	52.03%

Ecological Inference, 7th Senate District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Jeremy Moss	56.55%	30.19%	77.67%
Ryan Foster	43.45%	22.33%	69.81%
Black			
Jeremy Moss	91.55%	88.88%	93.78%
Ryan Foster	8.45%	6.22%	11.12%
Hispanic			
Jeremy Moss	56.86%	37.81%	74.86%
Ryan Foster	43.14%	25.14%	62.19%
NH White			
Jeremy Moss	93.57%	90.98%	95.69%
Ryan Foster	6.43%	4.31%	9.02%

Ecological Inference, 8th Senate District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Mallory McMorrow	65.61%	34.84%	89.51%
Marshall Bullock	34.39%	10.49%	65.16%
Black			
Mallory McMorrow	19.90%	16.39%	24.13%
Marshall Bullock	80.10%	75.87%	83.61%
Hispanic			
Mallory McMorrow	51.44%	28.04%	77.91%
Marshall Bullock	48.56%	22.09%	71.96%
NH White			
Mallory McMorrow	96.15%	94.66%	97.34%
Marshall Bullock	3.85%	2.66%	5.34%

Ecological Inference, 11th Senate District Primary, 2022			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Veronica Klinefelt	45.85%	24.35%	68.29%
Monique Owens	34.15%	31.71%	75.65%
Black			
Veronica Klinefelt	45.34%	33.70%	56.96%
Monique Owens	54.66%	43.04%	66.30%
Hispanic			
Veronica Klinefelt	40.22%	23.66%	59.68%
Monique Owens	59.78%	40.32%	76.34%
NH White			
Veronica Klinefelt	80.24%	74.13%	85.96%
Monique Owens	19.76%	14.04%	25.87%

Maxwell Palmer

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Boston, MA 02215
- APPOINTMENTS** **Boston University**, Boston, Massachusetts
- Associate Professor, **Department of Political Science**, 2021–Present
- Director of Advanced Programs, **Dept. of Political Science**, 2020–Present
- Civic Tech Fellow, **Faculty of Computing & Data Sciences**, 2021–Present
- Faculty Fellow, **Initiative on Cities**, 2019–Present
- Assistant Professor, **Department of Political Science**, 2014–2021
- Junior Faculty Fellow, **Hariri Institute for Computing**, 2017–2020
- EDUCATION** **Harvard University**, Cambridge, Massachusetts
- Ph.D., Political Science, May 2014.
- A.M., Political Science, May 2012.
- Bowdoin College**, Brunswick, Maine
- A.B., Mathematics & Government and Legal Studies, May 2008.
- BOOK** *Neighborhood Defenders: Participatory Politics and America’s Housing Crisis* (with Katherine Levine Einstein and David M. Glick). 2019. New York, NY: Cambridge University Press.
- Selected chapters republished in *Political Science Quarterly*.
 - Reviewed in *Perspectives on Politics*, *Political Science Quarterly*, *Economics 21*, *Public Books*, and *City Journal*.
 - Covered in Vox’s “The Weeds” podcast, CityLab, Slate’s “Gabfest,” Curbed, Brookings Institution Up Front.
- REFEREED ARTICLES** Einstein, Katherine Levine, Joseph Ornstein, and Maxwell Palmer. 2022. “**Who Represents the Renters?**” *Housing Policy Debate*.
- Einstein, Katherine Levine, David Glick, and Maxwell Palmer. 2022. “**Developing a pro-housing movement? Public distrust of developers, fractured coalitions, and the challenges of measuring political power.**” *Interest Groups & Advocacy* 11:189–208.

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

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

de Benedictis-Kessner, Justin and Maxwell Palmer. 2021. “Driving Turnout: The Effect of Car Ownership on Electoral Participation.” *Political Science Research and Methods*.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OTHER
PUBLICATIONS

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

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

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

POLICY
REPORTS

Glick, David M., Katherine Levine Einstein, and Maxwell Palmer. 2023. **2022 Menino Survey of Mayors: Mayors and the Climate Crisis**. Research Report. Boston University Initiative on Cities.

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

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

Einstein, Katherine Levine and Maxwell Palmer. 2022. **Representation in the**

Housing Process: Best Practices for Improving Racial Equity. Research Report. The Boston Foundation.

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

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

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

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

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

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

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

Einstein, Katherine Levine, Maxwell Palmer, David Glick, and Stacy Fox. 2020. **Mayoral Views on Cities' Legislators: How Representative are City Councils?** Research Report. Boston University Initiative on Cities.

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

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

Palmer, Maxwell, Katherine Levine Einstein, David Glick, and Stacy Fox. 2019. **Mayoral Views on Housing Production: Do Planning Goals Match Reality?** Re-

search Report. Boston University Initiative on Cities.

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

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

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

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

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

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

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

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

CURRENT
PROJECTS

“A Partisan Solution to Partisan Gerrymandering: The Define-Combine Procedure” (with Benjamin Schneer and Kevin DeLuca).

– Covered in *Fast Company*

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

“Developing a Pro-Housing Movement? How Public Distrust of Developers Stops New Housing and Fractures Coalitions” (with Katherine Levine Einstein and David

Glick).

“The Gender Pay Gap in Congressional Offices” (with Joshua McCrain).

“Racial Disparities in Local Elections” (with Katherine Levine Einstein).

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

“Menino Survey of Mayors 2021.” Co-principal investigator with David M. Glick and Katherine Levine Einstein.

GRANTS
AND AWARDS

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

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

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

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

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

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

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

The Center for Finance, Law, and Policy, Boston University, Research Grant for “From the Capitol to the Boardroom: The Returns to Office from Corporate Board Directorships,” 2015.

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

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

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

The Dirksen Congressional Center, Congressional Research Award, 2013.

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

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

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

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

SELECTED
PRESENTATIONS

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

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

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

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

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

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

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

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

“Congressional Gridlock,” American Studies Summer Institute, John F. Kennedy

Presidential Library and Museum, 2016.

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

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

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

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

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

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

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

Southern Political Science Association: 2015, 2018

European Political Science Association: 2015

EXPERT
TESTIMONY
AND CONSULTING

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

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

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

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

Bruni, et al. v. Hughs (No. 5:20-cv-35), U.S. District Court for the Southern Dis-

trict of Texas. Prepared expert reports and testified on the use of straight-ticket voting by race and racially polarized voting in Texas. (2020)

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

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

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

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

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

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

TEACHING

Boston University

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

- *Spark! Civic Tech Toolkit Workshop* (CDS DS 292; Spring 2023)

SERVICE

Boston University

- Research Computing Governance Committee, 2021–.
- Initiative on Cities Faculty Advisory Board, 2020–2022.
- Undergraduate Assessment Working Group, 2020–2021.
- College of Arts and Sciences
 - Search Committee for the Faculty Director of the Initiative on Cities, 2020–2021.
 - General Education Curriculum Committee, 2017–2018.
- Department of Political Science
 - Director of Advanced Programs (Honors & B.A./M.A.). 2020–.
 - Political Methodology Search Committee, 2021.
 - Delegate, Chair Selection Advisory Process, 2021.
 - Comprehensive Exam Committee, American Politics, 2019.
 - Comprehensive Exam Committee, Political Methodology, 2016, 2017, 2021.
 - Co-organizer, Research in American Politics Workshop, 2016–2018.
 - American Politics Search Committee, 2017.
 - American Politics Search Committee, 2016.
 - Graduate Program Committee, 2014–2015, 2018–2019, 2020–2021.

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

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

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

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

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

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

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

OTHER
EXPERIENCE

Charles River Associates, Boston, Massachusetts 2008–2010

Associate, Energy & Environment Practice

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

Updated February 16, 2023

Donald Agee, Jr., et al. v. Jocelyn Benson, et al.

Case No. 1:22-cv-00272

United States District Court for the Western District of Michigan

Expert Report of Jonathan Rodden, Ph.D.

A handwritten signature in black ink, appearing to read "Jonathan Rodden", written in a cursive style.

Jonathan Rodden

March 8, 2023

I. INTRODUCTION AND SUMMARY OF FINDINGS

I have been asked by the Michigan Independent Redistricting Commission (MICRC) and its Commissioners (collectively, “Commission”) to examine the expert report of Mr. Sean Trende in the matter of *Donald Agee, Jr., et al. v. Jocelyn Benson*. Specifically, I have been asked to evaluate his claim that race was the predominant motive in the crafting of the Detroit-area districts of the enacted redistricting plan for the Michigan House of Representatives—known as the “Hickory Plan”—and the enacted redistricting plan for the Michigan Senate—known as the “Linden Plan.”

My analysis proceeds in several steps. First, drawing on my academic research and experience with redistricting, I explain the nature of the task that confronted the Commission as it endeavored to fulfill the requirements of Article IV, Section 6 of the Michigan Constitution. Specifically, I explain the implications of the Commission’s charge in provision 13d, which stipulates that “districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage shall be determined using accepted measures of partisan fairness.” While Mr. Trende’s report largely ignores this provision, it is not possible to assess the racial characteristics of the enacted districts without considering the constraints imposed by this requirement.

Specifically, I demonstrate that in drawing plans for both the Michigan House of Representatives and the Senate, relative to an ensemble of computer-generated districts drawn without regard for party or race, and relative to the previously enacted plans, the Commissioners needed to trim the size of Democratic majorities in the most Democratic urban districts to achieve substantial improvements in partisan fairness scores.

In practice, this implies reductions in the Black voting-age population shares of the districts in the urban areas with the largest Black populations relative to an ensemble of computer-generated plans. If the Commission would have reproduced the distribution of Black voters across districts associated with an ensemble of party- and race-blind computer simulations, it could not have claimed to have met its Constitutional obligation to pursue partisan fairness. The paucity of Black urban Republicans made it impossible to reduce the magnitude of lopsided Democratic victories without also creating more racially heterogeneous urban districts.

Next, I respond to each of the four claims made by Mr. Trende in support of his conclusion that race was the predominant motive in drawing the Hickory and Linden plans.

First, Mr. Trende mobilizes visualizations and a narrative discussion to argue that relative to the previous 2011 redistricting plans—which were characterized by their own architects as partisan gerrymanders—the Commission’s plans “divvy up” Detroit-area voters by race. In fact, his maps show the opposite. Whereas the previous redistricting plans often placed boundaries precisely along the lines of residential racial segregation, the Commission’s plans do not. For reasons that are unclear, Mr. Trende seems to imply that racially and politically heterogeneous districts should

be viewed as a fingerprint of racial gerrymandering. However, he also includes his own proposal for Michigan Senate districts that, like the Commission's plan, crosses county boundaries and combines majority-Black and majority-white neighborhoods, so it is very difficult to discern what exactly Mr. Trende is claiming about how to identify racial predominance.

Second, Mr. Trende makes two arguments about compactness. In doing so, Mr. Trende ignores the Commission's requirement to facilitate partisan fairness, the tension between compactness and partisan fairness, and the fact that Article 4, Section 6(13) of the Michigan Constitution ranks political fairness and community-of-interest preservation above compactness and county/city preservation. He begins by contrasting the compactness of the Commission's Detroit-area districts with the previous enacted 2011 redistricting plans. He concludes that the Commission's *House* districts are relatively non-compact, but that the Commission's *Senate* districts are relatively compact. Mr. Trende does not explain 1) why the reader should make conclusions about racial predominance by comparing compactness scores to a prior plan that was drawn with the intent to produce partisan unfairness, or 2) why the inferences drawn from such a comparison should be equal and opposite for the House of Representatives and the Senate.

An additional claim about compactness is that a negative relationship between the Black voting-age population (BVAP) and the compactness of districts is indicative of racial predominance. He demonstrates that such a relationship exists in the Commission's Hickory Plan. However, he also demonstrates that this relationship is not present in the Commission's Linden Plan, but that it *is* present in the 2011 Senate plan, which he treats throughout the report as a comparison plan that should not be understood as a racial gerrymander. Moreover, a significant negative relationship between BVAP and compactness can also be found in Mr. Trende's race-blind ensemble of computer-generated plans, indicating that this relationship cannot possibly be interpreted as an indicator of racial predominance.

Third, Mr. Trende argues that an additional indicator of racial predominance is the fact that the counts of county splits in the Commission's plans are higher than in the previously enacted plans. This ignores the difficult trade-off between the minimization of county splits and the pursuit of partisan fairness, which had been exploited by the architects of the previous plan, as well as the fact that Article 4, Section 6(13) of Michigan's Constitution clearly ranks partisan fairness above the preservation of counties, and does not require strict minimization of county splits. Mr. Trende does not explain why the Commission's county splits should be understood as stemming from the pursuit of racial goals rather than efforts to achieve partisan fairness. Moreover, Mr. Trende produced ensembles of 50,000 computer-generated redistricting plans for both the House and Senate that did not attempt to strictly minimize the number of county splits. The Commission's plans produce fewer county splits than the entire distribution of Mr. Trende's computer-drawn plans, suggesting that the Commissioners indeed paid attention to county splits.

Finally, Mr. Trende uses ensembles of alternative computer-drawn redistricting plans and argues that because the distribution of Black voters across the Commission's districts deviates from that of the ensembles, race must have been the predominant motive in the construction of the districts. It is important to note that Mr. Trende's party- and race-blind ensembles pay no attention to the Michigan Constitution, and due to the relative concentration of Democratic voters in urban neighborhoods, the plans in these ensembles produce levels of partisan unfairness that are far beyond those of the Commission's plans. The Commission's adherence to the Michigan Constitution's partisan fairness requirement, which required the Commission to avoid drawing extremely politically homogeneous districts, could very well result in a distribution of Black voters across districts that differs from the distribution of Black voters seen in Mr. Trende's simulations. A difference between the racial distributions of his simulations and those of the enacted plans cannot, however, be interpreted as evidence of racial predominance.

Moreover, Mr. Trende's comparison of ensembles with specific plans simply does not work as an approach to measuring racial predominance. If we apply his approach to the previously enacted Senate plan and to his own proposed Senate plan, we must conclude that race was the predominant consideration in the construction of those plans as well. However, we cannot draw this conclusion about any of the plans. As with the Commission's plan, deviations of district-level BVAP shares from race- and party-blind computer simulations could occur for other reasons, including the desire to enhance or reduce partisan fairness.

II. QUALIFICATIONS AND EXPERIENCE

I am currently a tenured Professor of Political Science at Stanford University and the founder and director of the Stanford Spatial Social Science Lab—a center for research and teaching with a focus on the analysis of geo-spatial data in the social sciences. I am engaged in a variety of research projects involving large, fine-grained geo-spatial data sets including ballots and election results at the level of polling places, individual records of registered voters, census data, and survey responses. I am also a senior fellow at the Stanford Institute for Economic Policy Research and the Hoover Institution. Prior to my employment at Stanford, I was the Ford Professor of Political Science at the Massachusetts Institute of Technology. I received my Ph.D. from Yale University and my B.A. from the University of Michigan, Ann Arbor, both in political science. A copy of my current C.V. is included as Exhibit A.

In my current academic work, I conduct research on voting, demographics, geography, and aspects of election administration, including registration, the structure of precincts, redistricting, and methods of voting. Recent papers and books focus on the relationship between the patterns of political representation, geographic location of demographic and partisan groups, and the drawing of electoral districts. I have published papers using statistical methods to assess political geography, balloting, and representation in a variety of academic journals including *Statistics and Public Policy*, *Proceedings of the National Academy of Science*, *Science Advances*, *American Economic Review Papers and Proceedings*, the *Journal of Economic Perspectives*, the *Virginia*

Law Review, the *American Journal of Political Science*, the *British Journal of Political Science*, the *Annual Review of Political Science*, and the *Journal of Politics*. One of these papers was selected by the American Political Science Association as the winner of the Michael Wallerstein Award for the best paper on political economy, and another received an award from the American Political Science Association section on social networks.

In 2021, I received a John Simon Guggenheim Memorial Foundation Fellowship, and received the Martha Derthick Award of the American Political Science Association for “the best book published at least ten years ago that has made a lasting contribution to the study of federalism and intergovernmental relations.”

I have recently written a series of papers, along with my co-authors, using automated redistricting algorithms to assess partisan gerrymandering. This work has been published in the *Quarterly Journal of Political Science*, *Election Law Journal*, and *Political Analysis*, and it has been featured in more popular publications like the *Wall Street Journal*, the *New York Times*, and *Boston Review*. I recently authored a book, published by *Basic Books* in June of 2019, on the relationship between political districts, the residential geography of social groups, and their political representation in the United States and other countries that use winner-take-all electoral districts. The book was reviewed in *The New York Times*, *The New York Review of Books*, *Wall Street Journal*, *The Economist*, and *The Atlantic*, among others.

I have expertise in the use of large data sets and geographic information systems (GIS) and conduct research and teaching in the area of applied statistics related to elections. I frequently work with geo-coded voter files and other large administrative data sets, including in recent papers published in the *Annals of Internal Medicine* and *The New England Journal of Medicine*. I have developed a national data set of geo-coded precinct-level election results that has been used extensively in policy-oriented research related to redistricting and representation.

I have been accepted and testified as an expert witness in a number of election law and redistricting cases: *Romo v. Detzner*, No. 2012-CA-000412 (Fla. Cir. Ct. 2012); *Mo. State Conference of the NAACP v. Ferguson-Florissant Sch. Dist.*, No. 4:2014-CV-02077 (E.D. Mo. 2014); *Lee v. Va. State Bd. of Elections*, No. 3:15-CV-00357 (E.D. Va. 2015); *Democratic Nat’l Committee et al. v. Hobbs et al.*, No. 16-1065-PHX-DLR (D. Ariz. 2016); *Bethune-Hill v. Virginia State Board of Elections*, No. 3:14-cv-00852-REP-AWA-BMK (E.D. Va. 2014); and *Jacobson et al. v. Lee*, No. 4:18-cv-00262 (N.D. Fla. 2018), *Rivera v. Schwab*, No. 2022-cv-89 (Kan. Dist. Ct. 2022), *Carter v. Chapman*, No. 464 MD 2021, 465 MD 2021 (Pa. Commw. Ct. 2021); *Bennet v. Ohio Redistricting Comm’n*, No. 2021-1198 (Ohio 2021); *Adams v. DeWine*, No. 2021-1428 (Ohio 2021); *Neiman v. LaRose*, No. 2022-0298 (Ohio 2022). I also worked with a coalition of academics to file Amicus Briefs in the Supreme Court in *Gill v. Whitford*, No. 16-1161, and *Rucho v. Common Cause*, No. 18-422. Much of the testimony in these cases had to do with geography, electoral districts, voting, ballots, and election administration.

I am being compensated at the rate of \$550 per hour for my work on this case. My compensation is not dependent upon the outcome of the case or the opinions that I express.

III. DATA SOURCES

I was provided with the data and computer code used to produce Mr. Trende's report. Part of my report is based on reanalysis of his data. In addition, I consulted several files downloaded from the Commission's web page (<https://www.michigan.gov/micrc>) and from the State of Michigan Open Data Portal (<https://data.michigan.gov>). Additionally, I consulted data from U.S. Census, obtained from the National Historical GIS (<http://nhgis.org>), and from the Redistricting Data Hub (<https://redistrictingdatahub.org>).

IV. GEOGRAPHY, PARTISAN FAIRNESS, AND REDISTRICTING IN MICHIGAN

Before assessing the specific claims made in Mr. Trende's report, it is necessary to clarify some basic features of Michigan's political and racial geography. This geographic starting point structured the task confronting the Commission when it started drawing maps to comply with Article IV, Section 6 of the Michigan Constitution. It is not possible to draw conclusions about the role of race in redistricting without first comprehending the interaction of partisanship, race, and the requirements of the Michigan Constitution.

The Geography of Partisanship in Michigan

Above all, Democratic voters are far more geographically concentrated than Republican voters in Michigan. I have written a series of academic articles and a book about this phenomenon in the United States and other industrialized countries around the world.¹ I have demonstrated that especially in countries like the United States with a two-party system, an urban-rural electoral divide first emerged in the era of heavy industry and strong labor unions. This was also the case in Michigan, where the Democratic Party gained strength in industrial cities like Detroit, Grand Rapids, and Flint.

Thereafter, even as the class cleavage and the power of labor unions faded, when political groups pushed parties to take positions on additional issues, like civil rights, abortion, immigration, and free trade, the Democratic Party ended up adopting the interests of urban groups, and the Republican Party increasingly took up the interests of rural groups. As a result, a stark urban-rural

¹ Jonathan Rodden, 2019, *Why Cities Lose: The Deep Roots of the Urban-Rural Political Divide* (New York: Basic Book), Jowei Chen and Jonathan Rodden, 2013, "Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures," *Quarterly Journal of Political Science* 8: 239-269; Jonathan Rodden and Thomas Weighill, 2022, "Political Geography and Representation: A Case Study of Districting in Pennsylvania," in *Political Geometry*, edited by Moon Duchin and Olivia Walch (London: Springer).

divide in voting behavior has gained strength from the middle of the 20th century to the current day. Michigan is a classic example.

This divide has important implications for representation in legislatures. Geographic polarization has unfolded in such a way that densely populated areas in the urban core vote overwhelmingly for the Democratic Party in the United States. As a result, to the extent that the districts are compact and contiguous, voters in the legislative districts drawn in the urban core will inevitably be overwhelmingly Democratic. At the other end of the spectrum are rural and exurban districts that are safely Republican. However, in part because they include scattered unionized public sector workers, colleges and universities, and vestiges of past mining and industry, these districts are often far more politically heterogeneous than urban districts. As a result, Democrats tend to run up large numbers of “surplus” votes beyond the threshold of victory in the urban districts they win, while also “wasting” a substantial number of votes in the rural and exurban districts they typically lose.

In other words, support for Democratic candidates is inefficiently distributed in space, and as a result, they routinely end up with a seat share that falls well short of their vote share. Again, Michigan is a classic example. Even without any efforts at gerrymandering, the transformation of votes to seats will favor the Republican Party if state House and Senate districts are drawn according to traditional redistricting criteria, meaning that they are drawn to be compact and contiguous, while attempting, where possible, to keep counties and municipalities together.

To focus on the role of political geography in explaining the transformation of votes to seats as distinct from any possible motives of those drawing the districts, it is useful to train a computer algorithm to draw an ensemble of alternative districting plans, ignoring partisan data and assembling groups of vote tabulation districts (VTDs) into districts by focusing only on traditional redistricting criteria like geographic contiguity and compactness.

Mr. Trende has included some simulations of this kind in his report. Using his code and data, I have generated 500,000 redistricting plans for the Michigan House of Representatives, which has 110 seats. Associated with each of the underlying VTDs—the building blocks for drawing districts—are vote totals for a variety of past elections, and these can be combined into measures of partisanship for each simulated district in each plan. To produce these Democratic vote shares, I apply the same formula used by the Commission, relying on precinct-level results of the following 13 elections: President and U.S. Senate in 2020; U.S. Senate, Governor, Attorney General, and Secretary of State in 2018; President in 2016; U.S. Senate, Governor, Attorney General, Secretary of State in 2014; and President and U.S. Senate in 2012.

Adding up all the statewide votes for these elections, it is evident that Michigan is a competitive but Democratic-leaning state, with an overall Democratic vote share of 52.4 percent. However, on average, the simulated plans produce around 52 Democratic seats out of 110, or 47 percent.²

To understand how a party with 52.4 percent of the votes can receive only 47 percent of the seats, it is useful to examine a plot like those contained in Mr. Trende’s report. First, I rank the districts in each simulated plan from the most Republican to the most Democratic. In Figure 1, on the horizontal axis, the plans are placed into 110 bins based on these rankings, and the vertical axis plots the Democratic vote share of all the simulated plans in each bin. When a simulated plan produces a majority-Democratic district, it is portrayed in blue; and when it produces a Republican district, the data marker is red. The yellow dots provide average Democratic vote shares associated with each bin.

Figure 1: Ensemble of Simulated Michigan House Districts by Partisanship

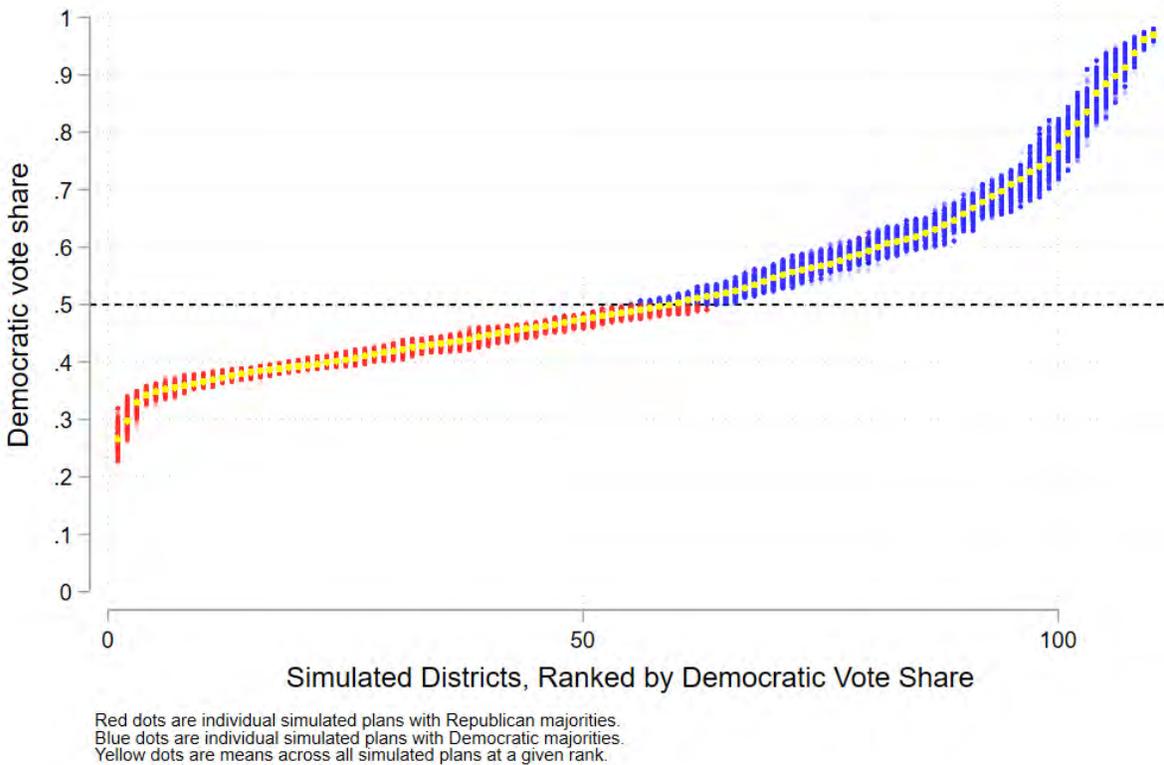


Figure 1 demonstrates that Democratic votes are highly concentrated in the most Democratic districts on the right-hand side of the plot. Note, for instance, that the simulations produce 16

² Using the same technique, I have also generated an ensemble of 500,000 redistricting plans for the Michigan Senate. Here again, the average plan had a Democratic seat share of around 47 percent (18 or 38 seats).

districts where the average Democratic vote share is 70 percent or higher. All of them are urban. However, on the left-hand side of the graph, there are only two rural districts where the Republican vote share is above 70 percent. Because Democrats are so concentrated in the districts they win by very lopsided margins, fewer of the state's Democratic voters are available to contribute to majorities in the pivotal districts in the middle of the plot. In sum, Figure 1 demonstrates that even when the districts are drawn by a non-partisan computer algorithm, Democrats tend to win their districts by much larger majorities, while Republicans tend to win their districts by smaller but still mostly comfortable majorities.

Social scientists have given considerable attention to the task of quantifying this phenomenon. One approach is to create an *index of lopsided margins* by measuring the average winning vote share of seats won by the Democrats and in seats won by Republicans and subtract the latter from the former. This quantity tells us how much more “packed” Democrats are in districts they win by relatively large margins than are the Republicans. We can calculate this index for each of the simulated plans in the ensemble and take an average of 7.4 percent, which indicates that Democrats tend to win their districts by more lopsided margins than do the Republicans.

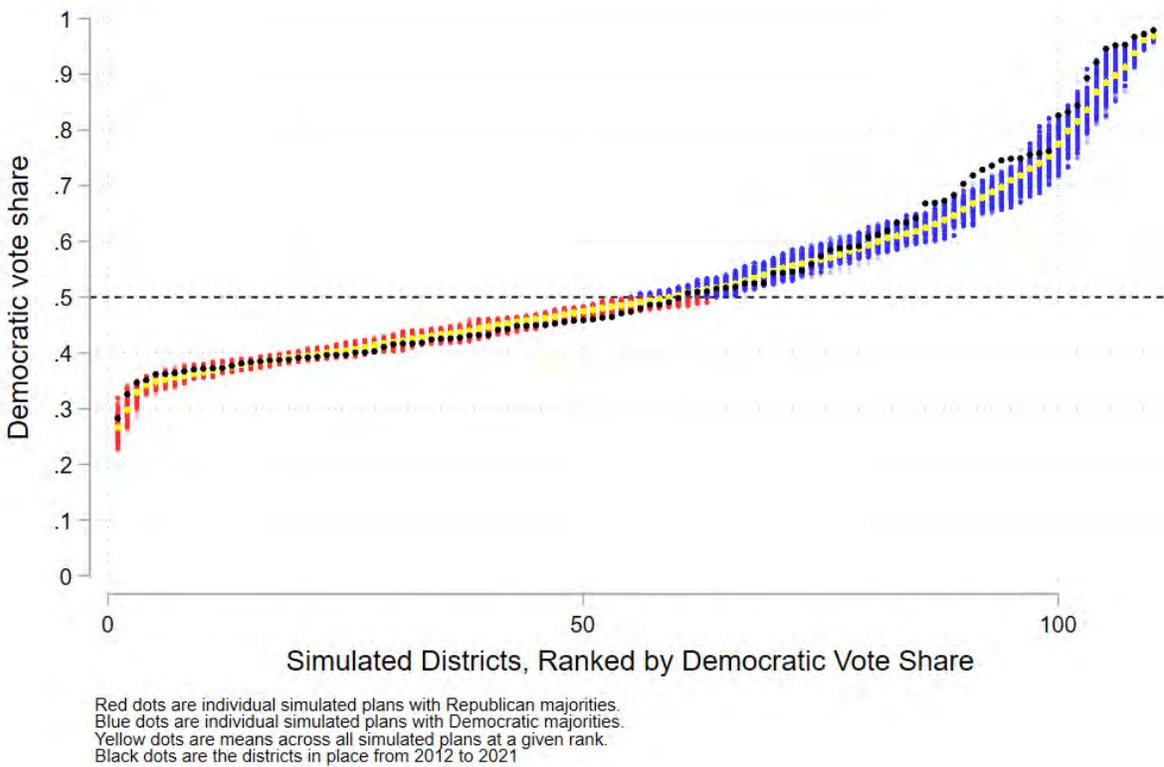
A second approach is to calculate the average Democratic vote share across all the districts, as well as the median Democratic vote share, and subtract latter from the former. The *mean median difference* is larger when the average district is more Democratic than the median district. As Democratic votes are more concentrated in the tail of the cross-district distribution, this quantity will be larger. If we calculate this for all the House of Representatives plans in the ensemble, the average difference is 4.1 percent, which again indicates that Democratic voters are less efficiently distributed across simulated districts than are Republican voters.

A third approach has become known as the *efficiency gap*. In each district, for each party, we can calculate the number of “surplus” votes received in districts that it wins, as well as the number of “lost” votes received in districts the party loses. We can calculate the share of all votes received by each party that are either surplus or lost, and subtract the Republican share from the Democratic share, giving us another measure that gets larger as the distribution of votes for Democrats is relatively less efficient than that of Republicans. Using this measure, the average across the ensemble of simulated plans is 12.9 percent.

In sum, each of these measures tells the same story about the neutral ensemble of simulated redistricting plans: Democrats are more “packed” than Republicans, which allows Republicans to win a greater share of seats than their share of votes. However, redistricting plans in the real world are not typically drawn by computer algorithms. In the United States, they are sometimes drawn by strategic incumbent partisans who wish to give an advantage to specific political parties or incumbents. Again, Michigan is a classic case. In a series of interviews, Jeff Timmer, former executive director of the Michigan Republican Party and one of the authors of the Michigan

redistricting plans that were put in place in 2012, revealed that he drew the districts with the primary goal of increasing the representation of Republicans.³ In an internal email that became public when Michigan’s redistricting plans were challenged as partisan gerrymanders in court, another map-drawer discussed efforts to “cram ALL the Dem garbage” into four Southeast Michigan districts and the “obvious objective—putting dems in a dem district and reps in a GOP district.”⁴

Figure 2: Ensemble of Simulated Michigan House Districts by Partisanship and the Partisanship of the “Benchmark” House Plan in Place from 2012 to 2021



To see how this “cramming” looks in practice, Figure 2 reproduces Figure 1, but adds the partisanship of these gerrymandered districts using black dots. Note that on the right-hand side of the plot, the black dots are mostly outside the range of the simulations, meaning that a key strategy of those drawing the districts was to make urban districts even *more* Democratic than the very lopsided districts that emerged from the simulations. This makes even *fewer* Democrats available to contribute to Democratic victories in more pivotal suburban districts, creating extra seats for Republicans. Note that throughout the middle of Figure 2, the black dots appear below the yellow

³ “Two Authorities on Gerrymandering Weigh in on Michigan’s Redistricting Commission,” *wdet.org*, October 14, 2021.

⁴ “GOP Gerrymanderer: My Maps Fueled Toxic Politics,” *Bridge Michigan*, January 7, 2021.

dots, meaning that in more competitive districts, Republican vote shares are higher than the average of the simulations.

These efforts to pack Democrats even beyond what would happen in party-blind simulations are also captured by the indices of partisan fairness. While the average index of lopsided margins was 7.4 percent in the ensemble, in the enacted map of 2012 it was 10 percent. While the average mean-median difference in the simulations was 4.1 percent, in the enacted map of 2012 it was 6 percent. And while the average efficiency gap in the simulations was 12.9 percent, in the enacted plan of 2012 it was 18.7 percent (see Table 1 below).

Just as it is possible to draw districts with the intention of packing Democrats even further than the simulations, it is also possible to make efforts to “unpack” them. In fact, Article IV, Section 6 of the Michigan Constitution requires it in provision 13d, which stipulates that “districts shall not provide a disproportionate advantage to any political party.” This provision is not ambiguous. In addition to respecting traditional redistricting principles and the Voting Rights Act, the Commission is tasked with the goal of creating districts that are as fair as possible to the two parties. Provision 13d continues: “A disproportionate advantage shall be determined using accepted measures of partisan fairness.” In going about its work, the Commission elected to examine each of the partisan fairness indicators discussed above.

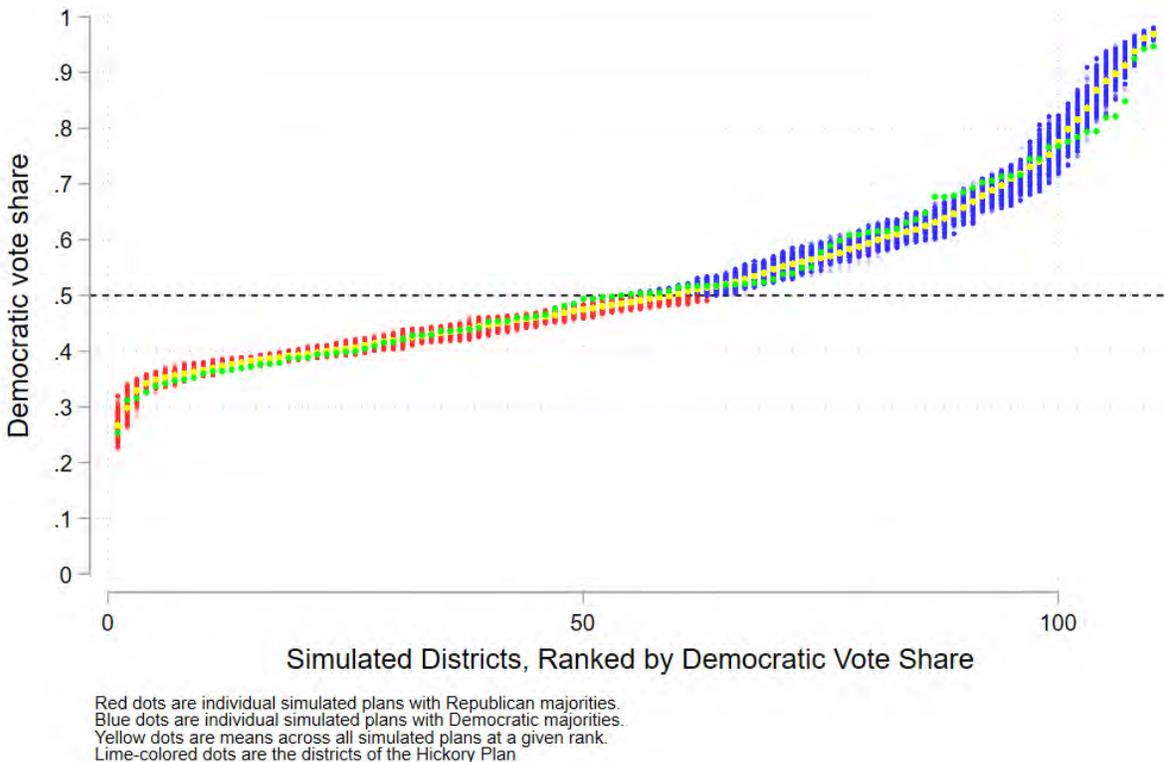
As a practical matter, this means that as Commissioners went about their work and explored various configurations of districts in urban areas and then consulted measures of partisan fairness, they would have noticed that the most compact configurations of urban districts—the kind that emerge most naturally from the type of simulations explored above—would have produced measures of partisan fairness indicating a substantial advantage for Republicans. Since their Constitutional marching orders were to reduce this type of unfairness, they would have then been forced to seek a different configuration—one that made these urban districts less overwhelmingly Democratic.

This is precisely what the Commissioners did. Figure 3 is the same plot as Figures 1 and 2, but it includes in lime green the districts of the enacted 2022 House of Representatives Plan, known as the Hickory Plan. We can see that Democratic vote shares in the 10 most Democratic districts are lower in the Commission’s plan than those produced by the simulations. In other words, the Commission appears to have “unpacked” some of the most lopsided urban districts.

Moreover, in the middle of the distribution, by comparing the yellow and lime-colored dots, we can see that relative to the average of the simulations, the Commission’s districts are systematically more Democratic in the Republican-leaning districts, and more Republican in the Democratic-leaning districts. By making elections more competitive in a wide range of districts, the Commission was able to reduce the index of lopsided margins, the mean-median difference, and

the efficiency gap. While the average index of lopsided margins was 7.4 percent in the ensemble, in the Commission’s map it was 5.3 percent. While the average mean-median difference in the simulations was 4.1 percent, in the Commission’s map it was 2.7 percent. And while the average efficiency gap in the simulations was 12.9 percent, in the Commission’s map it was only 4.3 percent (see Table 1 below).

Figure 3: Ensemble of Simulated Michigan House Districts by Partisanship and the Partisanship of the Hickory Plan



If we sum up the Democratic and Republican vote shares in the districts of the Hickory Plan, we see that the Commission achieved an exact tie: there were 55 Democratic-leaning seats and 55 Republican-leaning seats. Recall that the average simulation result was 52 Democratic seats, and that the partisan index used by the Commission indicated a statewide Democratic vote share of 52.4 percent.

The story is similar with the Michigan Senate. Relative to the previous plan, and relative to the party-blind simulations, by reducing the “packing” of Democratic voters in the most lopsided Democratic districts, with its Linden Plan, the Commission was able to create districts with better partisan fairness metrics. These metrics indicate slightly less pro-Republican bias than the Commission’s House plan, and using the Commission’s partisan index, the Linden Plan produces 20 districts with Democratic majorities (52.6 percent). Recall that according to the Commission’s

index, the average statewide Democratic vote share was 52.4 percent, so the partisanship of the plan corresponds closely to that of the state.

Table 1: Measures of Partisan Fairness

	Lopsided Margins Index	Mean- Median Difference	Efficiency Gap	Estimated Democratic Seats
Michigan House of Representatives				
Previous plan (2012-2021)	10	6	18.7	50
Average of 50,000 simulations	7.4	4.1	12.9	52
Hickory plan (current enacted)	5.3	2.7	4.3	55
Michigan Senate				
Previous plan (2012-2021)	8.6	5.1	17.3	17
Average of 50,000 simulations	6.9	3.7	12.5	18
Linden plan (current enacted)	4.5	1.2	3.3	20

In sum, by “unpacking” some of the most Democratic urban districts and creating more competitive suburban districts, the Commission was able to pursue its constitutional obligation and improve significantly on measures of partisan fairness compared with the prior districts, which were deemed by their own creators as partisan gerrymanders, and relative to non-partisan computer simulations. However, since the concentration of Democrats in urban neighborhoods is so extreme, they were not able to bring measures of partisan fairness all the way to the neutral point, especially in the House of Representatives, so that the Hickory Plan, and to a lesser extent the Linden Plan, still exhibit a mild advantage for Republicans.

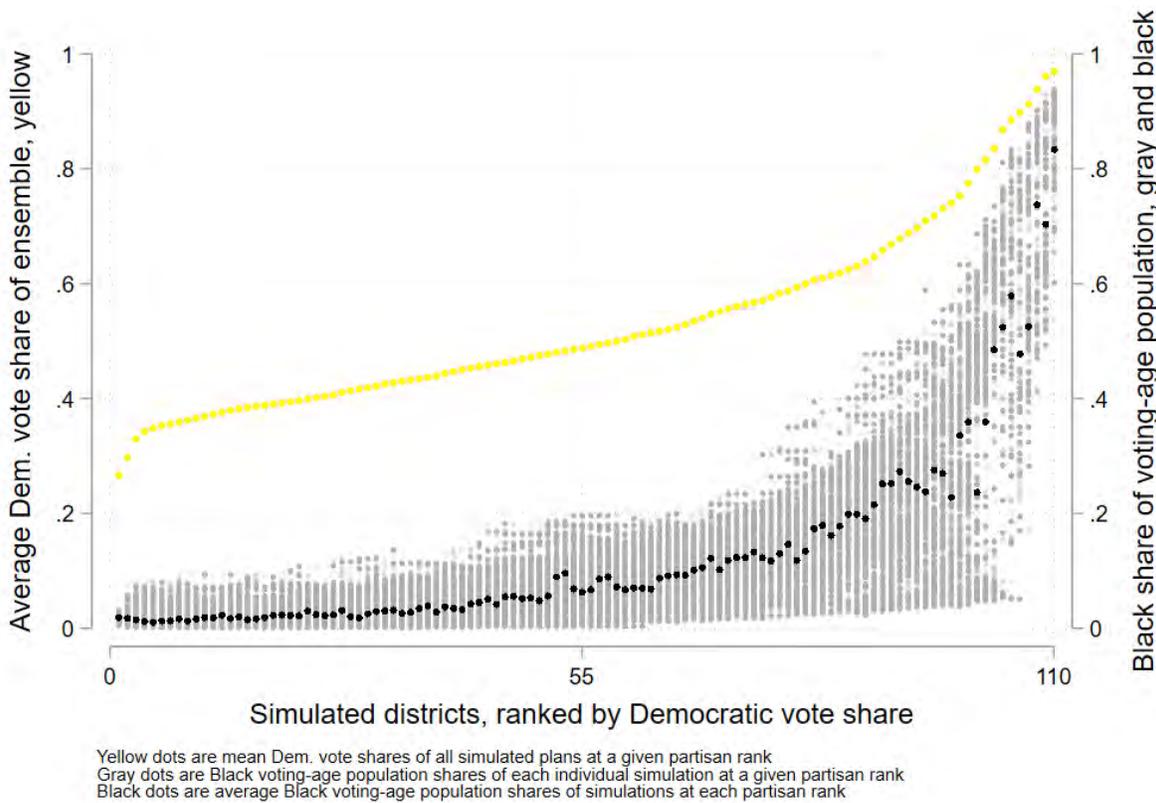
The Geography of Race in Michigan

As in many other parts of the United States, race is highly correlated with partisanship in Michigan. In particular, some of the most overwhelmingly Democratic neighborhoods in the urban core of Detroit also have very large Black majorities. To see the implications of this, let us revisit the ensemble of 50,000 simulated Michigan House of Representative districts once more. In Figure 4, I reproduce the same yellow dots as in all the previous plots. Once again, on the horizontal axis is the rank from 1 to 110 of the Democratic vote share of the simulated districts, and as before, on the left-hand vertical axis is the average Democratic vote share over all the 50,000 simulations, which is represented with yellow data markers for each rank. But now, in addition, instead of plotting the range of partisan outcomes at each partisan rank, as in the previous plots, I display the

Black voting-age population (BVAP) share of each simulation at each partisan rank in gray, and the average BVAP across simulations at each partisan rank in black, which are indicated on the right-hand vertical axis.

Figure 4 shows that when the simulations inevitably produce compact, extremely Democratic districts in the urban core of Detroit, on the right side of the plot, these simulated districts typically also have very high Black voting-age population shares—an average of over 70 percent in the three most Democratic ranked-districts. To achieve the Commission’s mandated goal of improving measures of partisan fairness, it was necessary to trim the size of Democratic majorities in these districts relative to the non-partisan simulations. As a practical matter, Figure 4 suggests that this was not possible without altering the distribution of race across districts. There were simply no proximate precincts with large numbers of Black Republicans that would have made it possible to improve partisan fairness scores without reducing the Black voting-age population shares of the most Democratic districts. Had the Commission simply reproduced the distribution of racial groups across districts from the party- and race-blind simulations, it could not have claimed to have pursued its Constitutional mandate.

Figure 4: Ensemble of Simulated Michigan House of Representatives Districts by Partisanship and Race



The Commission had no countervailing mandate to preserve the racial distribution of simulations that are blind as to party and race—that is to say, it had no mandate to produce a set of urban districts where the voting-age population is in the range of 70 or 80 percent Black. Yet it is worth noting that the Commission’s plan still produced 7 districts where Black Michiganders made up over 50 percent of the voting-age population. If we take either the mean or the median of the 50,000 simulations, we find that the simulations also tended to produce the same number of majority-Black districts: 7.

Figure 5: Ensemble of Simulated Michigan Senate Districts by Partisanship and Race

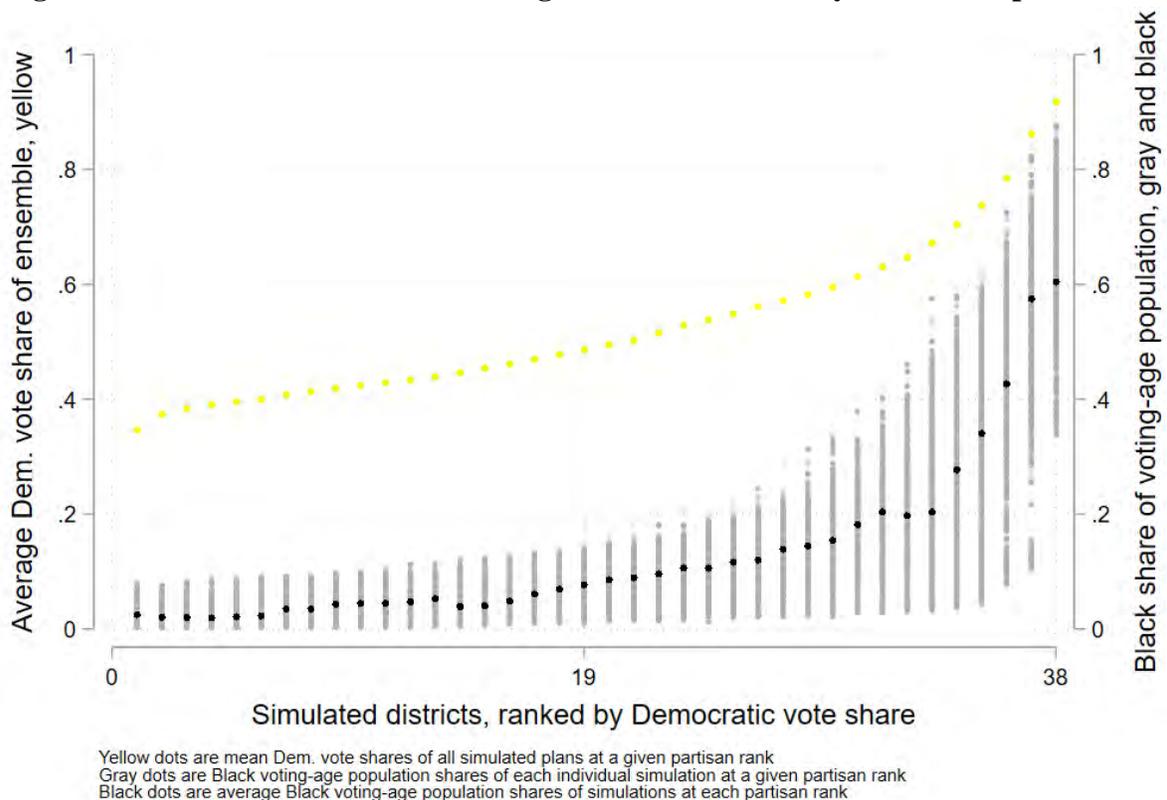


Figure 5 provides a similar plot for the Michigan Senate. Here as well, by drawing compact districts without regard for partisanship, the simulations produce some extremely Democratic districts, represented with yellow dots on the right side of the graph. For instance, on average, the simulations produce five districts with a Democratic vote share above 70 percent, and not a single district on the left side where the Republican vote share is above 70 percent. There are two districts where the simulations would produce Democratic vote shares well above 80 percent. Again, in order to reduce the lopsided margins index, the mean-median difference, and the efficiency gap, the Commission had no choice but to reduce the Democratic vote shares of these urban districts. And again, the gray and black dots show that especially in the two most Democratic districts, the Black voting-age population share in the simulations was very high, and it is difficult to see how the Commission could have fulfilled its obligation to Article IV, Section 6 of the Michigan

Constitution while drawing districts where the black voting-age population would be at or above the average of the simulations.

In the Commission’s “Linden Plan,” the Democratic vote shares were substantially lower in the two most Democratic districts—districts 3 and 7—than in the simulations. As we have seen in Table 1 above, this had the effect of bringing the partisan fairness scores closer to neutrality. And as a result, the Black voting-age population share in the two most Democratic districts ended up on the lower end of the range of the simulations: 42 percent in District 3, and 46 percent in District 7.

In sum, in drawing plans for both the House of Representatives and the Senate, the Commissioners needed to trim the size of Democratic majorities in the most Democratic urban districts in order to achieve substantial improvements in partisan fairness scores relative to the previous districts or the simulated districts, and in practice, this implied reductions in the Black voting-age populations of the districts in the urban areas with the largest Black populations.

V. VISUAL ANALYSIS AND NARRATIVE

With these basic facts in hand, let us now evaluate Mr. Trende’s efforts to explain the Commission’s redistricting plans as having been predominantly motivated by race. In the parts of his report dealing with the House and Senate plans, there are sections entitled “Racial Predominance.” Both sections proceed in the same way. First, there is a visual inspection of maps and a narrative that attempts to portray the district lines as having been motivated by racial considerations. Second, Mr. Trende makes some arguments about the compactness of districts. Third, he discusses county splits. And fourth, he uses redistricting simulations to calculate a novel measure of what he calls “racial gerrymandering.” I will consider each in turn.

Mr. Trende begins his discussion of racial predominance by displaying maps of the Detroit area. In Figure 6 below, I have provided maps of the same parts of the Detroit metro area that were discussed in Mr. Trende’s report. Like Mr. Trende, I include dot density maps displaying the racial geography of the Detroit area. In Figure 6, each red dot corresponds to 30 non-Hispanic white voting-age individuals, and each black dot corresponds to 30 non-Hispanic black voting-age individuals. I include the boundaries of the districts in place from 2012 to 2021, the districts of the plaintiffs’ demonstration maps that were presented in Mr. Trende’s report, as well as the districts of the currently enacted map known as the “Hickory Plan.”

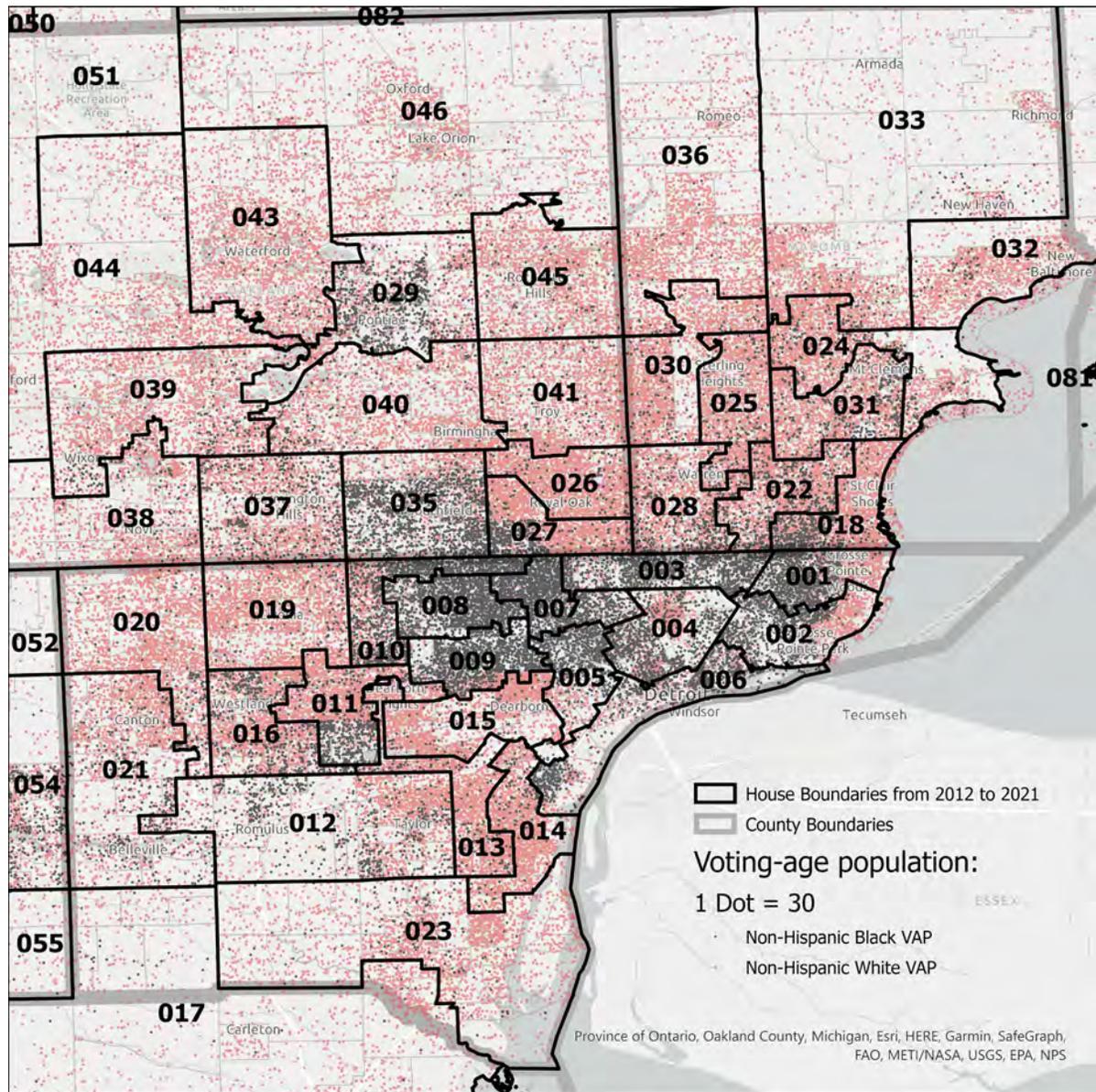
Much of Mr. Trende’s analysis of Michigan House districts is a discussion of the virtues of the prior map that was in place from 2012 to 2021, which I will refer to as the 2011 Plan. He describes it as follows: “the districts... rarely crossed county lines. Instead, they were often reasonably compact districts that conformed to political boundaries and rarely included appendages and arms” (page 43).

As discussed above, those responsible for drawing the 2011 plans for the Michigan House of Representatives and Senate in the previous round of redistricting were very clear about their partisan goals. They were also very clear about the fact that those goals were well-served by drawing compact districts that observed jurisdictional boundaries. According to one of the map-drawers, Mr. Timmer, “There were two main keys to gerrymandering in Michigan when I sat down to draw maps 10 and 20 years ago. Relying on county and city or township geography, keeping those intact, helps Republicans. The other thing that helped Republicans was the Voting Rights Act — packing those districts, those majority minority districts, into cities like Detroit.”⁵

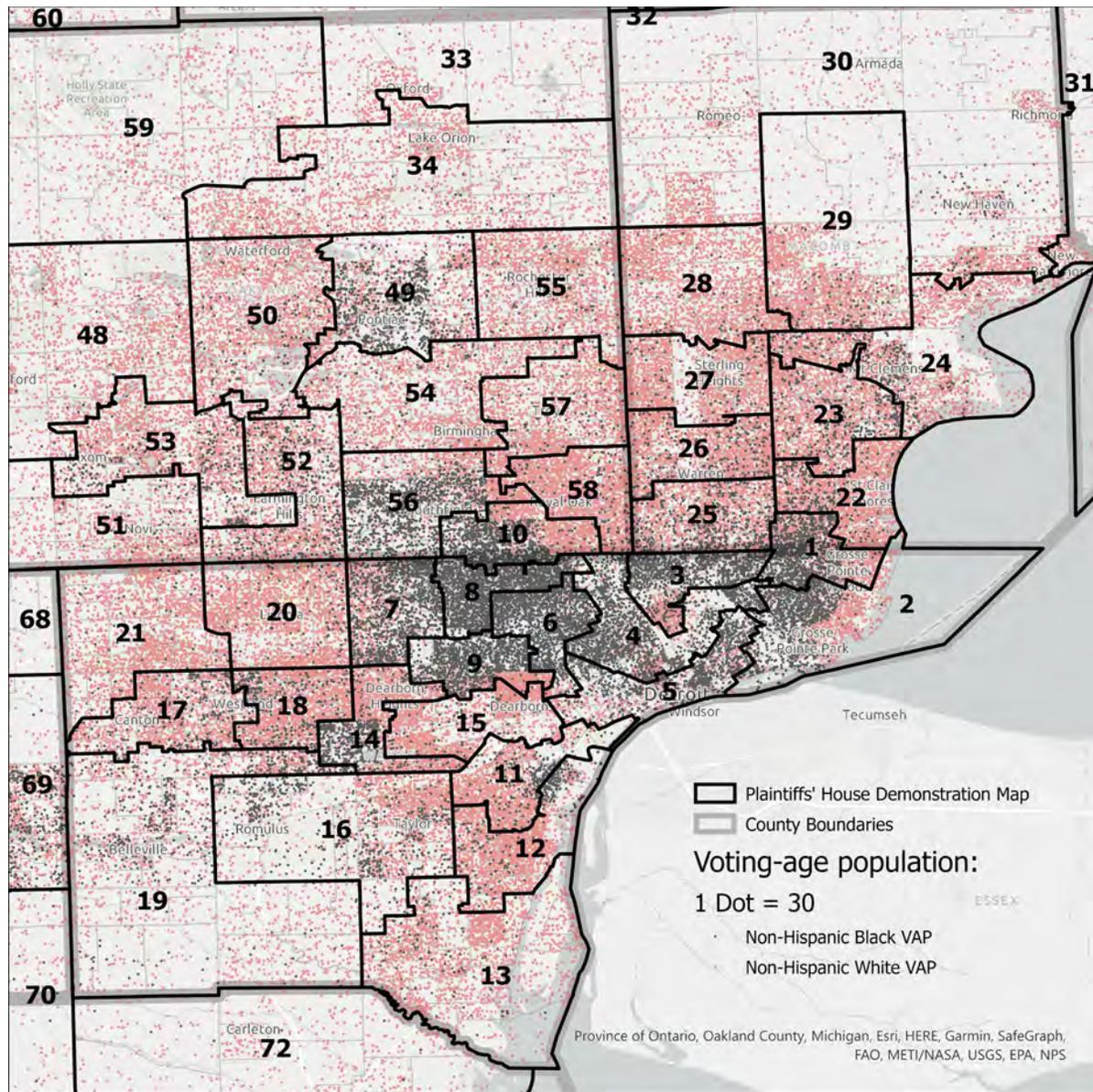
In other words, it was possible to achieve levels of partisan unfairness well beyond the non-partisan simulations by packing Black voters into districts with extremely high Black voting-age population shares. As can be seen in Figure 6a, the stark racial segregation around county boundaries—especially Wayne County—was helpful in this endeavor.

⁵ <https://wdet.org/2021/10/14/two-authorities-on-gerrymandering-weigh-in-on-michigans-redistricting-commission/>

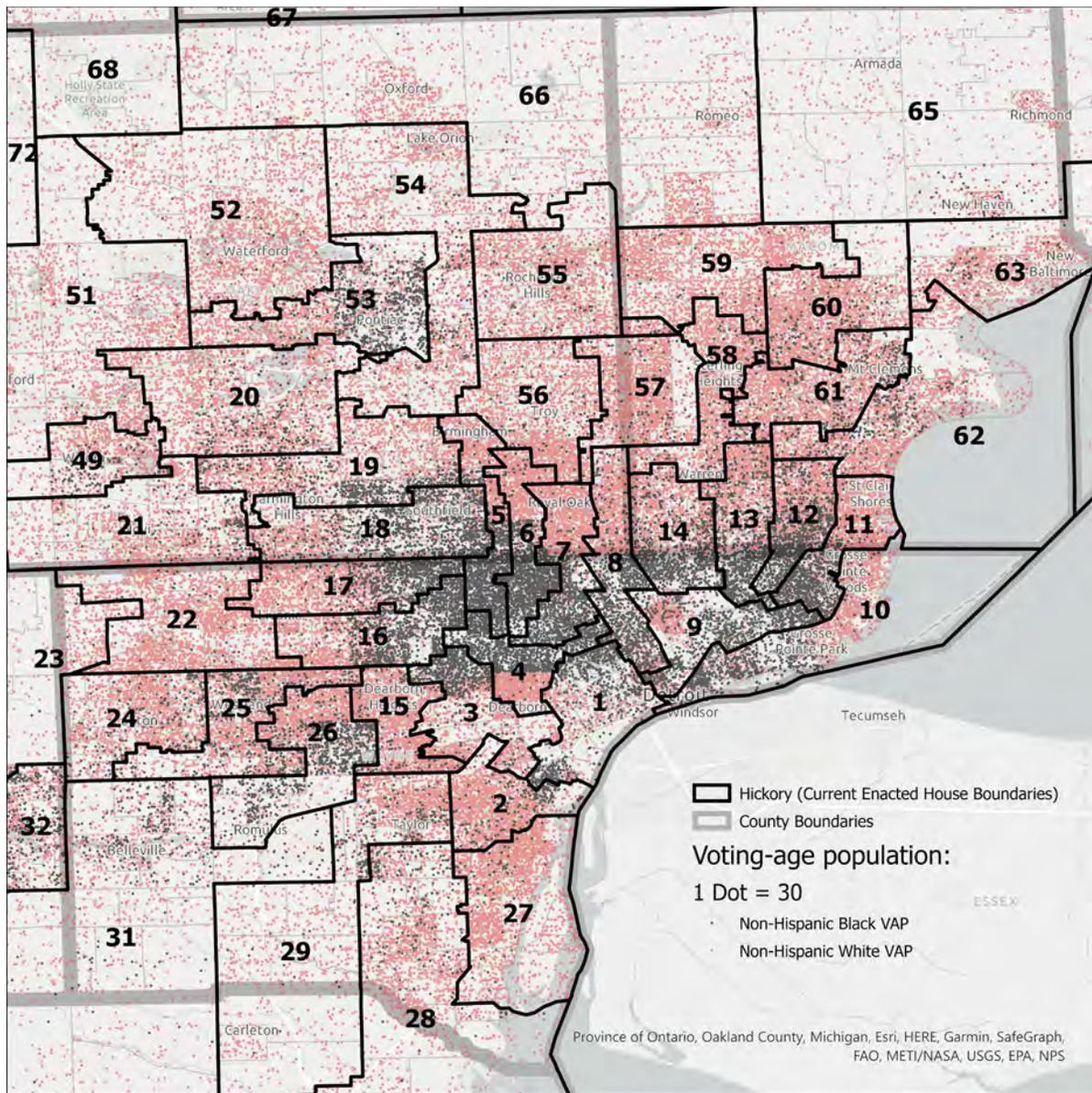
**Figure 6a: Race and Boundaries of Michigan House of Representatives Districts:
2011 Plan**



**Figure 6b: Race and Boundaries of Michigan House of Representatives Districts:
Plaintiffs' Demonstration Map**



**Figure 6c: Race and Boundaries of Michigan House of Representatives Districts:
Currently Enacted Districts (Hickory Plan)**



In past litigation related to racial gerrymandering, courts have relied on testimony demonstrating that district-drawers carefully followed the geographic dividing lines between racial groups, using district boundaries to segregate voters by race.⁶ Note that in the 2011 House plan, the effort to pack Democratic voters often involved drawing district boundaries that followed racial dividing lines in residential geography. Something very similar can be seen in the Plaintiffs' Demonstration House Plan.

To see this more clearly, it is helpful to zoom in on some geographic areas and examine the plans side by side. Figure 7 is centered on the intersection of Wayne, Oakland, and Macomb Counties. It reproduces the dot density map of race, such that each dot represents 10 voting-age individuals, and includes maps of the boundaries of the 2011 Plan (upper left), the Plaintiffs' Demonstration Plan (upper right), and the Hickory Plan (bottom).

In both the 2011 Plan and the Plaintiffs' Demonstration Plan, with some exceptions, the district lines follow rather closely along the lines of residential segregation. In the Plaintiffs' Demonstration map, when District 1 crosses the Wayne County boundary, for example, it does so in a way that follows the lines of racial segregation. To see how these lines also packed Democrats into extremely homogeneous districts, see Figure 8, which displays the same area, but instead of using dots to represent racial groups, it uses dots to represent voters in the 2020 election, such that each blue dot represents 10 Biden voters, and each red dot represents 10 Trump voters. Comparing Figures 7 and 8, we can see that by following lines of racial segregation, the 2011 Plan and the Plaintiffs' Demonstration Plan created very homogeneous Democratic districts.

The Hickory Plan does something quite different. It creates districts that are more racially and politically heterogeneous than those in the other two plans. The lines of residential segregation are often found *within* the districts, rather than at the boundaries between the districts. By “unpacking” Democratic voters in this way, as explained above, the Commission was able to reduce the partisan unfairness of the previous map. Visually, in Figure 8 we can see a greater mixing of red and blue dots within districts in the Hickory Plan, which has the effect of improving partisan fairness scores.

Figures 9 and 10 are identical, but they zoom in a little further West, centered on Livonia. Again, in Figure 9 we can see that with some exceptions, the boundaries of the 2011 Plan followed the lines of residential segregation. In Figure 10 we can see that in doing so, they also segregated partisans. And in the bottom maps in Figures 9 and 10—the Hickory Plan—we can see that the Commission drew districts running West to East that were more racially heterogeneous, and as a result, more heterogeneous with respect to partisanship.

⁶ See Amended Report of Jonathan Rodden, Ph.D. in support of Plaintiffs, August 30, 2017, *Bethune-Hill v. Virginia St. Bd. of Elec.*, Case No. 3:14-cv-852 (E.D. Va.) (Exhibit P-069); *Bethune-Hill v. Virginia St. Bd. of Elec.*, 326 F. Supp. 3d 128, 145–46 (E.D. Va. 2018) (crediting this analysis).

Figure 8: 2022 Presidential Election Results and Boundaries of Michigan House of Representatives Districts, Three Alternative Plans, Zoom at the Intersection of Wayne, Oakland, and Macomb Counties

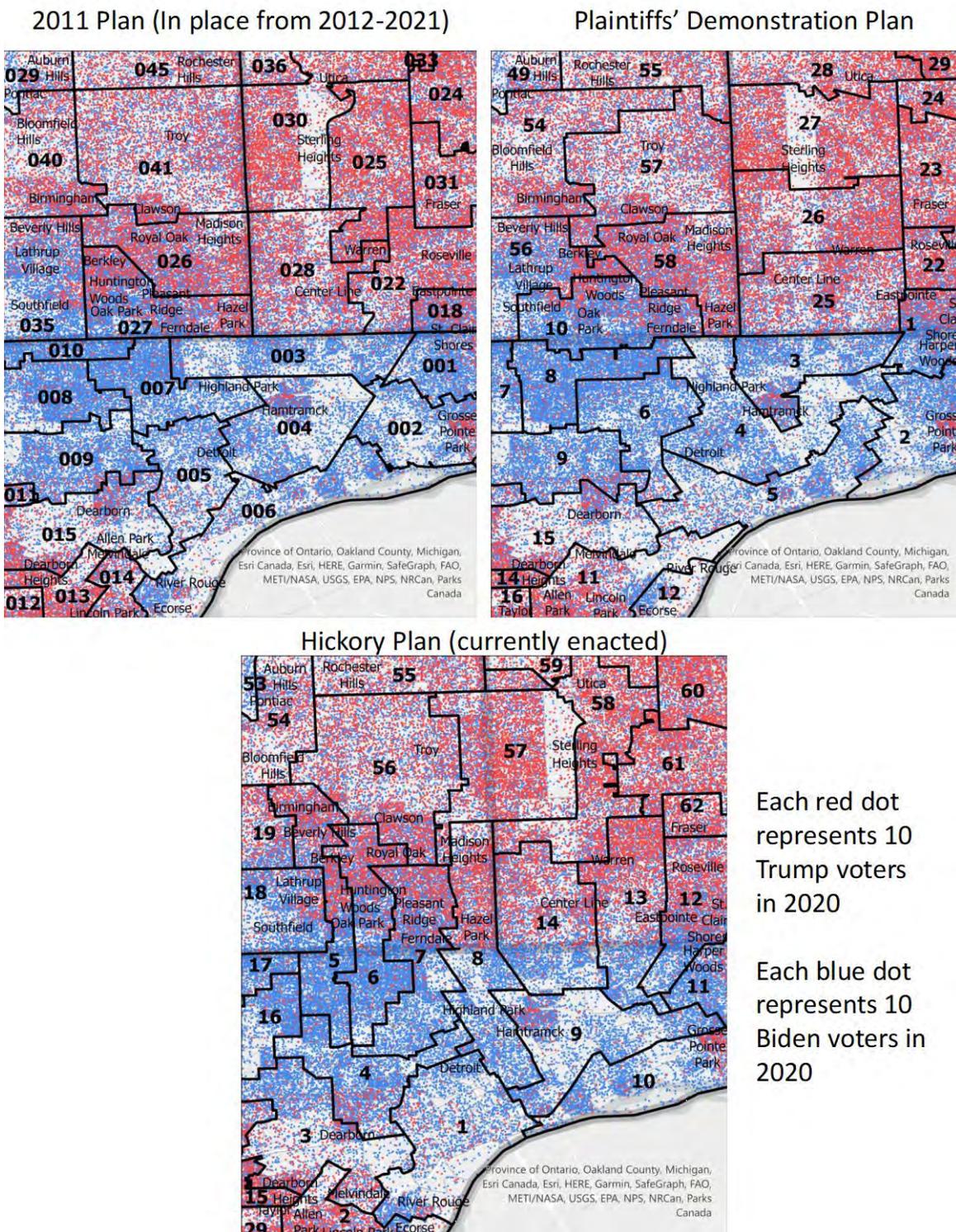
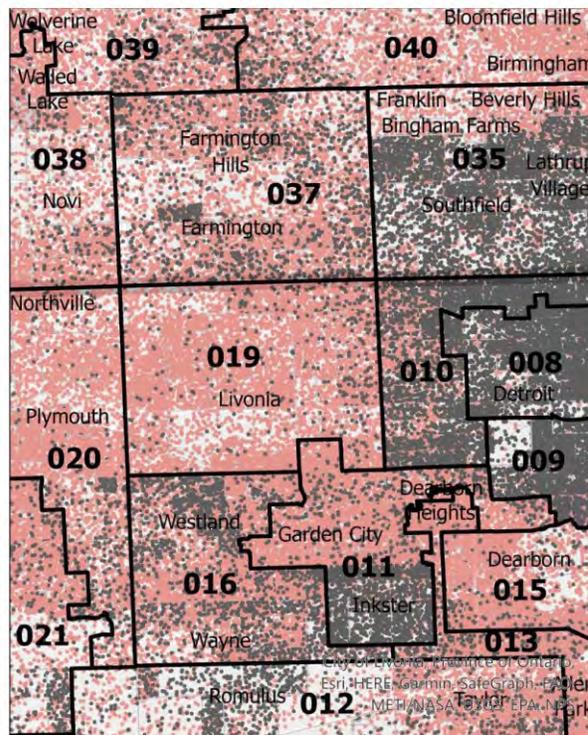
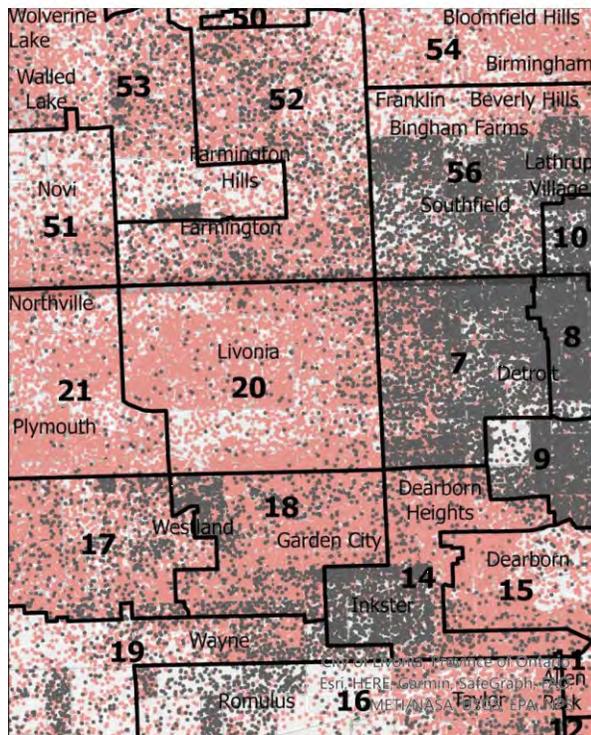


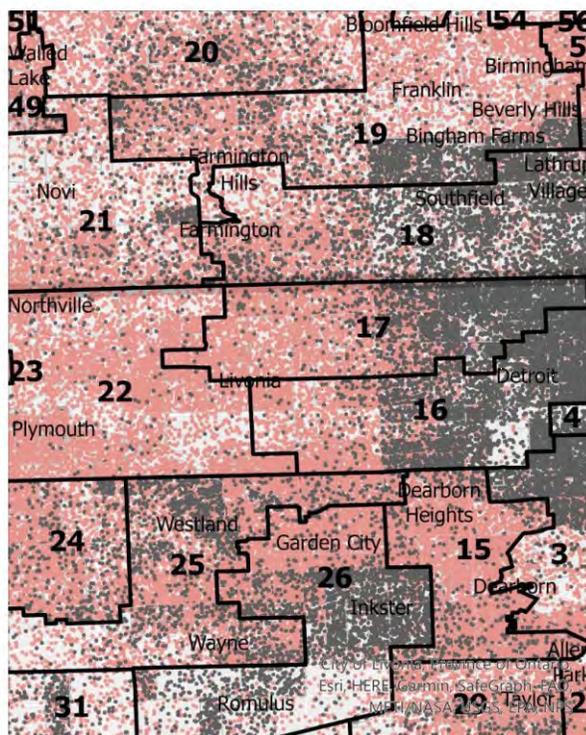
Figure 9: Race and Boundaries of Michigan House of Representatives Districts, Three Alternative Plans, Zoom Centered on Livonia

2011 Plan (In place from 2012-2021)

Plaintiffs' Demonstration Plan



Hickory Plan (currently enacted)



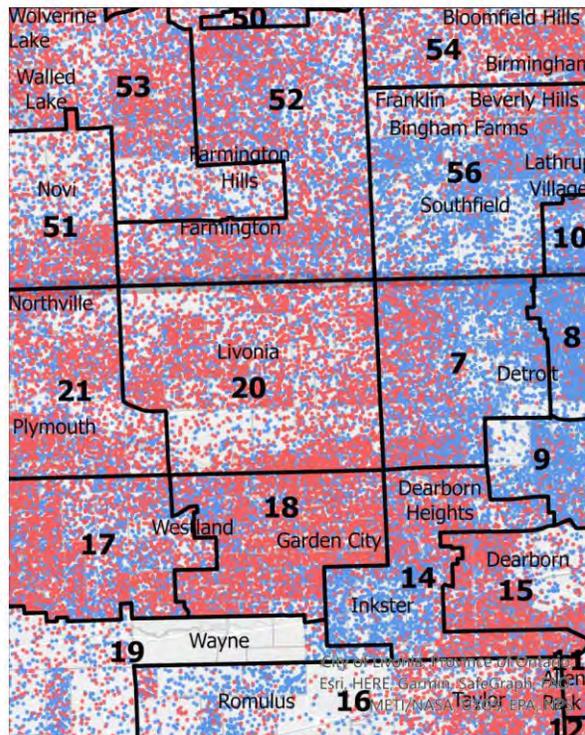
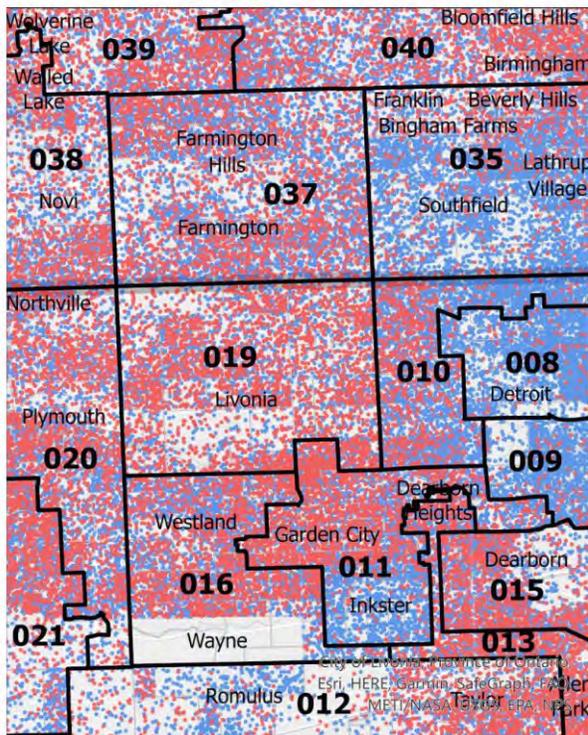
Each red dot represents 10 white voting-age residents

Each black dot represents 10 Black voting-age residents

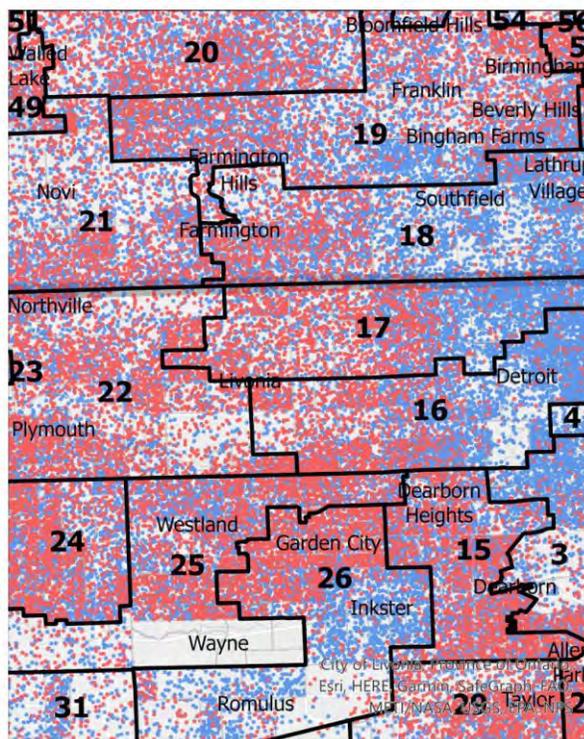
Figure 10: 2022 Presidential Election Results and Boundaries of Michigan House of Representatives Districts, Three Alternative Plans, Zoom Centered on Livonia

2011 Plan (In place from 2012-2021)

Plaintiffs' Demonstration Plan



Hickory Plan (currently enacted)



Each red dot represents 10 Trump voters in 2020

Each blue dot represents 10 Biden voters in 2020

Describing some of the Commission's Detroit-area districts that cross racial boundaries, Mr. Trende argues that "these features do not exist to improve the partisan performance of the map, as almost all of these precincts are at least Democratic leaning" (page 48). This claim is mistaken for two reasons. First, Mr. Trende seems not to recognize that all the partisan fairness scores considered by the Commission are driven by the prevalence of lopsided districts, and efforts to reduce the number of lopsided districts would be found precisely in the most lopsided districts. Second, Mr. Trende fails to recognize that decisions made in one part of the map have knock-on effects for other parts of the map. Decisions made about boundaries in the middle-ring suburbs have implications for the competitiveness of the out-ring suburbs, for example, and as seen above, the Commission's decisions ended up reducing the lopsided margins in the most non-competitive districts of the urban core, while also creating more competitive districts in the middle- and outer-ring suburbs.

In the next sentence, Mr. Trende goes on to say that the Commission's Detroit-area districts "divvy up the voters by race, combining Black precincts in Detroit with White precincts in the suburbs" (page 48). This is a curious sentence, as the first clause is negated by the second. It is not clear how a map that ignored some of the lines of racial residential segregation and combined different racial groups in the same districts can be described as "divvying them up" by race. Racial gerrymandering is typically understood as placing voters within or outside a district predominantly on the basis of race. Mr. Trende's style of qualitative analysis is to present maps showing that district boundaries do not follow the lines of residential racial segregation. The reader is evidently expected to interpret this as evidence that racial groups have been intentionally "cracked", presumably to undermine their influence. However, it is not clear why the mere presence of racially heterogeneous districts is evidence that the Commission was assigning voters in or out of districts on the basis of race. Racially heterogeneous districts can easily emerge when the district-drawer is *not* paying attention to race or is attempting to achieve a goal that is orthogonal to race, such as preserving a geographic community of interest or facilitating partisan fairness.

In the section of his report focusing on the Michigan Senate, Mr. Trende makes the same arguments. Again, he praises the compactness and respect for county boundaries associated with the 2011 Plan and criticizes the Commission's plan for crossing the Wayne County boundary and combining Black and white voters in districts that are more racially and politically heterogeneous. Again, he provides no discussion of the Commission's mandate to reduce partisan unfairness by creating more competitive districts in the urban core and suburbs. He merely returns to the curious assertion that the districts "divvy up the voters by race" (page 97).

Figures 11 and 12 below demonstrate that, as with the 2011 House of Representatives Plan, the 2011 Senate Plan packs urban Democratic voters into overwhelmingly Democratic districts. It also demonstrates that the Commission's Linden plan created Senate districts that were more racially and politically heterogeneous.

A surprising omission in Mr. Trende’s discussion is any mention of his proposed Senate redistricting plan, which is introduced and discussed elsewhere in the report as a “demonstration map.” This plan is depicted in Figure 11b and 12b. This plan is quite similar to the Linden Plan (Figure 11c and 12c) in that its districts traverse most of the northern boundary of Wayne County. Moreover, in crossing county and municipal boundaries, Mr. Trende’s proposed districts also combine white and Black neighborhoods.

The main claim in the narrative accompanying Mr. Trende’s maps seems to be that when districts combine urban majority-Black neighborhoods with more suburban, majority-white neighborhoods, for reasons that are unclear, this constitutes evidence of racial predominance. As argued above, the logic of this claim is faulty. But if we accept it, we must also conclude that race was the predominant factor in creating *his own* Senate districts. Again, it is very difficult to understand how Mr. Trende conceptualizes racial predominance. I will return to this issue below when discussing Mr. Trende’s attempt to quantify racial gerrymandering.

Figure 11a: Race and Boundaries of Senate Districts: 2011 Plan

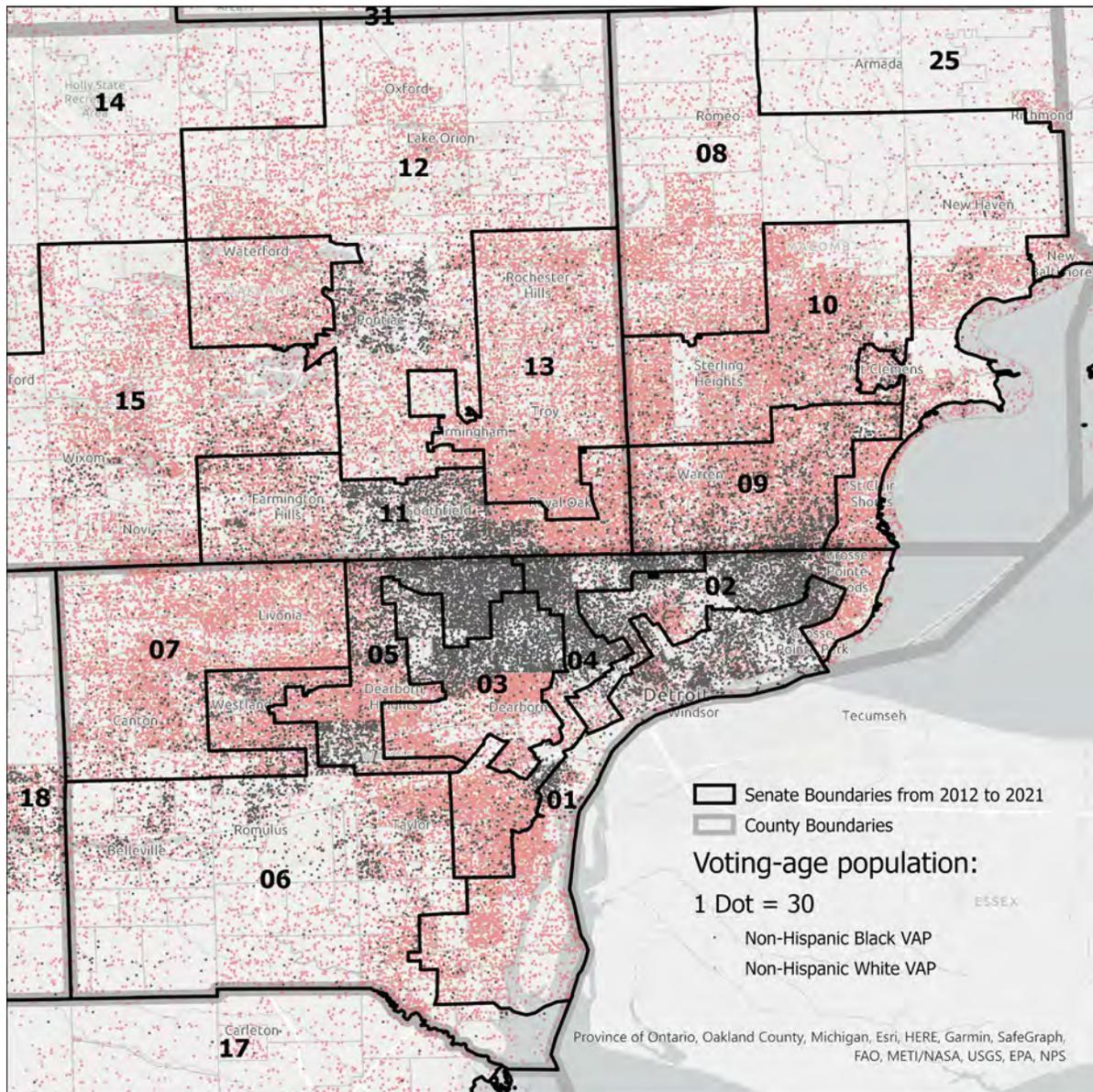


Figure 11b: Race and Boundaries of Senate Districts: Plaintiffs' Demonstration Map

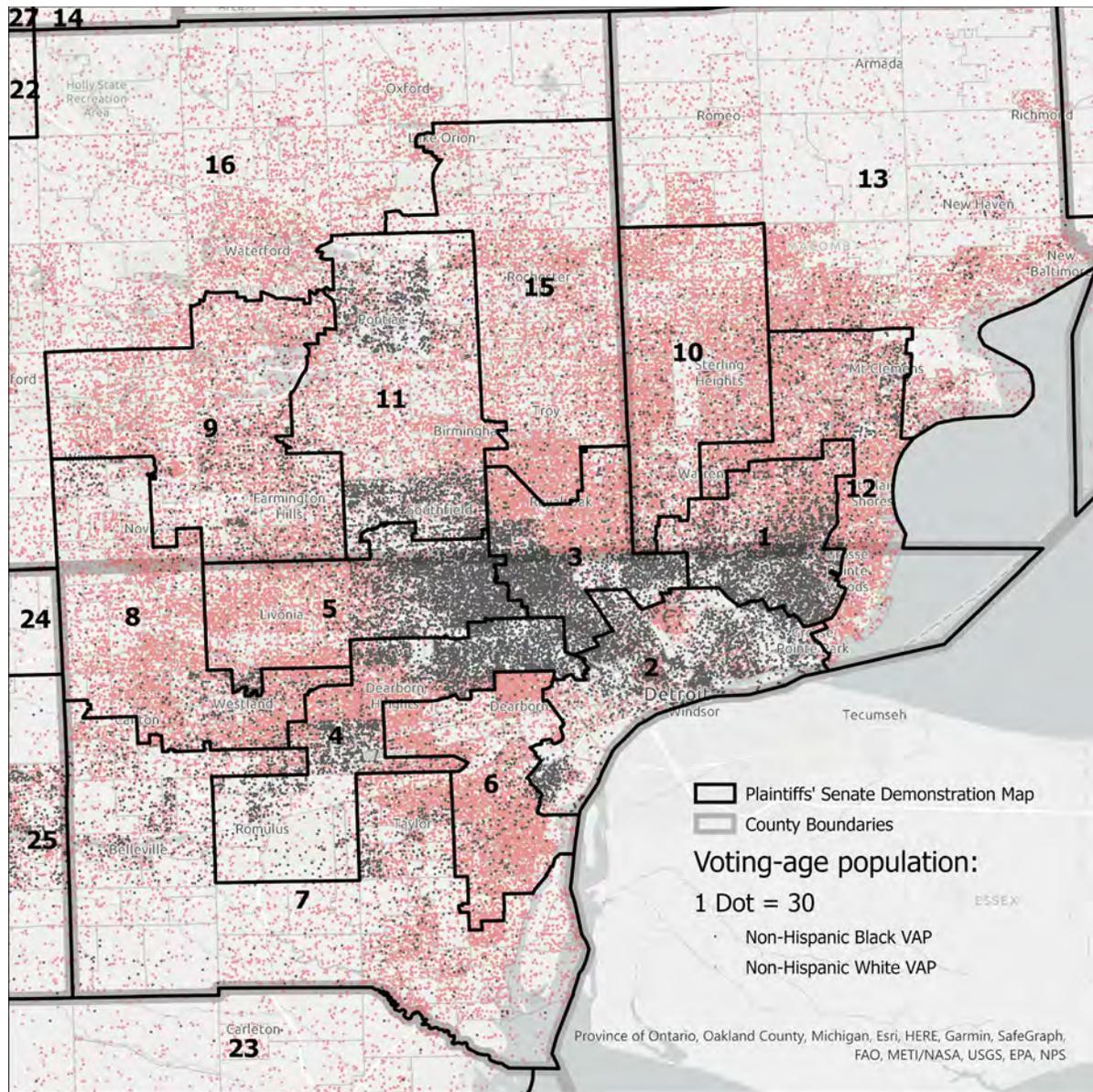


Figure 11c: Race and Boundaries of Senate Districts: Currently Enacted Map (Linden Plan)

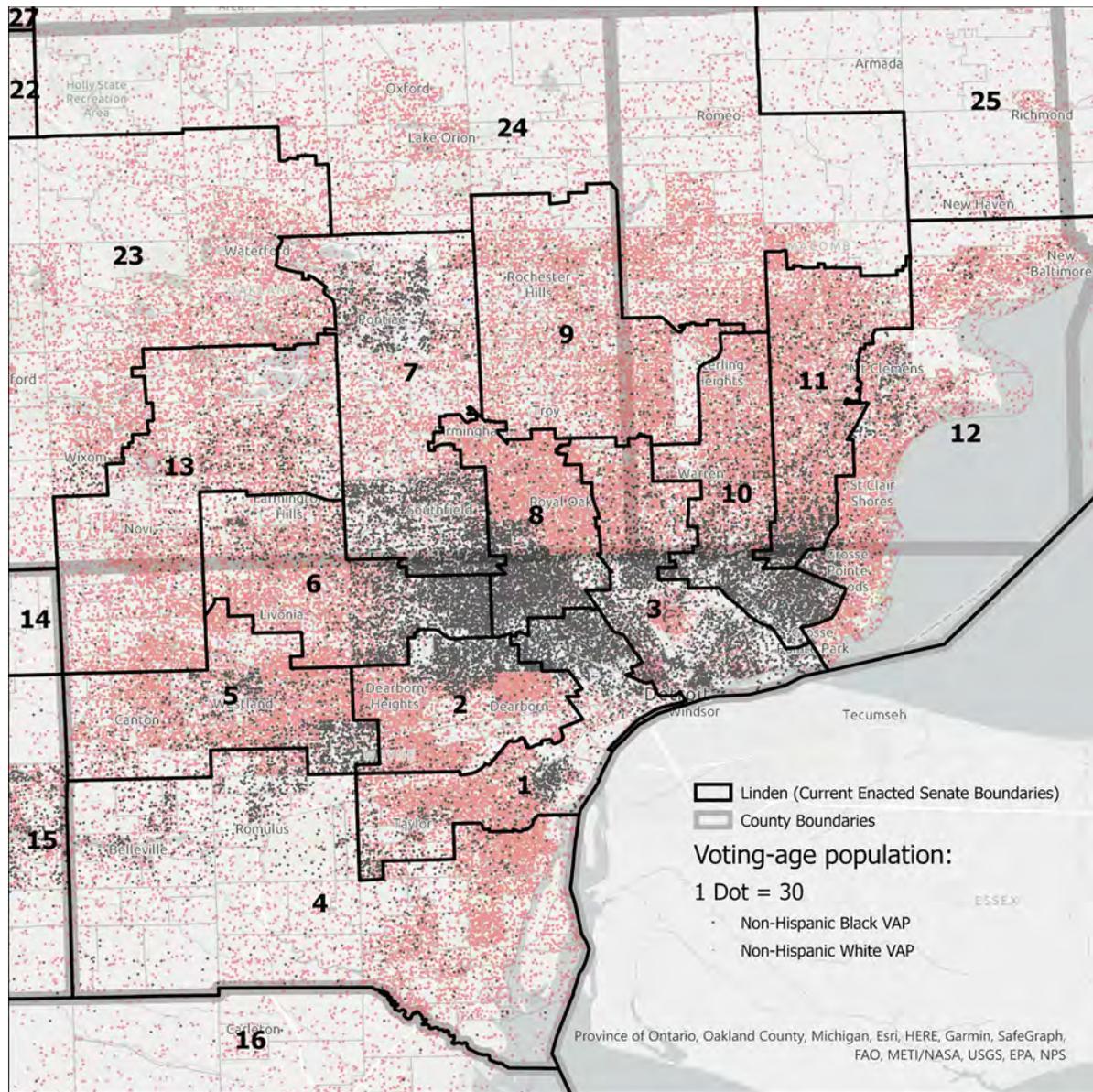
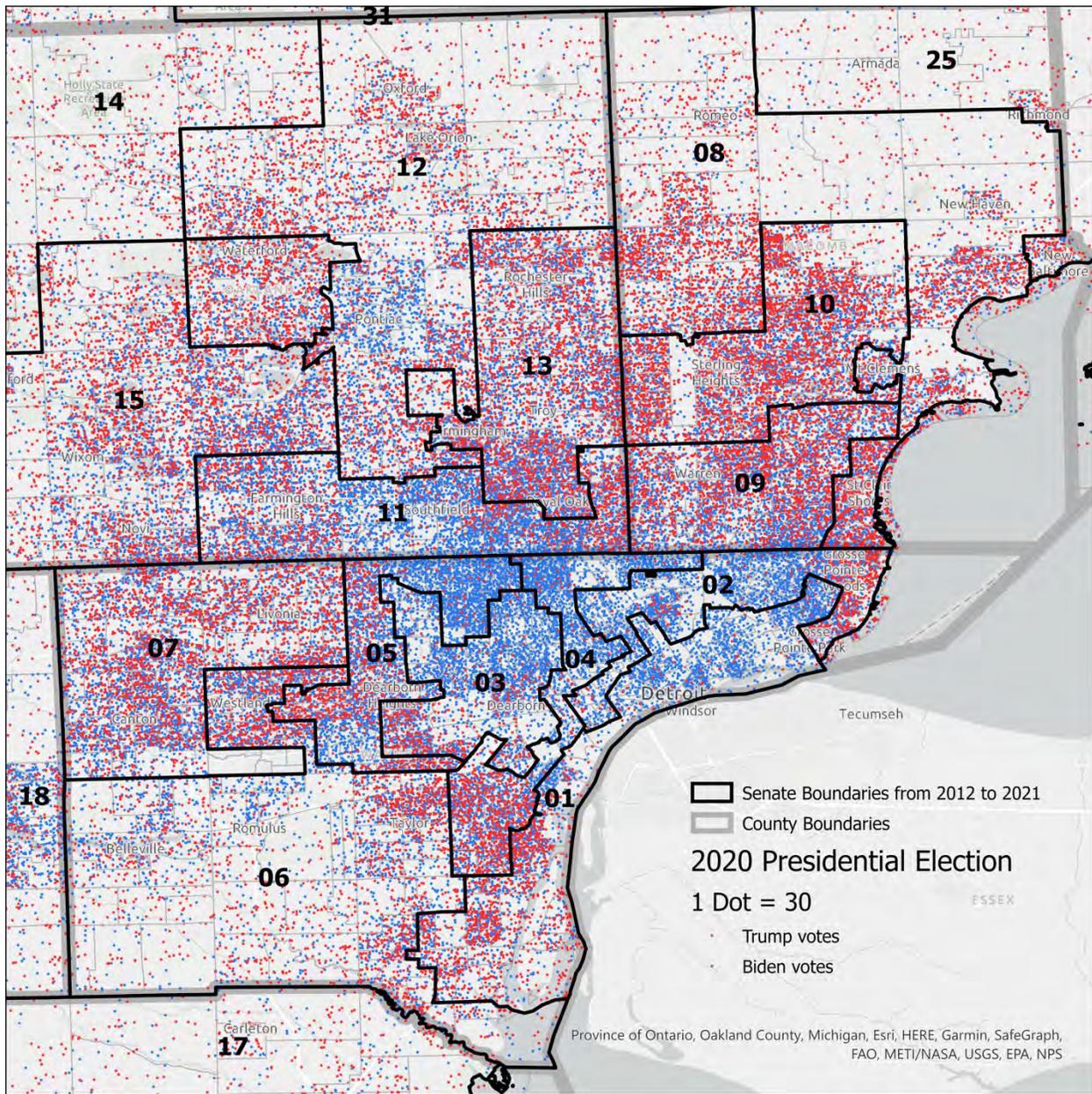


Figure 12a: Partisanship and Boundaries of Senate Districts: 2011 Plan



**Figure 12b: Partisanship and Boundaries of Senate Districts:
Plaintiffs' Demonstration Map**

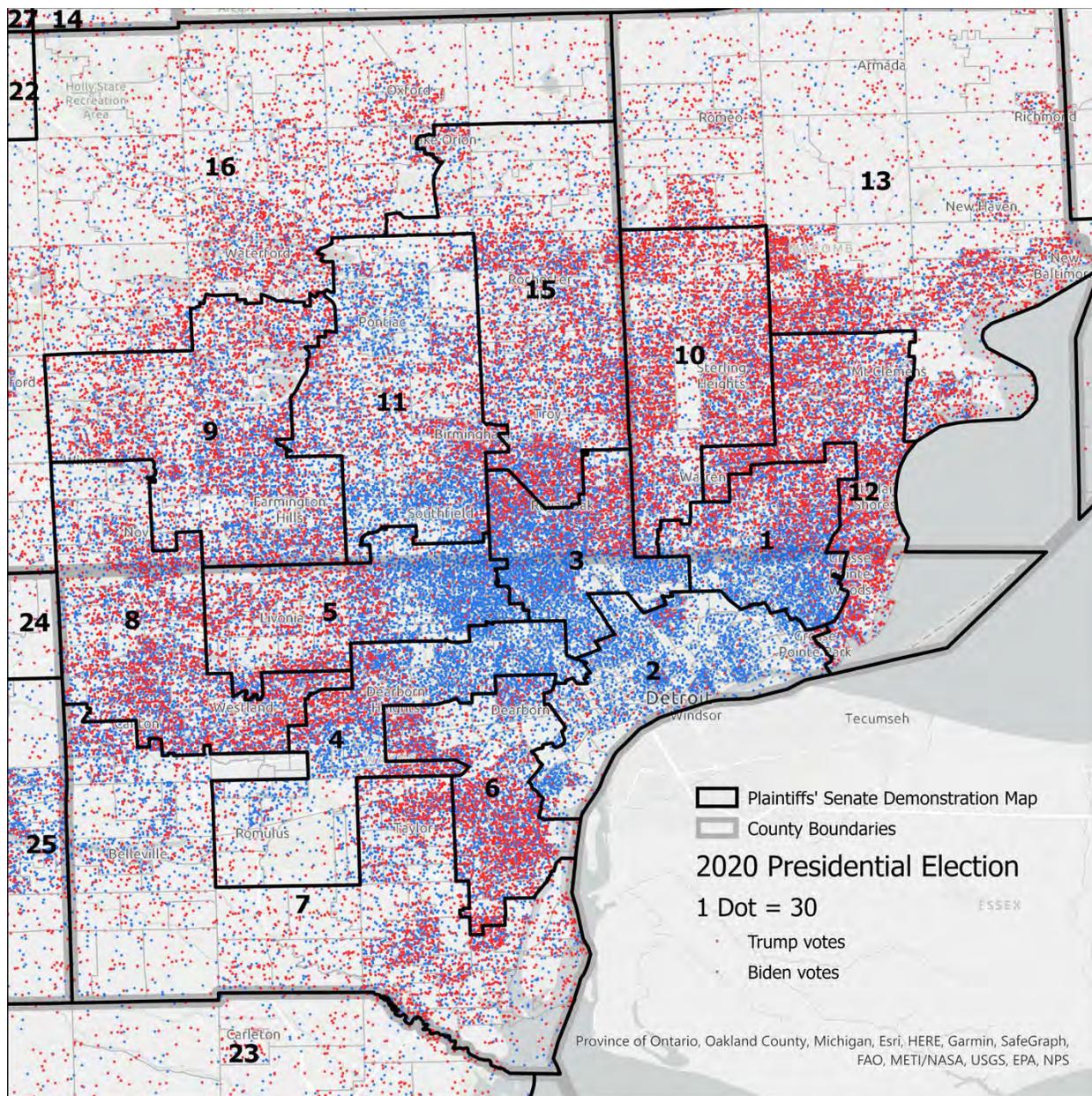
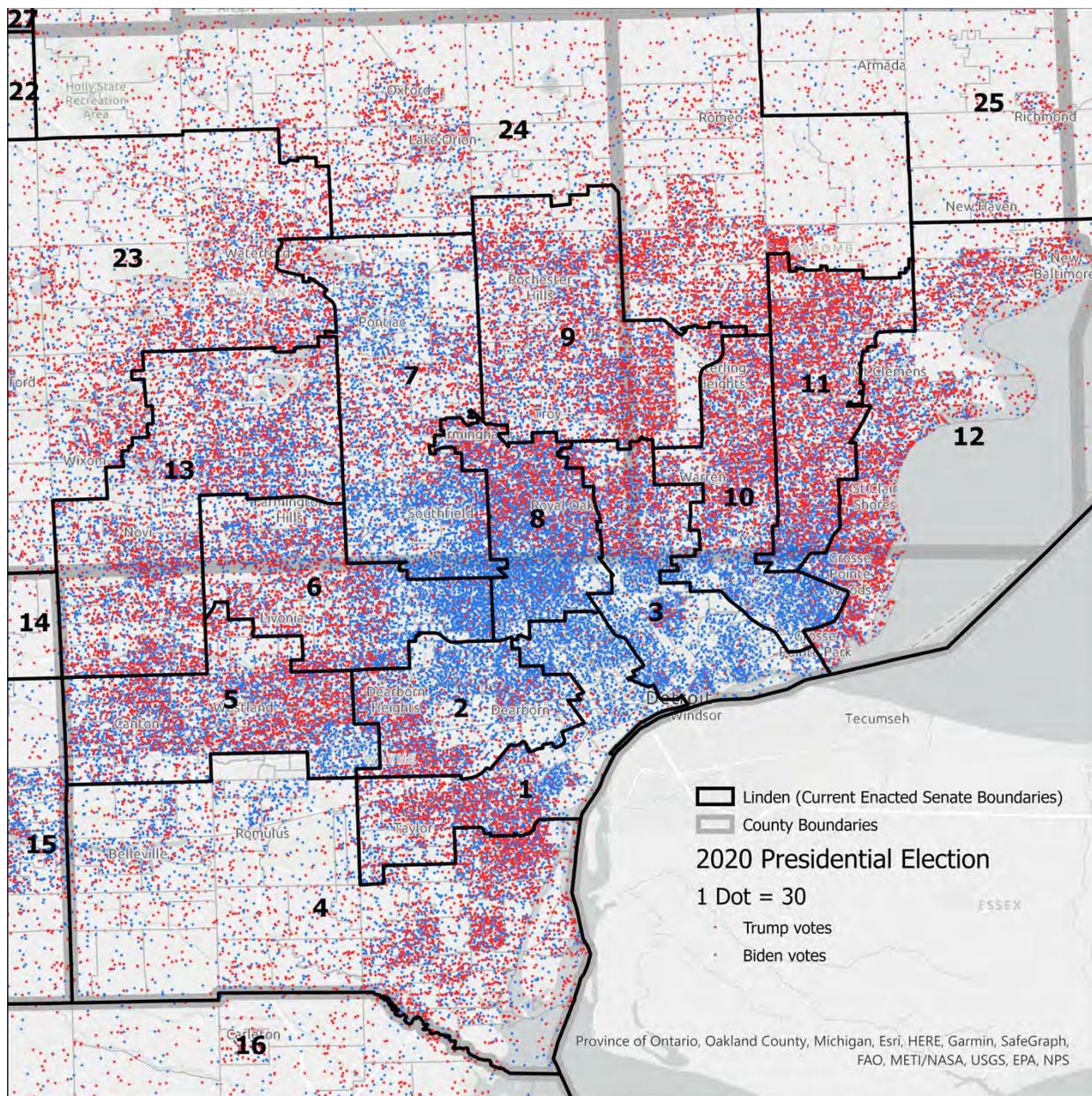


Figure 12c: Partisanship and Boundaries of Senate Districts: Currently Enacted Map (Linden Plan)



VI. COMPACTNESS

Mr. Trende’s overall argument about compactness and racial predominance is somewhat difficult to discern. On page 49, he seems to argue that the Hickory Plan compares unfavorably to the 2011 House of Representatives Plan because the districts of the latter were more compact in the Detroit area. He seems to suggest that *non-compact* urban districts are a fingerprint of racial predominance.

However, he goes on to point out on page 106 that the districts in the 2011 Senate plan were *less* compact than those of the Linden Senate plan. Here, without mobilizing any evidence, and in spite of the stated partisan goals of the architects of the 2011 Plan, he surmises that the non-compact districts in the 2011 Plan “likely reflect a desire to comply with the VRA”,⁷ and that “the more compact districts under the Linden Plan reflect a lack of concern with this.” The argument appears to have shifted 180 degrees. Now, the claim seems to be that *compact* districts should arouse suspicion.

Mr. Trende does not explain 1) why the reader should make conclusions about racial predominance by comparing compactness scores exclusively to a prior plan that was drawn with partisan intent, or 2) why the inferences drawn from such a comparison should be equal and opposite for the House of Representatives and the Senate.

Moreover, Mr. Trende ignores the fact that compactness is ranked below partisan fairness in the provisions of Article 4, Section 6(13) of the Michigan Constitution. Likewise, he fails to consider the fact that compact districts can help exacerbate partisan unfairness in Michigan. By drawing relatively compact House of Representatives districts, the architects of the 2011 Plan were able to facilitate a very pronounced pro-Republican bias.

Moving beyond Mr. Trende’s general discussion of compactness, he also makes a specific claim that compactness was “subordinated” to race in the Commission’s plans. The evidence for this is a series of regressions in which Mr. Trende demonstrates a negative and statistically significant relationship between the Black voting-age population share of a district and the district’s compactness score in the Hickory Plan for the House of Representatives. Curiously, he also demonstrates that there this relationship does *not* exist among the districts of the Linden Plan for Senate.

He does not explain why a negative relationship between district compactness and BVAP should be understood as evidence of racial predominance or anything else nefarious. In fact, in each of his House of Representatives regressions, he could have substituted the Democratic vote share for Black voting-age population share and gotten a similar result: as districts become more Democratic, they become less compact. Had he presented these regressions, Mr. Trende’s logic would lead to the conclusion that compactness was “subordinated” to partisanship rather than race. In short, it is not possible to draw any conclusions about the specific role of race in generating the correlations that Mr. Trende highlights in the Hickory Plan.

⁷ He also makes a curious suggestion on page 106 that the “benchmark” Senate plan should be seen as an attempt to produce “five Black VRA districts.” He does not explain how he determined this or how he defines a “Black VRA district.”

Once again, it is not clear what to make of Mr. Trende's comparison of the Commission's plans to the 2011 Plans. In Table 11, which estimates these regressions for the 2011 House plan, the coefficients are also negative, as with the Commission's House districts, but not quite statistically significant. In Table 26, where he displays the results of regressions for the 2011 Senate Plan, the negative coefficients are larger than those in the other tables, and consistently statistically significant, while this is not the case for the Linden Plan (Table 27), where there is no consistent relationship.

It is very difficult to extract any consistent story from this pattern of results. In most of his regressions, whether they examine the Commission's plans or the 2011 Plans, the coefficients are negative, but they are sometimes statistically significant and sometimes not, depending on the Plan in question or the measure used. This raises the possibility that there is simply something structural about the geography of Michigan whereby districts with larger Black voting-age population will tend to be less compact for reasons having nothing to do with racial or partisan motivations of the mapmakers.

To see whether this is the case, we can run Mr. Trende's regressions on the ensemble of 50,000 simulated plans that did not take party or race into account. If a significant relationship between compactness and BVAP can be found in the ensemble, it cannot possibly be interpreted as a fingerprint of racial predominance. I conduct this exercise by regressing the Polsby-Popper score of each simulated district on its BVAP. The regression includes fixed effects for each individual plan in the ensemble, meaning that the results are driven by variation across districts within each plan. When I run this regression for the ensemble of House plans, the coefficient for *Black Voting-Age Population* is -.06, and it is highly statistically significant, with a p-value less than .001. For the Senate, the coefficient is -.03, also with a p-value less than .001. These results indicate that there is something structural about Michigan's geography that produces a negative correlation between district BVAP and compactness.

In sum, Mr. Trende's analysis of compactness allows us to draw no inferences whatsoever about the role of race in redistricting.

VII. COUNTY SPLITS

Next, Mr. Trende observes that the Commission's plans included more county splits than the 2011 Plan. He does not explain why this is relevant for drawing inferences about racial predominance, or why the previous redistricting plan is a useful comparison. Recall the observation of one of that plan's architects, Mr. Timmer: "Relying on county and city or township geography, keeping those intact, helps Republicans." If Mr. Timmer's observation is correct, the Commission would have found it difficult to fulfill its Constitutional obligation to facilitate partisan fairness while strictly minimizing county splits. And it is important to note that Article 4, Section 6(13) of the Michigan

Constitution does not compel the Commissioners to strictly minimize county or municipal splits, and this criterion is placed near the bottom of the list, below the partisan fairness criterion.

It is possible to examine Mr. Timmer’s claim about the relationship between county splits and pro-Republican partisan bias more carefully by returning once again to the ensembles of alternative redistricting plans. As explained further below, the relevance of the ensembles is limited due to the fact that the entire ensemble is more biased in favor of Republicans than the Commission’s plans, but even so, it might be possible to learn something by observing variation across the 50,000 plans. One of Mr. Trende’s approaches to generating ensembles was to avoid constraining the algorithm to prioritize the minimization of county splits. Using this computer code, I generated 50,000 House of Representatives plans in which the number of county splits ranges from 62 to 76. For each level of county splits, I calculate averages for the three metrics of partisan fairness. I plot these averages (on the vertical axis) against the number of county splits (on the horizontal axis) in Figure 13.

Figure 13: Using Computer-Generated Redistricting Ensembles to Illuminate the Trade-off Between County Splits and Partisan Fairness Metrics

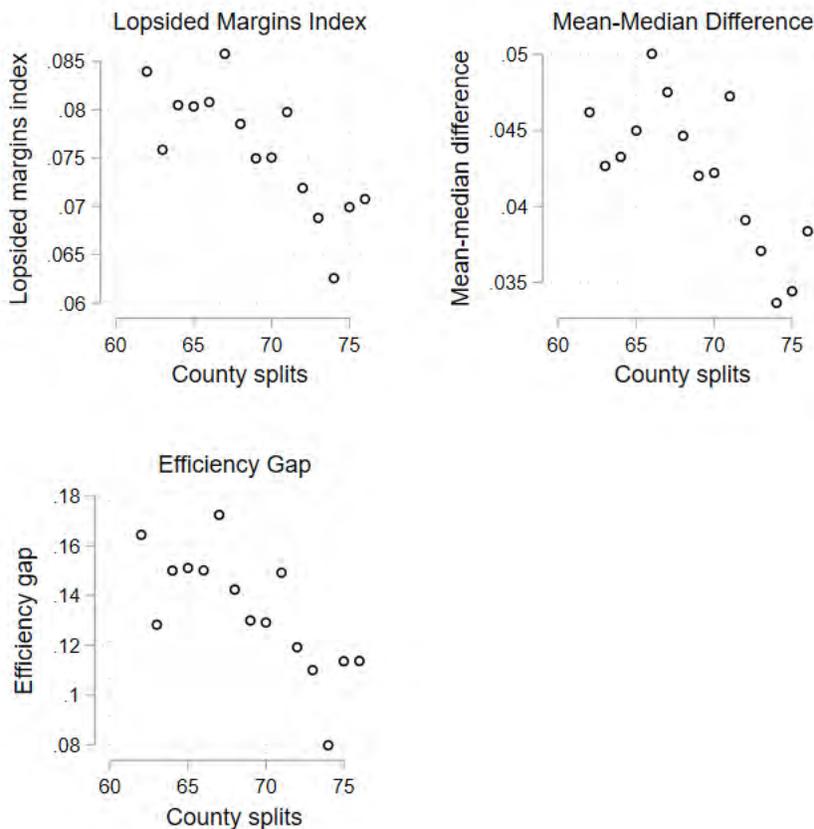


Figure 13 demonstrates that when drawing Michigan House Districts, even in an ensemble of randomly generated maps, there appears to be a trade-off between county splits and partisan fairness. As the number of county splits increases, the level of pro-Republican advantage decreases. Thus, as the Commission attempted to draw districts that adhered to the Constitution's partisan fairness standards, they likely found it difficult to simultaneously minimize county splits, and in any case, they were not required to strictly minimize those splits.

According to Mr. Trende, the number of county splits in the Hickory Plan was 60, which is fewer splits than the entire range of Mr. Trende's ensemble that did not attempt to minimize county splits. In Mr. Trende's Senate ensemble, the range of county splits was from 43 to 59, and Mr. Trende reports that the Linden plan produced 30 county splits. Thus, it appears that the Commission indeed attempted to limit its county splits while pursuing its other Constitutional requirements, even if the Commissioners did not end up in the range of the absolute minimum number of splits that could be located by a computer algorithm.⁸

In sum, as with measures of compactness, there is nothing about the number of county splits that would indicate that the Commission was focusing on race when drawing its districts.

VIII. COMPARISON OF ENACTED PLAN TO ENSEMBLE

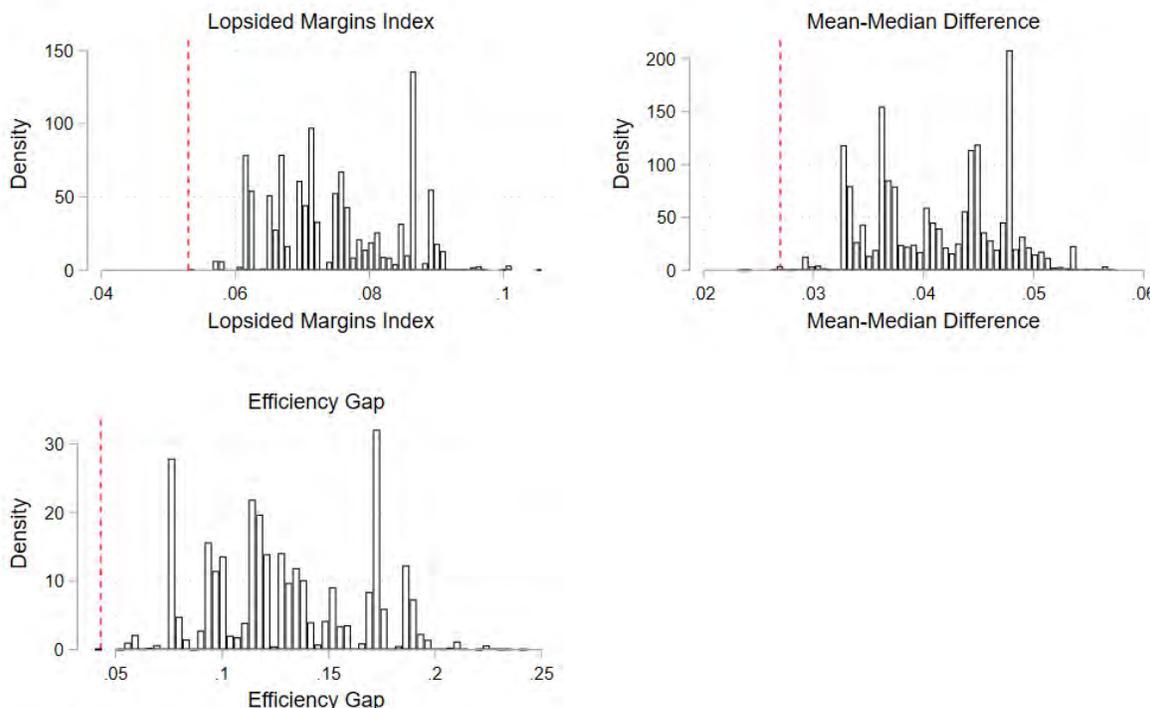
Finally, Mr. Trende contrasts the distribution of Black voting-age population across districts in the Hickory and Linden plans with the distribution of Black voting-age population in his ensembles of computer-drawn plans. As described above, his ensembles were produced by a computer algorithm that pays no attention to racial or partisan data. It simply tries to draw compact, contiguous districts. It is important to note that other than trying to abide by the traditional redistricting criteria of compactness and contiguity, and for some simulations, the preservation of county boundaries, the algorithm pays no attention to the requirements of the Michigan constitution. Above all, it ignores the requirement to abide by the Voting Rights Act, and crucially, it ignores the partisan fairness requirement.

Mr. Trende borrows his application of redistricting ensembles from a body of work that uses such ensembles to evaluate whether partisan features of the enacted plan are outliers when contrasted with the distribution of plans in the non-partisan computer-drawn ensemble. However, he misses a crucial step in this type of analysis. To serve as a useful benchmark, the ensemble must produce plans that abide by the *same rules* that had to be followed by those drawing the districts.

⁸ Mr. Trende also produced an ensemble based on an algorithm that is trained to strictly minimize county splits. The range of county splits produced in that ensemble is from 30 to 45.

Nowhere in Mr. Trende’s report or in his computer code does he calculate the partisan index used by the Commission or any measures of partisan fairness, either for the 2011 districts, for his own proposed districts, the Commission’s districts, or the redistricting ensembles. As described above, this algorithm produces plans that have much higher pro-Republican partisan fairness scores than the plans produced by the Commission.

Figure 14: Histograms of Partisan Fairness Scores for Ensemble of 50,000 Alternative Michigan House Redistricting Plans



Red line = Enacted Hickory Plan

Figure 14 demonstrates the extent of this problem. It presents histograms of the distributions of the partisan fairness scores of each of the 50,000 alternative plans in the ensemble and indicates with a red line the score of the Hickory Plan. In each case, virtually the entire distribution of plans in the ensemble exhibits a higher level of pro-Republican bias than the Hickory Plan.

As explained above, in order to reduce measures of pro-Republican bias relative to the simulated plans, it was necessary for the Commission to reduce the Democratic vote shares of the districts of the urban core of Detroit, and in practice, this also involved reducing the Black voting-age population shares of those districts relative to the districts produced by the simulations.

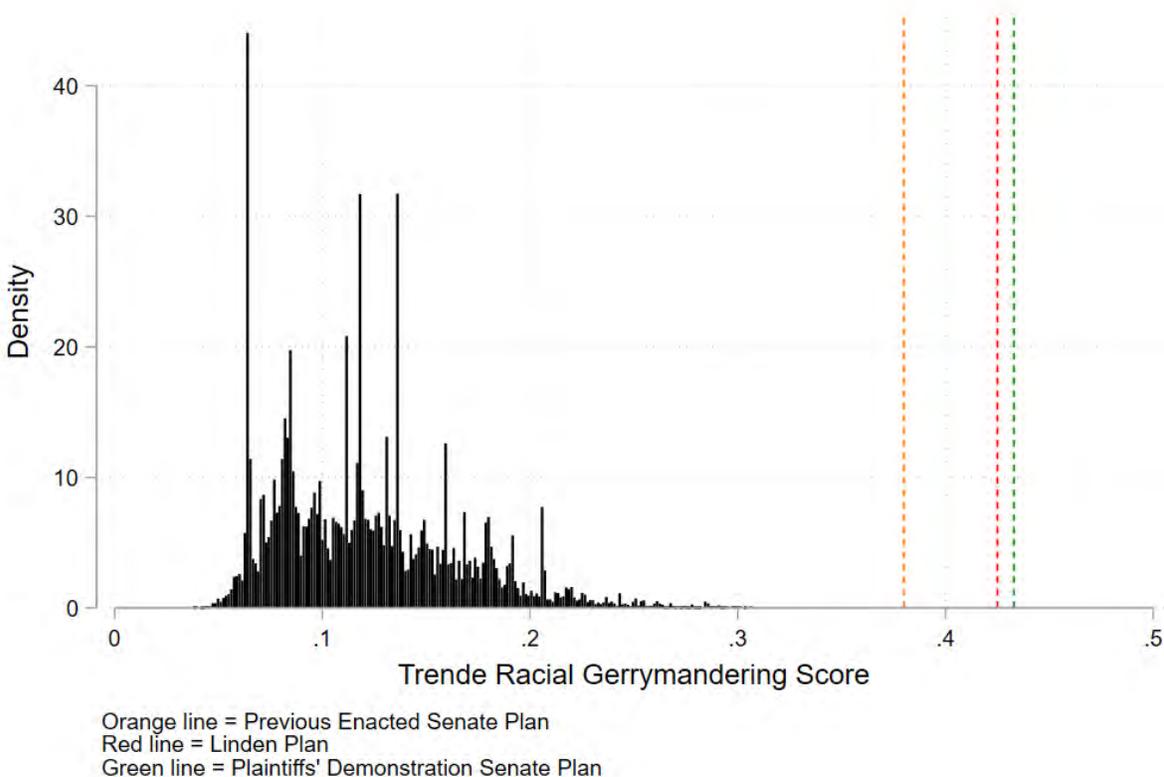
As a result, there is nothing surprising or nefarious about the fact that the distribution of Black voting-age population across districts is different in the Commission’s plans than in the

simulations. Mr. Trende’s measure of “racial gerrymandering” ranks the districts by race, and at each rank, calculates the deviation of the BVAP share of the enacted plan from the average of the simulated plans. If the distribution of BVAP shares do not track Mr. Trende’s party- and race-blind benchmark that ignores the Michigan Constitution, he classifies it as a racial gerrymander.

With this approach, a redistricting plan that deviates from the race-blind benchmark in an effort abide by the Voting Rights Act would be classified as a racial gerrymander, as would a plan that deviates in order to pursue a goal of partisan fairness or any other goal. In other words, it is not a measure of racial predominance at all.

In fact, by Mr. Trende’s standard, *all* the Senate plans considered in his report—the previous decade’s plan, the Linden plan, and especially his own proposed Senate plan—are racial gerrymanders. He creates an index, which is the square root of the sum of the squared deviations from the mean BVAP at each BVAP rank. He then presents histograms for the “gerrymandering scores” of the simulations, like those using partisan fairness scores in Figure 14 above. He demonstrates that the score of the Linden plan is outside the range of the simulations.

Figure 15: Distribution of “Racial Gerrymandering Scores” for Redistricting Ensembles, Linden Plan, Previous Plan, and Plaintiffs’ Demonstration Plan



He does not conduct a similar analysis for the other plans considered in the report. I do so in Figure 15.⁹ According to Figure 15, the 2011 Senate plan (indicated in orange) also had a racial gerrymandering score that was well outside the range of the simulations. In other words, its distribution of BVAP shares across districts deviated from that of the average of the simulations, and the deviation was larger than that which occurred among the simulations in the ensemble. The same is true of the Linden Plan, and according to Mr. Trende’s standard, the most “racially gerrymandered” Senate plan considered in the report is Mr. Trende’s proposed plan.

Figure 16: Ensemble of Simulated Michigan Senate Districts by BVAP Share and BVAP Share of Previous Senate Districts and Plaintiffs’ Demonstration Districts

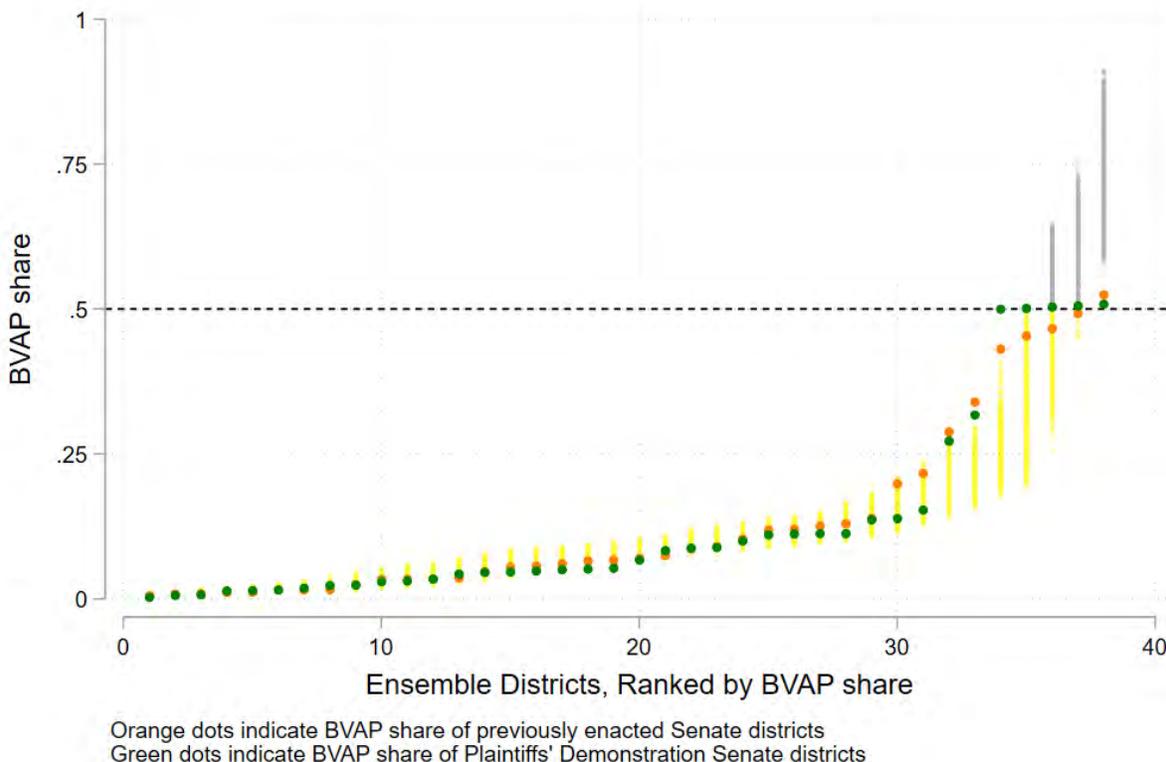


Figure 16 replicates a figure from Mr. Trende’s report, but focuses on the 2011 Senate districts and the Plaintiffs’ Demonstration districts rather than the Linden Plan. The horizontal axis is the rank of the district in terms of BVAP share. The vertical axis is the BVAP share of the districts in the ensemble (yellow markers for districts that do not have a BVAP majority, grey for those with a BVAP majority), and the alternative districts (orange for the previously enacted plan, and green for the Plaintiffs’ Demonstration districts).

⁹ In creating this ensemble, I use Mr. Trende’s computer code that attempts to reduce county splits. I do so because the number of county splits produced with the unconstrained approach to Senate districts is far beyond that produced in any of the hand-drawn plans, so it appears to be far less relevant as a benchmark. In any case, a graph produced with that approach is very similar to Figure 10.

Figure 16 allows us to comprehend why these plans deviate from the simulations. In the two districts with the largest Black population, these districts have much lower BVAP shares than the simulations. In districts ranked 30 to 35 (out of 38), the previous plan placed Black voters into districts with *higher* BVAP than the simulations. This is also true of the districts ranked from 32 to 35 in Mr. Trende's proposed districts. We can also see that in districts from rank 11 to 23, the BVAP shares in both plans are on the low end of what was produced in the ensembles.

It is difficult to draw conclusions about motivations or considerations of map-drawers from these plots. For the 2011 Plan, a likely explanation is the one provided by Mr. Timmer: districts were drawn to pack urban voters into extremely Democratic districts, providing Republican candidates with an advantage in more competitive districts. As for Mr. Trende's plan, the motivations are simply not clear.

The same considerations, of course, undermine any attempt to divine racial intent from deviations of BVAP shares in the Hickory or Linden plans from the averages of the ensembles. As explained above, the deviations in the Commission's plans were necessary for the constitutional imperative to improve partisan fairness.

IX: CONCLUSIONS

As in many other U.S. states, due to their clustering in urban areas, Democrats in Michigan are more geographically concentrated than Republicans. In Michigan, Black voters in cities vote overwhelmingly for Democratic candidates. When districts are drawn by a non-partisan computer algorithm focusing on compactness, contiguity, and respect for county boundaries, the districts will provide an advantage in the transformation of votes to seats for Republican candidates. Among other goals, the Michigan Independent Redistricting Commission was tasked with drawing districts that would facilitate partisan fairness. It would have been difficult for the Commission to maximize the compactness of districts or minimize county splits while also pursuing that goal. And if the Commission was to pursue the goal of partisan fairness, it would not replicate the distribution of Black voters across districts that would be produced by an algorithm that ignores party and race.

It is not surprising, then, that the Commission's districts were less compact, or split a greater number of counties, than the previously enacted plan, which achieved a very high level of pro-Republican bias. It is also not at all surprising that the Commission's plan did not replicate the distribution of Black voters across districts that was produced by the algorithm that ignored party, race, and the requirements of the Michigan constitution. In fact, the previously enacted plan and Mr. Trende's proposed plan also did not replicate that distribution.

In sum, Mr. Trende's observations about the Commission's redistricting plans provide some indications that the Commission attempted to abide by the Constitution's partisan fairness requirements, but no indications whatsoever that race was the predominant factor in drawing districts for the state legislature.

APPENDIX A

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Education

Ph.D. Political Science, Yale University, 2000.

Fulbright Scholar, University of Leipzig, Germany, 1993–1994.

B.A., Political Science, University of Michigan, 1993.

Academic Positions

Professor, Department of Political Science, Stanford University, 2012–present.

Senior Fellow, Stanford Institute for Economic Policy Research, 2020–present.

Senior Fellow, Hoover Institution, Stanford University, 2012–present.

Director, Spatial Social Science Lab, Stanford University, 2012–present.

W. Glenn Campbell and Rita Ricardo-Campbell National Fellow, Hoover Institution, Stanford University, 2010–2012.

Associate Professor, Department of Political Science, Stanford University, 2007–2012.

Fellow, Center for Advanced Study in the Behavioral Sciences, Palo Alto, CA, 2006–2007.

Ford Career Development Associate Professor of Political Science, MIT, 2003–2006.

Visiting Scholar, Center for Basic Research in the Social Sciences, Harvard University, 2004.

Assistant Professor of Political Science, MIT, 1999–2003.

Instructor, Department of Political Science and School of Management, Yale University, 1997–1999.

Publications

Books

Why Cities Lose: The Deep Roots of the Urban-Rural Divide. Basic Books, 2019.

Decentralized Governance and Accountability: Academic Research and the Future of Donor Programming. Co-edited with Erik Wibbels, Cambridge University Press, 2019.

Hamilton's Paradox: The Promise and Peril of Fiscal Federalism, Cambridge University Press, 2006. Winner, Gregory Luebbert Award for Best Book in Comparative Politics, 2007; Martha Derthick Award for lasting contribution to the study of federalism, 2021.

Fiscal Decentralization and the Challenge of Hard Budget Constraints, MIT Press, 2003. Co-edited with Gunnar Eskeland and Jennie Litvack.

Peer Reviewed Journal Articles

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Homicide Deaths Among Adult Cohabitants of Handgun Owners in California, 2004 to 2016: A Cohort Study, *Annals of Internal Medicine* forthcoming 2022 (with David M. Studdert, Yifan Zhang, Erin E. Holsinger, Lea Prince, Alexander F. Holsinger, Garen J. Wintemute, and Matthew Miller).

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Assembly of the LongSHOT Cohort: Public Record Linkage on a Grand Scale, 2019, *Injury Prevention* (with Yifan Zhang, Erin Holsinger, Lea Prince, Sonja Swanson, Matthew Miller, Garen Wintemute, and David Studdert).

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The Achilles Heel of Plurality Systems: Geography and Representation in Multi-Party Democracies, 2015, *American Journal of Political Science* 59,4: 789-805 (with Ernesto Calvo). Winner, Michael Wallerstein Award for best paper in political economy, American Political Science Association.

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Economic Geography and Economic Voting: Evidence from the U.S. States, 2006, *British Journal of Political Science* 36, 3: 527-47 (with Michael Ebeid).

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Working Papers

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Federalism and Inter-regional Redistribution, Working Paper 2009/3, Institut d'Economia de Barcelona.

Representation and Regional Redistribution in Federations, Working Paper 2010/16, Institut d'Economia de Barcelona (with Tiberiu Dragu).

Changing the Default: The Impact of Motor-Voter Reform in Colorado (with Justin Grimmer), 2022.

Chapters in Books

Political Geography and Representation: A Case Study of Districting in Pennsylvania (with Thomas Weighill), in *Political Geometry*, edited by Moon Duchin and Olivia Walch, 2022, Springer.

Keeping Your Enemies Close: Electoral Rules and Partisan Polarization, in *The New Politics of Insecurity*, edited by Frances Rosenbluth and Margaret Weir, 2022, Cambridge University Press.

Decentralized Rule and Revenue, 2019, in Jonathan Rodden and Erik Wibbels, eds., *Decentralized Governance and Accountability*, Cambridge University Press.

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Lessons and Conclusions (Chapter 13), 2003, in Rodden, et al., *Fiscal Decentralization and the Challenge of Hard Budget Constraints* (see above).

Online Interactive Visualization

Stanford Election Atlas, 2012 (collaboration with Stephen Ansolabehere at Harvard and Jim Herries at ESRI)

Other Publications

Supporting Advanced Manufacturing in Alabama, Report to the Alabama Innovation Commission, Hoover Institution, 2021.

How America's Urban-Rural Divide has Shaped the Pandemic, 2020, *Foreign Affairs*, April 20, 2020.

An Evolutionary Path for the European Monetary Fund? A Comparative Perspective, 2017, Briefing paper for the Economic and Financial Affairs Committee of the European Parliament.

Amicus Brief in *Rucho et al. v. Common Cause*, 2019, Supreme Court of the United States, with Wesley Pegden and Samuel Wang.

Amicus Brief in *Gill et al. v. Whitford et al.*, 2017, Supreme Court of the United States, with Jowei Chen and Wesley Pegden.

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Decentralization and the Challenge of Hard Budget Constraints, *PREM Note 41*, Poverty Reduction and Economic Management Unit, World Bank, Washington, D.C. (July).

Decentralization and Hard Budget Constraints, *APSA-CP* (Newsletter of the Organized Section in Comparative Politics, American Political Science Association) 11:1 (with Jennie Litvack).

Book Review of *The Government of Money* by Peter Johnson, *Comparative Political Studies* 32,7: 897-900.

Fellowships, Honors, and Grants

John Simon Guggenheim Memorial Foundation Fellowship, 2021.

Martha Derthick Award of the American Political Science Association for "the best book published at least ten years ago that has made a lasting contribution to the study of federalism and intergovernmental relations," 2021.

National Institutes of Health, funding for "Relationship between lawful handgun ownership and risk of homicide victimization in the home," 2021.

National Collaborative on Gun Violence Research, funding for "Cohort Study Of Firearm-Related Mortality Among Cohabitants Of Handgun Owners." 2020.

Fund for a Safer Future, Longitudinal Study of Handgun Ownership and Transfer (LongSHOT), GA004696, 2017-2018.

Stanford Institute for Innovation in Developing Economies, Innovation and Entrepreneurship research grant, 2015.

Michael Wallerstein Award for best paper in political economy, American Political Science Association, 2016.

Common Cause Gerrymandering Standard Writing Competition, 2015.

General support grant from the Hewlett Foundation for Spatial Social Science Lab, 2014.

Fellow, Institute for Research in the Social Sciences, Stanford University, 2012.

Sloan Foundation, grant for assembly of geo-referenced precinct-level electoral data set (with Stephen Ansolabehere and James Snyder), 2009-2011.

Hoagland Award Fund for Innovations in Undergraduate Teaching, Stanford University, 2009.

W. Glenn Campbell and Rita Ricardo-Campbell National Fellow, Hoover Institution, Stanford University, beginning Fall 2010.

Research Grant on Fiscal Federalism, Institut d'Economia de Barcelona, 2009.

Fellow, Institute for Research in the Social Sciences, Stanford University, 2008.

United Postal Service Foundation grant for study of the spatial distribution of income in cities, 2008.

Gregory Luebbert Award for Best Book in Comparative Politics, 2007.

Fellow, Center for Advanced Study in the Behavioral Sciences, 2006-2007.

National Science Foundation grant for assembly of cross-national provincial-level dataset on elections, public finance, and government composition, 2003-2004 (with Erik Wibbels).

MIT Dean's Fund and School of Humanities, Arts, and Social Sciences Research Funds.

Funding from DAAD (German Academic Exchange Service), MIT, and Harvard EU Center to organize the conference, "European Fiscal Federalism in Comparative Perspective," held at Harvard University, November 4, 2000.

Canadian Studies Fellowship (Canadian Federal Government), 1996-1997.

Prize Teaching Fellowship, Yale University, 1998-1999.

Fulbright Grant, University of Leipzig, Germany, 1993-1994.

Michigan Association of Governing Boards Award, one of two top graduating students at the University of Michigan, 1993.

W. J. Bryan Prize, top graduating senior in political science department at the University of Michigan, 1993.

Other Professional Activities

Selection committee, best paper award, American Journal of Political Science.

International Advisory Committee, Center for Metropolitan Studies, Sao Paulo, Brazil, 2006–2010.

Selection committee, Mancur Olson Prize awarded by the American Political Science Association Political Economy Section for the best dissertation in the field of political economy.

Selection committee, Gregory Luebbert Best Book Award.

Selection committee, William Anderson Prize, awarded by the American Political Science Association for the best dissertation in the field of federalism and intergovernmental relations.

Courses

Undergraduate

Politics, Economics, and Democracy

Introduction to Comparative Politics

Introduction to Political Science

Political Science Scope and Methods

Institutional Economics

Spatial Approaches to Social Science

Graduate

Political Economy

Political Economy of Institutions

Federalism and Fiscal Decentralization

Politics and Geography

Consulting

2017. Economic and Financial Affairs Committee of the European Parliament.

2016. Briefing paper for the World Bank on fiscal federalism in Brazil.

2013-2018: Principal Investigator, SMS for Better Governance (a collaborative project involving USAID, Social Impact, and UNICEF in Arua, Uganda).

2022. Expert witness in *Rivera v. Schwab* No. 2022-cv-89 (Kan. Dist. Ct. 2022)

2022. Drew Pennsylvania Congressional redistricting plan that was chosen by the Pennsylvania Supreme Court for implementation in *Carter v. Chapman* No. 7 MM 2022, 2022WL 549106 (Pennsylvania Supreme Court).

2022. Written expert testimony in *Benninghoff v. 2021 Legislative Reapportionment Commission* (Pennsylvania Supreme Court).

2022 Expert witness in *Bennett v. Ohio Redistricting Commission*, No. 2012-1198 (Ohio Supreme Court).

2022 Expert witness in *Adams v. DeWine* No. 2012-1428 (Ohio Supreme Court).

2022 Expert witness in *Neiman v. LaRose* No. 2022-0298 (Ohio Supreme Court)

2019: Written expert testimony in *McLemore, Holmes, Robinson, and Woullard v. Hosemann*, United States District Court, Mississippi.

2019: Expert witness in *Nancy Corola Jacobson v. Detzner*, United States District Court, Florida.

2018: Written expert testimony in *League of Women Voters of Florida v. Detzner* No. 4:18-cv-002510, United States District Court, Florida.

2018: Written expert testimony in *College Democrats of the University of Michigan, et al. v. Johnson, et al.*, United States District Court for the Eastern District of Michigan.

2017: Expert witness in *Bethune-Hill v. Virginia Board of Elections*, No. 3:14-CV-00852, United States District Court for the Eastern District of Virginia.

2017: Expert witness in *Arizona Democratic Party, et al. v. Reagan, et al.*, No. 2:16-CV-01065, United States District Court for Arizona.

2016: Expert witness in *Lee v. Virginia Board of Elections*, 3:15-cv-357, United States District Court for the Eastern District of Virginia, Richmond Division.

2016: Expert witness in *Missouri NAACP v. Ferguson-Florissant School District*, United States District Court for the Eastern District of Missouri, Eastern Division.

2014-2015: Written expert testimony in *League of Women Voters of Florida et al. v. Detzner, et al.*, 2012-CA-002842 in Florida Circuit Court, Leon County (Florida Senate redistricting case).

2013-2014: Expert witness in *Romo v Detzner*, 2012-CA-000412 in Florida Circuit Court, Leon County (Florida Congressional redistricting case).

2011-2014: Consultation with investment groups and hedge funds on European debt crisis.

2011-2014: Lead Outcome Expert, Democracy and Governance, USAID and Social Impact.

2010: USAID, Review of USAID analysis of decentralization in Africa.

2006–2009: World Bank, Independent Evaluations Group. Undertook evaluations of World Bank decentralization and safety net programs.

2008–2011: International Monetary Fund Institute. Designed and taught course on fiscal federalism.

1998–2003: World Bank, Poverty Reduction and Economic Management Unit. Consultant for *World Development Report*, lecturer for training courses, participant in working group for assembly of decentralization data, director of multi-country study of fiscal discipline in decentralized countries, collaborator on review of subnational adjustment lending.

Last updated: February 8, 2023

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR. et al.,

Plaintiffs,

v.

JOCELYN BENSON, et al.,

Defendants.

Case No. 1:22-CV-00272-PLM-RMK-JTN

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**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

**PLAINTIFFS' EXPERT REPORT DISCLOSURE PURSUANT TO FED. R. CIV. P.
26(a)(2)(B)**

TO: ALL PARTIES NAMED AND TO THEIR ATTORNEYS OF RECORD

Plaintiffs, by and through their counsel, hereby submit the expert report of Dr. Brad Lockerbie in accordance with Federal Rule of Civil Procedure 26(a)(2)(B).

Respectfully submitted,

Dated: January 18, 2023

/s/ John J. Bursch

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Final Report

United States District Court of Western District Michigan Southern Division

Agee et al. v. Benson et al.

Case No. 1:22-cv-00272

Expert Report of Brad Lockerbie, Ph.D.

Professor of Political Science

East Carolina University

Greenville, NC

January 15, 2023

I. Purpose of Engagement

1. I have been asked by plaintiff's counsel to review and offer my opinions on material related to Case No. 1:22-cv-00272. With respect to the two (2) claims brought under Section 2 of the federal Voting Rights Act, I have been asked to analyze the factors discussed in the Senate Report that accompanied the 1982 Voting Rights Act Amendments, S. Rep. No. 97-417, at 28-29 (1982) and their applicability to this case. These factors are generally known as the "Senate Factors." The Senate Factors are part of the analysis relative to the totality of the circumstances as part of a Section 2 Voting Rights claim.
2. My focus is on Senate Factors. The material I review includes the report of Bruce L. Adelson, MICRC Voting Rights Act Legal Counsel, entitled "The History of Discrimination in the State of Michigan and its Influence on Voting," (hereafter Adelson Report) the report of Dr. Lisa Handley, entitled "Report to the Michigan Independent Citizens Redistricting Commission," (hereafter Handley Report) and the transcripts of the public meetings of the Michigan Independent Citizens Redistricting Commission and items referenced within these transcripts.
3. In my review, I have relied on the documents referenced above, the hyperlinks in these documents, and the documents I reference within my report. I also reviewed the Institute for Public Policy and Social Research's report, "Redistricting's effect on Black Representation in Michigan," by Angelina Benli and Lexie Milukhin from December 9, 2022.

4. After a review of these materials, based on my training as a political scientist and my experience as a political scientist (see Appendix for my CV), I conclude the following.
 - a. Michigan has a long history of official discrimination. The effect of that discrimination is still being felt today. This discrimination is both political and non-political.
 - b. There is a high degree of racial polarization in voting in Michigan. There is high racial polarization in Michigan's Wayne, Oakland, Genesee, and Saginaw counties.
 - c. Minority groups are considerably less educated and have fewer economic resources than whites in Michigan.

II. Qualifications

5. I am professor of political science at East Carolina University in Greenville, North Carolina. I have taught at East Carolina University since 2007. From 1988 to 2007, I was an assistant and associate professor of political science at the University of Georgia. I have served as a consultant for the Advanced Placement Program, an open-response question grader, and a table leader with supervisory responsibility for other graders. Also, I have served as a presenter at the Robert Taft seminars on American government. I have reviewed several American Government and statistics books for various university and commercial presses. I have served as a reviewer for both political science and economics grant applications for the National Science Foundation. I have also been a recipient of two grants from the National Science Foundation.

6. In 1988, I received my doctorate in political science from the University of Iowa, specializing in American electoral behavior. I received a Bachelor of Arts from the University of Georgia in 1984, majoring in political science.
7. I have published over 30 peer-reviewed articles on elections and public opinion in political science journals and interdisciplinary journals, including the *American Journal of Political Research*, *PS: Political Science and Politics*, and *Social Science Quarterly*. I authored *Do Voters Look to the Future? Economics and Elections* published by SUNY Press. I have published several book chapters, including two with Cambridge University Press. Several chapters look at race, among other variables related to voting behavior. My CV is attached. My publications within the last ten years are:
 - a. “Economic Pessimism and Political Punishment in 2020,” *PS: Political Science and Politics*, 54:67-69.
 - b. “Maybe it is More than a Joke: Satire, Mobilization, and Political Participation,” (with Jody C. Baumgartner), 2018, *Social Science Quarterly*, 99:1060-1074.
 - c. “The Economic Pessimism Model,” 2017, *PS: Political Science and Politics*. 50:335.
 - d. “Economic Pessimism and Political Punishment,” 2016, *PS: Political Science and Politics*. 49:673-676.
 - e. “Race and Religion: Voting Behavior and Political Attitudes,” 2013, *Social Science Quarterly*. 94:1145-1158.

- f. “Economic Expectations and Election Outcomes,” 2013, *PS: Political Science and Politics*. 46:42.
8. I served as a consultant who was deposed in *Nielsen v. DeSantis* (Case No. 4:20-cv-00236 N.D. FL.), *Donald J. Trump for President, Inc., et al., v. Kathy Boockvar et al.* (W.D. Pa.), *North Carolina Alliance for Retired Persons v. North Carolina State Board of Elections* (Wake Cty. Sup. Ct), and the state of Florida with regarding SB 90. I served as a testifying expert in *The Arkansas NAACP et al vs. The Arkansas Board of Apportionment et al* (Case No.: 4:21-cv-01239-LPR). I also served as a testifying witness in *Faith Rivera et al. vs. Scott Schwab and Michael Abbot* in the District Court of Wyandotte County (Case No.: 2022-CV-000089). I have served as either as witness at a trial and/or in a deposition in these cases in the last four years.
9. I am being paid \$600/hour for my time in this matter. My pay is not dependent on the content, the interpretation of the analysis performed, or the outcome of this proceeding.

III. History of Discrimination in Michigan and the four counties

10. Bruce L. Adelson, the MICRC Voting Rights Legal Counsel, has outlined many of the problems with the work of the Michigan Independent Citizens Redistricting Commission. As much of his report is contrary to the apparent interests of the Commission, I accept them as given. One should note that the Commission voted not to release the memo or the recording of the meeting where it was discussed.¹

¹ MICRC_009641.pdf, December 2, 2021, pages 71-74.

11. The testimony before the Michigan Independent Citizens Redistricting Commission over the several months of hearings also supports the argument that Michigan has a history of ongoing discrimination.
12. Adelson notes there were slaves in Michigan territory before the adoption of the US Constitution.
13. Slavery continued in Michigan until it was officially abolished upon statehood.
14. The initial state constitution prevented blacks from serving on juries and voting. Although the Michigan legislature banned *de jure* segregation after the Civil War, Detroit still maintained racially segregated schools.
15. During the 20th century, Detroit was a stronghold of the Klan. A race riot in 1943 on Belle Isle resulted in 34 deaths (25 blacks and nine whites), almost 700 people injured, and approximately 2 million dollars of property damage.
16. I assume these dollars are unadjusted for inflation. Using the US Inflation calculator, in 2022 dollars, this would be 34 million dollars of property damage.²
17. The “12th Street Riot” of 1967 was a confrontation between Black residents of Detroit and the police force. President Lyndon Johnson deployed federal troops in response. This riot resulted in 43 deaths, 467 injured, and over 2,000 buildings destroyed.
18. More recent manifestations of the concern over racial discrimination can be seen in the transcripts of the MICRC meetings.

² usinflationcalculator.com. 2022 is the latest year for which they provide the calculations. (accessed January 10, 2023)

19. Alicia Williams, the Jackson County NAACP president, notes she stands for an underrepresented community where civil rights are taken for granted.³
20. The president of a block club on Detroit's west side states that black people face political barriers, and these barriers continue today.⁴
21. Maya Jones, a resident of Battle Community, states that the committee needs to redress the inequities that create barriers to opportunities. Opportunities hindered by the historical legacy, such as patterns of racism.⁵
22. Sarah Howard, attorney for the Fair Maps Project of the AFL-CIO, expressed concern that the Commission was proposing maps that lead to a retrogression regarding minority representation in the legislature.⁶
23. Yvette McElroy, a lifelong resident of Detroit, stated that the maps which provide for 0 Senate districts with a minority population of 50% or more mean that communities of interest will not have the opportunity to elect candidates that look like them or share similar interests.⁷
24. The Reverend Steve Bland Junior, the Senior Pastor of Temple Baptist Church, similarly argued that districts needed 50% African American so that his voting block would have fair representation and a voice on the issues.⁸
25. Natalie, a native Detroiter, states that the maps submitted by the MICRC do not represent the best interests of African Americans. These maps, according to her, will make it difficult or impossible for African American candidates to

³ MICRC_002813.pdf, May 11, 2021, page 48.

⁴ MICRC_003361.pdf, June 15, 2021, page 24.

⁵ MICRC_003403.pdf, June 17, 2021, page 21.

⁶ MICRC_005635.pdf, September 9, 2021, page 5.

⁷ MICRC_007706.pdf, October 6, 2021, page 16.

⁸ MICRC_007706.pdf, October 6, 2021, page 18.

win elections. She also remarks on the work of Michigan State's Institute for Public Policy noting the breakup of geographically compact Black majorities so that there are no majority-black districts.⁹

26. Ray, a 32-year member of the UAW, states that the problems with the maps provided are at their worst in Detroit. Blacks are split up into multiple districts their voting influence is greatly diminished.¹⁰

27. Yvette Anderson states that the Commission needs to have maps that are 51% Black so that Black people can elect like themselves. Moreover, she argues that the current maps represent a return to the Jim Crow politics of the past.¹¹

28. Danielle Steven, retired public servant and member of the Detroit NAACP, states that the maps do not represent the best interests of black voters. Like an earlier commentator, she notes the Michigan State Institute for Public Policy highlighting the breaking apart of the geographically compact majority in Detroit.¹²

29. Ladie, a resident of Detroit and a community advocate, states that the Commission's path will lead to the disenfranchisement of communities of color.¹³

30. Joseph Person, Chair of the Oakland County Democratic Black Caucus, states that the maps proposed are a high-tech lynching.¹⁴

⁹ MICRC_008200.pdf, October 20, 2021, page 9.

¹⁰ MICRC_008200.pdf, October 20, 2021, page 13.

¹¹ MICRC_008200.pdf, October 20, 2021, page 16.

¹² MICRC_008200.pdf, October 20, 2021, page 29.

¹³ MICRC_008200.pdf, October 20, 2021, page 32.

¹⁴ MICRC_008200.pdf, October 20, 2021, page 39.

31. Jonathan, a Wayne County Commissioner, argues that with the maps submitted, you would have the lowest number of black elected officials in the state's history.¹⁵
32. The president of the Troy branch of the NAACP states these maps do provide for voting rights. They reduce the number of likely black elected officials.¹⁶
33. John Johnson, identified as the Executive Director of the Michigan Department of Civil Rights stated: "Simply put, the department believes the maps presented by this Commission violate Federal civil rights law. This Commission has historic opportunity and profound responsibility to redraw Michigan's boundaries so we preserve as the Voting Rights Act says you must in deciding who will represent their interest in both Lansing and Washington D.C. The maps this body approved fail that test. They dilute majority minority districts and strip the ability for minority voters to elect legislatures reflect their community and effect any meaningful opportunity to impact public policy and law making."¹⁷
34. Marietta, a resident of Detroit, states that the maps crack down on Detroit and make it impossible for African Americans to elect candidates that look like them.¹⁸
35. Jeffrey Robinson, a member of the executive committee of the Detroit chapter of the NAACP, argues that black voters in Detroit have been denied their full

¹⁵ MICRC_008200.pdf, October 20, 2021, page 54.

¹⁶ MICRC_008200.pdf, October 20, 2021, page 62.

¹⁷ MICRC_008200.pdf, October 20, 2021, page 65.

¹⁸ MICRC_008200.pdf, October 20, 2021, page 69.

voice in the state and national government He also urges the rejection of maps that diminish the likely number of elected black representatives.¹⁹

36. The State Representative for District 1 notes the racism he endured when out canvassing. He argued that the creation of minority districts was needed to comply with the Voting Rights Act.²⁰

37. Jackie, a resident of Detroit, states that the maps suppress and nullify the black vote. She further notes that there are no black districts in an overwhelmingly black city. She compares these maps to the Post-Reconstruction Jim Crow laws in the South.²¹

38. Joan Long, a League of Women Voters member, urged the Commission to rectify what she refers to as the violations of the Voting Rights Act.²²

39. Sarah Holmes urged the Commission to make racial gerrymandering a thing of the past. She notes that only three majority-white districts are represented by an African American.²³

40. Jerome Reed a legislative liaison with the Michigan Department of Civil Rights, is quoted as saying: “The Commission has a historic opportunity and a profound responsibility to redraw Michigan’s electoral boundaries so that we preserve, as the Voting Rights Act says you must, the ability of the minority to have a voice in their Government and deciding who will represent their interests from the local school board to the halls of Congress. The maps this

¹⁹ MICRC_008200.pdf, October 20, 2021, page 143-144.

²⁰ MICRC_008345.pdf, October 21, 2021, pages 18-19.

²¹ MICRC_008345.pdf, October 21, 2021, page 73.

²² MICRC_008429.pdf, October 22, 2021, page 11.

²³ MICRC_008550.pdf, October 25, 2021, page 67.

body approved on October 11 failed that test. They dilute minority majority districts and strip the ability for minority voters to elect legislative representatives who reflect their community and affect any meaningful opportunity to impact public policy and law making.”²⁴

41. Shaun Lee references the Michigan Executive Director John Johnson saying the proposed maps violate the Voting Rights Act.²⁵

42. Amanda Oster references the same point about the Department of Civil Rights.²⁶

43. Mark Payne, DFA coordinator for the Michigan League of Conservation Voters, references the Michigan Department of Civil Rights, stating that the maps dilute and strip the ability of minority voters to influence public policy.²⁷

44. Laida, a resident of Detroit, stated the Department of Civil Rights had informed the commission on December 9 that the proposed maps violated the Voting Rights Act.²⁸

45. The Reverend Wendell Anthony, president of the NAACP, stated that the proposed maps violate the Voting Rights Act.²⁹

46. In section IV, labeled **Voting in Michigan: VRA Section 5 Coverage and Language Barriers**, Adelson notes many instances of findings that Michigan’s voting process was discriminatory.

²⁴ MICRC_008625.pdf, October 26, 2021, pages 112-113.

²⁵ MICRC_009372.pdf, November 4, 2021, page 5.

²⁶ MICRC_009372.pdf, November 4, 2021, page 17.

²⁷ MICRC_009575.pdf, November 18, 2021, page 22.

²⁸ MICRC_009723.pdf, December 16, 2021, page 30.

²⁹ MICRC_009723.pdf, December 16, 2021, page 65.

47. In 1976, the US Attorney General and Census Director added Michigan to the list of states covered by Section 5 of the Voting Rights Act.³⁰
48. In 2007, the Department of Justice used Section 5 to stop the state from closing a branch of the Secretary of State's office.³¹
49. The Section 5 coverage of the Voting Rights Act applied to Buena Vista Township in Saginaw County because the county did not provide election materials in Spanish, as required.³²
50. The Institute for Public Policy and Social Research at Michigan State University reported on the proposed maps, as referenced by many participants in the Redistricting public hearings.³³
51. The authors of the report note that the Michigan Senate map splits Detroit into three districts with less than 45% African American population.³⁴
52. The authors also note that the Commission may improve its maps' legal standing by describing its approach to selecting communities of interest and compliance with the Voting Rights Act.³⁵
53. The *Bridge Michigan*, on August 3, 2022, published an article titled, "Losses by Black candidates revive fears about Michigan redistricting."³⁶

³⁰ Adelson, page 25.

³¹ Adelson, page 26.

³² Adelson, page 26.

³³ <https://ippsr.msu.edu/news/ippsr-analysis-evaluates-proposed-redistricting-maps> (accessed January 14, 2023).

³⁴ <https://ippsr.msu.edu/news/ippsr-analysis-evaluates-proposed-redistricting-maps> (accessed January 14, 2023).

³⁵ <https://ippsr.msu.edu/news/ippsr-analysis-evaluates-proposed-redistricting-maps> (accessed January 14, 2023).

³⁶ <https://www.bridgemi.com/michigan-government/losses-black-candidates-revive-fears-about-michigan-redistricting> (accessed January 14, 2023).

54. The report notes that in three metro Detroit seats, black candidates lost open primaries. According to the report, this reignited fears that the new districts would decrease black representation.
55. Democratic consultant Adrian Hemond is quoted in the report as saying, “it’s not been a great day for Black representation.”
56. Similarly, Detroit political consultant Adolph Mongo is quoted as saying, “Redistricting has really screwed things up.” “Those folks that are going to represent us don’t look like us.”
57. The *Bridge Michigan* Report quotes Keith Williams, chair of the Black Caucus of the Michigan Democratic party, as saying, “The redistricting committee won and Black folks lost.” “Psychologically, what it’s saying is that we don’t control our destiny anymore.”³⁷

IV. Economic Disparities

58. Adelson notes the high levels of segregation in Detroit regarding housing patterns. Realtors did not show houses in predominantly white neighborhoods to blacks.³⁸
59. Racially restrictive covenants, though legally unenforceable, remain in their deeds.³⁹
60. Adelson notes that unlawful foreclosures have arisen as a successor to relining.⁴⁰

³⁷ <https://www.bridgemi.com/michigan-government/losses-black-candidates-revive-fears-about-michigan-redistricting> (accessed January 11, 2022)

³⁸ Adelson, page 8.

³⁹ Adelson, page 14.

⁴⁰ Adelson, page 15.

61. Adelson argues that the effects of redlining remain today. This redlining has led to disparities in wealth between whites and blacks.⁴¹
62. According to Adelson, communities of color generally have longer wait times at the polls.⁴²
63. Adelson notes socio-economic disparities and voting. Blacks are much less likely to have a bachelor's degree than whites. Whites have 172% more bachelor's degrees than do blacks.⁴³
64. It is as close to a universally accepted finding in the study of American politics as we can note that education is positively related to voter turnout. The classic in the field is Wolfinger and Rosenstone's *Who Votes?* The findings of this work have been corroborated by years of work by other scholars.⁴⁴

V. Racial Polarization

65. The Handley Report covers much of the ground of racial polarization in Michigan and the geographic areas covered in this matter.
66. She states that the plaintiffs must satisfy three preconditions to qualify for relief. First, the minority group must be sufficiently large and geographically compact to form a majority in a single-member district. Second, the minority group must be politically cohesive. Last, whites must vote as bloc to usually defeat minority-preferred candidates.

⁴¹ Adelson, page 17.

⁴² Adelson, page 17.

⁴³ Adelson, page 23. Calculations my own

⁴⁴ Wolfinger, Raymond E. and Steven J. Rosenstone. 1980. *Who Votes?* New Haven: Yale University Press.

67. Adelson notes that the higher you go in terms of minority population, the more likely you are to elect a candidate of choice.⁴⁵ He also recommends a cushion above the estimated minimum percentage of the population for minorities to elect candidates of choice because these are just estimates.⁴⁶
68. Handley uses homogenous precinct analysis, ecological regression, and ecological inference to address the issue of racial polarization. She notes the first two are more common and have been accepted by the US Supreme Court. The third, EI, is post-Gingles, but according to Handley, it has been accepted in numerous court proceedings.
69. Handley examines several elections with African American candidates in Michigan. Four were with an African American candidate either running alone or at the top of the ticket (Barack Obama's 2012 presidential election, Godfrey Dillard 2014 Secretary of State of Michigan, and John James for US Senate in 2018 and 2020). James is identified as not being the candidate of choice of black voters.
70. Of the two races with African Americans at the top of the ticket, whites and blacks voted for different candidates. In one of the two times, the black candidate, Barak Obama, the incumbent president won. Ruth Johnson won reelection to the position of Secretary of State over Godfrey Dillard.⁴⁷
71. Handley also counts the 2020 presidential race in which Kamala Harris ran for Vice President and the 2018 race in which Garlin Gilchrist ran for Lieutenant

⁴⁵ MICRC_004797.pdf, August 8, 2021, page 76.

⁴⁶ MICRC_007421.pdf, October 4, 2021, page 65.

⁴⁷ Election returns provided by Handley on page 35.

Governor. In both instances, the bottom of the ticket runs in tandem with the top of the ticket.

72. In an article titled “Why VPs Matter Less than You Think” in Politico, political scientists Kyle C. Kopko and Christopher J. Devine, argue that in most cases voters vote for the top of the ticket. For a vice-presidential candidate to matter they must be either tremendously popular or tremendously unpopular. Neither is usually the case. Consequently, there is little reason to believe that the bottom half of the ticket is particularly determinative in these cases.⁴⁸

73. Handley finds most of the races she examines to be racially polarized.

74. Statewide, Handley notes that all but the 2012 US Senate race won by Stabenow was polarized. Even here, two of her four techniques show that to be polarized as well. The first form of ecological inference and the ecological regression show black voters overwhelmingly voted for Stabenow and a majority of white voters cast a ballot for the Republican candidate, Peter Hoekstra. The second form of ecological inference shows Stabenow doing worse than the Republican candidate, but neither received a majority of the white vote. She did, however, do better than the Republican candidate, Peter Hoekstra, among white voters when looking at the Homogenous precinct analysis. This election might be complicated by the relatively high showing (3.2-3.7%) of “others” among whites.

⁴⁸ Kopko, Kyle C. and Christopher J. Devine. April 11, 2016. “Why VPs Matter Less than You Think,” *Politico*. <https://www.politico.com/magazine/story/2016//04/election-2016-vice-president-selection-matters-less-than-you-think-213805/> (Accessed January 10, 2023).

75. Stabenow got no less than 96.8% of the African American vote, regardless of the technique employed.
76. Looking at the elections employed by Handley, we can see that when there was racial polarization, as identified by her, four of the twelve elections were won by the candidate favored by whites.⁴⁹
77. To examine racial polarization and calculate what percentage of African Americans is necessary for African Americans to have the opportunity to elect a candidate of choice, she makes use of these races.
78. Winning office in American politics usually requires winning two elections: the primary election and the general election.
79. Handley opts to not use the one statewide primary election, the 2018 Democratic gubernatorial primary because 50% of the vote was not required to win the election.⁵⁰
80. Susan Smith, vice president of the League of Women Voters of Michigan, questions the work of Handley for not using primary voting when performing racial bloc voting analysis.⁵¹
81. Mark Payne, DFA Coordinator for the Michigan League of Conservation Voters, also urged using primary elections to analyze racial polarization.⁵²
82. Suppose the candidate choice of the minority community loses in the primary. In that case, the candidate that receives the votes of minority voters in the

⁴⁹ Handley, pages 35-36.

⁵⁰ Handley Report, page 24.

⁵¹ MICRC_008746.pdf, October 27, 2021, page 6.

⁵² MICRC_009575.pdf, November 18, 2021, page 22

general election is, at best, their second choice, and perhaps the least bad option.

83. The gubernatorial general election does not require 50%, but it is used by Handley.⁵³

84. The senatorial general election does not require 50%, but it is used by Handley.⁵⁴

85. The presidential election does not require 50%, but it is used by Handley.⁵⁵

86. In fact, the statewide races in Michigan presented by Handley do not require 50% of the vote.

87. Looking at Handley's Appendix A, the 2016 presidential election, the 2018 Attorney General election, and the 2020 US Senate election all had winners with less than 50% of the vote.⁵⁶

88. Handley also states that we should not use the 2018 Democratic gubernatorial primary, as there is no consistent candidate of choice for African Americans in the four counties she examines.⁵⁷

89. In three of the four (Genesee, Saginaw, Oakland, and Wayne) counties, Thanedar was the plurality choice among black voters. Only in Oakland County was Thanedar not the candidate of choice for blacks. Even here, one of her four techniques showed him the candidate of choice for blacks.

⁵³ <http://archive.fairvote.org/?page=2293> (accessed January 10, 2023)

⁵⁴ <http://archive.fairvote.org/?page=2293> (accessed January 10, 2023)

⁵⁵ <http://archive.fairvote.org/?page=2293> (accessed January 10, 2023)

⁵⁶ Handley, pages 35-36.

⁵⁷ Handley, page 24.

90. Moreover, we should note that in the three-way race in these four counties, never do less than 55% favor a candidate other than Whitmer. Leaving out the homogenous precinct analysis, the number goes up to 60% of blacks favoring a candidate other than Whitmer.

91. Susan Smith, identified as the vice president of the League of Women Voters, expressed concern about the lack of primary elections in Handley's analysis of racial bloc voting.⁵⁸

VI. Conclusion

92. The reports and documents lead me to the following overarching conclusions:

- a. The Adelson report and the testimony before the Michigan Independent Citizens Redistricting Commission demonstrate a history of racial discrimination in Michigan. This history and its legacy continue to this day.
- b. There are striking economic and educational disparities today in Michigan and Detroit. These disparities have been found in the social science literature to be related to diminished political participation.
- c. There is the possibility of drawing legislative districts in Michigan with African Americans constituting a majority.
- d. Racial polarization in Michigan's voting continues through the most recent elections. Moreover, in many instances, the candidate of choice of the African American community loses the election to the candidate preferred by whites.

⁵⁸ MICRC_008746.pdf page 6.

A handwritten signature in black ink, appearing to read "Lockerbie".

Brad Lockerbie
Professor of Political Science
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BRAD LOCKERBIE

Curriculum Vitae

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EDUCATION

Ph.D., University of Iowa, 1988
A.B., University of Georgia, 1984

ACADEMIC APPOINTMENTS

Professor, East Carolina University, 2014 -
Professor and Chair, East Carolina University, 2007-2014
Associate Professor, University of Georgia, 1994-2007
Assistant Professor, University of Georgia, 1988-1994
Instructor, University of Georgia, Spring 1988
Instructor, University of Iowa, Fall 1987
Teaching Assistant, University of Iowa, 1985-1987

SCHOLASTIC AWARDS AND HONORS

Phi Kappa Phi, 2010-
Omicron Delta Kappa, 2010-
Exemplary Service Medal, Thomas Harriot College of Arts and Sciences, East Carolina University, 2009
Dean Thomas P. Lauth Award for Teaching Excellence, 2007
Delta Upsilon Chapter of Gamma Phi Beta Recognition of Contributions to Academic Excellence at the University of Georgia, 1999
Delta Upsilon Chapter of Gamma Phi Beta Recognition of Contributions of Academic Excellence at the University of Georgia, 1998
Selected to participate in the Institute for Behavioral Research Faculty Mentoring program, 1990
Departmental nominee for Conference of Southern Graduate Schools Annual Achievement Award for New Scholars, 1989

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- "Race and Religion: Voting Behavior and Political Attitudes," 2013, *Social Science Quarterly*. 94:1145-1158.
- "Economic Expectations and Election Outcomes," 2013, *PS: Political Science and Politics*. 46:42.
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- "Election Forecasting: The Future of the Presidency and the House," 2008, *PS: Political Science and Politics*. 41:71.
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- "An Integrative Approach to Modeling Presidential Success in Congress," (with Stephen Borrelli and Scott Hedger), 1998, *Political Research Quarterly*, 51:155-172.
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- "The Sophomore Surge: Conversion, Mobilization, or Abstention," 1994, *Political Research Quarterly*, 47:961-968.
- "Party Contacting and Political Participation, 1952-1990," (with Peter W. Wielhouwer), 1994, *American Journal of Political Science*, 38:211-229.
- "Economic Dissatisfaction and Political Alienation in Western Europe," 1993, *European Journal of Political Research*, 23:281-293.
- "Making Choices About Choice: House Support for Abortion Funding," (with James L. Regens), 1993, *Social Science Research*, 22:24-32.
- "Election Marginality, District Homogeneity, and Policy Responsiveness," 1992, *Midsouth Journal of Political Science*, 13:341-354.
- "Elections and the Responsiveness of Incumbents: A Response to Bernstein," 1992, *Midsouth Journal of Political Science*, 13:361-362.
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- "Change in Party Identification: The Role of Prospective Economic Evaluations," 1989, *American Politics Quarterly*, 17:291-311.
- "Economics, Votes, Protests: West European Cases," (with Michael S. Lewis-Beck), 1989, *Comparative Political Studies*, 22:155-177.
- "Getting Inside the Beltway: Perceptions of Presidential Skill and Success," (with Stephen A. Borrelli), 1989, *British Journal of Political Science*, 19:97-106.
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- "Split Partisan Identification," (with John A. Clark), 1998, in Charles D. Hadley and Lewis Bowman, editors, *Political Party Activists in Southern Politics: Mirrors and Makers of Change*, 111-128, Knoxville, Tennessee: University of Tennessee Press.
- "Campaign Activities," (with John A. Clark and Peter W. Wielhouwer), 1998, in Robert P. Steed, John A. Clark, Lewis Bowman, and Charles D. Hadley, editors, *Party Organization and*

- Activism in the American South*, Tuscaloosa, Alabama: University of Alabama Press.
- "Georgia: Two-Party Political Reality!" (with John A. Clark), 1997, in Laurence W. Moreland and Robert P. Steed, editors, *The 1996 Presidential Election in the South: Southern Party Systems in the 1990s*, 65-76, Westport Connecticut: Praeger Press.
- "Georgia: Two-Party Political Reality?," (with John A. Clark), 1995, in Charles D. Hadley and Lewis Bowman, editors, *Southern State Party Organizations and Activists*, 127-144, Westport, Connecticut: Praeger Press.
- "Georgia: A State in Transition," (with John A. Clark), 1994, in Robert P. Steed, Laurence W. Moreland, and Tod A. Baker, editors, *The 1992 Presidential Election in the South*, 39-50, Westport Connecticut: Praeger Press.
- "United States of America," (with Arthur H. Miller), 1992, in Mark Franklin, Tom Mackie, and Henry Valen, editors, *Electoral Change: Responses to Evolving Social and Attitudinal Structures in Western Countries*, 362-382, Cambridge: Cambridge University Press.
- "Electoral change and social change," (with Mark Franklin, Tom Mackie, Henry Valen, et al.), 1992, in Mark Franklin, Tom Mackie, Henry Valen, editors, *Electoral Change: Responses to Evolving Social and Attitudinal Structures in Western Countries*, 33-60, Cambridge: Cambridge University Press.

BOOK REVIEW

Ragsdale, Lyn and Jerrold G. Rusk. *The American Nonvoter*. NY: New York: Oxford University Press, 2017. 315 pages

GRANTS

Southern Grassroots Party Activists Project
NSF Grant SES-9009846
Southern Grassroots Party Activists Project II
NSF Grant SES-9986501

WORKS IN PROGRESS

Religion and Voting Behavior in American Politics
Ethnicity, Religion and Political Engagement
Multiracial Churches: Are their Black and White Parishioners different?

PAPERS

- "Race and Religion," proposed for presentation on the Race, Ethnicity, and Politics section at the Annual Meeting of the Midwest Political Science Association, 2022.
- "Multiracial Churches: Are their Black and White Parishioners different?" presented at the Annual Meeting of the Annual Meeting of the Southern Political Science Association, 2019.
- "Ethnicity, Religion, and Political Engagement" presented at the Annual Meeting of the Midwest Political Science Association, 2016.
- "Economics and Election Outcomes: The Presidency and the House" presented at the Annual

- Meeting of the Southern Political Science Association, 2013.
- "Actions, Attitudes, and Affiliations: Race, Religion, and Voting Behavior" presented at The Annual Meeting of the Midwest Political Science Association, April, 2009.
- "Election Forecasting: The Future of the Presidency and the House" presented at the Annual Meeting of the Southern Political Science Association, 2013.
- "Religion and Voting Behavior: A Question of Black and White" presented The Annual Meeting of the Southern Political Science Association, January 2007.
- "A Question of War: Question Wording and Support for War in Iraq" (with Stephen A. Borrelli) presented at The Annual Meeting of the Midwest Political Science Association, April, 2005.
- "Voting in the States: Incumbency and Economics in the 1990s" presented at The Annual Meeting of the Southern Political Science Association, November, 2001.
- "Economics and Politics: Egocentric or Sociotropic?" presented at The Annual Meeting of the Midwest Political Science Association, April 27-30, 2000.
- "Party Identification: A Dynamic Model" presented at The Annual Meeting of the Southern Political Science Association, November, 1999.
- "Forecasting Legislative Elections: A Look to the Future," presented at The Annual Meeting of the Southwestern Social Science Association, March, 1999.
- "The Partisan Component to the Incumbency Advantage: an extension," presented at The Annual Meeting of the Midwest Political Science Association, April 23-25, 1998.
- "The Partisan Component to the Incumbency Advantage," presented at The Annual Meeting of the Southern Political Science Association, November 7-9, 1996.
- "Race and Voting Behavior in Presidential Elections: 1952-1992," presented at The Annual Meeting of the Midwest Political Science Association, April 18-20, 1996.
- "The Incumbency Advantage and Economic Voting in Gubernatorial and Senate Elections: A Comparison at the Individual Level," presented at The Annual Meeting of the Southern Political Science Association, November 1-4, 1995.
- "Election Forecasting: A Look to the Future," presented at The Annual Meeting of the American Political Science Association, August 31- September 3, 1995.
- "Economic Accountability and Multiparty Government in Western Europe, 1973-1989," (with Kevin M. Leyden, Terry J. Royed, and Stephen A. Borrelli) presented at the Annual Meeting of the Midwest Political Science Association, April 6-8, 1995.
- "Hidden Honeymoons? Agendas and the Dynamics of Presidential Influence in Congress," (with Stephen A. Borrelli) presented at The Annual Meeting of the Southern Political Science Association, November 2-5, 1994.
- "The Presidential Honeymoon: Is It Overrated?" (with Stephen A. Borrelli) presented at The Annual Meeting of the Midwest Political Science Association, April 14-16, 1994.
- "Ideological Dispersion and the Composition of Party Systems," (with James L. Regens) presented at The Annual Meeting of the American Political Science Association, September 2-5, 1993.
- "Party Integration in Southern Local Parties," (with John A. Clark) presented at The Annual Meeting of the American Political Science Association, September 2-5, 1993.
- "Ideological Dispersion and the Number of Parties in Western Democracies," (with James L. Regens) presented at the Meetings of The Public Choice Society in conjunction with The

- Economic Science Association, March 17-20, 1993.
- "The Incumbency Advantage: A Micro- and Macro-level Phenomenon," (with Charles S. Bullock, III) presented at The Annual Meeting of the Southern Political Science Association, November 5-8, 1992.
- "The Influence of Party Contact, Economics and Attitudes on Political Participation, 1952-1990," (with Peter W. Wielhouwer) presented at The Annual Meeting of the American Political Science Association, September 3-6, 1992.
- "Split Partisanship Among Grassroots Party Activists," (with John A. Clark) presented at The Annual Meeting of the American Political Science Association, September 3-6, 1992.
- "Party Activists in Georgia," (with John A. Clark), presented at The 1992 Citadel Symposium on Southern Politics, March 5-6, 1992.
- "The Incumbency Advantage: Conversion, Mobilization, or Abstention," presented at the Annual Meeting of the Southern Political Science Association, November 7-9, 1991.
- "The Craven Politician: Congressional Vote Choice and the Budget Deficit," (with James L. Regens), presented at the Meetings of The Public Choice Society in conjunction with The Economic Science Association, March 15-17, 1991.
- "Economic Dissatisfaction and Political Alienation in Western Europe," presented at the Annual Meeting of the Southern Political Science Association, November 8-10, 1990.
- "Prospective Voting in Presidential Elections: 1956-1988," presented at the Annual Meeting of the Midwest Political Science Association, April 4-7, 1990.
- "Marginality and Policy Responsiveness," presented at the Annual Meeting of the Southern Political Science Association, November 2-4, 1989.
- "The Impact of Levels of Information on the Use of Prospective Evaluations," presented at the Annual Meeting of the American Political Science Association, August 31-September 3, 1989.
- "Prospective Voting and Political Trust," presented the Annual Meeting of the Midwest Political Science Association, April 13-15, 1989.
- "Prospective Economic Voting and Casework in House Elections, 1952-1986," presented at the Annual Meeting of the Southern Political Science Association, November 3-6, 1988.
- "Prospective Voting in Senate Elections, 1952-1986," presented at the Annual Meeting of the Southern Political Science Association, November 4-7, 1987.
- "Party Identification: Prospective or Retrospective," presented at the Annual Meeting of the American Political Science Association, September 3-6, 1987.
- "Economics, Culture, and Participation: West European Cases," (with Michael S. Lewis-Beck), presented at the Annual Meeting of the American Political Science Association, September 3-6, 1987.
- "Getting Inside the Beltway: A New Approach to Presidential Skill and Success," (with Stephen A. Borrelli), presented at the Annual Meeting of the Midwest Political Science Association, April 9-11, 1987.
- "Marginality-Homogeneity and Responsiveness Revisited," paper presented at the Annual Meeting of the Southern Political Science Association, November 5-8, 1986.

OTHER PROFESSIONAL ACTIVITIES

Discussant on Elections panel at The Annual Meeting of the Southern Political Science Association, 2013.

Discussant on Elections panel at The Annual Meeting of the Southern Political Science Association, 2010.

Participant on the Forecasting the 2008 Election roundtable at The Annual Meeting of the American Political Science Association, August, 2008.

Participant on the Forecasting the 2004 Election roundtable at The Annual Meeting of the American Political Science Association, September, 2004.

Chair/Discussant on the Dynamics of Partisanship panel at The Annual Meeting of the Southern Political Science Association, November, 2001.

Discussant on the Issue Ownership and Policy Voting panel at The Annual Meeting of the American Political Science Association, September, 2001.

Participant on the Forecasting the 2000 Election roundtable at The Annual Meeting of the American Political Science Association, September, 2000.

Discussant on the Vote choice Panel at The Annual Meeting of the Midwest Political Science Association, April 27-30, 2000.

Chair of the Vote Choice Strategies Panel at The Annual Meeting of the American Political Science Association, September 2-5, 1999.

Chair of the Policy Balancing and Split Ticket Voting in National and Subnational Elections Panel at The Annual Meeting of the Midwest Political Science Association, April 15-17, 1999.

Discussant on the Presidential Influence in Congress Panel at The Annual Meeting of the Midwest Political Science Association, April 15-17, 1999.

Chair of Issues of Representation in National and State Legislatures Panel at The Annual Meeting of the Southwestern Social Science Association, March, 1999.

Discussant on the Individual Decision Processes Panel at the Annual Meeting of the Southern Political Science Association, October 28-31, 1998.

Discussant on the Economic and Ideological Effects and Partisanship on the Vote Panel at The Annual Meeting of the American Political Science Association, August 26-30, 1998.

Discussant on the Voting Behavior panel at the Biannual Citadel Symposium on Southern Politics, March, 1998.

Discussant on the Presidential Success in Congress Panel at The Annual Meeting of the Southern Political Science Association, November 7-9, 1997.

Discussant on the Elections and the Economy Panel at The Annual Meeting of the American Political Science Association, August 28-31, 1997.

Chair/Discussant on the Issues, Preferences, and Electoral Choices panel at The Annual Meeting of the Midwest Political Science Association, April 10-12, 1997.

Discussant on the Partisan Dynamics of Elections panel at The Annual Meeting of the Southern Political Science Association, November 7-9, 1996.

Participant on the Forecasting the 1996 Election roundtable at The Annual Meeting of the American Political Science Association, August 29-September 1, 1996

Chair of the Distributive Politics in State and Federal Legislatures panel at The Annual Meeting of the Midwest Political Science Association, April 18-20, 1996.

Discussant on the Issue Preferences and Voter Choice panel at The Annual Meeting of the Southern Political Science Association, November 1-4, 1995.

Discussant on the Mobilizing Participation panel at The Annual Meeting of the Midwest Political Science Association, April 6-8, 1995.

Delivered the Plenary Address "The 1994 Midterm Elections and the American Political System" at the Annual Meeting of the Georgia Political Science Association, February 24-25, 1995.

Discussant on the Economic Conditions and Political Behavior from a Comparative Perspective panel at the Annual Meeting of the Southern Political Science Association, November 3-6, 1993.

Participant on Roundtable on the 1992 U.S. Elections at The Annual Meeting of the Georgia Political Science Association Meeting, February 25-27, 1993.

Discussant on the Congressional Elections panel of the Public Opinion and Elections Section at the Annual Meeting of the Southern Political Science Association, November 5-8, 1992.

Presentation on turnout at the Symposium on "Public and Private Cooperation for Argentinian Counsel for Coca Cola.

Discussant on the Age and Political Socialization panel of the Political Attitudes, Behavior, and Psychology Section at the Annual Meeting of the Midwest Political Science Association, April 5-7, 1990.

Organized and chaired The Changing Nature of Elections panel at the Annual Meeting of Georgia Political Science Association, February 2-3, 1990.

Staff member, Robert A. Taft Institute of Government Seminar, University of Georgia Department of Social Science Education and Institute of Government, July 9-21, 1989, July 9-20, 1990, July 8-19, 1991, June 23-July 6, 1993.

Discussant on the Economics of Electoral Choice panel of the Elections, Voting, and Media Section at the Annual Meeting of the Midwest Political Science Association, April 13-15, 1989.

Discussant on the Primaries panel of the Elections, Voting, and the Media Section at the Annual Meeting of the Midwest Political Science Association, April 14-16, 1988.

MANUSCRIPT REVIEWER

National Science Foundation - Political Science Division
National Science Foundation - Economics Division
American Political Science Review
American Journal of Political Science
Journal of Politics
Western Political Quarterly
Political Research Quarterly
Social Science Quarterly
Legislative Studies Quarterly
American Politics Quarterly
Political Behavior
Comparative Politics
Southeastern Political Review
State and Local Government Review

Pearson Publishing
Thomson Publishing
Pennsylvania State Press
West Publishing Company
McGraw Hill Publishing
Sage Publications

CONSULTING

Kansas
Arkansas
North Carolina
Pennsylvania
Florida
Michigan
Gainesville, GA
Georgia Trial Lawyers Association
John Knox
Lumber City, Georgia
University of Iowa Social Science Institute

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

Expert Report of Sean P. Trende

January 18, 2023

I. Expert Qualifications

I serve as Senior Elections Analyst for RealClearPolitics. I joined RealClearPolitics in January of 2009 after practicing law for eight years. I assumed a fulltime position with RealClearPolitics in March of 2010. RealClearPolitics is a company of around 50 employees, with its main offices in Washington D.C. It produces one of the most heavily trafficked political websites in the world, which serves as a one-stop shop for political analysis from all sides of the political spectrum and is recognized as a pioneer in the field of poll aggregation. It produces original content, including both data analysis and traditional reporting. It is routinely cited by the most influential voices in politics, including David Brooks of *The New York Times*, Brit Hume of Fox News, Michael Barone of The Almanac of American Politics, Paul Gigot of The Wall Street Journal, and Peter Beinart of The Atlantic.

My main responsibilities with RealClearPolitics consist of tracking, analyzing, and writing about elections. I collaborate in rating the competitiveness of Presidential, Senate, House, and gubernatorial races. As a part of carrying out these responsibilities, I have studied and written extensively about demographic trends in the country, exit poll data at the state and federal level, public opinion polling, and voter turnout and voting behavior. In particular, understanding the way that districts are drawn and how geography and demographics interact is crucial to predicting United States House of Representatives races, so much of my time is dedicated to that task.

Publications and Speaking Engagements:

I am currently a Visiting Scholar at the American Enterprise Institute, where my publications focus on the demographic and coalitional aspects of American Politics. I am also the author of *The Lost Majority: Why the Future of Government is up For Grabs and Who Will Take It*. In this book, I explore realignment theory. It argues that realignments are a poor concept that should be abandoned. As part of this analysis, I conducted a thorough analysis of demographic and political trends beginning in the 1920s and continuing through the modern times, noting the fluidity and fragility of the coalitions built by the major political parties and their candidates.

I also co-authored the 2014 Almanac of American Politics. The Almanac is considered the foundational text for understanding congressional districts and the representatives of those districts, as well as the dynamics in play behind the elections. PBS's Judy Woodruff described the book as "the oxygen of the political world," while NBC's Chuck Todd noted that "Real political junkies get two Almanacs: one for the home and one for the office." My focus was researching the

history of and writing descriptions for many of the newly-drawn districts, including tracing the history of how and why they were drawn the way that they were drawn. I was assigned Texas as one of my states. I have also authored a chapter in Larry Sabato's post-election compendium after every election dating back to 2012.

I have spoken on these subjects before audiences from across the political spectrum, including at the Heritage Foundation, the American Enterprise Institute, the CATO Institute, the Bipartisan Policy Center, and the Brookings Institution. In 2012, I was invited to Brussels to speak about American elections to the European External Action Service, which is the European Union's diplomatic corps. I was selected by the United States Embassy in Sweden to discuss the 2016 elections to a series of audiences there and was selected by the United States Embassy in Spain to fulfill a similar mission in 2018. I was invited to present by the United States Embassy in Italy, but was unable to do so because of my teaching schedule.

Education:

I am currently enrolled as a doctoral candidate in political science at The Ohio State University. I have completed all my coursework and have passed comprehensive examinations in both methods and American Politics. In pursuit of this degree, I have also earned a Master's Degree in Applied Statistics. My coursework for my Ph.D. and M.A.S. included, among other things, classes on G.I.S. systems, spatial statistics, issues in contemporary redistricting, machine learning, non-parametric hypothesis tests and probability theory.

In the winter of 2018, I taught American Politics and the Mass Media at Ohio Wesleyan University. I taught Introduction to American Politics at The Ohio State University for three semesters from Fall of 2018 to Fall of 2019, and again in Fall of 2021. In the Springs of 2020 and 2021, I taught Political Participation and Voting Behavior at The Ohio State University. This course spent several weeks covering all facets of redistricting: How maps are drawn, debates over what constitutes a fair map, measures of redistricting quality, and similar topics. I am teaching this course this semester as well.

Prior Engagements as an Expert:

In 2021, I served as one of two special masters appointed by the Supreme Court of Virginia to redraw the districts that will elect the Commonwealth's representatives to the House of Delegates, state Senate, and U.S. Congress in the following decade. The Supreme Court of Virginia accepted those maps, which were praised by observers from across the political spectrum. "New

Voting Maps, and a New Day, for Virginia,” *The Washington Post* (Jan. 2, 2022), available at <https://www.washingtonpost.com/opinions/2022/01/02/virginia-redistricting-voting-maps-gerrymander/>; Henry Olsen, “Maryland Shows How to do Redistricting Wrong. Virginia Shows How to Do it Right,” *The Washington Post* (Dec. 9, 2021), available at <https://www.washingtonpost.com/opinions/2021/12/09/maryland-virginia-redistricting/>; Richard Pildes, “Has VA Created a New Model for a Reasonably Non-Partisan Redistricting Process,” *Election Law Blog* (Dec. 9, 2021), available at <https://electionlawblog.org/?p=126216>.

In 2019, I was appointed as the court’s expert by the Supreme Court of Belize. In that case I was asked to identify international standards of democracy as they relate to malapportionment claims, to determine whether Belize’s electoral divisions (similar to our congressional districts) conformed with those standards, and to draw alternative maps that would remedy any existing malapportionment.

I served as a Voting Rights Act expert to counsel for the Arizona Independent Redistricting Commission in 2021 and 2022.

I previously authored an expert report in *Dickson v. Rucho*, No. 11-CVS-16896 (N.C. Super Ct., Wake County), which involved North Carolina’s 2012 General Assembly and Senate maps. Although I was not called to testify, it is my understanding that my expert report was accepted without objection.

I also authored an expert report in *Covington v. North Carolina*, Case 5 No. 1: 15-CV-00399 (M.D.N.C.), which involved almost identical challenges in a different forum. Due to what I understand to be a procedural quirk, where my largely identical report from Dickson had been inadvertently accepted by the plaintiffs into the record when they incorporated parts of the Dickson record into the case, I was not called to testify.

I authored two expert reports in *NAACP v. McCrory*, No. 1:13CV658 (M.D.N.C.), which involved challenges to multiple changes to North Carolina’s voter laws. I was admitted as an expert witness and testified at trial. My testimony discussed the “effect” prong of the Voting Rights Act claim. I did not examine the issues relating to intent.

I authored reports in *NAACP v. Husted*, No. 2:14-cv-404 (S.D. Ohio), and *Ohio Democratic Party v. Mated*, Case 15-cv-01802 (S.D. Ohio), which dealt with challenges to various Ohio voting laws. I was admitted and testified at trial in the latter case (the former case settled). The judge in the latter case ultimately refused to consider one opinion, where I used an internet map-drawing

tool to show precinct locations in the state. Though no challenge to the accuracy of the data was raised, the judge believed I should have done more work to check that the data behind the application was accurate.

I served as a consulting expert in *Lee v. Virginia Board of Elections*, No. 3:15-cv-357 (E.D. Va. 2016), a voter identification case. Although I would not normally disclose consulting expert work, I was asked by defense counsel to sit in the courtroom during the case and review testimony. I would therefore consider my work de facto disclosed.

I filed an expert report in *Mecinas v. Hobbs*, No. CV-19-05547-PHX-DJH (D. Ariz. 2020). That case involved a challenge to Arizona's ballot order statute. Although the judge ultimately did not rule on a motion *in limine* in rendering her decision, I was allowed to testify at the hearing.

I authored two expert reports in *Feldman v. Arizona*, No. CV-16-1065-PHX-DLR (D. Ariz.). Plaintiffs in that case challenged an Arizona law prohibiting the collection of voted ballots by third parties that were not family members or caregivers and the practice of most of the state's counties to require voters to vote in their assigned precinct. My reports and testimony were admitted. Part of my trial testimony was struck in that case for reasons unrelated to the merits of the opinion; counsel for the state elicited it while I was on the witness stand and it was struck after Plaintiffs were not able to provide a rebuttal to the new evidence.

I authored an expert report in *Pascua Yaqui Tribe v. Rodriguez*, No. 4:20-CV-00432-TUC-JAS (D. Ariz.), which involved early voting. My expert report and testimony were admitted at trial.

I authored expert reports in *A. Philip Randolph Institute v. Smith*, No. 1:18-cv-00357-TSB (S.D. Ohio), *Whitford v. Nichol*, No. 15-cv-421-bbc (W.D. Wisc.), and *Common Cause v. Rucho*, NO. 1:16-CV-1026-WO-JEP (M.D.N.C.), which were efficiency gap-based redistricting cases filed in Ohio, Wisconsin, and North Carolina.

I have only been excluded as an expert once, in *Fair Fight v. Raffensperger*. The judge concluded that I lacked sufficient credentials to testify as an expert in election administration.

I authored an expert report in the cases of *Ohio Organizing Collaborative, et al v. Ohio Redistricting Commission*, et al (No. 2021-1210); *League of Women Voters of Ohio, et al v. Ohio Redistricting Commission*, et al (No. 2021-1192); *Bria Bennett, et al v. Ohio Redistricting Commission*, et al (No. 2021-1 198). That case was decided on the written record.

I authored two expert reports in the consolidated cases of *NCLCV v. Hall* and *Harper v. Hall* (21 CVS 15426; 21 CVS 500085), two political/racial gerrymandering cases. My reports and testimony were admitted.

I authored two expert reports in the consolidated cases of *Montana Democratic Party v. Jacobson*, DV-56-2021-451 (Mont. Dist. Ct.). These cases involve the elimination of same-day registration, use of student identification to vote, and the restriction of ballot collection.

I authored an expert report on behalf of amicus curiae in the consolidated cases of *Carter v. Chapman* (No. 464 M.D. 2021) and *Gressman v. Chapman* (No. 465 M.D. 2021), which were redistricting cases before the Supreme Court of Pennsylvania.

I filed an expert report in *Harkenrider v. Hochul*, (No. E2022-0116CV), which is a partisan gerrymandering challenge to New York's enacted Congressional and state Senate maps. My reports and testimony were admitted.

I filed an expert report in *Szeliga v. Lamone*, Case No. C-02-CV-21-001816 (Md. Cir. Ct.) and *In the Matter of 2022 Legislative Redistricting of the State*, Misc. No. 25 (Md. Ct. App.), political gerrymandering cases in Maryland. My reports and testimony were admitted.

I filed an expert report in *Graham v. Adams*, (No. 22-CI-00047) (Ky. Cir. Ct.), a political gerrymandering case. I was admitted as an expert and allowed to testify as trial.

I filed an expert report in *NAACP v. McMaster*, (No. 3:21-cv-03302-JMC-T,11-1- RMG), which is a racial gerrymandering challenge to South Carolina's enacted state House maps.

A full c.v., which includes all qualifications, including a list of all publications authored in the previous 10 years; a list of all other cases in which, during the previous 4 years, I testified as an expert at trial or by deposition; is attached as *Appendix A*.

II. Scope of engagement

I was retained by plaintiffs to explore whether and to what extent the newly enacted maps for the Michigan House of Representative (referred to herein as the “Hickory Map” or “Hickory Plan”) and Senate (referred to herein as the “Linden Map” or “Linden Plan”), drawn by the newly created Michigan Independent Citizens Redistricting Commission (MICRC) pursuant to Mich. Const. Art. IV §6A, will create districts as required by the Voting Rights Act of 1965, as amended. In particular, I was asked to explore whether such districts are required by the Supreme Court's directives in *Thornburg v. Gingles*, 478 U.S. 30 (1986) and, if so, whether the districts in the Hickory and Linden Maps will perform by electing the minority candidate of choice. I was also

asked to examine whether race predominated in the drawing of the districts for both maps, employing both qualitative and quantitative techniques. As a part of this endeavor, I was asked to compare the maps to the maps that were in effect from the 2012-2020 elections, referred to as either the “Benchmark Plan” or “Benchmark Maps.” I am being compensated at the rate of \$400/hr. My compensation is in no way contingent upon my findings.

III. Introduction and Summary of Opinions

On June 24, 2022, MICRC commissioner Rebecca Szetela published a 19-page report that suggested discomfort with the way districts were drawn in the Detroit metro area. In particular, Commissioner Szetela claimed she was worried that she could not say “with any degree of confidence” whether Black-preferred candidates would emerge successfully from Democratic primaries. Rebecca Szetela, *Dissenting Report*, June 24, 2022, at 2. (“Szetela Report”). In a memorable turn of phrase, she claimed the MICRC’s approach “was to follow a will-o’-the-wisp and rely on the hope that general election thresholds will magically translate into Black voters’ candidates of choice advancing past the Democratic primaries.” *Id.* at 8. The reason the Commission did this, according to Commissioner Szetela, was because the Commission’s attorneys “aggressively” pushed to lower BVAPs in districts to 35% to 40%, ostensibly to avoid a challenge to the maps as packing minority voters. *Id.* at 5.

Szetela was right. Two months later, Black voters’ candidates of choice lost multiple competitive primaries. The most striking result was found in the contest for the Democratic nomination in the newly drawn 8th Senate District. This district, which was redrawn to have a Black Voting Age Population (“BVAP”) of 40%, in line with the lawyers’ directives, ties together poor, heavily Black areas of Detroit with heavily White, more upscale cities near Pontiac, such as Birmingham.

Perhaps most importantly, it paired together two incumbents. Marshall Bullock was an African-American Senator who had been elected in a 45% BVAP district four years earlier. His opponent was state Senator Mallory McMorrow, who defeated a Republican incumbent in 2018 in a district that was then confined to the Oakland County suburbs; its BVAP was just 5%.

Voters were immensely polarized; Black voters favored Bullock 60 points, while White voters favored McMorrow by 90 points. In the end though, McMorrow won the district by a 36-point margin, in part because of the turnout advantage she enjoyed among high-propensity White voters and in part because White voters rallied behind her to a greater degree than Blacks did

behind McMorrow. It was also, however, in part because map drawers drew the BVAP of the district so low that it would be impossible for any Black candidate to win a polarized election.

This is the first conclusion of this report: That although they were required to draw VRA-compliant districts, the MICRC failed in its task because it drew the BVAPs in many of these districts too low for Black voters to regularly compete.

This conclusion is consistent with contemporary observations by political journalists. Writing for MLive, Alyssa Burr reported that

Democrats in the upcoming legislative term will have [fewer] Black lawmakers than currently serving, with the Senate dropping from five to three Black senators and 15 Black representatives now standing at 13. This also marks the first time in recent years there will be no Black men serving in the Michigan Senate.

Adrian Hemond, a political consultant with Grassroots Midwest, said redistricting gave Democrats the key to take over the House and Senate after winning the majority in both chambers, but subsequently stripped down the political power of Black residents.

“Democrats, in large part, can thank the redistricting commission for their legislative majorities, but the way they accomplished that was diminishing Black representation,” Hemond said.

Once-in-a-decade redistricting was completed last year by the Michigan Independent Citizens Redistricting Commission. The commission—made of four Republicans, four Democrats, and five Independents—was created by the passage of a 2018 ballot proposal intended to keep politicians out of the redistricting process in order to prevent political gerrymandering and make political districts more competitive.

The new maps caused a “racial gerrymandering” to take place instead, Hemond said, with portions of Detroit being drawn together with areas like Macomb and Oakland counties, and various incumbents being drawn into the mix.

See Alyssa Burr, “Democrats Big Midterm Win Overshadows Loss of Black Voices,” *MLive* (Nov. 15, 2022), available at <https://www.mlive.com/politics/2022/11/democrats-big-midterm-win-overshadows-loss-of-black-voices.html>.

Likewise, Bankole Thompson observed in the November 21, 2022 *Detroit News* that Democrats’ state legislative wins:

[S]tem from a very disgraceful reality: White liberals in the state have been reluctant to openly discuss the wider implications of the last redistricting process, which perhaps resulted in the smallest margin of Black representation in Lansing in decades. . . . Prior to redistricting,

Michigan boasted some 17 majority-minority districts. In essence, Democrats took the Legislature at a time when historically Black legislative representation is in decline. That is nothing to be proud of.

The second conclusion is tied in with the above narrative as well. Because the attorneys for the commission “aggressively” demanded that the BVAPs be pushed lower and lower, race came to predominate in the drawing of these districts. This is apparent from the anecdote above, which may be buttressed by fact witness testimony at trial. But it is also apparent from the shape of the districts, their racial compositions, and the fact that the Black population is carefully cracked and paired with White suburban voters.

In short: Based on the work performed as addressed in the following sections of the report, I hold to the following opinions to a reasonable degree of professional certainty:

- It is possible to draw ten reasonably compact House districts where the Black Voting Age Population (BVAP) is in excess of 50%, while also complying with the other demands of the Michigan constitution.
- There is substantial evidence of racially polarized voting in competitive Democratic state House primaries in Detroit.
- The Hickory Plan is likely to reduce the number of districts where Black voters can elect their candidate of choice. In fact, there was surprisingly little evidence to support the MICRC’s apparent conclusion that districts with 35% to 40% BVAP would enable Black voters to win competitive Democratic primaries, especially when these voters would be paired with high propensity voters in the suburbs.
- Race predominated in the drawing of the Hickory Plan. This is confirmed by both qualitative and quantitative examinations of the districts.
- It is possible to draw five reasonably compact Senate districts where the BVAP is in excess of 50%, while also complying with the other demands of the Michigan constitution.
- There is substantial evidence of racially polarized voting in competitive Democratic state Senate primaries in Detroit.
- The Linden Plan is likely to reduce the number of districts where Black voters can elect their candidate of choice.
- Race predominated in the drawing of the Linden Plan. This is confirmed by both qualitative and quantitative examinations of the districts.

IV. Data Relied Upon and Construction of Datasets

For purposes of this report, I reviewed and/or relied upon the following materials:

- Mapping data made available from the Michigan Independent Citizens Redistricting Commission (MICRC), available at <https://www.michigan.gov/micrc/mapping-process/mapping-data>;
- Shapefiles for census definitions of the block, precinct, census division and county data, downloaded from the Redistricting Data Hub, available at <https://redistrictingdatahub.org/>;
- Election return data at the precinct level, from the webpages of the clerks of Wayne, Oakland and Macomb counties;
- A shapefile of 2022 precincts, made available at <https://gis-michigan.opendata.arcgis.com/datasets/Michigan::2022-voting-precincts/explore?location=44.892723%2C-86.310800%2C7.40>;
- Other documents referenced in this report.

Because election data are made available at the precinct level, most of the district-wide election data is accurate. When precincts are split, however, it is necessary to estimate how many votes a candidate earned from each portion of the precinct. This is accomplished by taking the precinct-wide votes for each candidate and assigning them to census blocks. Rather than simply dividing by the number of blocks, analysts usually weight blocks by some number. Here, votes are assigned proportionally to the voting age population in each block. Separate sums for each portion of the precinct are then calculated by adding up the blocks in each precinct segment. Different approaches and weighting mechanisms can produce marginally different results. Following the guidance of the MICRC, I have defined Black as non-Hispanic Black alone, Asian as non-Hispanic Asian or Pacific Islander alone, and White as non-Hispanic White alone. Supplemental analysis contained in **Appendix B** performed with other definitions of Black confirms that none of the analyses herein would change if alternate definitions were utilized.

Precinct shapefiles were manually joined to the election results made available by the county clerks.

All shapefiles are projected using the WGS 84 projection.

V. Background

A. Racial demographics of Michigan

According to the United States Census Bureau, 61.6% of Michigan voters identified their race as White alone in 2020. Another 12.4% identified their race as Black alone, while 18.7% identified their ethnicity as Hispanic. Asian residents constituted 6% of the population, while American Indians identified constituted 1.1% of the population. Hawaiians and Pacific Islanders were 0.2% of the population, 8.4% of residents identified as “Some Other Race,” while 10.2% of Michiganders responded that they identified with two or more races. <https://www.census.gov/library/stories/state-by-state/michigan-population-change-between-census-decade.html>. Note that these numbers do not add up to 100, because “Hispanic” is considered a separate, non-racial category. Thus, a Michigan resident may identify as Hispanic White, non-Hispanic White, Hispanic Black, non-Hispanic Black, and so forth.

Despite this diversity, Michigan’s minority population is heavily concentrated. Of the 4,753 precincts in the state, non-Hispanic Whites constitute over 80% of the voting age population in 2,897 of them, or 61% of the precincts. Non-Hispanic Whites are a majority in 3,937 precincts, or 82.8%. Outside of Wayne, Saginaw, Genesee, Bay, and Oakland counties, non-Hispanic Whites constitute a majority of the population in 96% of all precincts.

This is perhaps best demonstrated by the following two maps. Black-majority precincts are largely confined to Wayne, Oakland, Genesee and Saginaw counties. Hispanic-majority precincts are largely non-existent.

Figure 1:
Michigan Precincts, 2020, by BVAP

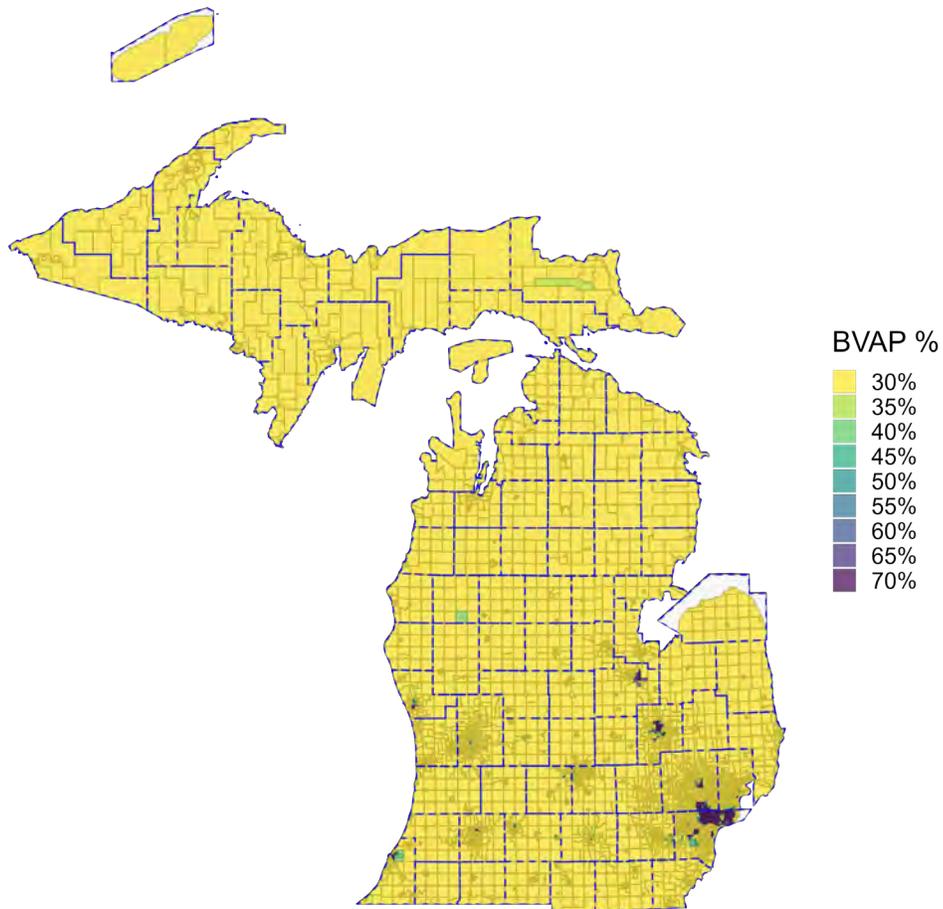
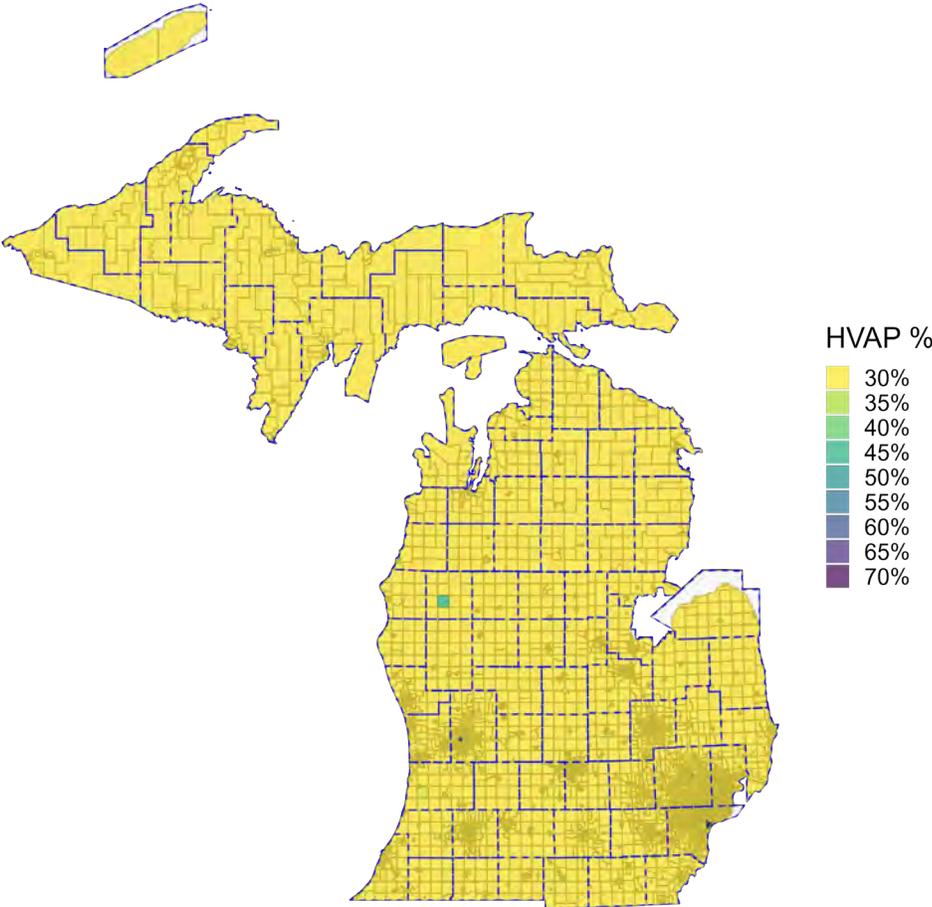
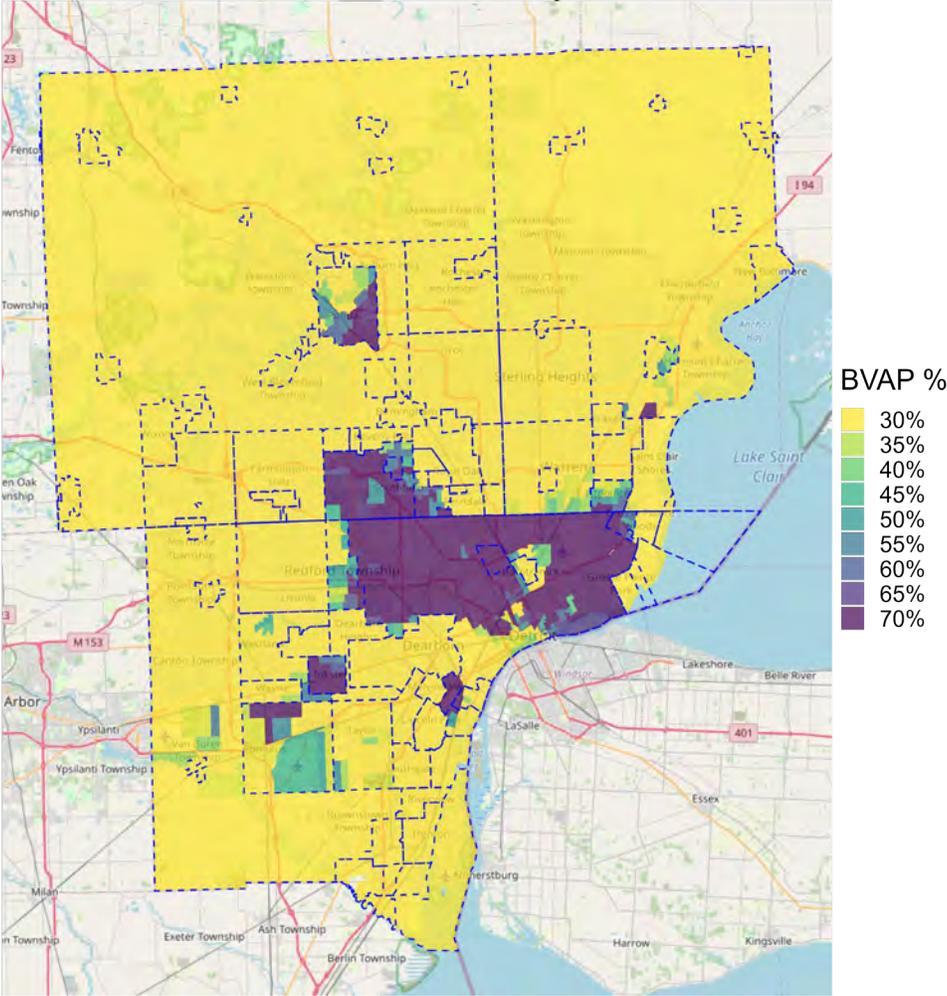


Figure 2:
Michigan Precincts, 2020, by Hispanic VAP



Instead, racial minorities are heavily concentrated in the Detroit Metro area. As the following map suggests, the non-White population is heavily concentrated in the City of Detroit, particularly western Detroit, in southern Oakland County, and around Pontiac.

Figure 3
Detroit Precincts, 2020, by BVAP



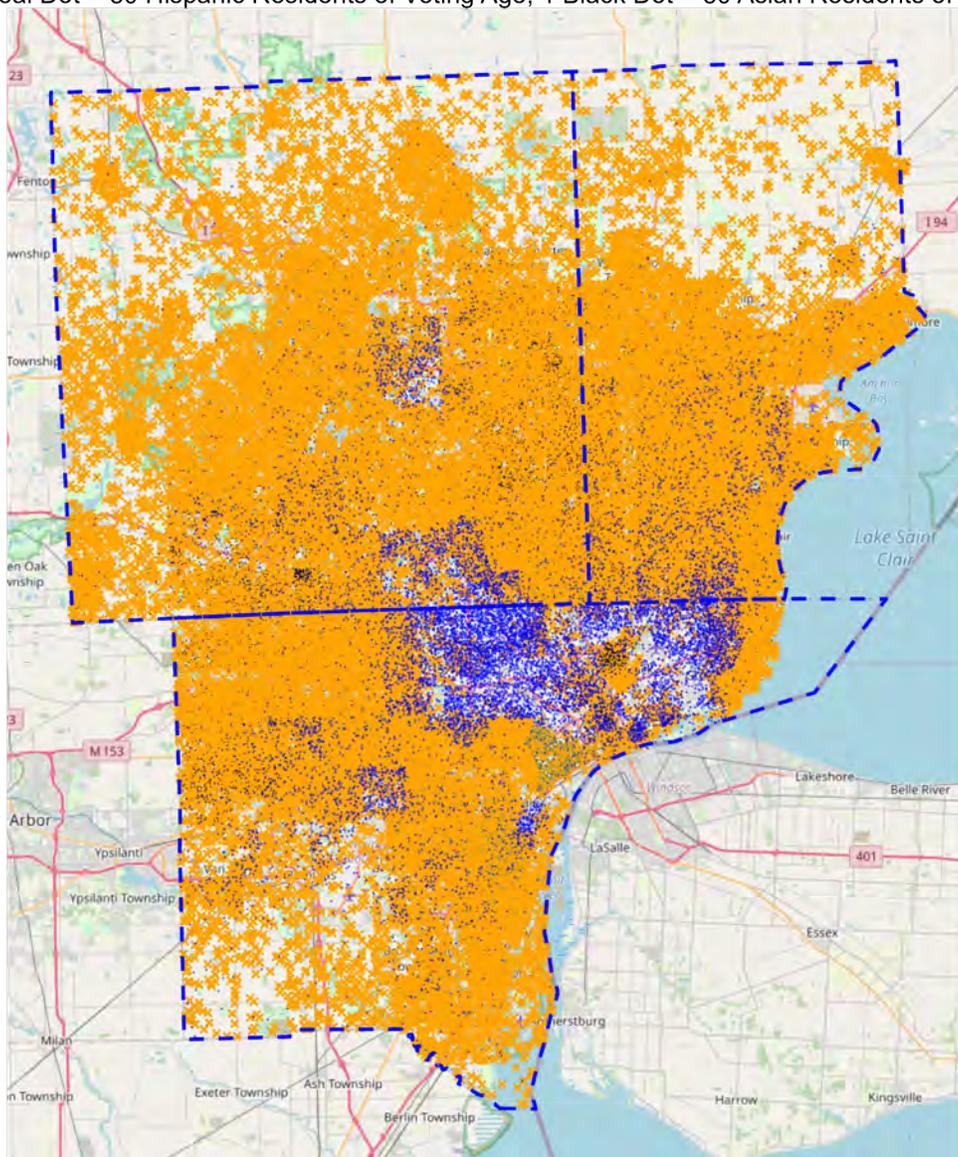
A final visualization of the distribution of racial groups in Detroit is set out in the following dot density map. See *Bethune-Hill v. Va. State Bd. of Elections*, 326 F. Supp. 3d 128, 145-146 (explaining and accepting dot density maps for VRA analysis). A dot density map takes an areal unit (in this dot density map, the precincts) and counts the number of individuals with a certain characteristic in each unit. Here, we count individuals by race. It then plots 1 dot randomly within that unit for each individual. A researcher can color-code the dots to help visualize the spatial distribution of individuals.

To keep the maps from becoming too cluttered, it is often helpful to place a dot for some ratio of individuals. In the following example, we place one dot for every 50 individuals of a given race or ethnicity for VTDs in Macomb, Oakland and Wayne counties. An orange “x” represents

50 white residents of voting age, a blue dot is 50 Black residents of voting age, a teal dot represents 50 Hispanic residents of voting age, while a black dot represents 50 Asian residents of voting age.

Figure 4

Combined Populations of Macomb/Oakland/Wayne Counties, MI
1 Orange 'X' = 50 White Residents of Voting Age, 1 Blue Dot = 50 Black Residents of Voting Age
1 Teal Dot = 50 Hispanic Residents of Voting Age, 1 Black Dot = 50 Asian Residents of Voting Age



As you can see, the suburban counties are largely White, although there are Asian-American residents scattered throughout, with a few concentrations west of Detroit. There are concentrations of Black residents in Pontiac in central Oakland County, as well as on the Wayne County line in Southfield and Eastpointe. Northern Detroit is mostly Black, with a concentration of White and Asian residents in Hamtramck; the Grosse Pointes are also heavily White. Southern

and Western Wayne County are also White, with concentrations of Black residents around River Rouge, Inkster and Romulus. West of downtown Detroit is heavily Hispanic.

This is backdrop for the MICRC's maps. Because, to my knowledge, it is not possible to draw a district that will tend to elect the candidate of choice of any minority group other than Black voters, I focus my report on Black voters.

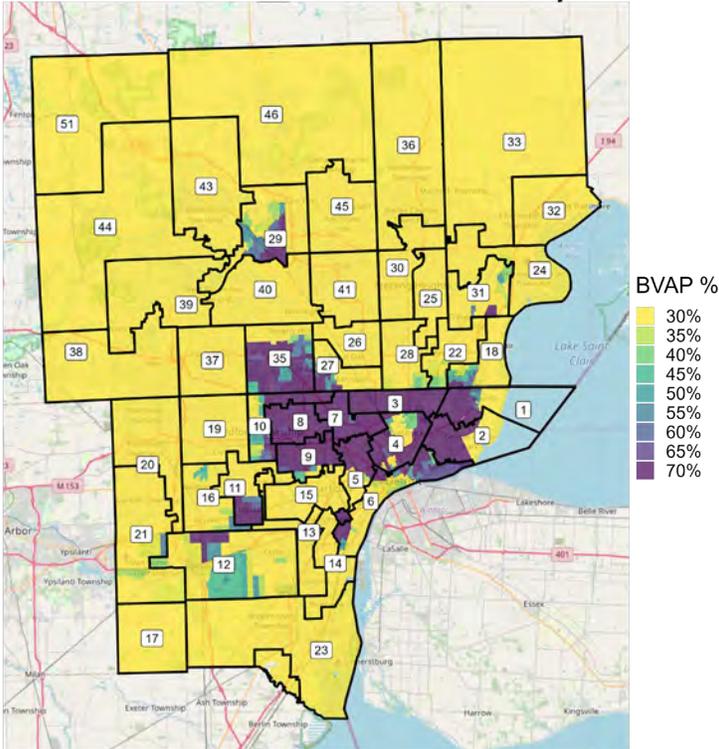
B. Michigan House and Senate Plans

For the redistricting following the 2020 decennial census, Michigan utilized the MICRC for the first time. This commission made substantial changes to the districts in metro Detroit. The following sets of maps illustrate these changes. In all of these maps, the districts lines are laid over the precincts, which are color-coded by the precincts' BVAP. To improve readability, the precinct outlines are removed here.

From 2012-2020, the districts were largely contained within whole counties. The Hickory Plan, however, traverses county lines repeatedly, particularly the Wayne/Oakland and Wayne/Macomb boundaries. Several Detroit-area districts are stretched out into heavily White areas of the suburbs.

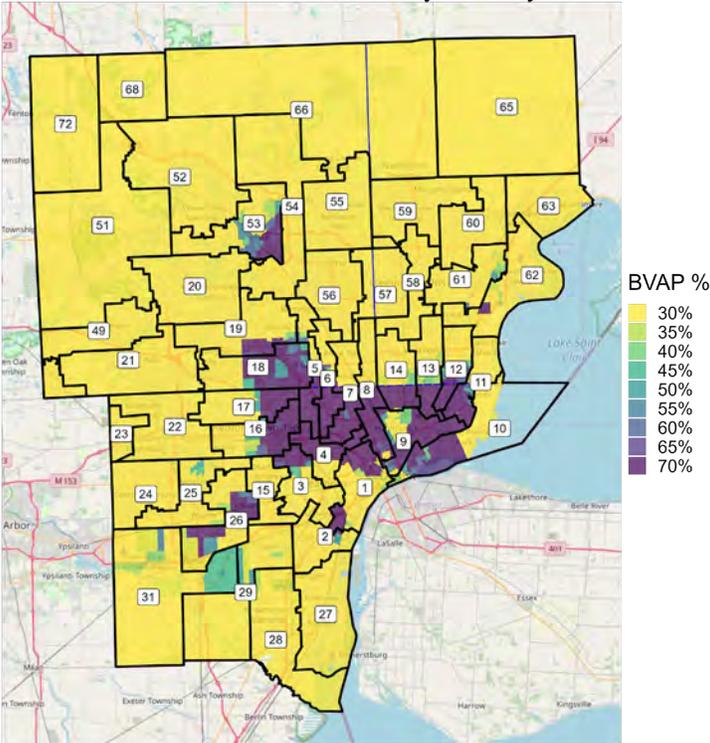
Figures 5, 6

Detroit Area House Districts, Benchmark Plan, by BVAP



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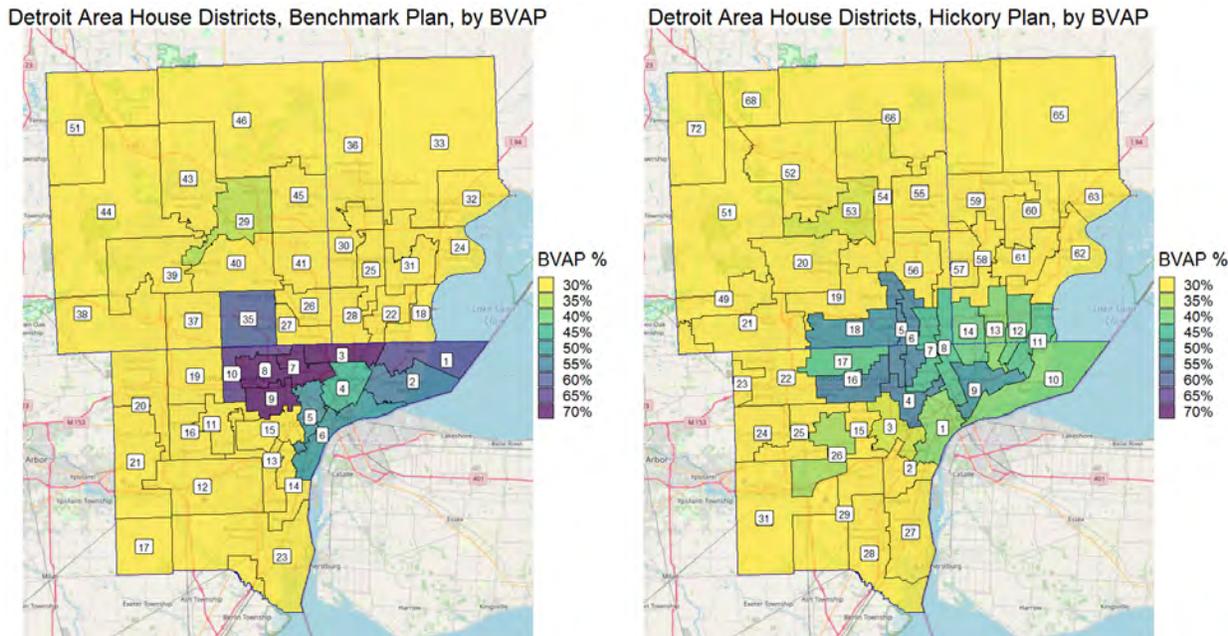
Detroit Area House Districts, Hickory Plan, by BVAP



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The net effect of this is to reduce the Black voting percentage multiple districts. These data are presented both in tabular and map form. The color shading in the following two maps displays the aggregate BVAP at the district level. The reduction in the BVAP in the Detroit area districts is evident from the lightened shade of the districts.

Figure 7



The following table summarizes this, showing the districts under the various plans with the highest percent BVAP. Under the Benchmark Map, eleven districts are majority Black, ten of which are in the Detroit area. An additional district, District 4, is 47.65% Black. Under the reconstituted lines, however, only seven districts have a BVAP in excess of 46.2%, six of which are in the Detroit area.

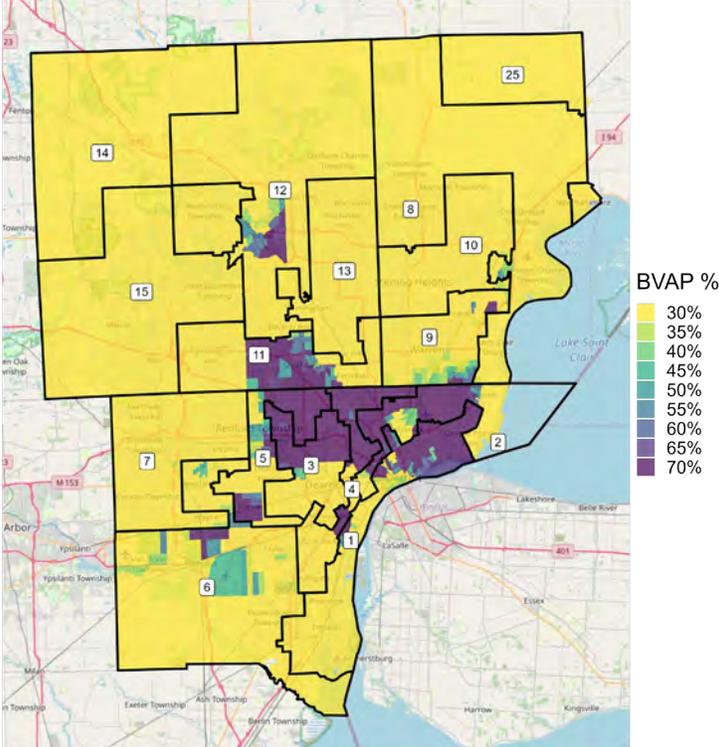
Table 1

BVAP in 20 Most Heavily Black Michigan Districts			
Benchmark Plan		Hickory Plan	
District	BVAP	District	BVAP
7	92.0%	4	55.6%
8	90.1%	5	55.3%
3	88.6%	6	54.9%
9	72.2%	16	54.9%
10	65.4%	18	52.2%
1	63.2%	9	51.7%
35	60.5%	70	50.1%
34	58.5%	7	44.3%
2	56.0%	8	43.7%
5	52.3%	11	42.8%
6	50.9%	17	42.4%
4	45.6%	14	41.1%
29	34.3%	12	41.0%
95	33.7%	10	38.8%
49	27.8%	13	38.4%
54	26.3%	1	38.0%
12	25.4%	26	35.8%
11	25.1%	3	32.8%
92	24.0%	53	32.6%
27	23.0%	94	31.9%

The Senate tells a similar story. Under the Benchmark Plan, seven districts are contained wholly within Wayne County. Under the Linden Plan, however, these districts are drawn out into the suburbs as well, with eight districts crossing over the Wayne County line into either Oakland or Macomb counties.

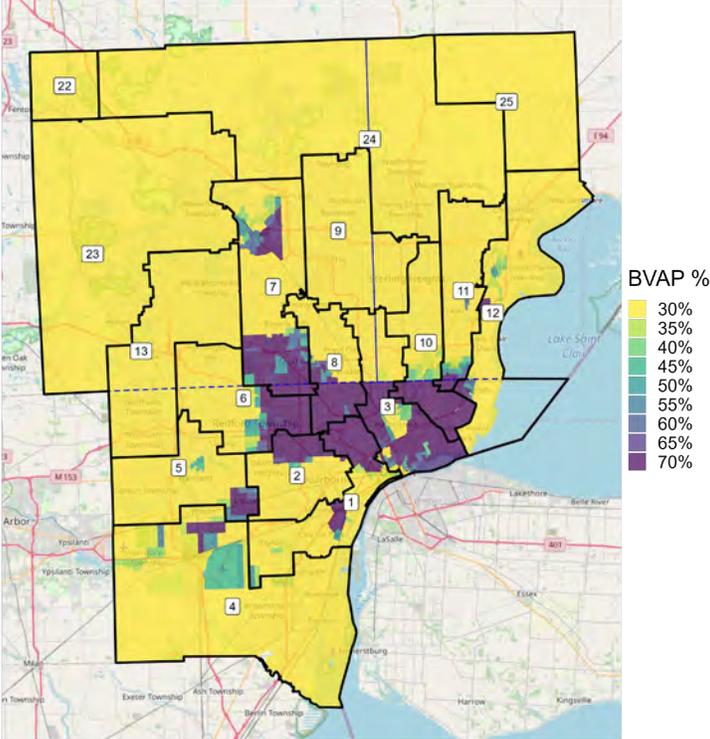
Figures 9, 10

Detroit Area Senate Districts, Benchmark Plan, by BVAP



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Detroit Area Senate Districts, Linden Plan, by BVAP

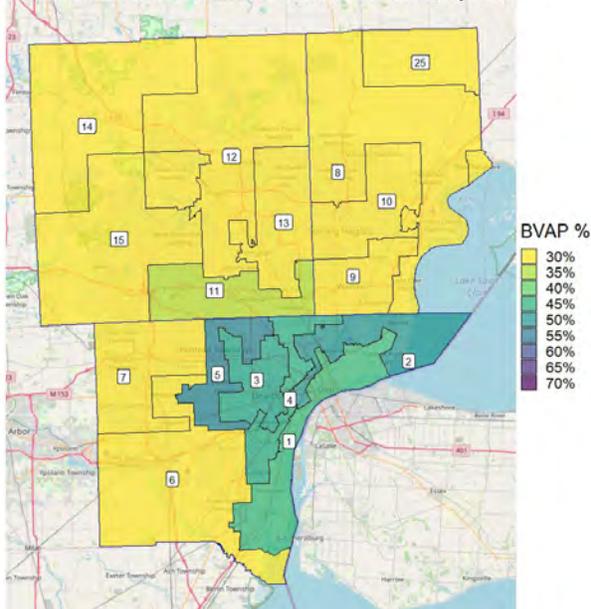


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The end result of these changes is the same as with the House. Consistent with the exchanges reported in the Szetela Report, the BVAPs in the districts are decreased substantially. The Benchmark Plan had two districts drawn in excess of 50% BVAP and three more in excess of 45% BVAP. The Linden Plan, however, has just one district drawn in excess of 45% BVAP: A single district at 47.05% BVAP.

Figure 11

Detroit Area Senate Districts, Benchmark Plan, by BVAP



Detroit Area Senate Districts, Linden Plan, by BVAP

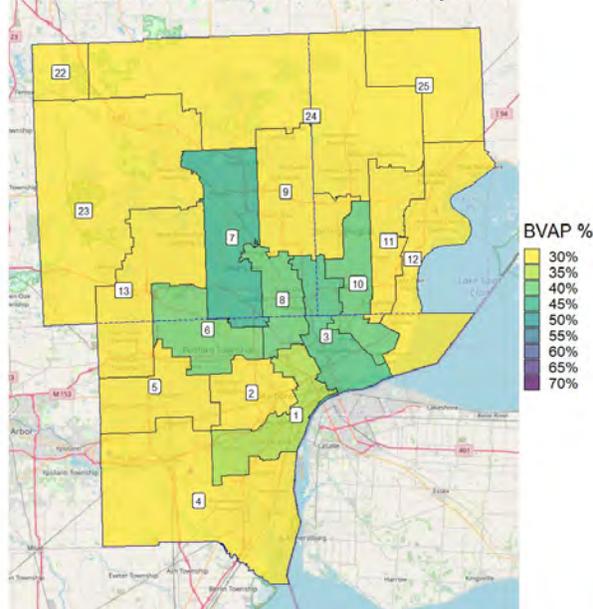


Table 2

BVAP in 10 Most Heavily Black Michigan Senate Districts			
Benchmark Plan		Linden Plan	
District	BVAP	District	BVAP
5	52.5%	7	44.8%
2	49.3%	3	42.1%
3	46.7%	10	40.4%
4	45.4%	8	40.2%
1	43.1%	6	39.1%
11	34.0%	1	35.0%
27	28.8%	27	27.3%
9	21.7%	2	24.5%
6	19.9%	11	19.2%
12	13.9%	5	18.3%

The result of this is a shift of political power away from Wayne County’s Black population and into the suburbs. Under the Benchmark Plan, seven districts contain a majority of their population in Wayne County, five of which are districts with substantial Black populations. Under the Linden Plan, that number falls to six (districts 1-6). Of those six districts, only three are even arguably districts that would likely elect the Black candidate of choice in a polarized primary.

VI. Analysis of Michigan House of Representatives Hickory Plan

A. Gingles factors

1. Numerosity/compactness

First, I was asked to draw a map that would include reasonably configured districts in the Wayne County area with Black majority VAPs, while reducing township, county and city splits. I was able to draw 10 such districts, though it is possible that an 11th could be drawn with more aggressive county splitting. For purposes of this map, I only changed districts 1-34 and 46-72. It is possible that a less disruptive map could be drawn by sacrificing compactness or splitting more township, county and city lines. A map of the altered districts follows, along with a summary of the relevant data from them. Individual maps of the districts follow in Appendix C.

Figure 12

Plaintiffs' House Demonstration Map

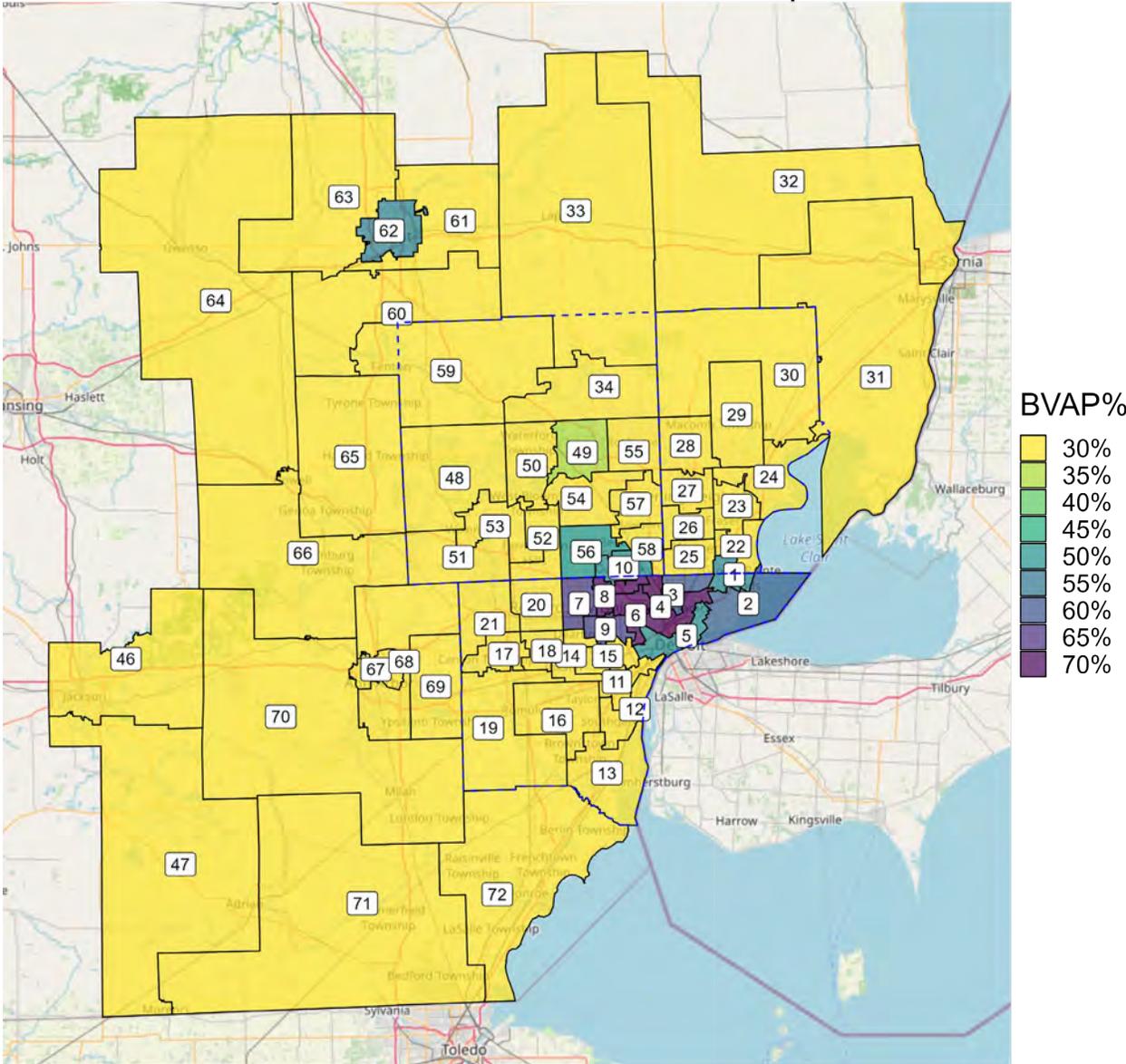


Table 3

Demonstration Plan, With Population Deviation and Racial Statistics						
District	Population	Deviation	BVAP	HVAP	AVAP	WVAP
1	90,872	-0.81%	51.64%	1.86%	1.15%	41.81%
2	90,379	-1.35%	58.11%	1.73%	1.13%	35.99%
3	90,112	-1.64%	59.87%	1.13%	14.02%	20.93%
4	90,823	-0.86%	74.95%	1.84%	3.29%	16.03%
5	89,556	-2.24%	50.34%	22.95%	1.71%	21.60%
6	89,981	-1.78%	81.81%	8.19%	0.27%	6.37%
7	91,561	-0.06%	63.14%	2.52%	0.62%	29.65%
8	90,500	-1.21%	92.15%	0.96%	0.18%	3.44%
9	89,561	-2.24%	62.48%	4.43%	0.32%	28.99%
10	91,073	-0.59%	50.13%	2.11%	1.37%	42.48%
11	90,101	-1.65%	13.20%	22.54%	0.75%	58.90%
12	92,101	0.53%	11.63%	8.17%	1.36%	74.39%
13	90,686	-1.01%	5.42%	4.84%	2.71%	82.74%
14	91,169	-0.48%	26.64%	4.01%	1.56%	63.27%
15	89,480	-2.33%	4.86%	3.85%	3.43%	83.82%
16	92,146	0.58%	24.70%	5.94%	2.14%	61.77%
17	92,821	1.32%	12.00%	3.30%	17.24%	63.53%
18	90,252	-1.48%	15.32%	3.85%	2.65%	73.09%
19	93,429	1.98%	20.83%	4.02%	2.85%	67.10%
20	91,203	-0.45%	4.59%	3.04%	3.19%	85.65%
21	89,848	-1.93%	2.70%	2.94%	10.90%	80.39%
22	93,637	2.21%	10.15%	2.24%	1.36%	81.96%
23	93,890	2.49%	14.72%	2.32%	1.89%	76.83%
24	93,474	2.03%	12.24%	2.65%	1.59%	79.48%
25	92,715	1.20%	22.37%	2.48%	9.08%	61.22%

Demonstration Plan, With Population Deviation and Racial Statistics						
District	Population	Deviation	BVAP	HVAP	AVAP	WVAP
26	92,528	1.00%	11.02%	1.81%	9.64%	74.15%
27	93,117	1.64%	4.90%	2.30%	7.31%	82.29%
28	92,854	1.36%	3.48%	2.73%	3.99%	86.44%
29	91,167	-0.49%	4.87%	2.61%	3.45%	85.73%
30	93,861	2.45%	4.61%	3.49%	0.91%	87.12%
31	93,820	2.41%	0.69%	1.88%	0.48%	93.31%
32	92,029	0.46%	3.38%	4.95%	0.60%	87.00%
33	92,785	1.28%	1.34%	2.56%	0.66%	91.19%
34	93,886	2.48%	2.20%	4.41%	3.97%	85.57%
46	91,993	0.42%	12.29%	3.64%	1.13%	78.18%
47	89,412	-2.40%	3.49%	6.61%	0.65%	85.39%
48	92,464	0.93%	1.32%	2.66%	1.40%	90.43%
49	90,740	-0.95%	34.88%	14.25%	5.72%	40.83%
50	93,759	2.34%	5.76%	5.45%	2.83%	81.87%
51	93,406	1.96%	4.03%	3.19%	18.49%	71.03%
52	92,456	0.92%	17.20%	2.46%	11.93%	64.91%
53	93,730	2.31%	12.43%	3.35%	11.88%	68.78%
54	93,319	1.86%	4.81%	2.41%	10.91%	78.87%
55	93,529	2.09%	3.53%	3.95%	13.79%	75.37%
56	91,881	0.29%	48.57%	2.34%	2.86%	42.47%
57	90,059	-1.70%	4.05%	3.07%	19.85%	69.89%
58	93,511	2.07%	5.55%	3.25%	4.10%	82.75%
59	92,096	0.53%	1.06%	2.81%	0.93%	90.99%
60	90,009	-1.75%	7.66%	3.03%	2.32%	82.54%
61	93,087	1.61%	8.04%	3.56%	0.54%	82.83%

Demonstration Plan, With Population Deviation and Racial Statistics						
District	Population	Deviation	BVAP	HVAP	AVAP	WVAP
62	92,254	0.70%	52.78%	4.22%	0.64%	37.23%
63	92,004	0.43%	13.58%	3.11%	0.79%	78.06%
64	91,781	0.18%	0.38%	2.63%	0.47%	92.58%
65	93,313	1.86%	0.48%	2.30%	0.94%	92.62%
66	90,475	-1.24%	0.75%	2.29%	0.95%	92.05%
67	92,042	0.47%	5.39%	4.95%	17.22%	67.13%
68	91,181	-0.47%	8.99%	5.42%	12.19%	68.61%
69	91,150	-0.50%	26.33%	5.71%	3.86%	57.73%
70	91,383	-0.25%	3.85%	3.74%	3.57%	84.60%
71	93,198	1.73%	0.63%	3.26%	0.55%	91.70%
72	92,559	1.03%	3.20%	3.66%	0.68%	87.69%

The newly drawn districts are roughly as compact as their counterparts in the Hickory Plan’s districts (the compactness metrics are described in more detail below). The mean Reock score is 0.425, while the mean Polsby-Popper score is 0.417. This is comparable to the Hickory Plan’s mean scores of 0.37 on both metrics. The least compact district under the Hickory Plan is 0.155 for the Reock Score and 0.136 for the Polsby-Popper metric; this is comparable to 0.227 and 0.189 for the Demonstration map.

In addition, the districts split fewer counties than the Hickory Map. The Macomb/Oakland county line remains intact. The Wayne County/Macomb county line is crossed just once, while the Wayne County/Oakland county line is crossed twice. No boundary between counties in the newly drawn district other county line is crossed more than once, with one exception. The St.Clair/Macomb County boundary is traversed three times; two of those traversals are created to keep cities intact. With a few exceptions (the three-way split of New Baltimore), townships and cities are split no more than once, and a whole district is generally contained within a city if possible.

2. Polarized voting

Winning an election is a three-step process: (1) Candidate emergence; (2) the partisan primary; (3) the general election. Candidate emergence is an understudied phenomenon in political science, and it is hard to draw firm conclusions here. There is no realistic question here

about the general election, as every district that has a BVAP of at least 35% is overwhelmingly Democratic. Since Black voters express a consistently strong preference for Democrats in the aggregate, the Black candidate of choice will almost certainly win the general election. General election data is therefore not relevant to our inquiry.

The question here is wholly one of whether the Black candidate of choice can emerge victorious from the Democratic primary. Answering this question, however, presents a thorny set of complications. First, the data aren't rich with respect to primary challenges. This is especially true in statewide races. Second, we lack confirmatory data on what turnout would look like in Democratic primaries. There are no exit polls against which to check our intuitions, for one thing. More importantly, the MICRC drew the districts with BVAP percentages drawn down into a range where we have little recent experience with Democratic primary elections.

For instance, the Benchmark House Plan contains only one district with a BVAP between 34% and 51%, which makes it difficult to establish a benchmark for where Black candidates of choice begin to encounter difficulties in the primary. The Hickory Plan, by contrast, creates eleven of these districts (and only six districts with a BVAP in excess of 51%). There are only two Senate districts in the Benchmark Senate Plan with a BVAP between 34% and 46.7%; the Linden plan contains six of them (and no districts with a BVAP in excess of 45%).

We are also in an increasingly unstable political alignment. White suburbanites are increasingly finding a home in the Democratic Party, which will change the composition of the Democratic primary electorate, raising the threshold for Black candidates of choice to win a primary election in the presence of racially polarized voting.

Additionally, it is well established that higher socioeconomic status correlates with increased turnout. *See generally* Raymond F. Wolfinger & Steven J. Rosenstone, *Who Votes?* (1980). By extending these districts into the wealthier suburbs, the Commission likely introduced a group of White voters who were more likely to turn out and participate. This, of course, is difficult to measure (since we do not have data at a sufficiently granular level) but it is a risk that analysts much keep in mind.

Despite the data-poor environment, we can nevertheless tease out some conclusions from the evidence. Techniques such as ecological regression and ecological inference have been used in court cases to estimate voting and participation rates. The Handley Report engages in some of

this analysis, and my findings are largely consistent with the Report's in this respect. Handley Report, at Appendix B.

The problem is that the Report does little to justify the BVAP's contained in the districts. In fact, Black candidates increasingly have trouble winning primary elections in the heavily Black districts that already exist. It seems more likely, based upon the data, that this is a recipe for creating an environment where the House and Senate Black caucuses can hold their meetings in an Uber XL. We see some evidence of this in the 2022 elections. As term limits kick in over the course of the decade, we can expect this to accelerate, especially if suburban Whites continue their migration to the Democratic Party.

2018 Gubernatorial Election

The Handley Report finds that there is one statewide primary race with a racialized element: The 2018 gubernatorial race. She seemingly dismisses this race on the grounds that there were three candidates, and Black voters were not cohesive in their support for any candidate. *See Report to the Michigan Independent Citizens Redistricting Commission,* [Handley Report] at 5-6. While the race may not provide the clear-cut results that we might have gotten from, say, the Clinton/Obama primary election in 2008, that does not mean it is of no use to us.

After all, even though Black voters did not cohere around a single candidate, it is not clear that this is a sensible standard for a multi-candidate primary. Outside of theoretical constructs, a threshold below 50% support for a candidate among one group can sometimes make it difficult-to-impossible for the other group's top choice candidate to win, even without complete coalescence. For example, if, in a 50-50 district Black voters split between Candidate A and B but have a heavy preference for A, while rejecting candidate C, while White voters completely reject candidate A but unify behind candidate C, it becomes a very difficult hill for candidate A to amass the votes, even though preferences might nevertheless be clear. This is likely a question for lawyers to argue about and judges to decide, but we will certainly see examples of this in the pages that follow.

The 2018 gubernatorial race featured three candidates: Shri Thanedar, who is Indian-American, Abdul El-Sayed, who is Egyptian-American, and now-Gov. Gretchen Whitmer, who is White. Dr. Handley finds significant division among White and Black voters in this race in Wayne County, with between 42.5 and 45.6% of Black voters supporting Thanedar and 33.7 and 36.1% of Black voters supporting Whitmer. By contrast, 3.9 to 7.5% of White voters supported Thanedar

and between 49.2% and 54.5% of White voters supported Whitmer. Handley Report, at 50. In other words, White voters here rejected the preferred Black candidate, while Black voters expressed a clear preference for Thanedar over Whitmer. Using a different variant of ecological inference, I find that 59.3% of Whites voted for Whitmer while just 3.8% voted for Thanedar, while 37.4% of Blacks voted for Whitmer and 41.13% voted for Thanedar. Thus, my technique and that of Dr. Handley return substantially similar results. While the question of whether, in the context of a three-way race, this equates to sufficient polarization is one for the courts, it is nevertheless striking that only 4% of Whites voted for the plurality choice of Black residents of Wayne County, while Black voters voted for a choice other than the solid choice of White voters.

Wayne County is not a monolith, however. White voters in, say, Hamtramck, are different in many ways from White voters in Livonia. This may play out in the Democratic primary, resulting in different estimates in different areas of the city. To test this, I pulled the precincts for each of the Benchmark House districts contained entirely within Wayne County. I then performed an ecological inference analysis for each district. The results are displayed on the following four pages.

Table 4

Ecological Inference, 2018 Democratic Primary, House Benchmark Plan 1-6				
Race	Party	Estimate	Lower 95%	Upper 95%
District 1				
Black	Thanedar	45.65%	39.56%	51.31%
NH White	Thanedar	4.36%	1.65%	8.28%
Black	Whitmer	36.60%	29.71%	43.09%
NH White	Whitmer	60.35%	52.82%	67.66%
District 2				
Black	Thanedar	50.55%	46.78%	54.39%
NH White	Thanedar	2.76%	1.31%	4.82%
Black	Whitmer	32.64%	27.69%	36.93%
NH White	Whitmer	60.35%	54.70%	65.68%
District 3				
Black	Thanedar	40.14%	34.18%	45.57%
NH White	Thanedar	23.83%	11.04%	44.67%
Black	Whitmer	40.75%	34.66%	46.99%
NH White	Whitmer	32.61%	13.80%	56.83%
District 4				
Black	Thanedar	49.51%	44.47%	54.65%
NH White	Thanedar	8.00%	3.65%	13.68%
Black	Whitmer	35.30%	29.57%	40.56%
NH White	Whitmer	12.50%	5.96%	21.73%
District 5				
Black	Thanedar	51.14%	47.55%	54.54%
NH White	Thanedar	18.32%	6.92%	34.71%
Black	Whitmer	34.80%	31.20%	38.08%
NH White	Whitmer	26.29%	11.18%	44.87%
District 6				
Black	Thanedar	41.02%	36.15%	45.93%
NH White	Thanedar	14.86%	6.22%	25.83%
Black	Whitmer	35.40%	29.77%	40.77%
NH White	Whitmer	31.52%	16.29%	47.51%

Ecological Inference, 2018 Democratic Primary, House Benchmark Plan 7-12

Race	Party	Estimate	Lower 95%	Upper 95%
District 7				
Black	Thanedar	43.39%	39.30%	47.36%
NH White	Thanedar	31.27%	9.30%	63.58%
Black	Whitmer	37.17%	33.60%	40.67%
NH White	Whitmer	35.07%	12.79%	58.08%
District 8				
Black	Thanedar	37.80%	34.71%	41.20%
NH White	Thanedar	31.53%	14.15%	55.25%
Black	Whitmer	40.46%	36.81%	43.71%
NH White	Whitmer	27.28%	10.29%	50.12%
District 9				
Black	Thanedar	50.52%	46.99%	53.99%
NH White	Thanedar	11.43%	5.37%	19.27%
Black	Whitmer	37.93%	34.52%	41.34%
NH White	Whitmer	11.83%	5.13%	21.18%
District 10				
Black	Thanedar	39.04%	35.18%	42.68%
NH White	Thanedar	15.45%	6.73%	28.07%
Black	Whitmer	41.61%	37.10%	45.85%
NH White	Whitmer	54.13%	33.75%	71.92%
District 11				
Black	Thanedar	53.96%	42.99%	64.37%
NH White	Thanedar	6.69%	3.25%	10.94%
Black	Whitmer	29.92%	19.19%	41.68%
NH White	Whitmer	43.68%	29.85%	55.07%
District 12				
Black	Thanedar	32.26%	22.52%	43.54%
NH White	Thanedar	17.64%	7.88%	30.52%
Black	Whitmer	44.36%	30.53%	57.21%
NH White	Whitmer	63.23%	44.92%	78.46%

Ecological Inference, 2018 Democratic Primary, House Benchmark Plan 13-16, 19-20

Race	Party	Estimate	Lower 95%	Upper 95%
District 13				
Black	Thanedar	22.47%	9.13%	41.37%
NH White	Thanedar	6.40%	3.21%	10.65%
Black	Whitmer	44.71%	18.39%	68.51%
NH White	Whitmer	56.75%	42.44%	68.63%
District 14				
Black	Thanedar	25.33%	9.80%	47.39%
NH White	Thanedar	7.49%	3.53%	12.61%
Black	Whitmer	40.97%	17.11%	66.46%
NH White	Whitmer	65.47%	54.68%	74.60%
District 15				
Black	Thanedar	18.91%	7.31%	36.09%
NH White	Thanedar	2.56%	1.37%	3.97%
Black	Whitmer	41.07%	19.04%	62.46%
NH White	Whitmer	32.14%	27.00%	37.53%
District 16				
Black	Thanedar	35.27%	17.39%	56.92%
NH White	Thanedar	8.57%	4.10%	14.50%
Black	Whitmer	47.53%	25.12%	68.78%
NH White	Whitmer	75.76%	66.14%	84.05%
District 19				
Black	Thanedar	23.38%	8.58%	44.12%
NH White	Thanedar	3.13%	1.56%	5.06%
Black	Whitmer	44.05%	17.89%	69.49%
NH White	Whitmer	76.56%	68.08%	83.83%
District 20				
Black	Thanedar	22.83%	8.84%	42.64%
NH White	Thanedar	3.22%	1.75%	5.14%
Black	Whitmer	32.77%	11.30%	58.15%
NH White	Whitmer	70.97%	64.53%	77.06%

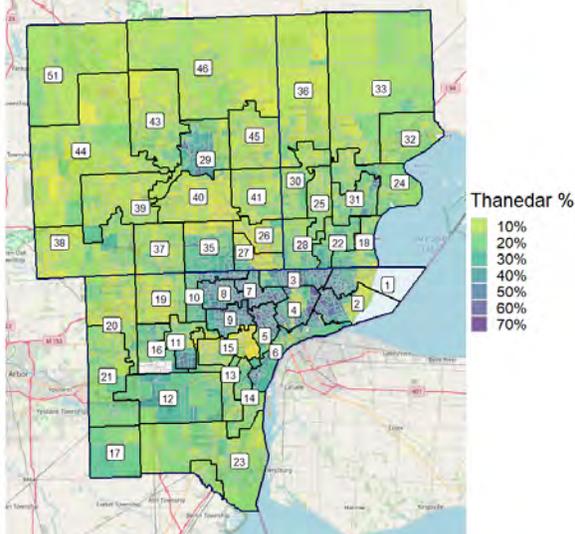
Ecological Inference, 2018 Democratic Primary, House Benchmark Plan 21				
Race	Party	Estimate	Lower 95%	Upper 95%
District 21				
Black	Thanedar	24.55%	11.24%	41.37%
NH White	Thanedar	7.64%	3.25%	13.80%
Black	Whitmer	51.36%	28.99%	71.24%
NH White	Whitmer	73.84%	60.10%	84.54%

Looking this over, a few things should stand out. First, White voters and Black voters tend to have very different views of Thanedar, particularly in the “core” Detroit districts. Likewise, Black and White voters tend to have different views of Whitmer. Finally, White support for Whitmer does, in fact, increase in suburban districts relative to urban districts. Thus, a district that stretches out into the suburbs would gain a disproportionate number of voters who would not be likely to favor the Black candidate of choice in a Democratic primary. Black support in the suburbs rises as well, although the number of Black voters in these districts becomes so small that it is impossible to say for certain whether this is the case. This is consistent with Dr. Handley’s analysis of Oakland County, which finds virtually no White support for Thanedar there, with the small number of Black voters splitting between Thanedar, Whitmer and El-Sayed. In other words, Black voters in the suburbs seem to not form a natural coalition with Black voters in Detroit proper.

The result of “baconmandering” Wayne County’s Black majority districts into the suburbs can be seen in the following two sets of maps, which show levels of support for Thanedar and Whitmer at the precinct level, with the Hickory and Benchmark maps superimposed.

Figure 13

Thanedar Performance by VTD, Benchmark Plan



Thanedar Performance by VTD, Hickory Plan

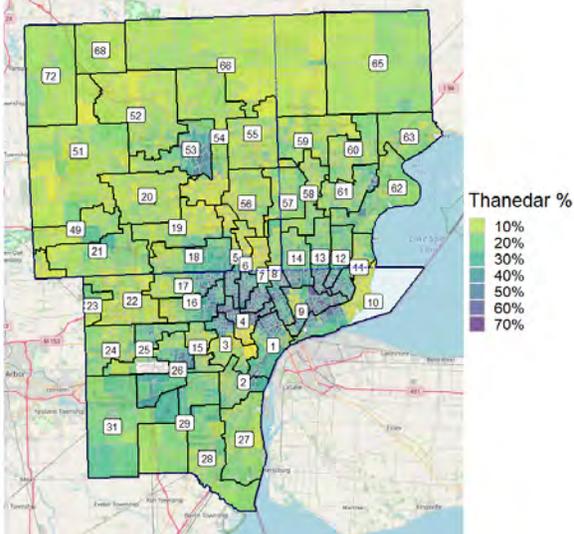
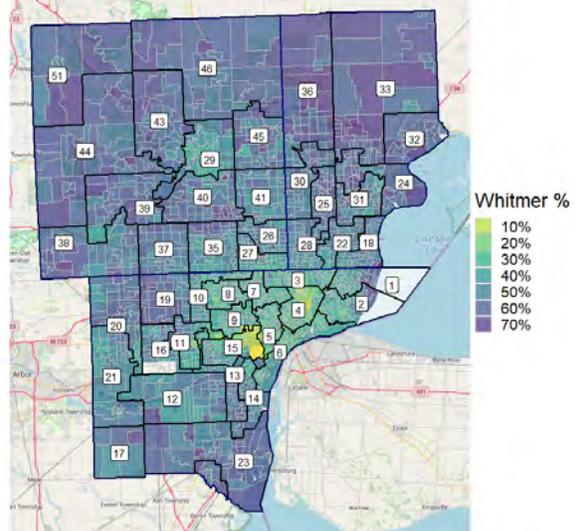
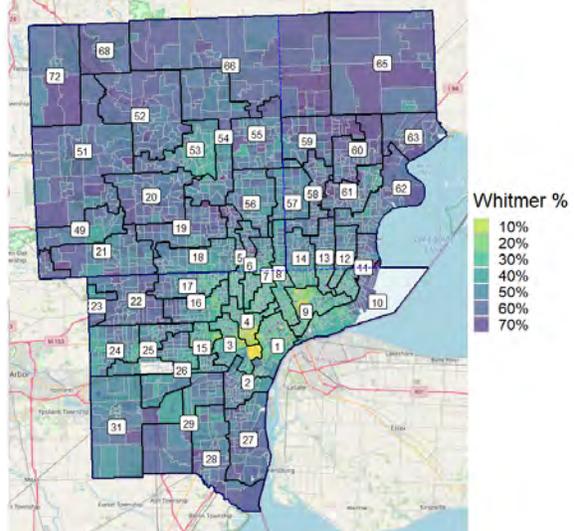


Figure 14

Whitmer Performance by VTD, Benchmark Plan



Whitmer Performance by VTD, Benchmark Plan



Thanedar’s areas of strength under the Benchmark Plan are consolidated in districts 5, 7, 8 and 9, which he carried under the Benchmark Plan, with significant pockets of strength in Districts 3, 6 and 10. The Hickory Plan, however, cuts this cluster of support among multiple districts, sending them out into areas of the region where Thanedar was weak and Whitmer was strong. In other words, it takes precincts where the Black candidate of choice in Wayne County was strong and combines them with precincts where the Black candidate candidate of choice fared poorly.

The net result of this is striking. Under the Benchmark Plan, Thanedar carried four districts in the Detroit area, while El-Sayed carried two and Whitmer carried the balance. Under the Hickory Plan, however, Thanedar carried zero districts. His best showing in a district under the Benchmark Plan was 41.5% of the vote, in District 7, followed closely by his 41.2% showing in District 5. Under the Hickory Plan, Thanedar's best performance comes in District 1, where he received just 33.7% of the vote; the next best showing comes in District 4, where he received 31.3% of the vote (and lost overall by 1200 votes to El-Sayed, who carries four districts under the Hickory Map). To put this in perspective, 33.7% of the vote would be Thanedar's sixth-best showing under the Benchmark Plan, while 31.3% would have been just his seventh-best performance.

In short, there is substantial evidence of racially polarized voting in the 2018 gubernatorial primary, particularly in Detroit proper. The Hickory Map, however, rearranges precincts in such a way that the Black candidate of choice loses them all, while the position of the White candidate of choice is improved.

House Primaries

House data are significantly more difficult to come by, particularly regarding the race of challengers for the House. We therefore cannot replicate the tables we find below for the Senate races neatly. At the same time, though, House elections occur more frequently than Senate elections. I was able to match House election data from the Wayne County Clerk's website (<https://www.waynecounty.com/elected/clerk/november-6-2018-general-election-results.aspx>) to the precinct files and analyze whether Black candidates of choice would be able to emerge from primaries.

There can be little doubt that the Black candidate of choice would win in Benchmark House districts 3, 7 and 8, since those districts had no White population to speak of; this lack of a White population will also make a racially polarized voting analysis difficult to conduct here. I therefore concentrate my analysis on Districts 2 (56% BVAP), 4 (45.5% BVAP), 5 (52.3% BVAP), 6 (50.9% BVAP), 9 (72.2% BVAP), 10 (65.4% BVAP), and 35 (60.5% BVAP).

I note at the outset that Dr. Handley identifies Benchmark District 29 as a district where the Black candidate of choice lost in a polarized primary. Handley Report at 12. That district has a BVAP of 34.3%. The next-closest House district has a BVAP of 47%. Thus, there is no evidence suggesting that the Black candidate of choice can win a polarized primary in a district with a BVAP

below 47%. In fact, the lowest BVAP for which Dr. Handley produces actual estimates is District 6 in 2020, which is 53% Black and where the Black candidate of choice won by just 3%. In fact, there is just one example of a Black candidates winning a racially polarized primary in the Detroit area in districts with a BVAP below 47% in the districts that the Handley Report examines: The 2018 primary where the Black incumbent – who had initially been chosen by district delegates in a special election -- won in District 11.

Most of the races here are difficult to interpret, because they often feature multiple candidates running. Some races do stand out, however, particularly from the 2018 elections. For example, in the 2nd House District (60.3% BVAP), Joe Tate emerged victorious from a crowded field. Although Black voters did not coalesce behind a single candidate, White voters did. That candidate was Tate, who earned 67% of the White vote, but was the 5th choice of Black voters. White voters, by contrast, gave just 8% of the vote to the Black-preferred candidate.

Table 5

Ecological Inference, 2nd House District Primary, 2018			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Joe Tate	18.60%	6.51%	33.76%
Carla Tinsley-Smith	21.54%	7.05%	37.84%
Latisha Johnson	20.41%	7.17%	37.23%
Carol Banks	13.02%	4.23%	24.76%
Willie Bell	9.68%	3.20%	19.17%
Regina Jones	10.35%	3.46%	18.12%
Kinda Makini Anderson	4.48%	1.54%	8.78%
Black			
Joe Tate	9.40%	7.01%	12.00%
Carla Tinsley-Smith	23.35%	19.82%	26.98%
Latisha Johnson	18.09%	15.11%	21.06%
Carol Banks	21.56%	18.89%	24.24%
Willie Bell	18.07%	15.68%	20.25%
Regina Jones	4.92%	4.02%	5.85%
Kinda Makini Anderson	4.21%	3.19%	5.28%
Hispanic			
Joe Tate	19.92%	6.73%	35.13%
Carla Tinsley-Smith	22.59%	8.08%	37.91%
Latisha Johnson	17.98%	6.51%	32.78%
Carol Banks	17.21%	5.17%	29.89%
Willie Bell	10.38%	3.76%	19.63%
Regina Jones	5.64%	1.99%	11.27%
Kinda Makini Anderson	5.20%	1.94%	9.90%
NH White			
Joe Tate	68.94%	63.03%	74.68%
Carla Tinsley-Smith	7.73%	4.05%	12.56%
Latisha Johnson	11.42%	6.59%	16.71%
Carol Banks	4.17%	1.96%	7.03%
Willie Bell	2.94%	1.32%	5.16%
Regina Jones	2.78%	1.64%	4.14%
Kinda Makini Anderson	1.51%	0.79%	2.43%

The 2018 primary in the 5th District (54.1% BVAP) is another race where it is difficult to say whether the voters were polarized. Black voters generally backed Cynthia Johnson, while White voters favored Rita Ross. But this is hardly a solid example of a race where we would be confident that the Black candidate of choice would emerge successfully from a district with a BVAP in the low 40s; Johnson won by just nine votes in this heavily Black district.

Table 6

Ecological Inference, 5th House District Primary, 2018			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Cynthia Johnson	19.25%	6.10%	36.35%
Rita Ross	19.29%	5.44%	41.74%
Mark Payne	17.42%	5.05%	34.10%
Cliff Woodward	9.62%	3.09%	19.54%
Mark Murphy	13.75%	3.79%	27.59%
Jermaine Tobey	14.73%	4.53%	27.30%
Black			
Cynthia Johnson	40.92%	38.06%	43.89%
Rita Ross	37.59%	34.47%	40.56%
Mark Payne	10.63%	8.13%	12.87%
Cliff Woodward	5.46%	4.21%	6.73%
Mark Murphy	3.87%	2.56%	5.16%
Jermaine Tobey	0.94%	0.51%	1.47%
Hispanic			
Cynthia Johnson	18.93%	8.13%	32.04%
Rita Ross	31.26%	14.21%	49.21%
Mark Payne	17.82%	8.53%	28.96%
Cliff Woodward	8.19%	3.65%	14.39%
Mark Murphy	7.73%	3.36%	14.17%
Jermaine Tobey	11.40%	4.98%	19.94%
NH White			
Cynthia Johnson	25.81%	10.82%	43.65%
Rita Ross	34.38%	13.88%	54.00%
Mark Payne	10.16%	3.69%	21.10%
Cliff Woodward	6.14%	2.55%	11.64%
Mark Murphy	7.90%	3.53%	14.39%
Jermaine Tobey	11.19%	4.95%	19.28%

Most of the other races are difficult to interpret. Karen Whitsett emerged victorious from a polarized race in 2020, but it was not a resounding victory; she won with 45% of the vote over divided opposition in this district.

In addition to replicating the analyses in the 2018 and 2020 races that Dr. Handley references in her report, I was also able to find a shapefile of precincts for the 2014, 2016 and 2022. The results are summarized in the following tables. These tables provide the BVAP for the district, the identification and vote share for the Black-preferred and White-preferred candidates, as well as the margin between the Black-preferred candidate and the White-preferred candidate.

Rows where Black and White voters agreed on their candidate of choice are shaded white; rows where they disagreed but the Black candidate of choice prevailed are shaded green, while rows where they disagreed but the White candidate of choice prevailed are shaded red.

Table 7

2014 House EI Summary										
District	BVAP	Black 1st Choice	Black 1st Choice %	Black 2nd Choice	Black 2nd Choice %	White 1st Choice	White 1st Choice %	White 2nd Choice	White 2nd Choice %	Black Cand Margin%
Prior House 7	92.00%	LaTanya Garrett	41.46%	Nicole Stallworth	37.78%	James Cole	21.39%	Nicole Stallworth	18.71%	19.38%
Prior House 8	90.10%	Sherry Gay-Dagnogo	53.85%	Stacy Pugh	27.59%	Stacy Pugh	29.89%	Sherry Gay-Dagnogo	29.56%	17.30%
Prior House 3	88.60%	Wendell Byrd	31.25%	Clarence Gayles	20.61%	Clarence Gayles	30.78%	Carron Pinkins	18.73%	3.30%
Prior House 9	72.20%	Harvey Santana*	83.44%	Hussein Berry	16.56%	Hussein Berry	60.19%	Harvey Santana*	39.81%	50.60%
Prior House 10	65.40%	Leslie Love	45.64%	Roy McCalister, Jr.	34.67%	Jay Johnson	67.86%	Leslie Love	–	12.70%
Prior House 1	63.20%	Brian Banks*	70.73%	Rebecca Thompson	19.50%	Rebecca Thompson	52.88%	Michael Koester	24.81%	6.70%
Prior House 2	56.00%	Alberta Talabi*	92.89%	Andrew Casazza	4.08%	Andrew Casazza	78.55%	Alberta Talabi*	16.18%	40.00%
Prior House 5	52.30%	Fred Durhal*	55.30%	Cynthia Johnson	34.90%	Fred Durhal*	30.76%	Cynthia Johnson	26.14%	–
Prior House 6	50.90%	Stephanie Chang	50.72%	Tyrone Carter	40.53%	Stephanie Chang	54.03%	Tyrone Carter	22.08%	–
Prior House 4	45.60%	Rose Mary Robinson*	93.53%	Mohammed Hassan	6.47%	Rose Mary Robinson*	72.57%	Mohammed Hassan	27.43%	–

In 2014, Black and White voters agreed on the candidates of choice in districts 4-6, which also happened to be the districts with the lowest BVAPs. Two things stand out. First, these districts are often heavily polarized. For example, in House District 2, Alberta Tinsley Talabi received

92.89% of the vote from Black voters, but just 16.18% from White voters. Second, even in overwhelmingly Black districts, these candidates frequently have close calls. Wendell Byrd had a close call in an 89% Black District, while Brian Banks won by just 7 points in a 63% BVAP district; White voters gave him just 15% of their vote.

The 2016 elections tell a similar story.

Table 8

2016 House EI Summary										
District	BVAP	Black 1st Choice	Black 1st Choice %	Black 2nd Choice	Black 2nd Choice %	White 1st Choice	White 1st Choice %	White 2nd Choice	White 2nd Choice %	Black Cand Margin%
Prior House 7	92.00%	LaTanya Garrett*	93.16%	Bernard Thompson	6.84%	LaTanya Garrett*	61.00%	Bernard Thompson	39.00%	–
Prior House 8	90.10%	Unopposed	–	–	–	–	–	–	–	–
Prior House 3	88.60%	Wendell Byrd*	53.42%	Al Williams	17.99%	Wendell Byrd	33.97%	Al Williams	26.30%	–
Prior House 9	72.20%	Sylvia Santana	54.09%	Gary Pollard	33.27%	Gary Pollard	39.01%	Sylvia Santana	15.20%	18.84%
Prior House 10	65.40%	Leslie Love*	84.03%	Mary Cavanagh	11.75%	Leslie Love*	46.71%	Mary Cavanagh	34.08%	–
Prior House 1	63.20%	Brian R. Banks*	73.75%	Washington Youson	9.88%	Pamela Sossi	80.77%	Brian R. Banks*	9.69%	9.22%
Prior House 2	56.00%	Bettie Cook Scott	42.22%	Carla Tinsley-Smith	31.90%	Jeremy Henner	59.13%	Joe Tate	18.40%	6.27%
Prior House 5	52.30%	Fred Durhal*	59.70%	Cynthia Johnson	40.30%	Cynthia Johnson	53.30%	Fred Durhal	46.70%	14.82%
Prior House 6	50.90%	Stephanie Chang	80.36%	Dennis Black	6.50%	Stephanie Chang	53.81%	Dennis Black	11.29%	–
Prior House 4	45.60%	Rose Mary Robinson*	64.56%	Quincy Jones	23.09%	Rose Mary Robinson*	42.51%	Quincy Jones	18.76%	–

Here, we see a little less polarization, but still see the Black candidate of choice pulling through, sometimes narrowly, in majority-Black districts. Overall, there is little in the margin of victory for Black-preferred candidates that might suggest non-incumbent Black candidates would be successful in races with BVAP shares in the low 40s.

Finally, we can evaluate the results of the Hickory map. Four Black candidates of choice were defeated. Perhaps most strikingly, in the *open* seats, Black candidates of choice lost four of the six races, including a race in a Black-majority district. Hickory District 17 was unopposed; Rep. Laurie Pohutsky, who previously represented an 85% White district in the suburbs, did not draw a challenge.

Table 9

2022 House EI Summary										
District	BVAP	Black 1st Choice	Black 1st Choice %	Black 2nd Choice	Black 2nd Choice %	White 1st Choice	White 1st Choice %	White 2nd Choice	White 2nd Choice %	Black Cand Margin%
Hickory 4	55.60%	Karen Whitsett*	66.00%	Lori Turner	32.30%	Gus Tarraf	79.85%	Karen Whitsett	13.71%	37.30%
Hickory 5	55.30%	Reggie Davis	62.00%	Steele Hughes	15.79%	Natalie Price	63.09%	Michelle Wooddell	22.13%	-8.70%
Hickory 6	54.90%	Regina Weiss*	46.00%	Danielle Hall	25.64%	Regina Weiss*	91.01%	Myya Jones	3.82%	-
Hickory 16	54.90%	Stephanie Young*	94.00%	Ishmail Terry	5.74%	Stephanie Young*	92.56%	Ishmail Terry	7.44%	-
Hickory 18	52.20%	Jason Hoskins	54.00%	Caprice Jackson	45.92%	Jason Hoskins	65.59%	Caprice Jackson	34.41%	-
Hickory 9	51.70%	Abraham Aiyash*	49.00%	Darnell Gardner	29.45%	Abraham Aiyash*	71.50%	Darnell Gardner	7.68%	-
Hickory 7	50.10%	Helena Scott*	90.00%	Melanie Macey	7.55%	Melanie Macey	62.35%	Helena Scott*	34.22%	13.10%
Hickory 8	43.70%	Ernest Little	35.00%	Durrel Douglas	33.62%	Mike McFall	53.37%	Dave Soltis	30.45%	-20.60%
Hickory 11	42.80%	Regina Williams	25.00%	Ricardo White	22.01%	Veronia Paiz	31.91%	Alex Manwell	20.81%	-4.40%
Hickory 17	42.40%	Unopposed	-	-	-	-	-	-	-	-
Hickory 14	41.10%	Donavan McKinney	85.00%	Kristina Lodovisi	9.90%	Donavan McKinney	42.99%	Kristina Lodovisi	32.91%	-
Hickory 12	41.00%	Kimberly Edwards	84.00%	Richard Steenland*	15.84%	Richard Steenland*	62.78%	Kimberly Edwards	37.22%	3.80%
Hickory 10	38.80%	Joe Tate*	90.00%	Toni Mua	9.90%	Joe Tate*	93.48%	Toni Mua	6.52%	-
Hickory 13	38.40%	Lori Stone*	50.00%	Myles Miller	49.78%	Lori Stone*	86.33%	Myles Miller	13.67%	-
Hickory 1	38.00%	Tyrone Carter*	62.00%	Jermaine Tobey	11.85%	Tyrone Carter*	61.66%	Jermaine Tobey	38.34%	-
Hickory 26	35.80%	Steven Chisholm	54.00%	Allen Wilson	29.77%	Dylan Wegela	79.18%	Allen Wilson	8.57%	-15.10%

Four Black candidates of choice fell, often by substantial margins. Black incumbents were largely successful, but they also generally failed to attract serious challenges. According to the nonpartisan Transparency USA, only Melanie Macey and Caprice Jackson raised substantial funds; most raised under \$5,000. Even then, Kimberly Edwards barely won, while Helena Scott had a surprisingly poor showing, despite overwhelming support for Black voters.

In other words, twelve Black candidates of choice won seats in this election. But two of those wins were fairly precarious, and ten of those wins feature incumbents. In open districts,

Black candidates of choice fared worse, boding poorly for the remainder of the decade, especially if better-financed candidates later appear.

B. Racial Predominance

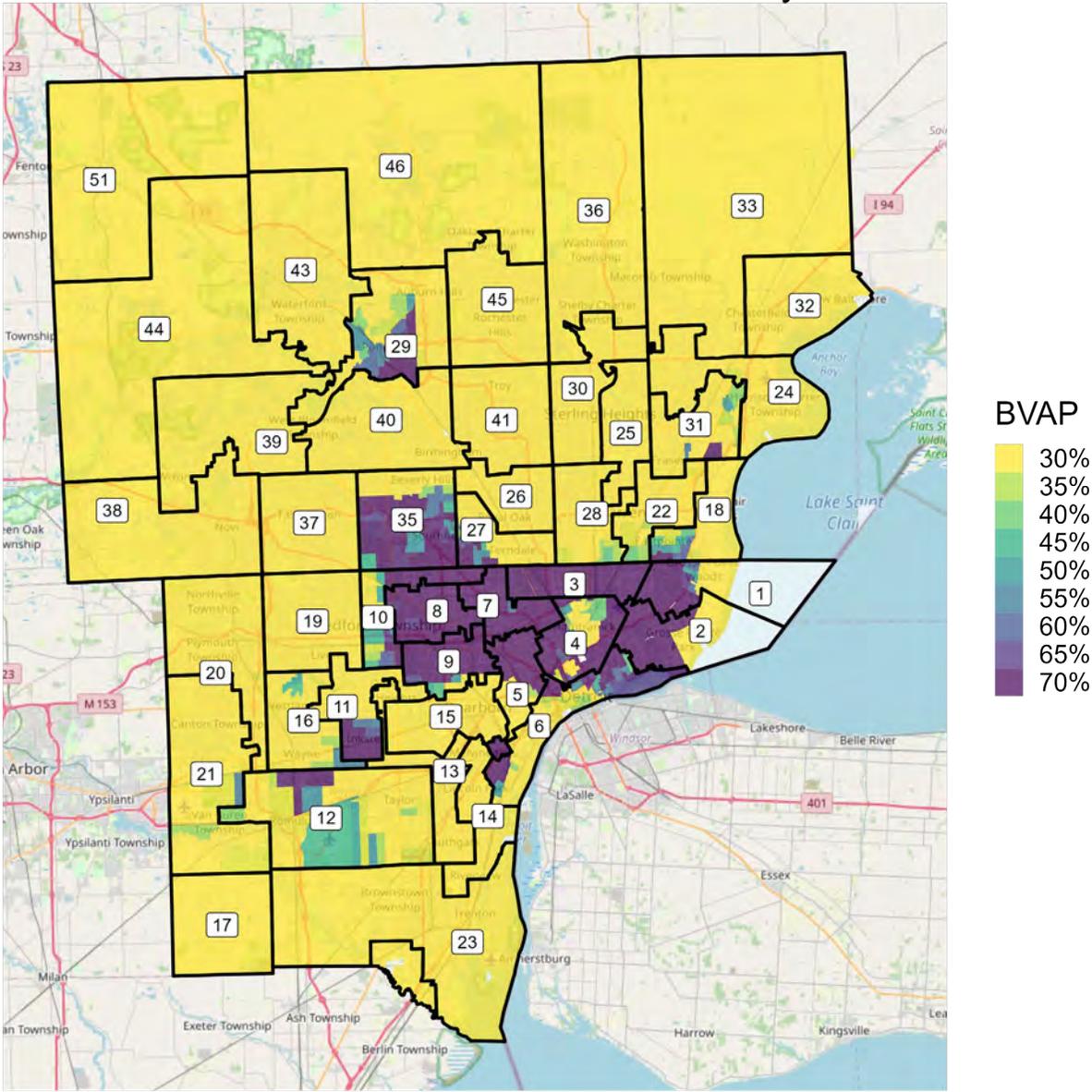
I was also asked to examine whether race predominated in the drawing of the districts in Michigan. Part of this inquiry, to my understanding, is whether traditional redistricting principles are subverted to the goal of drawing districts on the basis of race. This is a demanding inquiry. Yet, it is clear that in the Detroit area, multiple districts are drawn with race as the predominant motive.

1. Background

For purposes of this inquiry, I've examined the districts in Wayne County, and in the two major suburban counties: Macomb and Oakland. As the following figures show, under the Benchmark plan, the districts in this area rarely crossed county lines. Instead, they were often reasonably compact districts that conformed to political boundaries and rarely included appendages and arms.

Figure 15

Benchmark Plan, Detroit Area Districts by Race

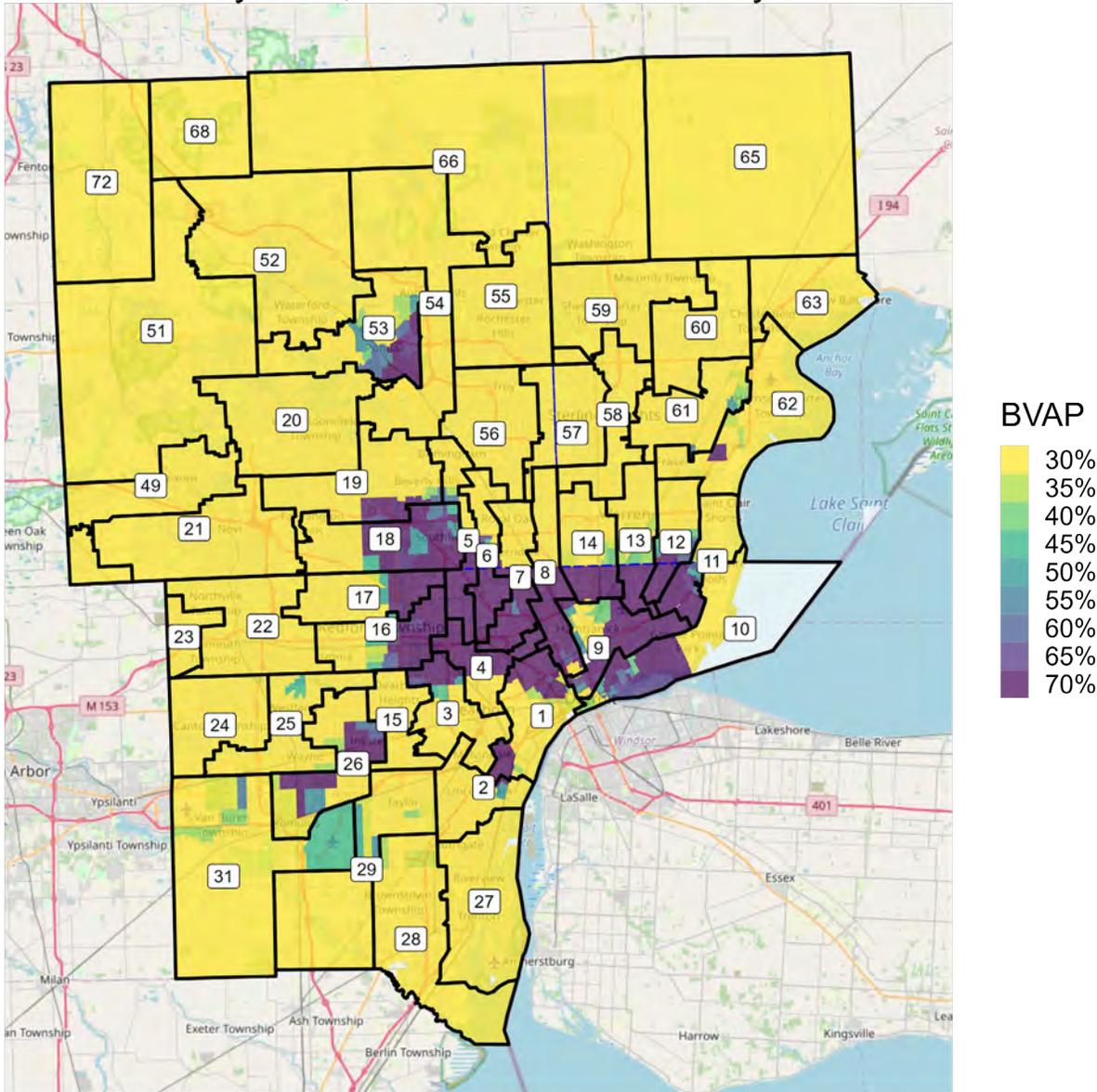


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The Detroit area districts under the Hickory Plan, by contrast, are nothing of the sort.

Figure 16

Hickory Plan, Detroit Area Districts by Race



© OpenStreetMap contributors

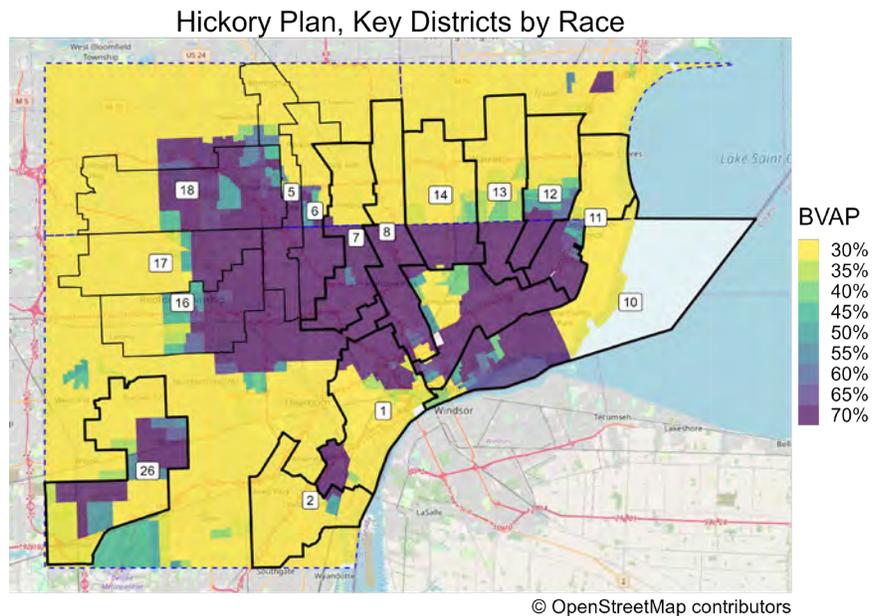
As one can readily see, these districts repeatedly cross the county boundaries. Districts 10, 11, 12, 13 and 14 cross the Wayne-Macomb boundary, districts 5, 6, 7 and 8 cross the Wayne-Oakland boundary, while districts 57 and 66 cross the Oakland-Macomb boundary. This compares with the Benchmark Plan, where none of these boundaries are ever breached.

Moreover, they cross the Wayne County boundary in very particular ways. All of these districts combine heavily Black areas of Detroit with White areas of the two northern counties. The result of this is to keep the Black VAP low, playing dice (as seen above) with the ability of

Black voters to succeed in their ability to elect their candidates of choice. The same is true south of Detroit, where districts 1 (and by extension, 2) and 26 adopt bizarre shapes to achieve their goal.

We can see this better by focusing on the districts challenged in Plaintiffs' First Amended Complaint in particular. We also examine districts 5, 6, 16, 17, and 18. Although not directly challenged, they provide additional (at times, more extreme) examples of the overall strategy of the map drawers: to take portions of the Black community and then stretch the districts out into the suburbs.

Figure 17



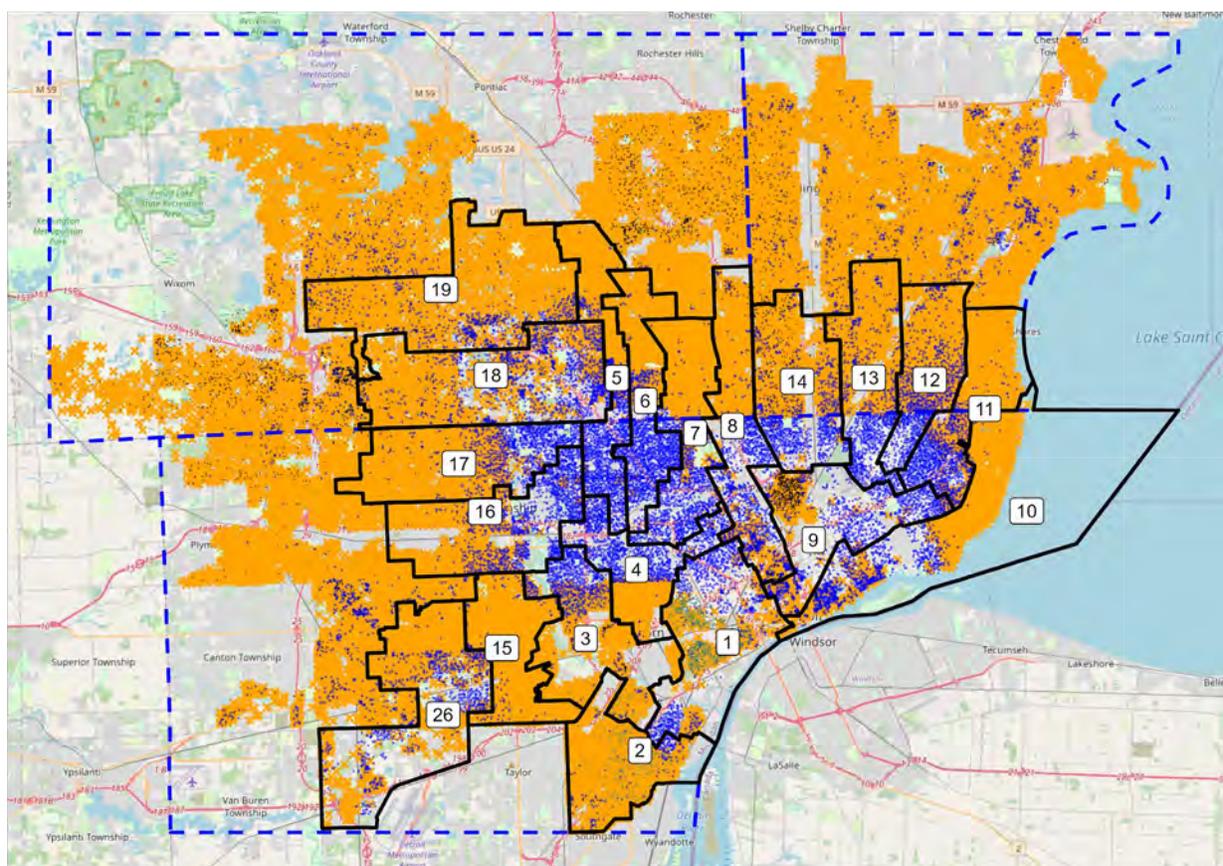
District 1 crosses over a heavily Hispanic area of South Detroit to connect with heavily African-American precincts in southern Detroit and River Rouge, leaving District 2 as a largely bleached district. District 26 takes on a strange hook shape, connecting Black precincts in Inkster and Romulus with heavily White precincts in Garden City. The strategy, however, is most readily seen in the string of districts numbered between 5 and 14. With the exception of 9 (which is a byproduct of the bizarre shapes), these districts take the shape of bacon strips of varying thickness.

Such “baconmandering” is a basic tool in the gerrymandering toolbox, where concentrations of voters are split up among multiple different districts.

Perhaps the clearest demonstration of this can be seen with the following dot density maps, which overlay the Hickory lines over the dots in the respective districts, as well as in some of the surrounding areas.

Figure 18

Population of Macomb/Oakland/Wayne Counties, MI, by Hickory Districts
1 Orange 'X' = 50 White Residents of Voting Age, 1 Blue Dot = 50 Black Residents of Voting Age /n
1 Teal Dot = 50 Hispanic Residents of Voting Age, 1 Black Dot = 50 Asian Residents of Voting Age

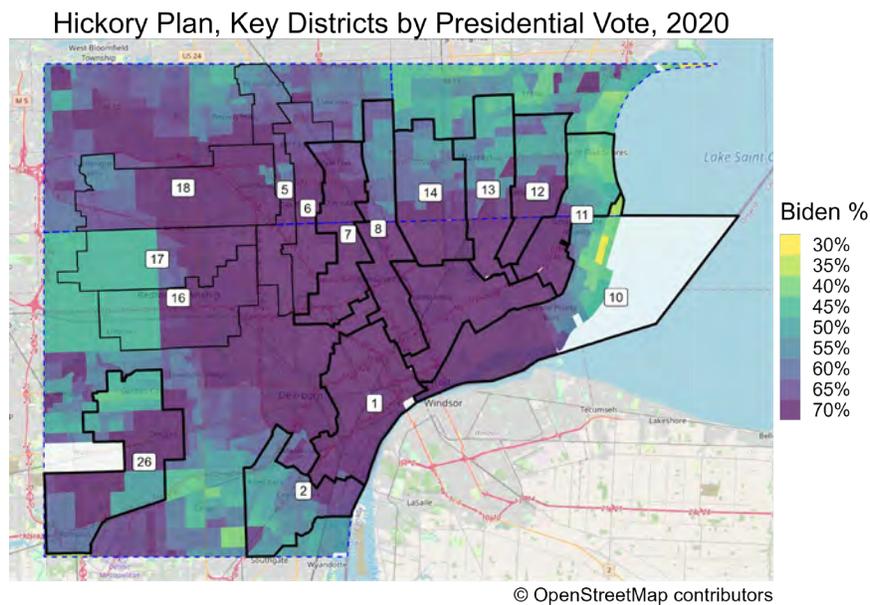


All of these districts begin in Black areas, which are sliced up among them, carefully avoiding any substantial concentration of Black voters. They are then stretched out into the

surrounding counties or towns, reaching into heavily White areas. Even within counties, the racial intent is clear. Districts 11, 13 and 14 all stop abruptly before reaching the more diverse center of downtown Detroit. District 10 snakes around through heavily Black areas of eastern Detroit, combining those districts with the Grosse Pointes. District 7 reaches deeply into Detroit, but then carefully avoids high BVAP precincts in Oakland County, while District 8, which takes in a larger portion of Detroit, extends itself in a thin strip to reach higher-white-density areas of Oakland. District 5 is perhaps the most egregious district on the map, demonstrating the MICRC's determination to reduce the BVAP of these districts at the expense of any other legitimate redistricting consideration.

It is true that the MICRC was charged with creating politically fair maps, and race and politics do correlate. Here, however, these features do not exist to improve the partisan performance of the map, as almost all of these precincts are at least Democratic leaning. Instead, they divvy up the voters by race, combining Black precincts in Detroit with White precincts in the suburbs.

Figure 19



That the overwhelming consideration in forming these bizarrely shaped districts is race is all the more apparent when we consider the traditional redistricting criteria and see how they were subverted to race-based districting.

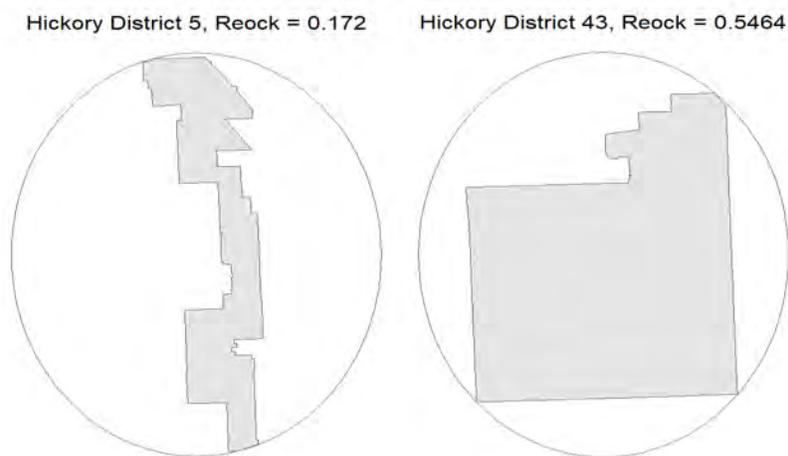
2. Compactness

As described above, under the Benchmark Plan the districts in this area are typically compact – at times they are almost perfect squares. The Hickory Plan is different, with long, stretched out districts. It is also apparent that the lack of compactness is associated with race.

We can examine the districts in the Detroit area under both the Benchmark Plan and the Hickory Plan using a variety of metrics for assessing compactness. Compactness doesn't have an agreed-upon definition in the political science literature. Instead, it is multidimensional, with different attempts to define the concept evoking different aspects. The first, and perhaps most widespread, definition of compactness is the Reock Score. The Reock score looks at the ratio of the area of the district to the area of the smallest circle that would enclose the district (also known as a "minimum bounding circle"). Ernest Reock, "A Note: Measuring Compactness as a Requirement of Legislative Apportionment," 1 *Midwest Jrnl. Pol. Sci.* 70 (1961). This ratio will fall as districts become distorted lengthwise; it therefore punishes long, bacon-like districts. A "perfect" Reock score is 1, while a zero is a theoretical perfectly non-compact district.

To make this less abstract, an illustration of the Hickory Plan's District 5, with its minimum bounding circle, is provided beside a district with a much higher Reock score. As you can see, the latter district fills its minimum bounding circle to a much greater extent than Hickory Plan District Five.

Fig. 20



We can get a sense of how the commission subverted compactness to the goal of drawing districts with particular racial characteristics in mind with the following sets of charts. While these charts may seem a bit confusing at first, they are ultimately illuminating. These charts take the Benchmark and Hickory districts that are wholly within Macomb, Oakland, and Wayne counties, and break them apart. The charts display one district in each pane. The districts are ordered by compactness, such that the upper left district is the least compact district under the given metric, while the lower right district is the most compact district (the data should be read in rows, not columns). The title of each pane is the compactness score for that district.

In short, if the darker districts are clustered at the top of the chart, the map generally makes high BVAP districts less compact. If they are spread throughout the chart, the map is indifferent to the BVAP.

Figure 21

Detroit Area Benchmark House Districts, by BVAP and Compactness

Titles = Reock Scores,
Labels = District Numbers
0.1493 0.1882 0.1901 0.2003 0.2129

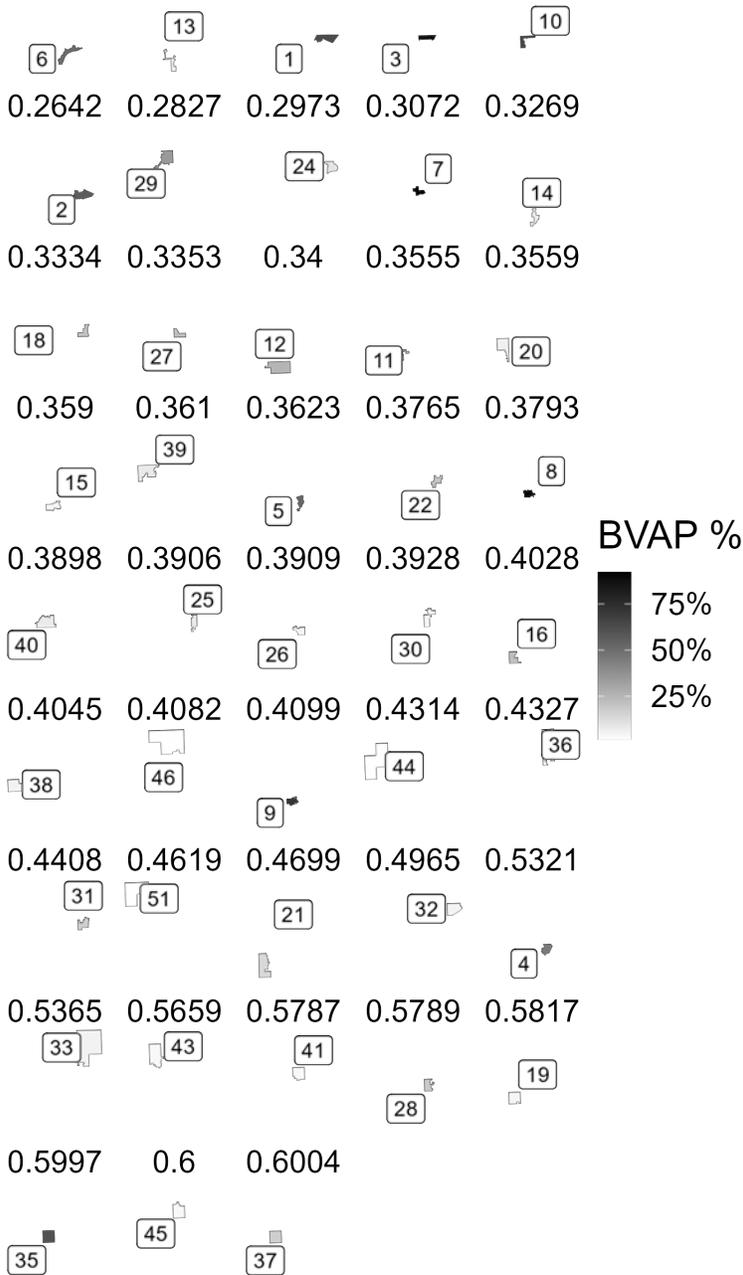
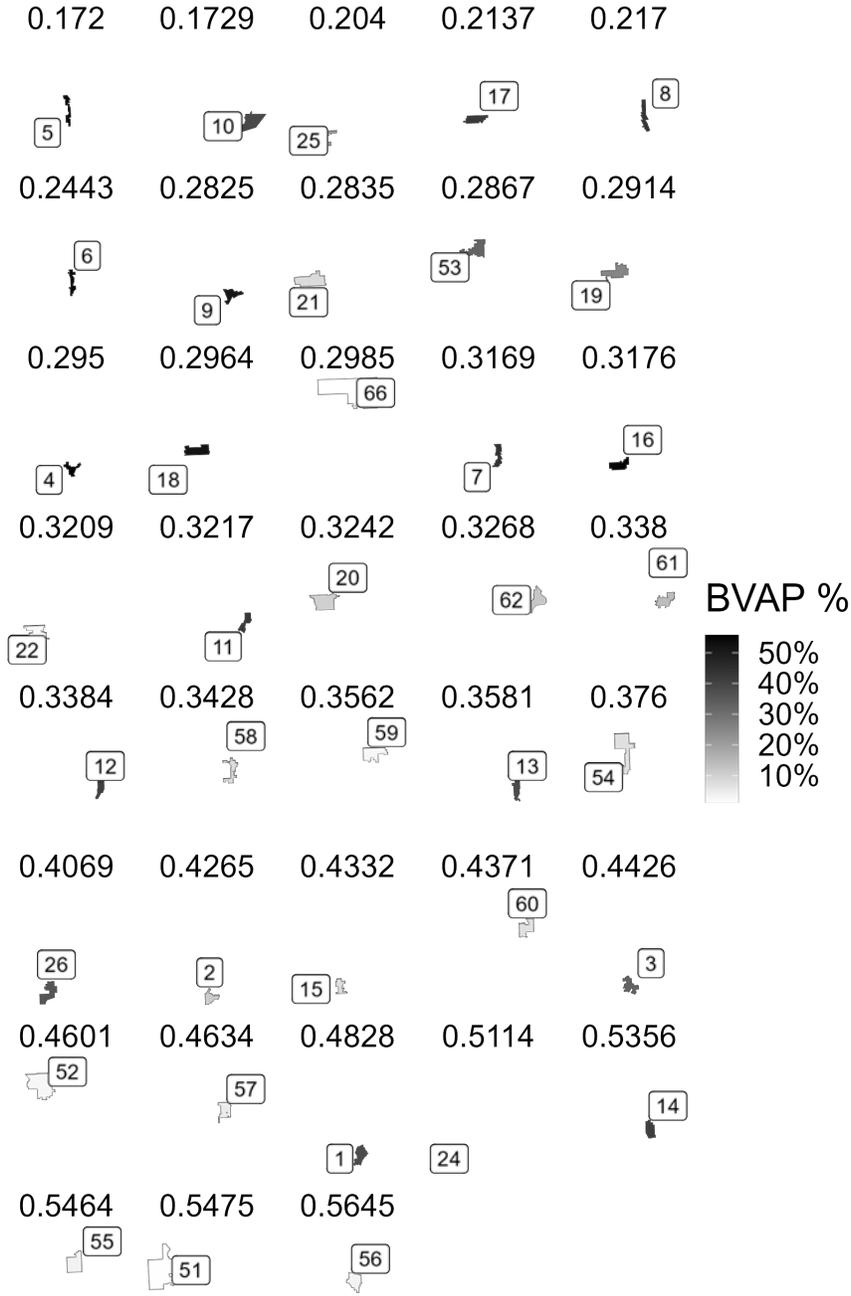


Figure 22

Detroit Area Hickory House Districts, by BVAP and Compactness

Titles = Reock Scores,
Labels = District Numbers



This is exactly what we see here. In both the Benchmark and Hickory plans, the less compact districts seem concentrated at the top of the chart, but it is much more pronounced in the Hickory plan, where almost all of the top three rows have districts that are among the highest BVAP districts under that plan.

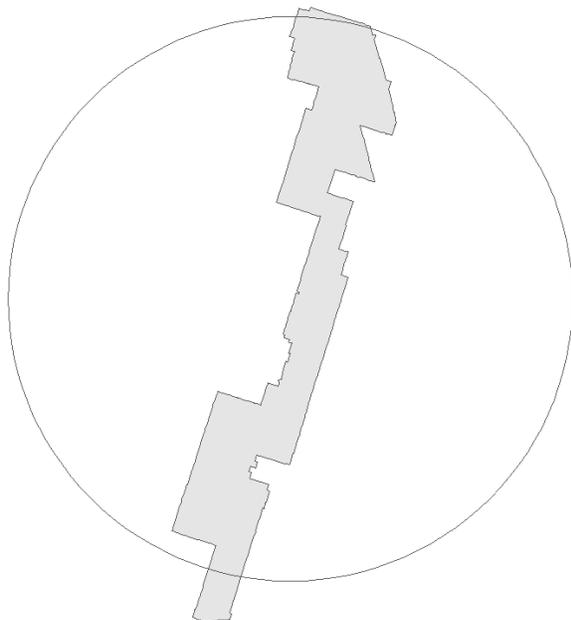
The second metric we examine is Polsby-Popper. While the Reock score punishes districts that are stretched and distended, the Polsby-Popper score punishes districts that have “arms” and “inlets.” It does this by comparing the ratio of the area of the district to the area of a circle that has the same perimeter as the district. Daniel D. Polsby & Robert D. Popper, “The Third Criterion: Compactness as a Procedural Safeguard Against Partisan Gerrymandering,” 9 *Yale L. & Pol. Rev.* 301 (1991).

To understand the motivation behind Polsby-Popper, sketch out a circle. Then erase some of the edge of the circle and draw a narrow tendril snaking into the district toward the center. The Reock score would not change much since the size of the minimum bounding circle remains the same and the area of the district does not change much. The Polsby-Popper score, however, would fall significantly since the perimeter of the district would be greatly increased. A “perfect” Polsby-Popper score is 1, while a theoretical perfectly non-compact district would score a zero. Note that, in a state like Michigan with jagged coastlines and inlets, the Polsby-Popper scores will naturally be lower than in other similarly situated states.

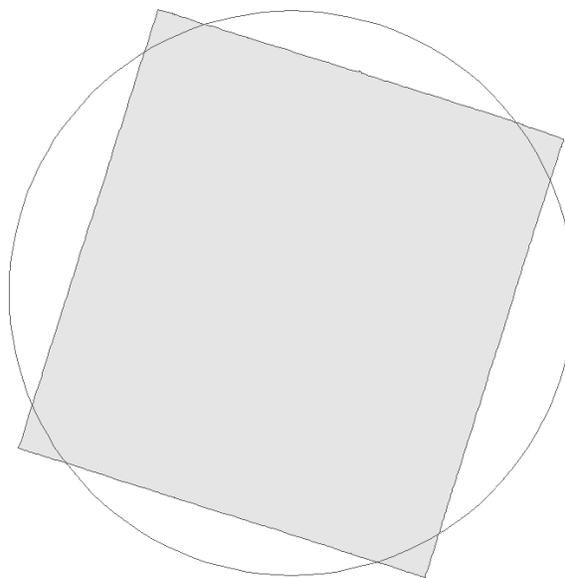
To make this less abstract, I have once again provided an illustration of the Hickory Plan’s District 5, with a circle whose circumference is equal to the perimeter of District 5. I have provided a similar illustration for District 35 under the previous map. As you can see, the area of the circle for Benchmark District 35 is much closer to that of the district than is true of Hickory District 5.

Figure 23

Hickory District 5, Polsby-Popper = 0.1527



Benchmark District 35, Polsby-Popper = 0.7857



Returning to our plots from earlier, we can once again see that in the Hickory Map, the dark shaded districts are skewed toward the top of the plot, while under the Benchmark Plan they are spread more evenly across the map.

Figure 24

Detroit Area Benchmark House Districts, by BVAP and Compactness

Titles = Polsby-Popper Scores,
Labels = District Numbers

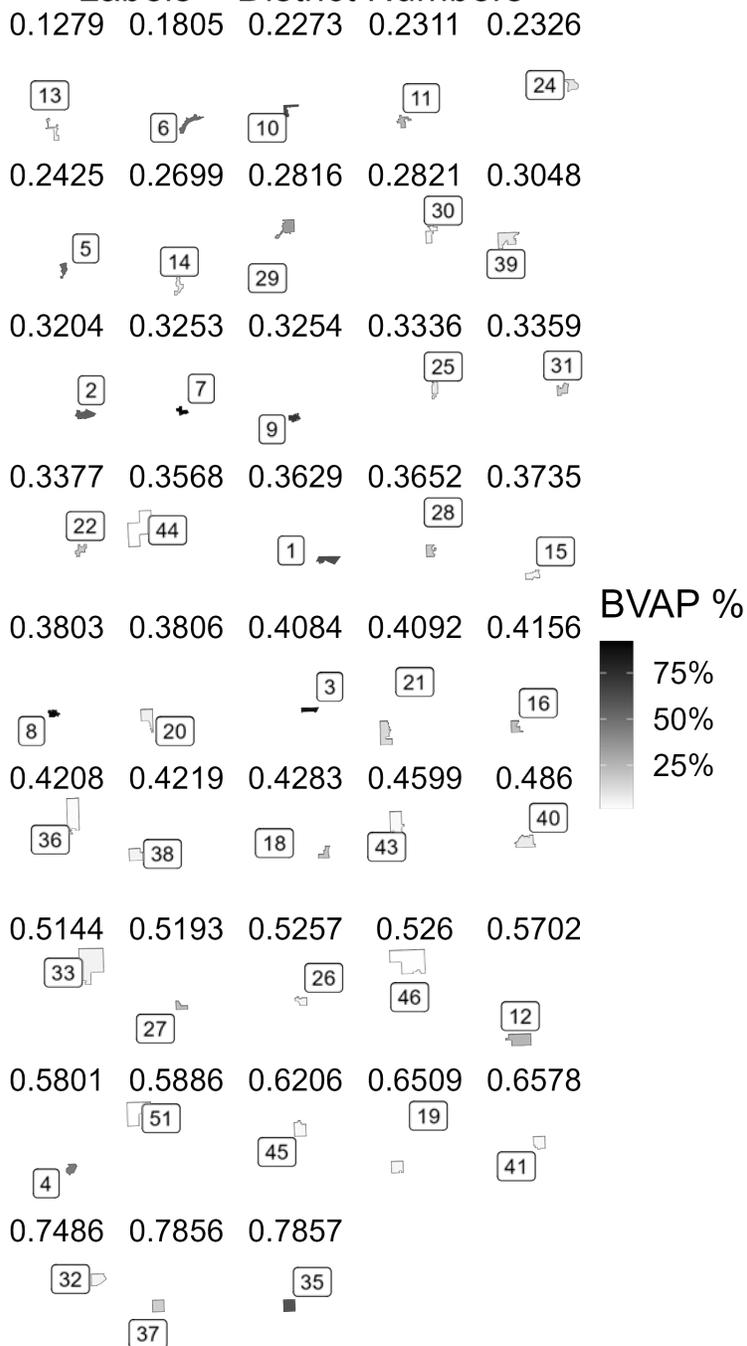
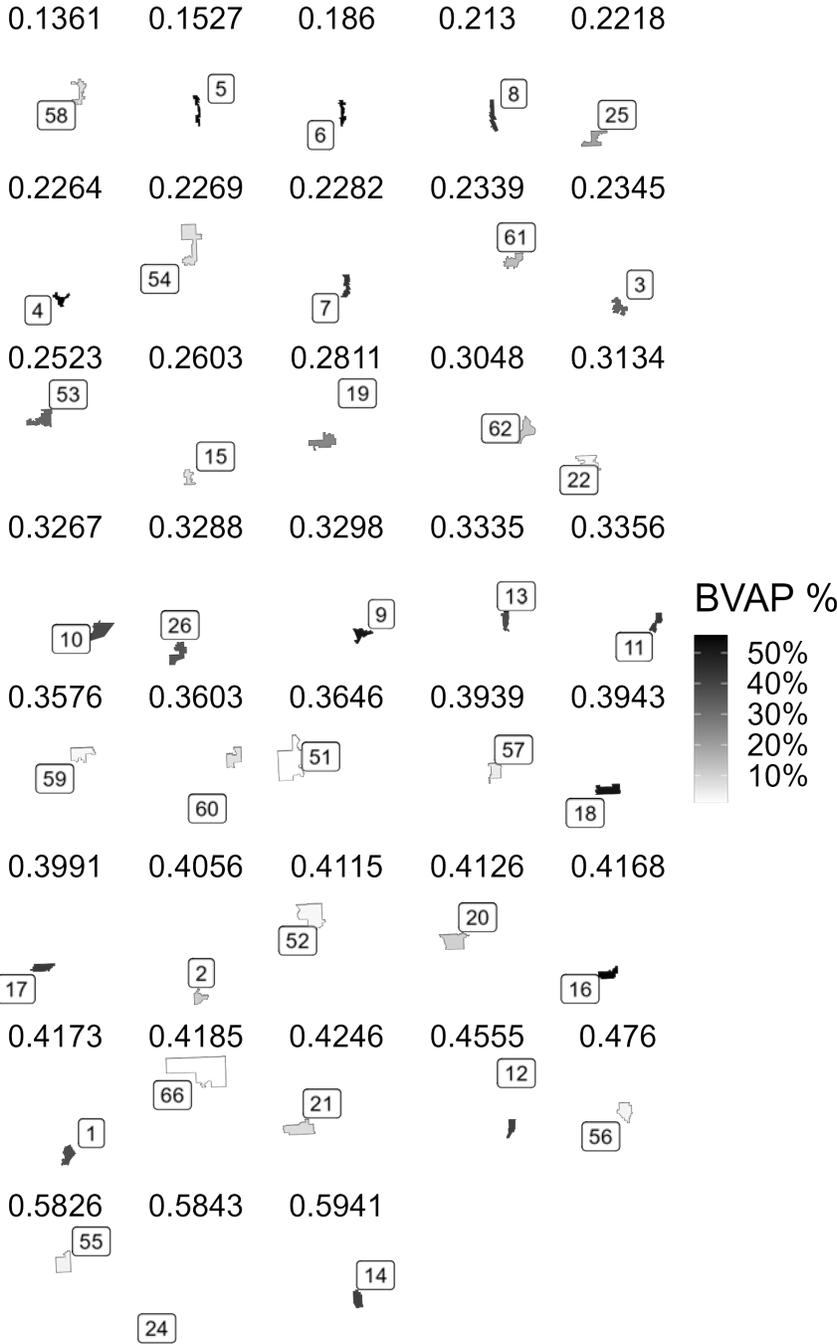


Figure 25

Detroit Area Hickory House Districts,
by BVAP and Compactness

Titles = Polsby-Popper Scores,
Labels = District Numbers



The final metric we examine is a newer one, developed by political scientists Aaron Kaufman, Gary King and Maya Komisarich. Rather than directly developing a mathematical

formula for measuring compactness, they instead interviewed judges, redistricting experts, public officials, lawyers and ordinary citizens by showing them various districts, in order to get a sense of what they would consider “valid.” Kaufman, Aaron, et al., “How to Measure Legislative Compactness if You Only Know it When You See it,” *65 Am. Jnl. Pol. Sci.* 533, 534 (2021). They find that the groups effectively define compactness in the same way, which they summarize as “squarish, with minimal arms, pockets, islands, or jagged edges.” *Id.* at 544. They turn these into what they (unfortunately) call “I Know it When I See It” scores, or what I will call (after consulting with the authors), MAGiK scores (for Maya K., Aaron K. and Gary K.). These scores run from 1 to 100. Because they are whole numbers, there can be multiple districts with identical MAGiK scores:

Figure 26:

Detroit Area Benchmark House Districts, by BVAP and Compactness

Titles = MAGiK Scores,
Labels = District Numbers

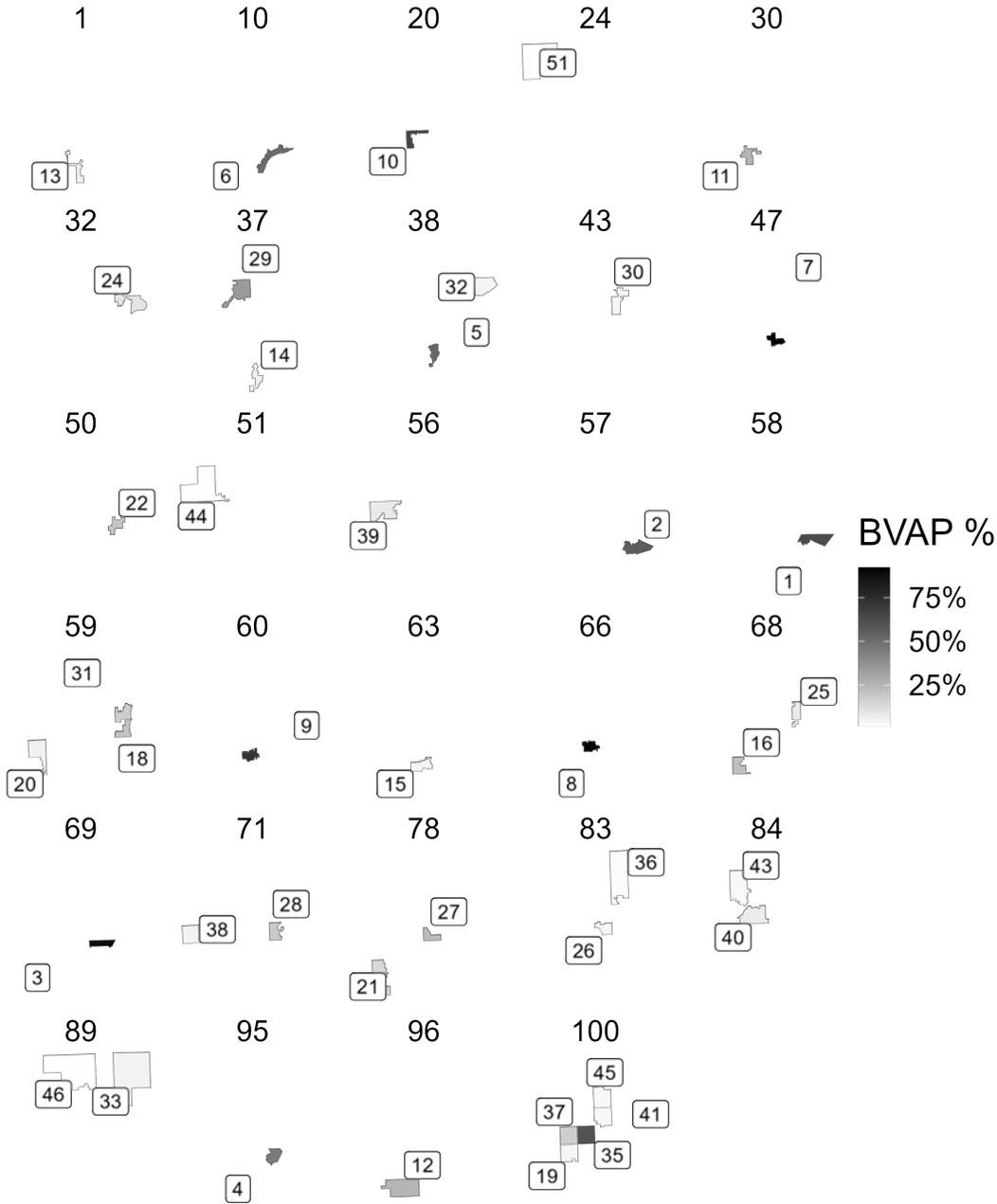
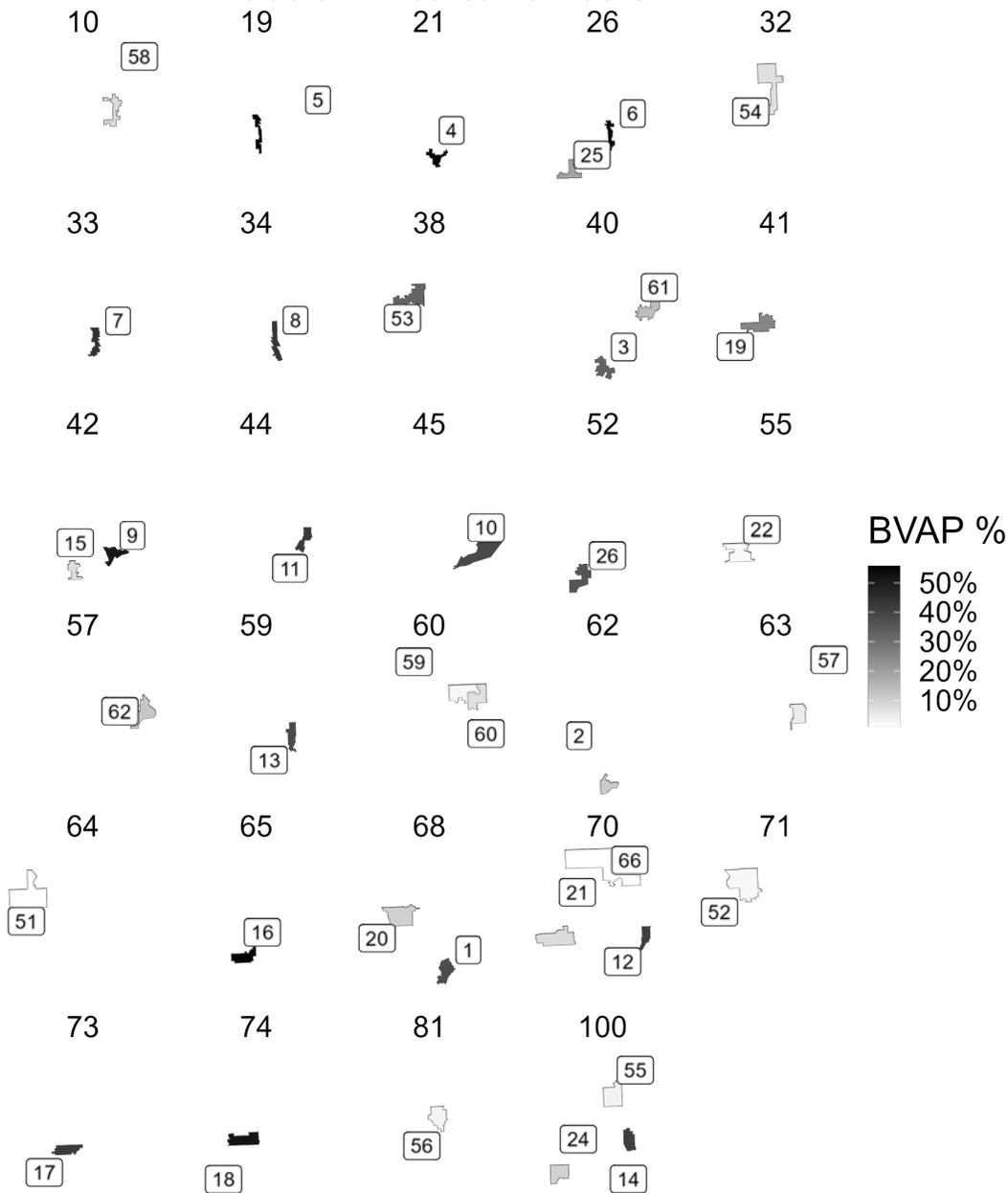


Figure 27

Detroit Area Hickory House Districts, by BVAP and Compactness

Titles = MAGiK Scores,
Labels = District Numbers



We see the same relationship. The more heavily Black districts in the Hickory map are consolidated at the top, while the districts in the Benchmark plan are more evenly distributed.

Overall, heavily Black districts are routinely ranked among the least compact in the state. When looking at the Reock scores, Districts 5 (#2), 6 (#15), 7 (#29), 8 (#11), 10 (#3), 16 (#30), 17 (#9), and 18 (#24) are among the 30 least compact districts in the state. For Polsby-Popper Scores, districts 5 (#4), 6 (#8), 7(#17), and 8(#11) are in this range. For the MAGiK scores, District 13 is the least compact district in the state, with 5(#17), 6 (#3), 7 (#28), 10 (#6), 11 (#9), 14 (#13), and 17 (#30) also scoring poorly.

But rather than relying on what we see with our eyes, we can more rigorously examine how compactness was sacrificed for race by conducting a simple regression analysis. Regression analysis tests the strength of the relationship between two variables by finding the line that best fits the data. It then tells us whether the relationship is “statistically significant.” Statistical significance is determined by examining what is known as a “p-value.” The p-value tells us how likely it is that we would see the outcome that we observed (or an even more extreme outcome) *if* there were no relationship between ballot order and vote share. *See* George Casella & Roger L. Berger, *Statistical Inference* 397 (2d ed. 2002). As that probability gets smaller and smaller, we eventually conclude that the outcome is simply too unlikely to continue to believe that there is no relationship. *Id.*

Coin flipping offers a useful analogy. We generally believe coins are fair. If you flip a coin and get a head, that is not unusual; you would think nothing of the coin. If you flipped it again and got another head, that is not unusual either (this will occur about 25% of the time with a fair coin). If you flipped it two more times and get two more heads, your eyebrows would raise. That should only happen about 6% of the time. At a certain point, the outcomes become so improbable with a fairly weighted coin that you would no longer believe that the coin is fair (it is *possible*, to toss 100 heads in a row with a fair coin, but it is extremely unlikely; the better explanation is that the coin is weighted).¹

Statisticians typically use the following guidelines regarding interpretation of a p-value:

¹ In reality, we would probably go quite some time before we concluded the coin was unfair. This is because many of us would in reality evaluate the evidence in light of a strongly held prior belief that coins are fairly weighted. This is a Bayesian-style analysis, and is discussed in more detail later in the report. Also, in a true frequentist experiment the number of tosses would be determined ahead of time; this example is solely to illustrate the concept of a p-value.

- $<.01$: very strong evidence the “null hypothesis”; in this case, that there is *not* a relationship between vote share and ballot order;
- $.01 - .05$: strong evidence against the null hypothesis;
- $.05 - .1$: weak evidence against the null hypothesis;
- $> .1$: little or no evidence against the null hypothesis; in this case, little-to-no evidence that ballot order is associated with vote share.

Wasserman, Larry, *All of Statistics: A Concise Course in Statistical Inference*, 157 (2004).

By convention, a p-value of 0.05 generally defines the boundary between a “statistically significant” finding and an insignificant one. Importantly, the p-value only tells us how probable the data are taking the null hypothesis as true: If the null were true, then we would see this sort of evidence “x” percent of the time. One *cannot*, however flip this around and claim a p-value of .12 suggests “given this data, there is a 12 percent chance the null [no relationship between Republican vote share and ballot order] is true.” One also cannot then go a step further and say that there is an 88 percent chance that the original hypothesis (a relationship exists between ballot order and vote share) exists. Wasserman at 157. In statistical terms, the p-value represents an analysis of the data conditioned on the null hypothesis (more technically, a parameter estimate) being true. It is incorrect to reverse the statement, as if a researcher had conditioned on the data, and then draw conclusions about the probability of the null hypothesis being true. To use a more basic illustration, the following statement: “If a person has a pug, then they have a dog,” is true. But it would be a mistake to flip it around and say, “If a person has a dog, then they have a pug.”

The findings here are straightforward. Under the Benchmark Map, we lack sufficient evidence to support a claim that there is a relationship between the BVAP and any of the three metrics. Under the Hickory Map, however, the relationship is statistically significant between all three metrics and the p-values. The coefficients are negative, meaning that as the BVAP of a district increases, we can conclude that the compactness decreases.

Tables 11, 12

Regression Results, Compactness vs. BVAP, All Benchmark House Districts		
Test	Coefficient	P-value
Reock	-0.247	0.163
Polsby-Popper	-0.109	0.404
MAGiK	-0.002	0.048

Regression Results, Compactness vs. BVAP, All Hickory Districts		
Test	Coefficient	P-value
Reock	-0.384	0.004
Polsby-Popper	-0.275	0.023
MAGiK	-0.001	0.045

The same findings are true when we restrict our inquiry to the districts in the Detroit area only (removing districts that are only partially in the three key counties we examine). There is a relationship between Reock scores and district BVAPs, but this does not hold with respect to the other two metrics. However, when we look at the Hickory Plan districts in the Detroit area, all three metrics are statistically significant. In other words, we have sufficient evidence to conclude that in the Detroit area alone, districts with heavy Black populations were made less compact than districts with light Black populations.

Tables 13, 14

Regression Results, Compactness vs. BVAP, Detroit Benchmark House Districts		
Test	Coefficient	P-value
Reock	-0.907	0.008
Polsby-Popper	-0.352	0.184
MAGiK	-0.002	0.336

Regression Results, Compactness vs. BVAP, Detroit Hickory Districts		
Test	coefficient	pvalue
Reock	-0.908	0.002
Polsby-Popper	-0.423	0.139
MAGiK	-0.003	0.069

3. County splits

As the demonstration maps above and simulation maps below demonstrate, it is possible to draw districts that comport with the state's obligations under the Voting Rights Act while minimizing county and municipal splits. Yet the Hickory Plan does not do this. Under the previous House map, 30 districts crossed county lines. Only 3 districts that cross lines cross the Macomb, Oakland, and Wayne county boundaries, and none of the them cross the boundary between those three counties. Under the Hickory Plan, that number increases to 60, notwithstanding the fact that the Michigan Constitution requires that due regard be given to county lines. Nine of those additional 30 split districts are on the Wayne County boundary.

Moreover, under the previous plan, only ten counties are split more than once. Under the Hickory plan, that number increases to 47, with a total of 151 splits in those counties. Of those, 32 splits are found in Macomb, Oakland and Wayne counties.

4. Simulation analysis

I have also conducted a simulation analysis of the Hickory Maps. Simulation analysis is widespread in political science. The simulation approach to redistricting has been accepted in multiple courts, including state courts in Ohio, North Carolina and Pennsylvania. *See League of Women Voters of Ohio v. Ohio Redistricting Commission* (2021); *Harper v. Hall* (2021); *League of Women Voters of Pennsylvania v. Com.* (2018). I chose to employ a particular version of this called Sequential Monte Carlo analysis. It has been accepted by courts and relied upon in many cases, including *Harkenrider v. Hochul* (2021), striking down the New York congressional and senate maps, and in *Szelgia v. Lamone* (2021), striking down the Maryland congressional map.

For this report, I have employed a broadly accepted "package" in R called "redist," which generates a representative sample of districts. *See, e.g., Benjamin Fifeld, et. al, "Automated Redistricting Simulation using Markov Chain Monte Carlo," 29 Jrnl. Computational and Graphical Statistics 715 (2020).*

There are a variety of proposed simulation techniques, but they all proceed from the same basic principle: precincts are aggregated together in a random fashion, potentially subject to a variety of parameters, to form districts in hundreds or thousands of maps. This creates an "ensemble" of maps that reflect what we would expect in a state if maps were drawn without respect to a certain criteria – here, racial criteria. If the map is drawn without racial intent, its partisan features should match those that appear in the ensemble. The more the map deviates from

what we observed in the ensemble, the more likely it becomes that racial considerations played a heavy role.

To better understand how this works, imagine the following cluster of seven hexagons as a cluster of precincts, with each hexagon representing an individual precinct. The precincts are connected when they share adjacent sides. Those adjacencies are reflected in the image below by the lines that connect the hexagons. The top precinct therefore shares a border with the center, top right, and top left precincts; the top left hexagon shares a border with the top, center, and bottom left precincts; and so forth.

It is possible, however, to “break” adjacencies, by telling the computer to treat the precincts as not adjacent, effectively removing one of these lines. One can continue to do so until there is only one path from any precinct to any other precinct. This is called a “spanning tree,” *e.g.*, Kruskal, J.B., “On the Shortest Spanning Tree of a Graph and the Traveling Salesman Problem,” *7 Proc. Amer. Math Soc.* 48 (1956), and it lies at the heart of the redistricting algorithm.

For almost every set of more than two precincts, there will be multiple spanning trees, but the number of such trees is finite. I have illustrated two such trees for our cluster of seven hexagons.



Once you have reduced the number of connections between precincts to a minimum, removing one additional connection will create two distinct clusters of precincts. This is exactly what a district is: a collection of contiguous (adjacent) precincts that is separated from other precincts on the map by ignoring adjacencies with other precincts. In the following illustration I have removed the connection between the center hexagon and the lower right hexagon, and then illustrated the two districts this creates in the right panel.



This, then, is a microcosm of the approach that the redist package takes. To simplify greatly, by sampling spanning trees of Michigan’s precincts and then removing 109 connections, the software produces 110 randomly drawn districts. While the math is quite complicated, this approach produces a random sample of maps that mirrors the overall distribution of maps, much as a high-quality poll will produce a random sample of respondents that reflects the overall population. While the process is complicated, it can be run on a quality laptop computer.

Importantly, these maps are drawn without providing the software with any racial information. In other words, these maps help inform an analyst what maps would tend to look like in Michigan if they were drawn without respect to race.

Of course, other features, such as respect for county lines, compactness, or respect for geographic features could play a role in the drawing of district lines as well; these traditional redistricting criteria are almost always viewed as valid considerations by courts. To account for this, when removing the connections that create districts, the algorithm can be instructed to favor the removal of connections that will result in districts that remain within specified parameters when deciding which connections to remove. It can be instructed to remove connections in such a way that equally populated districts will be created, or to prefer breaks that will create compact districts, or will respect county boundaries, or any number of other factors.

Here, the simulation was instructed to follow federal and state law by drawing districts that will have a maximum total deviation of +/- 2.5%. The simulation was also instructed to draw reasonably compact districts. Finally, the simulation was first run with an instruction to avoid county splits. However, because the MICRC seemed to have been fairly inconsistent in its

treatment of county splits here, the simulations were also run without the county split minimization constraint.

Because the Wayne County districts frequently traverse the Wayne County border in all directions, I selected all of those precincts located within districts that were contained, in whole or in part, in Wayne, Macomb, Oakland, Monroe or Washtenaw counties. These were House districts 1-33, 46-49, 51-63, 65, and 66. Two districts in northwestern Oakland County were also excluded because they are primarily located in a different metro area: Flint.

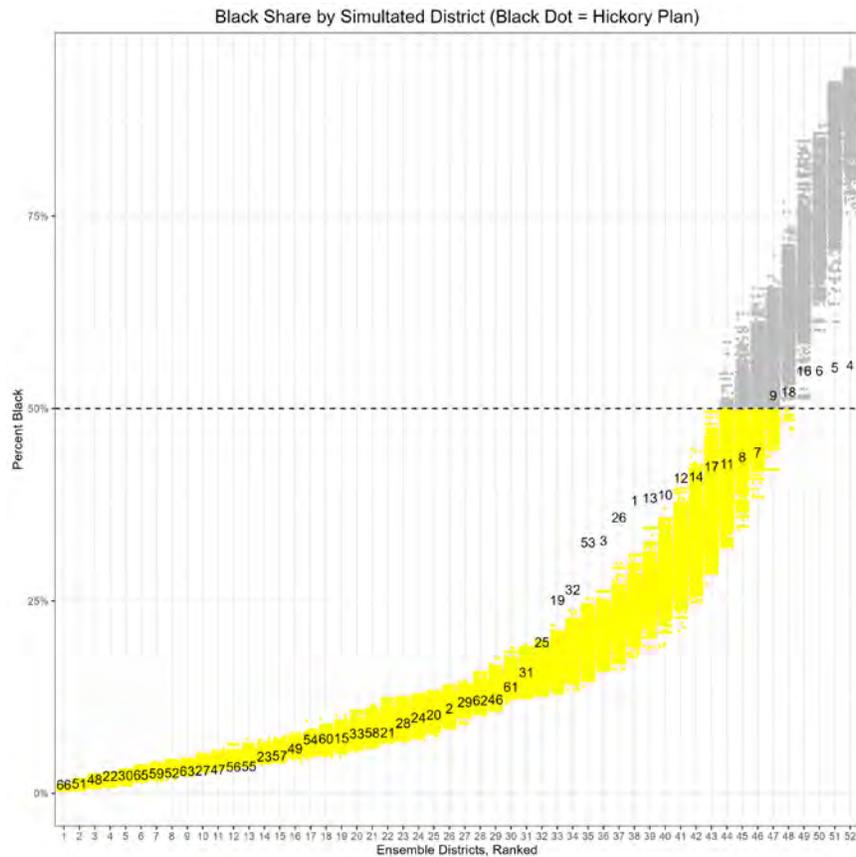
Although some of these districts stretch beyond the Detroit metro area, I chose to include all them because I wanted to allow second-and-third order effects of the map choices in Wayne County to propagate. That is to say, the Commission surely did not limit itself to selecting from the precincts contained in the Wayne County districts when drawing maps. Nor did it believe that all of those precincts had to be placed in a Wayne County-based district. By allowing adjacent and nearby precincts to be selected, we help ensure the simulations have the same range of choices that the MICRC had. I then sampled 50,000 districts using the constraints outlined above.

I ran the simulations three ways. First, I instructed the simulations to draw maps respecting county boundaries. Because the MICRC does not appear to have given much weight to this factor, however, I also instructed it to draw maps without respecting county boundaries. We first consider the maps drawn without respecting county boundaries.

The results confirm that the Hickory Map looks nothing like a map drawn without respect to race. I present these results in two ways. First, I use dotplots. In this plot, all 52 districts in each of the 50,000 simulated maps were sorted from districts with the highest BVAP to lowest BVAP. Each of these districts then received a dot in the plot. At the far right, above the number 52, you will notice a large cluster of grey dots spread between 75% and 92%. That means in every plan, the district with the highest BVAP fell somewhere between 75% and 92% Black.

The next cluster to the left, hovering above the number 51, consists of grey dots ranging between around 63% and 90%, Black with a few dots below 63%. This means that in all of the 50,000 simulated maps, the district with the second-highest BVAP typically fell between 63% and 90% BVAP, although a handful of maps produced districts that fell below 63% BVAP.

Figure 27



If a district had lower than 50% BVAP, I coded the dot as yellow, otherwise it was grey. As you can see, in some areas there is quite a bit of variation in what the maps draw, reflecting the wide array of race-neutral maps available to map-drawers. I have overlaid these dots from the simulated maps with labels depicting the racial breakdowns from the Hickory Map. This allows us to compare the racial breakdown of the districts in the Hickory Map directly to that of the simulations. If the Hickory Map was not drawn with a heavy reliance on racial data, or did so only moderately, it should hew closely to the results produced by the simulated maps (which were, of course, drawn blind to race). On the other hand, if map drawers relied heavily upon race when drawing the lines, we should expect significant deviations.

The chart plainly reflects the latter. While the simulated maps typically produce seven or eight (and frequently nine) majority BVAP districts, the Hickory Plan creates just six. But more telling is the “stairstep” pattern of the districts. The districts with the 31 lowest BVAPs fall squarely within the ranges predicted by the race-neutral simulations. In other words, in areas where the racial breakdown of the districts was unlikely to result in substantial Black populations in

districts, the districts look exactly like what we would expect race-neutral districts to look like; the commission paid little attention to race in these areas.

When we move into more heavily Black areas, however, a pattern arises. The next 11 districts all are either drawn at the extremes of their expected ranges, or fall entirely outside their expected ranges. This is where the MICRC began paying attention to race heavily, packing Black voters into districts where they would nevertheless be unlikely to elect their candidates of choice. There is a price to be paid for this, however, detailed in the Voting Rights Act section of this report. In the heaviest Black areas, Black voters are cracked to decrease the Black share of the population below what we would expect from a map drawn without respect to race. This pattern is the DNA of a gerrymander. *See also* Gregory Herschlag *et al*, “Quantifying Gerrymandering in North Carolina: Supplemental Appendix.” 7 *Statistics and Public Policy* 30 (2020) (referring to this pattern as the “signature of gerrymandering”).

Of particular note is how closely the BVAPs hew to the 40% goal described in the Szetela Report, where we would not expect that from race-neutral maps.

To best illustrate the degree to which the Hickory Plan reflects outliers when compared to maps drawn without partisan information, I employed the “gerrymandering index,” proposed by Bangia *et al* (2017) and endorsed by McCartan & Imai in their paper setting forth the algorithm used to generate the districts in this report. *See* Cory McCartan & Kosuke Imai, “Sequential Monte Carlo for Sampling Balanced and Compact Redistricting Plans,” at 25, *available at* <https://arxiv.org/pdf/2008.06131.pdf>. I then applied it to race, instead of politics.

It is conceptually similar to the idea of root mean squared error (used throughout statistics). To calculate the index, we once again take each of the 50,000 simulated maps and rank the districts from highest BVAP to lowest BVAP in each map.

We then average BVAPs across these ranks. This step tells us, generally speaking, what percentage BVAP we would expect the highest BVAP district to have in a map drawn without respect to race, what we would expect the second-highest BVAP district to have, and so forth.

Of course, some areas might be conducive to a wide range of racial outcomes depending how the map is drawn. Other areas are so heavily White that the districts that are drawn there are likely to vary very little from that average. Put differently, we might be very surprised, due to simple geography, if a map’s lowest BVAP district varies from that average by more than a few

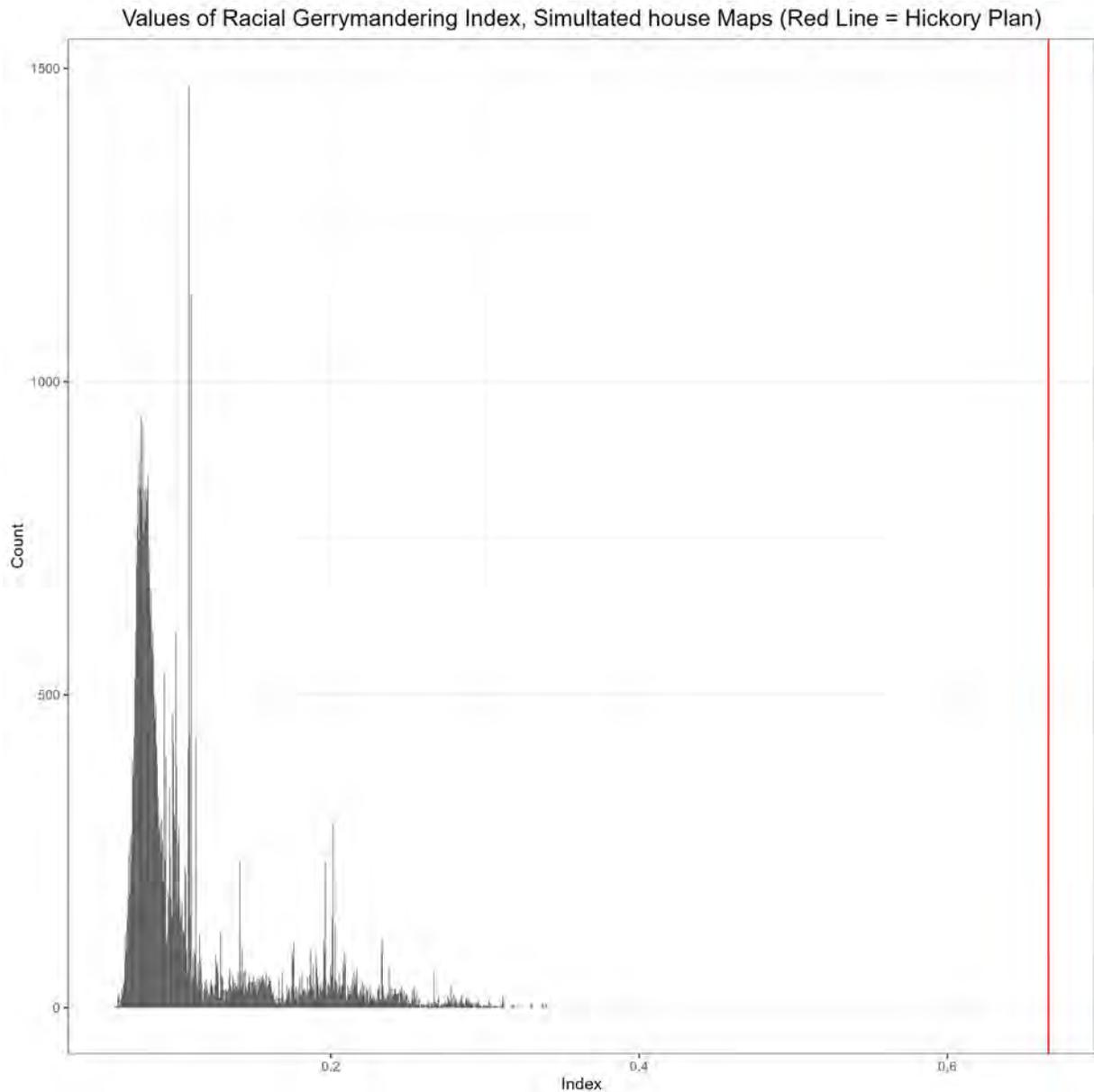
points; we might be less surprised if some districts at the other end of the distribution exhibited more variability.

To help account for this, we then calculate the deviations in each plan in the ensemble from the mean for each “bin.” To make this less abstract: the district with the highest BVAP in the ensemble, on average, has a BVAP of 92.2% Black. A district in the ensemble whose highest BVAP district was 91% Black would have a deviation of 1.2% for that rank, while one whose highest BVAP district was 97% Black would have a deviation of 4.8%. The second highest BVAP district in maps in the ensemble is, on average, 87.5% Black. A map whose second highest BVAP district has a BVAP of 80% would have a deviation of 7.5%, and so forth. To emphasize large deviations (and to make everything positively signed so the deviations don’t just cancel out) these values are then squared and added together to give us a sense of how far maps drawn without respect to racial data will tend to naturally vary from expectations overall. This number is the gerrymandering index.

In simplified terms, this gives us the total deviation from average BVAP share in the ensemble for all the districts in the plan, while giving more weight to particularly large misses. The square root is then taken, which effectively puts everything back on a percentage scale. We then engage in the same exercise for the enacted plan and compare these scores to those in the ensemble. If an enacted plan is drawn without respect to race, we should see gerrymandering indices that fall within the range of the gerrymandering index of the ensemble. If not, we should see an outlier.

The utility of this exercise is that it looks at maps as a whole, rather than looking at districts in isolation. The results here are particularly striking:

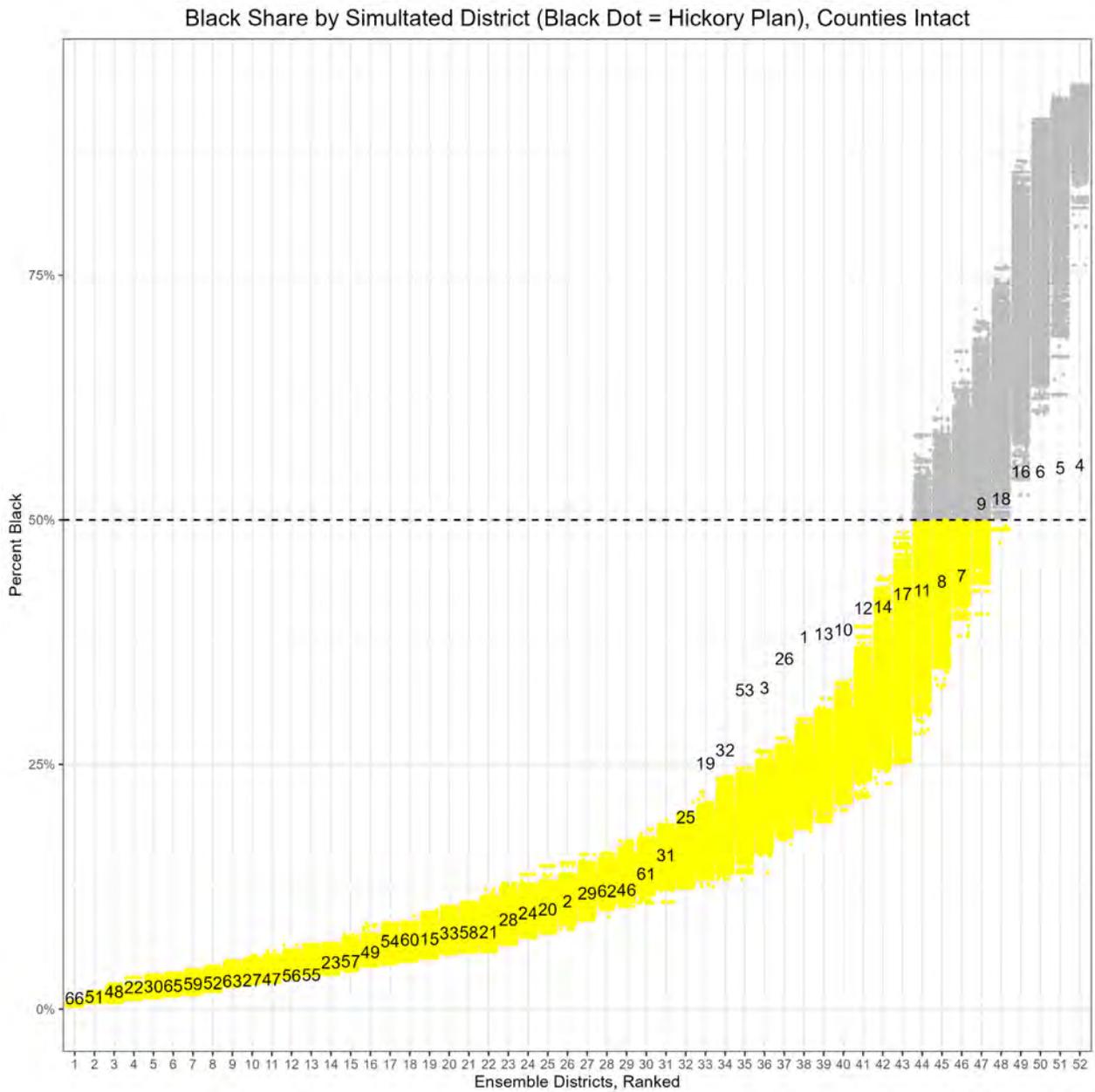
Figure 28



The Hickory Plan is a grotesque outlier, with the racial gerrymandering index of .66 falling well outside the range of the racial gerrymandering indices of the race-neutral ensembles. Is so far outside the range that the only reasonable conclusion is the commission relied heavily on race when drawing these districts.

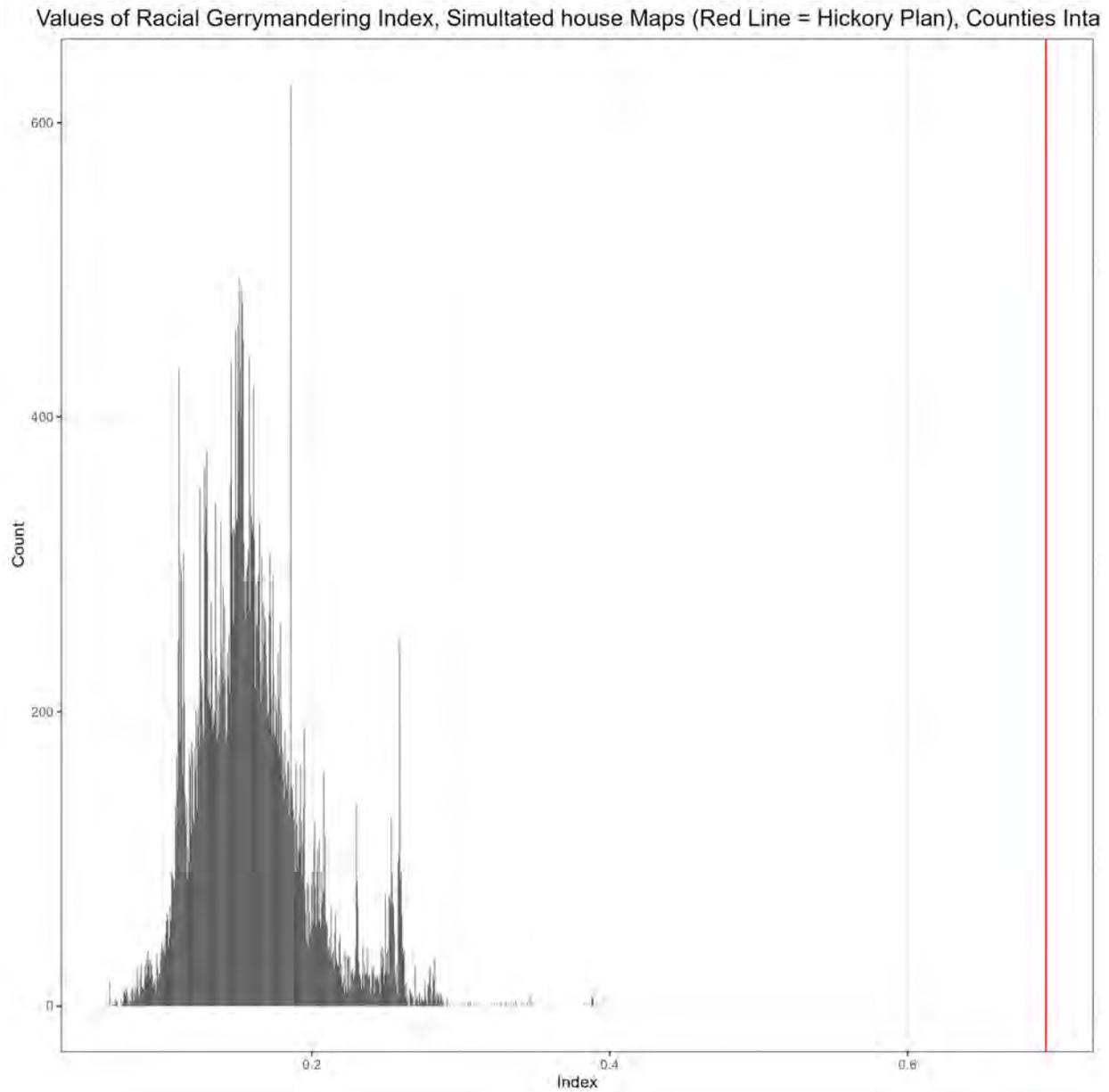
We can also look at the case where counties are added as a constraint. We see it is the same basic outcome. The dotplots show large deviations from the race-neutral ensemble:

Figure 29



The racial gerrymandering index also presents as a substantial outlier. Thus, the only reasonable conclusion here is that the MICRC’s attorneys’ directive to draw districts to a 40% target dominated the creation of the Detroit-area districts.

Figure 30



In short, over the course of 100,000 total race-neutral maps, we never see anything approaching the deviation of the ensemble. In other words, a result like this simply does not happen by chance. Taken together, these findings demonstrate that drawing districts to a 40% BVAP total was an overriding goal of the commission.

In response to these statistical outliers, some might argue that this could all be a function of politics. That is to say, because there is some correlation between race and politics, and because the commission was instructed to draw a “fair” map, perhaps the distortions we see in the racial

composition of the districts is simply a function of the hunt for districts that fit a particular distribution.

To test this, we can select a political indicator and see if the Hickory Map presents as a grotesque outlier there as well. Because political outcomes are so heavily correlated today, it generally doesn't really matter which race or races we select, but for this set of simulations I selected the 2020 presidential election. If the map were being distorted on the basis of race as a secondary effect of a need to pay close attention to the political composition of the districts, we should see a pattern in the political composition of the Hickory Districts that is similar to the pattern we saw in the racial composition of the Hickory Districts, with strong deviations occurring in the 45%-55% range, where competitive races occur.

In fact, *we do not see this*. While there are meaningful deviations, they are not nearly as substantial as the deviations we saw for the Hickory Map. This is true whether or not counties are instructed to remain intact.

Figure 31

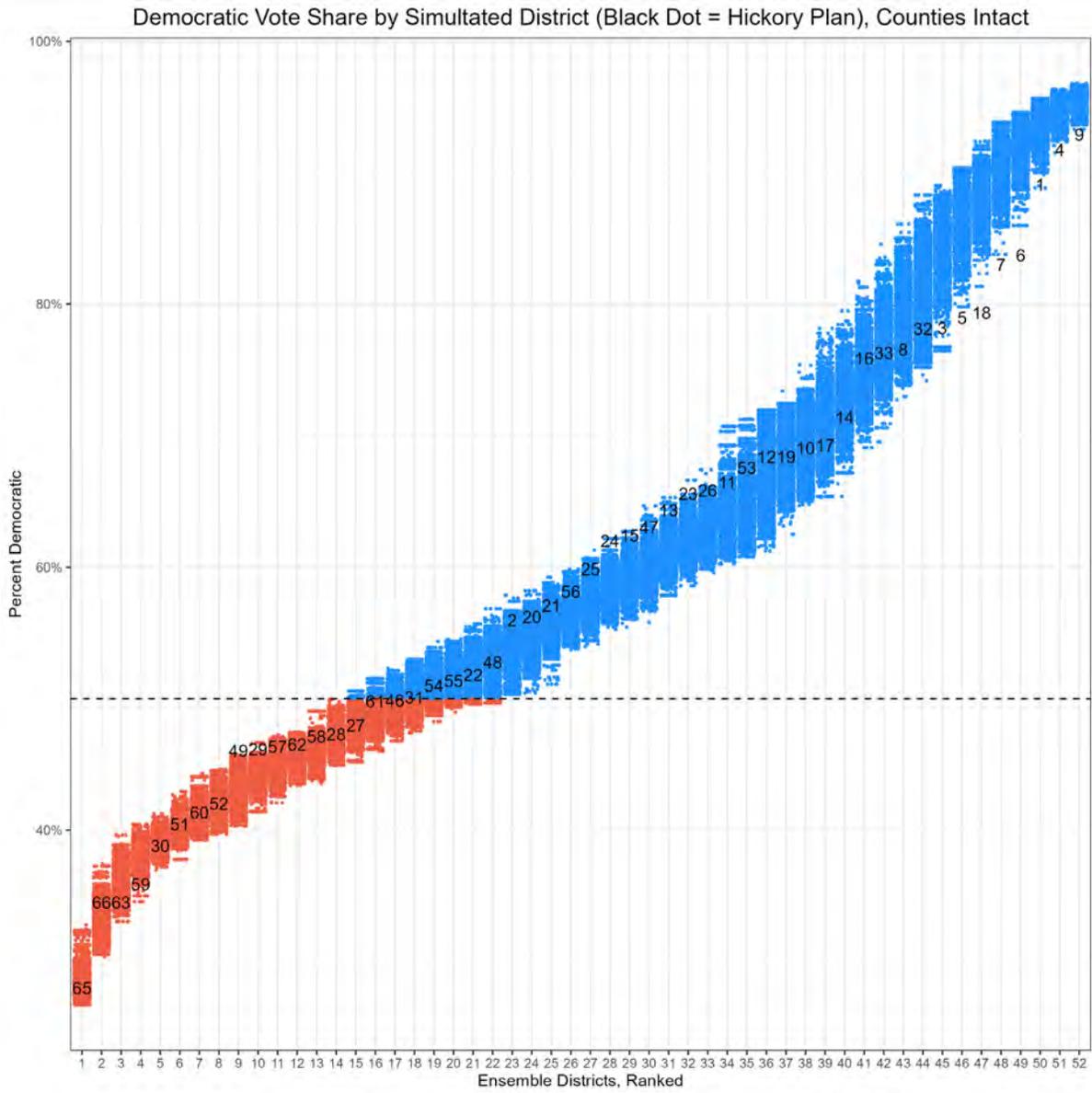
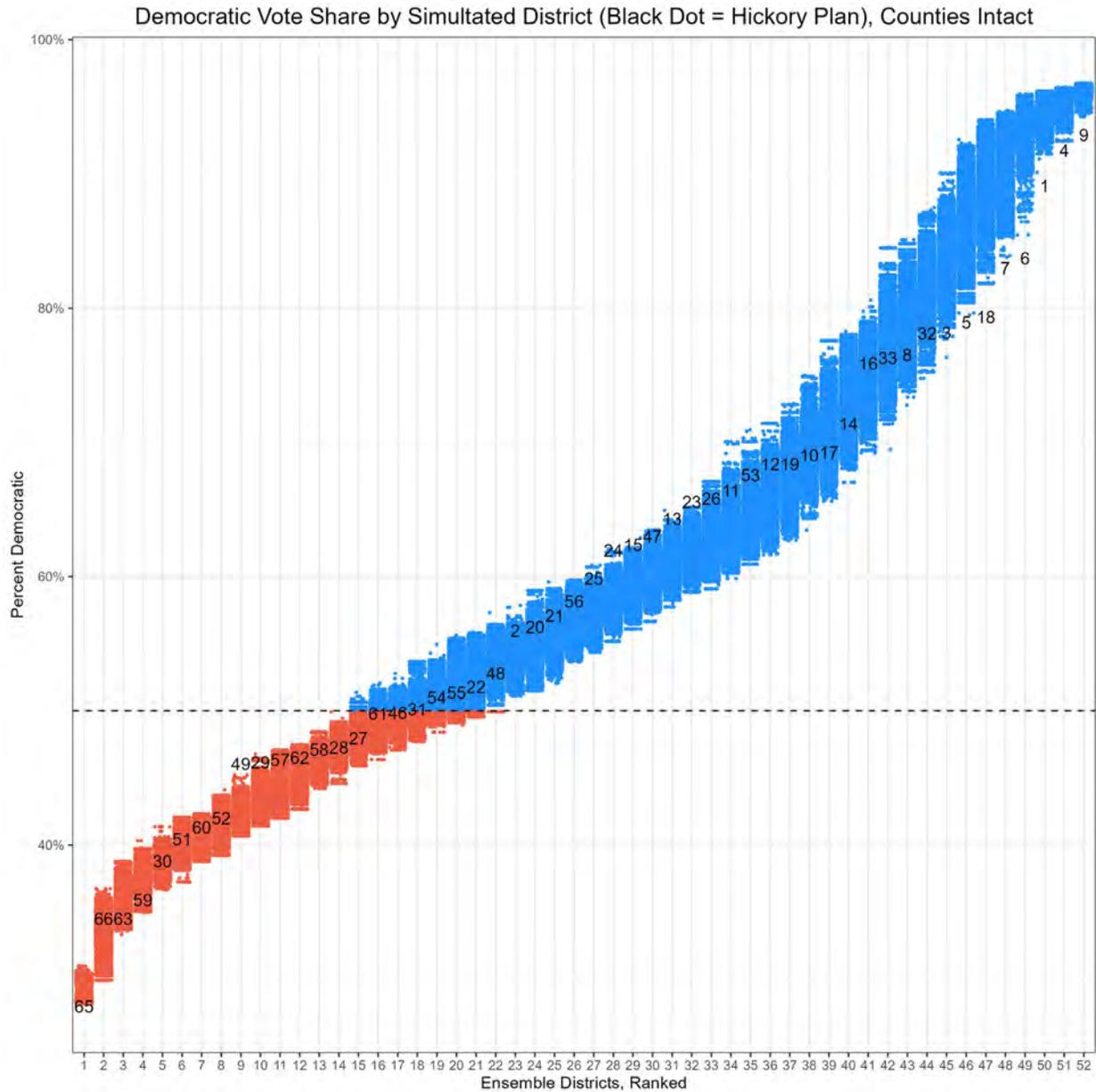


Figure 32



Notably, the Hickory Plan contains *almost exactly* as many districts carried by President Joe Biden as we would expect from a map drawn without any respect to politics. There is perhaps a modest bias toward competitive districts, but the largest deviations occur in places where such deviations matter the least: In heavily Democratic districts. These districts also tend to be the most heavily African-American. If anything, the deviations we see with respect to politics are likely being drawn by the desire to change the racial composition of districts, and not the other way around.

The gerrymandering indices confirm this. Although there are, indeed, deviations from the politics-neutral ensembles, they are not nearly as substantial as the deviations based on race.

Figure 33

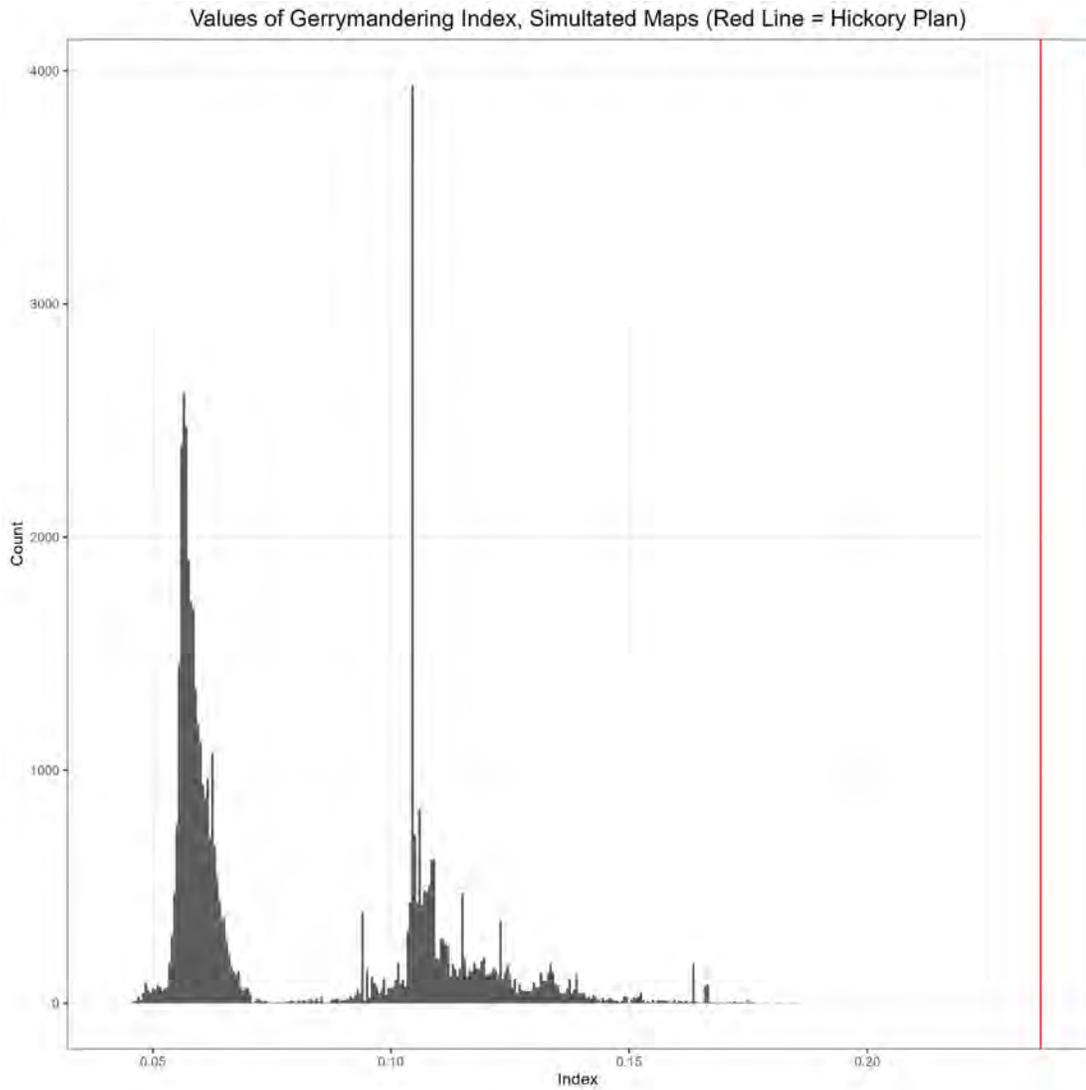
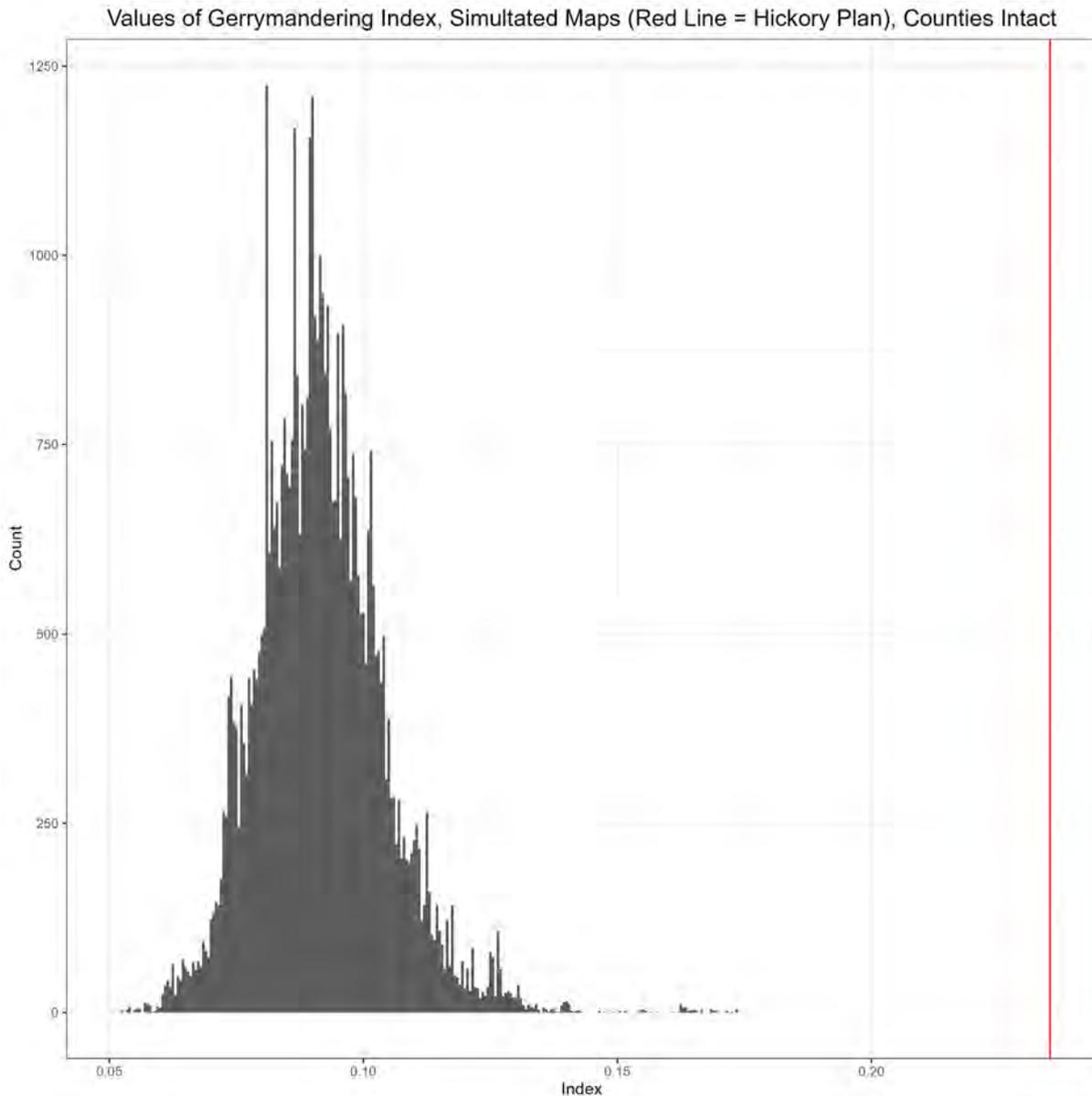


Figure 34



In other words, the data unsurprisingly show that the MICRC paid some attention to politics. But it does not appear, however, that politics was the determinative factor that drove the racial composition of the districts. To the contrary, the weight of the evidence suggests that it was the racial composition of the districts that drove the politics.

As a final check, I took into account of communities of interest by “freezing” cities and townships that the commission chose to keep intact. That is to say, if the commission failed to split a city or township, the simulated maps will be forced to keep that city or township intact. The results do not change appreciably.

Figure 35

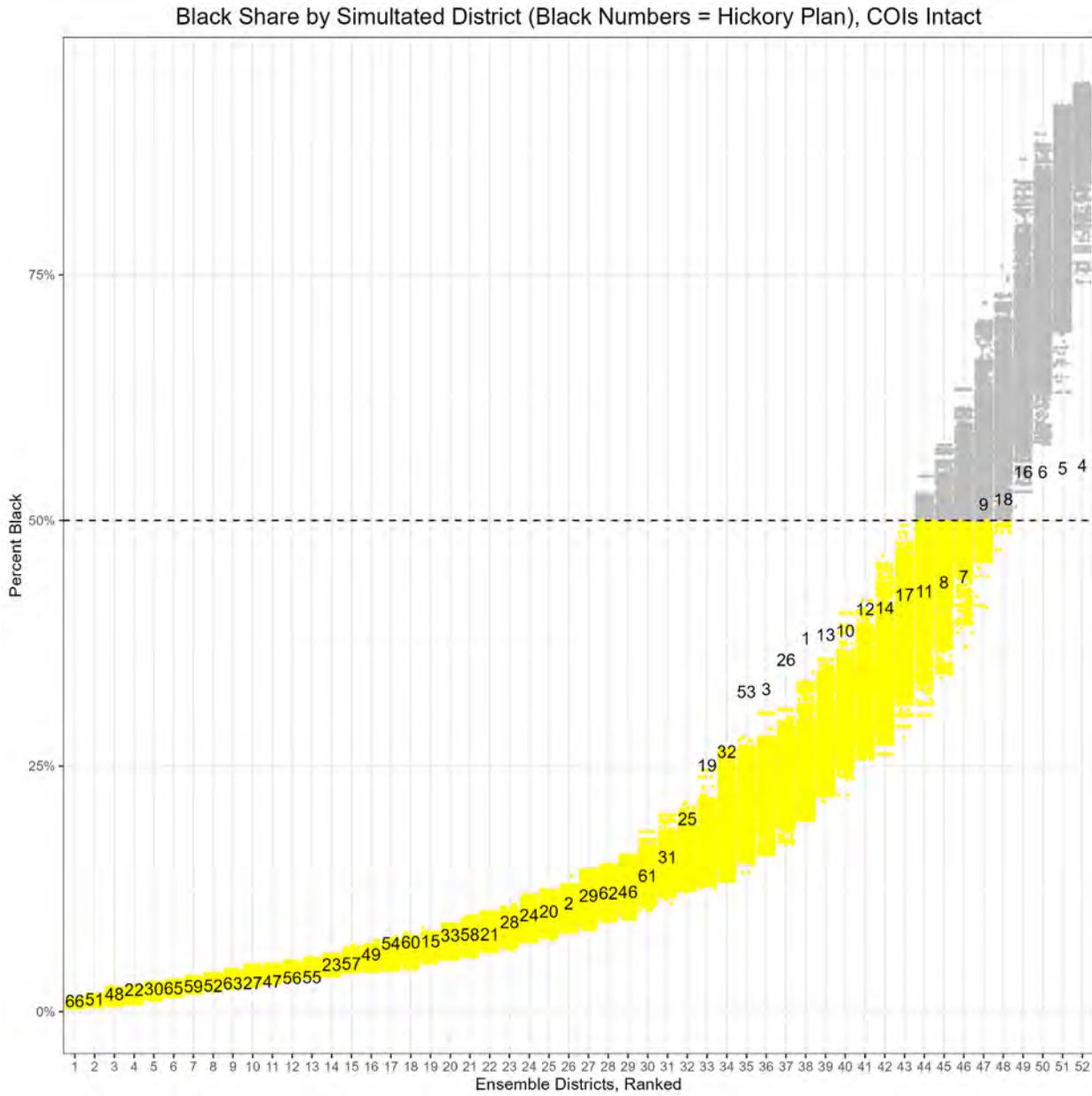


Figure 36

Values of Racial Gerrymandering Index, Simulated house Maps (Red Line = Hickory Plan), Counties Inta

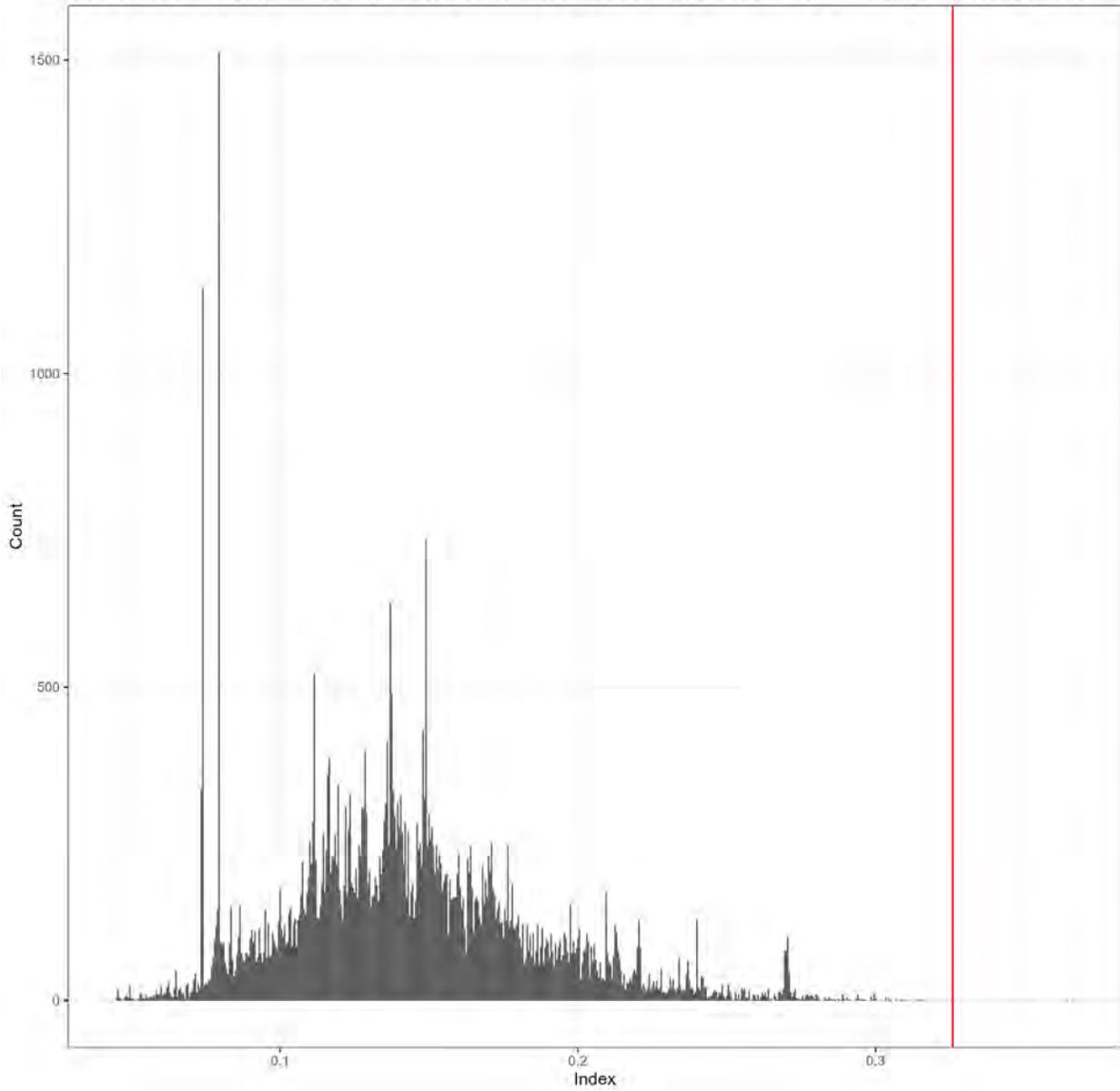


Figure 37

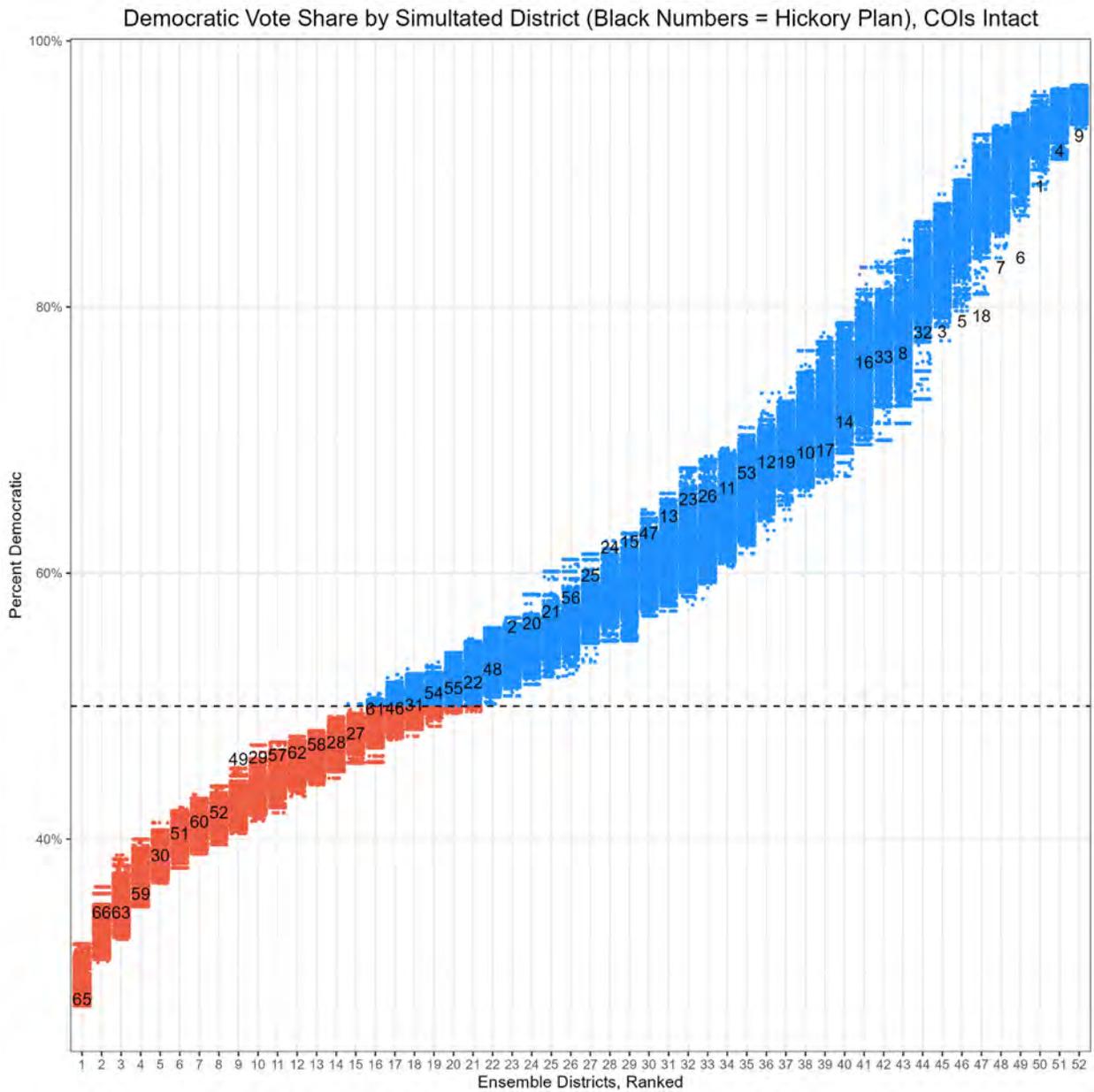
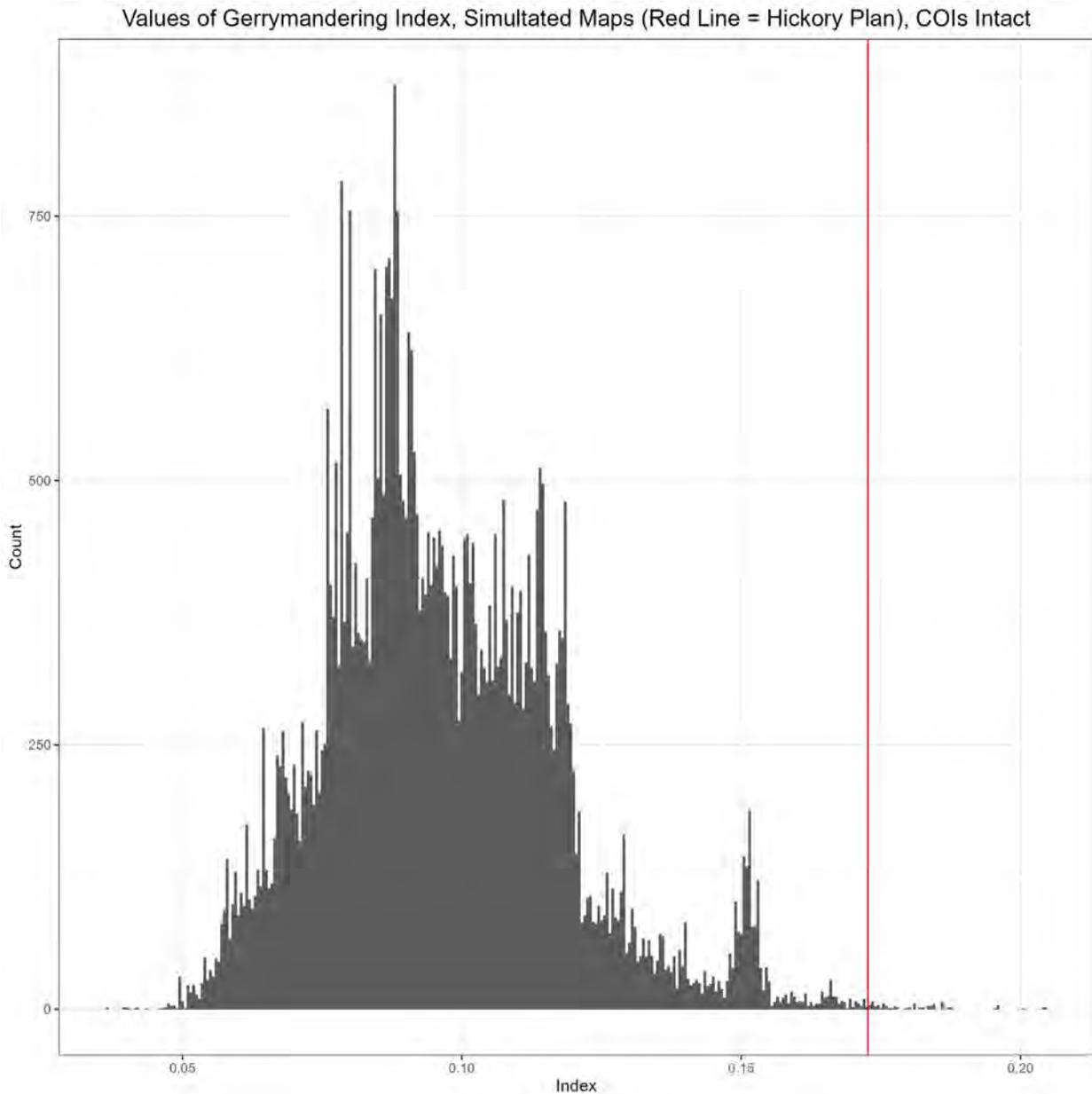


Figure 38



VII. MI State Senate

A. *Gingles* Factors and the performance of the Linden Map

1. Numerosity/Compactness

First, I was once again asked to draw a map that would draw reasonably configured districts in the Wayne County area with Black majority VAPs, while minimizing township, county and city splits. I was able to draw five such districts. For purposes of this map, I only changed districts 1-16 and 23-25. It is possible that a less disruptive map could be drawn by sacrificing compactness

or splitting more township, county and city lines. A map of the altered districts follows, along with a summary of the relevant data from them. Individual maps of the districts follow in an Appendix:

Figure 39

Plaintiffs' Senate Demonstration Map

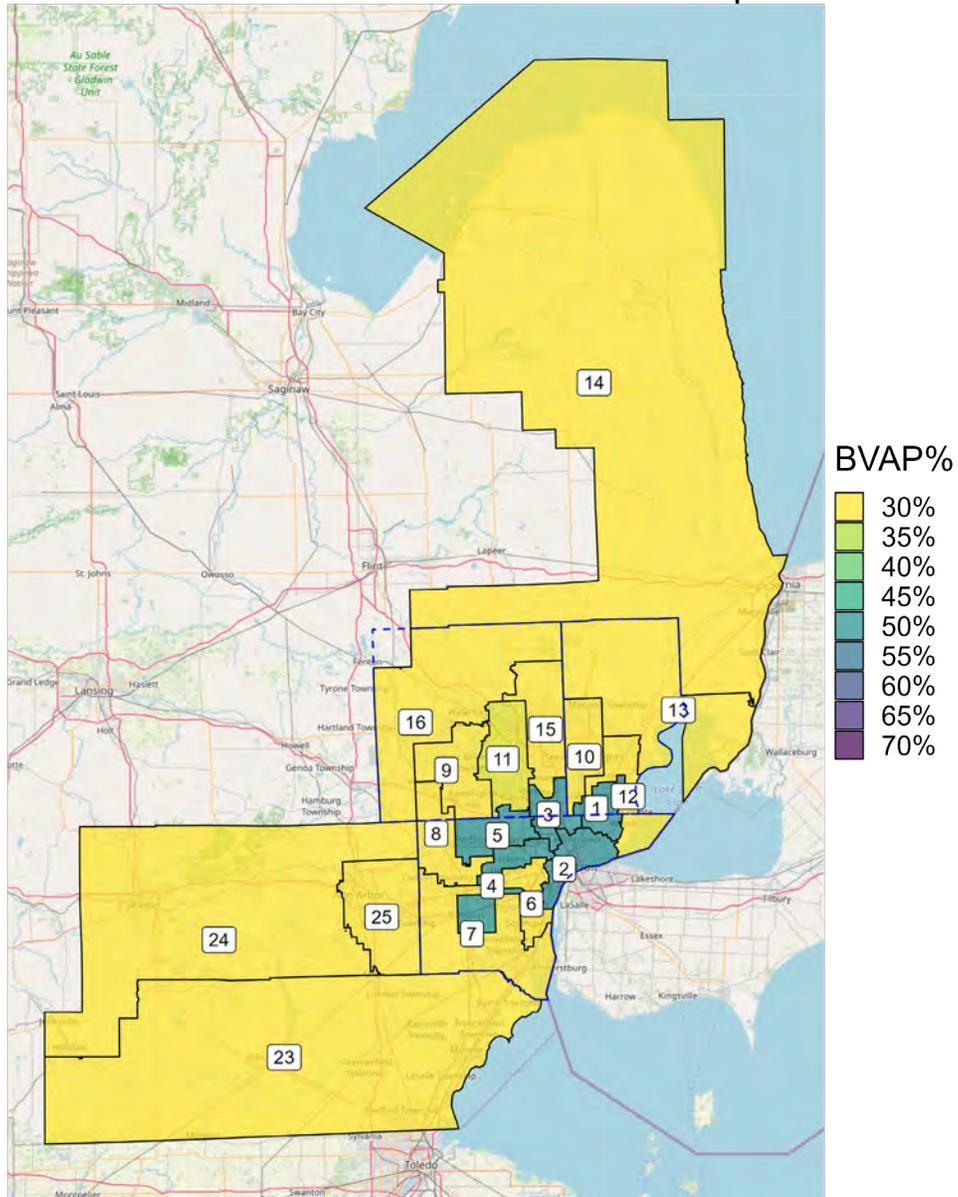


Table 15

Demonstration Plan, Redrawn Districts With Population Deviation and Racial Statistics						
District	Population	Deviation	BVAP	HVAP	AVAP	WVAP
1	261,875	-1.25%	50.60%	1.92%	2.45%	40.87%
2	260,905	-1.62%	50.88%	14.63%	5.36%	25.22%
3	260,000	-1.96%	50.41%	2.18%	2.74%	40.79%
4	267,494	0.87%	50.01%	4.10%	0.96%	40.56%
5	267,226	0.77%	50.16%	2.19%	1.81%	42.17%
6	264,289	-0.34%	5.35%	8.55%	1.92%	79.80%
7	264,921	-0.10%	13.68%	4.95%	4.68%	71.89%
8	266,533	0.51%	8.88%	3.35%	12.43%	71.57%
9	261,088	-1.55%	11.10%	3.42%	10.16%	71.74%
10	265,088	-0.04%	6.74%	2.35%	8.00%	79.54%
11	259,914	-1.99%	31.77%	6.43%	5.64%	52.41%
12	261,163	-1.52%	11.30%	2.36%	2.39%	80.23%
13	263,379	-0.68%	4.60%	2.76%	1.74%	87.17%
14	262,338	-1.08%	1.48%	2.88%	0.50%	91.62%
15	267,826	0.99%	3.43%	3.48%	14.16%	75.57%
16	266,445	0.47%	1.56%	3.56%	1.96%	88.81%
23	269,802	1.74%	2.38%	4.57%	0.57%	88.24%
24	271,250	2.28%	5.19%	3.05%	1.87%	85.64%
25	271,336	2.32%	13.88%	5.51%	11.38%	63.74%

The newly drawn districts are roughly as compact as the Linden Plan’s districts. The mean Reock score is 0.394, while the mean Polsby-Popper score is 0.340. This is comparable to the Linden Plan’s mean scores of 0.37 and .352 (note: these scores are for the newly drawn districts only). The least compact district under the Linden Plan is 0.245 for the Reock Score and 0.202 for the Polsby-Popper metric; this compares to 0.233 and 0.206 for the Demonstration map. Notably, the less compact districts are not found in the ability-to-elect districts.

In addition, the districts split fewer counties than the Linden Map. The Macomb/Oakland county line remains intact. The Wayne County/Macomb County line is crossed just twice, while the Wayne County/Oakland county line is crossed just three times. No other boundaries between counties in the newly drawn district other county line is crossed more than once. With a few exceptions (the three-way split of Westland), townships and cities are split no more than once.

2. Polarized Voting

State Senate races are different than state House races; they attract fewer candidates, attract more professional candidates, and are more expensive. They also illustrate clearly the dangers of dropping the BVAP in districts too far. Consider the 2014 elections. Of the six districts with significant Black populations under the Benchmark Plan, two featured unopposed races. A third (District 2) saw agreement on the candidate of choice between Blacks and Whites – supporting incumbent Sen. Bert Johnson. The other races were different. In a 45.4% BVAP district, Sen. Virgil Smith narrowly bested Rashida Tlaib by 8 points, thanks to a higher degree of polarization behind her. In District 11, the White vote fractures between Ellen Lipton and Vicki Barnett, allowing the Black candidate of choice to win by four-tenths of a point. In the 5th District, propelled by near-uniform support among White voters and facing a fractured Black field, the White candidate of choice (who earned just 7% of the vote from Black voters) won in a 52.5% BVAP district by just over eight points.

Table 16

2014 Senate EI Summary										
District	BVAP	Black 1st Choice	Black 1st Choice %	Black 2nd Choice	Black 2nd Choice %	White 1st Choice	White 1st Choice %	White 2nd Choice	White 2nd Choice %	Black Cand Margin%
Prior Senate 5	52.50%	Shanelle Jackson	35.76%	David Nathan	30.67%	David Knezek	86.01%	David Nathan	3.26%	-8.20%
Prior Senate 2	49.30%	Bert Johnson*	65.31%	John Olumba	24.21%	Bert Johnson*	74.62%	John Olumba	14.36%	—
Prior Senate 3	46.70%	Unopposed	—	—	—	—	—	—	—	—
Prior Senate 4	45.40%	Virgil Smith*	65.30%	Rashida Tlaib	32.80%	Rashida Tlaib	55.94%	Virgil Smith	30.99%	7.90%
Prior Senate 1	43.10%	Unopposed	—	—	—	—	—	—	—	—
Prior Senate 11	34.00%	Vincent Gregory*	62.23%	Ellen Lipton	20.08%	Ellen Lipton	44.42%	Vicki Barnett	43.48%	0.40%

Table 17

Ecological Inference, 5th Senate District Primary, 2014			
Party	Estimate	Lower 95%	Upper 95%
Asian			
Shanelle Jackson	7.71%	3.47%	15.09%
David Knezek	49.54%	18.76%	69.44%
David Nathan	9.69%	3.94%	19.22%
Carrie O'Connor	16.46%	6.01%	31.44%
Thomas Stallworth	5.72%	2.42%	11.38%
Frank Tomcsik	10.88%	4.63%	21.88%
Black			
Shanelle Jackson	35.76%	34.59%	36.92%
David Knezek	7.32%	5.62%	9.14%
David Nathan	30.67%	29.66%	31.68%
Carrie O'Connor	1.55%	1.16%	1.99%
Thomas Stallworth	23.92%	23.04%	24.80%
Frank Tomcsik	0.78%	0.57%	1.02%
Hispanic			
Shanelle Jackson	5.00%	2.67%	8.21%
David Knezek	51.78%	30.53%	68.30%
David Nathan	6.42%	3.20%	11.74%
Carrie O'Connor	20.92%	10.23%	35.73%
Thomas Stallworth	6.09%	3.19%	10.64%
Frank Tomcsik	9.80%	4.98%	17.28%
NH White			
Shanelle Jackson	2.78%	1.65%	4.10%
David Knezek	86.01%	83.21%	88.42%
David Nathan	3.26%	2.14%	4.61%
Carrie O'Connor	3.21%	2.10%	4.65%
Thomas Stallworth	2.13%	1.34%	3.07%
Frank Tomcsik	2.61%	1.79%	3.48%

Table 18

2014 Democratic State Senate Primary Results, Elections w/ Black Candidates, Detroit Metro Area		
Candidate	Vote Share	Candidate Race
District 5 (54.3% BVAP)		
Knezek, David	32.2%	White
Jackson, Shanelle	24.0%	African American
Nathan, David	21.0%	African American
Stallworth III, Thomas	16.4%	African American
O'Connor, Carrie	4.5%	White?
Tomcsik, Frank	1.9%	White
District 2 (51.1% BVAP)		
Johnson, Bert	63.0%	African American
Olumba, John	22.2%	African American
Lemmons, Georgia	10.5%	African American
Nykoriak, Taras	4.4%	White
District 3 (48.2% BVAP)		
Morris Hood	100.0%	African American
District 4 (47% BVAP)		
Smith, Virgil	49.8%	African American
Tlaib, Rashida	41.9%	Middle Eastern
Worthy, Howard	8.3%	White?
District 1 (44.7% BVAP)		
Young, Coleman	100.0%	African American
District 11 (35.5% BVAP)		
Gregory, Vincent	34.7%	Black
Barnett, Vicki	34.3%	White
Cogen Lipton, Ellen	31.0%	White
District 10 (8% BVAP)		
Jenkins, Kenneth	100.0%	African American

Overall, in these races the Black candidates' vote shares tend to mirror the BVAP of the district, running within a few points of each other. This is unsurprising, given the degree of racially polarized voting.

The 2018 elections tell a similar story. Black and White voters agreed on Marshall Bullock and Jeremy Moss as their candidates of choice. In two more districts, Black candidates of choice

were able to win narrowly against White-supported candidates. Sylvia Santana managed to win by just 2.8% in a 46.7% BVAP district in a race where she was the only candidate who raised more than \$5,000 according to Transparency USA.

Table 19

2018 Senate EI Summary										
District	BVAP	Black 1st Choice	Black 1st Choice %	Black 2nd Choice	Black 2nd Choice %	White 1st Choice	White 1st Choice %	White 2nd Choice	White 2nd Choice %	Black Cand Margin%
Prior Senate 5	52.50%	Betty Jean Alexander	68.10%	David Knezek*	31.90%	David Knezek*	72.60%	Betty Jean Alexander	27.50%	9.00%
Prior Senate 2 Special	49.30%	Brian Banks	28.80%	Adam Hollier	27.50%	Abraham Aiyash	42.56%	Adam Hollier	32.38%	-5.20%
Prior Senate 2	49.30%	Brian Banks	27.31%	Adam Hollier	25.65%	Abraham Aiyash	42.18%	Adam Hollier	32.45%	-3.80%
Prior Senate 3	46.70%	Sylvia Santana	60.30%	Anita Belle	25.40%	Gary Woronchak	76.00%	Sylvia Santana	18.70%	2.80%
Prior Senate 4	45.40%	Marshall Bullock	47.20%	Fred Durhal	40.60%	Marshall Bullock	38.60%	Fred Durhal	31.30%	-
Prior Senate 1	43.10%	Alberta Tinsley Talabi	47.10%	Stephanie Chang	27.10%	Stephanie Chang	76.70%	Stephanie Roehm	8.70%	-23.40%
Prior Senate 11	34.00%	Jeremy Moss	53.10%	Crystal Bailey	24.90%	Jeremy Moss	51.00%	Vanessa Moss	20.30%	-

Consider District 1 (43.1% BVAP), which the Handley Report identifies as being racially polarized, Handley Report at 9, with White voters preferring Stephanie Chang, and Black voters preferring Alberta Tinsley Talabi. Chang won the primary; she is now representing a district with a BVAP of just 35%. In District 2, it is difficult to identify a candidate of choice due to the badly fractured nature of the primary. Handley Report, at 9.

State Senate District 3 saw heavy racial polarization. Sylvia Santana won by less than three points against the White candidate of choice, Gary Woronchak, in a district that was 46.7% BVAP – still higher than the highest BVAP district under the Linden Plan.

In 2018, three African-American candidates ran in the Democratic primary in District 4; in this circumstance there was not significant racial polarization. In District 5 (52.5% BVAP), the voting was polarized. *Id.* The Black candidate of choice, Betty Jean Alexander, won her election. But her vote share of 54.5% of the vote closely mirrored the BVAP of the district.

Table 20

2018 Democratic State Senate Primary Results, Elections w/ Black Candidates, Detroit Metro Area		
Candidate	Vote Share	Candidate Race
District 5 (54.3% BVAP)		
Alexander, Betty Jean	54.5%	African American
Knezek, David	45.5%	White
District 2 (51.1% BVAP)		
Hollier, Adam	25.2%	African American
Aiyash, Abraham	21.0%	Middle Eastern
Banks, Brian	17.2%	African American
Williams, Regina	9.4%	African American
Lemmons, LaMar	9.1%	African American
Olumba, John	6.4%	African American
Cushingberry Jr., George	4.1%	African American
Miah, Anam	3.4%	Middle Eastern
Gannan, Lawrence	2.0%	Hispanic/White
Phillips, William	1.2%	?
Campbell, Tommy	1.0%	White
District 3 (48.2% BVAP)		
Santana, Sylvia	41.5%	African American
Woronchak, Gary	38.7%	White
Belle, Anita	14.3%	African American
Burrell, Terry T	5.5%	African American
District 4 (47% BVAP)		
Bullock, Marshall	44.3%	African American
Durhal, Fred	38.3%	African American
Pinkins, Carron L	17.5%	African American
District 1 (44.7% BVAP)		
Chang, Stephanie	49.8%	Asian
Talabi Tinsley, Alberta	26.4%	African American
Cook Scott, Bettie	11.2%	African American
Cole Jr., James	5.2%	African American
Roehm, Stephanie	4.4%	White
Rivera, Nicholas	2.9%	Hispanic
District 11 (35.5% BVAP)		
Moss, Jeremy	51.7%	White
Bailey, Crystal	21.2%	African American
Moss, Vanessa	18.5%	African American
Turner, James	8.6%	?
District 6 (21.3% BVAP)		
Geiss, Erika	65.4%	African American
Kosowski, Robert	34.6%	White

This is problematic, because it is apparent that there is frequently racially polarized voting in these Senate districts, as there was in 2018. Thus, the Voting Rights Act would demand districts that would elect the Black candidate of choice. The evidence is significant, however, that dropping

the BVAPs as low as the MICRC did would result in districts that would not reliably perform. This is exactly what happened in 2022.

Table 21

2022 Senate EI Summary										
District	BVAP	Black 1st Choice	Black 1st Choice %	Black 2nd Choice	Black 2nd Choice %	White 1st Choice	White 1st Choice %	White 2nd Choice	White 2nd Choice %	Black Cand Margin%
Linden 7	44.80%	Jeremy Moss*	91.24%	Ryan Foster	8.76%	Jeremy Moss*	92.80%	Ryan Foster	7.20%	–
Linden 3	42.10%	Stephanie Chang*	81.00%	Toinu Reeves	19.00%	Stephanie Chang*	93.07%	Toinu Reeves	6.93%	–
Linden 10	40.40%	Unopposed	–	–	–	–	–	–	–	–
Linden 8	40.20%	Marshall Bullock*	79.87%	Mallory McMorrow*	20.13%	Mallory McMorrow*	96.34%	Marshall Bullock*	3.66%	–37.00%
Linden 6	39.10%	Mary Cavanagh	48.78%	Darryl Brown	38.73%	Vicki Barnett	48.25%	Mary Cavanagh	47.40%	8.10%
Linden 1	35.00%	Brenda Sanders	43.62%	Erika Geiss*	18.41%	Frank Liberati	46.38%	Erika Geiss*	42.57%	0.40%

In District 10, the only candidate was a White Democrat who hailed from Macomb County. Districts 7 and 3 saw agreement on retaining the incumbents, who also ran against token opposition. The Black candidate of choice managed to hang on in District 6. The other two districts, however, saw the Black candidate of choice lose. In District 1, Brenda Sanders received just 7% of the vote from non-Hispanic Whites. Black voters in turn rejected the White voters’ choice – Frank Liberti – giving him just 4% of the vote. This fracturing allowed Erika Geiss, who neither faction had as their first choice (but who had significant support among White voters) win.

Of course, the big story came in District 8, which was perhaps the ideal test case for how these districts can be expected to perform as term limits kick in and the districts open up. It featured two well-funded Democratic incumbents, one from Wayne County, and one from Oakland County. White voters voted almost uniformly for the White candidate, Mallory McMorrow. Black voters voted as a slightly lower pace for Marshall Bullock. It didn’t matter, as McMorrow was virtually guaranteed to win, absent a turnout collapse among Whites, so long as she benefitted from bloc voting.

Dr. Handley is surely correct that establishing a threshold of representation for a primary is difficult from this data. But cutting the BVAPs of all of these senate districts below 47% -- and all but one below 43% -- is a recipe for disaster in the long run. Black candidates of choice often

have difficulty winning even in districts above that threshold. It surely will not get any easier as term limits push out incumbents who can leverage their incumbency to ward off strong challengers. For now, only three Senate seats elect Black candidates of choice. To hold on to these, Black candidates will likely have to hope for divided opposition, or underfunded opposition. With BVAPs hovering in the low 40% range, their future is not in their hands.

Gubernatorial Elections

Once again, the gubernatorial elections provide ample evidence of racial polarization in Democratic primaries.

Table 22

Ecological Inference, 2018 Democratic Primary, Senate Benchmark Plan 1-6				
Race	Party	Estimate	Lower 95%	Upper 95%
District 1				
Black	Thanedar	43.51%	40.66%	46.32%
NH White	Thanedar	6.82%	4.52%	9.69%
Black	Whitmer	33.77%	30.84%	36.66%
NH White	Whitmer	65.74%	60.09%	70.98%
District 2				
Black	Thanedar	49.49%	46.68%	52.21%
NH White	Thanedar	4.04%	2.77%	5.62%
Black	Whitmer	38.57%	35.54%	41.45%
NH White	Whitmer	52.70%	48.48%	56.82%
District 3				
Black	Thanedar	51.43%	49.41%	53.46%
NH White	Thanedar	3.39%	2.25%	4.87%
Black	Whitmer	37.90%	35.69%	39.95%
NH White	Whitmer	29.72%	26.80%	32.94%
District 4				
Black	Thanedar	41.95%	40.04%	43.75%
NH White	Thanedar	7.68%	4.96%	10.98%
Black	Whitmer	37.08%	34.97%	38.91%
NH White	Whitmer	72.40%	64.80%	78.44%
District 5				
Black	Thanedar	40.59%	38.97%	42.19%
NH White	Thanedar	6.42%	3.90%	9.38%
Black	Whitmer	39.12%	36.87%	41.13%
NH White	Whitmer	44.52%	36.43%	51.96%
District 6				
Black	Thanedar	38.69%	27.60%	49.08%
NH White	Thanedar	8.69%	5.41%	12.63%
Black	Whitmer	37.72%	25.54%	48.63%
NH White	Whitmer	76.96%	70.00%	82.45%

Table 23

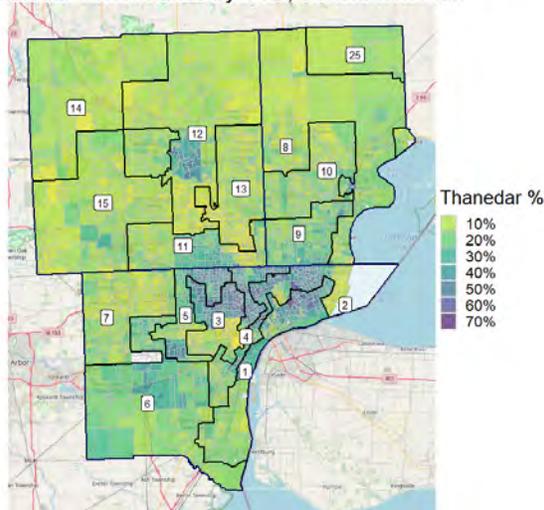
Ecological Inference, 2018 Democratic Primary, Senate Benchmark Plan 7-12				
Race	Party	Estimate	Lower 95%	Upper 95%
District 7				
Black	Thanedar	29.33%	15.42%	47.57%
NH White	Thanedar	2.91%	1.96%	4.19%
Black	Whitmer	33.21%	16.32%	53.17%
NH White	Whitmer	74.80%	69.67%	79.61%

Shri Thanedar is the Black-preferred candidate in all five of the Detroit Districts, including by majorities in District 3, and nearly so in District 2. Thanedar, by contrast, likely never received more than 9% of the vote from non-Hispanic Whites here. Note too that as we move into the two suburban districts Whitmer’s level of support skyrockets into the 70s.

Note the effects of the redrawn districts. Thanedar does not perform as well in the five Senate districts in the Benchmark plan as he does in many of the Benchmark House plans. But the Linden Plan functions in the same way as the Hickory Plan: with districts stretching out into the heavily suburban areas of Oakland County where Whitmer ran exceptionally well.

Figure 40

Thanedar Performance by VTD, Benchmark Plan



Thanedar Performance by VTD, Linden Plan

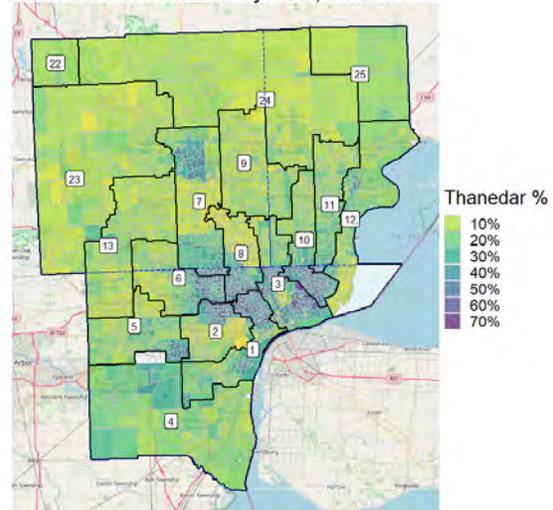
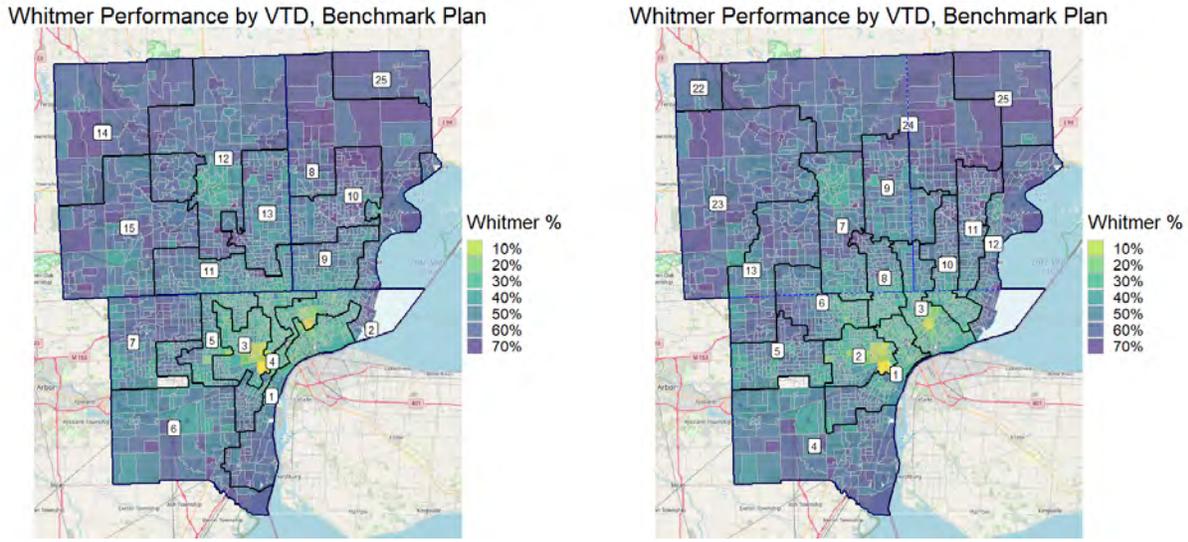


Figure 41



The result of this is that Thanedar’s performance in the six districts with significant Black populations under the Linden Plan are all diminished. While the differences aren’t as severe as under the Hickory Plan, in part because the Senate districts are large enough that he failed to carry any district, his performance drops by, on average, two points in the five most heavily Black districts under the Linden Plan.

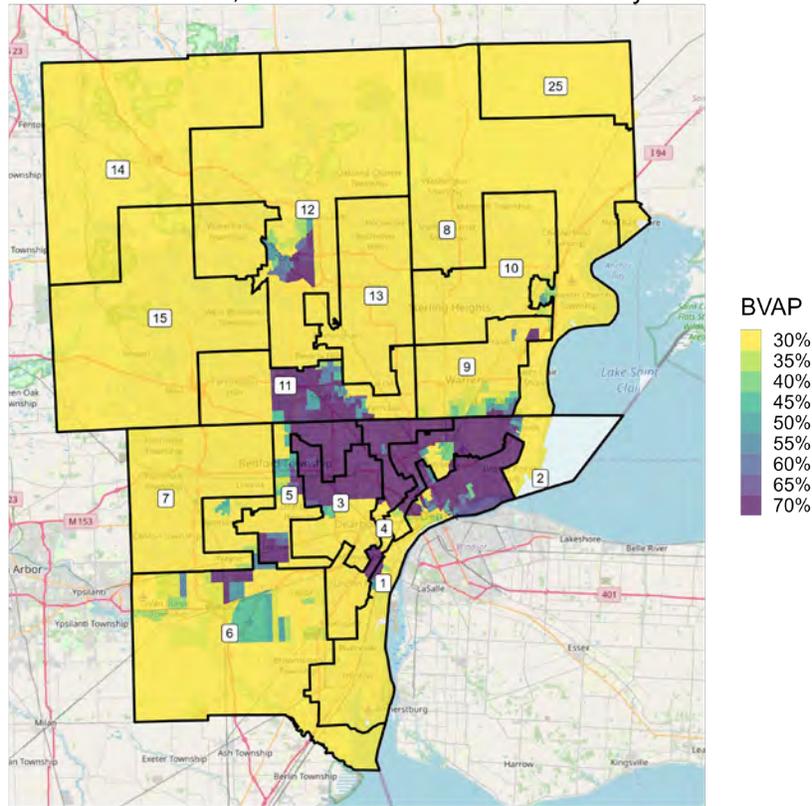
B. Racial Predominance

1. Background

Like the House districts, under the Benchmark Plan, the Detroit area Senate districts were fairly compact, although not as compact as their House counterparts. Several of the Detroit districts are “baconmanders” themselves, suggesting that race predominated in their drawing. Nevertheless, the Wayne County line is never crossed under this plan.

Figure 42

Benchmark Plan, Detroit Area Senate Districts by Race

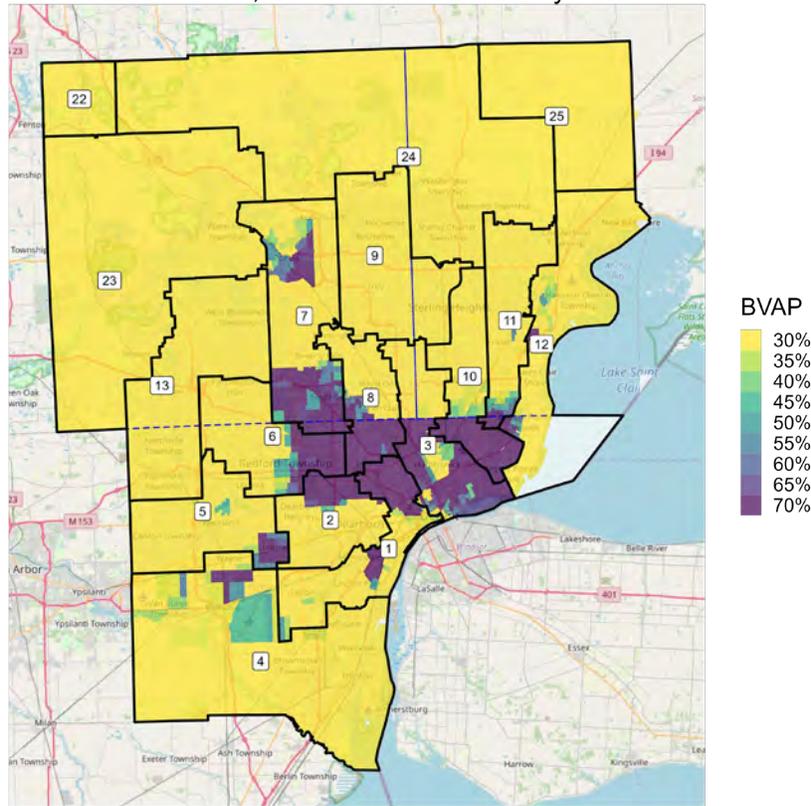


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Despite the fact that at most five reasonably configured majority Black districts can be drawn in the area, the Detroit area Senate districts under the Linden Plan cross the county line repeatedly.

Figure 43

Linden Plan, Detroit Area Districts by Race



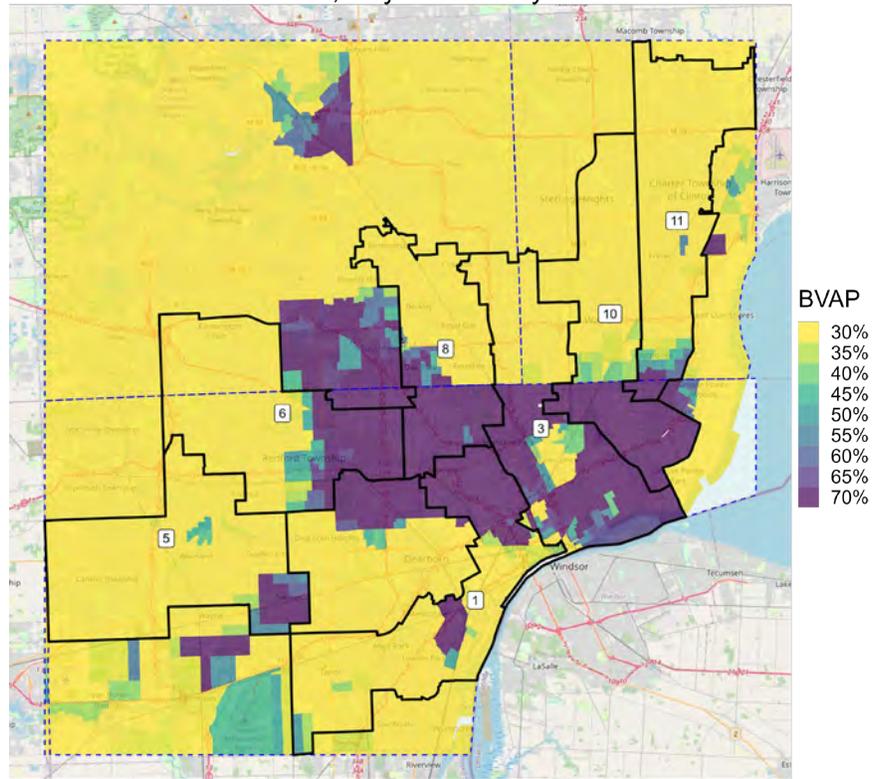
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Districts 3, 10, 11 and 12 cross the Wayne-Macomb boundary, districts 3, 6, 7, 8 and 13 cross the Wayne-Oakland boundary, while districts 3 and 9 and 24 cross the Oakland-Macomb boundary. This compares with the Benchmark Plan, where none of these boundaries are ever breached.

As with the Hickory Plan, this map crosses the Wayne boundary in particular ways. They function to take heavily Black areas of Detroit and combine them with suburban White areas of the Detroit suburbs. This reduces the Black VAP. As seen above, this “cracking” of the Black vote imperils the ability of Black voters to elect their candidates of choice. The same is true South of Detroit, where districts 1 and 5 adopt bizarre shapes to achieve their goal. We can see this better by focusing in on these districts in particular:

Figure 44

Linden Plan, Key Districts by Race

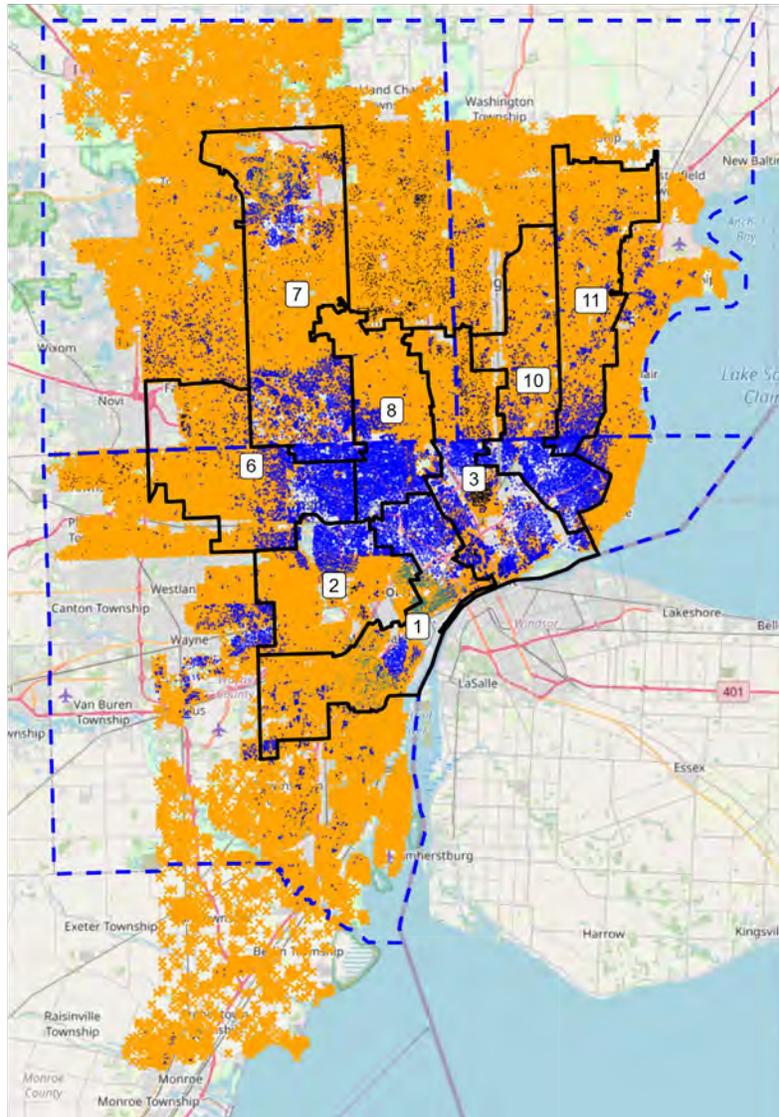


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The dot density map illustrates this even more starkly:

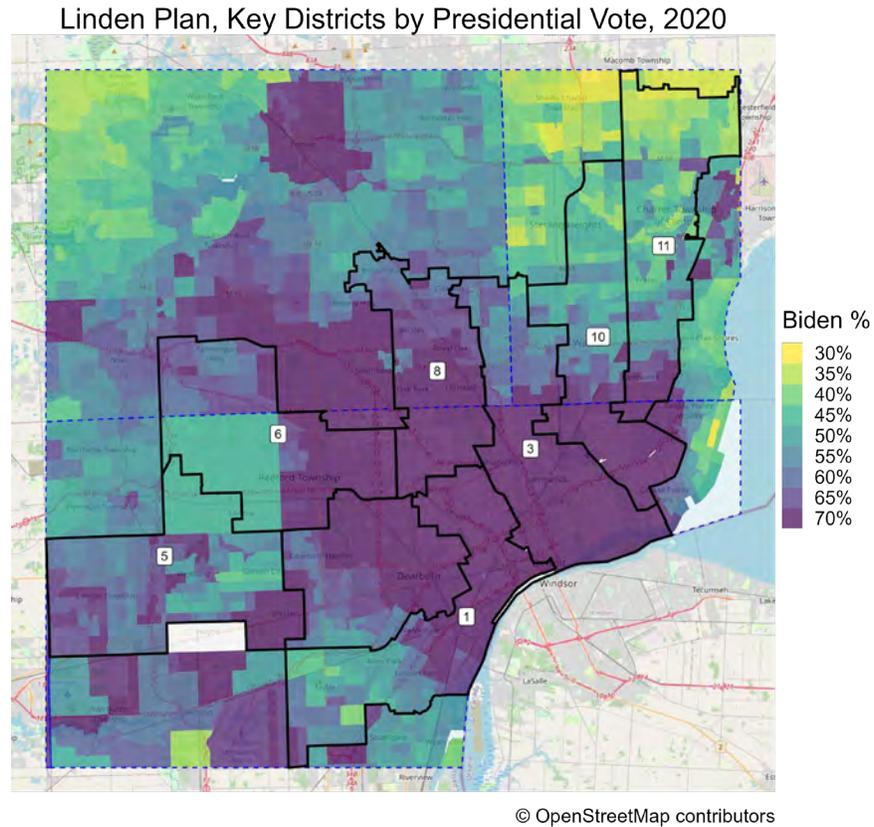
Figure 45

Population of Macomb/Oakland/Wayne Counties, MI, by Linden Districts
1 Orange 'X' = 25 White Residents of Voting Age, 1 Blue Dot = 25 Black Residents of Voting Age
1 Teal Dot = 25 Hispanic Residents of Voting Age, 1 Black Dot = 25 Asian Residents of Voting Age



Once again, these features do not exist to improve the partisan performance of the map, as almost all of these precincts are at least Democratic leaning. Instead, they divvy up the voters by race, combining Black precincts in Detroit with White precincts in the suburbs.

Figure 46



We can once again see how race predominated by examining traditional redistricting criteria individually.

2. Compactness

We begin with another set of the maps above. Again, these show the Detroit area map under the Benchmark Plan map and the Linden Plan map, with the maps broken down into districts.

Figure 47

Detroit Area Benchmark Senate Districts, by BVAP and Compactness

Titles = Reock Scores,
Labels = District Numbers

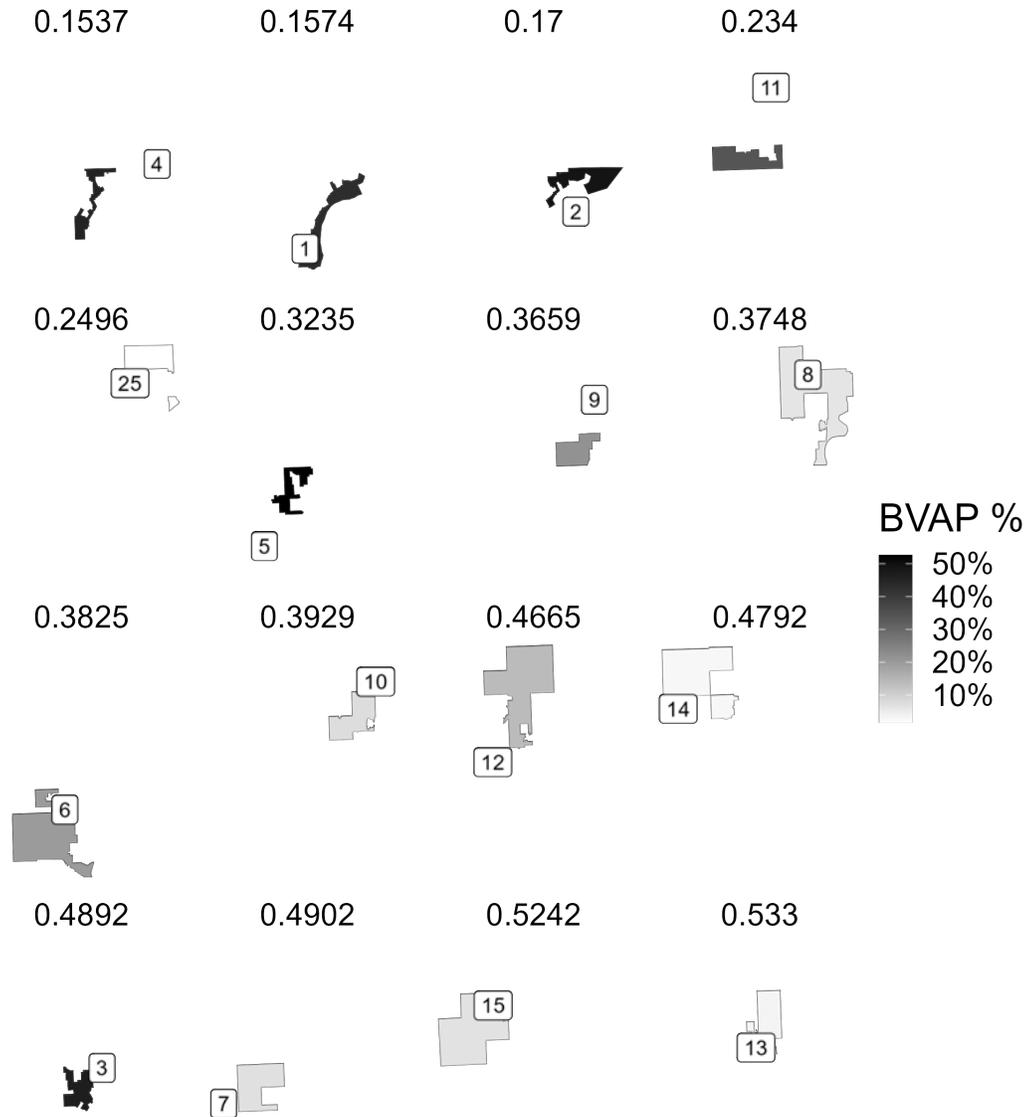
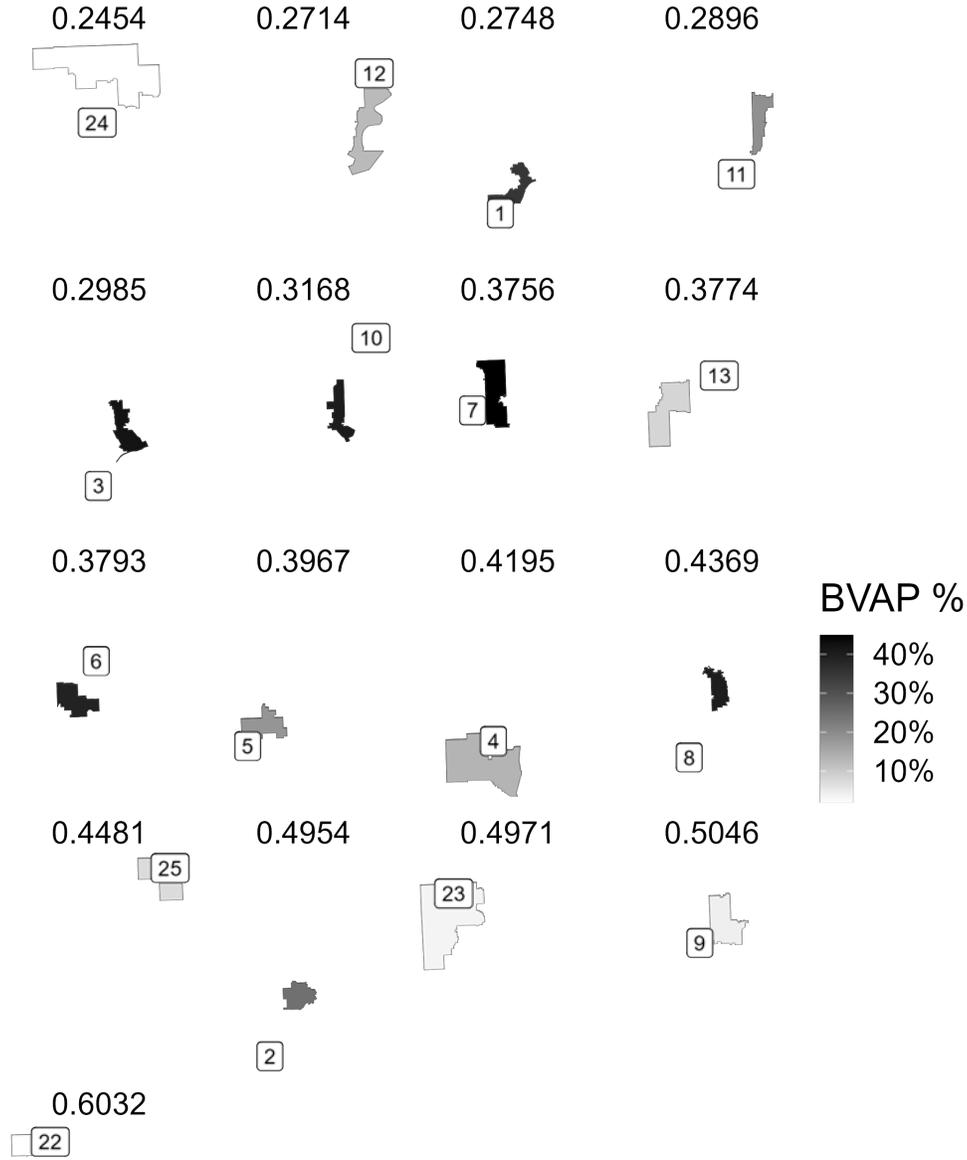


Figure 48

Detroit Area Linden Districts, by BVAP and Compactness

Titles = Reock Scores,
Labels = District Numbers



Under both maps, the districts with high BVAPs are located toward the top of the list, indicating that those districts generally performed the worst on the Reock scores. The same is true with Polsby-Popper scores:

Figure 49

Detroit Area Benchmark Senate Districts, by BVAP and Compactness

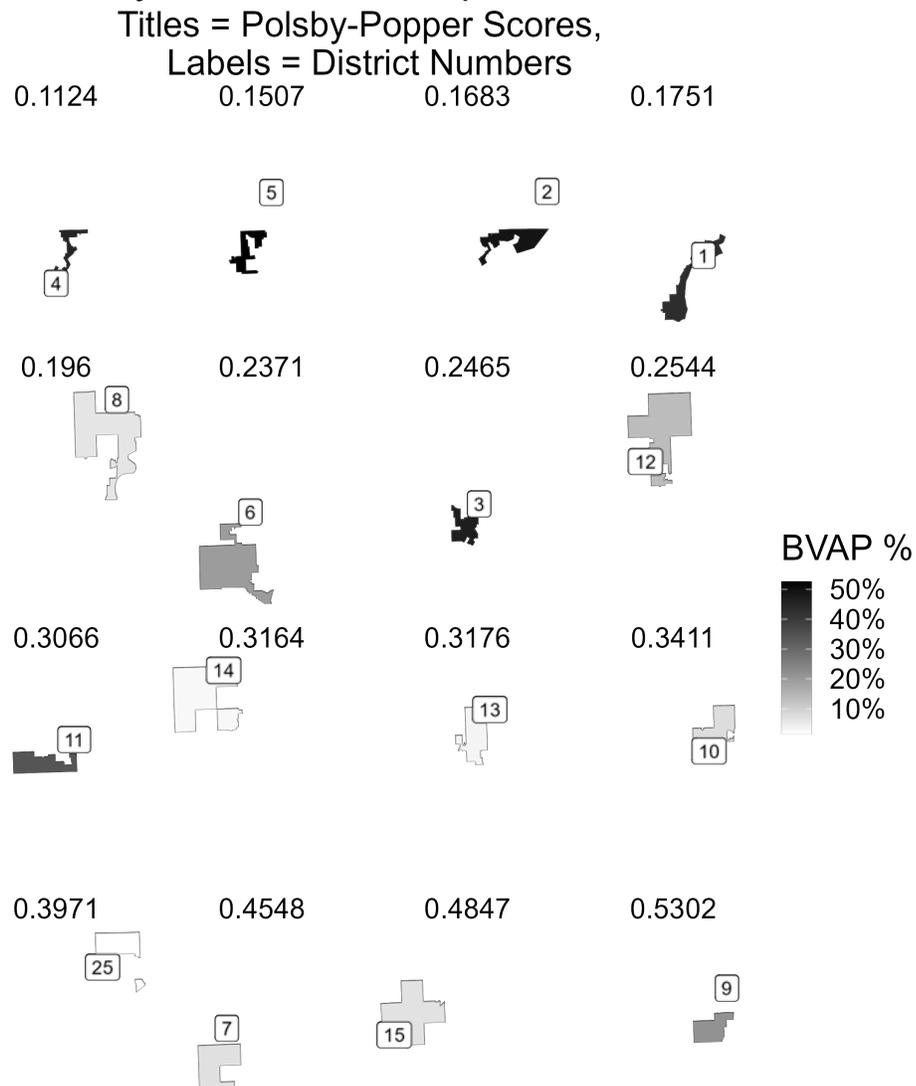
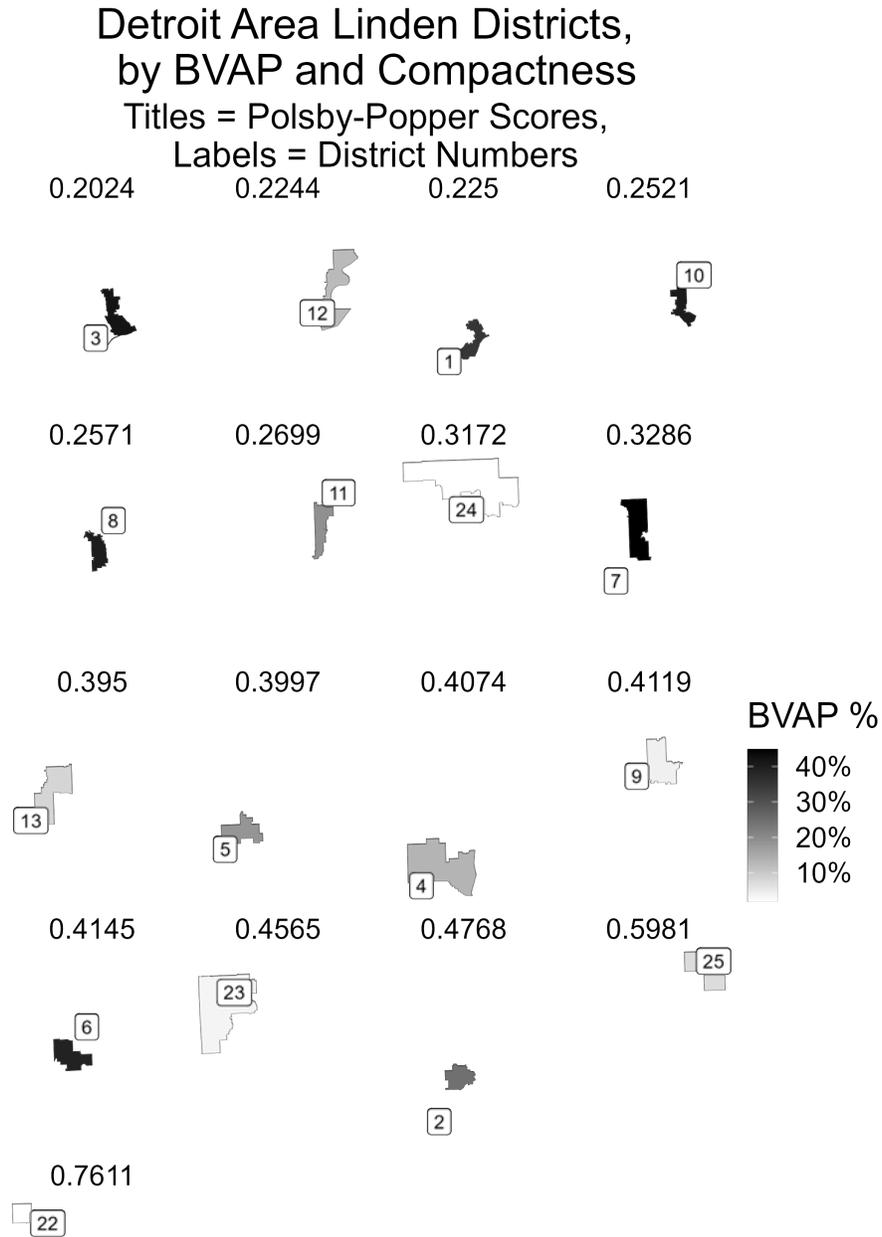


Figure 50



Finally, we see the same trend with the MAGiK scores.

Figure 51

Detroit Area Benchmark Senate Districts, by BVAP and Compactness

Titles = MAGiK Scores,
Labels = District Numbers

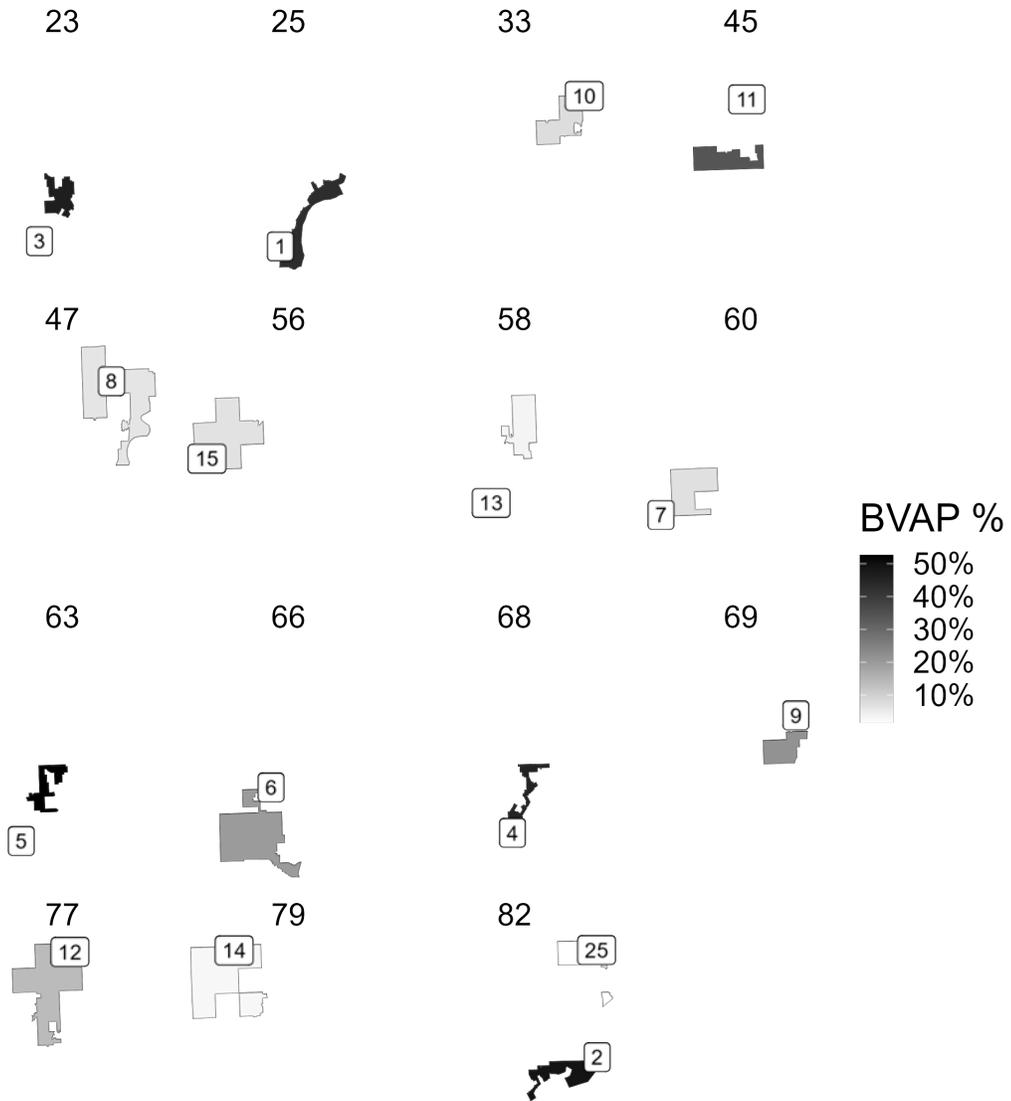
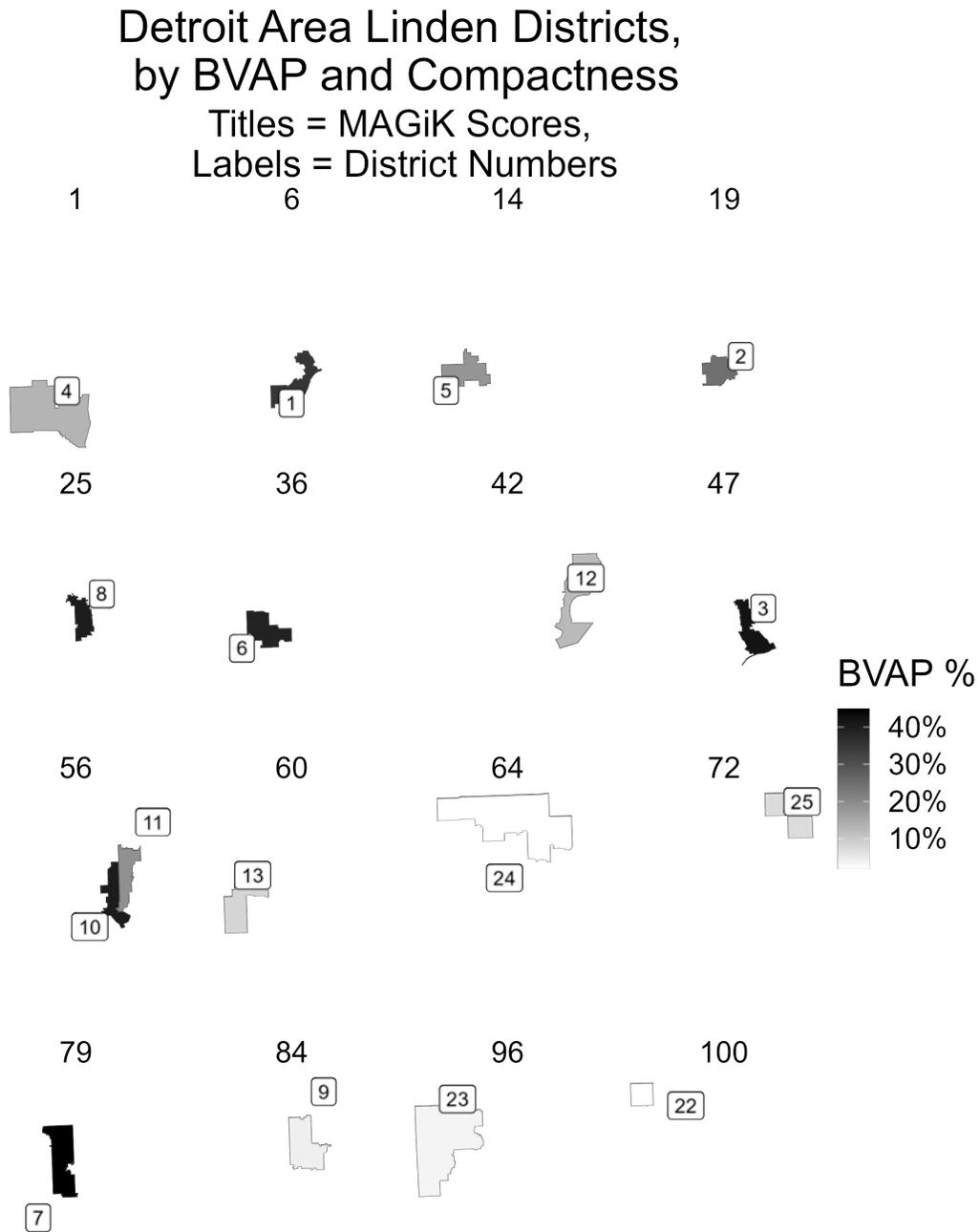


Figure 52



Rather than eyeball the data, though, we can run the regression analyses described above for House districts. Once again, we see the negative correlations between BVAP and compactness

score, under the Polsby-Popper scores. This suggests some degree of subordination of compactness to race; as the districts had larger and larger BVAPs, the compactness of the districts tended to decline.

Table 24

Regression Results, Compactness vs. BVAP, Detroit Benchmark Senate Districts		
Test	Coefficient	P-value
Reock	-0.864	0.014
Polsby-Popper	-0.975	0.009
MAGiC	-0.002	0.416

Table 25

Regression Results, Compactness vs. BVAP, Detroit Linden Districts		
Test	coefficient	pvalue
Reock	-0.562	0.167
Polsby-Popper	-0.612	0.02
MAGiK	-0.002	0.037

The results of the statewide maps tell a similar story. This time, it is the MAGiK scores that show the significant relationship, suggesting that, compared to the state as a whole, as interest in race increased, interest in compactness decreased.

Table 26

Regression Results, Compactness vs. BVAP, All Benchmark Senate Districts		
Test	Coefficient	P-value
Reock	-0.553	0.006
Polsby-Popper	-0.292	0.042
MAGiK	-0.003	0

Table 27

Regression Results, Compactness vs. BVAP, All Linden Districts		
Test	Coefficient	P-value
Reock	0.080	0.743
Polsby-Popper	-0.179	0.298
MAGiK	-0.002	0.037

Note that in all of these situations, the Linden plan is more compact, at least in the Detroit area, than the Benchmark Plan. This is because, under the Benchmark Plan, the Detroit area African-American districts tend to have strange shapes. But as noted above, there are likely five Black VRA districts available in Detroit; these shapes likely reflect a desire to comply with the VRA; the more compact districts under the Linden Plan reflect a lack of concern with this.

Regardless, under the Reock metric, districts 1 (#6), 11 (#9) and 3 (#10) are among the least compact districts in the state; this is more striking when you consider that districts 38 (#2) and 37(#4) are located on or around the Upper Peninsula and have little choice in their shapes; 32 (#5) is likewise a coastal district. Using Polsby-Popper, districts 3 (#4), 1 (#5), 10 (#6), 8 (#7) and 11 (#8) are also in the top ten; 37 and 38 once again take the top two spaces. Using the Kaufman-King index, District 3 (#1), District 1 (#2), District 10 (#4), District 11 (#7) and District 8 (#9) are among the ten least compact districts in the state. All seven challenged districts are in the bottom half in terms of compactness.

3. County Splits

Under the previous Senate map, 17 districts crossed county lines. None of the districts that cross county lines are in the Detroit area. Under the Linden Plan, that number increases to 31, notwithstanding the fact that the Michigan Constitution requires that due regard be given to county lines. Eight of those additional 14 split districts are on the Wayne County boundary.

Moreover, under the previous plan, only one county – Genesee – is ever split more than once. Under the Linden plan, that number increases to 31, with a total of 88 splits in those counties. Of those 88 splits, a quarter of them – 23 splits – are found in Macomb, Oakland and Wayne counties. The only county with a comparable number of splits is Kent County, which has 4 splits.

4. District Cores

Although not listed among the Michigan criterion, core retention has been listed as a legitimate factor for states to consider when redistricting in federal cases. While there is insufficient evidence to conclude that the Hickory Map subordinates this concern to racial factors, the Linden map does appear to subordinate concerns for this factor to race. We can demonstrate this with two regression analyses. Our first regression analysis asks, which asks “as the BVAP in a Linden plan district increases, does the amount of its core that is held over from the earlier plan also increase?” The answer is “no.” The p-value is less than 0.05, and the coefficient is negatively signed. In other words, we would be extremely unlikely to find these data if there were no

relationship between BVAP and core retention. We therefore conclude that as the BVAP of a district increases, the district will be comprised of less and less of a prior district’s core.

Table 28

Regression Results, BVAP vs. Max. Core Retention, Linden Plan			
Characteristic	Beta	95% CI ⁷	p-value
BVAP	-0.64	-1.1, -0.20	0.005

⁷ CI = Confidence Interval

The same is true if we ask the inverse of that question: “Using the prior plan’s districts, as BVAP increases, was a district more likely to be broken up?” The answer there appears to be “yes.” The p-value is less than 0.05, and the coefficient is negatively signed. In other words, we would be extremely unlikely to find these data if there were no relationship between BVAP and core retention. We therefore conclude that as the BVAP of a prior district increased, the district was more likely to be split up.

Table 29

Regression Results, BVAP vs. Max. Core Retention, Prior Plan			
Characteristic	Beta	95% CI ⁷	p-value
BVAP	-0.53	-0.92, -0.13	0.010

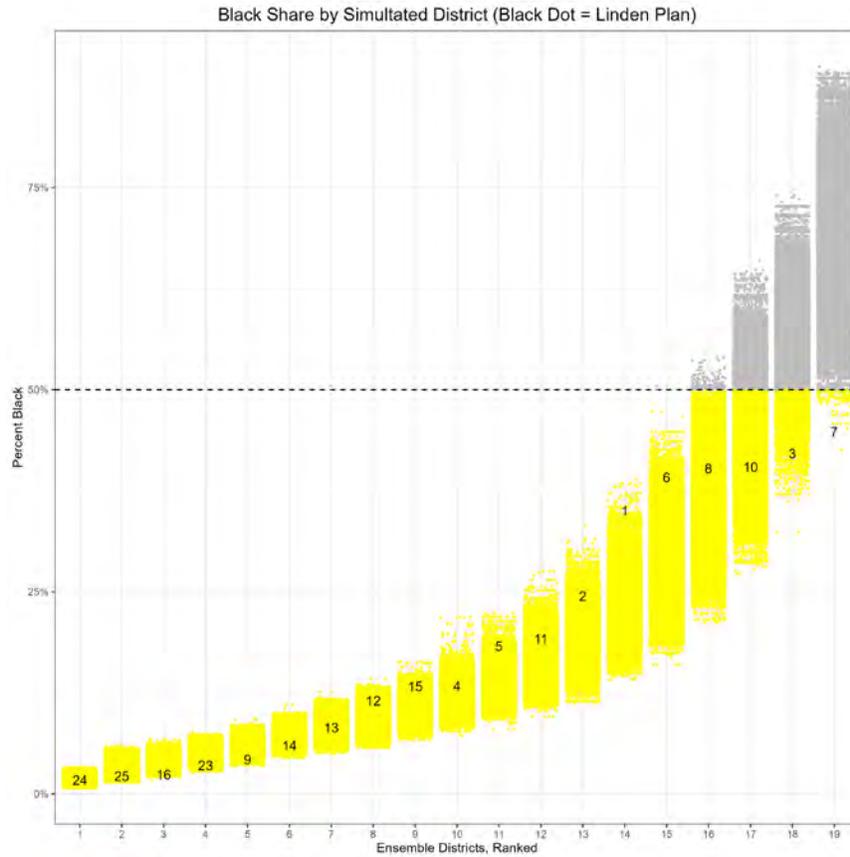
⁷ CI = Confidence Interval

5. Simulation Analysis

As with House districts, perhaps the best way to see whether the commission subordinated race to other considerations is with a simulation analysis. For my analysis of the Detroit-Area Senate plans, I once again selected Senate districts from Wayne and adjoining counties, and then districts that bordered them. These constituted 19 districts, or about half of the Senate.

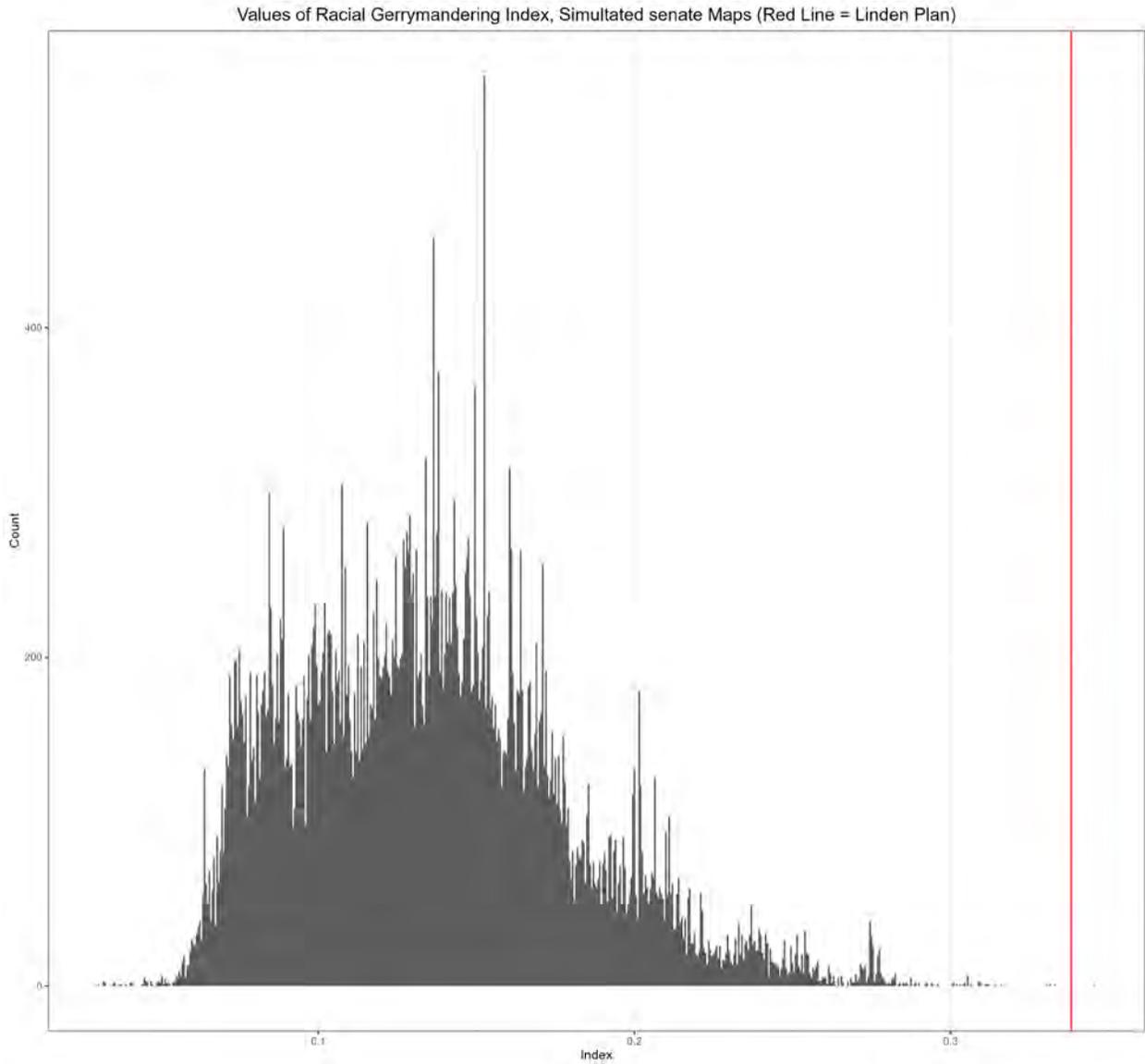
I once again created an ensemble of 50,000 maps from these precincts, each of 19 districts. As with the Hickory Plan, the Linden plan creates numerous outliers.

Figure 53



We first begin with the simulations where county lines are ignored. As with the Hickory Plan, the Linden Plan produces outliers with respect to race. We would expect at least three minority-majority districts with the Linden plan if it were drawn without consideration of race, as opposed to the zero that are actually contained in the Linden plan. The districts a familiar pattern; the 1st, 2nd, 3rd and 4th most heavily Black districts are made less heavily Black than we would expect, while the next three districts are significantly whiter than we would expect. The racial gerrymandering index again makes this plain. The Linden plan produces greater deviations in the racial composition of its districts from the mean distribution of maps than almost any map in the ensemble. Note the concentration around the 40% mark – again reflecting the instructions relayed in the Szetela report to draw districts down to a 40% target.

Figure 54



When we tell the simulations to pay attention to county boundaries, we see even more extreme deviations.

Figure 55

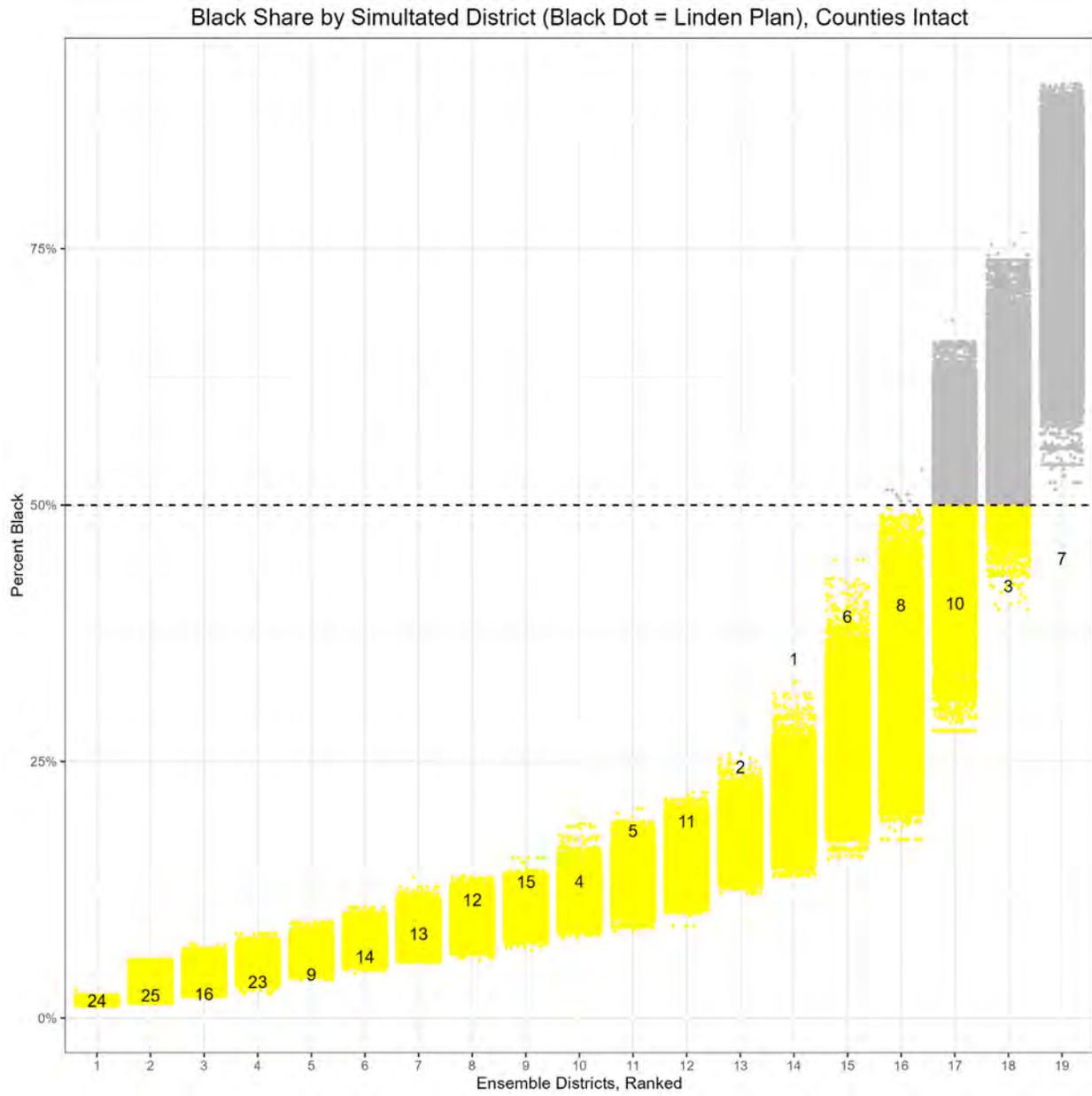
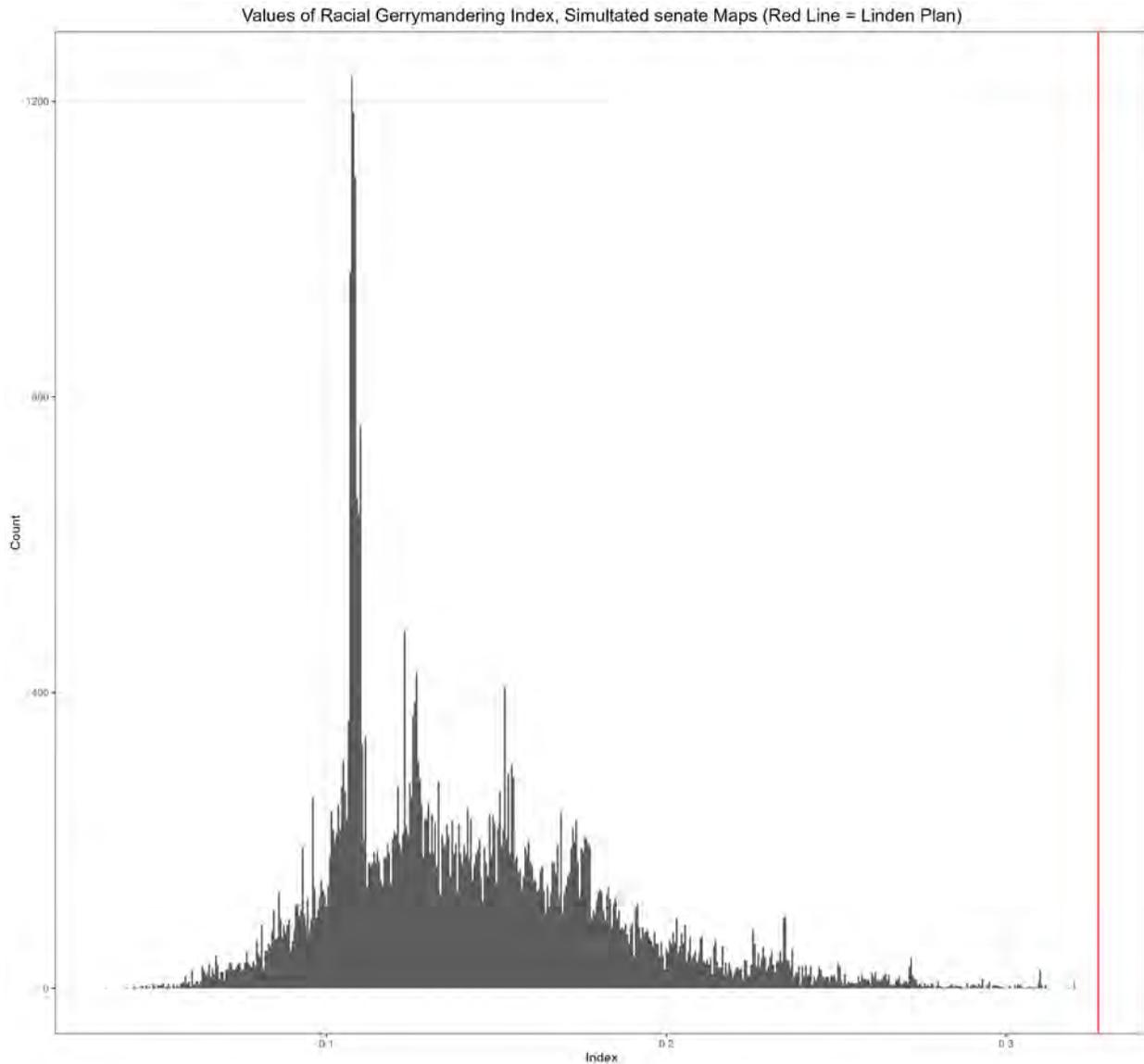


Figure 56



Once again, this cannot be justified by a supposed desire to achieve a political outcome. While there are significant deviations, those deviations do not occur in the areas where they would significantly affect political outcomes. Instead, they occur in the most heavily Democratic districts. In other words, this is once again a case where the political deviations are almost certainly driven by the racial considerations.

Figure 57

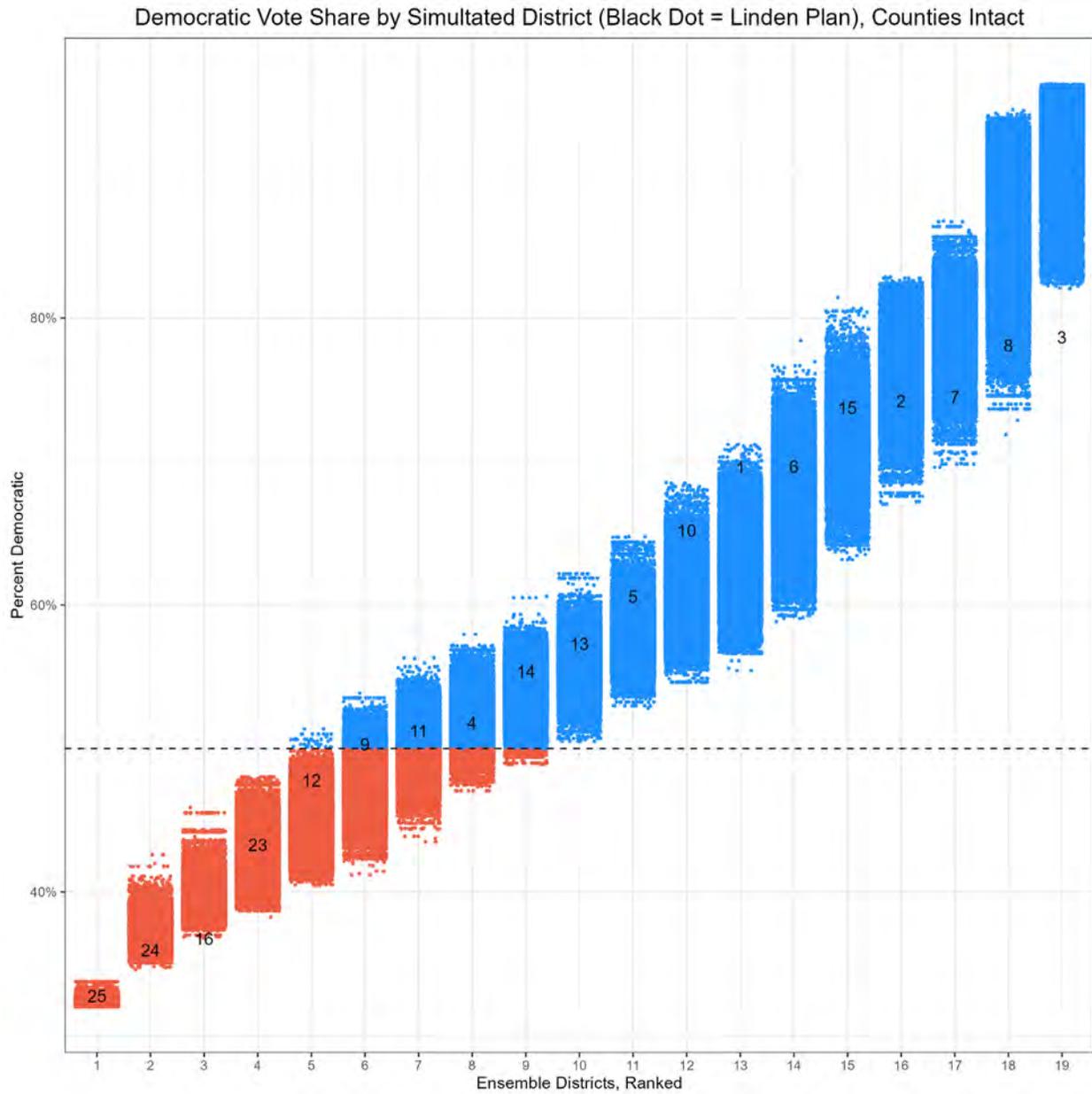


Figure 57

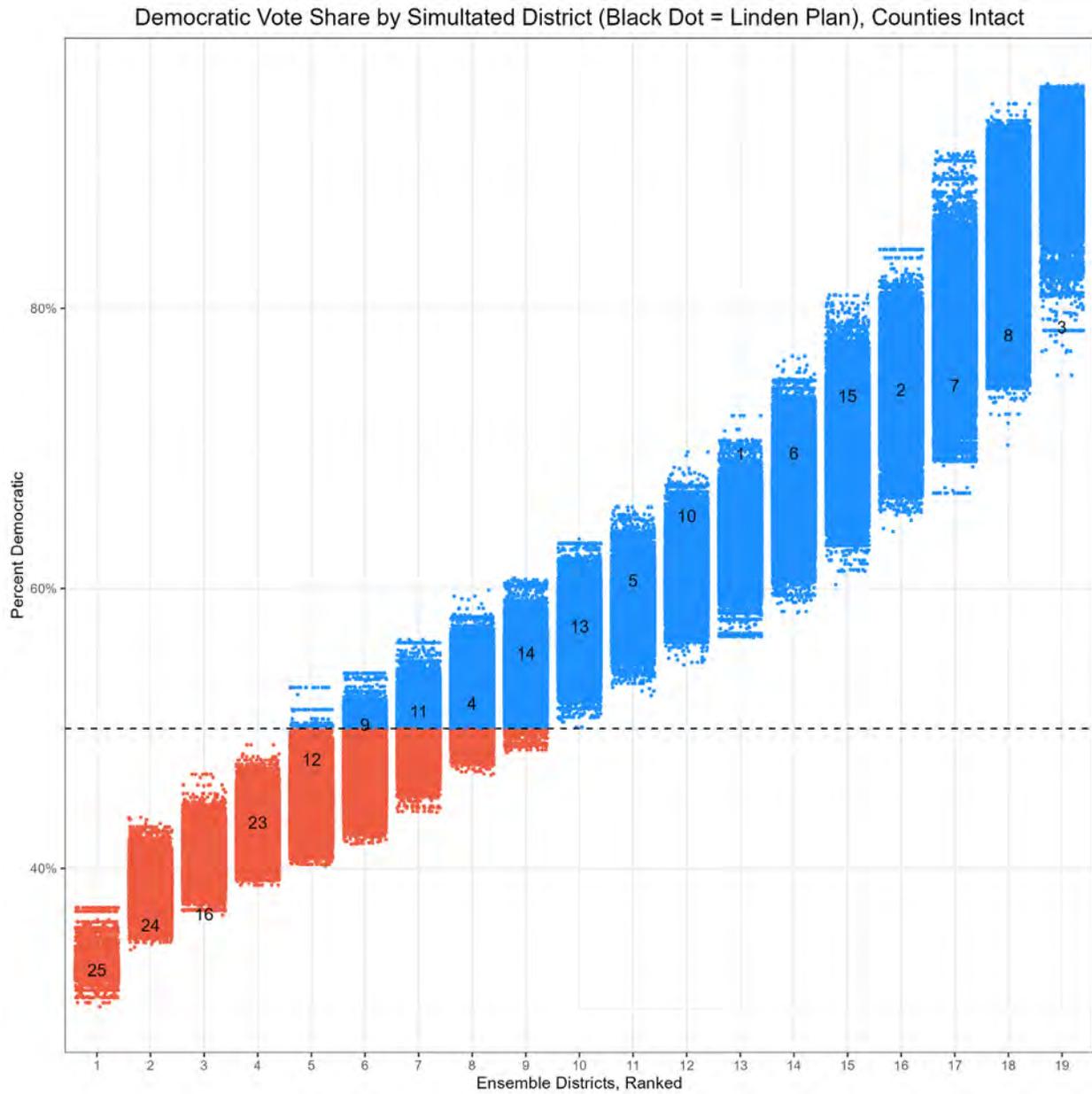


Figure 58

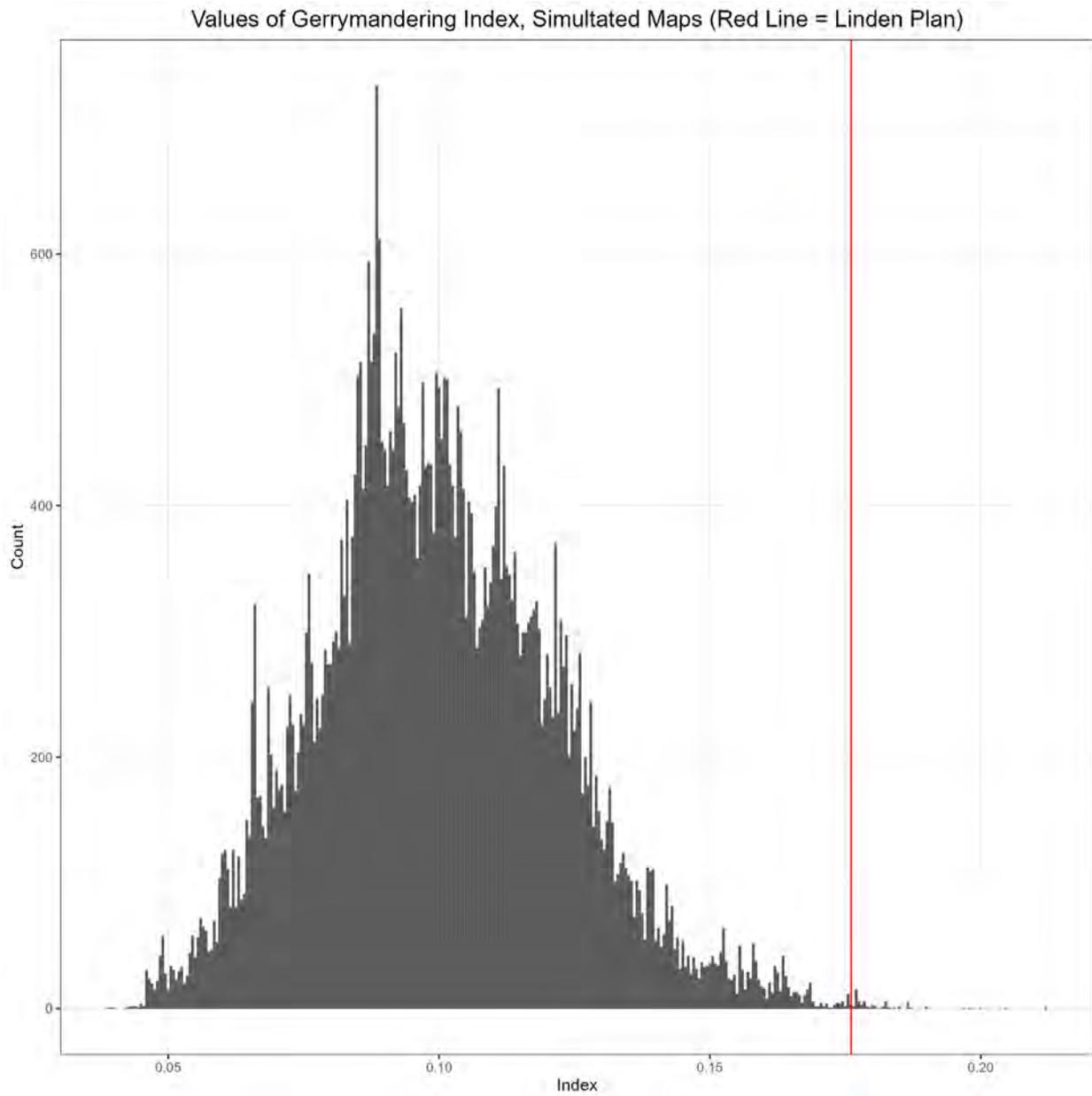
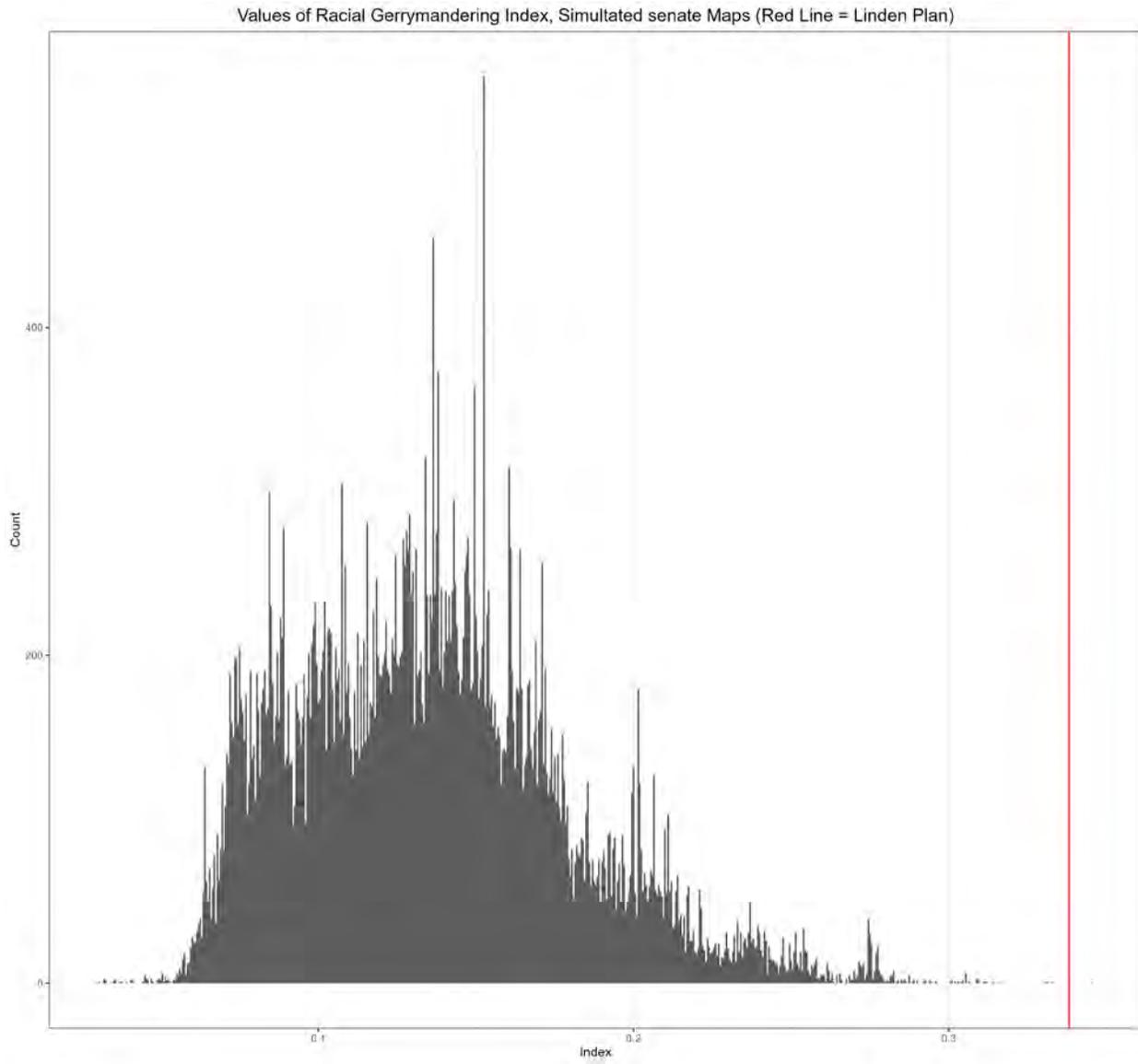


Figure 59



Finally, controlling for cities and townships changes nothing:

Figure 60

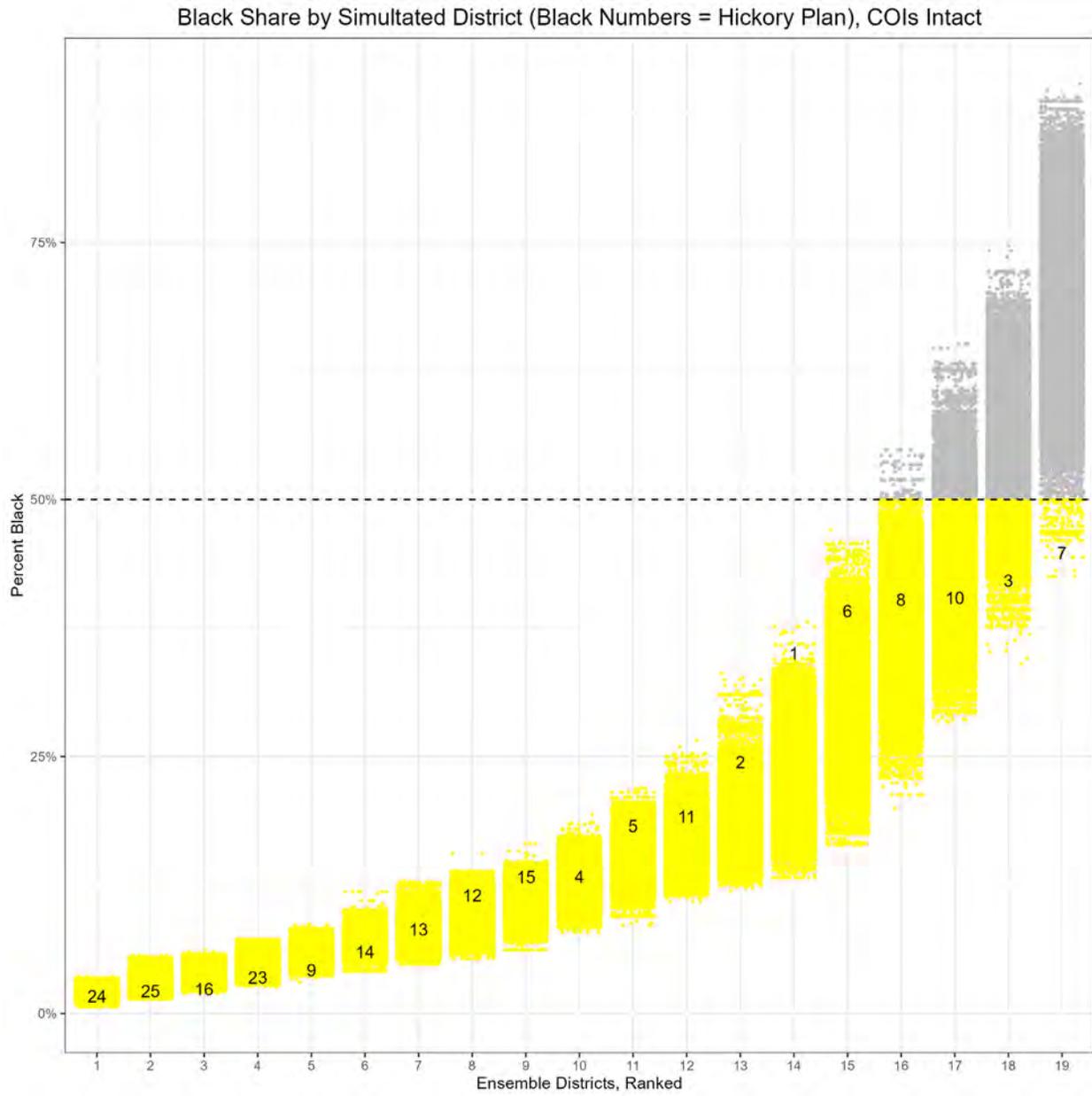


Figure 61

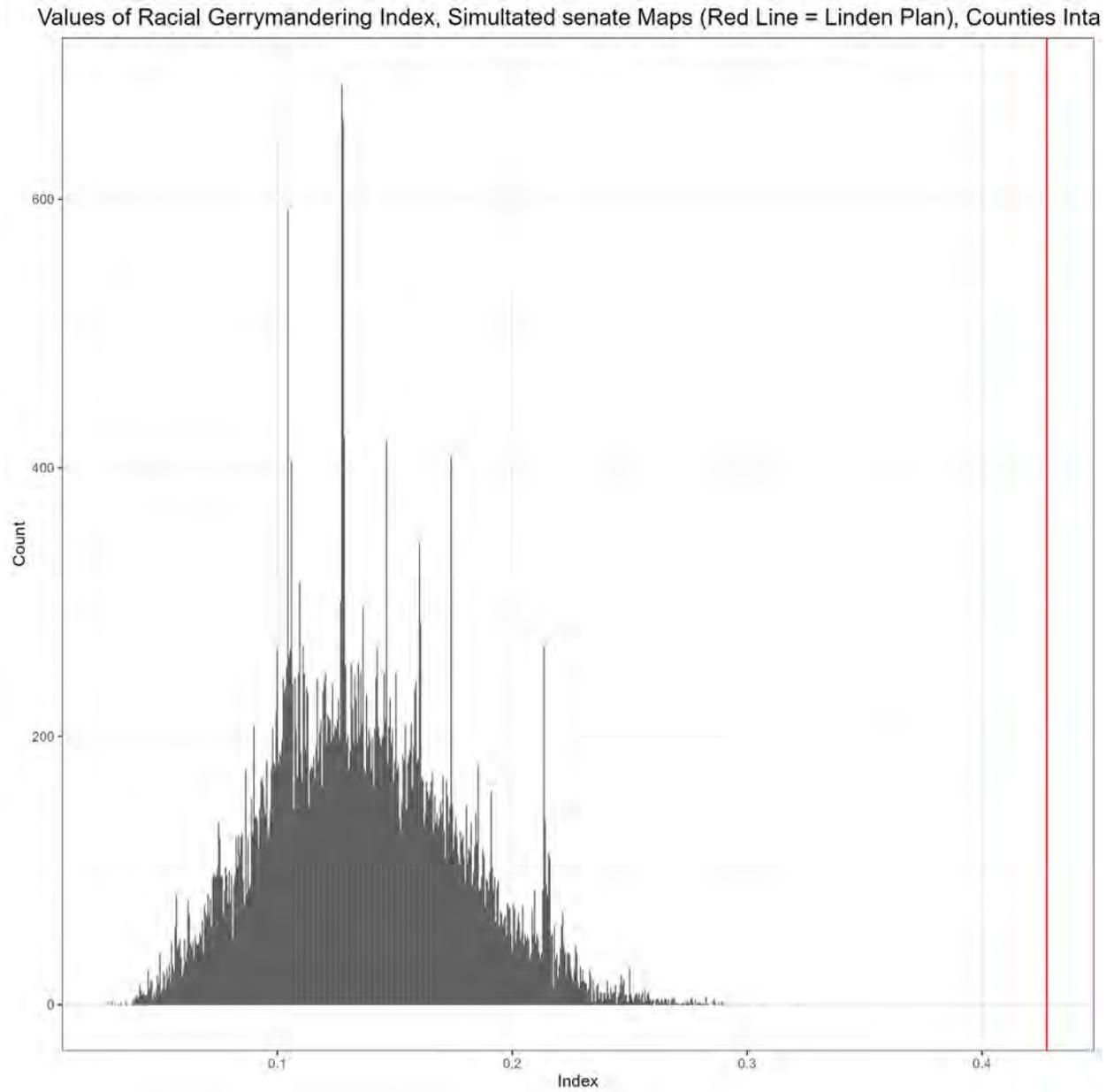


Figure 62

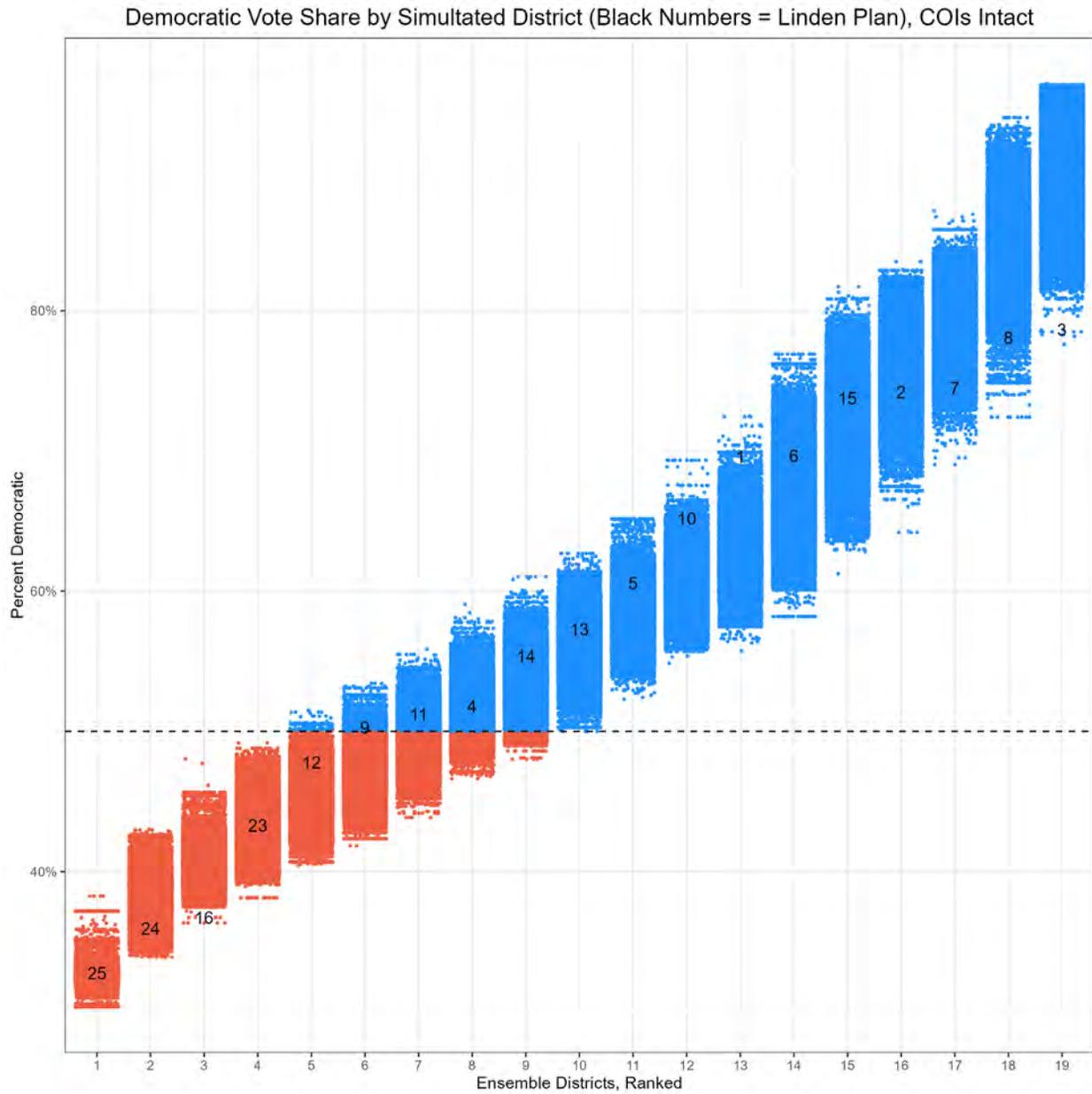
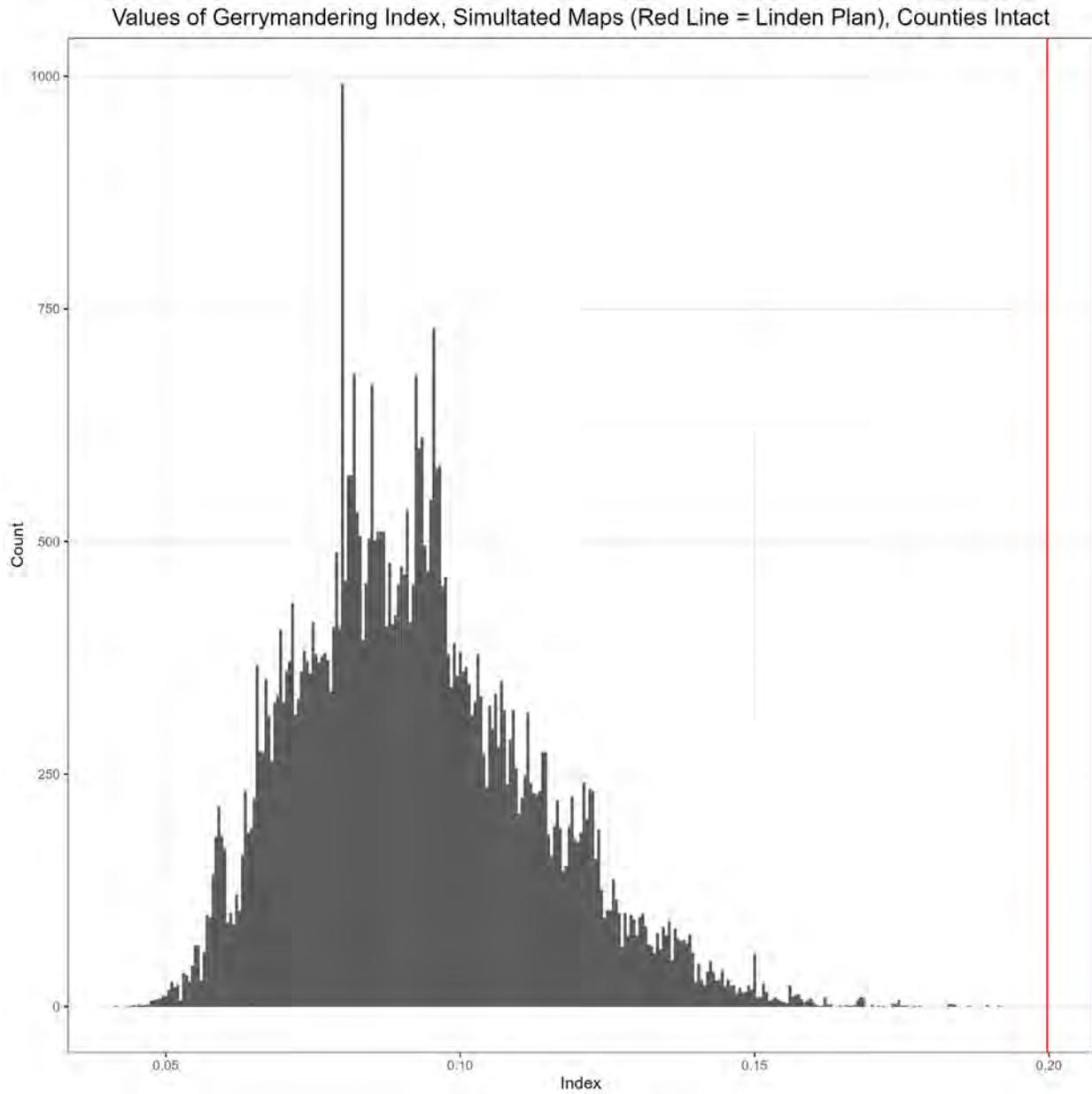


Figure 63



VIII. Conclusion

It is possible to draw ten House districts in the Detroit area and five Senate districts with majority BVAPs. There is ample evidence of racially polarized voting in Detroit Democratic primaries. The Voting Rights Act would therefore demand ten districts where African-American

voters are able to elect their candidates of choice (assuming the Senate factors are satisfied, which, to my understanding, is the subject of another expert report). Instead, the Linden and Hickory Plans reduce BVAPs in districts even further from already precarious levels, diminishing the likelihood that Black voters could elect their candidates of choice. This is exactly what happened in 2022, as the Black Michigan Legislative Delegation dropped 20% in a single election, from 20 to 16. With future races shaped by term limits, that number will fall further.

Equally important, this was not an accident. Both qualitative and quantitative analyses of the districts demonstrate that traditional redistricting criteria were subverted to the goal of drawing districts based on race. These bizarrely-shaped districts result in racial breakdowns that are extremely unlikely to have occurred under a race-neutral draw. Moreover, they do not appear to have been necessary to achieve the political outcome that the MICRC preferred, given that the districts resemble a map drawn without respect to politics, especially in key, competitive areas.

/s/ Sean P. Trende

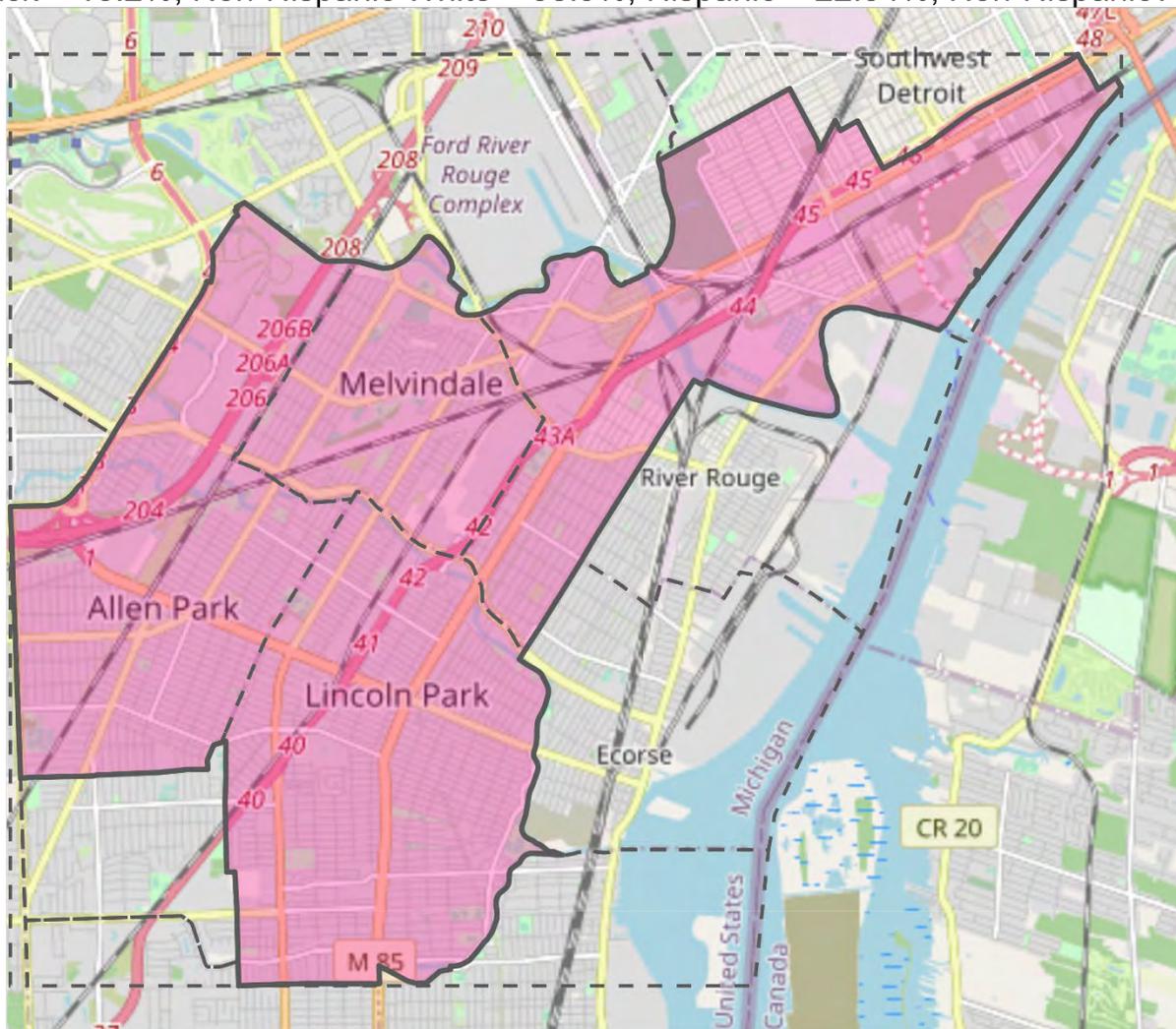
Sean P. Trende

1/18/2023

Appendix C
Demonstration Plan Details

Proposed Exemplar Map, District 11

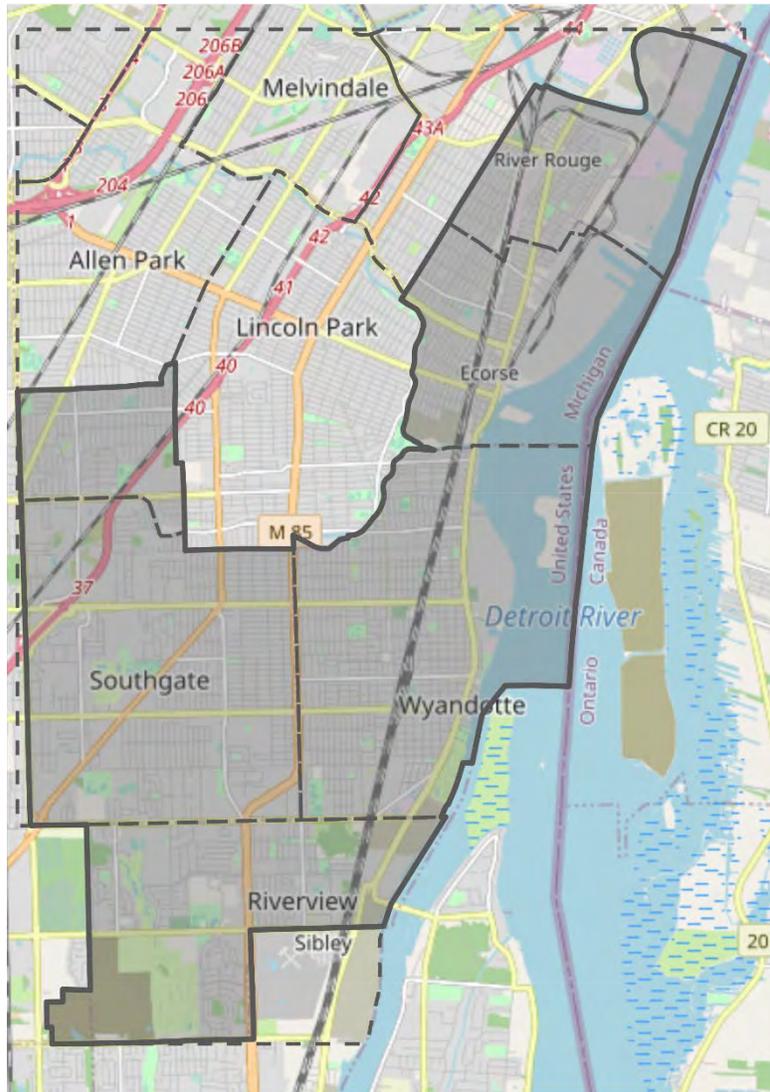
Black = 13.2%; Non-Hispanic White = 58.9%; Hispanic = 22.54%; Non-Hispanic A



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Proposed Exemplar Map, District 12

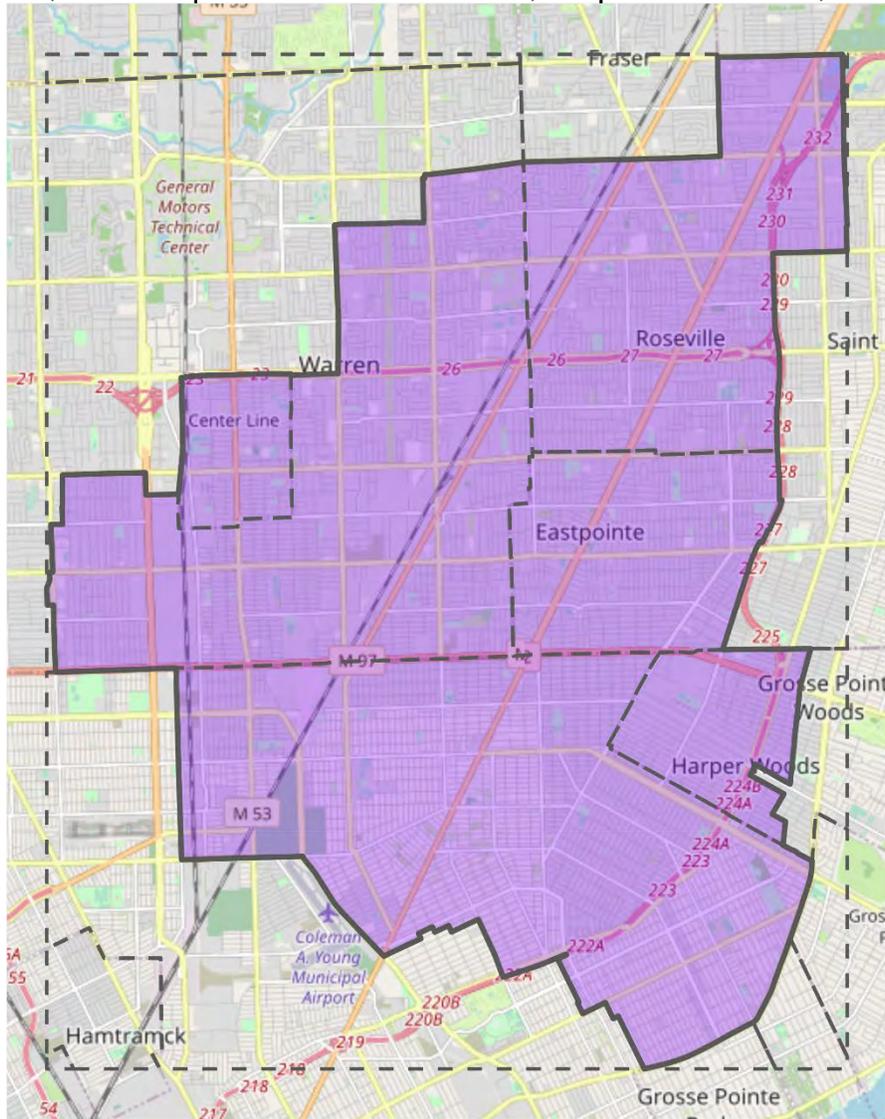
Black = 11.63%; Non-Hispanic White = 74.39%; Hispanic = 8.17%; Non-Hispanic /



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Proposed Exemplar Map, District 1

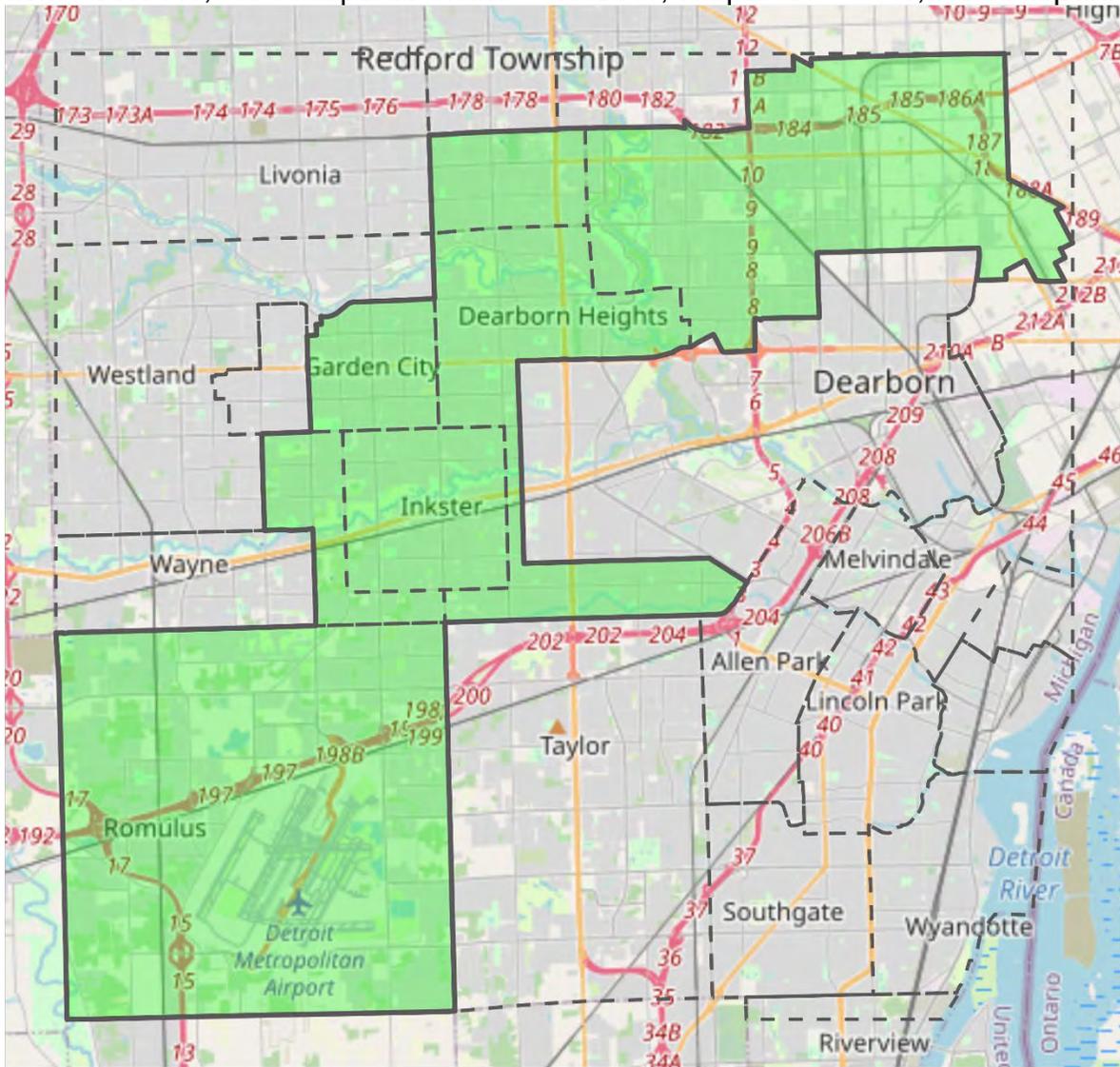
Black = 50.6%; Non-Hispanic White = 40.87%; Hispanic = 1.92%; Non-Hispanic A



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Proposed Exemplar Map, District 4

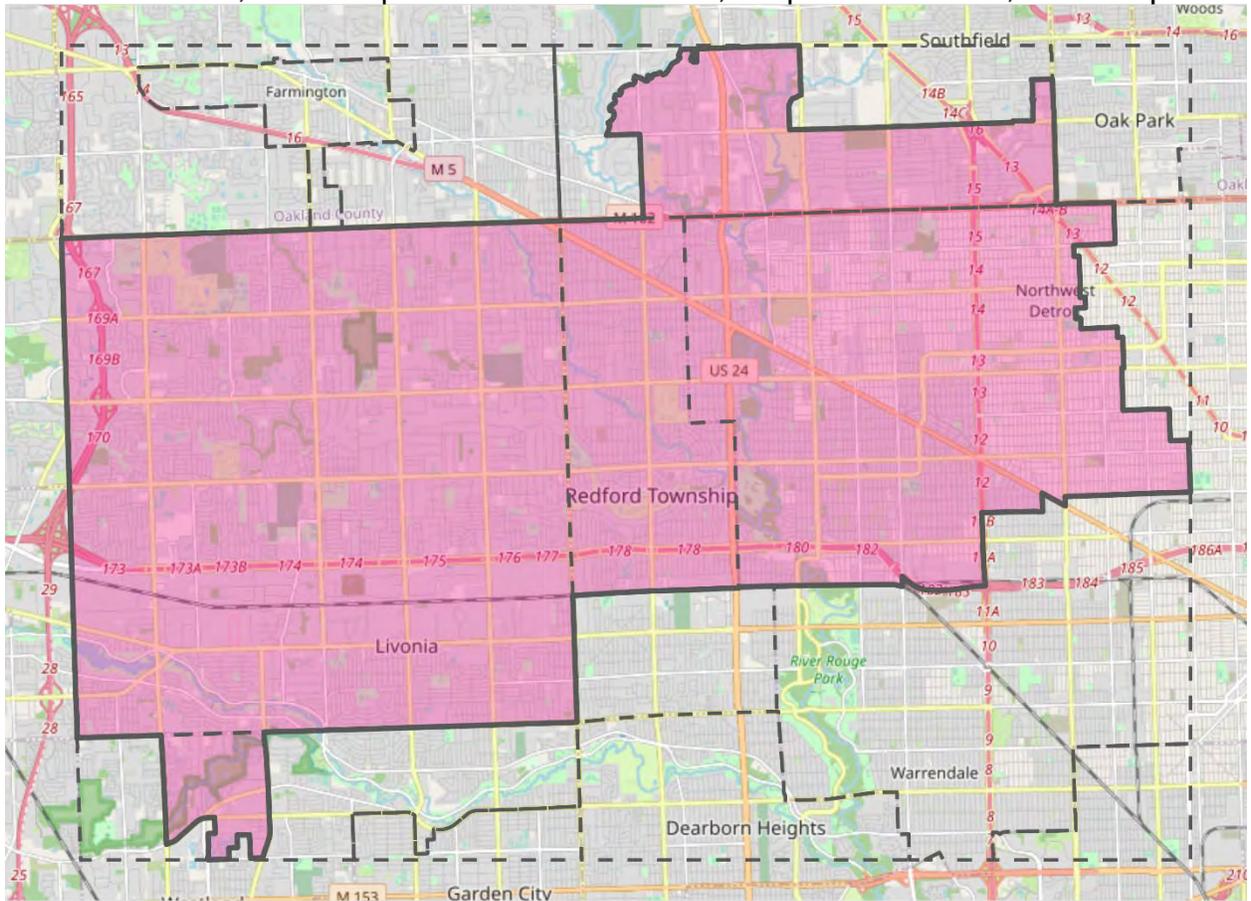
Black = 50.01%; Non-Hispanic White = 40.56%; Hispanic = 4.1%; Non-Hispanic A



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Proposed Exemplar Map, District 5

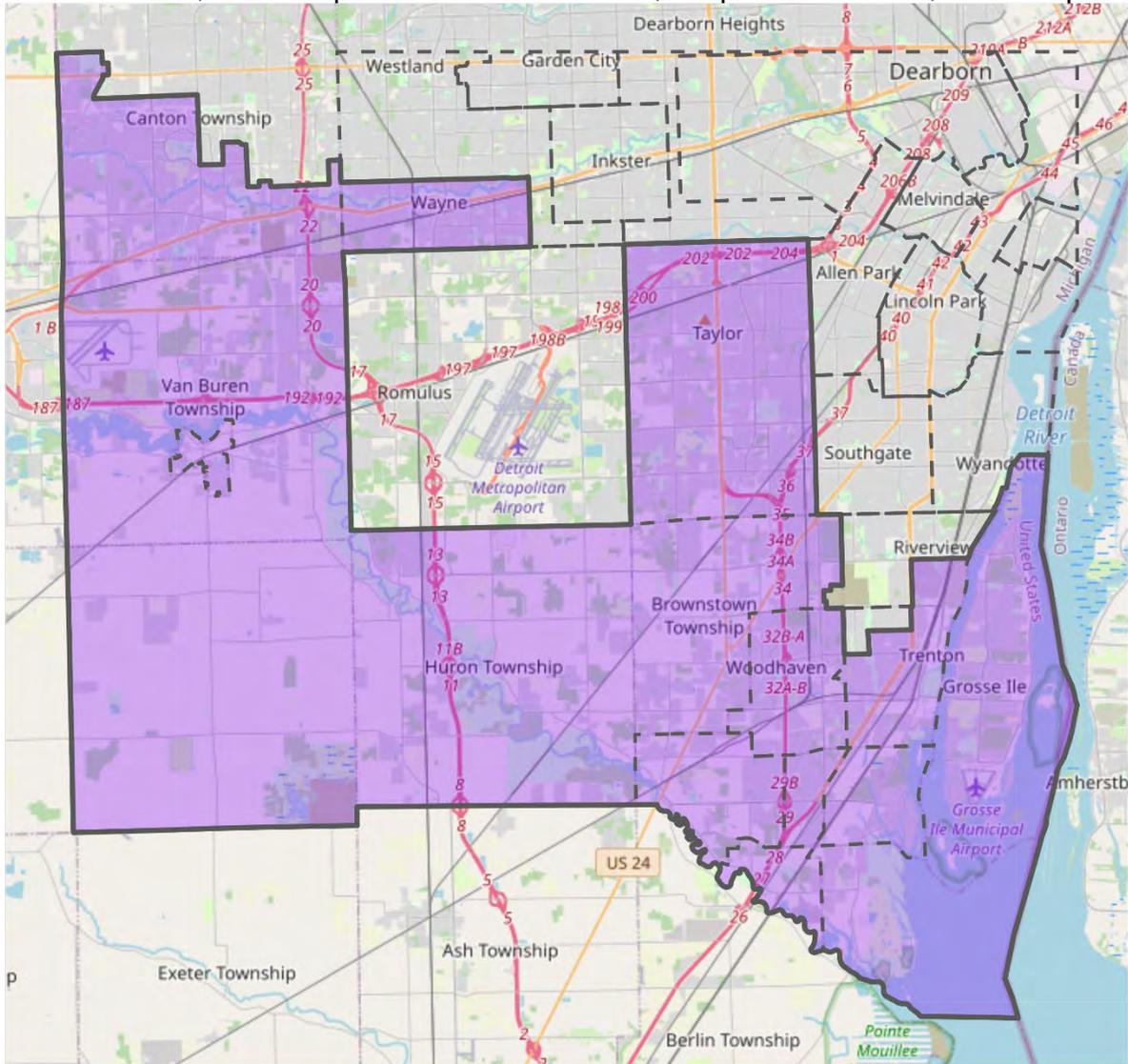
Black = 50.16%; Non-Hispanic White = 42.17%; Hispanic = 2.19%; Non-Hispanic /



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Proposed Exemplar Map, District 7

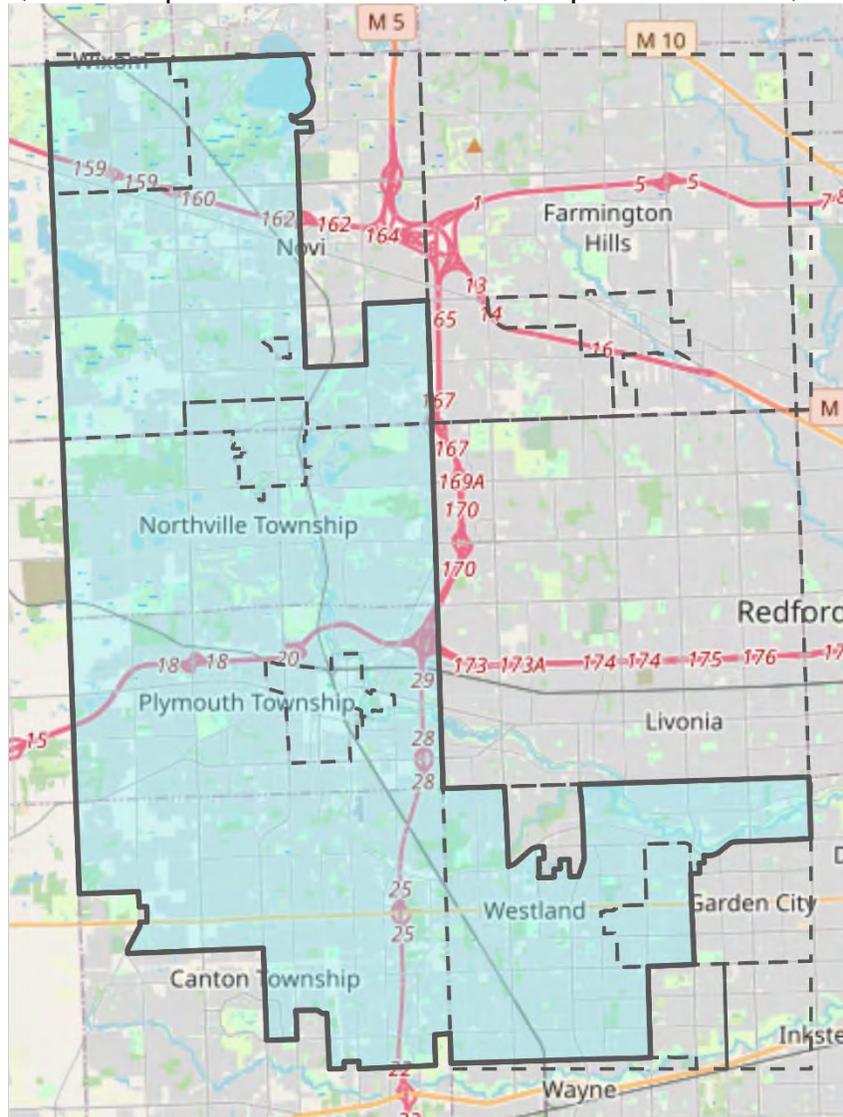
Black = 13.68%; Non-Hispanic White = 71.89%; Hispanic = 4.95%; Non-Hispanic /



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Proposed Exemplar Map, District 8

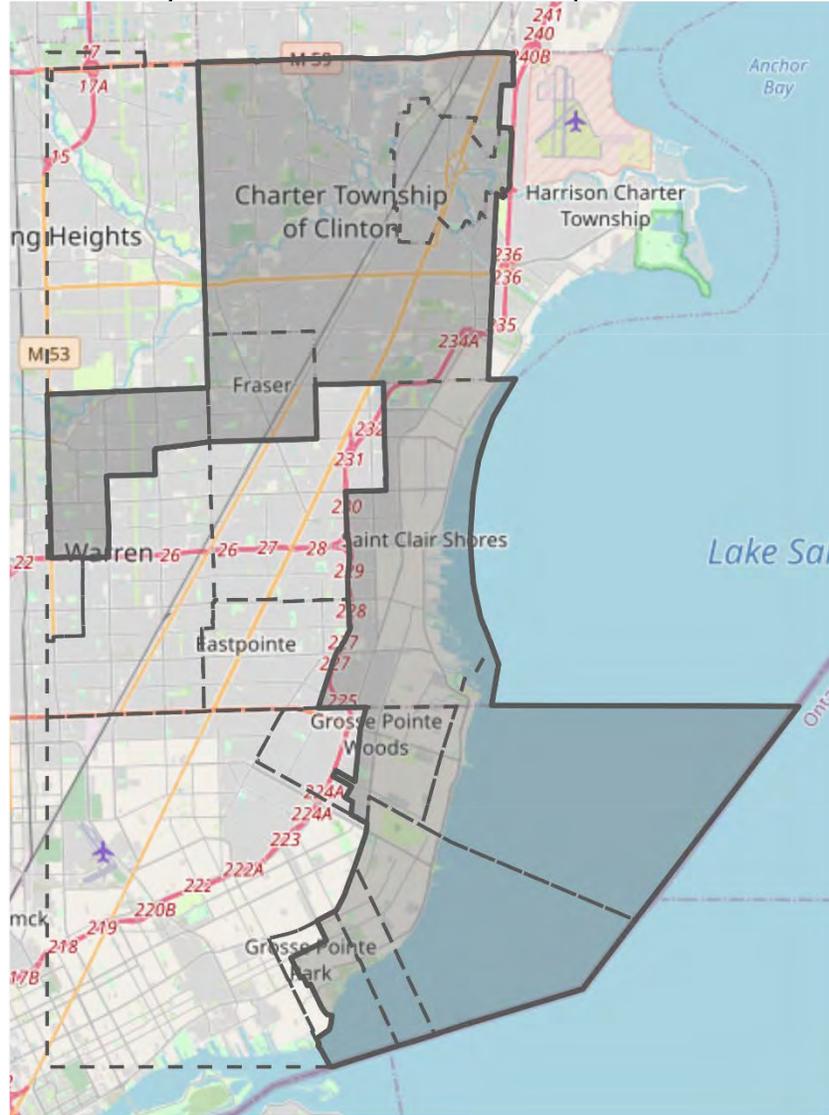
Black = 8.88%; Non-Hispanic White = 71.57%; Hispanic = 3.35%; Non-Hispanic A:



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Proposed Exemplar Map, District 12

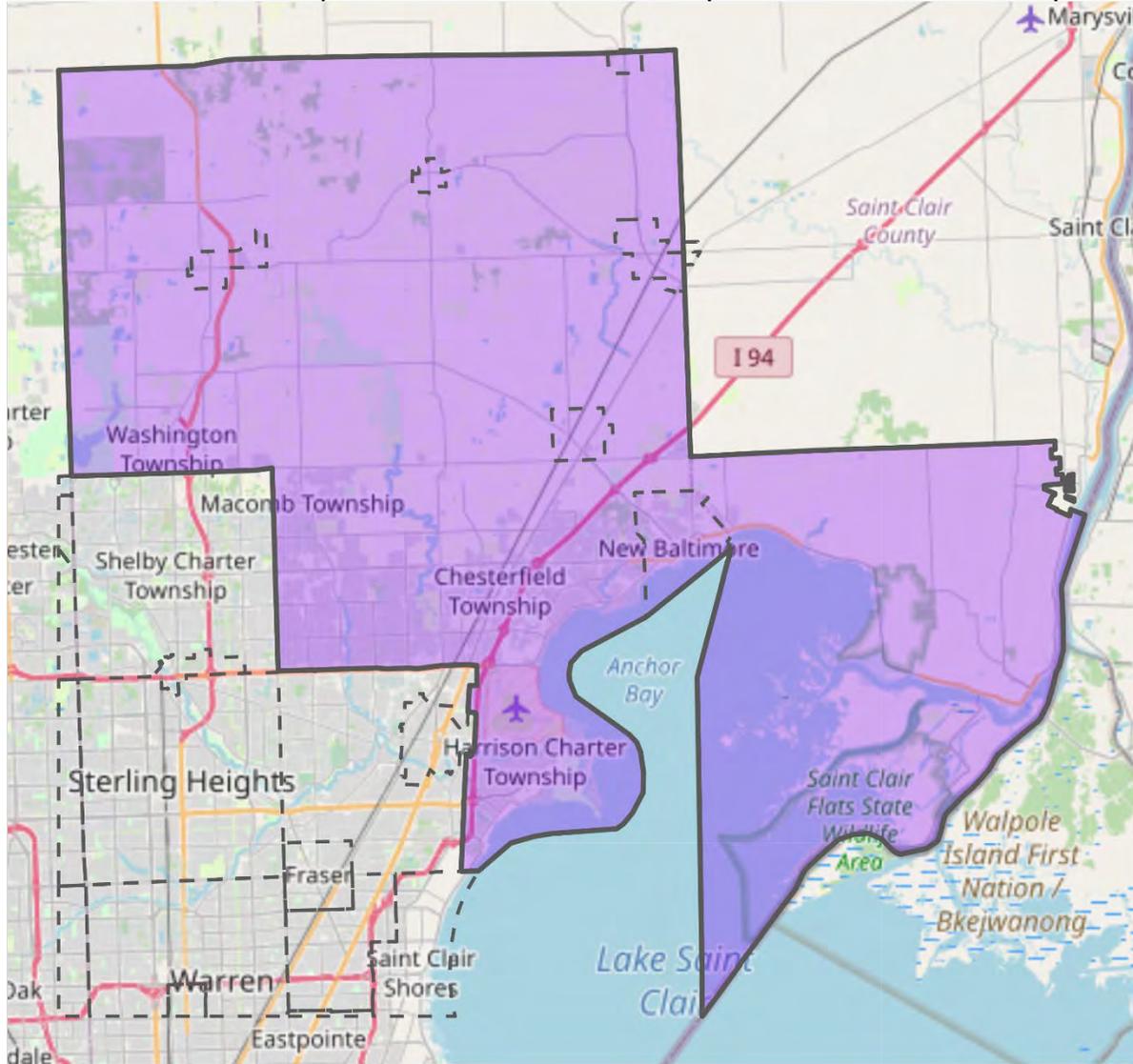
Black = 11.3%; Non-Hispanic White = 80.23%; Hispanic = 2.36%; Non-Hispanic A



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Proposed Exemplar Map, District 13

Black = 4.6%; Non-Hispanic White = 87.17%; Hispanic = 2.76%; Non-Hispanic A:



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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR. et al.,

Plaintiffs,

v.

JOCELYN BENSON, et al.,

Defendants.

Case No. 1:22-CV-00272-PLM-RMK-JTN

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For the Michigan Independent Citizens Redistricting Commission (MICRC)
The History of Discrimination in the State of Michigan and its
Influence on Voting

By Bruce L. Adelson, MICRC Voting Rights Act Legal Counsel¹

CONFIDENTIAL – Attorney Client Privileged

This memorandum presents an introductory overview and summarizes various barriers faced by minority groups in Michigan regarding their voting rights and the overall history of discrimination in this state. This memorandum is not all inclusive and is provided as background information for redistricting.

Under the Voting Rights Act (“VRA”), there is a “permanent nationwide prohibition on voting practices that discriminate on the bases of race, color, or membership in a language minority group.”² Section 2 of the VRA, specifically, is broadly construed. VRA §2 prohibits practices or standards that “result in citizens being denied equal access to the political process on account of race, color, or membership in a language minority group.”³

¹ We gratefully thank and acknowledge the invaluable assistance of our subcontractor, Praneeta Govil (JD, MPH, Bar pending) for her research and writing in preparing this memorandum. We also gratefully acknowledge the historical sleuthing inspiration and acumen of Michael Adelson (Ursinus College ’23, Zacharias Honors Scholar, Writing Fellow, Summer Fellow).

² DEPARTMENT OF JUSTICE, GUIDANCE UNDER SECTION 2 OF THE VOTING RIGHTS ACT, 52 U.S.C. 10301, FOR REDISTRICTING AND METHODS OF ELECTING GOVERNMENT BODIES (2021).

³ *Id.*

Under *Thornburg v. Gingles*, which the U.S. Supreme Court considers “our seminal §2 vote-dilution case,” there are three preconditions that need to be established to prove vote dilution in redistricting.⁴ These preconditions generally require that (1) the minority group is large and compact enough to be a majority in a single-member district, (2) there is significant political cohesiveness within the minority group, and (3) the current majority group is able to vote as a bloc to usually defeat the current minority’s preferred candidate.⁵ If these preconditions are met, then a court will evaluate the alleged violation in a holistic manner incorporating certain factors called the Senate Factors.

The factors are:

1. the extent of any history of official discrimination in the state or political subdivision that touched the right of the members of the minority group to register, to vote, or otherwise to participate in the democratic process;
2. the extent to which voting in the elections of the state or political subdivision is racially polarized;
3. the extent to which the state or political subdivision has used unusually large election districts, majority vote requirements, anti-single shot provisions, or other voting practices or procedures that may enhance the opportunity for discrimination against the minority group;
4. if there is a candidate slating process, whether the members of the minority group have been denied access to that process;
5. the extent to which members of the minority group in the state or political subdivision bear the effects of discrimination in such areas as education, employment and health, which hinder their ability to participate effectively in the political process;
6. whether political campaigns have been characterized by overt or subtle racial appeals;

⁴ *Id.*

⁵ *Id.*

7. the extent to which members of the minority group have been elected to public office in the jurisdiction;
8. whether there is a significant lack of responsiveness on the part of elected officials to the particularized needs of the members of the minority group; and
9. whether the policy underlying the state or political subdivision's use of such voting qualification, prerequisite to voting, or standard, practice or procedure is tenuous.⁶

The Senate Factors and the federal courts indicate that only one of these factors need exist for an electoral device or redistricting plan to be considered as discriminatory when all three *Gingles* preconditions are also satisfied. This list is not exhaustive, allowing courts to consider additional evidence at their discretion.⁷

A recent example of *Gingles* being applied in Michigan is the case of *United States of America v. Eastpointe*. In *Eastpointe*, the court found that the city's at large election system was potentially diluting the vote of Black citizens, thus running afoul of Section 2 of the VRA.⁸ The court looked at the history of discrimination in Eastpointe extensively.⁹ Aside from deliberating whether the three preconditions were met, the court also considered how the Black community in the area voted and whether the community was ever successful in electing their preferred

⁶ *Id.*

⁷ *Badillo v. City of Stockton*, 956 F.2d 884 (9th Cir. 1992), *Nixon v. Kent County*, 76 F.3d 1381 (6th Cir. 1996) (en banc), and Mulroy, Steven J., *The Way Out: A Legal Standard for Imposing Alternative Electoral Systems as Voting Rights Remedies*, HARV. CIVIL RIGHTS-CIVIL LIBERTIES L. REV. (1998).

⁸ *United States v. Eastpointe*, 378 F. Supp. 3d. 589 (2019).

⁹ See generally, *Id.*

candidates.¹⁰ Ultimately the court considered both the *Gingles* preconditions test and several of the Senate Factors in its decision.¹¹

Pursuant to the VRA and *Gingles*, Dr. Lisa Handley conducted a racially polarized voting analysis for the Michigan Independent Citizens Redistricting Commission in which she concluded that racial bloc voting exists in Michigan.¹² Applying *Gingles* and the Senate factors, we have prepared this memorandum to address the history of discrimination in Michigan.

I. Slavery and Historic Discrimination in Michigan

Michigan is viewed as a Northern abolitionist state that was not affected by the Jim Crow laws seen in the deep South. However, some of Detroit's first families were slaveholders.¹³ From 1760 to 1815, Indigenous people and Black people were enslaved and considered property in Detroit.¹⁴ A 1782 census showed 78 male and 101 female slaves living in the Michigan Territory.¹⁵ In 1805, only 15 African Americans lived in Detroit, but it is unknown how many were enslaved people. Many if not most of the enslaved people living in Michigan may have fled to British Canada after the Revolutionary War and the subsequent Treaty of Paris. The 1830 census reveals that 32 enslaved people lived in the Michigan Territory. Slavery persisted in Michigan but

¹⁰ *Id.* at 589-594.

¹¹ *See generally, Id.*

¹² Michigan Independent Citizen Redistricting Commission, *Lisa Handley Presentation: Determining if a Redistricting Plan Complies with the Voting Rights Act* (September 2, 2021, <https://www.michigan.gov/micrc/0,10083,7-418-106525---,00.html>).

¹³ Mandira Banerjee, *Detroit's Dark Secret: Slavery*, MICHIGAN TODAY (Feb. 19, 2018), <https://michigantoday.umich.edu/2018/02/19/detroits-dark-secret-slavery/>.

¹⁴ *Id.*

¹⁵ <http://absolutemichigan.com/michigan/slavery-in-the-northwest-territory/>

gradually declined until statehood was granted and slavery abolished in the new state on January 26, 1837.

Slavery in the Detroit area began under French control of the region as the fur trade flourished in the 18th century. Merchants wanted an inexpensive labor force for their burgeoning business and eventually “trading in the pelts of beavers and trading in the bodies of persons became contiguous endeavors in Detroit, forming an intersecting market in skins that takes on the cast of the macabre.”¹⁶ Slavery continued under subsequent British control of the Great Lakes. In the late 18th century, French and British settlers already living in the Michigan Territory when it was acquired by the United States were allowed to keep their slaves even though the federal government banned slavery in the unincorporated territory.¹⁷

After statehood, slavery’s legacy remained. For example, the state’s initial constitution prevented Black people from voting or serving on a jury, as was true in some other states in the 19th century.¹⁸ The Michigan legislature banned *de jure* segregation after the Civil War, but Detroit did not follow the statewide call and instead determined that schools in the city would be segregated by race.¹⁹

During & after the 20th Century’s Great Migration, many Black migrants to Michigan from the South faced intense racial discrimination in employment. Higher-paying jobs in the industrial

¹⁶ *Id.*

¹⁷ <https://www.michiganradio.org/arts-culture/2017-12-08/detroits-forgotten-history-of-slavery-detailed-in-new-book>

¹⁸ Chris Jaehnig, *African American Michigan: The Reconstruction Era*, *THE DAILY MINING GAZETTE* (May 9, 2020), <https://www.mininggazette.com/news/features/2020/05/african-american-michigan-the-reconstruction-era/>.

¹⁹ *Id.*

sector were primarily held by White Detroiters, while Black Detroiters typically held lower-paying ones. This continued through the post-World War II era – Jobs in Detroit’s police force, fire department, and other city departments were primarily held by whites.²⁰

By the early 20th century, Detroit had become a stronghold of the Ku Klux Klan (KKK). In the 1920s, there reportedly were more Klansmen living in Michigan than in any state in the country. Roughly half of Michigan Klansmen lived in metro Detroit.²¹ Even after the later dissolution of the KKK, a splinter vigilante group called the Black Legion continued to exist into the 1930s in Detroit. An estimated one third of the Black Legion’s members (approximately 5,000-10,000 people) operated in Detroit and targeted the city’s black population in the ‘30s.²²

“By the 1940s Detroit already had a long history of racial conflict. Race riots had occurred in 1863 and as recently as 1941. By the 1920s the city had become a stronghold of the Ku Klux Klan.... The industrial plants provided jobs but not housing.... As a result, the city's 200,000 black residents were cramped into 60 square blocks on the East Side and forced to live under deplorable sanitary conditions.

In 1943 the National Association for the Advancement of Colored People held an emergency war conference in Detroit and accused the nation of its hypocritical commitment to personal freedoms abroad and discrimination and segregation at home.”

On the evening of June 20, 1943, several racial incidents occurred on Belle Isle, including multiple fights between teenagers of both races. As violent confrontations continued into the next day, silence reigned over the city as 6,000 U.S. Army troops were stationed throughout Detroit in an ultimately successful effort to quell the violence. Twenty-five Black people and nine White people were killed in the violence that began on Belle Isle. The number injured approached 700 while the property damage, including looted merchandise, destroyed stores, and burned automobiles, totaled approximately \$2 million.

²⁰ SUGRUE, THOMAS J., *“THE ORIGINS OF THE URBAN CRISIS : RACE AND INEQUALITY IN POSTWAR DETROIT : PRINCETON, NJ, PRINCETON UNIVERSITY PRESS, 2005*

²¹ <https://www.hourdetroit.com/community/the-dark-days-of-the-black-legion/>,

What became known as the “12th Street Riot” occurred in 1967, initially as a confrontation between Black Detroiters and the largely White Detroit police force. In response, President Johnson deployed federal troops. The violence resulted in 43 dead, 467 injured, and more than 2,000 buildings destroyed. The “Riot” occurred mostly in Black communities. As a result, thousands of small businesses relocated out of Detroit and the affected area remained in a state of disrepair for decades.²³

Aforementioned 20th century racial disparities in employment led to unequal housing opportunities in Detroit. Housing options available to Black Detroiters were extremely limited throughout most of the 20th century. Black Detroiters were often left with unsanitary and eventually unsafe areas as their few housing options. Banks and federal housing groups frequently denied black home-owners’ loans, gave them unfairly inflated interest rates, and denied them the chance to improve their housing conditions. According to Author Thomas Sugrue, “you cannot underestimate the intensity [of] segregation in housing and the role that it played in dividing metropolitan Detroit by race.”²⁴

Detroit and its suburbs continued the segregation of public schools into the 1970s. On August 18th 1970, the NAACP filed a lawsuit against Michigan state officials and the governor, accusing them of maintaining racial segregation in education. Part of the lawsuit also alleged a direct relationship between unfair housing practices and educational segregation. The composition

²³ Sidney Fine, *Violence in the Model City: The Cavanaugh Administration, Race Relations, and the Detroit Riot of 1967* (1989)

²⁴ SUGRUE, THOMAS J., *THE ORIGINS OF THE URBAN CRISIS : RACE AND INEQUALITY IN POSTWAR DETROIT* : PRINCETON, NJ, PRINCETON UNIVERSITY PRESS, 2005

of students in schools adhered closely to segregated neighborhoods. The U.S. Supreme Court eventually ruled 5-4 against the NAACP's allegations of racial discrimination in education.²⁵

Throughout the early to late 20th century, Detroit remained highly segregated by race.²⁶ In addition, realtors often did not show houses in predominantly White neighborhoods to Black people while educational and financial racial discrimination and racially motivated violence persisted.²⁷

Grand Rapids was another area of high racial tension and inequality during Michigan's Jim Crow era.²⁸ A small but prominent middle class African-American community made its home in Grand Rapids after World War I. However, Black people in the city were denied equal rights of access to and use of many public places. Such discriminatory practices were known nationally as "Jim Crow." Despite state laws against racial discrimination, Grand Rapids decided to go its own way and implemented local *de jure* and *de facto* racial discrimination.²⁹ Black people came to Grand Rapids wanting equality but instead experienced racism.³⁰ In one telling event, KKK members marched through the streets of Grand Rapids without wearing their hoods on July 4, 1925

²⁵ *Milliken v. Bradley*: The Northern Battle for Desegregation: The State Bar of Michigan: <http://www.michbar.org/file/journal/pdf/pdf4article1911.pdf>

²⁶ *Historian: Divide Between "White Detroit" and "Black Detroit" Led to City's 1967 Rebellion*, MICHIGAN TODAY (July 17, 2017), <https://www.michiganradio.org/families-community/2017-07-17/historian-divide-between-white-detroit-and-black-detroit-led-to-citys-1967-rebellion>.

²⁷ *Id.*

²⁸ Chris Jaehnig, *African American Michigan: The People v. Jim Crow*, THE DAILY MINING GAZETTE (May 16, 2020), <https://www.mininggazette.com/news/features/2020/05/african-american-michigan-the-people-v-jim-crow/>.

²⁹ *Id.*

³⁰ *A History of the Civil Rights Movement in Grand Rapids, Michigan* (last visited Sept. 26, 2020), <https://www.arcgis.com/apps/MapJournal/index.html?appid=0642f76537354f3982b58f09ed514932>.

in a show of defiance and demonstration of their local power.³¹ In Grand Rapids, business owners refused to serve Black patrons. Even though the city was known for furniture manufacturing, Black people were routinely denied these skilled-labor jobs.³² Instead, they often worked lower paid, service jobs like busboy or other waitstaff.³³ Black citizens tried to counteract the discrimination, ultimately without full success, by forming the Grand Rapids Study Club, which focused on education, social and moral support, and a safe space for women of color.³⁴

An 1885 Michigan statute made “discrimination in public places illegal,” but it was not enforced until 1925 when Emmett Bolden asked for seating on the main floor of Keith's Theatre in Grand Rapids.³⁵ The theater refused his seating request, instead directing him to its segregated balcony. Keith’s Theater was blatant in its racism, with its balcony where the theater segregated Black people known as “N***** Heavens.”³⁶ Mr. Bolden sued the theater for discrimination. The Michigan Supreme Court overturned a lower court decision in favor of Keith's Theatre. Chief Justice Nelson Sharpe ruled that “the public safety and general welfare of our people demand that, when the public are invited to attend places of public accommodation, amusement, and recreation, there shall be no discrimination among those permitted to enter because of race, creed, or color. (The Civil Rights Statute) is bottomed upon the broad ground of the equality of all (persons) before the law.” Even though the state Supreme Court found that the theater’s behavior was against the

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Supra* note 22.

³⁶ *Id.*

law, the court nevertheless limited how and when the 1885 non-discrimination statute would apply.³⁷

There was racial discrimination in affordable housing, education, and politics as well.³⁸ For example, in 1908, the Grand Rapids Medical College began refusing re-admittance of students of color it had once accepted. A lawsuit followed and the court ruled in favor of the students: “All citizens according to the court’s findings are entitled to the privilege of education... and the drawing of the color line is an unjust discrimination.” After the decision, several white students protested and walked out of class, declaiming “This is a white man’s school,” and “Lynch ’em if they don’t keep out.” White students placed an effigy of an African American in the school’s lobby and paraded the effigy through the streets. In response, the college barred the two Black students who had sued the school. The college claimed that as a private institution, they could “discriminate as they pleased.” The ruling in favor of the Black students was eventually overturned by the state Supreme Court in favor of the college.³⁹

While the state Supreme Court made progress towards *de jure* racial equality in Michigan, the court still limited the non-discrimination statute to governmental discrimination only and upheld racial covenants in housing and other matters the court deemed to be private.⁴⁰

In another pivotal case, *Meisner*, the defendant bought the Bois Blanc Island and chartered a boat from Detroit to the island for his patrons to enjoy recreational activities.⁴¹ However, the defendant, a private citizen, was allowed to deny patronage, including denials based on race, at his

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Jim Crow Laws: Massachusetts, Michigan, Minnesota and Mississippi, AMERICANS ALL*, <https://americansall.org/legacy-story-group/jim-crow-laws-massachusetts-michigan-minnesota-and-mississippi>.

⁴¹ Case Law Access Project, *Meisner v. Detroit, Belle Isle & Windsor Ferry Co.*, 154 Mich. 545 (1908), <https://cite.case.law/mich/154/545/>.

sole discretion.⁴² The plaintiff was denied passage on the boat on multiple occasions because he had previously “created [unspecific] disturbances.”⁴³ Ultimately, the Michigan Supreme Court found that, “theaters, circuses, racetracks, private parks, and the like were private enterprises,” and could engage in discriminatory activity.⁴⁴

After the Keith’s Theater case, the state Supreme Court pivoted to holding that discrimination in public places was prohibited.⁴⁵ In *Bolden*, the state Supreme Court found that the state’s civil rights statute §15570 not only applied to criminal charges explicitly stated in the statute, but also allowed individuals to bring civil actions against a violator.⁴⁶ The case helped to end “customary segregation” or *de facto* segregation in Michigan.⁴⁷

In terms of voting, Indigenous people were afforded the right to vote in Michigan with the passage of the Snyder Act in 1924.⁴⁸ In 1867 Michigan legislators intended to give Black people the right to vote. However, although the 1867 constitutional convention supported Black suffrage, Michigan voters rejected such suffrage changes to the state constitution.⁴⁹ A majority at the convention decided not to make Black suffrage its own separate provision, a decision which

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Supra* note 22.

⁴⁵ *Id.*

⁴⁶ *Bolden v. Operating Corporation*, 239 Mich. 318, 323 (1927).

⁴⁷ *Supra* note 22.

⁴⁸ *Voting Rights for Native Americans*, LIBRARY OF CONGRESS, <https://www.loc.gov/classroom-materials/elections/right-to-vote/voting-rights-for-native-americans/#:~:text=Nast.,rights%20granted%20by%20this%20amendment>.

⁴⁹ *Supra* note 15.

contributed to the defeat of voting rights for Black Michiganders.⁵⁰ It would not be until 1869 that Black people would have the right to vote in Michigan.⁵¹

Today, Michigan is experiencing an increase in incidents of intolerance, ranking in the top 20 of all 50 states for Asian American and Pacific Islander (AAPI) hate incidents.⁵² Nationally, there has been a recent rise in anti-Asian sentiment, specifically against Chinese people due in part to China being blamed for the Coronavirus-19 pandemic.⁵³ Further, there has been a general upward trend in racial harassment and White Supremacist activity in the state.⁵⁴ In 2019, the FBI reported 434 hate crimes in Michigan with 313 of the crimes being racially motivated.⁵⁵

II. Discriminatory Housing Practices and Voting Impacts

A. Racially Restrictive Covenants Survive Though They are Legally Unenforceable

Racially restrictive covenants, prohibiting home sales to Black people for example, though illegal, still influence housing patterns. Indeed, in a series of court cases from 1925⁵⁶ through 1963, the Michigan Supreme Court held that “racial covenants” were not illegal under Michigan or federal civil rights laws. While the court ruled in favor of Black people who were denied access to

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Russell Jeung et. al, *Stop AAPI Hate National Report*, (March 31, 2021), <https://stopaapihate.org/wp-content/uploads/2021/05/Stop-AAPI-Hate-Report-National-210506.pdf>.

⁵³ Malachi Barrett, *Racial Harassment, White Supremacist Propaganda on the Rise in Michigan*, MICHIGAN LIVE (May 7, 2021), <https://www.mlive.com/politics/2021/05/racial-harassment-white-supremacist-propaganda-on-the-rise-in-michigan.html>.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Parmalee v. Morris—Michigan*, 1925 (188 N.W. 330).

theaters and other public accommodations, the court repeatedly made clear that it would not give civil rights precedence over private property rights, until the court reversed itself in 1963 in the case of *McKibbin v. Corporation & Securities Commission*, (119 N.W.2d 557, 1963).

Although such covenants are legally unenforceable today, their lingering presence in deeds can still result in segregation.⁵⁷ For example, many houses in Ann Arbor suburbs still have racially restrictive covenants in their deeds.⁵⁸ These covenants often state that “no part of such land shall be occupied by persons not of the Caucasian race except as guests or servants,” and are usually found under the homeowner obligations detailed in closing documents.⁵⁹ When Professor Michael Steinberg bought his house in the 1980s, he also had this racially restrictive covenant and tried to have it removed but was told that the removal process would be long and that it “would not be worth it.”⁶⁰

These covenants have an impact on housing segregation as a stark reminder of pervasive, historical housing discrimination. For example, according to Kiera O’Connor, who is helping develop community education programs around these covenants:

You know you’re buying this wonderful house and you’re so excited...and then you see this [covenant] and you just don’t really feel welcome in the community. And it’s just, it’s really just imagining how uncomfortable that would be. And also,

⁵⁷ Shannon Stocking, *U-M Research Raises Awareness of Racially Restrictive Covenants in Ann Arbor Housing*, THE MICHIGAN DAILY (2021), <https://www.michigandaily.com/ann-arbor/u-m-professors-reveal-racially-restrictive-covenants-ann-arbor-housing/>.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

these restrictive covenants have kind of created Ypsilanti in a way, because they drove people of color out of Ann Arbor.⁶¹

B. Redlining Still Affects Community Demographics

Redlining is the historical practice of denying Black people low interest loans and mortgages that are routinely granted to White people based on where they lived.⁶² The practice made it inordinately difficult or practically impossible to have home ownership in communities where much of the population was Black.⁶³ Though the practice is now illegal, areas where redlining occurred remain highly segregated today.⁶⁴ Redlining has led to disparities in wealth among Black and White Americans.⁶⁵ Data and studies reveal that people of color are still denied mortgages that are routinely given to White people in similar circumstances.⁶⁶ The legacy of redlining, residential, and housing discrimination continue today.

The wall in Watson's backyard was built by white real estate developers who struggled to secure financing for their white neighborhood until they cut it off from a Black one. It is one of a number of segregation walls built in the mid-20th century for this purpose and one of a few still standing.

⁶¹ *Id.*

⁶² *History of Housing Discrimination Against African Americans in Detroit* (last visited Sept. 26, 2021),

<https://www.naacpldf.org/files/our-work/Detroit%20Housing%20Discrimination.pdf>.

⁶³ Kelsey Yandura, *Redlining was Banned Over 50 Years Ago. It Still Makes Voting Difficult for Black Americans Today*, SUPERMAJORITY NEWS (Oct. 6, 2020), <https://supermajority.com/2020/10/redlining-was-banned-over-50-years-ago-it-still-makes-voting-difficult-for-black-americans-today/>.

⁶⁴ *Id.*

⁶⁵ Andre Perry and David Harshbarger, *America's Formally Redlined Neighborhoods Have Changed, and So Must Solutions to Rectify Them*, BROOKINGS (Oct. 14, 2019), <https://www.brookings.edu/research/americas-formerly-redlines-areas-changed-so-must-solutions/>.

⁶⁶ Lindsey Smith et. al., *Data Analysis: "Modern-Day Redlining" Happening in Detroit and Lansing*, NPR (Feb. 15, 2018), <https://www.michiganradio.org/news/2018-02-15/data-analysis-modern-day-redlining-happening-in-detroit-and-lansing>.

The divider — called the “Birwood Wall,” the “Eight Mile Wall” or the “Wailing Wall” — can’t be blamed for inventing segregation. But the barrier, and the policies that led to its existence, would have far-reaching repercussions for the people, both Black and white, who lived in its shadow.⁶⁷

With the sale of a parcel of land to Grosse Pointe Park, that city and the city of Detroit are working out a deal to remove a physical barrier that separates the two cities.

The barrier at the intersection of Kercheval Ave. and Alter Road is symbolic according to Detroit and removing it would end long-simmering racial tensions between the wealthier and majority white city of Grosse Pointe Park and majority black Detroit.⁶⁸

In addition to the consequences of redlining, in Detroit, unlawful foreclosures have arisen as its ostensible successor.⁶⁹ Detroit has one of the “highest rates of property tax foreclosures in the nation.”⁷⁰ In 2010, property tax assessments were 10 times higher than the legal limit and this practice is disproportionately applied when assessing lower-valued homes.⁷¹ Often foreclosed houses and properties end up being sold to White-owned corporations or White families.⁷²

⁶⁷ Built to keep Black from White: NBC News: <https://www.nbcnews.com/specials/detroit-segregation-wall/>

And see:

⁶⁸ WXYZ, 2019: <https://www.wxyz.com/news/detroit-is-demanding-grosse-pointe-park-remove-physical-barrier-with-sale-of-land> AND SEE: 'DETROITERS STAY OUT': RACIAL BLOCKADES DIVIDE A CITY AND ITS SURBURBS: THE GUARDIAN: <https://www.theguardian.com/us-news/2015/feb/03/detroit-apartheid-city-surburbs-grosse-pointe>

⁶⁹ Steven Shelton, *How Redlining Produced Poverty in Detroit*, TELEGRAM NEWSPAPER (Sept. 26, 2019), <https://www.telegramnews.net/story/2019/09/26/news/how-redlining-produced-poverty-in-detroit/750.html>.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

The 2020 census shows movement of Black people from Detroit to suburbs like Eastpointe.⁷³ The 2020 census further reveals that 25% of children in Eastpointe are White but only 13% attend the public school in their district.⁷⁴ There is also a misconception that such flight leads to a reduction in property value, which can then motivate others to leave, but the property value in areas that have diversified have remained stable.⁷⁵

C. Disparities and Poverty Can Adversely Affect Voting

Generally, those with lower socioeconomic status tend to vote less frequently.⁷⁶ Owning property in the United States is one of the primary ways to accumulate wealth such that denying property ownership can continue the cycle of poverty.⁷⁷ Banks and other lenders may engage in the practice of reverse redlining.⁷⁸ Reverse redlining is defined as “targeting residents within certain geographic boundaries, often based on income, race, or ethnicity, and giving those targeted borrowers credit on unfair terms.”⁷⁹ [internal quotes omitted]. Such behavior was seen in Detroit

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Supra* note 7 at 591.

⁷⁷ Caroline LLanes, *Detroit Ranked as One of the Most Segregated Cities in the Country*, MICHIGAN RADIO NPR (June 21, 2021), <https://www.michiganradio.org/post/detroit-ranked-one-most-segregated-cities-country>.

⁷⁸ Khristopher J. Brooks, *Redlining’s Legacy: Maps are Gone, but the Problem Hasn’t Disappeared*, CBS NEWS (June 12, 2020), <https://www.cbsnews.com/news/redlining-what-is-history-mike-bloomberg-comments/>.

⁷⁹ Asma Husain, *Reverse Redlining and the Destruction of Minority Wealth*, MICH. J. L. & RACE (Nov. 2, 2016), <https://mjrl.org/2016/11/02/reverse-redlining-and-the-destruction-of-minority-wealth/>.

prior to the 2008 housing crash. Commentators and experts opine that the city has yet to recover from these lending practices.⁸⁰

The persistent segregation that remains today due in large part to redlining results in lower local government resources for voting.⁸¹ Redlining has led to disparities in wealth among Black and White Americans.⁸² Places that have larger communities of color and/or have lower income generally experience longer polling wait times during elections.⁸³ Around 90% of voters of color had increased vote times compared to their White counterparts.⁸⁴

Voting in elections can be expensive for some. Voting requires time, skills, information, a certain level of health, and access to transportation, among others. Thus, even getting to the polling place might be difficult for those with lower income.⁸⁵ In Detroit, about one-third of people living in the city do not have a car.⁸⁶ Many Detroiters have expressed concerns about reliable public transportation to polling locations.⁸⁷ Further, the state Supreme Court recently held that

⁸⁰ *Supra* note 87.

⁸¹ *Supra* note 63.

⁸² *Supra* note 65.

⁸³ Justine Coleman, *Minority, Low-Income Districts Saw Longer Wait Times to Vote in 2018: Study*, *The Hill* (Nov. 4, 2019), <https://thehill.com/blogs/blog-briefing-room/news/468943-minority-low-income-districts-saw-longer-wait-times-to-vote-in>.

⁸⁴ *Id.*

⁸⁵ Matt Stevens, *Poorer Americans Have Much Lower Voting Rates in National Elections than the Nonpoor, A Study Finds*, *NEW YORK TIMES* (Aug. 11, 2020), <https://www.nytimes.com/2020/08/11/us/politics/poorer-americans-have-much-lower-voting-rates-in-national-elections-than-the-nonpoor-a-study-finds.html>.

⁸⁶ Monica Williams, *Need a Ride to the Polls? Amid a Court Ban, Detroiters Giving Free Lifts*, *BRIDGE DETROIT* (Oct. 28, 2020), <https://www.bridgedetroit.com/need-a-ride-to-the-polls-amid-a-court-ban-detroiters-giving-free-lifts/>.

⁸⁷ *Id.*

ridesharing services like Lyft or Uber cannot provide a discounted rate to transport people to polling places, thus reducing public transportation options to facilitate voting.⁸⁸

D. Housing and the Coronavirus-19 Pandemic's Disparate Impacts

Segregation in housing and income inequality have played a role in the rates of coronavirus cases among minority populations.⁸⁹ Such disparities are especially apparent in metropolitan areas. Cities where Black and Hispanic populations are more segregated from the White population had higher rates of death due to COVID.⁹⁰ Coronavirus rates can also be impacted by implicit racial bias in healthcare.⁹¹ Michigan implemented a coronavirus task force on racial disparities and the resultant report found that the rate of cases of the virus among the Black population was 40% higher than among the White population.⁹²

The rates of death due to the coronavirus are three times higher among the Black population in comparison to the White population in Michigan.⁹³ Michigan has an above average mortality

⁸⁸ *Id.*

⁸⁹ Jared Wadley, *Segregation, Income Disparity Fueled High COVID-19 Numbers*, MICHIGAN NEWS Feb. 18, 2021), <https://news.umich.edu/segregation-income-disparity-fueled-high-covid-19-numbers/>.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² Michigan Department of Health and Human Services, *Michigan Coronavirus Racial Disparities Task Force Interim Report*, 4 (Nov. 2020), https://www.michigan.gov/documents/coronavirus/Interim_Report_Final_719168_7.pdf.

⁹³ *Id.*

rate for Black Americans due to the virus.⁹⁴ COVID case rates have also been higher among the state's Hispanic population at 70% compared to the White population.⁹⁵

III . Michigan Today

Detroit remains the most segregated city in the United States with Detroit and the surrounding areas of Warren and Livonia being the fourth most segregated metropolitan area in the United States.⁹⁶ Detroit and other similarly situated places, such as Flint, have also historically experienced disinvestment.⁹⁷

As the auto industry in Detroit grew through the early to mid-20th century, many Black Americans who lived in the city experienced income growth that enabled them to move into the majority White, middle-class, suburban neighborhoods.⁹⁸ However, many White Americans in those neighborhoods were staunchly against this change.⁹⁹ For instance, Grosse Pointe had a point system in the 1950s that measured how “ethnic” a potential homeowner was along with a ban on selling homes to Black and Jewish people.¹⁰⁰ Both Dearborn and Warren are areas where Black

⁹⁴ Rashawn Ray et. al., *Examining and Addressing COVID-19 Racial Disparities in Detroit*, BROOKINGS (Mar. 2, 2021), <https://www.brookings.edu/research/examining-and-addressing-covid-19-racial-disparities-in-detroit/>.

⁹⁵ *Supra* note 106 at 5.

⁹⁶ *Supra* note 86.

⁹⁷ *Id.*

⁹⁸ Gordon Trowbridge and Oralandar Brand-Williams, *Cost of Segregation: Policies of Exclusion Created Boundaries Between Black, White Suburbs*, DETROIT NEWS (Apr. 15, 2020), <https://www.detroitnews.com/story/news/special-reports/2020/04/15/segregation-policies-create-boundaries-between-white-black-suburbs/5142654002/>.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

people have historically been denied housing.¹⁰¹ One of Dearborn’s past mayors, Orville Hubbard, aimed to keep Dearborn “clean” and made it clear that “[Black people] can’t get in here.”¹⁰² However, a street and a senior center are named after Orville Hubbard, the city made his birthday a holiday, and there was a statute of him in front of City Hall until its removal in June 2020.¹⁰³

A. Michigan’s Emergency Manager Laws and Their Impact on Voting

Michigan’s Emergency Manager Law, Public Act 436 allows the state government to replace all locally elected officials in cities and school boards where there is a finding that the area is financially distressed.¹⁰⁴ In such situations, the community affected does not have the ability to elect their local representatives.¹⁰⁵ The electoral power instead goes to state-appointed “emergency managers” who have historically been appointed more frequently in communities of color.¹⁰⁶ Such managers had effective political control over Detroit, Flint, Highland Park, Benton Harbor, and

¹⁰¹ *Id.* and Niraj Warikoo, *Statue of Former Dearborn Mayor Orville Hubbard Taken Down*, DETROIT FREE PRESS (June 5, 2020), <https://www.freep.com/story/news/local/michigan/wayne/2020/06/05/statue-dearborn-mayor-orville-hubbard-removed/3161044001/>.

¹⁰² *Supra* note 118.

¹⁰³ *Id.*

¹⁰⁴ *Michigan Residents Ask Supreme Court to Review Law that Led to Flint Water Crisis*, CENTER FOR CONSTITUTIONAL RIGHTS (March 31, 2017), <https://ccrjustice.org/home/press-center/press-releases/michigan-residents-ask-supreme-court-review-law-led-flint-water>.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

Pontiac for 18 years.¹⁰⁷ These cities each have a predominately Black population.¹⁰⁸ In 2018, Emergency Managers were removed from those cities and school districts.¹⁰⁹

The Flint Water Crisis resulted from a cost cutting measure taken by the emergency manager and against the advice of the EPA in 2014.¹¹⁰ Because the water was now being drawn from the Flint River, which is the waste disposal site for local industries, rather than from Detroit's treated water plant, it has high levels of lead, legionnaires disease bacteria, and total trihalomethanes, which are cancer-causing chemicals.¹¹¹ The lead levels are particularly harmful to children and the health effects from consuming the water are long lasting.¹¹²

Studies have shown, generally, that those who are chronically sick are less likely to vote.¹¹³ It is unclear what the exact relationship is between health and voting but "people who had poor self-rated health, no insurance, disabilities, and less emotional support were also less likely to vote

¹⁰⁷ Paul Egan, *Michigan Without State-Appointed Emergency Managers for First Time in 18 Years*, DETROIT FREE PRESS (June 27, 2018), <https://www.freep.com/story/news/local/michigan/2018/06/27/michigan-without-emergency-managers-first-time-18-years/737821002/>.

¹⁰⁸ Julie Mack, *See List of Michigan Cities with Most African American Residents, and Geographic Shifts Since 1970*, MICHIGAN LIVE (June 23, 2020), <https://www.mlive.com/public-interest/2020/06/see-list-of-michigan-cities-with-most-african-american-residents-and-geographic-shifts-since-1970.html>.

¹⁰⁹ *Supra* note 138.

¹¹⁰ ACLU 2016 IMPACT REPORT, https://www.aclu.org/sites/default/files/field_document/2016_impact_report.pdf.

¹¹¹ Melissa Denchak, *Flint Water Crisis: Everything You Need to Know*, NRDC (Nov. 8, 2018), <https://www.nrdc.org/stories/flint-water-crisis-everything-you-need-know>.

¹¹² *Id.*

¹¹³ Chloe Reichel, *How Health Affects Voter Turnout: A Research Roundup*, JOURNALIST'S RESOURCE (Oct. 29, 2018), <https://journalistsresource.org/politics-and-government/voter-turnout-health-research/>.

than the general population.”¹¹⁴ Experts have concluded that the likelihood of voting can be reduced when an individual suffers from chronic, debilitating illness.¹¹⁵

B. Educational Disparities in Michigan

There are significant barriers faced by Indigenous families and their children. In Michigan, there are 12 federally recognized tribes and four state recognized tribes, which when taken together means that there are about 100,000 Indigenous people living in Michigan.¹¹⁶ Thus, Michigan ranks among the top ten states with the largest Indigenous populations.¹¹⁷

In exit poll surveys, Indigenous people are often not recognized as a distinct group and are instead within the catch all group of “others.”¹¹⁸ Many are also stopped from voting due to the address listed on their ID because they are likely to have a P.O box listed if they live on a reservation.¹¹⁹ Poll workers are not given clear instructions on the various forms of a valid address and because of this, many Indigenous people can be turned away from voting.¹²⁰ The polling places that normally serve Indigenous people can be far away from reservations, can require

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ Meghanlata Gupta, *Debunking 10 Misconceptions About Michigan’s Native Americans*, BRIDGE MICHIGAN (June 24, 2020), <https://www.bridgemi.com/guest-commentary/opinion-debunking-10-misconceptions-about-michigans-native-americans>.

¹¹⁷ *Id.*

¹¹⁸ *Often Overlooked Native American Voters Poised to Become Powerful Voting Bloc in Michigan*, MICHIGAN RADIO NPR (Nov. 11, 2020), <https://www.michiganradio.org/post/often-overlooked-native-american-voters-poised-become-powerful-voting-bloc-michigan>.

¹¹⁹ *Id.*

¹²⁰ *Id.*

traversing inadequate roads, and typically lack funding and equipment.¹²¹ Even registering to vote can be challenging because many reservations do not have adequate broadband access, thus making it difficult to access the internet.¹²²

There is also a clear divergence in the percentages of bachelor's degrees earned by Indigenous people, African Americans, and Hispanic individuals in Michigan when compared to Caucasian and Asian individuals. In the total Michigan population, only 14% of Indigenous people have their bachelor's degree; 18% of Black people have their bachelor's degree; and 20% of Hispanic people have their Bachelor's degree.¹²³ These percentages are quite low when compared to the percentages of Bachelor's degrees held by White people, 31%, and Asians, 66%.¹²⁴

There are disparities in resources available to lower income, urban public schools, many of which are predominantly Black.¹²⁵ This is partially because funding for schools does not consider the additional costs associated with teaching in low-income communities.¹²⁶ On average,

¹²¹ Native American Rights Fund, *Obstacles at Every Turn: Barriers to Political Participation Faced by Native American Voters*(2020), https://www.narf.org/wordpress/wp-content/uploads/2020/05/NARF_2020FieldHearingReport_SummaryDocument.pdf and Native American Rights Fund, *Barriers to Casting a Ballot* (2020), https://vote.narf.org/wp-content/uploads/2020/06/obstacles_ballot_summary.pdf.

¹²² Native American Rights Fund, *Vote By Mail in Native American Communities* (2020), https://vote.narf.org/wp-content/uploads/2020/06/obstacles_votebymail_summary.pdf.

¹²³ Alex Rossman, *Michigan Has Stark Racial Disparities in Educational Attainment, Ranks Third Worst in Nation for Number of Bachelor Degrees Earned By Black Students*, MICHIGAN LEAGUE FOR PUBLIC POLICY (May, 29, 2020), <https://mlpp.org/michigan-has-stark-racial-disparities-in-educational-attainment-ranks-third-worst-in-nation-for-number-of-bachelor-degrees-earned-by-black-students/>.

¹²⁴ *Id.*

¹²⁵ Peter Ruark, *Expanding the Dream: Helping Michigan Reach Racial Equity in Bachelor's Degree Completion*, MICHIGAN LEAGUE FOR PUBLIC POLICY (May 29, 2020), <https://mlpp.org/expanding-the-dream-helping-michigan-reach-racial-equity-in-bachelors-degree-completion/>.

¹²⁶ *Id.*

providing education to a grade school child costs around \$9,590 annually but these costs can be higher for students who live in poverty.¹²⁷ Schools located in wealthier areas can buffer their expenses with revenue from property taxes in the area.¹²⁸ Low-income schools do not have this buffer.¹²⁹ Teacher turnover in low-income schools or schools with larger populations of color is high.¹³⁰ It is common for a low-income school to train a teacher and for that teacher to take a job at a higher-income school that could offer a higher salary.¹³¹ There are also issues of low literacy rates in low-income schools especially those located in communities of color.¹³² In Muskegon Heights, for example, only 6% of students were proficient in English as of 2018.¹³³

Black people may have relatively lower rates of bachelor's degrees due to poverty.¹³⁴ Michigan has high college tuition costs, and the amount of financial aid has not kept pace with increases in tuition.¹³⁵ Simply put, college education is expensive. Over the years, Michigan state government grants on average approximately \$5,466 in student aid to White students while

¹²⁷ Michigan Association of School Boards, *Cost of Educating a Child* (last visited Sept. 26, 2021), <https://www.masb.org/SFRC>.

¹²⁸ Lily Altavena, *Report: High Poverty Districts Bear the Brunt of the Teacher Turnover in Michigan*, DETROIT FREE PRESS (May 18, 2021), <https://www.freep.com/story/news/education/2021/05/18/edtrust-report-teacher-turnover/5128745001/>.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Melissa Frick, *High-Poverty Michigan School Districts Awarded \$3M to Help Improve Reading, Writing Skills*, MLIVE (Mar. 10, 2021), <https://www.mlive.com/news/2021/03/high-poverty-michigan-school-districts-awarded-3m-to-help-improve-reading-writing-skills.html>.

¹³³ *Id.*

¹³⁴ *Supra* note 163.

¹³⁵ *Id.*

granting about \$4,461 in student aid to students of color.¹³⁶ The total average of student aid provided in Michigan is the 12th lowest in the nation.¹³⁷ In 2018, Michigan used 4.1% of its total budget on higher education, which is significantly lower than the national average of 10.1%.¹³⁸

The disparities in higher education attainment also vary by location. Cities that have a predominantly Black population have even lower levels of Bachelor's degrees.¹³⁹ Places like Benton Harbor, Muskegon, and Saginaw can have as few as 10% of residents with Bachelor's degrees.¹⁴⁰ Generally, Michigan is found to be the third worst in the nation for its percentage of Bachelor's degrees earned by Black students in comparison to the total Black population in Michigan.¹⁴¹ Specifically, only 6.8% of Black students in the state earned a Bachelor's degree, which is less than the national average of 17.1%.¹⁴²

IV. Voting in Michigan: VRA Section 5 Coverage and Language Barriers

In 1976, the U.S. Attorney General and Census Director added Michigan to the list of only 14 states, and the only Midwestern State, to be covered by Section 5 of the Voting Rights Act, which required advance approval or preclearance from the Department of Justice or the U.S. District Court for the District of Columbia before any "change affecting voting" could be

¹³⁶ Allison Donahue, *Study: Low-income, Students of Color Squeezed in Michigan's College Affordability Crisis*, MICHIGAN ADVANCE (Sept. 7, 2019), <https://michiganadvance.com/2019/09/07/study-low-income-students-of-color-squeezed-in-michigans-college-affordability-crisis/>.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Supra* note 160.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴²¹⁴² *Id.*

implemented. In 2007, the Department of Justice used Section 5 to prevent the State of Michigan from closing a Secretary of State branch office in Buena Vista Township, deciding that the State could not prove that the closure did not discriminate against minorities and could not prove that the closure “neither has the purpose nor will have the effect of effect of denying or abridging the right to vote on account of race.”¹⁴³

Michigan’s Section 5 coverage applied to Clyde Township in Allegan County and Buena Vista Township in Saginaw County as a result of the townships not providing election materials in Spanish pursuant to the Voting Rights Act.^{144, 145}

In 2020, the Secretary of State for Michigan started the Language Access Task Force that aimed to translate voter information into various languages.¹⁴⁶ The voter information translated is on the state government’s website, however, this translation effort does not include absentee or in-

¹⁴³ December 26, 2007 Section 5 objection letter from DOJ to State of Michigan: https://www.justice.gov/sites/default/files/crt/legacy/2014/05/30/l_071226.pdf

¹⁴⁴ FEDERAL REGISTER, VOL. 41, NO. 158— FRIDAY, AUGUST 13, 1976

¹⁴⁵ On June 25, 2013, the United States Supreme Court held that it is unconstitutional to use the coverage formula in Section 4(b) of the Voting Rights Act to determine which jurisdictions are subject to the preclearance requirement of Section 5 of the Voting Rights Act, *Shelby County v. Holder*, 133 S. Ct. 2612 (2013). The Supreme Court did not rule on the constitutionality of Section 5 itself. The effect of the *Shelby County* decision is that the jurisdictions identified by the coverage formula in Section 4(b) no longer need to seek preclearance for the new voting changes, unless they are covered by a separate court order entered under Section 3(c) of the Voting Rights Act. (USDOJ)

¹⁴⁶ Malak Silmi, *Michigan Secretary of State Rolls Out Voter Information in 10 Languages*, DETROIT FREE PRESS (Oct. 10, 2020), <https://www.freep.com/story/news/politics/elections/2020/10/10/michigan-voter-information-translations-arabic-bengali-korean-spanish-tagalog/5916704002/>. The languages now provided are Arabic, Bengali, Burmese, Hindi, Korean, Mandarin, Spanish, Tagalog, Thai, and Urdu. *Id.*

person ballots.¹⁴⁷ About 10% of Detroiters speak a different language than English at home and Hamtramck has around 67% of individuals speaking a different language at home.¹⁴⁸

About 38.1% of individuals in Michigan who were born outside the United State are Limited English Proficient (“LEP”), among the highest rates in the United States, while 0.6% of individuals who were born anywhere in the United States are LEP.¹⁴⁹ The 2020 census data for Wayne County show that the LEP percentages in Michigan range from 3.5% to 13.1%.¹⁵⁰ However, some census tracts that are located in Hamtramck and Dearborn show that limited English proficiency among the population is 32.5% or higher.¹⁵¹

Some LEP voters may prefer in-person translation while voting rather than seeking out information online, especially when the online translation is done poorly.¹⁵² Further, though a voter can ask individuals not associated with a candidate or their labor union to assist them while voting, poll workers get inconsistent guidance on the matter.¹⁵³ Thus, poll workers have turned

¹⁴⁷ *Id.*

¹⁴⁸ Maggie McMillin, *Michigan Made it Easier than Ever for Non-English Speakers to Vote This Year. But the Work’s Not Done*, DETOUR DETROIT (Nov. 9, 2020), <https://detourdetroit.com/michigan-voting-other-languages-access/>.

¹⁴⁹ Migration Policy, *State Immigration Data Profiles: Michigan* (last visited Sept. 26, 2021), <https://www.migrationpolicy.org/data/state-profiles/state/language/MI>.

¹⁵⁰ United States Census, *People that Speak English Less than “Very Well” in the United States* (Apr. 8, 2020), <https://www.census.gov/library/visualizations/interactive/people-that-speak-english-less-than-very-well.html>.

¹⁵¹ *Id.*

¹⁵² *Supra* note 193.

¹⁵³ *Id.*

away individuals who are accompanied to the polls by a voting individual to help them understand the ballot.¹⁵⁴

The federal government sued Hamtramck for discriminatory election practices in 2003 for the city's conduct in a 1999 local election.¹⁵⁵ At the time, Hamtramck allowed challenges to an individual's voter registration under Michigan Law.¹⁵⁶ The "Citizens for a Better Hamtramck" were able to register as polling place challengers claiming that their aim was to keep the election "pure."¹⁵⁷ This group of challengers brought citizenship challenges only against people of color and those with Arab sounding names.¹⁵⁸ No White voter's citizenship was challenged during this election.¹⁵⁹ When complaints were made to the elections office, city officials did not address the issue.¹⁶⁰ Some Arab citizens decided not to vote in that election citing this racial intimidation and harassment.¹⁶¹ The United States brought suit to enforce the non-discriminatory requirements of the Voting Rights Act and U.S. Constitution.

As part of the 2003 consent decree settling the United States' lawsuit, Hamtramck was ordered to cease discrimination against voters based on race or color as prohibited by federal law, ordered to train election officials and polling place challengers about non-discrimination in

¹⁵⁴ *Id.*

¹⁵⁵ *United States v. Hamtramck*, No. 0073541 at 1 (Mich. Sept. 3, 2003) (First Amended Consent Order and Decree).

¹⁵⁶ *Id.*

¹⁵⁷ *United States v. Hamtramck*, No. 00-73541 at 2 (Mich.) (Complaint).

¹⁵⁸ *Id.* at 3.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 4.

¹⁶¹ *Id.* at 2.

elections, ordered to provide both Bengali and Arabic interpreters at the polls, voting information and ballots in both languages, and notices in the major newspapers for both communities about the consent order.¹⁶² In 2021, Hamtramck was again in violation of the VRA because the city did not provide Bengali interpreters nor voting information and ballots in Bengali.¹⁶³ The most recent consent order states that the city must provide these resources, with the court order effective until July 13, 2025.¹⁶⁴ In other Michigan jurisdictions such as Dearborn, where nearly half the population is Arabic speaking, there have also been issues of not providing citizens with translated materials or providing sample ballots that are translated only three days before an election.¹⁶⁵

¹⁶² *Supra* note 200 at 9.

¹⁶³ *U.S. District Court for the Eastern District of Michigan Enters Consent Decree and Order in Voting Rights Act Lawsuit—Hamtramck’s Bengali Language Election Program Ordered for Four Years*, ASIAN AMERICAN LEGAL DEFENSE & EDUC. FUND (July 13, 2021), <https://www.aaldef.org/press-release/u.s.district-court-for-the-eastern-district-of-michigan-signs-and-enters-consent-decree-and-order-in-voting-rights-act-lawsuit-hamtramck-s-bengali-language-election-program-ordered-for-four-years/>.

¹⁶⁴ *Id.*

¹⁶⁵ Beenish Ahmed, *Dearborn Needs Arabic-Language Election Materials, Arab-American Advocates Say*, NPR (July 29, 2021), <https://www.michiganradio.org/post/dearborn-needs-arabic-language-election-materials-arab-american-advocates-say>.

Conclusion

Minority groups in Michigan face several barriers to voting. *Gingles* and the Senate Factors provide guidance on what the state can consider when evaluating election and voting barriers. The U.S. Supreme Court has ruled that such considerations can include income, education, and health inequalities along with the presence of significant segregation in an area. This memorandum has attempted to address the various issues raised by the U.S. Supreme Court under *Gingles* and the Senate Factors while also providing the context of historical discrimination in Michigan dating to its time as a slave holding territory in the 18th century.

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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR.,)
an individual, ET AL.,)
)
Plaintiff(s),)

vs.)

) Case No. 1:22-cv-00272

JOCELYN BENSON, in her)
official capacity as the)
Secretary of State of)
Michigan, ET AL.,)
)
Defendant(s).)

- - - - -
ZOOM DEPOSITION OF BRAD LOCKERBIE, Ph.D.
Monday, April 10, 2023

- - - - -
Zoom Deposition of BRAD LOCKERBIE, Ph.D., called by
the Defendants for examination under the Federal Rules
of Civil Procedure, taken before me, the undersigned,
Lorraine A. Litvin, a Notary Public in and for the
State of Ohio, at Cleveland, Ohio, commencing at

a.m. the day and date above set forth. 11:03

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EXAMINATION INDEX

BRAD LOCKERBIE, Ph.D.

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- - - - -

EXHIBIT INDEX

Exhibit	Marked
Exhibit 1 Lockerbie Expert Report	8
Exhibit 2 IPPSR	44
Exhibit 3 MI Redistricting Map Analysis	46
Exhibit 4 Handley Expert Report	55

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1 BRAD LOCKERBIE, Ph.D.
2 called for examination, under the Federal Rules of
3 Civil Procedure, after having been first duly sworn,
4 as hereinafter certified, was examined and testified
5 as follows:

6 EXAMINATION

7 BY MS. PROUTY:

8 Q Could you please state your full name and current
9 address for the record.

10 A Brad Lockerbie, 9 Justin Drive, Etowah, North
11 Carolina, 28729.

12 Q I'm Erika Prouty. I'm one of the attorneys for
13 the defendants, Michigan Independent Citizens
14 Redistricting Commission and the individual
15 commissioners in their official capacity.

16 For the record, the parties have stipulated to
17 this deposition being conducted remotely and to the
18 witness being sworn in via videoconference.

19 Dr. Lockerbie, before we get started, there are a
20 few things I want to go over first. First, your
21 deposition is being transcribed. To make sure the
22 transcript is accurate, we need to keep a few things
23 in mind that might differ from how we speak in normal
24 conversations.

25 Number one, we need to make sure we don't talk

1 did, but I did not reference them in my report.

2 Q Sitting here today, you can't tell me
3 specifically what those are?

4 A I would need to basically look at my writings
5 here to do that.

6 Q In another sentence here in paragraph 10 you say:
7 "As much of his report is contrary to the apparent
8 interests of the commission, I accept them as given."

9 Can you tell me what specific statements in
10 Mr. Adelson's report are contrary to the apparent
11 interests of the commission?

12 A I would assume any problem he identified with
13 racial polarization and economic disparities that
14 cause problems would cause problems for the commission
15 in that they have an interest in their report being
16 accepted and approved.

17 Q Do you have any background as to why the report
18 was authored in the first place?

19 A I'm not privy to that.

20 Q I would like to turn your attention to paragraphs
21 12 through 17 now. Here, you're quoting from or
22 citing from Mr. Adelson's report about the history of
23 discrimination in Michigan.

24 Do you generally agree with Mr. Adelson's
25 findings that you cited here?

1 A I trust what he has said there, yes.

2 Q The same in paragraphs 46 to 49, do you agree
3 with Mr. Adelson's findings that you cited here?

4 A I trust that he has reported accurately.

5 Q With paragraphs 58 to 64 under the heading of
6 Economic Disparities in your report, do you agree with
7 Mr. Adelson's findings that you cited here?

8 A I trust his report. The only thing I catch there
9 is a typo in my own writing there where it says
10 relining it should be redlining.

11 Q Thank you for clarifying that. Would it be fair
12 to say you agree with Mr. Adelson's findings and
13 conclusions in his report?

14 A I believe it's accurate.

15 Q Do you believe it was thoroughly researched and
16 analyzed?

17 A I would have no reason to doubt that.

18 Q Would the commission have been justified in
19 relying on his report when they drew the maps?

20 A It would be a valuable piece of information, yes.

21 Q I would like to now turn to your discussion of
22 some of the public testimony offered to the commission
23 during the 2021 redistricting. We will start with
24 paragraph 18.

25 Can you describe your methodology for selecting

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(Deposition concluded at 2:10 p.m.)

Brad Lockerbie, Ph.D.

- - - - -

1 The State of Ohio,)
) SS: CERTIFICATE
2 County of Cuyahoga.)
3

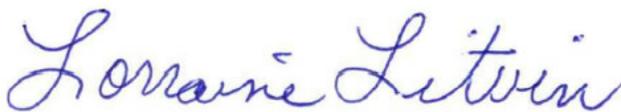
4 I, Lorraine A. Litvin, Notary Public within and
for the State of Ohio, duly commissioned and
5 qualified, do hereby certify that the within-named
BRAD LOCKERBIE, Ph.D., was by me first duly sworn to
6 testify the truth, the whole truth, and nothing but
the truth in the cause aforesaid; that the testimony
7 then given by him/her was by me reduced to stenotypy
in the presence of said witness, afterwards
8 transcribed on a computer, and that the foregoing is a
true and correct transcript of the testimony so given
by him/her as aforesaid.

9
10 I do further certify that this deposition was
taken at the time and place in the foregoing caption
11 specified and was completed without adjournment.

12 I do further certify that I am not a relative,
employee of, or attorney for any of the parties in the
13 above-captioned action; I am not a relative or
employee of an attorney for any of the parties in the
14 above-captioned action; I am not financially
interested in the action; I am not, nor is the court
15 reporting firm with which I am affiliated, under a
contract as defined in Civil Rule 28(D); nor am I
16 otherwise interested in the event of this action.

17 IN WITNESS WHEREOF I have hereunto set my hand
and affixed my seal of office at Cleveland, Ohio, on
18 this 17th day of April, 2023.

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Lorraine A. Litvin, Notary Public
in and for the State of Ohio.
My commission expires August 4, 2026

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DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 5854094

CASE NAME: Agee, Jr., Donald, et al. v. Benson, Jocelyn,
etc., et al.

DATE OF DEPOSITION: 4/10/2023

WITNESS' NAME: Brad Lockerbie, Ph.D.

In accordance with the Rules of Civil
Procedure, I have read the entire transcript of
my testimony or it has been read to me.

I have made no changes to the testimony
as transcribed by the court reporter.

Date Brad Lockerbie, Ph.D.

Sworn to and subscribed before me, a
Notary Public in and for the State and County,
the referenced witness did personally appear
and acknowledge that:

They have read the transcript;
They signed the foregoing Sworn
Statement; and
Their execution of this Statement is of
their free act and deed.

I have affixed my name and official seal
this _____ day of _____, 20____.

Notary Public

Commission Expiration Date

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DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 5854094

CASE NAME: Agee, Jr., Donald, et al. v. Benson, Jocelyn, etc., et al.

DATE OF DEPOSITION: 4/10/2023

WITNESS' NAME: Brad Lockerbie, Ph.D.

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have listed my changes on the attached Errata Sheet, listing page and line numbers as well as the reason(s) for the change(s).

I request that these changes be entered as part of the record of my testimony.

I have executed the Errata Sheet, as well as this Certificate, and request and authorize that both be appended to the transcript of my testimony and be incorporated therein.

Date Brad Lockerbie, Ph.D.

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

- They have read the transcript;
- They have listed all of their corrections in the appended Errata Sheet;
- They signed the foregoing Sworn Statement; and
- Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal this _____ day of _____, 20____.

Notary Public

Commission Expiration Date

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ERRATA SHEET
VERITEXT LEGAL SOLUTIONS MIDWEST
ASSIGNMENT NO: 4/10/2023

PAGE/LINE(S) / CHANGE /REASON

Date Brad Lockerbie, Ph.D.
SUBSCRIBED AND SWORN TO BEFORE ME THIS _____
DAY OF _____, 20_____ .

Notary Public

Commission Expiration Date

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate.

The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

* * *

DONALD AGEE, JR., et al.,
Plaintiffs,

vs.

CASE NO. 1:22-CV-00272

JOCELYN BENSON, et al.,
Defendants.

* * *

Deposition of SEAN TRENDE, a witness herein,
called by the defendants for examination pursuant to the
Rules of Civil Procedure, taken before me, Emma Jane
Troyer, a Notary Public within and for the State of
Ohio, at the Offices of Baker Hostetler, LLP, 200 Civic
Center Drive, Suite 1200, Columbus, Ohio, 43215, on
April 20th, 2023, at 9:00 a.m.

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I N D E X

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* * *

I N D E X

EXHIBIT	DESCRIPTION	PAGE
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* * *

1 APPEARANCES:

2
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21 * * *
22
23
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25

1 SEAN TRENDE,
2 a witness herein, having been first duly sworn as
3 hereinafter certified, was examined and deposed as
4 follows:

6 EXAMINATION

7 BY MS. McKNIGHT:

8 Q. Good morning.

9 A. Morning.

10 Q. I'm Kate McKnight, and I'm here today on behalf
11 of defendants in the Agee versus Benson case in the
12 Western District of Michigan. Would you state your full
13 name for the record?

14 A. Sean Patrick Trende, T-R-E-N-D-E.

15 Q. And I understand you've been deposed before; is
16 that correct?

17 A. Yes.

18 Q. Okay. So therefore I'll keep my introductory
19 statements brief. First, I'll endeavor to take a break
20 every hour or so. This is not an endurance contest. If
21 you need to take a break between them, just let me know.
22 All I ask is that you finish answering a question posed
23 before we do take any break.

24 Please ask for any clarification if my question
25 does not make sense. You're the expert here, and I'll

1 Q. I see. And does it serve as a basis for
2 comparison against the enacted plan?

3 A. Yeah. So more directly in a Section 5 context,
4 which we are not, but it's just an example of what
5 things had looked like before and what things looked
6 like afterwards.

7 Q. And in this case, did you use it as a basis of
8 comparison?

9 A. I think, again, this is an area where your
10 experts read more into what I had done than what I had
11 intended. I used it more as a narrative device. It is
12 a comparison, but not in the same sense that you would
13 do it in Section 5. It's more a narrative device to
14 show how things have changed.

15 Q. And do you have an understanding of how the House
16 and Senate maps in Michigan were drawn in 2011?

17 A. Yes.

18 Q. And do you have a sense of why they were drawn
19 that way?

20 A. I have some sense that -- excuse me --
21 republicans had the trifecta, as we call it. They
22 controlled the House, Senate, and governorship, and at
23 least to some extent they were trying to draw maps in a
24 different political environment, but nevertheless, maps
25 that would help them.

1 Q. And do you have a sense of how courts viewed the
2 drawing of maps from 2011?

3 A. I can't remember if these maps were ever
4 challenged. I know the congressional maps were, but I
5 don't know about the State House or State Senate maps.

6 Q. Okay. So as you sit here today, you're not aware
7 of whether federal courts reviewed the 2011 legislative
8 maps for compliance with the Constitution?

9 A. I'm trying to remember, and I can't. I know that
10 the congressional maps were challenged at least until
11 the Rucho decision came down -- R-U-C-H-O -- but I can't
12 remember if the State House and State Senate maps were
13 part of that challenge or not.

14 Q. Would it surprise you to know that a federal
15 court found the legislative maps to represent a
16 political gerrymander of historical proportions?

17 A. It wouldn't surprise me. They did the same
18 thing -- wrongly, I think -- but did it for the
19 congressional districts.

20 Q. Would you agree with the statement that black
21 preferred candidates are not always black?

22 A. Oh, yeah, obviously.

23 Q. And would you agree that it is possible for a
24 non-majority minority district to be represented by a
25 candidate of choice of the black community?

1 A. Yes. I mean, theoretically, you could have a
2 district with one black resident of voting age, and if
3 he prefers -- let's just make it simple and use a
4 general election. If he votes for democrats and the
5 district elects a democrat, then you would say that the
6 black candidate of choice won that district.

7 Q. And is it possible for a candidate of choice of
8 the black community to not be black?

9 A. Yes. Gary Peters in 2020 is an example of that
10 for a general election. I think courts -- and I
11 don't -- again, this is where you get into the details
12 of circuit law, but I believe courts have given some
13 weight to the race of the candidates. But again, I
14 think that 2020 Senate race is a nice example of a
15 counter-narrative where the white candidate was the
16 candidate of choice of the black community.

17 Q. I think we're at about an hour, so why don't we
18 take the break for the court reporter, for you, and then
19 we'll come back in ten minutes, if that's okay? So it's
20 10:05 now. We'll return at 10:15.

21

22 (Recess from 10:05 a.m. to 10:17 a.m.)

23

24 BY MS. McKNIGHT:

25 Q. Mr. Trende, I wanted to clarify something that we

1 to ensure that those maps were not reinforcing red
2 lining practices?

3 MR. PATTWELL: Objection; form.

4 A. I didn't consult those maps. I didn't consult
5 the maps at all. I don't know what the causal
6 relationship would be between drawing a state
7 legislative district today and red lining practices from
8 100 years ago, to the extent that's implied in your
9 question, but I didn't consult the maps.

10 Q. If that was an issue that mattered to voters and
11 the Commission, you wouldn't be aware of it as you sit
12 here today; is that right?

13 A. That's right.

14 Q. Okay. Did you interview any voters in preparing
15 your report?

16 A. No.

17 Q. Do you have any specific knowledge of requests
18 for changes in districts made at public hearings?

19 A. No.

20 Q. In preparing your report, did you come to have an
21 understanding of the voting behavior of Michigan's black
22 voters?

23 A. At least to some level, yes.

24 Q. And based on that understanding, do you
25 understand whether Michigan's black voters generally

1 vote for democratic candidates as opposed to republican
2 or independent candidates?

3 A. They generally vote for democratic candidates.

4 Q. Are you familiar with the criteria that the
5 Commission used to draw its plans?

6 A. To the extent it is the state constitutional
7 requirements, yes. At least, that would be what was
8 purported to be the criteria to draw the plans.

9 Q. So let's mark this as Exhibit 4.

10

11 (Defendant's Exhibit 4 marked for identification.)

12

13 Q. Mr. Trende, do you recognize what this document
14 is?

15 A. This is at least a copy of Section 6 of the
16 Michigan Constitution.

17 Q. And I'd like to draw your attention to Section 13
18 on Page 3. Do you understand this section to detail the
19 criteria the Commission should have used to follow in
20 proposing and adopting any plans?

21 A. Yes.

22 Q. Okay. And do you understand this list of
23 criteria to be ranked in order of priority?

24 A. Yes.

25 Q. Did you use this criteria in preparing your

1 A. So as Justice O'Connor put it, I think in Shaw,
2 but it might be one of the Bush V. Vera, redistricting
3 is an area where appearances matter, and so there is a
4 bit of, I know it where I see it, when I see it aspect
5 that's built into the court's case law.

6 I don't think any reasonable person could look
7 at, say, the Fifth District and say to themselves, that
8 is a compact, reasonably drawn district that makes
9 sense.

10 Q. And which Fifth District are you talking about --
11 the House Fifth District?

12 A. Yes.

13 Q. Are you aware that the House Fifth District is
14 not challenged in this case?

15 A. Yes. I'm also aware that in a racial
16 gerrymandering case, you're allowed, or it's acceptable
17 to look at evidence presented beyond the context of the
18 district's challenge. So, for example, in Alabama Black
19 Legislative Caucus, Justice Breyer says you can look at
20 statewide evidence, but ultimately the focus is on the
21 districts themselves, the challenged districts
22 themselves, and you can't just have a blunderbuss
23 statewide assault on a map.

24 Q. I have a question about your demonstration maps.
25 Did you conduct a performance analysis for districts in

1 the demonstration maps?

2 A. No, because again, these aren't remedial maps.
3 These are districted to demonstrate under Gingles Prong
4 1 that the black community is numerous enough to
5 constitute a majority in a reasonably configured
6 district.

7 Q. Were you ever aware of the political performance
8 of the demonstration maps?

9 A. No.

10 Q. So you were never aware of how many democrats or
11 republicans they elected?

12 A. No, because the point is to demonstrate, under
13 Gingles Prong 1, that you can draw reasonably configured
14 districts where minority groups constitute a majority of
15 the population, which would trump, regardless of whether
16 the constitution explicitly provided for it or not,
17 lower-tiered concerns.

18 Q. Now, we've talked a bit about what you didn't
19 look at in preparing your demonstration maps. I'd like
20 to try and get an understanding of how you prepared
21 those maps and what kind of check you placed on it, and
22 I'll take those two issues in turn. First, how did you
23 prepare the demonstration maps in this case?

24 A. In what sense?

25 Q. How were they made?

1 or if it's a chapter, but I did read it.

2 I know she does a lot of work on doing racially
3 polarizing analysis. She was, I believe, the RPV
4 analyst for the map drawer in the Arizona case. Or,
5 it's not a case -- the Arizona matter.

6 Q. I see at the top of Page 28 in your report that
7 you thought your findings are largely consistent with
8 Handley's report in this respect; do you see that?

9 A. Yes.

10 Q. Okay. In what respect?

11 A. So it says the Handley report engages some of
12 this analysis, which is responsive to ecological
13 regression, or referencing ecological regression and
14 ecological inference, and the analyses that I have
15 conducted are largely consistent with hers.

16 Q. And in reading your report -- please correct me
17 if I'm wrong -- do I have the correct understanding that
18 you don't have qualms with the reliability or quality of
19 Dr. Handley's analysis; instead, you seem to take issue
20 with how the analysis played out in the Commission's map
21 drawing process; is that a fair understanding?

22 MR. PATTWELL: Objection; form.

23 A. That's a little bit of a broad sweep. If we're
24 talking as a general matter, I could probably agree with
25 that frame, but I don't remember every single conclusion

1 within the Handley report, so there may be specific
2 examples that I would disagree with.

3 Q. Okay.

4 A. But my approach was generally to, at least with
5 respect to the ecological inference calculations, to
6 just take her findings as they were, since they were
7 consistent with what I found with my own analysis, and
8 then just supplement them with additional data that I'd
9 be able to find.

10 I know one of the experts -- Palmer, I think --
11 suggested that this is cherry picking, and I think he
12 missed what was going on. Dr. Handley had reported the
13 data out, and I didn't see a reason to duplicate it in
14 what was already a 120-page report, or on its way to
15 being, when I wrote it.

16 Q. Now, setting aside how you view the Commission
17 employed Dr. Handley's analysis, do you have any
18 reservations about a map drawing commission relying on
19 the analysis that Dr. Handley prepared for the Michigan
20 Commission?

21 MR. PATTWELL: Objection; form.

22 A. If we mean relying on the findings of her
23 ecological inference and ecological regression,
24 certainly not. Like I said, her results are pretty much
25 the same as the results that I came up with, which is

1 why there was no need to duplicate them in the report.

2 I don't think Dr. Palmer was being needlessly
3 aggressive. I don't mean to imply that, when he said I
4 was cherry picking. That's why we do the depositions.

5 Q. Okay. Now actually may be a good time to take a
6 break. We're at -- it's 11:08. Is it okay to take a
7 ten-minute break? Let's do ten minutes. So we'll be
8 back at 11:18.

9

10 (Recess from 11:08 a.m. to 11:25 a.m.)

11

12 BY MS. McKNIGHT:

13 Q. I'd like to pass out what will be marked as
14 Exhibit 5.

15 A. Before we get to this, I did have one other tweak
16 on a response.

17 Q. Okay?

18 A. Which is that when I was putting this report
19 together, I did notice that the calculations I had done
20 for the first version of my map were done with any part
21 black as the definition, and those are included in the
22 appendix -- those original maps. And so the maps
23 included in my plan, those maps had to be adjusted.

24 The maps in the appendix were the first maps I
25 drew back in the spring of 2022. Because they utilized

1 A. Yes. That is, I think you have to have ten
2 districts that comply with the Voting Rights Act that
3 will regularly elect the minority candidate of choice.
4 That's the whole thrust of the Voting Rights Act
5 challenge here.

6 Q. Okay.

7 A. Who knows, though. I mean, the Milligan case is
8 acting like a sword of Damocles in this whole
9 litigation, and if this case is tried, it may be tried
10 under a completely different voting rights regime.

11 Q. Pardon me, Mr. Trende. I just need to organize
12 my papers here. I'd like to step back for a minute from
13 Dr. Rodden's report and ask you some questions about the
14 benchmark plan. Are you familiar with statements made
15 by some of the map drawers within the 2011 map drawing
16 phase?

17 A. I've read them in some of the expert reports.

18 Q. Do you recall reading a quote from a political
19 strategist named Jeff Timmer who was involved with
20 drawing the 2011 plans as saying, quote, there were two
21 main keys to gerrymandering in Michigan when I sat down
22 to draw maps ten and twenty years ago. Relying on
23 county and city or township geography, keeping those
24 intact helps republicans. The other thing that helps
25 republicans was the Voting Rights Act, packing the

1 Q. We have some pulled. I'll bring it after the
2 break.

3 A. Oh, good. But yeah, you can see on Page 92 where
4 I'm taking something directly from my code and just
5 putting it on, and the code that I had in place gives
6 lower 95 percent and upper 95 percent, so it's a 95
7 percent credible interval.

8 But that's just because it's the code that I had.
9 For the most part, I am just doing -- when I do my
10 summary charts and whatnot, I'm just replicating what
11 Dr. Handley did.

12 Q. Okay. Let's turn to Page 28 and 29 of your
13 report. This has to do with your analysis of the 2018
14 gubernatorial election. Again, this is on Page 28 and
15 29 of your report.

16 Now I'm looking at Page 29. About halfway down
17 that first paragraph, you note that you found that 37 --
18 I want to make sure you're --

19 A. I'm listening.

20 Q. Okay -- that 37.4 percent of blacks voted for
21 Whitmer, and 41.1 percent voted for Thanedar; do you see
22 that?

23 A. I do.

24 Q. Do these figures, a difference of about four
25 percentage points, support a conclusion that black

1 Q. And here you report the BVAP for House District 4
2 at 45.5 percent; do you see that?

3 A. Yes.

4 Q. And do you know whether the black candidate of
5 choice won the 2018 primary in House District 4?

6 A. Certainly not off the top of my head.

7 Q. Okay. Where in your report do you focus on the
8 wins, the 2018 primary? I'll see if I can help.

9 A. So for 2018, Dr. Handley had done the work, and
10 so I don't do anything differently from what she has.

11 Q. Okay.

12 A. So all I'm doing here with 2 and 5, I believe,
13 are providing data where she did not.

14 Q. Okay. I see. What pages are 2 and 5 on?

15 A. 2 is on 37; 5 is on 39.

16 Q. And would you have relied on Dr. Handley's data
17 if you didn't agree with it?

18 A. So I never did any individual assessment of -- I
19 never saw her code. What I did do was note that we
20 produced substantially similar results with our
21 different approaches, and so I felt comfortable relying
22 on her, or, you know, using her findings for 2018 and
23 2020. I don't know if that's the same as agreeing with
24 it, because I didn't go through and look through all of
25 her code and whatnot.

1 Q. Okay.

2 A. But I don't have any reason to disagree with her,
3 is maybe a better way to put it.

4 Q. Okay. Thank you. Let's move to Page 25 of the
5 Handley report. This is Page 25 of Exhibit 5. Take a
6 minute to look at this, Mr. Trende, and then I'll ask
7 you some questions about it.

8 A. Okay.

9 Q. Do you recall looking at this chart the first
10 time you reviewed Dr. Handley's report?

11 A. Yes.

12 Q. Okay. And Dr. Handley states here, an
13 Examination Table 9 indicates that every Michigan State
14 House District with a BVAP of at least 35 percent elects
15 a minority representative to the State House; do you see
16 that?

17 A. Yes.

18 Q. Do you have any reason to disagree with that?

19 A. No. Well, this is as of 2021, so I don't know if
20 that's true as of today, but with that stipulation,
21 yeah.

22 Q. With that stipulation, you don't have any reason
23 to disagree with that statement as it relates to this
24 table?

25 A. Yeah. If we say every Michigan district in the

1 area of Dr. Handley's elections. Both House District 4
2 and House District 11 are in the Detroit area, aren't
3 they?

4 A. Yes.

5 Q. Okay. Let's turn to Page 7 of your report. Here
6 I'm looking at the second to last paragraph, and a
7 reference to Marshall Bullock was an African-American
8 senator who had been elected in a 45 percent BVAP
9 district four years earlier; do you see that?

10 A. Yes.

11 Q. Did you conduct a percent needed to win analysis
12 for Michigan minority voters?

13 A. No.

14 Q. And you would agree that Marshall Bullock had
15 been elected in a district that was drawn below majority
16 BVAP?

17 A. Yes.

18 Q. Did you conduct any form of analysis about
19 whether the majority minority districts in your
20 demonstration plan provide minority opportunity to elect
21 that does not exist under the challenged plans?

22 A. Except to the extent that the -- there's analysis
23 of whether there would be opportunity to win under the
24 challenged plans, no.

25 Q. Okay. So you never compared opportunity to win

1 under the challenged plans to -- pardon me -- I want to
2 make sure I understand what you just said.

3 A. Could I rephrase my answer? Because the
4 demonstration plan is only there to prove under Gingles
5 Prong 1 that the black population of Detroit is numerous
6 enough to support 10 majority black districts in a
7 reasonably configured -- in reasonably configured
8 districts. So again, that's not necessarily a map that
9 was meant to be a remedial map or anything of the sort.
10 It's simply to demonstrate Gingles Prong 1.

11 Q. Okay. So you never conducted an analysis where
12 you compared the opportunity to elect in the
13 demonstration plan as compared to the opportunity to
14 elect in the challenged plans; is that fair?

15 A. I never made that direct comparison, because
16 that's not the purpose of the demonstration plan. It's
17 just meant to illustrate numerosity and compactness.

18 Q. Did you conduct any kind of comparison of
19 opportunity to elect between the challenged plans and
20 the simulation plans?

21 A. No, because the simulation plans are only put
22 into place to illustrate that race predominated in the
23 drawing of the district. To the extent you were able to
24 demonstrate that there tend to be RA compliant
25 districts, I suppose that would give you defenses for 10

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STATE OF OHIO)

COUNTY OF MADISON) SS: CERTIFICATE

I, Emma Jane Troyer, a Notary Public within and for the State of Ohio, duly commissioned and qualified,

DO HEREBY CERTIFY that the above-named SEAN TRENDE was by me first duly sworn to testify the truth, the whole truth, and nothing but the truth.

Said testimony was reduced to writing by me stenographically in the presence of the witness and thereafter reduced to typewriting.

I FURTHER CERTIFY that I am not a relative or attorney of either party, in any manner interested in the event of this action, nor am I, or the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D).

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office at Plain City, Ohio, on this 25th day of April, 2023.



EMMA JANE TROYER
NOTARY PUBLIC, STATE OF OHIO
My commission expires 01-09-2027

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DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 5857187
CASE NAME: Agee, Donald, Jr., Et Al. v. Benson, Jocelyn, Et Al.
DATE OF DEPOSITION: 4/20/2023
WITNESS' NAME: Sean P. Trende

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have made no changes to the testimony as transcribed by the court reporter.

_____ Sean P. Trende

Date Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;
They signed the foregoing Sworn Statement; and
Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal
this _____ day of _____, 20____.

Notary Public

Commission Expiration Date

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I have executed the Errata Sheet, as well as this Certificate, and request and authorize that both be appended to the transcript of my testimony and be incorporated therein.

Date Sean P. Trende

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

- They have read the transcript;
- They have listed all of their corrections in the appended Errata Sheet;
- They signed the foregoing Sworn Statement; and
- Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal this _____ day of _____, 20____.

Notary Public

Commission Expiration Date

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ERRATA SHEET
VERITEXT LEGAL SOLUTIONS MIDWEST
ASSIGNMENT NO: 5857187

PAGE/LINE(S) / CHANGE /REASON

Date Sean P. Trende

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____
DAY OF _____, 20_____ .

Notary Public

Commission Expiration Date

Ohio Rules of Civil Procedure

Title V. Discovery

Rule 30

(e) Submission to Witness; Changes; Signing.

When the testimony is fully transcribed, the deposition shall be submitted to the witness for examination and shall be read to or by the witness, unless examination and reading are waived by the witness and by the parties. Any changes in form or substance that the witness desires to make shall be entered upon the deposition by the officer with a statement of the reasons given by the witness for making them. The deposition shall then be signed by the witness, unless the parties by stipulation waive the signing or the witness is ill, cannot be found, or refuses to sign. The witness shall have thirty days from submission of the deposition to the witness to review and sign the deposition. If the deposition is taken within thirty days of a trial or hearing, the witness shall have seven days from submission of the deposition to the witness to review and sign the deposition. If the trial or hearing is scheduled to commence less than seven days before the deposition is submitted to the witness, the court may establish a deadline for the

witness to review and sign the deposition. If the deposition is not signed by the witness during the period prescribed in this division, the officer shall sign it and state on the record the fact of the waiver or of the illness or absence of the witness or the fact of the refusal to sign together with the reason, if any, given therefor; and the deposition may then be used as fully as though signed, unless on a motion to suppress the court holds that the reasons given for the refusal to sign require rejection of the deposition in whole or in part.

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VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

AFFIDAVIT OF VIRGIL K. SMITH

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

I, Virgil K. Smith, having been first duly sworn, deposes and states as follows:

1. I have personal knowledge concerning the statements contained in this Affidavit, and if called to testify, can testify competently to the facts stated in this Affidavit.

2. I am a Black man, former Legislator, current community leader, and son of Detroit.

3. I have substantial and intimate knowledge regarding my hometown of Detroit, Michigan, which spans a wide array of social, political, and economic matters both historic and contemporary.

4. I was born and raised in the City Detroit, attended Detroit Public Schools for some time, and ultimately graduated from Detroit’s Benedictine High School in 1998.

5. During my upbringing, my father, Virgil C. Smith, represented Detroiters as both a member of the Michigan House of Representatives and member of the Michigan Senate. He later served as a Judge on Michigan's Third Circuit Court from 2004 to 2018; serving as the Chief Judge from 2009 to 2013.

6. Local government, policy development, and elections were omnipresent in my formative development and an academic concentration during my time in higher education. Specifically, I conducted my undergraduate studies at Michigan State University earning a degree in political science in 2002. I later earned a master's degree in public administration from Western Michigan University in 2012.

7. I served three terms as a Democratic member of the Michigan House of Representatives between 2003 and 2008 representing House District 7 which encompassed the northern tier of Detroit. This District did not include Highland Park.

8. In 2010, I ran for the Michigan State Senate (District 4) defeating former House Appropriations Committee Chair George Cushingberry in the August Democratic Primary and then going on to win the general election by a wide margin.

9. During my first term as a State Senator of District 4, my duties included serving on the Senate Committee on Redistricting. During my service on the Redistricting Committee, one of my objectives was ensuring that the Legislature's reapportionment plan would be compliant with the federal Voting Rights Act and thus protect the right of my majority/minority community (which are Black residents in the Detroit area) to have a fair opportunity to elect our candidates of choice.

10. Based, in part, on the evidence considered by the Senate Redistricting Committee as well as my lived experiences, I formed the perspective that compliance with the Voting Rights

Act at that time generally required reasonably cohesive districts with Black Voting Age Populations (“BVAPs”) or majority/minority precincts of, at least, 55%. This was the position I held during that process.

11. In 2014, I ran for reelection in Senate District 4 (which had been reapportioned to include not only a majority/minority portion of Detroit but also the predominately white suburbs of Lincoln Park, Allen Park, and Southgate). I defeated Rashida Tlaib in the democratic primary election and then defeated Keith Franklin in the general election.

12. Although I was victorious in the election, my personal experience campaigning in the predominately White portions of the newly apportioned Senate District 4 was met with much less success and reception than my campaign efforts in the predominately Black portions of my District. It is suffice to say the three new predominantly white cities were not too energized to welcome my campaign efforts. My campaign was not successful in gaining a majority of the vote. In fact, against my campaign’s best efforts, I did not receive over 35% of the vote in any of the three cities. The only reason why I won that race was because approximately over 50% of the voter precincts were majority minority precincts located in inner city Detroit.

13. In fact, while campaigning in the predominately white Allen Park during that election cycle, I had the very unfortunate experience of being aggressively confronted by a White code enforcement officer of the municipality who threatened to issue me a citation for illegally “soliciting” despite my being a sitting State Senator donned in campaign attire and carrying campaign literature. This is just one personal example of “campaigning while Black” but I’m aware of other examples experienced by my colleagues.

14. I resigned from the State Senate in 2016.

15. In 2018, I served as the campaign manager for Marshall Bullock for State Senate. Senator Bullock won election in 2018 and represented Senate District 4 from 2019 to 2023.

16. In 2020, I served as the Campaign Manager for Shri Thanedar who ran for State Representative for the 3rd District

17. In 2022, I again served as the campaign manager for Marshall Bullock for State Senate. This election was for a new senate district (i.e., Senate District 8) which had been redrawn by the Michigan Independent Citizens Redistricting Commission (the “MICRC”) as part of the “Linden Plan” for the State Senate.

18. The MICRC’s Senate District 8 is an elongated district with its southern 1/3 comprising a predominately Black portion of the City of Detroit in Wayne County and its northern 2/3s comprising a conglomeration of predominately White suburbs such as Ferndale, Berkley, Birmingham, Royal Oak, and portions of Clawson in Oakland County.

19. These two southern/northern portions of the District are also characterized by starkly different economic demographics, communities of interest, and legislative priorities.

20. During the election, it became immediately apparent that because Senate District 8’s BVAP had been lowered by the MICRC to only 40.2% (a meaningful portion of which consists of Black Voters who have relocated to white dominated suburbs in Oakland County), Senator Bullock—who is Black and who is from Wayne County—would need to perform well not only in the southern predominately Black portion of the District located in Wayne County but also obtain a sizable percentage of votes from the northern predominately White portion of the District located in Oakland County.

21. Unfortunately, based on my experience guiding former Senator Bullock’s campaign (which, of course, included an extensive amount of voter outreach efforts), it became

obvious that the democratic primary election would be racially polarized with Senator Bullock being the clear Black candidate of choice and Senator McMorrow, a White woman from Oakland County, being the clear White candidate of choice.

22. Our campaign efforts in the White dominated portion of the District were exceedingly difficult and marked by a discouraging lack of reception from White voters. For example, while “door knocking” efforts (a critical component of voter outreach) in the predominately Black portions of the District yielded an average “door open rate” approximating 60% - 70%, those same efforts in the predominately White portions of the District yielded a low door open rate approximating only 10%.

23. All too often, residents in predominately White portions of the District would peer through their windows or doors, notice the campaign and presumably the skin color of the candidates and/or campaign staff, knowingly chose not to engage, and thus provide no opportunity to be educated about the campaign’s priorities and values.

24. On the other side of the electoral equation, it was my observation that Senator McMorrow did very little, if any, serious direct voter outreach into the predominately Black neighborhoods in the District. In fact, Senator McMorrow’s campaign plan to win was built on the fact that voter precincts on her side of Eight Mile had higher voter turnout than the voter precincts on the Detroit side of Eight Mile. Senator McMorrow had an excel spreadsheet prepared to explain this difference that she passed out to the Michigan Capitol Lobbying organizations.

25. In the end, Senator Bullock, an incumbent, lost the democratic primary to Senator McMorrow, also an incumbent. This was the result despite the lack of any meaningful effort on

the part of the McMorrow Campaign to directly engage Black Voters in the predominately Black portions of the District.

26. In 2022, I also served as the campaign manager for Reggie Reg Davis for the Michigan House of Representatives. This election was for a new house district (i.e., House District 5) which had been redrawn by the MICRC as part of the “Hickory Plan” for the State House.

27. The MICRC’s House District 5 is an oddly slender and elongated district with its southern 1/3 comprising a predominately Black portion of the City of Detroit in Wayne County and its northern 2/3 stretching up through Oakland County’s predominately White suburbs such as the affluent Berkley, Beverly Hills, and Birmingham areas.

28. These two southern/norther portions of the District are also characterized by starkly different economic demographics, communities of interest, and legislative priorities.

29. During the election, it became apparent that because House District 5’s BVAP had been lowered by the MICRC to approximately 55% (a meaningful portion of which consists of Black Voters who have relocated to white dominated suburbs in Oakland County), Candidate Davis, who is Black and who is from Wayne County, would need to perform well not only in the southern predominately Black portion of House District 5 located in Wayne County but also obtain a sizable percentage of votes from the northern predominately White portion of the District located in Oakland County.

30. Unfortunately, based on my experience running candidate Davis’ campaign (which, of course, included an extensive amount of voter outreach efforts), it became obvious that the primary election would be racially polarized with candidate Davis being the clear Black

candidate of choice and candidate Natalie Price, a native Ohioan and Berkley resident, being the clear White candidate of choice.

31. Our campaign efforts in the White dominated portion of the District were exceedingly difficult and marked by a discouraging lack of reception from White voters. For example, while door knocking efforts (a critical component of voter outreach) in the predominately Black portions of the District yielded an average door open rate approximating 60% - 70%, those same efforts in the predominately White portions of the District yielded a low door open rate approximating only 10%.

32. All too often, residents in the predominately White portions of the District would peer through their windows or doors, notice the campaign and presumably the skin color of the candidates and/or campaign staff, knowingly chose not to engage, and thus provide no opportunity to be educated about the campaign's priorities and values.

33. By way of further example, I distinctly recall canvassing six precincts in Berkley (three precincts in State House District 5, and three precincts in State House District 6) and only succeeding in have three doors opened the entire time. This disappointment was exacerbated by one of the White residents who *did* open her door to speak with the campaign expressing that she would not be supporting any candidate "from Detroit."

34. On the other side of the electoral equation, it was my observation that Candidate Price did very little if any serious direct voter outreach into the predominately Black neighborhoods in the District.

35. Despite winning an overwhelming portion of the Black vote, candidate Davis lost to candidate Price, who won an overwhelming portion of the White vote.

36. I presently reside in a portion of the City of Detroit located within current Senate District 10 and House District 14.

37. A few of my community activities include serving as the executive vice chair for the 13th Congressional District of the Michigan Democratic Party, the vice chair of the Michigan Democratic Party Black Caucus, and executive director of Detroit Unity – a social welfare organization promoting voter engagement inside Michigan’s African American communities. To achieve this goal, Detroit Unity has partnered with the National Democratic Party Black Caucus.

38. I also have spent significant time following the MICRC’s redistricting efforts and reviewing the Hickory and Linden Plans.

39. The portions of Hickory and Linden Plans touching the historically protected majority/minority areas around the Detroit Metropolitan Area mark a radical change from the state House and Senate Maps adopted by the State Legislature during my tenure as a State Senator and member on the Senate’s Committee on Redistricting.

40. The most obvious and devious change is the blatant fracturing or cracking of historically protected majority/minority areas to dilute the BVAP and percentage of majority/minority precincts in the new districts touching Detroit. Tellingly, the MICRC did not implement this same fracturing of Black voters in Saginaw, Flint, and Pontiac because doing so was not necessary to benefit the electoral success of democrats generally.

41. Setting aside statistics, any person familiar with the area demographics and communities of interest in this area surrounding Detroit can readily see (i.e., just by viewing the geography of these districts touching Detroit) the partisan strategy employed by the MICRC to maximize the electoral success of Democrats generally at the expense of the opportunity of Black Voters to elect our candidates of choice.

42. Historically, Eight Mile Road has represented a line of segregation with the majority and heavily democratic Black population residing south of the line and the majority and politically mixed White population residing north of the line. Both the Hickory and Linden Plans have districts which transect this historic line of segregation in a way where the majority of the district's engaged voting population predominates north of the line.

43. My perception and experience has been that this line of segregation is becoming more blurred between Eight Mile Road and Ten Mile Road with more Black residents relocating from Detroit to places like Eastpointe, Southfield, Oak Park, and southern Warren. However, my perception and experience has been that those Black voters who have relocated from the City of Detroit into Oakland County are now more likely to support and vote for democratic candidates from their immediate area who are mostly White candidates of choice and not the Black candidates of choice. That is, I've seen a voting preference change based on relocation of community (i.e., Wayne to Oakland County).

44. Furthermore, it has been my perception and experience that the governmental, policy, and economic issues of voters within the City of Detroit are vastly different than the issues of the voters in the Oakland County suburbs. Just a few examples of issues of concern for predominately Black voters within Detroit that are not shared by voters within the predominately White Oakland County suburbs include gun violence, property crime, blight, illegal trash dumping, insurance rates, drag racing, and ineffective or inaccessible governmental assistance.

45. Even where the general issues are the same, the *impact* of the issues is generally very different on Black voters in Detroit as compared to White voters in Oakland County. Black voters in Detroit have a higher tendency to need and depend on basic governmental functions in our everyday lived existence while the relationship with government of White voters in the

Oakland County suburbs tends to be more theoretical or academic. One example is youth education. There is a difference between meeting basic reading, writing and math standards (something important in Detroit) and how certain social concepts are taught in schools (something pronounced in the white suburbs).

46. The different needs of the very different communities of interest (i.e., the predominately Black Detroit areas and the predominately White Oakland County areas) emphasize the importance of majority/minority candidates being represented in the State Legislature by our candidates of choice.

47. Black Detroiters being represented by a White Oakland County Democratic Legislator is not a sufficient conciliation prize for being disenfranchised from being represented by our actual candidate of choice.

48. In fact, while I served in both the State House and State Senate, my colleagues and I in the Black Caucus had success addressing the specific needs of our majority/minority constituents by raising important policy issues and working with both Democrats and Republicans to enact good policy. But without Black candidates of choice serving in the Legislature in sufficient numbers, my experience is that the issues important to the majority/minority communicates will not be raised and remain unattended to.

49. If Black candidates cannot achieve a campaign door open rate in the White Oakland County suburbs above 10%, they cannot win elections in these overly diluted districts created by the Hickory and Linden Plans. And, if the prevailing White candidates do not need to or bother campaigning in the Black dominated areas of the districts created by the Hickory and Linden Plans, those White officials cannot honestly be expected to seriously focus on the issues

important to the majority/minority areas with which they have no lived experience and for which they devoted little, if any, time getting to know the residents and asking for their vote.

50. Moreover, for a variety of reasons resulting from discrimination, as well as economic and educational disparity, my experience has been that -- as a starting point -- Black voters in the majority/minority areas tend to engage less in the political and electoral process than the White voters in Oakland County, creating a need for higher concentrations of Black voters in districts to elect our candidates of choice.

51. The dilution of the Black vote effected by the Hickory and Linden Plans and associated disenfranchisement that already occurred this past election will only further discourage Black participation in future elections, creating a downward spiral of disenfranchisement.

52. My hope and goal is that the MICRC will take these facts and experiences into consideration and redraw the Hickory and Linden Plans to create new districts where my majority/minority community will have a fair opportunity to elect candidates of our choice and candidates who will be attentive to our legislative priorities. At present, we stand disenfranchised, as already evidenced by the 2022 Democratic Primary Elections.

[Signature page follows]

FURTHER, Affiant sayeth not.

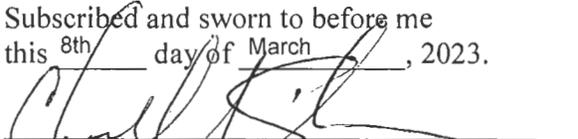
I DECLARE THE ABOVE STATEMENTS TO BE TRUE TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Dated: March 8, 2023



VIRGIL K. SMITH

Subscribed and sworn to before me
this 8th day of March, 2023.



Christineann Charlene Silva, Notary Public
Wayne County, Michigan
My Commission Expires: September 15, 2024
Acting in the county of: Wayne

CHRISTINEANN CHARLENE SILVA
NOTARY PUBLIC, STATE OF MI
COUNTY OF WAYNE
MY COMMISSION EXPIRES Sep 15, 2024
ACTING IN COUNTY OF *Wayne*

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

AFFIDAVIT OF LAMAR LEMMONS III

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

I, LaMar Lemmons III, having been first duly sworn, deposes and states as follows:

1. I have personal knowledge concerning the statements contained in this Affidavit, and if called to testify, can testify competently to the facts stated in this Affidavit.

2. I am a Black man, former Democrat Legislator, community educator and leader, and current resident of Detroit within the recently apportioned House District 13 and Senate District 12.

3. I have substantial and intimate knowledge regarding my hometown of Detroit, Michigan, which spans a wide array of social, political, and economic matters both historic and contemporary.

4. I grew up in the City of Detroit, attended Detroit Public Schools, and served as a social studies tutor (African American Studies) and reading instructor for the Inner-City Community Center.

5. Over the past 50 years, I have represented my community in a wide array of various governmental and civic capacities including roles ranging from Precinct Delegate, State Legislative Staffer/Researcher, Black Slate Member, and aide to the campaign of former Detroit Mayor Coleman Young to more senior positions such as State Legislator, Detroit Public Library Commissioner, President/Member of the Detroit Board of Education, and Chief of Staff to several Detroit Legislators.

6. Of particular import, I served as a Democrat Member of the Michigan House of Representatives (former District 2) between 1999-2002 and 2005-2006. I also served as Chief of Staff to my father, LaMar Lemmons Jr. during his second and third terms as a Democrat Member of the Michigan House of Representatives (former District 2) between 2007-2008 and 2009-2010, Policy Director to Sherry Gay-Dagnogo during her second term as a Democrat Member of the Michigan House of Representatives, and Chief of Staff to Betty Jean Alexander during her first term as a Democrat State Senator (former District 5) between 2018-2022.

7. Since the 1970's I have served as a candidate recruiter, political/election consultant and/or campaign manager to a number of local and state-wide candidates from the City of Detroit and surrounding Metropolitan Area and been involved in or affiliated with over 100 campaigns for local or state offices. These roles demanded significant time and study of demographics, political boundaries and apportionment, voting patterns and outreach, electoral advocacy strategies, election processes, campaign finance, and, most importantly, local policy priorities.

8. I am also a longstanding member of the Michigan Democratic Party Black Caucus and an Alumnus of the Michigan Legislative Black Caucus. I am currently an active member of the Black Citizens Lobby which focuses on policy issues critical to Black Detroiters such as insurance, education, policing, banking, housing, affirmative action, and reparations.

9. These various civic, professional, and volunteer roles I have held over the last 50 years involved significant physical “on the ground” outreach and campaigning in both predominately Black portions of the Detroit Metropolitan Area (mostly Detroit, Inkster, Highland Park, Southfield, Harper Woods, and Lathrup Village) as well as predominately White portions of the Detroit Metropolitan Area (mostly in the suburbs of Oakland and Macomb Counties).

10. My personal experience campaigning as a Black man has been that there is a marked difference in voter reception and engagement between the predominately Black portions of the Detroit Metropolitan Area and predominately White portions of the Detroit Metropolitan Area.

11. When campaigning in predominately Black residential areas, my experience has been that voter engagement could fairly be characterized as high with general door open rates approximating 60%-70% and voters generally willing to engage in a level of listening and feedback. For partisan races, these outreach efforts focus on homes of registered Democrat voters. For ballot initiatives, these efforts focus on homes of all registered or likely voters.

12. When campaigning in predominately White residential areas, I have typically employed a strategy of canvassing homes associated with registered voters believed to be Democrats or Independents. My experience has been that voter engagement could fairly be characterized as low with general door open rates approximating 10% and voters generally unwilling to engage in a level of listening and feedback. One strategy I have employed to obtain

higher voter engagement when canvassing in predominately White areas is to form multiracial teams of two (e.g., one Black and one White campaign staff) and have these teams knock doors together. While this strategy improves engagement levels, it is a less efficient usage of campaign resources and not a feasible option for all campaigns.

13. Furthermore, my experience and perception has been that voter engagement with Black candidates and campaign staff in the predominately White areas ranges, more often than one might expect, from subtly to overtly discriminatory.

14. For example, residents in the more upper or middle class predominately White areas will often peer through their windows or doors (or even cameras now), notice the campaign and presumably the skin color of the candidates and/or campaign staff, knowingly chose not to engage, and thus provide no opportunity to be educated about the campaign's priorities and values. Residents in the more lower-class predominately White areas engage in this same behavior but will on occasion also engage in hostile and derogatory behavior ranging from dismissive rudeness to outright racial name calling and threats to leave the property or neighborhood. My observation has been that this more hostile behavior is most frequent in areas like Warren, Roseville, Centerline, and even St. Clair Shores.

15. Unfortunately, I have not perceived any material change in the quality or quantity of these discriminatory behaviors over the last fifty years and I still encourage the exercise of caution for candidates who chose to campaign while Black in these areas. In fact, a colleague and current African American State Legislator I know reported that he recently had a White resident brandish a gun at him while campaigning in a predominately White area during the 2022 election. This occurred a in a predominately White trailer-park.

16. Conversely, my experience and perception has been that White candidates from the predominately White suburbs of Detroit do very little direct voter outreach into the predominately Black neighborhoods in Detroit.

17. My observation has been that this racial polarization generally carries over into participation in the electoral process and voting patterns in Democrat primary elections. My observation has been that, all things being equal, Black democrat primary voters from the predominately Black areas will generally prefer and vote for a Black democrat primary candidate over a White democrat primary candidate and, similarly, White democrat primary voters from the predominately White areas will generally even more strongly prefer and vote for a White democrat primary candidate over a Black democrat primary candidate. There are exceptions, but this has been my personal experience over the last 50 years in the Detroit Metropolitan Area.

18. My further perception has been that electoral outcomes between Black democrat primary candidates of choice and White democrat primary candidates of choice are often not equal where (i) Black residents from the predominately Black portions of the Detroit Metropolitan Area tend to vote at lower rates than White residents from the predominately White portions of the Detroit Metropolitan Area; and (ii) White democrat primary candidates from the predominately White portions of the Detroit Metropolitan Area have more financial support and resources than Black democrat primary candidates from the predominately Black portions of the Detroit Metropolitan Area.

19. This second point is worth emphasizing as my perception has been that a disparity of financial support and resources can have a significant impact on an election. There is a readily apparent and tremendous economic divergence between the predominately Black portions of the

Detroit Metropolitan Area, which tend to have less economic resources, and the predominately White portions of the Detroit Metropolitan Area which tend to have more economic resources.

20. Indeed, my personal experience has been that a sizable portion of the funding of Democrat primary campaigns originates from what I have long referred to as the “Oakland County Money Machine.” White Democrat primary candidates from these predominately White and significantly more wealthy areas in Oakland County have a natural fundraising advantage over Black Democrat primary candidates from the predominately Black and more economically disadvantaged areas in Wayne County. This has been evident not only in my review of campaign finance reports of candidate committees and political action committees but also my review of the all-too-often obscured political advocacy communications funded by so-called social welfare organizations operating under Section 501(C)(4) of the Internal Revenue Code.

21. I spent considerable time following the efforts of the Michigan Independent Citizens Redistricting Commission (MICRC), analyzing the MICRC’s Linden Plan for the State Senate, and participating in and analyzing the 2022 Democrat Primary Elections for Senate Districts 1, 2, 5, 6, 7, 8, and 11.

22. The Senate Districts from the Linden Plan that touch the historically protected majority/minority portions of the Detroit Metropolitan Area are fundamentally different geographically and demographically from the previous Senate Districts in that same area that had been adopted by the State Legislature over the last fifty years.

23. The most palpable modification is the MICRC’s splintering of long established and protected majority/minority areas to lower the Black Voting Act Population (BVAP) and percentage of majority/minority precincts in the new districts touching Detroit and other predominately Black communities in the Detroit Metropolitan Area.

24. A simple understanding of the racial demographics and history of discrimination in the Detroit Metropolitan Area reveals the partisan strategy employed wittingly or unwittingly by the MICRC or its professional staff to maximize the electoral success of Democrats generally at the expense of the opportunity of Black voters to elect our candidates of choice.

25. Historically, Eight Mile Road has represented a line of segregation with the majority and heavily democratic Black population residing south of the line in Wayne County and the majority and politically mixed White population residing north of the line in Oakland and Macomb Counties. That historic line of segregation has shifted slightly north with Ten Mile Road now being the new Eight Mile Road in my estimation. But leave no doubt, the Linden Plan's multi-county Senate Districts blatantly transect this line of segregation in a way where the majority of those districts' voting-age population predominates north of the line in the predominately White and more wealthy areas.

26. The historic lines of segregation to the west and south of Detroit are more complex but, just like the obvious transection to the north, the Senate Districts in the Linden Plan intentionally transect these lines to splinter the Black community and create Senate Districts with White majorities.

27. My view is that the Linden Plan represents an obvious and intentional effort to splinter Black communities of interest, dilute Black voting power, discourage Black candidates from running for office, and destroy the Detroit Democratic Black Caucus.

28. One example from the 2022 election cycle of the adverse impact of the Linden Plan on my Communities' ability to elect our candidates of choice is Senate District 8 which is an elongated district with its southern 1/3 comprising a predominately Black portion of the City of Detroit in Wayne County and its northern 2/3s comprising a conglomeration of predominately

White suburbs such as Ferndale, Berkley, Birmingham, Royal Oak, and portions of Clawson in Oakland County. These two southern/northern portions of the District are also characterized by starkly different economic demographics, communities of interest, and legislative priorities. Because the MICRC set Senate District 8's BVAP at only 40.2% and because of the economic, educational, and other advantages enjoyed by White candidates hailing from the northern predominately White portions of this District, I was concerned that it would be exceedingly difficult for any Black candidate of choice to prevail in a Democrat primary election for this District.

29. That concern materialized in the 2022 Democrat primary where Senator Marshall Bullock, a Black man from Wayne County and the clear Black candidate of choice, lost to Senator McMorrow, a White woman from Oakland County and the clear White candidate of choice. Senator McMorrow attracted significantly more financial resources and support to her election effort than Senator Bullock and, to my knowledge, she did not conduct any serious direct voter outreach into the predominately Black neighborhoods in the District.

30. Another example from the 2022 election cycle of the adverse impact of the Linden Plan on my communities' ability to elect our candidates of choice is Senate District 5 which connects the predominately Black community of Inkster with several predominately White communities including the much more wealthy and politically powerful communities of Canton and Livonia. With respect to Livonia, in particular, I am personally aware of this City's history of discrimination against people of color including local government intervention during the early 1990s to prevent bus route into the community from Detroit and other predominately Black neighborhoods.

31. In any event, Inkster has starkly different economic demographics, communities of interest, and legislative priorities than the rest of the District especially Canton and Livonia. Because the MICRC placed Inkster in Senate District 5 which has a BVAP at only 18.3%, I was concerned that it would be exceedingly difficult for any Black candidate of choice to prevail in a Democrat primary election for this District.

32. That concern materialized in the 2022 Democrat primary where Senator Dayna Polehanki, a White woman from Livonia and the clear White candidate of choice, defeated Velma Jean Overman, a Black woman from Inkster and clear Black candidate of choice, by a margin closely related to racial demographics. Dayna Polehanki attracted significantly more financial resources and support to her election effort than Velma Jean Overman and, to my knowledge, she did not conduct any serious direct voter outreach into the predominately Black neighborhoods in the District.

33. Another example from the 2022 election cycle of the adverse impact of the Linden Plan on my communities' ability to elect our candidates of choice is Senate District 11 which connects the predominately Black communities of Detroit and Eastpoint with the predominately White Macomb County suburbs of Clinton Township, Fraser, and Roseville. These areas represent very different communities of interest with different economic demographics and legislative priorities. Because the MICRC placed Detroit and Eastpointe in Senate District 11 which has a BVAP at only 19.2%, I was concerned that it would be doubtful for any Black candidate of choice to prevail in a Democrat primary election for this District. That concern materialized in the 2022 Democrat primary where Veronica Klinefeldt, a White council woman from Eastpointe and the clear White candidate of choice, defeated Monique Owens, a Black woman and first African American Mayor of Eastpointe.

34. Another concerning District is Senate District 6 with a BVAP of only 39.1%. The prevailing candidate from the 2022 Democrat primary election for this District was the former State Representative Mary Cavanaugh, a well-known woman from the predominately White City of Redford and who has a very light complexion. She is part Latina/Caucasian with an Irish last name, and not surprisingly was the clear White candidate of choice. One of her primary challengers, Darryl Brown, a Black man from Detroit and former Detroit Police Commissioner and Firefighter, won a large percentage of the Black vote but only a very small percentage of the White vote. With a BVAP of 39.1% my perception is that it will be exceedingly difficult for Black voters from the Detroit portion of District 6 to elect their candidates of choice where again a large portion of this District spans into the White dominated suburbs of Redford, Livonia, Farmington, and Farmington Hills.

35. Despite the 2022 cycle resulting in women of color winning Senate Districts 1 (BVAP 35%) and 2 (BVAP 24.5%), I still maintain my concern that the MICRC set the BVAPs for those Senate Districts far too low for Black candidates of choice to prevail in future elections. Like a few of the Senate Districts I briefly discuss above, Senate Districts 1 and 2 appear to be based on the same stratagem of splintering the Black vote and mixing Black communities into the predominately White political boundaries created by the MICRC. I view the 2022 Democrat primary results, where women of color prevailed, as anomalies and due to the unique circumstances and characteristics of the candidates themselves.

36. By way of example, incumbent Senator Erica Geiss, a Black woman from the predominately White City of Taylor, has a Caucasian sounding name and is married to Doug Geiss, a white man who serves as Chairman of the Taylor City Council and who formerly served as a State Representative in this area. Senator Geiss won a crowded primary to become the Democrat

candidate for Senate District 1 despite being neither the White nor Black candidate of choice. The clear Black candidate of choice for Senate District 1 was Brenda Sanders, a former Judge from Detroit. Not surprisingly, candidate Sanders did not get much traction with the White electorate. With a BVAP of only 35%, my perception is that it will be exceedingly difficult for Black voters from the Detroit portion of District 1 to elect their candidates of choice where again the majority portion of this District wraps from Detroit down into the White dominated suburbs of Allen Park, Lincoln Park, and Taylor.

37. By way of further example, incumbent Senator Sylvia Santana, a former State Representative and Black woman from Detroit, easily won her reelection bid for Senate District 2 against Maurice Sanders, a Black man. What is notable is that Senator Santana did not have a White challenger but this was arranged by way of a compromise. Senate Candidate Adel Mozip from Dearborn withdrew his candidacy and supported the long-term incumbent Santana after the two met at Haraz Coffee and the National Arab-Yemeni Association's main office in Dearborn. Senator Santana then received the endorsement from Adel Mozip and the Arab American PAC. With only a 24.5% BVAP and a population dominated by the wealthy and politically powerful Middle-Eastern community (which is coded as White in the census) from Dearborn, Black voters from Detroit are not likely to have any success electing their candidate of choice in future elections.

38. Another sign of adverse impacts to come from the Linden Plan on my communities' ability to elect our candidates of choice is Senate District 7, an elongated district which mixes the predominately Black communities of Detroit, Southfield, and Pontiac in with the predominately White, ultra-wealthy, and exceedingly powerful communities of Franklin, Bloomfield, Bloomfield Hills, Beverly Hills, and Auburn Hills. The predominately Black communities of District 7 have

vastly different economic demographics and legislative priorities than the predominately White communities of District 7.

39. And, while District 7 has the highest BVAP (i.e., 44.8%) in the Linden Plan, I was nonetheless concerned that it would be exceedingly difficult for any Black candidate of choice to prevail in a Democrat primary election for this District where the predominately White portions of the District are comprised of a sizeable portion of what I refer to as the “Oakland County Money Machine.” Both financial advantages and incumbency dissuade challengers especially minority challengers with less resources.

40. That concern was not contradicted in the 2022 Democrat primary where the incumbent Senator Jeremy Moss, a White man from Southfield, soundly defeated the newcomer Ryan Foster, a Black man from Detroit. Senator Moss had a significant incumbency advantage and attracted significantly more financial resources and support to his election effort than Ryan Foster who ran on a simple platform aimed at the average working person.

41. In conclusion, my concern is that the dilution of the Black democrat primary voters effected by the Linden Plan and associated disenfranchisement that already occurred this past election will only further discourage Black participation in future elections, creating a downward spiral of disenfranchisement.

42. Black Democrat voters from the predominately Black portions in the Detroit Metropolitan Area being represented by White Senators from the predominately White portions in the Detroit Metropolitan Area is not a sufficient representation of majority/minority interests.

43. There is a massive disparity of interest on insurance, education, policing and criminal justice banking, housing, affirmative action, and reparations policies between Black urban voters and White suburban voters in the Detroit Metropolitan Area.

44. One prime example involves viewpoints and policy decisions related to the Michigan Emergency Manager Referendum, also known as Public Act 4 of 2011, Local Government and School District Fiscal Accountability Act, which was on the November 6, 2012 statewide ballot in Michigan as Proposal 1 of 2012. While 82% of Detroit voters opposed the Emergency Manager Law, only 53% of voters statewide opposed the Emergency Manager Law representing a clear distinction between White and Black policy preference.

45. There are several other geographic examples demonstrating the racial polarization of this issue. In Oakland County, 80% of the predominately Black City of Pontiac voted “no” whereas over 80% of the predominately White City of Birmingham voted “yes.” In Macomb County, another telling contrast is the predominately Black area of Eastpointe which voted “no” by a huge margin and the predominately White areas of Shelby, Bruce, and Washington Townships which voted “yes” by a big margin. Similarly, another massive difference from Wayne County was the predominately Black areas of Detroit/Inkster which overwhelming voted “no” and the predominately White areas of Grosse Point, Plymouth, and Northville which voted “yes” by a wide margin.

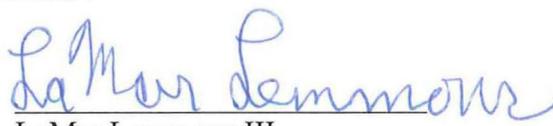
46. What’s more, my further understanding is that, at that time, 52% of Michigan's African American population resided in cities with an emergency manager, a consent agreement, or a transition advisory board. While, at the same time, only about 2% of Michigan's white citizens lived in communities governed by an emergency manager.

47. Similar examples of racially polarized issue voting in the Detroit Metropolitan Area are the 2006 affirmative action ballot initiative and then legislation removing the largest and only Black elected school board which became Act 10 of 1999.

48. My hope and goal is that the MICRC will take these facts and experiences into consideration and redraw the Linden Plan to create new districts where my majority/minority community will have a fair opportunity to elect candidates of our choice and candidates who will be attentive to our legislative priorities. At present, we stand disenfranchised, as already evidenced by the 2022 Democratic Primary Elections and the lack of the current State Legislature prioritizing any of the primary policy issues of the Black community.

FURTHER, Affiant sayeth not.

I DECLARE THE ABOVE STATEMENTS TO BE TRUE TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.


LaMar Lemmons III

Dated: March 28, 2023

Subscribed and sworn to before me
this 28th day of March, 2023.


Mary M. LaCroix, Notary Public
Macomb County, MI
My Commission Expires: 03/19/2029
Acting in the county of Wayne

MARY M. LACROIX
NOTARY PUBLIC, STATE OF MI
COUNTY OF MACOMB
MY COMMISSION EXPIRES Mar 19, 2029
ACTING IN COUNTY OF *Wayne*

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

**PLAINTIFF JEROME BENNETT'S OBJECTIONS AND RESPONSES TO THE
COMMISSION'S FIRST SET OF INTERROGATORIES**

Plaintiff Jerome Bennett ("Plaintiff"), by and through his counsel, pursuant to Federal Rule of Civil Procedure 33, objects and responds as follows to the First Set of Interrogatories submitted by Defendant Michigan Independent Citizens Redistricting Commission, and Douglas Clark, Juanita Curry, Anthony Eid, Rhonda Lange, Steven Terry Lett, Brittnei Kellom, Cynthia Orton, M.C. Rothhorn, Rebecca Szetela, Janice Vallette, Erin Wagner, Richard Weiss, and Dustin Witjes, each in his or her official capacity as a Commissioner of the Michigan Independent Redistricting Commission (collectively, the "Commission").

GENERAL OBJECTIONS

Plaintiff interposes the following general objections to the Commission's First Set of Interrogatories. Plaintiff's objections set forth in a certain response are in addition to the general limitations and objections set forth in this section. These limitations and objections form a part of Plaintiff's response to each and every Interrogatory; thus, the absence of a reference to a general

21. Plaintiff objects to the Commission's "Definitions and Instructions" as improper and unduly burdensome to the extent that any of them purport to impose any obligation broader than those set forth in the Federal Rules of Civil Procedure or purport to define terms or phrases in a manner different from their ordinary common meaning.

22. Plaintiff objects to the Interrogatories to the extent that any Interrogatory assumes or implies the existence of any rule of law or that Plaintiff consents to or agrees with the Commission's interpretation of any law or any legal duty or obligation on the part of Plaintiff.

23. Plaintiff objects to the extent any Interrogatory calls for Plaintiff or Plaintiff's counsel to interpret terms, including legal terms and terms calling for the formation of a legal conclusion, on the grounds that the Interrogatories are vague and susceptible to differing interpretations, may call for lay witnesses to form legal conclusions, and may invade the attorney-client privilege.

24. Plaintiff's objections and responses are based upon information presently known and available and Plaintiff reserves the right to amend, correct, or supplement these responses up to the close of discovery.

Subject to the foregoing general objections and limitations, and further subject to the particular objections set forth below, Plaintiff responds as follows:

INTERROGATORIES

INTERROGATORY NO. 1

For each Plaintiff, Describe in detail the Plaintiff's voter registration history since January 1, 2008, including the Plaintiff's

- A. full legal name
- B. date of birth
- C. each address where the Plaintiff was registered to vote since January 1, 2008
- D. the district number of each Michigan State House resided in since January 1, 2008
- E. the district number of each Michigan State Senate district the Plaintiff resided in since January 1, 2008
- F. and, if the Plaintiff became registered to vote after January 1, 2008, the date the

Plaintiff became registered to vote in Michigan.

RESPONSE: Plaintiff objects to this Interrogatory as overly-broad, unreasonably-burdensome, oppressive, and harassing. Plaintiff further objects to this Interrogatory as it requires review of information and documents that are not reasonably accessible because they cannot be retrieved or produced without undue burden and/or cost. Plaintiff further objects to this Interrogatory as it requests information Plaintiff simply does not know or could reasonably know. Plaintiff further objects to this Interrogatory as it requests to produce information or documents which are not in Plaintiff's possession, custody or control, and which are equally available to, or are already in the possession of the Commission and/or Defendant Benson. Plaintiff further objects to this Interrogatory as it requests information that is publicly available. Plaintiff further objects to this Interrogatory as it seeks information not relevant to the claims and defenses at issue in this action and, therefore, outside the proper scope of discovery. To the extent that a response is required, and without waiving any objections, Plaintiff responds to this Interrogatory as follows:

- A. Jerome Charles Bennett.**
- B. July 31, 1978.**
- C. 1159 Gray St., Detroit, MI 48215 (2008 – 2019); 13112 Couwlier Ave., Warren, MI 48089 (2019 - 2022); 8318 Maxell, Warren, MI 48089 (August 2022 – present).**
- D. House District 2 (2011 – 2019); House District 22 (2019 – 2021); House District 13 (2022); House District 14 (August 2022 – present).**
- E. Senate District 1 (2011 – 2019); Senate District 9 (2019 – 2021); Senate District 10 (2022 – present).**
- F. N/a. Plaintiff has been registered to vote in Michigan prior to January 1, 2008.**

INTERROGATORY NO. 2

For each Plaintiff,

- A. Describe in detail all political party affiliations the Plaintiff has had since January 1, 2008,**
- B. including but not limited to any political parties the Plaintiff has been a member of,**
- C. the date(s) during which the Plaintiff was so affiliated,**
- D. and any party offices, roles, or positions the Plaintiff has held.**

RESPONSE: Plaintiff objects to this Interrogatory as overly-broad, unreasonably-burdensome, oppressive, and harassing. Plaintiff further objects to this Interrogatory as it requires review of information and documents that are not reasonably accessible because they cannot be retrieved or produced without undue burden and/or cost. Plaintiff further objects to this Interrogatory as it requests information Plaintiff simply does not know or could reasonably know. Plaintiff further objects to this Interrogatory as it requests to produce information or documents which are not in Plaintiff's possession, custody or control, and which are equally available to, or are already in the possession of the Commission and/or Defendant Benson. Plaintiff further objects to this Interrogatory as it requests information that is publicly available. Plaintiff further objects to this Interrogatory as it seeks information not relevant to the claims and defenses at issue in this action and, therefore, outside the proper

As to objections only pursuant to Fed. R. Civ. P. 33(b)(5):

Dated: March 7, 2023

/s/ John J. Bursch
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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

**PLAINTIFF DENNIS LEROY BLACK, JR.’S OBJECTIONS AND RESPONSES TO
THE COMMISSION’S FIRST SET OF INTERROGATORIES**

Plaintiff Dennis Leroy Black, Jr. (“Plaintiff”), by and through his counsel, pursuant to Federal Rule of Civil Procedure 33, objects and responds as follows to the First Set of Interrogatories submitted by Defendant Michigan Independent Citizens Redistricting Commission, and Douglas Clark, Juanita Curry, Anthony Eid, Rhonda Lange, Steven Terry Lett, Brittni Kellom, Cynthia Orton, M.C. Rothhorn, Rebecca Szetela, Janice Vallette, Erin Wagner, Richard Weiss, and Dustin Witjes, each in his or her official capacity as a Commissioner of the Michigan Independent Redistricting Commission (collectively, the “Commission”).

GENERAL OBJECTIONS

Plaintiff interposes the following general objections to the Commission’s First Set of Interrogatories. Plaintiff’s objections set forth in a certain response are in addition to the general limitations and objections set forth in this section. These limitations and objections form a part of Plaintiff’s response to each and every Interrogatory; thus, the absence of a reference to a general

21. Plaintiff objects to the Commission's "Definitions and Instructions" as improper and unduly burdensome to the extent that any of them purport to impose any obligation broader than those set forth in the Federal Rules of Civil Procedure or purport to define terms or phrases in a manner different from their ordinary common meaning.

22. Plaintiff objects to the Interrogatories to the extent that any Interrogatory assumes or implies the existence of any rule of law or that Plaintiff consents to or agrees with the Commission's interpretation of any law or any legal duty or obligation on the part of Plaintiff.

23. Plaintiff objects to the extent any Interrogatory calls for Plaintiff or Plaintiff's counsel to interpret terms, including legal terms and terms calling for the formation of a legal conclusion, on the grounds that the Interrogatories are vague and susceptible to differing interpretations, may call for lay witnesses to form legal conclusions, and may invade the attorney-client privilege.

24. Plaintiff's objections and responses are based upon information presently known and available and Plaintiff reserves the right to amend, correct, or supplement these responses up to the close of discovery.

Subject to the foregoing general objections and limitations, and further subject to the particular objections set forth below, Plaintiff responds as follows:

INTERROGATORIES

INTERROGATORY NO. 1

For each Plaintiff, Describe in detail the Plaintiff's voter registration history since January 1, 2008, including the Plaintiff's

- A. full legal name
- B. date of birth
- C. each address where the Plaintiff was registered to vote since January 1, 2008
- D. the district number of each Michigan State House resided in since January 1, 2008
- E. the district number of each Michigan State Senate district the Plaintiff resided in since January 1, 2008
- F. and, if the Plaintiff became registered to vote after January 1, 2008, the date the

Plaintiff became registered to vote in Michigan.

RESPONSE: Plaintiff objects to this Interrogatory as overly-broad, unreasonably-burdensome, oppressive, and harassing. Plaintiff further objects to this Interrogatory as it requires review of information and documents that are not reasonably accessible because they cannot be retrieved or produced without undue burden and/or cost. Plaintiff further objects to this Interrogatory as it requests information Plaintiff simply does not know or could reasonably know. Plaintiff further objects to this Interrogatory as it requests to produce information or documents which are not in Plaintiff's possession, custody or control, and which are equally available to, or are already in the possession of the Commission and/or Defendant Benson. Plaintiff further objects to this Interrogatory as it requests information that is publicly available. Plaintiff further objects to this Interrogatory as it seeks information not relevant to the claims and defenses at issue in this action and, therefore, outside the proper scope of discovery. To the extent that a response is required, and without waiving any objections, Plaintiff responds to this Interrogatory as follows:

- A. Dennis Leroy Black, Jr.**
- B. June 22, 1991.**
- C. Various addresses within the campus of Wayne State University (2010 – 2014); 243 Field St., Detroit, MI 48214 (2014 – 2015); 487 Baldwin St., Detroit, MI 48214 (2015 – 2017); 861 Taylor St., Detroit, MI 48202 (2017 – 2020); 19341 Schoenherr St., Detroit, MI 48205 (2020 – 2021); 19140 Algonac St., Detroit, MI 48234 (2021 – 2022); 9491 McDougall St., Hamtramck, MI 48212 (August 2022 – present).**
- D. House District 6 (2014 – 2017); House District 4 (2017 – 2020); House District 3 (2020 – 2021); House District 13 (January 2022 – August 2022); House District 9 (August 2022 – present).**
- E. Senate District 1 (2014 – 2017); Senate District 2 (2017 – 2021); Senate District 10 (January 2022 – August 2022); Senate District 3 (August 2022 – present).**
- F. To the best of Plaintiff's knowledge and recollection, Plaintiff became eligible and registered to vote in approximately 2009.**

INTERROGATORY NO. 2

For each Plaintiff,

- A. Describe in detail all political party affiliations the Plaintiff has had since January 1, 2008,**
- B. including but not limited to any political parties the Plaintiff has been a member of,**
- C. the date(s) during which the Plaintiff was so affiliated,**
- D. and any party offices, roles, or positions the Plaintiff has held.**

RESPONSE: Plaintiff objects to this Interrogatory as overly-broad, unreasonably-burdensome, oppressive, and harassing. Plaintiff further objects to this Interrogatory as it requires review of information and documents that are not reasonably accessible because they cannot be retrieved or produced without undue burden and/or cost. Plaintiff further objects to this Interrogatory as it requests information Plaintiff simply does not know or could reasonably know. Plaintiff further objects to this Interrogatory as it requests to produce

VERIFICATION

STATE OF MICHIGAN)
)ss.
COUNTY OF WAYNE)

Dennis Leroy Black, Jr., being first duly sworn, deposes and says that he has read the foregoing Responses to The Commission’s First Set of Interrogatories, and knows the content thereof; that said responses were prepared with the assistance and advice of counsel; that the responses set forth therein, subject to inadvertent or undiscovered errors, are based on and therefore necessarily limited by the records and information still in existence, presently recollected and thus far discovered in the course of the preparation of the responses; that consequently he reserves the right to make any changes in the responses if it appears at any time that omissions or errors may have been made therein or that more accurate information is or may become available; and that subject to the limitations set forth herein, the said responses are true to the best of hid information, knowledge and belief.

Dennis Black

By: Dennis Leroy Black, Jr.

As to objections only pursuant to Fed. R. Civ. P. 33(b)(5):

Dated: March 21, 2023

/s/ John J. Bursch

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**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

DONALD AGEE, JR., an individual, *et al.*,

Plaintiffs,

v.

JOCELYN BENSON, in her official capacity
as the Secretary of State of Michigan, *et al.*;

Defendants.

Case No. 1:22-cv-00272

**Three-Judge Panel Appointed Pursuant to
28 U.S.C. § 2284(a)**

**PLAINTIFFS' OBJECTIONS AND RESPONSES TO THE COMMISSION'S FIRST SET
OF REQUESTS FOR ADMISSIONS**

Plaintiffs ("Plaintiffs"), by and through their counsel, pursuant to Federal Rule of Civil Procedure 36, object and respond as follows to the First Set of Requests for Admissions submitted by Defendant Michigan Independent Citizens Redistricting Commission, and Douglas Clark, Juanita Curry, Anthony Eid, Rhonda Lange, Steven Terry Lett, Brittnei Kellom, Cynthia Orton, M.C. Rothhorn, Rebecca Szetela, Janice Vallette, Erin Wagner, Richard Weiss, and Dustin Witjes, each in his or her official capacity as a Commissioner of the Michigan Independent Redistricting Commission (collectively, the "Commission").

GENERAL OBJECTIONS

Plaintiffs interpose the following general objections to the Commission's First Set of Requests for Admissions. Plaintiffs' objections set forth in a certain response are in addition to the general limitations and objections set forth in this section. These limitations and objections form a part of Plaintiffs' response to each and every Request for Admission; thus, the absence of a

susceptible to differing interpretations. Plaintiffs further object to this Request for Admission as vague and ambiguous because it is unclear what is meant by the phrase “2011 Redistricting Criteria.” Plaintiffs further object as this Request for Admission seeks information pertaining to the Commission’s process for configuring a Redistricting Plan that Plaintiffs simply do not know or could not reasonably know. To the extent that a response is required, and without waiving any objections, Plaintiffs admit the corresponding Request for Admission only to the extent that the Commission is responsible for complying with all laws, statutes, rules, regulations, and/or case law applicable to the Commission in carrying out its duties proscribed under law or otherwise.

REQUEST FOR ADMISSION NO. 6

Admit that there has only been one statewide Democratic primary in the state of Michigan in the Previous Decade.

RESPONSE: Plaintiffs object to this Request for Admission as it seeks publicly available information already available to the Commission. Plaintiffs further object to this Request for Admission as not relevant to the claims and defenses at issue in this case. To the extent that a response is required, and without waiving any objections, and as relevant in this case, Plaintiffs admit the corresponding Request for Admission.

REQUEST FOR ADMISSION NO. 7

Admit that Plaintiff Norma McDaniel was a plaintiff in *Detroit Caucus v. Independent Citizens Redistricting Commission*, 969 N.W.2d 331 (Mich. 2022).

RESPONSE: Plaintiffs object to this Request for Admission as it seeks publicly available information already available to the Commission. Plaintiffs further object to this Request for Admission as not relevant to the claims and defenses at issue in this case. To the extent

that a response is required, and without waiving any objections, and as relevant in this case, Plaintiffs admit the corresponding Request for Admission only to extent that the names of the plaintiffs in the above-captioned case, that has been fully disposed for over one-year, are self-evident.

REQUEST FOR ADMISSION NO. 8

Admit that the Commission did not set a mechanical threshold of obtaining 50% BVAP in any Challenged District.

RESPONSE: Plaintiffs object to this Request for Admission as it calls for an interpretation of legal terms and terms calling for the formation of a legal conclusion and is thus improper under Fed. R. Civ. P. 36(a)(1)(A). *United States v. Petroff-Kline*, 557 F.3d 285, 293 (6th Cir. 2009). Plaintiffs further object on the grounds that this Request for Admission is vague and susceptible to differing interpretations. Plaintiffs further object to this Request for Admission as outside of the scope of discovery pursuant to Fed. R. Civ. P. 26(b)(1). Plaintiffs further object to this Request for Admission as vague and ambiguous because it is unclear what is meant by the phrase “mechanical threshold.” Plaintiffs further object as this Request for Admission seeks information pertaining to the Commission’s process for configuring a Redistricting Plan that Plaintiffs simply do not know or could not reasonably know. To the extent that a response is required, and without waiving any objections, Plaintiffs neither admit nor deny the corresponding Request for Admission due to a lack of knowledge or information under Fed. R. Civ. P. 36(a)(4) regarding the Commission’s intent. That said, based solely on the objective criteria shown in the Expert Report of Sean P. Trende dated January 18, 2023, and the Benchmark Plan discussed therein (“Benchmark Plan”) — it appears inescapable that the Commission’s primary motivation was to increase the number

of Democratic-majority districts at the expense of Detroit-area Black voters. Specifically, the Benchmark Plan contained nine House districts with a BVAP of 56.0% or higher and the adopted Hickory Plan contained zero such districts. In addition, the Benchmark Plan contained four Senate districts with a BVAP of 45.0% or higher and the adopted Linden Plan contained zero.

Respectfully submitted,

Dated: March 6, 2023

/s/ John J. Bursch
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IN THE STATE OF MICHIGAN
IN THE SUPREME COURT

DETROIT CAUCUS; ROMULUS CITY COUNCIL; INKSTER CITY COUNCIL; TENISHA YANCY, as a State Representative and individually; SHERRY GAY-DAGNOGO, as a Former State Representative and individually; TYRONE CARTER, as a State Representative and individually; BETTY JEAN ALEXANDER, as a State Senator and individually, Hon. STEPHEN CHISHOLM, as member of Inkster City Council and individually, TEOLA P. HUNTER, as a Former State Representative and individually; Hon. KEITH WILLIAMS, as Chair MDP Black Caucus and individually; DR. CAROL WEAVER, as 14th Congressional District Executive Board Member and individually; WENDELL BYRD, as a Former State Representative and individually; SHANELLE JACKSON, as a Former State Representative and individually; LAMAR LEMMONS, as a Former State Representative and individually; IRMA CLARK COLEMAN, as a Former Senator & Wayne County Commissioner and individually; LAVONIA PERRYMAN, as representative of the Shirley Chisholm Metro Congress of Black Women and individually; ALISHA BELL, as Chair of the Wayne County Commission and individually; NATALIE BIENAIME, as a Citizen of the 13th District; OLIVER COLE, as a resident of Wayne County; ANDREA THOMPSON, as a resident of Detroit; DARRYL WOODS, as a resident of Wayne County, NORMA D. MCDANIEL, as a Resident of Inkster; MELISSA D. MCDANIEL, as a resident of Canton, CHITARA WARREN, as a resident of Romulus; JAMES RICHARDSON, as a resident of Inkster, ELENA HERRADA, as a resident of Detroit

Supreme Court Case No. 163926

Jurisdiction: Original Pursuant to Mich. Const. Art. 4, §6(19).

FIRST AMENDED VERIFIED COMPLAINT

Plaintiffs,

v.

AYAD LAW, P.L.L.C.
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DETROIT, MICHIGAN 48226
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MICHIGAN INDEPENDENT CITIZENS
REDISTRICTING COMMISSION,

Defendant.

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Grosse Pointe, MI 482336
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FIRST AMENDED VERIFIED COMPLAINT

NOW COMES, the above-named Plaintiffs (hereinafter "Plaintiffs"), by and through their attorneys at Ayad Law, PLLC, and hereby make the following complaint:

INTRODUCTION

1. On November 6, 2018, Michiganders voted to amend the Michigan Constitution of 1963 to create the Michigan Independent Citizens Redistricting Commission (hereinafter "Defendant" or "the Commission").

2. The amendment added, in pertinent part, the following language to Michigan's

Constitution:

(13) The commission shall abide by the following criteria in proposing and adopting each plan, in order of priority:

(a) Districts shall be of equal population as mandated by the United States constitution, and shall comply with **the voting rights act** and other federal laws.

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...
(c) Districts shall reflect the state's diverse population and **communities of interest**. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. **Communities of interest do not include relationships with political parties, incumbents, or political candidates.**

Mich Const 1963, art 4, §6(13)(a) and (c) (emphasis added).

3. After being created, the Commission has maintained that its mission and vision are:

Mission: To lead Michigan's redistricting process to assure Michigan's Congressional, State Senate, and State House district lines are drawn fairly in a citizen-led, transparent process, meeting Constitutional mandates.

Vision: To chart a positive course for elections based on fair maps for Michigan today and for the future.

(See <https://www.michigan.gov/micrc/0,10083,7-418-92033---,00.html>, last visited January 3, 2022, emphasis in original.)

- 4. This Supreme Court has already ruled that the Commission failed in its self-stated mission of 'transparency' when on December 20, 2021, it ruled that the Commission had violated Michigan's Open Meetings Act, and ordered the commission to make public the meetings they had been having in private.
- 5. On December 28, 2021, the Commission officially approved its redistricting maps (or "Plans") for the state of Michigan's Congressional, State Senate, and State House voting districts.
- 6. It is clear from the Commission's current proposed Plans that they will also be falling woefully short of their vision: "To chart a positive course for elections based on fair maps for Michigan today and for the future."
- 7. Pursuant to the Michigan Constitution of 1963, Article IV, Section 6(19) these Black Plaintiffs now challenge the three discriminatory and unlawful Plans of the Michigan Independent Redistricting Commission.

THE PARTIES

8. The Detroit Caucus is a group of Legislators from the Michigan House of Representatives that represent constituents within the City of Detroit.
9. The Romulus City Council is a legislative body of elected officials in the city of Romulus, MI.
10. The individual Plaintiffs are all, first and foremost, members of the Black community of Michigan and residents of Wayne County who stand to lose their ability to elect their chosen candidates into office:
 - a. The Detroit Caucus;
 - b. The Romulus City Counsel;
 - c. The Inkster City Council
 - d. State Representative and Detroit Caucus Chair, Tenisha Yancey
 - e. Former State Representative & Detroit Caucus Chair Sherry Gay-Dagnogo, M.Ed., DPSCD Board Member, resident of Detroit, Michigan;
 - f. State Representative Tyrone Carter
 - g. Senator Betty Jean Alexander, Senate District 5, resident of Detroit, Michigan;
 - h. Hon. Stephen Chisholm, Inkster City Council
 - i. Former State Rep. Teola P. Hunter, First Female Speaker *Pro Tem*, resident of Detroit, Michigan;
 - j. Hon. Keith Williams, Chair MDP Black Caucus, resident of Detroit, Michigan;
 - k. Dr. Carol Weaver, 14th Congressional District Executive Board Member, resident of Detroit, Michigan;

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- l. Former State Representative Wendell Byrd, resident of Detroit, Michigan;
- m. Former State Representative Shanelle Jackson, resident of Detroit, Michigan;
- n. Former State Representative Lamar Lemmons, resident of Detroit, Michigan;
- o. Former Senator and Wayne County Commissioner Irma Clark Coleman, resident of Detroit, Michigan;
- p. Lavonia Perryman, The Shirley Chisholm Metro Congress of Black Women, resident of Detroit, Michigan;
- q. Alisha Bell, Wayne County Commissioner and Chair, resident of Detroit, Michigan.
- r. Natalie Bienaime, Citizen the 13th District, resident of Detroit, Michigan;
- s. Oliver Cole, Resident of Wayne County;
- t. Andrea Thompson, Resident of Detroit;
- u. Darryl Woods, Resident of Wayne County.
- v. Darryl Woods, as a resident of Wayne County;
- w. Norma D. Mcdaniel, as a Resident of Inkster;
- x. Melissa D. Mcdaniel, as a resident of Canton,
- y. Chitara Warren, as a resident of Romulus;
- z. James Richardson, as a resident of Inkster,
- aa. Elena Herrada, as a resident of Detroit

11. Defendant Michigan Independent Citizens Redistricting Commission (“MICRC”) is a permanent commission in the legislative branch of government. Const 1963, art 4, § 6(1).

JURISDICTION

12. The Court has original subject-matter jurisdiction over this action under Article IV, Section 6(19), of the Michigan Constitution of 1963.

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37. Throughout the redistricting process, the Michigan Independent Redistricting Commission has been opaque with the public in regards to its compliance with the Voting Rights Act, in contravention of its mandate under the Michigan Constitution to perform its “duties in a manner that is impartial and reinforces public confidence in the integrity of the redistricting process. The commission shall conduct all of its business at open meetings.” Mich. Const. Art. 4, § 6(10).

38. In fact, this honorable Court recently ruled that a recording of MICRC’s October 27, 2021 meeting, during which two (2) memoranda were discussed involving the proposed maps compliance with the Voting Rights Act, must be disclosed to the public because the meeting involved the development of the redistricting map.⁹

39. This court further ruled that seven (7) additional memoranda out of 10 must be disclosed to the public as “supporting materials” under Const 1963, art 4, § 6(9).¹⁰

COUNT I
Violation of Mich Const 1963, art 4, §6(13)(a) and (c):
Dilution of Minority Voting Power

40. Plaintiffs reallege the prior paragraphs as if restated fully hereunder.

41. The Michigan Constitution of 1963 provides:

(13) The commission shall abide by the following criteria in proposing and adopting each plan, in order of priority:

(a) Districts shall be of equal population as mandated by the United States constitution, and shall comply with the **voting rights act [of 1965]** and other federal laws.

Mich Const 1963, art 4, §6(13)(a) (emphasis added).

42. The Voting Rights Act of 1965 holds, in pertinent part:

No voting qualification or prerequisite to voting or standard, practice, or procedure shall be imposed or applied by any State or political subdivision

⁹ Mich Sup. Ct. Docket No. 163823

¹⁰ *Id.*

in a manner which results in a denial or abridgement of the right of any citizen of the United States to vote on account of race or color...

52 USC § 10301.

43. In determining whether the Voting Rights Act statute has been violated, this Court follows "the guidance of the United States Supreme Court, [as] stated in *Thornburg v. Gingles*, 478 U.S. 30, 43–46, 106 S.Ct. 2752, 2762–2764, 92 L.Ed.2d 25 (1986)..." *In re Apportionment of State Legislature-1992*, 439 Mich 715, 735; 486 NW2d 639, 650 (1992).

44. In *Thornburg v. Gingles*, 478 U.S. 30, 43–46, 106 S.Ct. 2752, 2762–2764, 92 L.Ed.2d 25 (1986), Supreme Court of the United States has held that a successful Section 2 vote dilution claim has two components. First, a plaintiff must satisfy three preconditions by showing: (1) that the minority group is “sufficiently large and geographically compact to constitute a majority in a single-member district”: (2) that the minority group is “politically cohesive”: and (3) that bloc voting by other members of the electorate usually defeats the minority-preferred candidates. Satisfaction of these three preconditions is necessary but not sufficient to establish liability. Second, “[i]f these three preconditions are met, the district court must then examine a variety of other factors to determine whether, under the totality of the circumstances, the challenged practice impairs the ability of the minority voters to participate equally in the political process and to elect a representative of their choice.” As stated in *Gingles*, 478 U.S. at 36-37, additional “objective factors” used in determining the “totality of circumstances” surrounding an alleged violation of Section 2 of the Voting Rights Act include (but are not limited to) the extent to which the members of the minority group bear the effects of discrimination in areas like education, employment, and health, which hinder effective participation, is one measure.

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45. (1) The Black citizens of the City of Detroit are a minority group that is “sufficiently large and geographically compact to constitute a majority in a single-member district” as its population is 77.7% Black as per the 2020 census.
46. (2) The Black citizens of the City of Detroit are “politically cohesive” as is shown by their voting record where Detroit Black persons account for 79.1% of the total population of Detroit.¹¹ Biden won the city of Detroit with 94% of the vote while Trump received 5%.¹² Yet statewide in Michigan voter turnout was 71% and Biden defeated Trump by merely 50.6% to 47.9%, meaning that it was the Detroit Black community who, voting as a cohesive group, won the Presidential election for President Joseph Biden in this State and, potentially, the Country.
47. (3) Bloc voting by other members of the electorate usually defeats the minority-preferred candidates: Until the 1954 election of Charles Diggs in the old 15th District (13th today) followed by the election of John Conyers 10 years later in 1964 in the old 1st District (14th today) Detroit’s majority-minority community could not elect a Congressional candidate of their choice.
48. The Black citizens of the City of Detroit bear the effects of discrimination in the area of education:
- bb. In the city of Detroit the majority of the residents in the suburb area are predominantly White, while in the actual city majority of the residents are Black.¹³
 - cc. As of the mid-2000's, school funding per pupil in Wayne County (where Detroit is located) was approximately \$930.33, the lowest in the State. The second highest

¹¹ <https://www.census.gov/quickfacts/fact/table/detroitcitymichigan,mi/PST045217>

¹² <https://www.freep.com/story/news/politics/elections/2020/11/06/joe-biden-detroit-michigan-vote-election-2020/6168971002/>

¹³ Checkoway, Barry; Lipa, Todd; Vivyan, Erika; Zurvalec, Sue (2017). "Engaging Suburban Students in Dialogues on Diversity in a Segregated Metropolitan Area". *Education and Urban Society*. Sage Journals. 49 (4): 388–402.

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was \$1,239.47 per pupil, in Macomb County, almost 50% more than that of Wayne County and far below the average for Southeastern Michigan of \$1,807.17.¹⁴

dd. Detroit public schools have high illiteracy rates and low academic performance compared to cities across the United States, with Detroit "eighth graders scor[ing the] lowest in math and reading in the nation."¹⁵

ee. According to the National Institute for Literacy, 47% (200,000) of adults in Detroit are functionally illiterate, and half of the 200,000 adults do not have a high school diploma or GED, showing that the lack of these skills learned in an academic setting is generationally embedded into different groups of society.

49. The Black citizens of the City of Detroit bear the effects of discrimination in the area of employment:

ff. Detroiters have a lower employment rate compared to others living in Wayne County and those in neighboring counties such as Macomb and Oakland. In July 2020, unemployment in Detroit reached nearly 40 percent.¹⁶ This is much higher than the national unemployment average of even The Great Depression nearly a century ago.¹⁷

gg. As of 2016, Detroit's poverty rate was 35.7%, with a median household income of just over \$28,000.¹⁸

¹⁴ D., Rollandini, Mark. Michigan intermediate school districts: funding and resource allocation. p. 22.

¹⁵ Rosenbaum, Mark (2018-01-30), The Miseducation of America, Center for Political Studies (CPS).

¹⁶ Wileden, Lydia. 2020. "employment Dynamics in Detroit During the COVID-19 Pandemic." Detroit Metro Area Communities Study, University of Michigan. <https://detroitssurvey.umich.edu/wp-content/uploads/2020/08/Unemployment-August-2020.pdf>.

¹⁷ Rashawn Ray, Jane Fran Morgan, Lydia Wileden, Samantha Elizondo, and Destiny Wiley-Yancy; Examining and Addressing COVID-19 Racial Disparities in Detroit; The Brookings Institution, p. 14.

¹⁸ Williams, Corey (14 September 2017). "Census Figures Show Drop in Detroit Poverty Rate". U.S. News.

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50. The Black citizens of the City of Detroit bear the effects of discrimination in the area of health:

hh. Because of the legacies of underinvestment, redlining, jobs without benefits, poor or nonexistent and culturally incompetent health care, Black residents are less likely to be able to transcend the challenges presented by COVID-19 and are more likely to contract and die from the virus.¹⁹

ii. In Detroit, Black people represent a comparable over 75 percent of known COVID-19 diagnoses by race, yet account for a disproportionate nearly 90 percent of deaths.

Id.

51. Therefore, according to the analysis handed down in *Thornburg v. Gingles*, 478 U.S. 30, 43–46, 106 S.Ct. 2752, 2762–2764, 92 L.Ed.2d 25 (1986), the redistricting Plans approved by Defendant violate the Voting Rights Act of 1965 (52 USC § 10301) by implementing impermissible dilution of the Black vote in Michigan. As the Plans violate the Voting Rights Act, they also violate the Michigan Constitution at article 4, §6(13)(a) and (c).

**COUNT II
Declaratory Action**

52. Plaintiffs reallege the prior paragraphs as if restated fully hereunder.

53. The Court has the power to enter declaratory judgments. MCR 2.605(A)(1).

54. A case of actual controversy exists between these parties as Plaintiffs will imminently have their rights under the Michigan Constitution, the United States Constitution, and federal law (the Voting Rights Act of 1965) violated and be effectively completely disenfranchised.

¹⁹ Rashawn Ray, Jane Fran Morgan, Lydia Wileden, Samantha Elizondo, and Destiny Wiley-Yancy; Examining and Addressing COVID-19 Racial Disparities in Detroit; The Brookings Institution, p. 1.

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55. Guidance is needed by the Court to assist the parties in their conduct going forwards, so that Plaintiffs and the entire Black community of Michigan do not suffer the egregious and inexcusable injury of being racially discriminated against, disenfranchised, and having their legal, political, and civil rights eroded in one fell swoop.
56. The case in controversy is within the jurisdiction of this Court as, were the rights at issue violated, this Court would have original jurisdiction to hear causes of action arising out of those violations pursuant to Mich Const 1963, art 4, §6(19).
57. Specifically, Plaintiff requests a declaration from this Court that Defendant's proposed Michigan's Congressional, State Senate, and State House district voter districts Plans are unconstitutional and unlawful as they do not comport with the requirements of the Voting Rights Act of 1965 and the Michigan Constitution of 1963, article 4, §6(13)(a)-(c).

CONCLUSION AND RELIEF REQUESTED

The new voting district maps drawn by the Commission will thwart the Black Civil Rights Movement that this nation is famous for; that this nation is proud of. Should this Court not stop the Defendant from implementing their Plans, the Black voters of Michigan will be cast backwards in time to the days before Civil Rights heroes like Martin Luther King, Jr. and Rosa Parks led the fight for the representation that the Black community of Michigan currently has. The community of interest that is the Detroit Black community, will go from one that can unite to become powerful enough to win the United States presidency for their chosen candidate to one that cannot even elect state congress persons and senators; no matter what their voter turnout.

Under the Voting Rights Act of 1965, and therefore, the Michigan Constitution, it does not matter what the intentions of Defendant's members were, only what the effects of their redistricting will be. The effects are clear: By breaking the majority-Black US Congressional districts into eight voter districts from its previous two voter districts, it will dilute the vote of the Black community

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in Michigan into meaninglessness. Similarly, the Plans for the Michigan Senate and Michigan House of Representatives inexcusably reduce the ability of Black voters to be represented in this state and nationally. The Michigan Legislature was able to create voting districts with majority-Black districts in 1980, 1990, 2000, and 2010. Defendant's Plan for the US Congressional districts, the number of majority Black districts would be reduced from two to zero; under the State Senate Plans, from four to zero; and under the State House Plans, from twelve to six. That is a total of 18 majority-minority districts reduced to just six. In 1980, 1990, and 2000, partisan Michigan legislatures were able to draw up Plans which gave consideration (and majority-Black districts) to Michigan's Black community and there is no reason that the newly created should not have done the same.

The Commission was supposedly created to assure that the Voter Rights Act of 1965 was not violated. Unfortunately, that is exactly what is happening here. As the Voter Rights Act assures that majority-minority districts are not to be diluted in newly redrawn districts so that minority communities cannot elect their candidates of choice. This map falls far short of such mandates under the Voter Rights Act and, if this Court does not act decisively to curb Defendant's ill-made Plans, then Black Michiganders, and the Black community everywhere, will suffer an egregious and despicable injury. As the late Martin Luther King, Jr. one said: "Injustice anywhere is a threat to justice everywhere." This Honorable Court should act swiftly to save the State of Michigan from the shame and embarrassment that will be associated with Defendant's redistricting Plans.

WHEREFORE, Plaintiff requests that this Honorable Court enter judgement in their favor against Defendant and issue an order containing the following relief:

- a) Declaring that Defendant's currently proposed redistricting plans violate the Michigan Constitution of 1963, art 4, §6(13)(a) and (c) and the Voting Rights Act of 1965 by impermissibly diluting the Black voting power in Michigan;

- b) Ordering that Defendant be required to redraw their redistricting plans in accordance with the Michigan Constitution of 1963, art 4, §6(13)(a) and (c) the order of this Court;
- c) Awarding reasonable attorneys fees pursuant to Michigan Constitution of 1963, art 4, §6(5), (13)(a), and 52 U.S.C. § 10310(e); and
- d) Any and all such other relief that this Court deems just and equitable including any tolling of limitations periods necessary to accomplish justice.

Respectfully submitted;

AYAD LAW, PLLC

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Dated: January 10, 2022

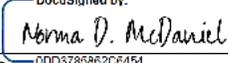
Verifications on following pages.

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VERIFICATION

I declare under the penalties of perjury that this Complaint has been examined by me and that its contents are true to the best of my information, knowledge, and belief.

Executed on: 1/10/2022

Signed: 
Plaintiff DocuSigned by:
-0003785962C6151...

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MICRC

09/02/21-1300 Meeting

Captioned by Q&A Reporting, Inc., www.qacaptions.com

>> VICE CHAIR SZETELA: We will bring the Michigan Independent Citizens Redistricting Commission to order at 1:06 p.m.

Greetings to Ann Arbor. We are happy to be here today. There are several groups that are making this meeting possible. I would like to thank Tom Ivako, Bonnie Roberts and Logan Woods of the center for local, state and urban policy here at the University of Michigan. Ellen Werman and Nate Hall, campus election management project. Landon Meyers, campus vote project. It's gratifying that so many groups are here to assist the MICRC in engaging people in redistricting here in Michigan.

This Zoom webinar is being live streamed at YouTube at [www.YouTube.com/MICHSO office/videos](http://www.YouTube.com/MICHSO_office/videos).

For anyone in the public watching who would prefer to watch via a different platform than they are currently using, please visit our social media at Redistricting MI to find the link for viewing on YouTube.

Our live stream today includes closed captioning. Closed captioning, ASL interpretation, and Spanish and Bengali and Arabic translation services will be provided for effective participation in this meeting. Please E-mail us at Redistricting@Michigan.Gov for additional viewing options or details on accessing language translation services for this meeting.

People with disabilities or needing other specific accommodations should also contact Redistricting at Michigan.gov.

This meeting is also being recorded and will be available at www.Michigan.gov/MICRC for viewing at a later date and this meeting is being transcribed and closed-captioned transcriptions will be made available and posted on Michigan.gov/MICRC along with the written public comment submissions.

There is also a public comment portal that may be accessed by visiting Michigan.gov/MICRC, this portal can be utilized to post maps and comments which can be viewed by both the Commission and the public.

Members of the media who may have questions before, during or after the meeting should direct those questions to Edward Woods III, our Communications and Outreach Director for the Commission at WoodsE3@Michigan.gov or 517-331-6309.

For the purposes of the public watching and for the public record I will now turn to the Department of State staff to take note of the Commissioners

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present.

>> MS. SARAH REINHARDT: Please say present when I call your name. If you are attending the meeting remotely, and unless your absence is due to military duty, please disclose your physical location by stating the County, City, Township or Village and the State from which you are attending the meeting remotely.

I will start with Doug Clark.

- >> COMMISSIONER CLARK: Present.
- >> MS. SARAH REINHARDT: Juanita Curry.
- >> COMMISSIONER CURRY:
- >> MS. SARAH REINHARDT: Anthony Eid?
- >> COMMISSIONER EID: Present.

Brittini Kellom?

Rhonda Lange?

- >> COMMISSIONER LANGE: Present; attending from Reed City, Michigan.
- >> MS. SARAH REINHARDT: Steve Lett?
- >> COMMISSIONER LETT: Present.
- >> MS. SARAH REINHARDT: Cynthia Orton?
- >> COMMISSIONER ORTON: Present.
- >> MS. SARAH REINHARDT: MC Rothhorn?
- >> COMMISSIONER ROTHORN: Present.
- >> MS. SARAH REINHARDT: Rebecca Szetela?
- >> VICE CHAIR SZETELA: Present.
- >> MS. SARAH REINHARDT: Janice Vallette?
- >> COMMISSIONER VALLETTE: Present.
- >> MS. SARAH REINHARDT: Erin Wagner?
- >> COMMISSIONER WAGNER: Present; attending remotely from

Charlotte, Michigan.

- >> MS. SARAH REINHARDT: Richard Weiss?
- >> COMMISSIONER WEISS: Present.
- >> MS. SARAH REINHARDT: Dustin Witjes?
- >> COMMISSIONER WITJES: Present.
- >> MS. SARAH REINHARDT: 11 Commissioners are present.

And there is a quorum.

>> COMMISSIONER LETT: You can view the agenda at www.Michigan.gov/MICRC. I would now entertain a motion to approve the meeting agenda. We have a motion made by Commissioner Lett, seconded by Commissioner Eid.

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The first and Foremost criteria are the U.S. Constitution and Federal law and the Voting Rights Act is Federal law.

And it applies everywhere in the country including Michigan.

It prohibits any voting standard practice or procedure including a redistricting plan that results in the denial or dilution of minority voting strength.

A redistricting plan that dilutes minority voting strength is one that either cracks or packs a geographically concentrated minority group.

A top example to the left is or to the right is an example of a District, a set of districts that cracks the minority community by dividing it among four districts, five districts so that they cannot elect a minority preferred candidate in any of those districts.

The lower example on the right is an example of a District or District center that packs minority voters so that they have an impact on only one District and no impact on any of the other districts despite the fact that you could probably have drawn two districts in which they had the ability to elect communities, to elect candidates of choice.

When the Voting Rights Act was amended in 1982 to make it clear that you did not have to show that the redistrictors intended to discriminate only that the plan that they drew actually resulted in discrimination.

The Supreme Court first considered this case in 1986 in a case called Thornburg versus Jingles and had to prove three conditions in order to satisfy Section Two and get a District drawn in which they could have the ability to elect a candidate of choice.

First is that the group must be sufficiently large and geographically compact to form a majority in a single member District.

This is in essence so there was actually a remedy available.

There is a solution to the problem of how do we elect candidates of choice.

The second is that the minority group must be politically cohesive.

That is, they must vote for the same candidates.

And, third, whites must vote as a bloc to usually defeat the minority-preferred candidates.

If they were not voting as a bloc to defeat these candidates, these candidates would win, and you wouldn't need to draw a minority District.

So how do we know how the minority group is voting? How do we know how whites are voting? What you do is conduct a racial bloc voting analysis.

And my job in this particular situation is to actually carry out what's called a racial bloc voting analysis that is analyze voting patterns by race to determine if voting is polarized. If whites are voting against a cohesive minority community.

I mentioned that first of all we have, of course, a secret ballot.

We don't know the race of the voters when they cast the ballot.

So, we have to use estimation techniques.

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And that is around 35% of Black voting age population turned out and cast a ballot for the Governor in 2018.

While the number was higher almost double for white voters.

This contest is racially polarized.

If Blacks voting alone had voted alone Whitmer would have been elected.

She was.

And then of course if whites voted alone, it would have been the republican candidate who was elected.

Below I have the primary for this election.

I have the gubernatorial primary of 2018.

We have the three candidates listed here.

We have they are all democrats.

We have their race.

We have the percentage of votes they received.

And you will see that this contest is also polarized.

This contest you have a plurality of the Black voters supporting Thanedar and majority of the white voters supported Whitmer.

So, this contest is also polarized.

Okay, now I did this, and you will see tables in the report that I eventually produce for every election but I'm going to show you summaries of this in a little bit.

So, over all statewide in the 13 elections that I looked at, 12 were polarized.

And those elections that are most probative to the courts, that is those that included minority candidates, 6 out of the 6 were polarized in the democratic primary which there was only one it was polarized.

And I money -- mentioned I looked at four counties and these are the results of the analysis in four counties in Genesee County we have nine of the 13 contests polarized with five of the six with minority candidates.

The democratic primary was polarized.

And Saginaw it's 11 out of 13 of the contests, six out of six of those contests with minority candidates.

And the democratic primary was polarized.

In Oakland all 13 of the general elections were polarized including the six with minority candidates but the democratic primary was not.

And finally in Wayne County where voting is less polarized you will see that 7 of the 13 contests were polarized, three of those were minority candidates and the democratic primary was polarized.

What this tells me is that voting is polarized in Michigan.

And what that means is the Voting Rights Act comes into may in districts that provide minority voters with the opportunity to elect their candidates must be drawn.

Okay, so voting is polarized.

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You have to create districts if they can be created, but more importantly perhaps is that those districts that exist must be maintained.

It's important to continue to provide minority voters with the opportunity to elect their candidates of choice.

So, if districts can be drawn, they should be drawn.

If districts exist and minority candidates are winning only because the districts exist, those districts must be maintained.

Those districts must be maintained in a way that gives minorities an opportunity to elect their candidates of choice.

But you don't just choose an arbitrary target.

You don't just say 50% voting age population is what we need to maintain these minority districts.

And it is the Supreme Court that has told us this, and Bruce gets to talk about this later. But the fact is you have to do a District specific functional analysis in each area that you are to determine what an effective minority District looks like.

No arbitrary percentages.

So how do we do a District-specific functional analysis? By functional we mean we have to look at actual voting behavior and look at election results.

By District specific I told you already we are going to look first at voting patterns not just statewide but District or broader areas like counties.

Now the first approach I'm going to discuss with you today, and that is taking the estimates of participation rates minority cohesion and white cross over from the RV B analysis I conducted and using that to calculate the percent minority population needed in a specific area for the minority preferred candidates to win a District in that area. But there's another approach that you can use that the Commissioners can use as they're drawing and that is to look at the election results of what I call bellwether elections to determine if that election had occurred within the proposed boundaries of the districts that you're creating if those minority preferred candidates would have carried those districts.

There are four bellwether contests in particular that you are going to focus on.

You will recall I said six contests include minority candidates and two of those contests the minority candidate was not the candidate preferred by minority voters.

That was in 2018 Senate and the 2020 Senate.

That was the republican John James.

So, the four bellwether contests you will be focusing on to determine if the districts you have drawn will allow minorities to elect candidates of choice will be the other four contests the 2012 presidents contest for president, the 2014 contest for treasurer, the 2018 gubernatorial contest and the 2020 Presidential contest.

And you can recompile election results and determine if the minority preferred candidates would carry the districts.

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Even though many of those would have been effective districts.

This last slide before I turn it over to Bruce is a maps of the State House and the State Senate districts because I wondered why there weren't any 35-45% Black districts and what the shapes of the districts were that were electing Blacks to office.

And I will tell you that there are some, let's see if I can go back, there are some very hacked Black districts.

We have some districts that I could not produce estimates of white voting behavior because there were virtually no whites voting in these districts.

We have State House Districts that are well -- we have three of them that are well over 90%.

And the Black preferred candidates are getting well over 90% of the vote.

Those are packed.

Doesn't like me going back.

Okay.

And those are not necessarily shaped districts.

It was not like they were creating districts that were nice little compact districts.

>> CHAIR KELLUM: Doctor Handley we have a question from Commissioner Lange.

>> DR. LISA HANDLEY: Yes.

>> COMMISSIONER LANGE: Dr. Handley I'm sorry to interrupt your presentation. I just have a quick question.

When doing the racial bloc voting, is it only based off from African/American votes or is it based off from any other ethnicities?

>> DR. LISA HANDLEY: That is a good question, and I should have said that earlier on now and many jurisdictions of course you would look at other ethnicities and I would have liked to have done so in Michigan.

But it turns out there are no counties with the sufficient number of Hispanics or Asian Americans or Native Americans to do the analysis.

But, yes, typically you could and should do the analysis if there was a sufficient number of minorities to do the analysis.

>> CHAIR KELLUM: Commissioner Lange does that satisfy your question?

>> COMMISSIONER LANGE: Yes, thank you very much.

>> CHAIR KELLUM: Dr. Handley you have another question from Commissioner Rothhorn?

>> COMMISSIONER ROTHORN: Dr. Handley I'm thinking about the census data and how we have a significant population of Arab Americans in Dearborn so following up on what Dr. Or excuse me what Commissioner Lange was saying do we have any or is there any way to understand the Arab American or the Mena vote in this analysis?

>> DR. LISA HANDLEY: There is not because we don't have the composition of the precincts.

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We don't have the Mena composition of the precincts available from the census. And I need to know the composition and I'm going to let Bruce expand on I'm just providing the factual information and Bruce gets to expand on why you might also not be doing that kind of analysis.

In fact, I am done.

I'm going to finish with this last map.

So, before I hand it over to Bruce, are there any questions specifically for me? Or should we hand it over to Bruce then you can ask us questions in concert?

>> CHAIR KELLOM: Looks like you have a question from Commissioner Eid?

>> COMMISSIONER EID: Well first off thank you so much for the presentation. I'm sure that was quite challenging to put together in such a short amount of time. You had two counties there Genesee and Wayne County where the 35% minority population picked the minority candidate.

The majority of the time.

But for both of those counties it looked like it could possibly be even lower than 35%. Was this data tabulated maybe to 30% or 25%? To see if it or add those numbers the minority candidate was still preferred?

>> DR. LISA HANDLEY: Theoretically you could do that but at that point you would not have sufficient enough minority population to use the word effective minority District in that case.

And in those instances, it might well be the case that voting just wasn't polarized at all.

>> COMMISSIONER EID: I have one more question.

Thank you for that answer.

So maybe Bruce will expand on this in a minute, but I mean, this says the Districts are packed.

Purposely packed.

So how do we unpack them? Is the question at hand.

>> DR. LISA HANDLEY: I will give that to Bruce.

>> MR. BRUCE ADELSON: Good afternoon.

Well, thank you very much, Dr. Handley, for your presentation.

There are a couple points I wanted to make and in part they may address the last comment from Commissioner Eid.

I wanted to remind everybody that we've previously talk about packing.

And Dr. Handley addressed the Alabama case.

We talk about before.

And I wanted to really stress the fact that picking arbitrary numbers for minority populations is routinely regarded as unconstitutional as racial gerrymandering.

That was true in the Alabama case.

That was true in the reverse Harris case we talk about.

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR. et al.,

Plaintiffs,

v.

JOCELYN BENSON, et al.,

Defendants.

Case No. 1:22-CV-00272-PLM-RMK-JTN

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Report on 2021 Redistricting

Commission Report adopted on Aug. 18, 2022





FOREWORD

For most of Michigan’s history, redistricting was conducted by the State Legislature—a process that all too often sparked political controversy and judicial intervention when the Legislature and Governor could not agree on a plan. In response, Michigan voters approved a constitutional amendment in 2018 that created a **Michigan Independent Citizens Redistricting Commission (MICRC)** and vested it with exclusive authority to adopt new district boundaries based on census data for the Michigan Senate, Michigan House of Representatives, and U.S. House of Representatives every 10 years beginning in 2021.

The [Michigan Constitution](#) vests the State’s redistricting process in the hands of the MICRC, led by 13 Commissioners who are selected using a process designed to provide for balanced, independent, and transparent governance. Commissioners were selected and appointed by August 2020 using the process outlined in the constitutional amendment. In order to ensure balance, under the Michigan Constitution, our 13 Commissioners are politically balanced: four members who affiliated with the Democratic party, four members who affiliated with the Republican party, and five members who were not affiliated with any political party.

Together, we completed the first open, independent and citizen-led redistricting process in Michigan history while far surpassing the MICRC’s goals for public comment, public hearing attendance and news media coverage. The Michigan Constitution mandated at least 10 public hearings around the state during 2020-21. We held at least 139 public meetings, including 16 hearings prior to drafting maps, and received over 29,000 public comments.

Our mission since we began in 2020 was to lead Michigan’s redistricting process to assure Michigan’s Congressional, State Senate, and State House district lines were drawn fairly in a transparent manner, meeting Constitutional mandates. Our aim throughout the process was to raise public awareness of the commission, encourage citizens to participate in the map-making process, generate consistent news media coverage to inform the public and answer questions from the news media and public about the commission’s work.

Without question, the MICRC’s efforts to complete its responsibilities was challenged by the greatest public health crisis in more than a century caused by the devastating spread of the COVID-19 pandemic. The Michigan census data the commission anticipated using in early 2021 was not provided by the U.S. Census Bureau until late September due to COVID-related delays. While the lack of timely census data did not ultimately impede the commission from faithfully serving the people of Michigan, it did contribute to the MICRC’s final maps not being approved until Dec. 28.

Despite these challenges, the MICRC fulfilled its constitutional mandate. We met or surpassed every metric of public observation and participation. From September 17, 2020, through May 6, 2021, before map drawing began we held 35 public meetings to address preliminary matters like hiring staff, procurement activities, and adoption of procedures. While the Michigan Constitution required the Commission to hold ten public hearings before drafting any maps, we held sixteen. After the release of 2020 census data by the U.S. Census Bureau, we created draft proposed maps. At this stage, we held 38 more public meetings, including five public hearings, throughout the state.

After winnowing the list of draft proposed U.S. House of Representatives, Michigan House of Representatives, and Michigan Senate plans to 15 plans, we published those proposed plans, accepted more feedback, and held an additional four meetings before adopting, at our December 28, 2021, meeting, new redistricting plans. As the Constitution requires, each plan was adopted by the vote of at



least two Commissioners affiliated with the two major parties and two Commissioners affiliated with no party.

Getting public input and promoting transparency in the MICRC process was of the utmost importance so that the public had confidence in our work as well as the work of future Michigan redistricting commissions. Holding dozens of meetings in every region of the state throughout 2020-21 was instrumental to the MICRC's ability to gain knowledge and insights from the public, allowing the MICRC to then systematically go through and make the changes that we needed to comply with the seven ranked redistricting criteria, which include compliance with the Voting Rights Act and partisan fairness.

Planning and research was fundamental to the MICRC's work. The MICRC consulted with leaders of redistricting commissions from California and Arizona, the first and second states in the nation, respectively, to approve similar commissions, respectively. We heard from experts with the University of Michigan and Michigan State University. We received feedback on our proposed maps from dozens of organizations that helped shape our decisions.

"Redistricting is never easy," as the U.S. Supreme Court stated in *Abbott v. Perez*. This process has proved that although redistricting presents unique challenges, the MICRC has been successful in collaboratively overcoming those challenges. The adopted redistricting plan with new legislative boundaries will be used for the 2022 primary and general elections.

The MICRC is proud of what we achieved. We are not alone in that belief.

The Princeton Gerrymandering Project, a nonpartisan research group that analyzes redistricting with the aim of eliminating partisan gerrymandering across the country, graded the MICRC's congressional map with an overall score of "A" and a "B" for the state House and Senate maps, saying "compared to a lot of maps across the country, they did very well."

As one [New York newspaper editorial](#) observed after the MICRC's landmark maps were announced: "The state of Michigan has just done something almost miraculous in this time of political acrimony – and something every citizen in America should want their state to do: It has done away, as much as possible, with political gerrymandering and taken a giant leap toward guaranteeing fair state and federal representation."

Equally important, the MICRC commissioned the Glengariff Group, Inc. to conduct two pre- and post-campaign statewide surveys of Michigan voters. The benchmarking survey was conducted March 27-31, 2021. The post-survey was a 600 sample, live operator telephone survey conducted on Feb. 11-14, 2022 and has a margin of error of +/-4.0% with a 95% level of confidence.

Key results from the post-campaign public opinion survey show:

- Most impressively, at the conclusion of the survey, all voters were asked if Michigan should continue to allow the Michigan Independent Citizens' Redistricting Commission to redraw the state's maps or should Michigan go back to allowing elected representatives that have control in the State Legislature to redraw the maps. **By an overwhelming margin of 65.5% to 10.1%, Michigan voters say the state should continue with the redistricting commission moving forward.**
- Voters were asked if Michigan citizens did or did not have a greater role in deciding how new districts would be drawn. By a margin of 45.0%-22.1%, voters aware of the MICRC's work believe Michigan citizens did have a great role.



- Voters were asked if the Commission succeeded or failed in giving Michigan citizens a greater role than politicians in designing new districts. By a margin of 49.6%-22.1%, voters aware of the MICRC's work said the MICRC succeeded in giving Michigan citizens a greater role.

We believe our democracy is stronger thanks to Michigan citizens' engagement, leadership and vision for a fair, inclusive and transparent process that puts voters above politics and hopefully ensures gerrymandering in Michigan is done once and for all.



PURPOSE STATEMENT

This report fulfills the MICRC's requirement enumerated as follows in the Michigan Constitution:

"(16) For each adopted plan, the commission shall issue a report that explains the basis on which the commission made its decisions in achieving compliance with plan requirements and shall include the map and legal description required in part (9) of this section. A commissioner who votes against a redistricting plan may submit a dissenting report which shall be issued with the commission's report."

The seven ranked, constitutionally mandated criteria below were used to draw new district boundaries for the state's Congressional, State Senate and State House districts:

"(a) Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.

(b) Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.

(c) Districts shall reflect the state's diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.

(d) Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.

(e) Districts shall not favor or disfavor an incumbent elected official or a candidate.

(f) Districts shall reflect consideration of county, city, and township boundaries.

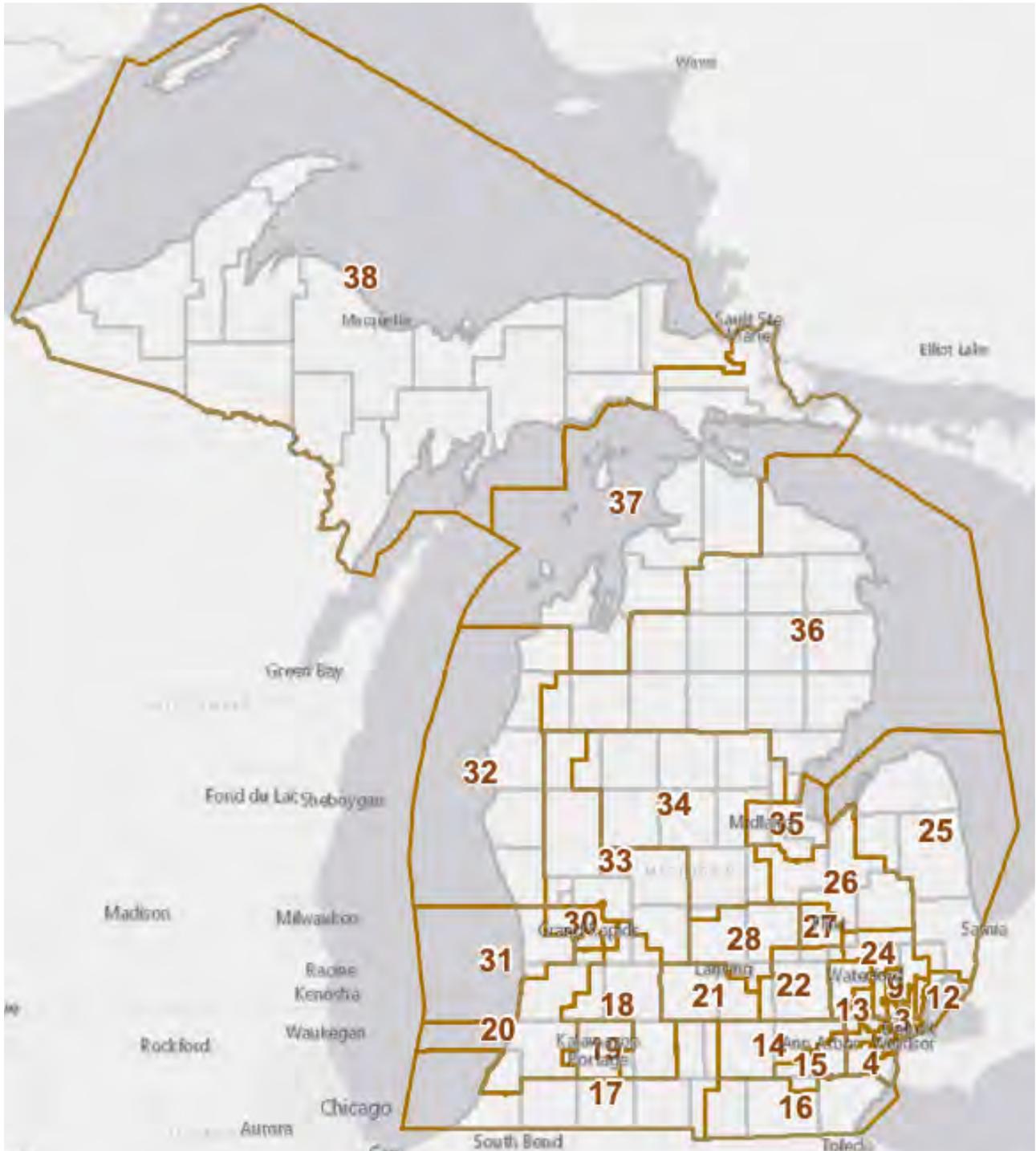
(g) Districts shall be reasonably compact."



Michigan State Senate Districts

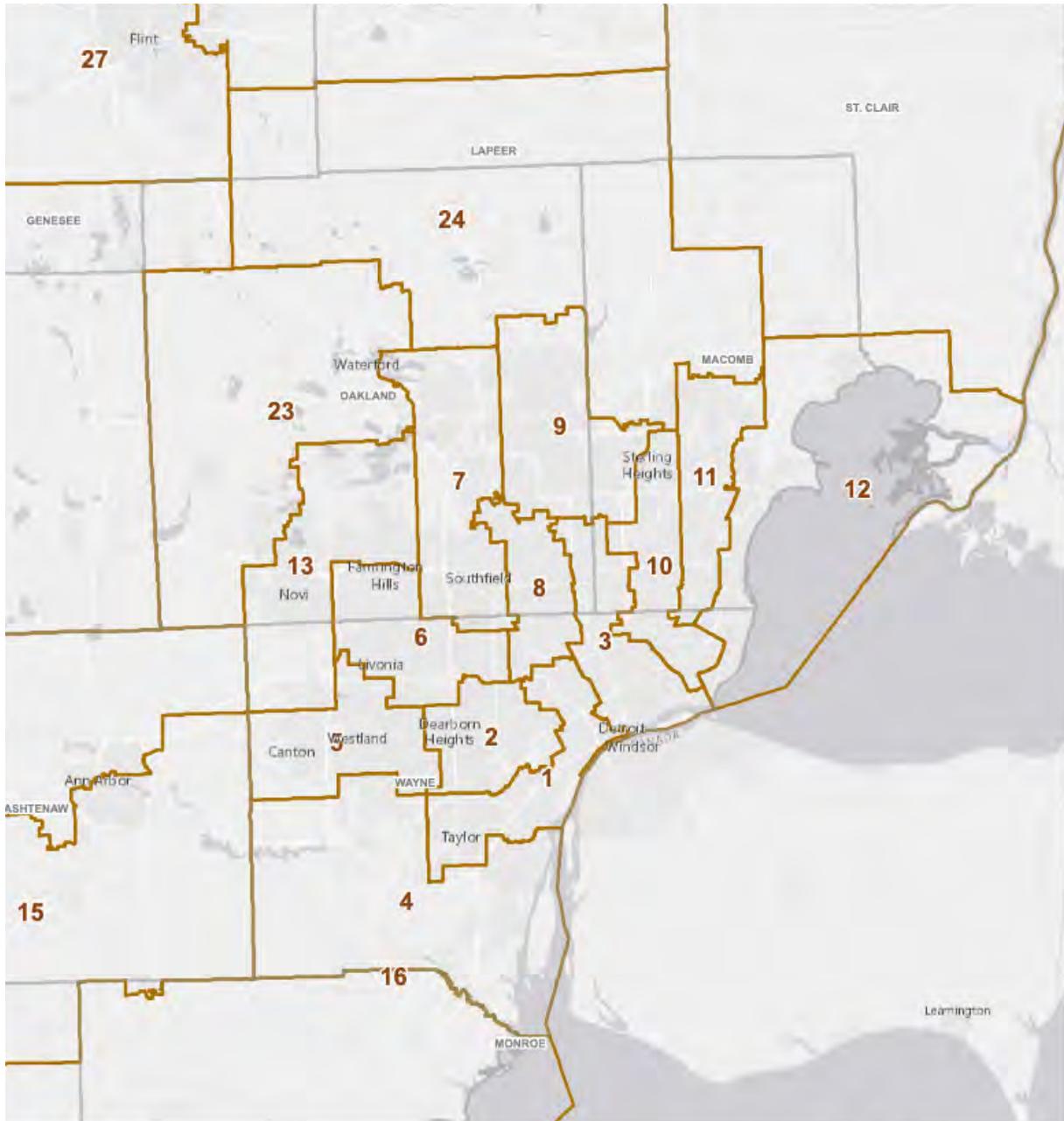
The Michigan Independent Citizen's Redistricting Commission approved the following map and district boundaries for the 38 state senate districts.

[Legal Description & Interactive Map](#)





METRO DETROIT





POPULATION

“(a) Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

The Michigan Independent Citizens Redistricting Commission sought and relied on legal counsel and expert advice in order to draw plans that complied with the requirements of the United States constitution, the Voting Rights Act and other federal laws. Material reflecting that counsel and advice is accessible on the Commission’s website.

[Meeting Notices & Materials](#)

[Meeting Notices & Materials Archives](#)

[Mapping Data](#)



DISTRICT	Total Population				Racial Demographics as Percent of Total Population					Voting Age Population		Racial Demographics as Percent of Voting Population				
	All Persons	Target	Dev.	Difference	NH White	NH Black	NH Asian	Hispanic	Minority	VAP	% of Total	NH White	NH Black	NH Asian	Hispanic	Minority
1	270,366	265,193	1.95%✓	5,173	38.73%	34.78%	0.85%	19.30%	61.27%	201,593	74.6%	42.88%	35.03%	0.93%	16.83%	57.12%
2	260,296	265,193	-1.85%✓	-4,897	61.33%	24.66%	1.60%	8.81%	38.67%	188,578	72.4%	61.85%	24.47%	1.83%	7.88%	38.15%
3	268,291	265,193	1.17%✓	3,098	39.96%	42.25%	10.11%	2.40%	60.04%	212,874	79.3%	41.95%	42.09%	9.46%	2.19%	58.05%
4	259,877	265,193	-2.00%✓	-5,316	74.98%	14.56%	2.25%	6.09%	25.02%	214,717	82.6%	74.71%	13.32%	2.14%	4.98%	25.29%
5	260,723	265,193	-1.69%✓	-4,470	62.23%	19.28%	9.16%	3.96%	37.77%	205,113	78.7%	65.09%	18.25%	8.86%	3.42%	34.91%
6	269,435	265,193	1.60%✓	4,242	44.15%	39.61%	5.40%	2.93%	55.85%	205,711	76.3%	48.95%	39.15%	5.55%	2.60%	51.05%
7	258,715	265,193	-2.44%✓	-6,478	39.05%	45.54%	4.57%	7.55%	60.95%	208,010	80.4%	40.54%	44.78%	4.71%	6.20%	59.46%
8	267,500	265,193	0.87%✓	2,307	47.83%	40.57%	1.66%	2.48%	52.17%	206,961	77.4%	52.04%	40.25%	1.85%	2.28%	47.96%
9	260,091	265,193	-1.92%✓	-5,102	71.32%	4.34%	17.23%	3.75%	28.68%	206,406	79.4%	73.16%	4.24%	16.23%	3.18%	26.84%
10	260,891	265,193	-1.62%✓	-4,302	47.66%	44.75%	4.16%	2.22%	52.34%	207,211	79.4%	50.14%	40.43%	3.95%	1.90%	49.86%
11	267,881	265,193	1.01%✓	2,688	66.85%	20.46%	2.30%	2.76%	33.15%	204,523	76.3%	72.05%	19.19%	2.35%	2.38%	27.95%
12	270,210	265,193	1.89%✓	5,017	75.00%	12.13%	1.16%	2.78%	25.00%	207,870	76.9%	81.01%	11.52%	1.29%	2.34%	18.99%
13	258,822	265,193	-2.40%✓	-6,371	73.56%	8.54%	13.82%	3.34%	26.44%	213,186	82.4%	73.47%	8.19%	12.43%	2.77%	26.53%
14	262,085	265,193	-1.17%✓	-3,108	82.27%	6.31%	5.30%	4.33%	17.73%	218,191	83.3%	80.82%	5.96%	5.36%	3.37%	19.18%
15	260,766	265,193	-1.67%✓	-4,427	68.07%	14.59%	8.11%	6.21%	31.93%	221,289	84.9%	68.01%	13.28%	8.09%	5.32%	31.99%
16	262,182	265,193	-1.14%✓	-3,011	89.48%	2.47%	0.56%	5.66%	10.52%	213,755	81.5%	88.39%	2.36%	0.57%	4.46%	11.61%
17	266,557	265,193	0.51%✓	1,364	84.35%	4.39%	0.97%	6.06%	15.65%	209,069	78.4%	85.38%	4.32%	1.02%	4.72%	14.62%
18	268,135	265,193	1.11%✓	2,942	83.41%	4.92%	1.70%	4.49%	16.59%	205,401	76.6%	85.77%	4.66%	1.56%	3.62%	14.23%
19	262,619	265,193	-0.97%✓	-2,574	76.77%	11.36%	2.70%	5.88%	23.23%	211,508	80.5%	77.49%	10.03%	2.71%	4.80%	22.51%
20	262,284	265,193	-1.10%✓	-2,909	75.11%	9.05%	2.03%	8.53%	24.89%	200,292	76.4%	78.64%	8.34%	1.95%	6.73%	21.36%
21	271,390	265,193	2.34%✓	6,197	68.10%	11.61%	2.75%	8.46%	31.90%	205,416	75.7%	73.70%	11.23%	2.77%	7.38%	26.30%
22	264,573	265,193	-0.23%✓	-620	89.50%	0.65%	0.78%	2.86%	10.50%	204,483	77.3%	92.17%	0.65%	0.83%	2.37%	7.83%
23	263,780	265,193	-0.53%✓	-1,413	85.17%	3.66%	2.70%	5.03%	14.83%	211,880	80.3%	85.65%	3.52%	2.62%	4.05%	14.35%
24	271,211	265,193	2.27%✓	6,018	83.91%	1.69%	2.41%	3.77%	16.09%	203,066	74.9%	89.06%	1.70%	2.44%	3.24%	10.94%
25	264,345	265,193	-0.32%✓	-848	89.17%	2.24%	0.45%	3.64%	10.83%	209,073	79.1%	90.82%	2.19%	0.46%	2.94%	9.18%
26	266,938	265,193	0.66%✓	1,745	84.87%	3.15%	0.42%	4.46%	15.13%	206,886	77.5%	88.51%	3.13%	0.44%	3.71%	11.49%
27	269,043	265,193	1.45%✓	3,850	57.85%	27.73%	1.22%	4.07%	42.15%	200,250	74.4%	63.00%	27.27%	1.32%	3.66%	37.00%
28	265,180	265,193	0.00%✓	-13	78.73%	4.65%	5.09%	5.07%	21.27%	210,771	79.5%	81.43%	4.84%	5.29%	4.38%	18.57%
29	263,566	265,193	-0.61%✓	-1,627	55.33%	16.51%	4.61%	18.56%	44.67%	200,247	76.0%	60.57%	15.37%	4.63%	15.50%	39.43%
30	264,560	265,193	-0.24%✓	-633	81.65%	5.68%	2.38%	7.62%	18.35%	212,420	80.3%	82.52%	5.06%	2.30%	6.18%	17.48%
31	267,918	265,193	1.03%✓	2,725	79.46%	1.56%	2.85%	10.84%	20.54%	200,843	75.0%	83.32%	1.41%	2.92%	9.22%	16.68%
32	270,401	265,193	1.96%✓	5,208	75.58%	9.07%	0.52%	6.01%	24.42%	205,945	76.2%	80.98%	8.80%	0.55%	4.92%	19.02%
33	267,378	265,193	0.82%✓	2,185	87.59%	2.51%	0.43%	5.12%	12.41%	207,138	77.5%	88.65%	2.99%	0.43%	4.33%	11.35%
34	261,805	265,193	-1.28%✓	-3,388	90.54%	2.22%	0.72%	3.76%	9.46%	213,991	81.7%	89.33%	2.34%	0.72%	3.01%	10.67%
35	268,708	265,193	1.33%✓	3,515	74.07%	12.21%	1.54%	7.75%	25.93%	211,487	78.7%	76.93%	11.30%	1.55%	6.32%	23.07%
36	270,486	265,193	2.00%✓	5,293	92.65%	0.35%	0.36%	2.03%	7.35%	220,106	81.4%	93.79%	0.30%	0.37%	1.55%	6.21%
37	261,707	265,193	-1.31%✓	-3,486	87.54%	0.73%	0.59%	2.45%	12.46%	213,146	81.4%	89.30%	0.75%	0.57%	1.95%	10.70%
38	266,616	265,193	0.54%✓	1,423	88.14%	1.65%	0.69%	1.74%	11.86%	217,404	81.5%	89.52%	1.90%	0.72%	1.43%	10.48%

Assigned 10077331
 Total Pop 10077331
 Inassigne: 0



PARTISAN FAIRNESS

(d) Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.

The Michigan Independent Citizen’s Redistricting Commission evaluated partisan fairness using four mathematical models. The adopted map did not provide ‘disproportionate advantage’ to any political party under any of the models used to measure partisan fairness.

Lopsided Margins

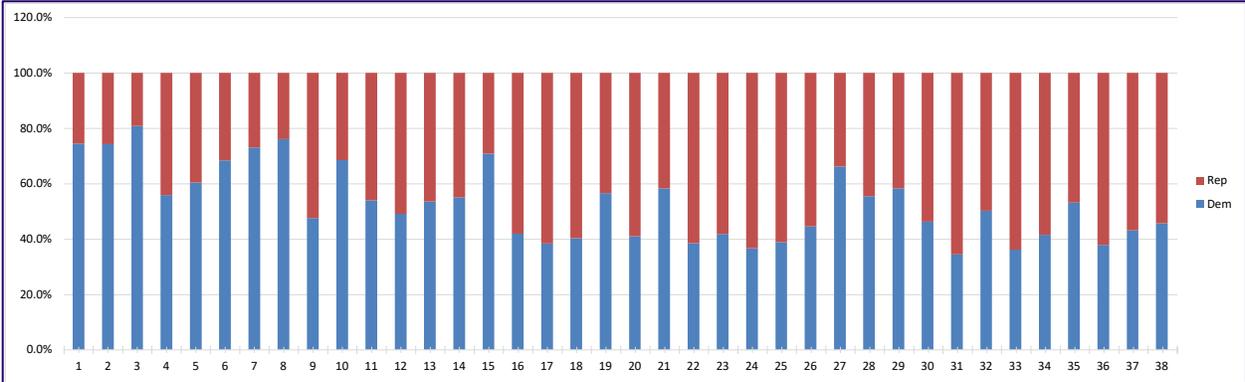
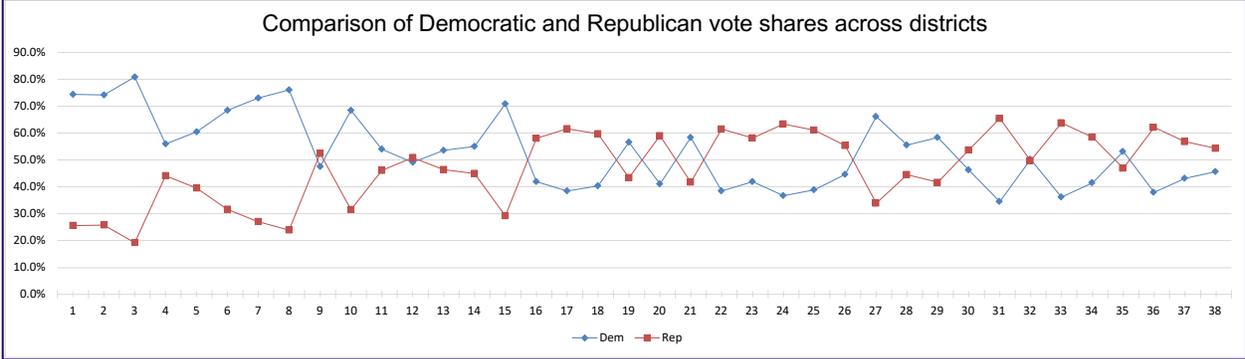
Average Winning Margin	Dem	63.2%
	Rep	58.7%

Finding	
Rep	Districts have a lopsided margin advantage of 4.5%

DISTRICT	Party		Total Votes	Percent Votes		Party Wins	
	Dem	Rep		Dem	Rep	Dem	Rep
1	851,070	292,452	1,143,522	74.4%	25.6%	74.4%	
2	755,866	262,569	1,018,435	74.2%	25.8%	74.2%	
3	946,197	224,423	1,170,620	80.8%	19.2%	80.8%	
4	828,426	653,023	1,481,449	55.9%	44.1%	55.9%	
5	851,926	556,975	1,408,901	60.5%	39.5%	60.5%	
6	1,016,114	469,106	1,485,220	68.4%	31.6%	68.4%	
7	1,132,528	418,860	1,551,388	73.0%	27.0%	73.0%	
8	1,251,274	394,020	1,645,294	76.1%	23.9%	76.1%	
9	705,117	777,377	1,482,494	47.6%	52.4%		52.4%
10	914,105	420,349	1,334,454	68.5%	31.5%	68.5%	
11	770,214	657,708	1,427,922	53.9%	46.1%	53.9%	
12	802,043	830,837	1,632,880	49.1%	50.9%		50.9%
13	938,950	814,031	1,752,981	53.6%	46.4%	53.6%	
14	860,212	701,929	1,562,141	55.1%	44.9%	55.1%	
15	1,087,019	448,037	1,535,056	70.8%	29.2%	70.8%	
16	605,886	839,809	1,445,695	41.9%	58.1%		58.1%
17	503,371	806,208	1,309,579	38.4%	61.6%		61.6%
18	577,925	855,830	1,433,755	40.3%	59.7%		59.7%
19	857,354	656,945	1,514,299	56.6%	43.4%	56.6%	
20	580,817	834,128	1,414,945	41.0%	59.0%		59.0%
21	873,298	623,609	1,496,907	58.3%	41.7%	58.3%	
22	632,830	1,012,216	1,645,046	38.5%	61.5%		61.5%
23	678,270	941,820	1,620,090	41.9%	58.1%		58.1%
24	591,273	1,021,738	1,613,011	36.7%	63.3%		63.3%
25	570,630	894,868	1,465,498	38.9%	61.1%		61.1%
26	694,054	861,687	1,555,741	44.6%	55.4%		55.4%
27	948,759	485,590	1,434,349	66.1%	33.9%	66.1%	
28	822,315	659,345	1,481,660	55.5%	44.5%	55.5%	
29	742,769	530,176	1,272,945	58.4%	41.6%	58.4%	
30	705,493	818,997	1,524,490	46.3%	53.7%		53.7%
31	532,144	1,009,913	1,542,057	34.5%	65.5%		65.5%
32	717,007	710,001	1,427,008	50.2%	49.8%	50.2%	
33	494,983	873,196	1,368,179	36.2%	63.8%		63.8%
34	569,367	802,097	1,371,464	41.5%	58.5%		58.5%
35	832,714	734,835	1,567,549	53.1%	46.9%	53.1%	
36	618,130	1,010,985	1,629,115	37.9%	62.1%		62.1%
37	736,347	969,123	1,705,470	43.2%	56.8%		56.8%
38	691,811	823,414	1,515,225	45.7%	54.3%		54.3%



Lopsided Margins





Mean-Median Difference

District Median Percentage	Dem	51.7%
	Rep	48.3%
Statewide mean percentage	Dem	52.8%
	Rep	47.2%
Mean-Median Difference	Dem	1.2%
	Rep	-1.2%

Findings	
Rep	Districts have a mean-median advantage of 1.2%

DISTRICT	Party	
	Dem	Rep
1	74.4%	25.6%
2	74.2%	25.8%
3	80.8%	19.2%
4	55.9%	44.1%
5	60.5%	39.5%
6	68.4%	31.6%
7	73.0%	27.0%
8	76.1%	23.9%
9	47.6%	52.4%
10	68.5%	31.5%
11	53.9%	46.1%
12	49.1%	50.9%
13	53.6%	46.4%
14	55.1%	44.9%
15	70.8%	29.2%
16	41.9%	58.1%
17	38.4%	61.6%
18	40.3%	59.7%
19	56.6%	43.4%
20	41.0%	59.0%
21	58.3%	41.7%
22	38.5%	61.5%
23	41.9%	58.1%
24	36.7%	63.3%
25	38.9%	61.1%
26	44.6%	55.4%
27	66.1%	33.9%
28	55.5%	44.5%
29	58.4%	41.6%
30	46.3%	53.7%
31	34.5%	65.5%
32	50.2%	49.8%
33	36.2%	63.8%
34	41.5%	58.5%
35	53.1%	46.9%
36	37.9%	62.1%
37	43.2%	56.8%
38	45.7%	54.3%



Efficiency Gap

		Total Wasted Votes	% Wasted Votes of Total Votes
Statewide % Wasted Votes	Dem	14,932,558	26.67%
	Rep	13,060,859	23.33%

Finding	
Rep	Candidates have an efficiency gap advantage of 3.3%

DISTRICT	Dem	Rep	Total Votes	Dem	Rep	Minimum to win	Dem	Rep	Dem	Rep
1	851,070	292,452	1,143,522	0	292,452	571,761	279,309	0	279,309	292,452
2	755,866	262,569	1,018,435	0	262,569	509,218	246,649	0	246,649	262,569
3	946,197	224,423	1,170,620	0	224,423	585,310	360,887	0	360,887	224,423
4	828,426	653,023	1,481,449	0	653,023	740,725	87,702	0	87,702	653,023
5	851,926	556,975	1,408,901	0	556,975	704,451	147,476	0	147,476	556,975
6	1,016,114	469,106	1,485,220	0	469,106	742,610	273,504	0	273,504	469,106
7	1,132,528	418,860	1,551,388	0	418,860	775,694	356,834	0	356,834	418,860
8	1,251,274	394,020	1,645,294	0	394,020	822,647	428,627	0	428,627	394,020
9	705,117	777,377	1,482,494	705,117	0	741,247	0	36,130	705,117	36,130
10	914,105	420,349	1,334,454	0	420,349	667,227	246,878	0	246,878	420,349
11	770,214	657,708	1,427,922	0	657,708	713,961	56,253	0	56,253	657,708
12	802,043	830,837	1,632,880	802,043	0	816,440	0	14,397	802,043	14,397
13	938,950	814,031	1,752,981	0	814,031	876,491	62,460	0	62,460	814,031
14	860,212	701,929	1,562,141	0	701,929	781,071	79,142	0	79,142	701,929
15	1,087,019	448,037	1,535,056	0	448,037	767,528	319,491	0	319,491	448,037
16	605,886	839,809	1,445,695	605,886	0	722,848	0	116,962	605,886	116,962
17	503,371	806,208	1,309,579	503,371	0	654,790	0	151,419	503,371	151,419
18	577,925	855,830	1,433,755	577,925	0	716,878	0	138,953	577,925	138,953
19	857,354	656,945	1,514,299	0	656,945	757,150	100,205	0	100,205	656,945



Efficiency Gap

DISTRICT	Party		Total Votes	Lost Votes		Minimum to win	Surplus Votes		Total Wasted Votes	
	Dem	Rep		Dem	Rep		Dem	Rep	Dem	Rep
21	873,298	623,609	1,496,907	0	623,609	748,454	124,845	0	124,845	623,609
22	632,830	1,012,216	1,645,046	632,830	0	822,523	0	189,693	632,830	189,693
23	678,270	941,820	1,620,090	678,270	0	810,045	0	131,775	678,270	131,775
24	591,273	1,021,738	1,613,011	591,273	0	806,506	0	215,233	591,273	215,233
25	570,630	894,868	1,465,498	570,630	0	732,749	0	162,119	570,630	162,119
26	694,054	861,687	1,555,741	694,054	0	777,871	0	83,817	694,054	83,817
27	948,759	485,590	1,434,349	0	485,590	717,175	231,585	0	231,585	485,590
28	822,315	659,345	1,481,660	0	659,345	740,830	81,485	0	81,485	659,345
29	742,769	530,176	1,272,945	0	530,176	636,473	106,297	0	106,297	530,176
30	705,493	818,997	1,524,490	705,493	0	762,245	0	56,752	705,493	56,752
31	532,144	1,009,913	1,542,057	532,144	0	771,029	0	238,885	532,144	238,885
32	717,007	710,001	1,427,008	0	710,001	713,504	3,503	0	3,503	710,001
33	494,983	873,196	1,368,179	494,983	0	684,090	0	189,107	494,983	189,107
34	569,367	802,097	1,371,464	569,367	0	685,732	0	116,365	569,367	116,365
35	832,714	734,835	1,567,549	0	734,835	783,775	48,940	0	48,940	734,835
36	618,130	1,010,985	1,629,115	618,130	0	814,558	0	196,428	618,130	196,428
37	736,347	969,123	1,705,470	736,347	0	852,735	0	116,388	736,347	116,388
38	691,811	823,414	1,515,225	691,811	0	757,613	0	65,802	691,811	65,802



Seats to Votes Ratio

	Vote Share	Count of Seats	Seat Share	Proportionality Bias
Dem	52.3%	20	52.6%	0.3%
Rep	47.7%	18	47.4%	-0.3%

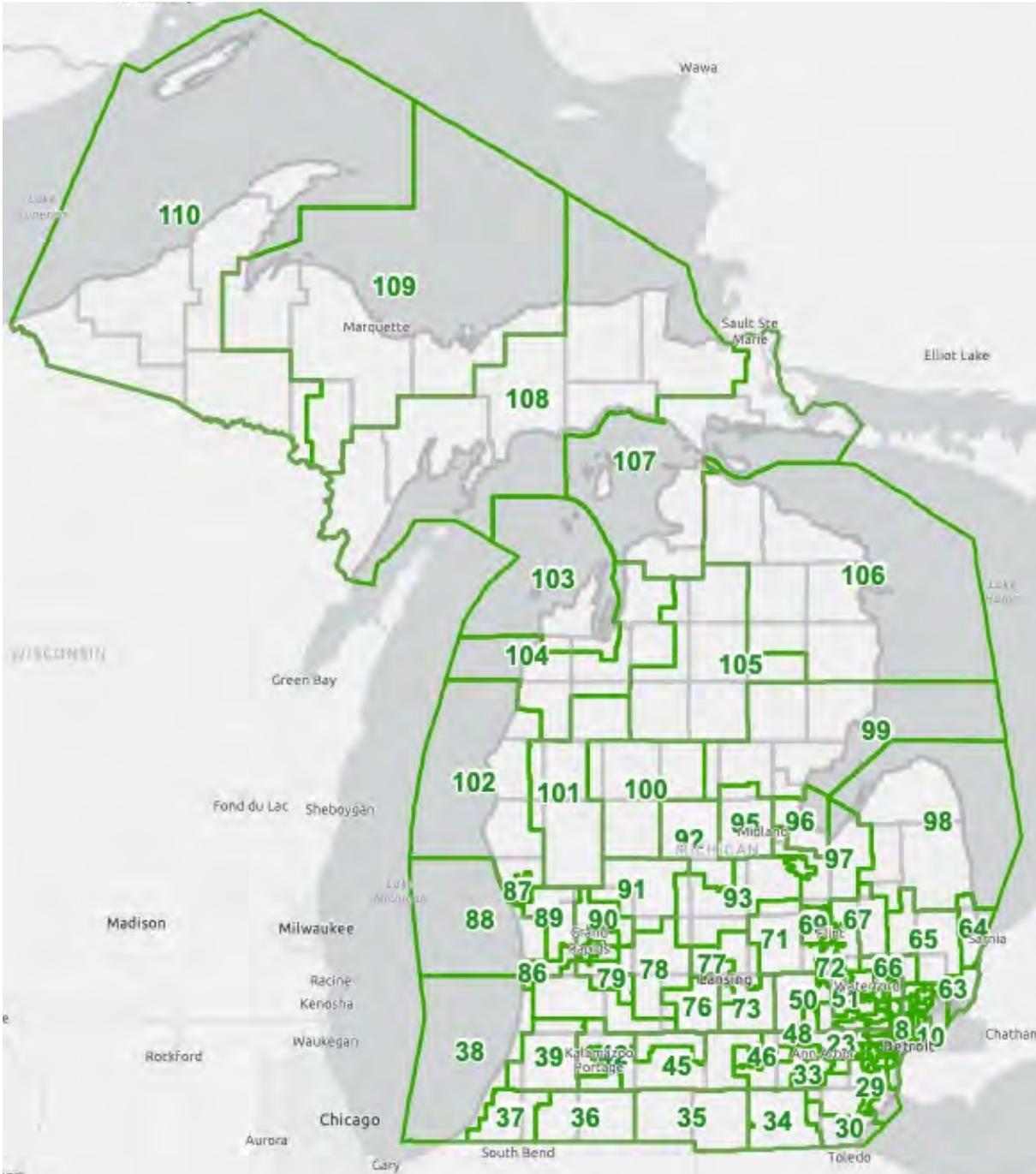
DISTRICT	Composite Score			
	Dem	Dem %	Rep	Rep %
1	851,070	74.4%	292,452	25.6%
2	755,866	74.2%	262,569	25.8%
3	946,197	80.8%	224,423	19.2%
4	828,426	55.9%	653,023	44.1%
5	851,926	60.5%	556,975	39.5%
6	1,016,114	68.4%	469,106	31.6%
7	1,132,528	73.0%	418,860	27.0%
8	1,251,274	76.1%	394,020	23.9%
9	705,117	47.6%	777,377	52.4%
10	914,105	68.5%	420,349	31.5%
11	770,214	53.9%	657,708	46.1%
12	802,043	49.1%	830,837	50.9%
13	938,950	53.6%	814,031	46.4%
14	860,212	55.1%	701,929	44.9%
15	1,087,019	70.8%	448,037	29.2%
16	605,886	41.9%	839,809	58.1%
17	503,371	38.4%	806,208	61.6%
18	577,925	40.3%	855,830	59.7%
19	857,354	56.6%	656,945	43.4%
20	580,817	41.0%	834,128	59.0%
21	873,298	58.3%	623,609	41.7%
22	632,830	38.5%	1,012,216	61.5%
23	678,270	41.9%	941,820	58.1%
24	591,273	36.7%	1,021,738	63.3%
25	570,630	38.9%	894,868	61.1%
26	694,054	44.6%	861,687	55.4%
27	948,759	66.1%	485,590	33.9%
28	822,315	55.5%	659,345	44.5%
29	742,769	58.4%	530,176	41.6%
30	705,493	46.3%	818,997	53.7%
31	532,144	34.5%	1,009,913	65.5%
32	717,007	50.2%	710,001	49.8%
33	494,983	36.2%	873,196	63.8%
34	569,367	41.5%	802,097	58.5%
35	832,714	53.1%	734,835	46.9%
36	618,130	37.9%	1,010,985	62.1%
37	736,347	43.2%	969,123	56.8%
38	691,811	45.7%	823,414	54.3%



Michigan State House Districts

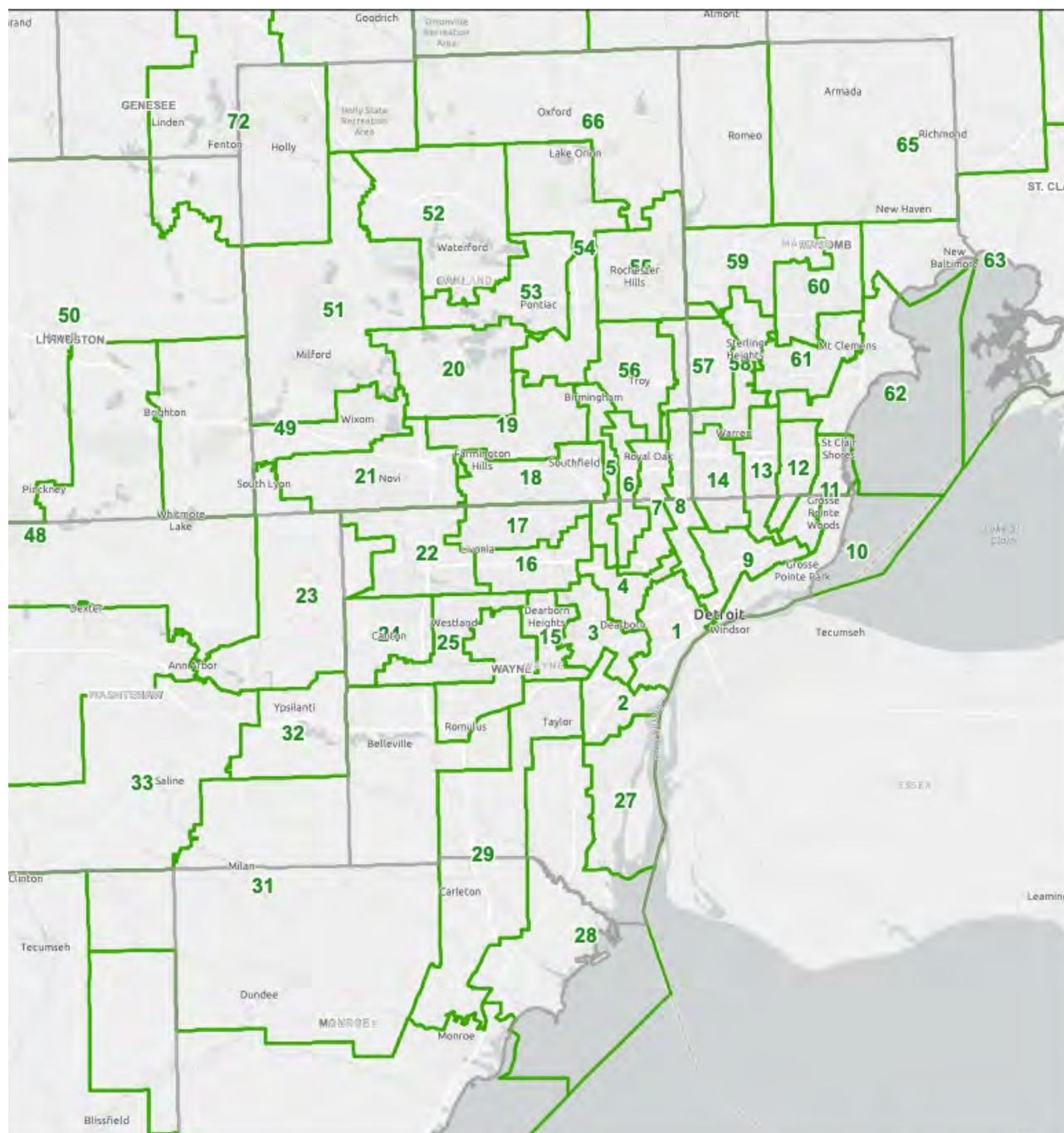
The Michigan Independent Citizen’s Redistricting Commission approved the following map and district boundaries for the 110 state house districts.

Legal Description & Interactive Map



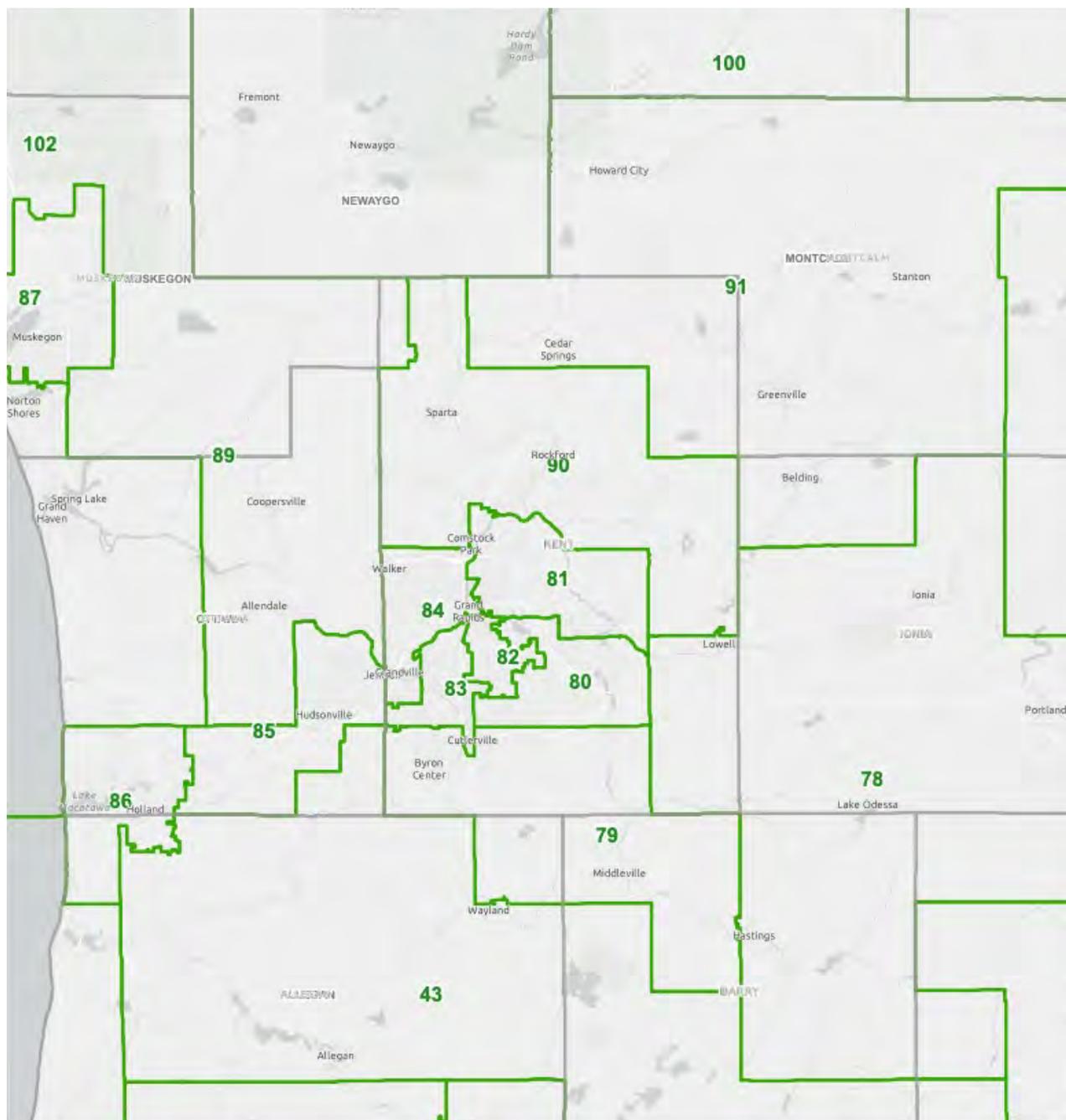


METRO DETROIT





GREATER GRAND RAPIDS





POPULATION

“(a) Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

The Michigan Independent Citizens Redistricting Commission sought and relied on legal counsel and expert advice in order to draw plans that complied with the requirements of the United States constitution, the Voting Rights Act and other federal laws. Material reflecting that counsel and advice is accessible on the Commission’s website.

Meeting Notices & Materials

Meeting Notices & Materials Archives

Mapping Data



POPULATION

DISTRICT	Total Population				Racial Demographics as Percent of Total Population					Voting Age Population		Racial Demographics as Percent of Voting Population				
	All Person	Target	Dev.	Difference	NH White	NH Black	NH Asian	Hispanic	Minority	VAP	% of Total	NH White	NH Black	NH Asian	Hispanic	Minority
1	91,856	91,612	0.27%✓	244	16.79%	35.26%	0.33%	43.92%	83.21%	65,520	71.3%	18.67%	38.03%	0.38%	39.49%	81.33%
2	89,622	91,612	-2.17%✓	-1,990	63.27%	11.54%	1.13%	18.58%	36.73%	69,719	77.8%	67.61%	11.04%	1.21%	15.61%	32.39%
3	93,531	91,612	2.09%✓	1,919	51.18%	33.31%	2.34%	8.21%	48.82%	66,030	70.6%	52.34%	32.82%	2.77%	7.64%	47.66%
4	90,903	91,612	-0.77%✓	-709	41.08%	52.65%	0.47%	1.72%	58.92%	64,833	71.3%	38.61%	55.60%	0.50%	1.61%	61.39%
5	92,744	91,612	1.24%✓	1,132	36.68%	55.87%	1.53%	1.96%	63.32%	71,629	77.2%	38.11%	55.31%	1.55%	1.70%	61.89%
6	93,629	91,612	2.20%✓	2,017	36.10%	56.66%	1.15%	2.03%	63.90%	73,324	78.3%	38.54%	54.93%	1.31%	1.79%	61.46%
7	92,948	91,612	1.46%✓	1,336	44.28%	46.93%	1.51%	2.80%	55.72%	75,856	81.6%	47.68%	44.29%	1.71%	2.52%	52.32%
8	92,670	91,612	1.15%✓	1,058	41.68%	45.73%	4.16%	2.96%	58.32%	76,299	82.3%	44.50%	43.70%	4.57%	2.61%	55.50%
9	90,818	91,612	-0.87%✓	-794	28.46%	50.05%	15.19%	1.57%	71.54%	66,200	72.9%	28.03%	51.65%	14.68%	1.48%	71.97%
10	90,534	91,612	-1.18%✓	-1,078	53.11%	38.14%	2.08%	2.77%	46.89%	74,475	82.3%	53.31%	38.79%	2.32%	2.35%	46.69%
11	91,145	91,612	-0.51%✓	-467	46.16%	46.82%	0.80%	2.19%	53.84%	70,700	77.6%	51.18%	42.82%	0.93%	1.82%	48.82%
12	90,630	91,612	-1.07%✓	-982	45.97%	44.46%	1.33%	2.45%	54.03%	68,955	76.1%	51.03%	40.99%	1.28%	2.08%	48.97%
13	90,393	91,612	-1.33%✓	-1,219	47.56%	41.39%	4.11%	2.17%	52.44%	69,812	77.2%	52.03%	38.36%	3.91%	1.89%	47.97%
14	90,555	91,612	-1.15%✓	-1,057	38.99%	43.39%	10.11%	2.45%	61.01%	69,140	76.4%	43.17%	41.11%	9.31%	2.14%	56.83%
15	92,301	91,612	0.75%✓	689	80.88%	7.49%	1.72%	5.23%	19.12%	69,652	75.5%	82.15%	7.18%	1.87%	4.70%	17.85%
16	93,035	91,612	1.55%✓	1,423	34.88%	56.88%	0.94%	2.87%	65.12%	72,066	77.5%	38.03%	54.92%	1.02%	2.44%	61.97%
17	90,737	91,612	-0.96%✓	-875	45.56%	44.57%	1.80%	3.10%	54.44%	71,354	78.6%	48.90%	42.43%	1.94%	2.64%	51.10%
18	92,169	91,612	0.61%✓	557	36.50%	52.03%	4.21%	2.71%	63.50%	75,714	82.1%	37.44%	52.16%	4.12%	2.40%	62.56%
19	90,931	91,612	-0.74%✓	-681	60.63%	24.62%	7.86%	2.80%	39.37%	72,930	80.2%	61.39%	25.11%	8.00%	2.34%	38.61%
20	93,017	91,612	1.53%✓	1,405	75.60%	10.28%	7.26%	2.68%	24.40%	74,684	80.3%	76.81%	10.20%	7.42%	2.25%	23.19%
21	93,876	91,612	2.47%✓	2,264	57.07%	7.60%	27.76%	3.48%	42.93%	71,599	76.3%	59.96%	7.89%	26.00%	3.07%	40.04%
22	91,654	91,612	0.05%✓	42	85.05%	2.23%	5.67%	3.19%	14.95%	75,487	82.4%	86.64%	2.24%	5.33%	2.74%	13.36%
23	90,719	91,612	-0.97%✓	-893	70.61%	4.68%	14.87%	4.41%	29.39%	76,266	84.1%	71.65%	4.78%	14.75%	4.14%	28.35%
24	91,480	91,612	-0.14%✓	-132	61.18%	10.03%	20.19%	3.69%	38.82%	69,996	76.5%	63.53%	9.84%	19.60%	3.29%	36.47%
25	90,562	91,612	-1.15%✓	-1,050	64.13%	20.53%	4.87%	4.47%	35.87%	73,216	80.8%	66.72%	19.62%	4.96%	3.82%	33.28%
26	91,723	91,612	0.12%✓	111	50.52%	37.86%	1.05%	4.20%	49.48%	70,678	77.1%	54.11%	35.82%	1.14%	3.61%	45.89%
27	90,457	91,612	-1.26%✓	-1,155	84.33%	3.05%	1.18%	6.36%	15.67%	73,737	81.5%	86.29%	2.93%	1.21%	5.34%	13.71%
28	91,598	91,612	-0.02%✓	-14	74.98%	9.75%	3.36%	6.24%	25.02%	71,385	77.9%	77.44%	9.14%	3.23%	5.36%	22.56%
29	92,583	91,612	1.06%✓	971	72.48%	13.37%	1.38%	6.68%	27.52%	72,381	78.2%	76.05%	11.83%	1.40%	5.62%	23.95%
30	93,460	91,612	2.02%✓	1,848	87.42%	2.57%	0.64%	4.06%	12.58%	73,606	78.8%	89.60%	2.30%	0.67%	3.21%	10.40%
31	92,978	91,612	1.49%✓	1,366	72.74%	16.00%	1.27%	4.03%	27.26%	73,558	79.1%	74.55%	15.72%	1.28%	3.54%	25.45%
32	92,092	91,612	0.52%✓	480	53.20%	28.29%	3.69%	7.17%	46.80%	73,449	79.8%	57.13%	26.46%	3.89%	6.21%	42.87%
33	92,730	91,612	1.22%✓	1,118	68.50%	7.94%	11.52%	5.90%	31.50%	74,822	80.7%	70.65%	7.76%	11.65%	5.23%	29.35%
34	92,371	91,612	0.83%✓	759	83.11%	2.61%	0.48%	8.88%	16.89%	73,142	79.2%	85.26%	2.88%	0.49%	7.27%	14.74%
35	93,023	91,612	1.54%✓	1,411	89.55%	1.44%	0.48%	4.20%	10.45%	71,335	76.7%	90.73%	1.66%	0.49%	3.29%	9.27%
36	89,634	91,612	-2.16%✓	-1,978	84.12%	2.73%	0.69%	7.00%	15.88%	68,621	76.6%	86.65%	2.74%	0.72%	5.44%	13.35%
37	91,456	91,612	-0.17%✓	-156	78.38%	6.26%	1.89%	6.54%	21.62%	71,787	78.5%	81.10%	6.19%	2.00%	5.18%	18.90%
38	93,422	91,612	1.98%✓	1,810	67.57%	19.03%	1.75%	6.63%	32.43%	73,770	79.0%	72.12%	16.97%	1.68%	5.18%	27.88%
39	90,270	91,612	-1.46%✓	-1,342	81.17%	1.69%	0.44%	10.74%	18.83%	69,482	77.0%	84.59%	1.69%	0.45%	8.20%	15.41%
40	90,211	91,612	-1.53%✓	-1,401	77.97%	7.16%	4.56%	4.57%	22.03%	69,763	77.3%	80.75%	6.74%	4.45%	3.86%	19.25%



POPULATION

DISTRICT	Total Population				Racial Demographics as Percent of Total Population					Voting Age Population		Racial Demographics as Percent of Voting Population				
	All Person	Target	Dev.	Difference	NH White	NH Black	NH Asian	Hispanic	Minority	VAP	% of Total	NH White	NH Black	NH Asian	Hispanic	Minority
41	91,872	91,612	0.28%✓	260	59.50%	21.99%	2.17%	8.66%	40.50%	72,876	79.3%	64.54%	19.61%	2.54%	7.40%	35.46%
42	91,192	91,612	-0.46%✓	-420	86.29%	3.44%	1.09%	3.41%	13.71%	70,454	77.3%	88.31%	3.13%	1.11%	2.69%	11.69%
43	92,518	91,612	0.99%✓	906	88.43%	0.80%	0.52%	5.52%	11.57%	70,016	75.7%	90.34%	0.65%	0.51%	4.58%	9.66%
44	89,974	91,612	-1.79%✓	-1,638	67.40%	15.11%	3.76%	6.67%	32.60%	68,782	76.4%	71.48%	14.34%	3.39%	5.53%	28.52%
45	90,612	91,612	-1.09%✓	-1,000	90.40%	1.29%	0.55%	3.08%	9.60%	71,054	78.4%	92.00%	1.14%	0.54%	2.48%	8.00%
46	91,041	91,612	-0.62%✓	-571	75.41%	12.23%	1.26%	4.62%	24.59%	71,551	78.6%	78.41%	12.17%	1.26%	3.54%	21.59%
47	91,302	91,612	-0.34%✓	-310	82.97%	3.10%	3.93%	4.17%	17.03%	73,378	80.4%	84.80%	3.07%	4.17%	3.43%	15.20%
48	92,373	91,612	0.83%✓	761	83.36%	1.79%	6.90%	3.00%	16.64%	74,656	80.8%	84.30%	1.79%	7.25%	2.56%	15.70%
49	93,247	91,612	1.78%✓	1,635	81.32%	5.78%	4.20%	4.03%	18.68%	74,267	79.6%	82.78%	5.82%	4.14%	3.38%	17.22%
50	93,139	91,612	1.67%✓	1,527	91.14%	0.44%	0.72%	3.01%	8.86%	72,160	77.5%	92.28%	0.44%	0.77%	2.54%	7.72%
51	91,507	91,612	-0.11%✓	-105	89.00%	1.30%	1.29%	3.41%	11.00%	72,488	79.2%	90.44%	1.25%	1.35%	2.70%	9.56%
52	91,098	91,612	-0.56%✓	-514	84.95%	2.75%	1.63%	5.77%	15.05%	72,818	79.9%	86.85%	2.66%	1.63%	4.81%	13.15%
53	93,056	91,612	1.58%✓	1,444	40.81%	33.94%	2.28%	17.60%	59.19%	71,476	76.8%	46.05%	32.59%	2.35%	14.72%	53.95%
54	92,949	91,612	1.46%✓	1,337	73.66%	6.77%	9.52%	5.16%	26.34%	73,853	79.5%	75.32%	6.95%	9.54%	4.33%	24.68%
55	91,805	91,612	0.21%✓	193	73.68%	3.41%	13.74%	4.69%	26.32%	71,848	78.3%	75.98%	3.51%	13.12%	3.98%	24.02%
56	90,410	91,612	-1.31%✓	-1,202	67.73%	3.39%	21.41%	3.38%	32.27%	71,737	79.3%	70.93%	3.44%	19.61%	2.94%	29.07%
57	89,693	91,612	-2.09%✓	-1,919	74.61%	5.19%	13.76%	2.60%	25.39%	71,864	80.1%	76.21%	4.89%	13.48%	2.27%	23.79%
58	90,454	91,612	-1.26%✓	-1,158	78.17%	8.23%	6.25%	2.72%	21.83%	73,423	81.2%	79.90%	7.86%	6.07%	2.41%	20.10%
59	89,336	91,612	-2.48%✓	-2,276	86.97%	2.68%	3.69%	2.91%	13.03%	70,271	78.7%	88.36%	2.58%	3.58%	2.50%	11.64%
60	92,742	91,612	1.23%✓	1,130	81.65%	7.23%	3.47%	3.23%	18.35%	72,453	78.1%	83.34%	7.08%	3.47%	2.69%	16.66%
61	93,156	91,612	1.69%✓	1,544	73.83%	15.25%	2.72%	3.08%	26.17%	75,006	80.5%	77.01%	13.83%	2.69%	2.52%	22.99%
62	90,539	91,612	-1.17%✓	-1,073	77.07%	13.35%	1.44%	2.83%	22.93%	74,114	81.9%	79.79%	12.07%	1.47%	2.35%	20.21%
63	90,638	91,612	-1.06%✓	-974	88.69%	3.12%	0.74%	2.65%	11.31%	72,589	80.1%	90.27%	2.86%	0.79%	2.13%	9.73%
64	91,060	91,612	-0.60%✓	-552	85.90%	3.78%	0.61%	4.08%	14.10%	71,638	78.7%	88.31%	3.56%	0.65%	3.30%	11.69%
65	92,892	91,612	1.40%✓	1,280	87.96%	2.29%	0.36%	5.03%	12.04%	73,184	78.8%	89.40%	2.39%	0.36%	4.12%	10.60%
66	93,014	91,612	1.53%✓	1,402	88.17%	1.18%	1.61%	4.41%	11.83%	71,767	77.2%	89.95%	1.10%	1.61%	3.59%	10.05%
67	92,816	91,612	1.31%✓	1,204	87.35%	3.28%	0.42%	3.56%	12.65%	73,721	79.4%	88.89%	3.28%	0.41%	2.70%	11.11%
68	93,065	91,612	1.59%✓	1,453	82.34%	6.24%	1.74%	4.12%	17.66%	73,273	78.7%	84.24%	6.00%	1.78%	3.37%	15.76%
69	91,698	91,612	0.09%✓	86	68.76%	21.07%	0.85%	3.62%	31.24%	71,476	77.9%	71.44%	19.84%	0.88%	3.15%	28.56%
70	90,738	91,612	-0.95%✓	-874	36.26%	51.87%	0.51%	4.87%	63.74%	68,117	75.1%	39.89%	50.13%	0.59%	4.37%	60.11%
71	91,966	91,612	0.39%✓	354	91.17%	0.69%	0.43%	3.06%	8.83%	72,963	79.3%	92.41%	0.64%	0.42%	2.51%	7.59%
72	92,844	91,612	1.34%✓	1,232	85.21%	4.89%	1.27%	3.55%	14.79%	72,890	78.5%	86.72%	4.79%	1.31%	2.88%	13.28%
73	91,543	91,612	-0.08%✓	-69	77.71%	5.83%	7.53%	4.34%	22.29%	75,397	82.4%	78.57%	6.50%	7.50%	3.80%	21.43%
74	90,782	91,612	-0.91%✓	-830	58.79%	18.25%	4.34%	11.02%	41.21%	70,233	77.4%	63.43%	17.05%	4.27%	9.39%	36.57%
75	93,554	91,612	2.12%✓	1,942	79.32%	4.35%	5.90%	5.12%	20.68%	75,207	80.4%	81.08%	4.26%	6.12%	4.27%	18.92%
76	92,354	91,612	0.81%✓	742	78.11%	7.92%	2.58%	6.26%	21.89%	73,043	79.1%	80.63%	7.67%	2.44%	5.18%	19.37%
77	92,594	91,612	1.07%✓	982	69.49%	11.08%	2.11%	10.61%	30.51%	72,106	77.9%	73.16%	10.25%	2.18%	9.15%	26.84%
78	92,264	91,612	0.71%✓	652	87.59%	3.62%	0.42%	4.31%	12.41%	71,687	77.7%	88.34%	4.48%	0.43%	3.47%	11.66%
79	90,952	91,612	-0.72%✓	-660	82.38%	4.41%	3.55%	5.05%	17.62%	67,213	73.9%	84.66%	4.13%	3.49%	4.15%	15.34%
80	92,350	91,612	0.81%✓	738	67.22%	12.08%	8.14%	7.64%	32.78%	69,344	75.1%	70.96%	11.28%	7.94%	6.32%	29.04%



POPULATION

DISTRICT	Total Population				Racial Demographics as Percent of Total Population					Voting Age Population		Racial Demographics as Percent of Voting Population				
	All Persons	Target	Dev.	Difference	NH White	NH Black	NH Asian	Hispanic	Minority	VAP	% of Total	NH White	NH Black	NH Asian	Hispanic	Minority
81	91,516	91,612	-0.10%	-96	78.37%	7.75%	3.19%	5.49%	21.63%	71,975	78.6%	81.42%	7.03%	3.06%	4.63%	18.58%
82	91,219	91,612	-0.43%	-393	49.92%	26.76%	3.33%	14.62%	50.08%	70,814	77.6%	55.75%	24.58%	3.37%	12.03%	44.25%
83	91,341	91,612	-0.30%	-271	51.58%	9.19%	2.73%	31.56%	48.42%	67,461	73.9%	57.46%	8.69%	2.98%	26.96%	42.54%
84	91,890	91,612	0.30%	278	75.14%	6.21%	1.83%	11.25%	24.86%	73,379	79.9%	79.03%	5.36%	1.91%	9.31%	20.97%
85	90,127	91,612	-1.62%	-1,485	87.14%	1.21%	2.12%	5.70%	12.86%	66,158	73.4%	89.34%	1.11%	2.16%	4.64%	10.66%
86	90,575	91,612	-1.13%	-1,037	66.02%	2.62%	5.08%	22.19%	33.98%	70,221	77.5%	70.69%	2.33%	5.13%	18.69%	29.31%
87	91,376	91,612	-0.26%	-236	61.91%	24.21%	0.50%	6.83%	38.09%	70,829	77.5%	65.83%	22.94%	0.53%	5.55%	34.17%
88	90,900	91,612	-0.78%	-712	87.81%	1.47%	1.42%	4.62%	12.19%	71,051	78.2%	89.90%	1.37%	1.37%	3.68%	10.10%
89	93,134	91,612	1.66%	1,522	86.99%	1.96%	0.82%	5.55%	13.01%	71,969	77.3%	88.55%	2.04%	0.89%	4.58%	11.45%
90	91,549	91,612	-0.07%	-63	87.20%	1.60%	0.91%	5.69%	12.80%	68,467	74.8%	89.55%	1.47%	0.89%	4.50%	10.45%
91	91,350	91,612	-0.29%	-262	90.75%	0.53%	0.38%	3.79%	9.25%	70,036	76.7%	92.31%	0.44%	0.38%	3.02%	7.69%
92	92,520	91,612	0.99%	908	81.45%	4.58%	1.37%	5.84%	18.55%	73,959	79.9%	82.92%	5.11%	1.41%	4.77%	17.08%
93	89,410	91,612	-2.40%	-2,202	86.47%	3.80%	1.18%	5.25%	13.53%	72,182	80.7%	87.40%	4.20%	1.17%	4.50%	12.60%
94	90,438	91,612	-1.28%	-1,174	46.40%	33.75%	1.24%	13.25%	53.60%	69,020	76.3%	51.34%	31.92%	1.29%	11.32%	48.66%
95	91,439	91,612	-0.19%	-173	88.86%	1.05%	1.89%	3.11%	11.14%	71,873	78.6%	90.46%	1.01%	1.85%	2.48%	9.54%
96	90,544	91,612	-1.17%	-1,068	86.81%	1.69%	0.55%	6.14%	13.19%	72,724	80.3%	89.24%	1.54%	0.58%	4.84%	10.76%
97	93,159	91,612	1.69%	1,547	88.85%	2.28%	0.49%	4.03%	11.15%	73,355	78.7%	90.17%	2.33%	0.49%	3.30%	9.83%
98	92,049	91,612	0.48%	437	92.62%	0.32%	0.29%	3.35%	7.38%	72,801	79.1%	93.77%	0.31%	0.29%	2.76%	6.23%
99	89,375	91,612	-2.44%	-2,237	92.86%	0.38%	0.35%	2.09%	7.14%	72,792	81.4%	93.81%	0.34%	0.36%	1.64%	6.19%
100	91,751	91,612	0.15%	139	91.21%	1.17%	0.45%	2.19%	8.79%	72,641	79.2%	92.09%	1.15%	0.50%	1.89%	7.91%
101	92,604	91,612	1.08%	992	87.51%	1.49%	0.45%	5.48%	12.49%	72,534	78.3%	88.89%	1.50%	0.45%	4.81%	11.11%
102	91,886	91,612	0.30%	274	85.43%	1.22%	0.40%	7.30%	14.57%	72,924	79.4%	87.83%	1.25%	0.40%	5.68%	12.17%
103	93,426	91,612	1.98%	1,814	89.71%	0.53%	0.79%	3.36%	10.29%	76,458	81.8%	91.48%	0.46%	0.73%	2.69%	8.52%
104	89,466	91,612	-2.34%	-2,146	91.28%	0.35%	0.44%	2.58%	8.72%	71,871	80.3%	92.68%	0.30%	0.46%	1.96%	7.32%
105	89,541	91,612	-2.26%	-2,071	92.67%	0.32%	0.32%	2.12%	7.33%	72,736	81.2%	93.86%	0.28%	0.33%	1.56%	6.14%
106	90,875	91,612	-0.80%	-737	92.66%	0.27%	0.31%	1.34%	7.34%	75,466	83.0%	93.74%	0.22%	0.32%	1.05%	6.26%
107	92,701	91,612	1.19%	1,089	83.30%	1.24%	0.52%	1.77%	16.70%	75,875	81.8%	85.31%	1.39%	0.48%	1.42%	14.69%
108	89,366	91,612	-2.45%	-2,246	85.05%	2.21%	0.34%	1.69%	14.95%	72,443	81.1%	87.00%	2.62%	0.36%	1.25%	13.00%
109	89,410	91,612	-2.40%	-2,202	87.41%	2.21%	0.51%	1.84%	12.59%	73,187	81.9%	88.58%	2.58%	0.53%	1.63%	11.42%
110	90,788	91,612	-0.90%	-824	91.64%	0.48%	1.19%	1.70%	8.36%	74,036	81.5%	92.71%	0.46%	1.25%	1.41%	7.29%
Assigned	10077331															
Total Pop	10077331															
Unassigned	0															



PARTISAN FAIRNESS

(d) Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.

The Michigan Independent Citizen’s Redistricting Commission evaluated partisan fairness using four mathematical models. The adopted map did not provide ‘disproportionate advantage’ to any political party under any of the models used to measure partisan fairness.

Lopsided Margins

Average Winning Margin	Dem	64.5%
	Rep	59.2%

Finding	
Rep	Districts have a lopsided margin advantage of 5.3%

DISTRICT	Party		Total Votes	Percent Votes		Party Wins	
	Dem	Rep		Dem	Rep	Dem	Rep
1	258,502	20,654	279,156	92.6%	7.4%	92.6%	
2	261,320	174,928	436,248	59.9%	40.1%	59.9%	
3	265,267	72,758	338,025	78.5%	21.5%	78.5%	
4	328,745	19,885	348,630	94.3%	5.7%	94.3%	
5	438,662	126,246	564,908	77.7%	22.3%	77.7%	
6	470,863	102,192	573,055	82.2%	17.8%	82.2%	
7	463,517	102,015	565,532	82.0%	18.0%	82.0%	
8	341,385	88,387	429,772	79.4%	20.6%	79.4%	
9	311,310	17,291	328,601	94.7%	5.3%	94.7%	
10	366,472	198,627	565,099	64.9%	35.1%	64.9%	
11	353,187	168,158	521,345	67.7%	32.3%	67.7%	
12	313,082	125,555	438,637	71.4%	28.6%	71.4%	
13	303,076	144,266	447,342	67.8%	32.2%	67.8%	
14	306,099	104,625	410,724	74.5%	25.5%	74.5%	
15	270,884	173,183	444,067	61.0%	39.0%	61.0%	
16	405,317	123,360	528,677	76.7%	23.3%	76.7%	
17	334,631	153,279	487,910	68.6%	31.4%	68.6%	
18	491,476	126,756	618,232	79.5%	20.5%	79.5%	
19	412,797	235,189	647,986	63.7%	36.3%	63.7%	
20	349,902	284,833	634,735	55.1%	44.9%	55.1%	
21	259,240	241,843	501,083	51.7%	48.3%	51.7%	
22	309,321	339,589	648,910	47.7%	52.3%		52.3%
23	291,695	187,546	479,241	60.9%	39.1%	60.9%	
24	305,861	223,265	529,126	57.8%	42.2%	57.8%	
25	275,148	168,470	443,618	62.0%	38.0%	62.0%	



Lopsided Margins

DISTRICT	Party		Total Votes	Percent Votes		Party Wins	
	Dem	Rep		Dem	Rep	Dem	Rep
26	312,525	129,982	442,507	70.6%	29.4%	70.6%	
27	281,073	271,239	552,312	50.9%	49.1%	50.9%	
28	251,831	229,455	481,286	52.3%	47.7%	52.3%	
29	238,070	218,638	456,708	52.1%	47.9%	52.1%	
30	230,506	290,674	521,180	44.2%	55.8%		55.8%
31	275,393	235,646	511,039	53.9%	46.1%	53.9%	
32	360,998	108,735	469,733	76.9%	23.1%	76.9%	
33	420,621	167,901	588,522	71.5%	28.5%	71.5%	
34	214,429	277,077	491,506	43.6%	56.4%		56.4%
35	143,815	295,685	439,500	32.7%	67.3%		67.3%
36	153,719	264,662	418,381	36.7%	63.3%		63.3%
37	179,718	274,797	454,515	39.5%	60.5%		60.5%
38	285,580	266,034	551,614	51.8%	48.2%	51.8%	
39	189,211	264,591	453,802	41.7%	58.3%		58.3%
40	297,007	253,141	550,148	54.0%	46.0%	54.0%	
41	318,040	108,655	426,695	74.5%	25.5%	74.5%	
42	246,225	295,466	541,691	45.5%	54.5%		54.5%
43	160,976	348,109	509,085	31.6%	68.4%		68.4%
44	217,430	200,803	418,233	52.0%	48.0%	52.0%	
45	189,025	329,707	518,732	36.4%	63.6%		63.6%
46	215,370	200,283	415,653	51.8%	48.2%	51.8%	
47	382,546	238,809	621,355	61.6%	38.4%	61.6%	
48	312,504	306,850	619,354	50.5%	49.5%	50.5%	
49	239,660	309,345	549,005	43.7%	56.3%		56.3%
50	196,227	359,878	556,105	35.3%	64.7%		64.7%
51	229,955	363,093	593,048	38.8%	61.2%		61.2%
52	239,488	344,546	584,034	41.0%	59.0%		59.0%
53	287,443	121,241	408,684	70.3%	29.7%	70.3%	
54	267,126	309,291	576,417	46.3%	53.7%		53.7%
55	267,990	306,710	574,700	46.6%	53.4%		53.4%
56	291,476	264,875	556,351	52.4%	47.6%	52.4%	
57	215,912	228,973	444,885	48.5%	51.5%		51.5%
58	239,623	242,137	481,760	49.7%	50.3%		50.3%
59	201,755	333,786	535,541	37.7%	62.3%		62.3%
60	234,995	299,708	534,703	43.9%	56.1%		56.1%
61	271,563	250,509	522,072	52.0%	48.0%	52.0%	
62	273,649	273,005	546,654	50.1%	49.9%	50.1%	
63	214,269	325,099	539,368	39.7%	60.3%		60.3%
64	217,142	262,173	479,315	45.3%	54.7%		54.7%
65	183,403	351,999	535,402	34.3%	65.7%		65.7%



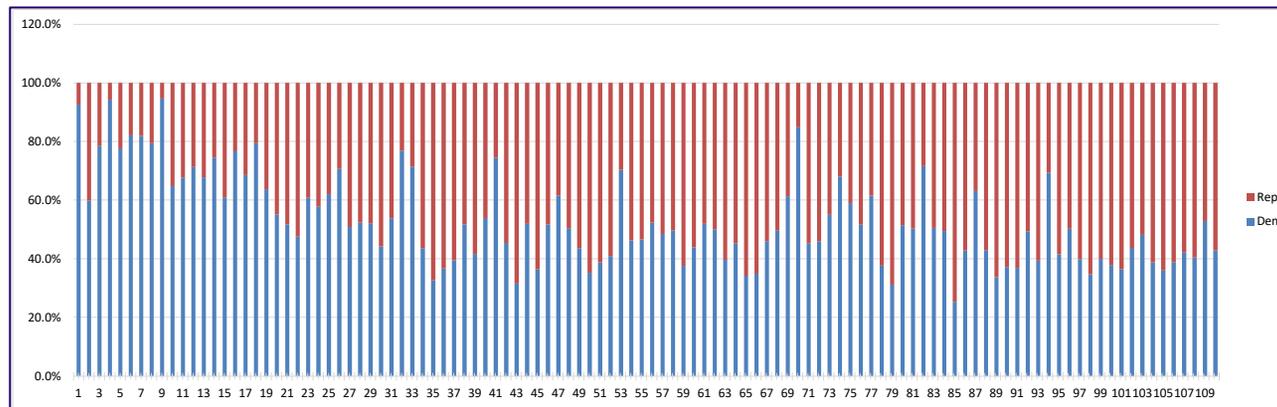
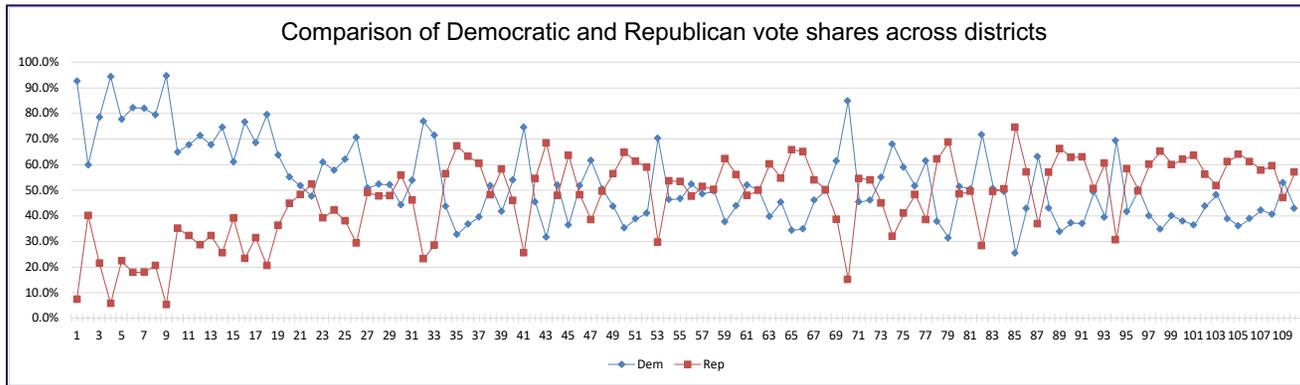
Lopsided Margins

DISTRICT	Party		Total Votes	Percent Votes		Party Wins	
	Dem	Rep		Dem	Rep	Dem	Rep
66	202,864	377,939	580,803	34.9%	65.1%		65.1%
67	250,917	293,559	544,476	46.1%	53.9%		53.9%
68	276,355	278,227	554,582	49.8%	50.2%		50.2%
69	323,172	203,120	526,292	61.4%	38.6%	61.4%	
70	374,227	66,491	440,718	84.9%	15.1%	84.9%	
71	251,023	301,954	552,977	45.4%	54.6%		54.6%
72	260,583	305,018	565,601	46.1%	53.9%		53.9%
73	262,680	214,960	477,640	55.0%	45.0%	55.0%	
74	326,911	154,066	480,977	68.0%	32.0%	68.0%	
75	327,413	227,885	555,298	59.0%	41.0%	59.0%	
76	292,290	273,022	565,312	51.7%	48.3%	51.7%	
77	322,455	201,503	523,958	61.5%	38.5%	61.5%	
78	177,054	291,695	468,749	37.8%	62.2%		62.2%
79	160,508	353,131	513,639	31.2%	68.8%		68.8%
80	275,659	259,938	535,597	51.5%	48.5%	51.5%	
81	285,844	281,219	567,063	50.4%	49.6%	50.4%	
82	312,114	123,420	435,534	71.7%	28.3%	71.7%	
83	187,012	182,812	369,824	50.6%	49.4%	50.6%	
84	243,716	249,048	492,764	49.5%	50.5%		50.5%
85	138,039	405,083	543,122	25.4%	74.6%		74.6%
86	203,770	270,959	474,729	42.9%	57.1%		57.1%
87	268,142	156,618	424,760	63.1%	36.9%	63.1%	
88	245,387	325,594	570,981	43.0%	57.0%		57.0%
89	154,660	302,784	457,444	33.8%	66.2%		66.2%
90	207,162	349,053	556,215	37.2%	62.8%		62.8%
91	171,026	291,337	462,363	37.0%	63.0%		63.0%
92	203,368	208,285	411,653	49.4%	50.6%		50.6%
93	206,155	316,588	522,743	39.4%	60.6%		60.6%
94	336,647	148,685	485,332	69.4%	30.6%	69.4%	
95	227,166	319,003	546,169	41.6%	58.4%		58.4%
96	274,622	271,760	546,382	50.3%	49.7%	50.3%	
97	217,116	326,656	543,772	39.9%	60.1%		60.1%
98	180,381	338,681	519,062	34.8%	65.2%		65.2%
99	209,769	314,549	524,318	40.0%	60.0%		60.0%
100	182,482	298,484	480,966	37.9%	62.1%		62.1%
101	177,978	310,629	488,607	36.4%	63.6%		63.6%
102	230,242	295,320	525,562	43.8%	56.2%		56.2%
103	314,152	337,962	652,114	48.2%	51.8%		51.8%
104	218,901	344,830	563,731	38.8%	61.2%		61.2%
105	194,704	345,949	540,653	36.0%	64.0%		64.0%



Lopsided Margins

DISTRICT	Party		Total Votes	Percent Votes		Party Wins	
	Dem	Rep		Dem	Rep	Dem	Rep
106	223,939	351,534	575,473	38.9%	61.1%		61.1%
107	246,137	337,553	583,690	42.2%	57.8%		57.8%
108	202,307	297,105	499,412	40.5%	59.5%		59.5%
109	275,060	244,621	519,681	52.9%	47.1%	52.9%	
110	220,366	293,600	513,966	42.9%	57.1%		57.1%





Mean-Median Difference

District Median Percentage	Dem	50.3%
	Rep	49.7%
Statewide mean percentage	Dem	53.1%
	Rep	46.9%
Mean-Median Difference	Dem	2.7%
	Rep	-2.7%

Findings	
Rep	Districts have a mean-median advantage of 2.7%

DISTRICT	Party		DISTRICT	Party		DISTRICT	Party		DISTRICT	Party	
	Dem	Rep									
1	92.6%	7.4%	31	53.9%	46.1%	61	52.0%	48.0%	91	37.0%	63.0%
2	59.9%	40.1%	32	76.9%	23.1%	62	50.1%	49.9%	92	49.4%	50.6%
3	78.5%	21.5%	33	71.5%	28.5%	63	39.7%	60.3%	93	39.4%	60.6%
4	94.3%	5.7%	34	43.6%	56.4%	64	45.3%	54.7%	94	69.4%	30.6%
5	77.7%	22.3%	35	32.7%	67.3%	65	34.3%	65.7%	95	41.6%	58.4%
6	82.2%	17.8%	36	36.7%	63.3%	66	34.9%	65.1%	96	50.3%	49.7%
7	82.0%	18.0%	37	39.5%	60.5%	67	46.1%	53.9%	97	39.9%	60.1%
8	79.4%	20.6%	38	51.8%	48.2%	68	49.8%	50.2%	98	34.8%	65.2%
9	94.7%	5.3%	39	41.7%	58.3%	69	61.4%	38.6%	99	40.0%	60.0%
10	64.9%	35.1%	40	54.0%	46.0%	70	84.9%	15.1%	100	37.9%	62.1%
11	67.7%	32.3%	41	74.5%	25.5%	71	45.4%	54.6%	101	36.4%	63.6%
12	71.4%	28.6%	42	45.5%	54.5%	72	46.1%	53.9%	102	43.8%	56.2%
13	67.8%	32.2%	43	31.6%	68.4%	73	55.0%	45.0%	103	48.2%	51.8%
14	74.5%	25.5%	44	52.0%	48.0%	74	68.0%	32.0%	104	38.8%	61.2%
15	61.0%	39.0%	45	36.4%	63.6%	75	59.0%	41.0%	105	36.0%	64.0%
16	76.7%	23.3%	46	51.8%	48.2%	76	51.7%	48.3%	106	38.9%	61.1%
17	68.6%	31.4%	47	61.6%	38.4%	77	61.5%	38.5%	107	42.2%	57.8%
18	79.5%	20.5%	48	50.5%	49.5%	78	37.8%	62.2%	108	40.5%	59.5%
19	63.7%	36.3%	49	43.7%	56.3%	79	31.2%	68.8%	109	52.9%	47.1%
20	55.1%	44.9%	50	50.5%	49.5%	80	51.5%	48.5%	110	42.9%	57.1%
21	51.7%	48.3%	51	38.8%	61.2%	81	50.4%	49.6%			
22	47.7%	52.3%	52	41.0%	59.0%	82	71.7%	28.3%			
23	60.9%	39.1%	53	70.3%	29.7%	83	50.6%	49.4%			
24	57.8%	42.2%	54	46.3%	53.7%	84	49.5%	50.5%			
25	62.0%	38.0%	55	46.6%	53.4%	85	25.4%	74.6%			
26	70.6%	29.4%	56	52.4%	47.6%	86	42.9%	57.1%			
27	50.9%	49.1%	57	48.5%	51.5%	87	63.1%	36.9%			
28	52.3%	47.7%	58	49.7%	50.3%	88	43.0%	57.0%			
29	52.1%	47.9%	59	37.7%	62.3%	89	33.8%	66.2%			
30	44.2%	55.8%	60	43.9%	56.1%	90	37.2%	62.8%			



Efficiency Gap

Statewide % Wasted Votes	Total Wasted Votes		% Wasted Votes of Total Votes	
	Dem	Rep		
			15,201,004	27.16%
			12,782,476	22.84%

Finding	
Rep	Candidates have an efficiency gap advantage of 4.3%

DISTRICT	Party		Total Votes	Lost Votes		Minimum to win	Surplus Votes		Total Wasted Votes	
	Dem	Rep		Dem	Rep		Dem	Rep	Dem	Rep
1	258,502	20,654	279,156	0	20,654	139,578	118,924	0	118,924	20,654
2	261,320	174,928	436,248	0	174,928	218,124	43,196	0	43,196	174,928
3	265,267	72,758	338,025	0	72,758	169,013	96,255	0	96,255	72,758
4	328,745	19,885	348,630	0	19,885	174,315	154,430	0	154,430	19,885
5	438,662	126,246	564,908	0	126,246	282,454	156,208	0	156,208	126,246
6	470,863	102,192	573,055	0	102,192	286,528	184,336	0	184,336	102,192
7	463,517	102,015	565,532	0	102,015	282,766	180,751	0	180,751	102,015
8	341,385	88,387	429,772	0	88,387	214,886	126,499	0	126,499	88,387
9	311,310	17,291	328,601	0	17,291	164,301	147,010	0	147,010	17,291
10	366,472	198,627	565,099	0	198,627	282,550	83,923	0	83,923	198,627
11	353,187	168,158	521,345	0	168,158	260,673	92,515	0	92,515	168,158
12	313,082	125,555	438,637	0	125,555	219,319	93,764	0	93,764	125,555
13	303,076	144,266	447,342	0	144,266	223,671	79,405	0	79,405	144,266
14	306,099	104,625	410,724	0	104,625	205,362	100,737	0	100,737	104,625
15	270,884	173,183	444,067	0	173,183	222,034	48,851	0	48,851	173,183
16	405,317	123,360	528,677	0	123,360	264,339	140,979	0	140,979	123,360
17	334,631	153,279	487,910	0	153,279	243,955	90,676	0	90,676	153,279
18	491,476	126,756	618,232	0	126,756	309,116	182,360	0	182,360	126,756
19	412,797	235,189	647,986	0	235,189	323,993	88,804	0	88,804	235,189
20	349,902	284,833	634,735	0	284,833	317,368	32,535	0	32,535	284,833



Efficiency Gap

DISTRICT	Party		Total Votes	Lost Votes		Minimum to win	Surplus Votes		Total Wasted Votes	
	Dem	Rep		Dem	Rep		Dem	Rep	Dem	Rep
21	259,240	241,843	501,083	0	241,843	250,542	8,699	0	8,699	241,843
22	309,321	339,589	648,910	309,321	0	324,455	0	15,134	309,321	15,134
23	291,695	187,546	479,241	0	187,546	239,621	52,075	0	52,075	187,546
24	305,861	223,265	529,126	0	223,265	264,563	41,298	0	41,298	223,265
25	275,148	168,470	443,618	0	168,470	221,809	53,339	0	53,339	168,470
26	312,525	129,982	442,507	0	129,982	221,254	91,272	0	91,272	129,982
27	281,073	271,239	552,312	0	271,239	276,156	4,917	0	4,917	271,239
28	251,831	229,455	481,286	0	229,455	240,643	11,188	0	11,188	229,455
29	238,070	218,638	456,708	0	218,638	228,354	9,716	0	9,716	218,638
30	230,506	290,674	521,180	230,506	0	260,590	0	30,084	230,506	30,084
31	275,393	235,646	511,039	0	235,646	255,520	19,874	0	19,874	235,646
32	360,998	108,735	469,733	0	108,735	234,867	126,132	0	126,132	108,735
33	420,621	167,901	588,522	0	167,901	294,261	126,360	0	126,360	167,901
34	214,429	277,077	491,506	214,429	0	245,753	0	31,324	214,429	31,324
35	143,815	295,685	439,500	143,815	0	219,750	0	75,935	143,815	75,935
36	153,719	264,662	418,381	153,719	0	209,191	0	55,472	153,719	55,472
37	179,718	274,797	454,515	179,718	0	227,258	0	47,540	179,718	47,540
38	285,580	266,034	551,614	0	266,034	275,807	9,773	0	9,773	266,034
39	189,211	264,591	453,802	189,211	0	226,901	0	37,690	189,211	37,690
40	297,007	253,141	550,148	0	253,141	275,074	21,933	0	21,933	253,141
41	318,040	108,655	426,695	0	108,655	213,348	104,693	0	104,693	108,655
42	246,225	295,466	541,691	246,225	0	270,846	0	24,621	246,225	24,621
43	160,976	348,109	509,085	160,976	0	254,543	0	93,567	160,976	93,567
44	217,430	200,803	418,233	0	200,803	209,117	8,314	0	8,314	200,803
45	189,025	329,707	518,732	189,025	0	259,366	0	70,341	189,025	70,341
46	215,370	200,283	415,653	0	200,283	207,827	7,544	0	7,544	200,283
47	382,546	238,809	621,355	0	238,809	310,678	71,869	0	71,869	238,809
48	312,504	306,850	619,354	0	306,850	309,677	2,827	0	2,827	306,850
49	239,660	309,345	549,005	239,660	0	274,503	0	34,843	239,660	34,843
50	196,227	359,878	556,105	196,227	0	278,053	0	81,826	196,227	81,826



Efficiency Gap

DISTRICT	Party		Total Votes	Lost Votes		Minimum to win	Surplus Votes		Total Wasted Votes	
	Dem	Rep		Dem	Rep		Dem	Rep	Dem	Rep
51	229,955	363,093	593,048	229,955	0	296,524	0	66,569	229,955	66,569
52	239,488	344,546	584,034	239,488	0	292,017	0	52,529	239,488	52,529
53	287,443	121,241	408,684	0	121,241	204,342	83,101	0	83,101	121,241
54	267,126	309,291	576,417	267,126	0	288,209	0	21,083	267,126	21,083
55	267,990	306,710	574,700	267,990	0	287,350	0	19,360	267,990	19,360
56	291,476	264,875	556,351	0	264,875	278,176	13,301	0	13,301	264,875
57	215,912	228,973	444,885	215,912	0	222,443	0	6,531	215,912	6,531
58	239,623	242,137	481,760	239,623	0	240,880	0	1,257	239,623	1,257
59	201,755	333,786	535,541	201,755	0	267,771	0	66,016	201,755	66,016
60	234,995	299,708	534,703	234,995	0	267,352	0	32,357	234,995	32,357
61	271,563	250,509	522,072	0	250,509	261,036	10,527	0	10,527	250,509
62	273,649	273,005	546,654	0	273,005	273,327	322	0	322	273,005
63	214,269	325,099	539,368	214,269	0	269,684	0	55,415	214,269	55,415
64	217,142	262,173	479,315	217,142	0	239,658	0	22,516	217,142	22,516
65	183,403	351,999	535,402	183,403	0	267,701	0	84,298	183,403	84,298
66	202,864	377,939	580,803	202,864	0	290,402	0	87,538	202,864	87,538
67	250,917	293,559	544,476	250,917	0	272,238	0	21,321	250,917	21,321
68	276,355	278,227	554,582	276,355	0	277,291	0	936	276,355	936
69	323,172	203,120	526,292	0	203,120	263,146	60,026	0	60,026	203,120
70	374,227	66,491	440,718	0	66,491	220,359	153,868	0	153,868	66,491
71	251,023	301,954	552,977	251,023	0	276,489	0	25,466	251,023	25,466
72	260,583	305,018	565,601	260,583	0	282,801	0	22,218	260,583	22,218
73	262,680	214,960	477,640	0	214,960	238,820	23,860	0	23,860	214,960
74	326,911	154,066	480,977	0	154,066	240,489	86,423	0	86,423	154,066
75	327,413	227,885	555,298	0	227,885	277,649	49,764	0	49,764	227,885
76	292,290	273,022	565,312	0	273,022	282,656	9,634	0	9,634	273,022
77	322,455	201,503	523,958	0	201,503	261,979	60,476	0	60,476	201,503
78	177,054	291,695	468,749	177,054	0	234,375	0	57,321	177,054	57,321
79	160,508	353,131	513,639	160,508	0	256,820	0	96,312	160,508	96,312
80	275,659	259,938	535,597	0	259,938	267,799	7,861	0	7,861	259,938



Efficiency Gap

DISTRICT	Party		Total Votes	Lost Votes		Minimum to win	Surplus Votes		Total Wasted Votes	
	Dem	Rep		Dem	Rep		Dem	Rep	Dem	Rep
81	285,844	281,219	567,063	0	281,219	283,532	2,313	0	2,313	281,219
82	312,114	123,420	435,534	0	123,420	217,767	94,347	0	94,347	123,420
83	187,012	182,812	369,824	0	182,812	184,912	2,100	0	2,100	182,812
84	243,716	249,048	492,764	243,716	0	246,382	0	2,666	243,716	2,666
85	138,039	405,083	543,122	138,039	0	271,561	0	133,522	138,039	133,522
86	203,770	270,959	474,729	203,770	0	237,365	0	33,595	203,770	33,595
87	268,142	156,618	424,760	0	156,618	212,380	55,762	0	55,762	156,618
88	245,387	325,594	570,981	245,387	0	285,491	0	40,104	245,387	40,104
89	154,660	302,784	457,444	154,660	0	228,722	0	74,062	154,660	74,062
90	207,162	349,053	556,215	207,162	0	278,108	0	70,946	207,162	70,946
91	171,026	291,337	462,363	171,026	0	231,182	0	60,156	171,026	60,156
92	203,368	208,285	411,653	203,368	0	205,827	0	2,459	203,368	2,459
93	206,155	316,588	522,743	206,155	0	261,372	0	55,217	206,155	55,217
94	336,647	148,685	485,332	0	148,685	242,666	93,981	0	93,981	148,685
95	227,166	319,003	546,169	227,166	0	273,085	0	45,919	227,166	45,919
96	274,622	271,760	546,382	0	271,760	273,191	1,431	0	1,431	271,760
97	217,116	326,656	543,772	217,116	0	271,886	0	54,770	217,116	54,770
98	180,381	338,681	519,062	180,381	0	259,531	0	79,150	180,381	79,150
99	209,769	314,549	524,318	209,769	0	262,159	0	52,390	209,769	52,390
100	182,482	298,484	480,966	182,482	0	240,483	0	58,001	182,482	58,001
101	177,978	310,629	488,607	177,978	0	244,304	0	66,326	177,978	66,326
102	230,242	295,320	525,562	230,242	0	262,781	0	32,539	230,242	32,539
103	314,152	337,962	652,114	314,152	0	326,057	0	11,905	314,152	11,905
104	218,901	344,830	563,731	218,901	0	281,866	0	62,965	218,901	62,965
105	194,704	345,949	540,653	194,704	0	270,327	0	75,623	194,704	75,623
106	223,939	351,534	575,473	223,939	0	287,737	0	63,798	223,939	63,798
107	246,137	337,553	583,690	246,137	0	291,845	0	45,708	246,137	45,708
108	202,307	297,105	499,412	202,307	0	249,706	0	47,399	202,307	47,399
109	275,060	244,621	519,681	0	244,621	259,841	15,220	0	15,220	244,621
110	220,366	293,600	513,966	220,366	0	256,983	0	36,617	220,366	36,617



Seats to Votes Ratio

	Vote Share	Count of Seats	Seat Share	Proportionality Bias
Dem	52.3%	57	51.8%	-0.5%
Rep	47.7%	53	48.2%	0.5%

DISTRICT	Composite Score			
	Dem	Dem %	Rep	Rep %
1	258,502	92.6%	20,654	7.4%
2	261,320	59.9%	174,928	40.1%
3	265,267	78.5%	72,758	21.5%
4	328,745	94.3%	19,885	5.7%
5	438,662	77.7%	126,246	22.3%
6	470,863	82.2%	102,192	17.8%
7	463,517	82.0%	102,015	18.0%
8	341,385	79.4%	88,387	20.6%
9	311,310	94.7%	17,291	5.3%
10	366,472	64.9%	198,627	35.1%
11	353,187	67.7%	168,158	32.3%
12	313,082	71.4%	125,555	28.6%
13	303,076	67.8%	144,266	32.2%
14	306,099	74.5%	104,625	25.5%
15	270,884	61.0%	173,183	39.0%
16	405,317	76.7%	123,360	23.3%
17	334,631	68.6%	153,279	31.4%
18	491,476	79.5%	126,756	20.5%
19	412,797	63.7%	235,189	36.3%
20	349,902	55.1%	284,833	44.9%
21	259,240	51.7%	241,843	48.3%
22	309,321	47.7%	339,589	52.3%
23	291,695	60.9%	187,546	39.1%
24	305,861	57.8%	223,265	42.2%
25	275,148	62.0%	168,470	38.0%
26	312,525	70.6%	129,982	29.4%
27	281,073	50.9%	271,239	49.1%
28	251,831	52.3%	229,455	47.7%
29	238,070	52.1%	218,638	47.9%
30	230,506	44.2%	290,674	55.8%
31	275,393	53.9%	235,646	46.1%
32	360,998	76.9%	108,735	23.1%
33	420,621	71.5%	167,901	28.5%
34	214,429	43.6%	277,077	56.4%
35	143,815	32.7%	295,685	67.3%
36	153,719	36.7%	264,662	63.3%
37	179,718	39.5%	274,797	60.5%
38	285,580	51.8%	266,034	48.2%
39	189,211	41.7%	264,591	58.3%
40	297,007	54.0%	253,141	46.0%



Seats to Votes Ratio

DISTRICT	Composite Score			
	Dem	Dem %	Rep	Rep %
41	318,040	74.5%	108,655	25.5%
42	246,225	45.5%	295,466	54.5%
43	160,976	31.6%	348,109	68.4%
44	217,430	52.0%	200,803	48.0%
45	189,025	36.4%	329,707	63.6%
46	215,370	51.8%	200,283	48.2%
47	382,546	61.6%	238,809	38.4%
48	312,504	50.5%	306,850	49.5%
49	239,660	43.7%	309,345	56.3%
50	196,227	35.3%	359,878	64.7%
51	229,955	38.8%	363,093	61.2%
52	239,488	41.0%	344,546	59.0%
53	287,443	70.3%	121,241	29.7%
54	267,126	46.3%	309,291	53.7%
55	267,990	46.6%	306,710	53.4%
56	291,476	52.4%	264,875	47.6%
57	215,912	48.5%	228,973	51.5%
58	239,623	49.7%	242,137	50.3%
59	201,755	37.7%	333,786	62.3%
60	234,995	43.9%	299,708	56.1%
61	271,563	52.0%	250,509	48.0%
62	273,649	50.1%	273,005	49.9%
63	214,269	39.7%	325,099	60.3%
64	217,142	45.3%	262,173	54.7%
65	183,403	34.3%	351,999	65.7%
66	202,864	34.9%	377,939	65.1%
67	250,917	46.1%	293,559	53.9%
68	276,355	49.8%	278,227	50.2%
69	323,172	61.4%	203,120	38.6%
70	374,227	84.9%	66,491	15.1%
71	251,023	45.4%	301,954	54.6%
72	260,583	46.1%	305,018	53.9%
73	262,680	55.0%	214,960	45.0%
74	326,911	68.0%	154,066	32.0%
75	327,413	59.0%	227,885	41.0%
76	292,290	51.7%	273,022	48.3%
77	322,455	61.5%	201,503	38.5%
78	177,054	37.8%	291,695	62.2%
79	160,508	31.2%	353,131	68.8%
80	275,659	51.5%	259,938	48.5%

DISTRICT	Composite Score			
	Dem	Dem %	Rep	Rep %
81	285,844	50.4%	281,219	49.6%
82	312,114	71.7%	123,420	28.3%
83	187,012	50.6%	182,812	49.4%
84	243,716	49.5%	249,048	50.5%
85	138,039	25.4%	405,083	74.6%
86	203,770	42.9%	270,959	57.1%
87	268,142	63.1%	156,618	36.9%
88	245,387	43.0%	325,594	57.0%
89	154,660	33.8%	302,784	66.2%
90	207,162	37.2%	349,053	62.8%
91	171,026	37.0%	291,337	63.0%
92	203,368	49.4%	208,285	50.6%
93	206,155	39.4%	316,588	60.6%
94	336,647	69.4%	148,685	30.6%
95	227,166	41.6%	319,003	58.4%
96	274,622	50.3%	271,760	49.7%
97	217,116	39.9%	326,656	60.1%
98	180,381	34.8%	338,681	65.2%
99	209,769	40.0%	314,549	60.0%
100	182,482	37.9%	298,484	62.1%
101	177,978	36.4%	310,629	63.6%
102	230,242	43.8%	295,320	56.2%
103	314,152	48.2%	337,962	51.8%
104	218,901	38.8%	344,830	61.2%
105	194,704	36.0%	345,949	64.0%
106	223,939	38.9%	351,534	61.1%
107	246,137	42.2%	337,553	57.8%
108	202,307	40.5%	297,105	59.5%
109	275,060	52.9%	244,621	47.1%
110	220,366	42.9%	293,600	57.1%



DISSENTING REPORT
Submitted by Commissioner
Rebecca Szetela



DISSENTING REPORT: 2021 CHESTNUT CONGRESSIONAL REDISTRICTING MAP

Authored by: Commissioner Rebecca Szetela

Chair: September 2021-March 2022

Vice-Chair: March 2021-September 2021

Summary

The Michigan Independent Citizens Redistricting Commission adopted its final United States Congressional, Michigan State House, and Michigan State Senate maps on December 28, 2021. This approval was the culmination of over a year of challenging, and often intense, work, which was complicated both by the global COVID-19 pandemic and a four-month delay in release of data from the United States Census Bureau. For the first time in the State of Michigan, a group of randomly selected voters, in lieu of politicians, drew the U.S. Congressional, Michigan State House, and Michigan State Senate maps. These maps were drawn openly and with the ongoing participation, input, and observation of the public. Individual Commissioners, who were strangers to each other at the start of this process, bridged their partisan leanings and worked collaboratively, as a team, to compile maps. The Commission performed admirably under very challenging circumstances. There is much for the Commission to celebrate.

While celebrations are in order, all business processes, no matter how successful, should be subject to a frank evaluation process. There is always room for improvement. There are always insights to be gleaned and carried forward. Retrospective evaluations, where we look backward at what went right, what went wrong, and what can be improved, are (and should be) standard and expected. The redistricting process should be subject to no less scrutiny.

The intent of this Dissenting Report is to provide an honest and transparent account of areas where, due to a variety of intersecting factors, the Commission could have performed more faithfully to its Constitutional mandate in the creation, revision, and adoption of its U.S. Congressional, State House, and State Senate maps. This Report highlights deficiencies in adhering to several Constitutional criteria (Voting Rights Act Compliance, Respecting Communities of Interest, and Partisan Fairness) as well as an error in elevating a criterion that was not in the Constitution. This Report also notes that the Commission did not appropriately account for and consider the full body of public comment. As a

result, the Commission’s process was not as data-driven, objective, or participatory as it should have been.

Because this Report is written with the intention toward improvements in the process, I have included many recommendations for future Commissions. For the reasons set forth below, I dissent to the adoption of Chestnut Congressional map by the Commission.

Rationale

OBJECTION 1 | CRITERIA #1 COMPLIANCE WITH FEDERAL LAW, INCLUDING THE VOTING RIGHTS ACT

*“Unfortunately we do not have sufficient information to anticipate what might happen in future Democratic primaries in the proposed districts. The reason is that we have only one statewide Democratic primary for which we can recompile results and minority voters were not cohesive in this primary. **We simply do not know what would happen in a primary in which minority voters are cohesive.**”*

Ex. 1, Dr. Lisa Handley, December 27, 2021¹

In my opinion, the Commission cannot say with any degree of confidence whether any of the Commission’s approved maps (the US Congressional (“Chestnut”), State Senate (“Linden”), and State House (“Hickory”)) will provide minorities, particularly Black voters in the metropolitan Detroit area, with an opportunity to elect their candidates of choice in **both** primary and general elections. This is a serious flaw in the Chestnut map. Thus, I dissent to its adoption.

The Commission’s Quantitative and Legal Analysis

In furtherance of its compliance with the Voting Rights Act (“VRA”), the Commission exclusively relied on quantitative analysis from Dr. Lisa Handley, legal analysis from its Voting Rights Expert (Bruce Adelson), and legal advice from its general counsel. The first step in this compliance process was a determination as to whether voting in Michigan was racially polarized. To determine this, Dr. Handley analyzed ten years’ worth of general and primary election data from the State of Michigan. Ex. 2, Final Handley Report.² In conducting her analysis, Dr. Handley calculated that the majority of Michigan counties (95%, or 79 out of 83 counties) lacked sufficient Black voter populations to estimate voting behavior. Ex. 3, Sept. 2 Transcript, pp. 21-24. Thus, a racially polarized voting (“RPV”) analysis could not

¹ I would like to acknowledge the excellent analysis Dr. Lisa Handley performed for the Commission.

² For brevity, I have only attached portions of Exhibit 2 to this Dissent. The full report is available at: <https://www.michigan.gov/micrc/meeting-notices-and-materials> under the link titled “Racially Polarized Voting Analysis.”

be performed in those counties. *Id.* However, Dr. Handley determined that four Michigan counties (Wayne, Oakland, Saginaw, and Genesee) contained sufficient Black voting-age populations to allow an RPV analysis to be conducted. *Id.* In each of those four counties where the RPV analysis was conducted, voting was racially polarized. Ex. 2, pg. 7; Ex. 3, pp. 21-24. Because voting was racially polarized, the Commission was required to structure districts that complied with the VRA in those counties. *Id.* Mr. Adelson correspondingly advised that the VRA did not require minority-majority districts (e.g., districts with greater than 50% Black voting age population); however, the Commission did need to create “opportunity to elect” districts. The Commission was advised by Mr. Adelson that an “opportunity to elect” district is one where the district contains the requisite number of minority voters needed to enable those voters an opportunity to elect their candidates of choice. Dr. Handley’s analysis was intended to determine the minimum percentage of Black voting-age population (“BVAP”) necessary to create opportunity to elect districts in the four racially polarized counties (Wayne, Oakland, Saginaw, and Genesee).

To estimate these percentages, Dr. Handley evaluated the degree to which white voters supported Black-preferred candidates (the “White Crossover Vote”) in the four counties. As noted by Dr. Handley, “if a relatively consistent percentage of white voters support Black-preferred candidates, candidates preferred by Black voters can be elected in districts that are less than majority Black.” Ex. 2, p. 19. The White Crossover Vote can also compensate for depressed Black voter turnout. Ex. 2, p. 19. Alternately, “if voting is starkly polarized, with few or no whites crossing over to vote for the candidates supported by Black voters,” a district “that is more than 50% Black VAP” may be needed to elect Black-preferred candidates. *Id.* Thus, Dr. Handley’s analysis included the voting patterns of Black and white voters as well as data regarding variations in turnout rates.

After completing her analysis, Dr. Handley provided the Commission with a report stating that, for **general elections**, Black voters could elect candidates of choice in Wayne County with a BVAP as low as 35%. Ex. 2; Ex. 4, pp 13-18. In Oakland County, once again for **general elections**, Black voters could elect candidates of choice with a BVAP as low as 40%. Ex. 2; Ex. 4. Dr. Handley also stated that no county required districts with a BVAP of 50% or more in the general election. *Id.*

However, general election results were not the only relevant inquiry. As noted in Dr. Handley’s writings on this topic, **both primary and general elections must be considered**. Ex. 5, *Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence*, B. Grofman, L. Handley, and D. Lublin, North Carolina Law Review, Volume 79, Number 5, Article 12 (6-1-2001) p. 1410-1411. Moreover, map drawers need to be **most** focused on the **highest** percentages required because that is

the percentage needed to win both elections (primary and general). *Id.* Accordingly, if 52% is the proper number to allow minority voters an opportunity to elect in a primary, but 43% is needed in a general election, the map drawer's work should be governed by the higher primary percentage (52%). *Id.*

Accordingly, Dr. Handley also analyzed primary data. Ex. 2, p. 24-26. There was a single Statewide Michigan Democratic³ primary with results that could be recompiled and applied to any district reconfiguration that the Commission desired to test. *Id.* That election was the 2018 Gubernatorial primary, in which three candidates were running: Gretchen Whitmer, Abdul El-Sayed, and Shri Thanedar. In analyzing this election, Dr. Handley determined that Black voters were not "cohesive" – meaning they did not support a single, identifiable candidate. *Id.* This lack of cohesiveness made it impossible to extrapolate the data from that election in a manner that could predict the election results for future districts. *Id.* at 24. Disappointingly, the 2018 Gubernatorial primary could not be used to determine the proper BVAP levels needed for Black voters to elect their candidates of choice in the primary elections in the recompiled districts.

In the absence of Statewide primary data for analysis and recompilation, Dr. Handley analyzed other primary election data. Dr. Handley produced two charts entitled "Threshold of Representation" for both the State Senate and State House (the "Threshold Tables"). Ex. 2, p. 24-26. Dr. Handley described these Threshold Tables as being a "useful check on the percent needed to win estimates" found in the general election tables. Ex. 2, p. 24. The Threshold Tables were "designed to identify the lowest minority percentage above which minority candidates are consistently elected." Ex. 2, p. 24. **For the State Senate, that threshold was 48%.**⁴ For the State House, **the threshold identified was 36%** (*as described more fully in the footnote, it should have been between 47% and 52%*).⁵ A Threshold Table

³ Because Michigan's BVAP population tends to vote overwhelmingly Democratic, Democratic primaries were Dr. Handley's area of focus.

⁴ Dr. Handley's analysis showed there were no State Senate districts with BVAP levels between 36% and 44% (the very "target range" the Commission later confined itself to in drawing its maps). Ex. 2; Ex. 3, pp. 18-19. Of the single district with 45% BVAP (District 1), the Black candidate of choice (Alberta Tinsley Talabi) did not survive the primary, even though she received approximately 48% (and the majority) of the Black vote. Ex. 2, p. 26, 65. In comparison, Stephanie Chang, an Asian woman, won the primary with 49.8% of the vote, having received over 75% of the votes cast by white voters. *Id.* ***Thus, in a district with 45% BVAP, Black voters did not have the opportunity for their candidate of choice (Alberta Tinsley Talabi) to advance to the general election.*** As expected, as the Democratic candidate in the general election, Ms. Chang easily won the general election for Senate District 1, obtaining 72% of the vote and an estimated 95%+ of the BVAP vote. Ex. 2, p. 54.

⁵ Using the same methodology Dr. Handley used in the Senate table, the Threshold for the House also should have been 47% BVAP or more. Similar to the State Senate, there were no State House districts with BVAP levels between 37% and 46%. Ex. 2, p. 25-26; Ex. 3, pp. 18-19. Dr. Handley's State House Threshold Table identifies 36% as the number needed to elect minority candidates of choice. Ex. 2. However, her analysis overlooked the fact that

was not provided for Congressional elections.

To summarize Dr. Handley's analysis, for Wayne and Oakland Counties, the election analysis showed that Black voters had the opportunity to elect candidates of choice in the **general election** with BVAP numbers ranging between 35% and 40%. Ex. 4, pp. 13-16. However, the Threshold Tables, which reflected **primary results**, suggested higher amounts were likely necessary (48% in the State Senate and between 47% and 52% in the State House) for Black voters to have an opportunity to elect their candidates of choice in primaries.⁶ Ex. 4, p. 18-19. Because VRA compliance requires the ability to elect candidates of choice **in both elections**, the Commission should have taken a conservative approach by using higher BVAP numbers (approximately 48%) when constructing districts in all maps. Ex. 5, pp. 1410-1411. This approach would have been the most protective of the voting rights of Black voters.⁷

The Commission's Directions From Counsel

Armed with Dr. Handley's report and data, the Commission began drawing maps following this approach and drew districts in the Metropolitan Detroit area with BVAP percentages around 50%. After completing districts in most of the Metropolitan Detroit area, the Commission's counsel intervened and began aggressively pushing the Commission to reduce the BVAP numbers to as close to the general election percentages (35% to 40%) as possible. Ex. 6, Sept. 13 Email. This pressure was most evident at

the minority candidate elected at the 36% threshold was not the candidate of choice for Black voters. Although all districts above 36% elected **minority** candidates, and in State House District 29 (BVAP 36.04%) a Black candidate was elected, this candidate **was not** the candidate of choice for Black voters. Ex. 2, p. 25, 67. The Black voters' candidate of choice (Kermit Williams) did not survive the primary, even though he received approximately 50% of the Black vote. *Id.* In comparison, Brenda Carter, a Black woman, won the primary with 30.7% of the vote, having received over 59% of the votes cast by white voters. *Id.* **Thus, in a district with 36% BVAP, Black voters were not able to have their candidate of choice (Kermit Williams) survive the primary to be considered at the general election.** Once again, as expected, the winner of the Democratic primary, Brenda Carter, easily won the general election for House District 29, obtaining 72.9% of the vote and an estimated 95%+ of the BVAP vote. Ex. 2, p. 58. By comparison, in the 6th House District (53% BVAP), the candidate of choice favored by Black voters (Tyrone Carter – with approximately 70% of BVAP vote) was able to prevail in the primary, even though white voters did not prefer that candidate. Ex. 2, p. 25, 68. Dr. Handley did not provide estimates for Black voters for District 4, where Abraham Aiyash was elected, because so many candidates ran for election in that primary that Dr. Handley could not ascertain the minority-preferred candidate. Thus, the Threshold of Representation for State House districts should have been somewhere between the BVAP of Mr. Aiyash's district (47% BVAP in the 4th district) and the 53% BVAP in Mr. Carter's district (the 6th district).

⁶ The variation in the target BVAP percentages was attributable to primary and general election disparities in both the White Crossover Vote and voter turnout.

⁷ If the Commission had exercised its discretion to use BVAP percentages higher than the general election values, and those numbers proved to be too high, Black voters' candidates of choice would still have a reasonable chance of election and a future Commission would have the ability, based on a decade of data, to adjust the numbers further downward. On the other hand, if the general election BVAP thresholds adhered to by the Commission are too low, Black voters may spend a decade being injured by not having an opportunity to elect candidates of choice. The Commission should have had a careful discussion balancing the risks and benefits of both approaches. In lieu of having that discussion, the Commission yielded that decision-making to its counsel.

the September 30, 2021, Commission meeting in Rochester Hills, where the Commission was expressly directed to identify “anything that is higher than 40% for the black voting age population” and “those quote unquote fixes can be dealt with.” Ex. 7, Sept. 30, 2021, AM Meeting Transcript, pg. 21; See Ex. 7, p. 22. Despite Dr. Handley’s analysis showing that the required BVAP for primary elections was likely higher than the required BVAP for general elections, the Commission acquiesced to its counsel and redrew each of its existing maps in the Metropolitan Detroit area based on the general election BVAP “targets” of 35% to 40%.

The Public Response

Having witnessed the low percentages of BVAP that the Commission was being directed to achieve, Metropolitan Detroiters appeared in force to question whether the Commission’s maps would provide Black voters in Metropolitan Detroit with an opportunity to elect their candidates of choice in the primaries. See Ex. 8⁸, Detroit Hearing Transcript, Oct. 20, 2021. The Commission received hundreds of comments objecting to the low BVAP percentages in its draft maps. Ex. 8. Additionally, Jerome Reide, a legislative liaison from the Michigan Department of Civil Rights, and John E. Johnson, Jr., the Executive Director of the Michigan Department of Civil Rights, also both presented letters to the Commission indicting their belief that the Commission was violating the Voting Rights Act.

As voters testified, the Metropolitan Detroit area is solidly Democratic, with elections in Wayne County generally favoring Democrats by 20 percentage points or more. Ex. 8. Reliably, whoever wins the Democratic primary in Wayne County will win the general election. *Id.*, see Ex. 2. Thus, for Black voters to be able to elect their candidate of choice, that candidate of choice **must be able to succeed in the Democratic primary**. Ex. 8. The public asserted that general election results were neither reliable nor valid indicators of whether Black voters would be able to elect candidates of choice. *Id.* By ignoring the outsized role of the Democratic primaries in the Metropolitan Detroit area and focusing on the 35% and 40% range derived from general election data, the public stated that the Commission was poised to disenfranchise Black voters by denying them the opportunity to elect their candidates of choice. *Id.*

The Commission Declines to Correct Its Course

Following several hearings and meetings, including the October 20 Detroit Public Hearing, some Commissioners began questioning the validity of its attorneys’ directives to draw districts using the

⁸ Due to its length, I have attached only a portion of the transcript from the October 20, 2021, public hearing in Detroit. The full transcript is available at: https://www.michigan.gov/micrc/-/media/Project/Websites/MiCRC/Transcripts1/MICRC_Meeting_Transcript_10_20_2021.pdf?rev=a378536e31c446a494555afb9672b019&hash=0E0BEC4295A48C46AEB4689E2C0299D4

general election BVAP percentages supplied by Dr. Handley's report. The Commission's response to those concerns should have been to return to the expert who prepared the RPV analysis (Dr. Handley) to seek her opinion with respect to the concerns of the public. Instead, once again at the direction of counsel, the Commission held a closed session with its counsel (rather than Dr. Handley) to discuss the concerns of voters. Ex. 9, Oct. 20, 2021, Email. This meeting was merely a reiteration of the same legal advice that had resulted in the objections from Metropolitan Detroiters in the first instance. Closed Session Hearing, Oct. 27, 2021.⁹ At this meeting, the concerns of Metropolitan Detroiters were cast as advocating "not to follow the law." *Id.* at 1:03:46. This messaging was repeated in email messages to Commissioners in advance of the meeting as well, where Commissioners were directed to disregard the comments as being "advanced by lobbyists and politicians driving emotion." Ex. 10, Oct. 18, 2021, Email. Commissioner comments during the closed-door meeting exemplify the adoption by some Commissioners of these recharacterizations of the concerns of voters. Closed Session Hearing, Oct. 27, 2021 (Commissioner at 1:01:50: "*I also reflected on the Detroit hearing...they were just wrong...their comments were not backed by anything other than their feelings*"; Commissioner at 39:13: "*I think...I hope we all recognize, at least I think, many of the many, many, many of the comments that we heard, while they were saying that it was a VRA issue, it's a partisan issue. They have an agenda. And we need to be able to spot that and weed that out and not fall for that.*"; Commissioner at 1:20:12: "*I just want to remind us all that...it was set up so that we hear from citizens, but, I think, at this point, we need to, kind of, shut out all the criticisms that are coming and all the pressure because these are all motivated.*"). In this echo chamber created by its counsel, Commissioners were dissuaded from making further adjustments to the maps. Acceding to these pressures, the Commission abandoned further inquiry into whether higher BVAP percentages were needed and, instead, deferred to the advice of counsel.

Although the Commission itself did not directly seek clarification from Dr. Handley, Dr. Handley attempted to alert the Commission of its impending error. Specifically, Dr. Handley warned Commission staff¹⁰ on December 10, 2021, that the Commission's maps had BVAP levels too low to allow Black

⁹ The audio from this meeting is available at: <https://www.michigan.gov/micrc/additional-pages/MSC-163823-Materials> under the heading, "Closed Session Audio Recording, Oct. 27." A transcript of this hearing was not available at the time of the preparation of this Report.

¹⁰ This information was not conveyed to the Commission by its general counsel and other staff members were directed by the general counsel not to share Dr. Handley's concerns with Commissioners. Uncomfortable with the general counsel's direction, staff members informed me of Dr. Handley's concerns and I relayed those concerns to several Commissioners on December 15, 2021. Ex. 11, December 15, 2021, Email. For clarification, I incorrectly stated in my December 15 email, based on my misunderstanding at the time, that Dr. Handley's analysis was flawed. The Commission's understanding of Dr. Handley's analysis was flawed, not the analysis itself.

voters the opportunity to elect their candidates of choice. Ex. 11, Email. Dr. Handley reaffirmed these concerns on December 27, 2021, noting that the Commission does not know if its maps will provide minority voters with an opportunity to elect candidates of choice in the Democratic primary:

*Unfortunately we do not have sufficient information to anticipate what might happen in future Democratic primaries in the proposed districts. The reason is that we have only one statewide Democratic primary for which we can recompile results and minority voters were not cohesive in this primary. **We simply do not know what would happen in a primary in which minority voters are cohesive.***

Ex. 1, Dr. Lisa Handley, December 27, 2021

Despite vigorous public comment, evidence from its own expert indicating that higher BVAP percentages were needed, and plenty of time to act to change the maps, the Commission instead voted on December 28, 2021 to not allow adjustments to the maps.¹¹ Ex. 16, p. 85. The Commission had no data or evidence to suggest that Black voters will have an opportunity to elect candidates of choice in the Democratic primary with BVAP percentages of 35%, 40%, or even 45%. Ex. 2, Ex. 3. Undeterred, the Commission approved the Chestnut map, with BVAP populations of 43.81% (District 12) and 44.70% (District 13).

Conclusion

In conclusion, given the concerning data derived from primary elections and warnings from both the public and the Commission's RPV expert, the Commission's approach to compliance with the VRA was anything but data-driven, evidence-based, or participatory. The Commission's approach was to follow a will-o'-the-wisp and rely on the hope that general election thresholds will magically translate into Black voters' candidates of choice advancing past the Democratic primaries. Because the Commission did not have evidence or data to establish that these BVAP levels are sufficient to allow Black voters to have an opportunity to elect their candidates of choice in both the primary and general elections for either its Congressional, State Senate, or State House maps, I dissent to the adoption of the Chestnut Congressional Map.

Recommendation for Future Commissions:

1. In determining the requisite minority voting populations necessary for minority voters to have an opportunity to elect their candidates of choice, future Commissions should utilize the higher of the general election or primary election results to establish "target" BVAP ranges.

¹¹ Commissioners Kellom, Curry, Lange, Wagner, and I voted against precluding changes to the maps (i.e., those Commissioners were in favor of changing the maps).

2. To ensure full and complete understanding of expert reports, all discussions of data and analysis regarding the requisite level of minority populations necessary to permit minority voters an opportunity to elect candidates of choice should require the attendance of the data scientist who conducted the analysis (in this case, Dr. Lisa Handley). Staff and other consultants should not be permitted to interpret the recommendations or conclusions of data scientists for the Commission.
3. Expert analysis of draft map compliance with the Voting Rights Act (and other metrics) should be received before maps may advance to the 45-day public comment period.
4. To the extent there is ambiguity or uncertainty regarding what BVAP levels are appropriate, Commissioners should openly and publicly discuss any concerns fully and vote on recommendations. The Commission should not rely on non-analyst determinations of the appropriate percentage levels.
5. The Commission, not staff or consultants, should evaluate the validity and import of public comments.

OBJECTION 2 | CRITERIA #3 COMMUNITIES OF INTEREST

I dissent to the Chestnut map to the extent it fails to take into consideration and accommodate the following seven communities of interest that were identified as significant by the Commission and incorporated into other Congressional, State Senate, and State House Maps.

Community of Interest 1: Bengali Community of Interest

The Bengali community identified Hamtramck and portions of Warren and Macomb County as being a community of interest that should be kept together. This community of interest was divided into two in the Chestnut Congressional map. The Chestnut map is the only final proposed Congressional map published by the Commission that divides this community of interest.

See comments p1511 (Mariam Akanan), p4107 (Nada Alhanooti, Hamtramck), f1514 (Tufayel Reza, Warren), f1516 (Iqbal Hossain, Hamtramck City), f1460 (Nurun Nesa, Warren), f1459 (Nazmin Begum, Warren); w1456 (Sumon Kobir, Warren Township), w1398 (Muzadded Abdullan, Warren City), p1037 (Rebeka Islam, Hamtramck), Map submitted via Portal Comment by Hayg Oshagan, 9/8/2021

Community of Interest 2: Jewish Community of Interest

Eighty percent of the Metropolitan Detroit-area Jewish community resides in the “core” Oakland County communities of Berkley, Commerce Township, West Bloomfield, Bloomfield Hills, Birmingham, Franklin, Farmington, Farmington Hills, Royal Oak, Oak Park, Huntington Woods, Walled Lake, and

Southfield. Seven percent of Jewish households live in the Southfield area and 12% of the population of Southfield is Jewish. Franklin also contains a significant Jewish population. Despite requests to keep Southfield and Franklin with the remainder of the Jewish community in the “core” area, the Chestnut map isolates and separates Southfield and Franklin from the remainder of the Jewish community of interest. The Chestnut map is the only final proposed Congressional map published by the Commission that divides this community of interest.

See comments w746 (Todd Schafer, Beverly Hills); c1803 (Menachem Hojda, Oak Park); c5247 (Judah Karesh, West Bloomfield Township); w1000 (Charlotte Massey, Royal Oak)

Community of Interest 3: Indigenous Population Community of Interest

The Commission received many comments from members of Indigenous populations, who specifically identified their populations as communities of interest throughout the State. The Indigenous populations specifically identified the service areas for the Indian Health Services clinic run by the Nottawaseppi Huron Band of the Potawatomi and the American Indian Health & Family Services clinic in the Detroit area as communities of interest. In addition, Meredith Kennedy, the author of these comments and a representative for and member of the Indigenous populations, specifically identified the Birch map as being the map that best preserved these communities of interest. The Chestnut map does not preserve the community of interest of the Indigenous populations.

See comments p5531, p5527, and p5525

Community of Interest 4: LGBTQ+ Community of Interest

The Commission also received many comments from members and allies of the LGBTQ+ community, who identified their community of interest as encompassing the communities of Southfield, Oak Park, Pleasant Ridge, Huntington Woods, Ferndale, Hazel Park, and the Detroit neighborhood of Palmer Park. The Chestnut map divides this community of interest into three separate districts.

See comments w1924 (Oscar Renautt, Oak Park), w5790 (Ivy Nicole), w5669 (Sarah, Ishpeming Township), w5473 (Troy, Detroit), w5471 (Kathy Randolph), f3493 (Michael Rowady), c777 (LGBT Detroit, Detroit), c819 (LGBT Detroit, Detroit), w1287 (Midge Cone, Ann Arbor), and w1306 (Sue Hadden, Ann Arbor).

Community of Interest 5: Sikh Community of Interest

The Sikh community of Troy and Rochester Hills also identified their community as a community

of interest and requested that the Troy and Rochester Hills Sikh community of interest stay together. The Chestnut map divides this community.

Ex. 8, p. 16; Ex. 16, p. 19.

Community of Interest 6: Asian Pacific Islander and Chaldean Populations in Oakland/Macomb Counties Community of Interest

Members of the Asian Pacific Islander and Chaldean communities in eastern Oakland County and western Macomb counties also identified themselves as a community of interest. The Chestnut map divides these populations in two by following the township boundary between the 10th and 11th districts for Oakland and Macomb County. Thus, the Chestnut map divides the Asian Pacific Islander and Chaldean community of interest.

See comments w8699 (Daniel G, Troy) and p7262 (Yousif, Troy).

Community of Interest 7: Arab & Middle Eastern/North African Community of Interest

Members of the Arab or Middle Eastern/North African (MENA) community in Wayne County also identified themselves as a community of interest. The Chestnut map divides these populations in two. Thus, the Chestnut map divides the Arab or Middle Eastern/North African (MENA) community of interest.

See comment c1510 (Mariam Akanan, Dearborn), with supporting comments from Jamie Kim (Dearborn) and Mariam Bazzi (Dearborn).

Although the Commission had the discretion to determine which communities of interest it would incorporate into its maps, it is striking that these seven communities of interest were specifically identified for inclusion in all other “collaborative” Commission maps yet excluded, without explanation, from the Chestnut map. The Commission did not assess whether these communities of interest could have been accommodated within the Chestnut map and did not explain why these communities of interest were abandoned by the Commission in the Chestnut map. Due to the unexplained failure to accommodate the seven above-referenced communities of interest, I dissent to the adoption of the Chestnut Congressional map.

Recommendation for Future Commissions:

1. Future Commissions should maintain records of communities of interest incorporated into various draft maps along with specific details as to why communities of interest were included in some maps but not others.
2. To the extent maps exclude communities of interest included in other maps, a full

accounting as to the rationale for that exclusion must be documented, along with a detailed explanation as to why the excluded community of interest could not be reasonably accommodated in the excluding map.

OBJECTION 3 | CRITERIA #4 PARTISAN FAIRNESS

I dissent because each of the Commission’s Congressional, State Senate, and State House maps, including the Chestnut, could have achieved improved (i.e., closer to zero) partisan fairness metrics. Although the redistricting software licensed by the Commission, AutoBound Edge, contained a full complement of political and partisan data and tools, the Commission was directed by its general counsel that the Commission was precluded from considering election data and partisan fairness metrics when drawing its initial Statewide maps. Specifically, the Commission was advised by its general counsel that the Constitution “actually prohibits the Commission from considering the election results while they are mapping” and that the Commission was “legally prohibited from” considering election data in drawing maps. Ex. 7, Sept. 30, 2021, AM Transcript, pp. 66-67. As noted by members of the public, the Constitution contains no such restrictions. Ex. 12, Sept. 30, 2021, PM Transcript, p. 9.

To prevent Commissioners from viewing election data and partisan metrics during mapping, the Commission’s general counsel further directed the Commission’s mapping vendor, EDS, to disable and keep “hidden” the partisan fairness metrics, election data, and other political data and reporting features in AutoBound Edge. Ex. 13, Oct. 6 2021, Email. The Commission was unaware of this direction and did not consent to it. Handicapped by this lack of access, the Commission began drawing maps in August of 2021 without access to key functionality in the mapping software that it had paid for. These features were not re-enabled until after the completion of draft maps in October and required a software update. Ex. 14, October 3, 2021, Email from Kimball Brace (*“One of the things that staff and I need to discuss on Monday is how much of some of the additional reports do you want to unveil. Like this political fairness report there are a bunch of other data, tables and reports that are possible in EDGE, but we should talk about what do we want to release.”*)

The Commission’s lack of access to partisan fairness metrics until after maps were drawn resulted in rushed attempts to fix woefully non-compliant maps. Further, even after Commissioners were granted access to partisan fairness tools, Commissioners were repeatedly directed by the general counsel to “stop chasing zero” – meaning to cease trying to improve the partisan fairness metrics of the draft maps, even though improvements in such metrics were unquestionably achievable (and had been achieved by several Commissioners) without altering adherence to higher-ranked Constitutional

criteria.

Moreover, maps with improved partisan fairness metrics were hampered from public release by the Commission’s counsel. For example, around September 30, 2021, a Commissioner produced what had been described by the general counsel as a “perfect” Congressional map. The general counsel described the map as having a “0%” efficiency gap and a “0%” mean-median measurement. The general counsel and other consultants decided that this Commissioner’s map could not have been produced without improper outside influence. Thus, the general counsel accused the Commissioner of violating the Constitution and pressured the Commissioner to withhold the map from the public and his fellow Commissioners (“*Bruce and I remain steadfast in our recommendation to [REDACTED] that he not advance his map we discussed with him last week...*”). Ex. 15, October 4, 2021, Email. Because of this interference, the Commissioner did not present the map to the Commission or the public and, further, altered the map to **increase** the partisan fairness metrics, tilting the “perfect” map in favor of Republicans.¹² Ex. 15. This map – which deliberately inflated the partisan fairness metrics in favor of Republicans – was the predecessor to the Chestnut map. As a result of these pressures, the Chestnut map is a less-partisan-fair version of another map.

As evidenced by a Commissioner’s supposedly “perfect” map and other maps,¹³ the Commission could have produced Congressional, State Senate, and State House maps with better (meaning closer to zero) partisan fairness metrics, without compromising other Constitutional criteria. Because maps with better partisan fairness metrics were actually achieved yet hindered from public production, I dissent to the adoption of the Chestnut map.

Recommendation for Future Commissions:

1. Future Commissions should have access to all partisan fairness and political data and reporting functionality while drafting maps.
2. Commissioners, not staff or consultants, should make decisions regarding access to data, tools, and maps.

OBJECTION 4 | INEQUITABLE ACCOUNTING AND TREATMENT OF PUBLIC COMMENTS AND INAPPROPRIATE ATTEMPTS TO INFLUENCE PUBLIC COMMENTS

I dissent to the adoption of the Chestnut Congressional map because it was not the map

¹² Ironically, the general counsel’s failure to be forthright with the full Commission with respect to her concerns about this Commissioner’s map may have enabled the adoption of a revised version of the very map that she objected to.

¹³ Similarly, the Szetela House map was a more-partisan-fair version of the Hickory, without deleterious impacts on higher-ranked Constitutional criteria.

preferred by the public. The Birch map, not the Chestnut map, was the Congressional map that the majority of the public supported. Due to the Commission's lack of an organized accounting system to track public comments and failure to equally weigh all comments, some Commissioners erroneously concluded that the Chestnut map had the greatest public support. Since the Birch map actually had the greatest public support, this was in error.

The Commission was tasked with soliciting "wide" and "meaningful public participation" as part of its Constitutional obligations. Const. 1963, Art. IV., §6(10). Accordingly, the Commission diligently solicited public feedback, resulting in the Commission receiving nearly thirty thousand public comments throughout the redistricting process.¹⁴ After the approval and advancement of final proposed maps to the 45-day public comment period on November 1, the Commission received comments via public meetings ("In-Person Comments"), via the online public comment portal ("Portal Comments"), and via comments placed directly on the maps themselves on the Mapping Page ("Mapping Comments").¹⁵ Unfortunately, the Commission lacked a systematic method of tallying, recording, and reporting public comments.

Recognizing this deficiency on the part of the Commission, members of the public attempted to fill the gap. For example, a woman named Nicole Bedi tallied Mapping and Portal Comments and reported the tallies. Ex. 16, December 28, 2021, Transcript, p. 19. Specifically, Ms. Bedi reported that the Birch map received the greatest number of positive comments (with 67% of comments positive). Ex. 16, p. 19. As further noted by Ms. Bedi, only 55% of the Chestnut map's comments were positive. *Id.* With 67% of its 819 comments positive, the Birch map received 548 positive comments. In contrast, the Chestnut map (with only 55% of its 828 comments being positive) received only 455 positive comments. Ex. 16, p. 19. Thus, the Birch map had over 20% more favorable comments than the Chestnut map. Other members of the public conducted similar examinations of the public record and provided their reports to the Commission. Each of those reports indicated that the Birch map was the most preferred.

Rather than relying on these or other mathematical tabulations, the Commission's evaluation of public comments was haphazard and inconsistent. Some Commissioners did not routinely read Portal or Mapping Comments. Other Commissioners did not read a single Portal or Mapping Comment. Some

¹⁴ The Commission's 2022 Communication and Outreach Report is available at: <https://www.michigan.gov/micrc/-/media/Project/Websites/MiCRC/MISC5/MICRC-CO-031022.pdf?rev=e1e5911a7d264fa997475f9270d6380a&hash=D6FB5458F97A8339A47E7FAAFE75AEAE>

¹⁵ Portal Comments and Mapping Comments are available on the www.michigan.gov/micrc website.

Commissioners weren't attentive to In-Person Comments. In contrast, at least one Commissioner seemed to value In-Person Comments more than Mapping or Portal Comments.¹⁶ Ex. 16, p. 82-83, ¶15. Additionally, despite the fact that In-Person Comments in favor of the Birch were ubiquitous, some Commissioners appeared to inexplicably disregard those In-Person Comments. Ex. 16, p. 80-81, ¶1 and ¶3. Had the Commission created a recording and tracking system for public comments, many of these inconsistencies and discrepancies could have been avoided.

Lastly, at least one Commissioner attempted to sway public votes in favor of his preferred maps. Specifically, on December 20, 2021, prior to the Commission's final vote on the maps, a Commissioner individually met with two groups that had been particularly engaged during the redistricting process, ACCESS and APIAVote Michigan. It was the practice of the Commission that all public interactions be coordinated and publicly noticed through the Commission's staff and that Commissioners appear in groups. The rationale behind those practices was to prevent Commissioners from interactions with the public that could undermine the Commission's goals of transparency and openness. Disregarding those practices, the Commissioner individually arranged and attended this meeting. At the meeting, the Commissioner repeatedly suggested that the Chestnut map was the public's preferred map, informing both groups "you liked the Chestnut Congressional Map," and specifically advocating for both groups to submit "more comments like that."¹⁷ To her credit, the representative from ACCESS corrected the Commissioner and stated that the Birch map was actually the map preferred by her group for the State of Michigan. Despite this Commissioner's efforts, the Chestnut map still received fewer favorable votes than the Birch map.

Using objective measures, in addition to receiving a greater number of favorable comments, the Birch, not the Chestnut, map had the greatest number of votes in favor of adopting the map between the dates the maps were published and the date the map was ultimately adopted. Between November 1, 2021, and December 28, 2021, **the Birch map received approximately 15% more votes in its favor of its adoption than the Chestnut map.**¹⁸ Additionally, when considering votes in favor of the Birch prior to

¹⁶ One Commissioner mistakenly believed there were comments in favor of the Chestnut map at the "next five" public hearings, which were held between October 20 and October 26. Ex. 16, p. 82-83, ¶15. The Chestnut map was not created or named until November 1. Therefore, the Commission could not have received In-Person Comments in favor of the Chestnut map at October hearings/meetings because the Chestnut map did not exist at that time. This confusion illustrates the precise problem with relying upon memory rather than objective measures.

¹⁷ This meeting was recorded and posted on APIAVote Michigan's Facebook page on December 27, 2021, but I was unaware of the existence of the video or its contents until after the Commission voted on the maps on December 28, 2021. As of the date of this Report, the video is available at: <https://www.facebook.com/apiavotemi/>.

¹⁸ Although the Birch map received a great many comments urging its adoption before November 1, 2021, and

November 1, 2021, the Birch map was irrefutably the public’s preferred map, with substantially greater public support than the Chestnut.

Source	Support Birch	Support Chestnut
Mapping Comments	294	204
Portal Comments	98	81
In-Person Comments ¹⁹	50	101
Total ²⁰	442	386

The Chestnut map **was not** the public’s preferred map by any measure.

The Commission was not obligated to adopt a particular map based solely on the weight of public opinion. However, because the Commission was required to solicit (and did solicit) public participation, the Commission should have accurately documented, analyzed, and given meaningful consideration the comments received from the public. It failed to do so. In part due to the failure to appropriately tally, measure, and account for public comments, the Commission failed to adopt the map preferred by the public and, instead, voted to approve a map the public did not prefer. For these reasons, I dissent to the adoption of the Chestnut map by the Commission.

Recommendation for Future Commissions:

1. Future Commissions should maintain a public, running tally of unique “votes” in favor of any maps published for the public’s consideration. This tally should include all unique votes received for a particular map during the duration of its publication to the public.
2. Multiple votes by the same individual should be counted as a single vote. The Commission should establish processes to prevent the same individuals from casting multiple votes.
3. In-person, written, and online comments should be weighted equally.
4. Vote tallies should quantify the percentage of positive and negative comments with respect

those votes in favor are still relevant and important, I focused solely on the time period where both maps had been published for consideration. Considering votes before November 1, 2021, would have resulted in an even greater number of votes in favor of the Birch.

¹⁹ In the November 1 through December 28 time frame, the Chestnut map received more support than the Birch map via In-Person Comments; however, the Birch map received significantly more support in writing via Portal and Mapping Comments. Commissioners who never or rarely read Portal and Mapping Comments incorrectly believed the Chestnut map had greater support, when, in fact, the Birch map was the public’s preferred Congressional Plan.

²⁰ I personally tallied the number of Portal, Mapping, and In-Person for the Birch and Chestnut maps to reach these results. In making these tallies, I only treated a comment as “in favor of adopting” of a map when the commentor specifically described one map as being superior to others using superlatives or other clear indicators of preference (e.g., “best map,” “fairest map,” “adopt this one,” etc.). I disregarded comments generally describing a map as “fair” or “balanced” as well as comments ranking two maps as equal (e.g., “either the Chestnut or Birch”). I also disregarded unfavorable comments. In addition, I only considered votes after the date the Chestnut was created (November 1, 2021).

- to a particular map.
5. Commissioners should not meet individually with groups or individuals to discuss redistricting matters.
 6. Commissioners should not be permitted to “steer” or direct public opinion toward particular maps. In interactions with the public and press, Commissioners should remain neutral with respect to their preferred maps until the date of deliberations.
 7. To enable the seamless incorporation of public mapping proposals, the Commission should verify that mapping tools used by the public to submit maps are compatible with mapping software used by the Commission.
 8. To the extent a future Commission elects to adopt a map in spite of the weight of public comment with respect to that map, the Commission should provide, at a minimum, a rationale for its decision.

OBJECTION 5 | IMPROPER CONSIDERATION OF COMPETITIVENESS

In addition to receiving fewer positive public comments and fewer favorable public votes than other maps, a significant percentage of positive comments favoring the Chestnut map did so due to the supposed “competitiveness” of the map. Competitiveness is not among the Commission’s seven ranked Constitutional criteria. Further, the Commission was repeatedly advised that it could not consider competitiveness as a factor (*“I have consistently stated that competitiveness is not a constitutional criteria in Michigan. Attempting to add this consideration as a criteria [sic] creates a significant legal problem and leaves the MICRC wide open to a court challenge. First, there is no legal basis for including competitiveness in the criteria that the MICRC is constitutionally mandated to follow. This would likely be viewed as arbitrary and capricious by a court, particularly after receiving legal advice against inserting competitiveness.”*) Ex. 17, Sept. 20, 2021, Email.

Although the Constitution does not list competitiveness as a factor, the Constitution does not prevent the Commission from considering other factors **after** verifying compliance with the seven ranked Constitutional criteria. However, several Commissioners stated during deliberations that they primarily favored the Chestnut due to its “competitiveness,” above consideration with respect to how the Congressional maps compared with respect to the seven ranked Constitutional criteria. Ex. 16, p. 77, p. 80 (¶1-2), and p. 81 (¶3). In so doing, the Commission elevated a non-Constitutional criterion above the seven ranked Constitutional criteria. Thus, I dissent to the adoption of the Chestnut map to the extent the Commission improperly considered “competitiveness” as a primary factor in adopting

the map.

Recommendation for Future Commissions:

1. Future Commissions should not consider non-ranked criteria above Constitutionally ranked criteria.
2. Future Commissions should evaluate how to treat comments promoting criteria not specified by the Constitution.
3. If future Commissions desire to consider non-Constitutional criteria, such consideration should only occur after an evaluation and ranking of potential plans compliance with non-Constitutional criteria.

OBJECTION 6 | FAILURE TO ENGAGE IN OPEN AND TRANSPARENT DELIBERATIONS

Lastly, I dissent to the adoption of the Chestnut map because the Commission failed to deliberate on the maps comprehensively, openly, transparently, and objectively. The Commission deliberated for a mere 20 to 25 minutes before commencing voting on the Chestnut map. Deliberations on the Linden and Hickory maps were similarly brief. The Commission did not evaluate, compare, or contrast plans for their compliance with each of the Constitutional criteria in any systematic or comprehensive manner. Additionally, no attempts were made to rank plans based on objective measures. This lack of meaningful analysis and discussion of which maps best conformed to the Constitutional and other criteria did not fulfill the Commission’s mission of an open, transparent, objective, and data-driven process. Thus, I dissent to the adoption of the Chestnut Congressional map.

Recommendation for Future Commissions:

1. Future Commissions should schedule several open meetings to deliberate over proposed plans.
2. Evaluations of compliance with each Constitutional criteria should be conducted well in advance of final deliberations and voting.
3. Proposed maps should be compared, contrasted, scored, and ranked in accordance with their compliance with the Constitutional criteria.

Conclusion

In summary, I dissent to the adoption of the Chestnut map with respect to its compliance with Constitutional Criteria 1 (Voting Rights Act Compliance), 3 (Communities of Interest), and 4 (Partisan Fairness). I also dissent to the adoption of the Chestnut map because the Commission improperly weighed considerations of competitiveness in adopting the map. Additionally, I dissent to the adoption of the Chestnut map because the Commission neglected to consider and equally weigh all public

comment received in a support of the various Congressional maps and, as a consequence, adopted a map not preferred by the public. Finally, I dissent due to the lack of open, transparent, and data-driven deliberations regarding the maps.

Respectfully submitted,

A handwritten signature in black ink that reads "Rebecca Szetela". The signature is written in a cursive style with a large, looping 'S' at the end.

Rebecca Szetela

Dated: June 24, 2022

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Exhibit 1

From: Irhandley@aol.com
Sent: Monday, December 27, 2021 9:25 PM
To: Szetela, Rebecca (MICRC)
Cc: Rothhorn, MC (MICRC); Pastula, Julianne (MICRC); badelson1@comcast.net
Subject: Re: MICRC Questions

Follow Up Flag: Follow up
Flag Status: Completed

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Dear Rebecca,

Both the threshold tables on 26 and 27 and the recompiled election results for Dillard are important tools for estimating whether minority candidates of choice can win in the proposed districts. The two approaches, at least in this instance, do not contradict one another with regard to the general election – the minority preferred candidate wins all of the general election above 35% in the state senate threshold table as well as the state house threshold table. It is the Democratic primary that is the stumbling block in the senate threshold table (I am referring to State Senate District 1 and the fact that the winner was not the candidate of choice of Black voters in the primary – she was, however, the minority candidate of choice in the general).

Unfortunately we do not have sufficient information to anticipate what might happen in future Democratic primaries in the proposed districts. The reason is that we have only one statewide Democratic primary for which we can recompile results and minority voters were not cohesive in this primary. We simply do not know what would happen in a primary in which minority voters are cohesive.

(The reason that recompiled election results are especially important is that they take into account the voting patterns of the actual voters that will reside in the newly proposed district.)

Best wishes,
Lisa

Dr. Lisa Handley

—Original Message—

From: Szetela, Rebecca (MICRC) <SzetelaR@michigan.gov>
To: SA HANDLEY <Irhandley@aol.com>
Cc: Rothhorn, MC (MICRC) <RothhornM@michigan.gov>
Sent: Mon, Dec 27, 2021 2:24 pm
Subject: MICRC Questions

Good afternoon, Dr. Handley! I have some follow up question on your report to the MICRC. I understand you will be unavailable tomorrow, so Sue suggested I email a list of questions to you.

I am trying to reconcile the information contained on pages 26 and 27. My understanding is that the table on page 26 was intended to test the "breakpoint" between districts that are electing candidates of choice versus those that are not. Table 10 on page 26 indicates that for the Michigan State Senate, districts with BVAP of 47% or lower are not able to elect

candidates of choice. This is concerning since none of our currently proposed Senate maps (Palm, Cherry, Linden) exceed 45% BVAP. Based on this table alone, I read your report to suggest that our Senate maps need to be above 48% to create opportunity to elect districts and that revisions may be necessary.

However, when I read the text on the next page (re: bellweather elections, particularly the 2014 SOS race with Godfrey Dillard), I draw a different conclusion.

I wondered how our districts are performing looking at that election. To test the maps, I ran the Linden and Cherry election results for the Dillard election. I also edited the Linden to increase the BVAP to 45% and Linden/Cherry maps to increase the BVAP to 48% for comparison purposes. Comparing the election results for the 2014 SOS election, Dillard would have won handily in all five districts, regardless of whether the BVAP was as low as 35% or as high as 50%.

Senate Maps - BVAP Percentages

District No.	Linden Plan		Revised Linden 45%		Revised Linden/Cherry 48%	
	BVAP	Dillard Election	BVAP	Dillard Election	BVAP	Dillard Election
1	35.03%	71.74%	45.23%	79.97%	50.95%	84.53%
3	42.09%	76.23%	45.39%	78.54%	48.24%	80.45%
7	44.78%	63.19%	46.59%	64.89%	50.70%	66.74%
8	40.25%	65.15%	45.20%	68.40%	49.65%	70.81%
10	40.43%	62.57%	45.98%	66.49%	48.15%	68.25%

This reassures me that maybe our Senate maps are OK with their percentages as they stand? Or am I misunderstanding your analysis? If you could clarify I would appreciate it.

On a related note, I do think that part of the variation in results in current District 1 on Table 10 relates to the combination of communities. In the current district 1, you have very little of Detroit plus Harper Woods combined with Grosse Pointe Woods and Grosse Pointe Shores, which are both wealthy and white with high voter turnout. I suspect part of the variation in District 1 may relate to variations in voter turnout between the wealthier Grosse Pointes vs. the considerably less well-heeled Detroit and Harper Wood. I would expect the Grosse Pointes preferred candidate to be elected given the makeup of that district (which is part of the reason why we drew that district differently in our Senate maps).

Thank you so much for any clarification.

Rebecca Szetela

Commissioner

Michigan Independent Citizens Redistricting Commission

szetelar@michigan.gov

(517) 898-9366



Exhibit 2

Report to the Michigan Independent Citizens Redistricting Commission

Dr. Lisa Handley

Preface

This report outlines the analyses I conducted on behalf of the Michigan Independent Citizens Redistricting Commission (MICRC) and relays my findings. I also briefly explain the partisan fairness measures I advised the MICRC to adopt as a component of the redistricting software and why I made these recommendations. The legal implications of my findings and the assessment of any proposed plans have been left to the MICRC legal team.

I. The Voting Rights Act and Racially Polarized Voting

The Voting Rights Act of 1965 prohibits any voting standard, practice or procedure – including redistricting plans – that result in the denial or dilution of minority voting strength. Section 2 of the Voting Rights Act was amended in 1982 to establish that intentional discrimination need not be proven (as the Supreme Court determined was required under the 15th Amendment to the Constitution). The U.S. Supreme Court first interpreted the amended Act in *Thornburg v. Gingles*,¹ a challenge to the 1982 North Carolina state legislative plans. In this case the U.S. Supreme Court held that plaintiffs must satisfy three preconditions to qualify for relief:

- The minority group must be sufficiently large and geographically compact to form a majority in a single-member district
- The minority group must be politically cohesive
- Whites must vote as a bloc to usually defeat the minority-preferred candidates

What do we mean when we say minority voters must be politically cohesive? And how do we know if white voters usually vote as a bloc to defeat the candidates preferred by minority voters? According to the Court, racially polarized voting is the “evidentiary linchpin” of a vote dilution claim. Voting is racially polarized if minorities and whites consistently vote for different candidates. More specifically, if minorities consistently support the same candidates, they are said to be politically cohesive. If whites are consistently *not* supporting these candidates, they are said to be bloc voting against the minority-preferred candidates.

¹ 478 U.S. 30 (1986).

Table 1: Number of Statewide Elections Analyzed that were Polarized

	General Elections with Minority Candidates	All Statewide General Election Contests	Statewide Democratic Primary
Statewide	6/6	12/13	1/1
Genesee	5/6	9/13	1/1
Saginaw	6/6	11/13	1/1
Oakland	6/6	13/13	0/1
Wayne	3/6	7/13	1/1

Every statewide general election contest analyzed was polarized in Oakland County – only in the Democratic primary for Governor in 2018 did Black and white voters support the same candidate (Gretchen Whitmer). Voting in Saginaw County was nearly as polarized: two U.S. Senate contests (2012 and 2014) were not polarized, but the gubernatorial primary was polarized. Black and white voters agreed on the same candidates slightly more often in Genesee County – in addition to supporting U.S. senate candidates Debbie Stabenow in 2012 and Gary Peters in 2014, they both supported Barack Obama in 2012 and Democrat Mark Schauer for Governor in 2014.

Voting in Wayne County was considerably less racially polarized than statewide or in the other three counties studied. However, slightly more than half of the general election contests and the one statewide Democratic primary analyzed were polarized, with Black and white voters supporting the same candidates in 2012, disagreeing on the three statewide offices, but supporting the same U.S. Senate candidate in 2014, supporting different candidates for U.S. President in 2016 and 2020, and voting for most of the same candidates in 2018.

C. Congressional and State Legislative Election Results

This section provides a summary of my racial bloc voting analysis of recent congressional and state legislative districts in the four-county area of Wayne, Oakland, Genesee and Saginaw. I analyzed 2018 and 2020 general elections, and the 2018 and 2020 Democratic primaries if at least one African American candidate competed in the election contest. However, for a number of state

only the first step in the process – it does not take into account the voting patterns of Black and white voters. If voting is racially polarized but a significant number of white voters typically “crossover” to vote for Black voters’ preferred candidate, it may be the case that crossover voting can more than compensate for depressed Black turnout.

Incorporating Minority Cohesion and White Crossover Voting Even if Black citizens are turning out at lower rates than whites, and voting is racially polarized, if a relatively consistent percentage of white voters support Black-preferred candidates, the candidates preferred by Black voters can be elected in districts that are less than majority Black. On the other hand, if voting is starkly polarized, with few or no whites crossing over to vote for the candidates supported by Black voters, it may be the case that a district that is more than 50% Black VAP is needed to elect Black-preferred candidates. A district-specific, functional analysis should take into account not only differences in turnout rates, but also the voting patterns of Black and white voters.²¹

To illustrate this mathematically, consider a district that has 1000 persons of voting age, 50% of who are Black and 50% of who are white. Let us begin by assuming that Black turnout is lower than white turnout in a two-candidate general election. In our hypothetical election example, 42% of the Black VAP turn out to vote and 60% of the white VAP vote. This means that, for our illustrative election, there are 210 Black voters and 300 white voters. Further suppose that 96% of the Black voters supported their candidate of choice and 25% of the white voters cast their votes for this candidate (with the other 75% supporting her opponent in the election contest). Thus, in our example, Black voters cast 200 of their 210 votes for the Black-preferred candidate and their other 8 votes for her opponent; white voters cast 75 of their 300 votes for the Black-preferred candidate and 225 votes for their preferred candidate:

Thus, for example, if 39.3% of the Black population turned out and 48.3% of the white population turned out, $B = .483$ and $A = .393$, and $M = .483 / (.393 + .483) = .483 / .876 = .5513$, therefore a Black VAP of 55.1% would produce an equal number of Black and white voters. (For a more in-depth discussion of equalizing turnout see Kimball Brace, Bernard Grofman, Lisa Handley and Richard Niemi, “Minority Voting Equality: The 65 Percent Rule in Theory and Practice,” *Law and Policy*, 10 (1), January 1988.)

²¹ For an in-depth discussion of this approach to creating effective minority districts, see Bernard Grofman, Lisa Handley and David Lublin, “Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence,” *North Carolina Law Review*, volume 79 (5), June 2001.

It is important to remember that winning office in the United States usually requires winning two elections: a primary and a general election. The tables above consider only general election contests. Producing a comparable set of tables for Democratic primaries is not possible. First, there was only one statewide Democratic primary – the 2018 primary contest for Governor. There were three candidates competing in this election and because 50% of the vote was not required to win the election, a mathematical equation setting the percentage needed to win 50% of the vote does not work. Second, Black voters were not cohesive in support of any one of these three candidates. In fact, the candidate preferred by even the plurality of Black voters was not the same in the four counties examined. Drawing a district that Black-preferred candidate could win this primary is not possible when there is no Black-preferred candidate.

In areas where most of the white voters are likely to vote in Republican primaries, the inability to calculate the percent needed to win in Democratic primaries is not particularly important. Black voters will dominate the Democratic primary unless they make up only a very small portion of the voters in the district. However, in the counties examined in Michigan, many white voters elect to participate in the Democratic primary, especially in Wayne County. As the percentage Black VAP of proposed districts decreases, it may become more challenging for Black-preferred candidates to win not only the general election but the Democratic primary – but only if voting in Democratic primaries is racially polarized. Unfortunately, it is not possible to ascertain exactly how much more difficult it would be – or even if it would be more difficult – given the lack of Democratic primary election data.

B. Threshold of Representation in the Current State House and Senate Districts

A useful check on the percent needed to win estimates found in Tables 5-8 that can be done prior to drawing any districts is to produce what have been referred to by some political scientists as “threshold of representation” tables. These tables are designed to identify the lowest minority percentage above which minority candidates are consistently elected. Tables 9 and 10, below, report the BVAP of the current Michigan state house and senate districts with over 20% BVAP, and indicate the race and party of the candidate elected to represent the district.²³ Sorted

²³ There are no African American state senators or representatives elected from districts that are less than 20% Black in VAP. However, there are other minority candidates (Hispanic, Asian, and Middle Eastern) elected to state house districts with considerably less than 20% BVAP.

by the percent BVAP, the tables can sometimes provide evidence of a clear breakpoint between those districts that are probably electing candidates of choice and those that are not.²⁴

An examination Table 9 indicates that every Michigan state house district with a BVAP of at least 35% elects a minority representative to the state house. In fact, every district with a BVAP of more than 26.53% elects a minority to office with the exception of District 49 in Genesee County. And the racial bloc voting analysis of House District 49 indicates that the white incumbent, John Cherry, is the candidate of choice of Black voters, even in the 2018 Democratic primary when he faced several African American candidates.

Table 9: Threshold of Representation for State House Districts, 2021

State House District	Total VAP	Black VAP	Percent Black VAP	Name	Party	Race	Percent of Vote 2020
7	60347	57256	94.27%	Helena Scott	D	Black	93.00%
8	62448	58042	92.42%	Stephanie A. Young	D	Black	96.70%
3	54130	49536	90.93%	Shri Thanedar	D	Asian	93.30%
9	62529	46806	74.22%	Karen Whitsett	D	Black	94.20%
10	69209	46977	67.41%	Mary Cavanagh	D	Hispanic	84.80%
1	59788	38993	64.76%	Tenisha R. Yancey	D	Black	75.80%
35	78306	49325	62.50%	Kyra Harris Bolden	D	Black	82.90%
34	49491	30419	60.96%	Cynthia R. Neeley	D	Black	86.70%
2	57031	33142	57.70%	Joe Tate	D	Black	74.10%
5	49290	27190	54.12%	Cynthia A. Johnson	D	Black	93.40%
6	67505	36182	52.86%	Tyrone Carter	D	Black	100.00%
4	68749	32761	47.27%	Abraham Aiyash	D	ME	89.80%
29	72319	26621	36.04%	Brenda Carter	D	Black	72.90%
95	58640	21320	35.50%	Amos O'Neal	D	Black	70.10%
49	64844	19308	29.47%	John D. Cherry	D	White	68.90%
54	72426	21212	28.79%	Ronnie Peterson	D	Black	77.70%
12	73883	20207	26.97%	Alex Garza	D	Hispanic	62.40%
11	73586	19760	26.53%	Jewell Jones	D	Black	65.20%
92	66135	16957	25.34%	Terry J. Sabo	D	White	65.30%
27	73337	18051	24.35%	Regina Weiss	D	White	74.40%
16	74617	17556	23.25%	Kevin Coleman	D	White	62.50%
75	76956	18127	22.56%	David LaGrand	D	White	74.60%
68	71672	16808	22.44%	Sarah Anthony	D	Black	75.90%
18	75251	16519	21.76%	Kevin Hertel	D	White	60.30%
22	68758	14588	21.00%	Richard Steenland	D	White	59.90%
60	74176	15887	20.97%	Julie M. Rogers	D	White	71.40%

²⁴ Without the confirmation provided by a racial bloc voting analysis, it could conceivably be the case that the minority legislator is not the candidate of choice of minority voters.

Interpreting Table 10, for the Michigan state senate, is less straightforward. The four districts with BVAP percentages over 47% elect African Americans to office. However, Stephanie Chang, the state senator in District 1, which is 44.68% BVAP, was not the candidate of choice of Black voters in the 2018 Democratic primary, though she is the candidate of choice in the general election.

Table 10: Threshold of Representation for State Senate Districts, 2021

State Senate District	Total VAP	Black VAP	Percent Black VAP	Name	party	race	Percent of vote 2018
5	203828	111418	54.25%	Betty Alexander	D	Black	77.4%
2	169357	86961	50.82%	Adam Hollier	D	Black	75.7%
3	186758	90737	48.14%	Sylvia Santana	D	Black	81.8%
4	180199	85691	47.00%	Marshall Bullock	D	Black	78.3%
1	193087	87075	44.68%	Stephanie Chang	D	Asian	72.0%
11	229870	82336	35.48%	Jeremy Moss	D	White	76.7%
27	175918	54071	30.42%	Jim Ananich	D	White	71.2%
9	219325	50800	22.95%	Paul Wojno	D	White	65.9%
6	217734	46997	21.29%	Erika Geiss	D	Black	61.4%

C. Recompiled Election Results

As noted above, once draft districts have been drawn, there is a second approach available for ascertaining whether a proposed district is likely to provide minority voters with an opportunity to elect their candidates of choice to legislative or congressional office. This approach relies on recompiling election results from previous elections to see if the candidates preferred by minority voters would win in the draft district. This process entails (1) identifying “bellwether” elections, (2) disaggregating the precinct level results for these elections down to the census block level and then (3) re-aggregating the results up to conform to proposed district boundaries to determine if the minority-preferred candidate would win. This recompilation can only be done

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MICRC

09/02/21-1300 Meeting

Captioned by Q&A Reporting, Inc., www.qacaptions.com

Exhibit 3

>> VICE CHAIR SZETELA: We will bring the Michigan Independent Citizens Redistricting Commission to order at 1:06 p.m.

Greetings to Ann Arbor. We are happy to be here today. There are several groups that are making this meeting possible. I would like to thank Tom Ivako, Bonnie Roberts and Logan Woods of the center for local, state and urban policy here at the University of Michigan. Ellen Weerman and Nate Hall, campus election management project. Landon Meyers, campus vote project. It's gratifying that so many groups are here to assist the MICRC in engaging people in redistricting here in Michigan.

This Zoom webinar is being live streamed at YouTube at [www.YouTube.com/MICHSO office/videos](http://www.YouTube.com/MICHSO_office/videos).

For anyone in the public watching who would prefer to watch via a different platform than they are currently using, please visit our social media at Redistricting MI to find the link for viewing on YouTube.

Our live stream today includes closed captioning. Closed captioning, ASL interpretation, and Spanish and Bengali and Arabic translation services will be provided for effective participation in this meeting. Please E-mail us at Redistricting@Michigan.Gov for additional viewing options or details on accessing language translation services for this meeting.

People with disabilities or needing other specific accommodations should also contact Redistricting at Michigan.gov.

This meeting is also being recorded and will be available at www.Michigan.gov/MICRC for viewing at a later date and this meeting is being transcribed and closed-captioned transcriptions will be made available and posted on Michigan.gov/MICRC along with the written public comment submissions.

There is also a public comment portal that may be accessed by visiting Michigan.gov/MICRC, this portal can be utilized to post maps and comments which can be viewed by both the Commission and the public.

Members of the media who may have questions before, during or after the meeting should direct those questions to Edward Woods III, our Communications and Outreach Director for the Commission at WoodsE3@Michigan.gov or 517-331-6309.

For the purposes of the public watching and for the public record I will now turn to the Department of State staff to take note of the Commissioners

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The first and Foremost criteria are the U.S. Constitution and Federal law and the Voting Rights Act is Federal law.

And it applies everywhere in the country including Michigan.

It prohibits any voting standard practice or procedure including a redistricting plan that results in the denial or dilution of minority voting strength.

A redistricting plan that dilutes minority voting strength is one that either cracks or packs a geographically concentrated minority group.

A top example to the left is or to the right is an example of a District, a set of districts that cracks the minority community by dividing it among four districts, five districts so that they cannot elect a minority preferred candidate in any of those districts.

The lower example on the right is an example of a District or District center that packs minority voters so that they have an impact on only one District and no impact on any of the other districts despite the fact that you could probably have drawn two districts in which they had the ability to elect communities, to elect candidates of choice.

When the Voting Rights Act was amended in 1982 to make it clear that you did not have to show that the redistrictors intended to discriminate only that the plan that they drew actually resulted in discrimination.

The Supreme Court first considered this case in 1986 in a case called Thornburg versus Jingles and had to prove three conditions in order to satisfy Section Two and get a District drawn in which they could have the ability to elect a candidate of choice.

First is that the group must be sufficiently large and geographically compact to form a majority in a single member District.

This is in essence so there was actually a remedy available.

There is a solution to the problem of how do we elect candidates of choice.

The second is that the minority group must be politically cohesive.

That is, they must vote for the same candidates.

And, third, whites must vote as a bloc to usually defeat the minority-preferred candidates.

If they were not voting as a bloc to defeat these candidates, these candidates would win, and you wouldn't need to draw a minority District.

So how do we know how the minority group is voting? How do we know how whites are voting? What you do is conduct a racial bloc voting analysis.

And my job in this particular situation is to actually carry out what's called a racial bloc voting analysis that is analyze voting patterns by race to determine if voting is polarized. If whites are voting against a cohesive minority community.

I mentioned that first of all we have, of course, a secret ballot.

We don't know the race of the voters when they cast the ballot.

So, we have to use estimation techniques.

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And the two most standard estimation techniques are ecological regression analysis and ecological inference analysis. Ecological simply means you are using aggregate data.

What we are going to do is we are going to look at precincts rather than individuals. And we are going to look to see if there are patterns across the precincts in which the demographic composition of the precinct is related to the voting patterns of those precincts.

So, on the left we see ecological regression each precinct in the jurisdiction has been placed on the scatter plot on the basis of the percent Black turnout this is the jurisdiction in the south where we actually know turn out by race.

And the vertical axis is vote for Warnock this is an election that occurred in January of 2021 it's the race for U.S. Senate in Georgia.

This is real data in a specific County.

You can see a pattern here and the pattern is the higher the percent Black across the precincts the more votes you see for Warnock that is the estimation technique we used to determine how whites and Blacks are voting in this particular jurisdiction.

This practice, this particular technique had one disadvantage associated with it and that voting was very polarized, you would get estimates that were outside the logical bounds and would find something like 105 Blacks vote 105% of Black voters voted for Warnock. And negative 5 white voters voted for Warnock.

So, in the 1990s Professor King developed ecological inference, that you see on the right side. And this process, each precinct is actually represented by a line rather than a point using more information about the precinct to get this line. And that is all the possible combinations of Black and white votes that could have produced the result for that particular precinct as represented by a line as opposed to a point.

And then the computer generates a best guesstimate of what the actual composition of the votes for the Black candidate were, was.

So, this is the analysis that I performed in Michigan.

Now you need a few pieces of information in order to perform this.

And that is that you need to have an area that has a sufficient number of minority voters to actually estimate voting behavior by race.

I looked at eight counties.

There were several counties in the west of Michigan that had growing minority population around Grand Rapids, Muskegon County and Kent County and it turns out there was not a sufficient number of minority votes to estimate behavior voting behavior on the basis of race in those two counties.

The same is true of I looked at six counties in the east.

I was able to produce estimates for Wayne, Oakland, Genesee and Saginaw Counties, I was not able to do so for Washtenaw and Macomb Counties there was not a sufficient amount of Black turn out to estimate Black and white behavior in those two counties so

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what I'm going to give you is the results of analysis for statewide for the entire State of Michigan and for these four counties.

Because actually what you want to do you want to do an area specific analysis because it turns out that voting patterns are different depending where you are in the state.

For example, it may be the case using the example I gave you before of the Georgia election.

Turns out that in the rural areas of Georgia the election was very polarized while in the urban area around Fulton it was much less polarized.

In fact, it wasn't polarized at all in certain areas.

So, it matters where you are in the state as to how much polarization there is and when you're drawing districts it matters what it looks like in that specific area.

The Court is quite adamant about doing a District-specific and an analysis and this is why I looked at these counties.

I looked at 13 elections there have been 13 statewide and Federal elections over the decade.

These include U.S. Senate, U.S. president, U.S. Senate, and three statewide contests, the gubernatorial contests the Attorney General and Secretary of State and the treasurer.

Four statewide contests.

Now the courts have indicated that the most probative contest to look at are contests include minority candidates.

So, you've had four contests statewide contests over the last decade that included minority candidates.

These are the most probative.

You have also listed them here.

You had the 2012 race for U.S. president.

You had a 2014 Secretary of State contest.

You had the 2018 and 2020 U.S. Senate contests.

Then you had two contests that included minority candidates as running mates.

This is the 2018 gubernatorial contest and the 2020 Presidential contest.

So, these I looked at all 13 statewide contests, but these are the most probative according to the courts.

Ordinarily I would look at statewide democratic primaries as well.

I could not look at republican primaries there is not enough minority participation in republican primaries to actually analyze voting patterns by race.

So, I look at democratic primaries.

And in this case, you've only had one statewide democratic primary.

This entire decade and that was in 2018 for Governor.

So, I looked at that contest as well.

This is what the results look like.

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And I'm going to explain how to read this table.

Every election that I looked at for every area has a table that looks like this.

So, this is statewide.

This is the election listed here, 2018 Governor.

And here are the candidates.

Here are the parties of the candidates.

Here are the races of the candidates.

Here is the votes that they received statewide.

Now, there are actually four estimates for Black voters and there are four estimates for white voters.

I talked to you about ecological regression and mentioned the problem you have with ecological regression and there sit 104 of Black voters supporting Whitmer.

I didn't mention homogenous precinct.

This is actual these are the actual results of precincts across the state that are overwhelmingly one race.

So these are precincts across the state that are 90% or more voting age population Black in composition.

So that's how I derived the homogenous and this is actual data so looking at 90% plus precincts 90 per cent plus Black age population precincts 95.6% of those voters supported Whitmer.

There are actually two different forms of ecological inference analysis.

One is called two by two.

And that is the one that was developed in the 1990s.

It's since been refined so that I can account for differential turn out and that's what is in the last column 95.3%.

Now all of these are derived from different techniques.

You wouldn't expect them to be exactly the same, but they are all telling a very similar story and that is overwhelming Black support for Whitmer.

On the other side of this table, we will get our estimates.

I report the estimates for the white voters.

So let me see if I can get this to work.

But it's not doing this.

Okay, so we've got 41.1% in the overwhelmingly white precincts, 41.1% of the voters supported Whitmer.

The AR estimate is 38.9.

The two by two is 40.6.

And let me see and the C is 44.8% so these are estimates.

Now I forgot to mention down here the votes for office this is the percentage of voting age population that actually turned out and cast a ballot for that particular office.

So, you can see there is a difference in turn out rates.

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And that is around 35% of Black voting age population turned out and cast a ballot for the Governor in 2018.

While the number was higher almost double for white voters.

This contest is racially polarized.

If Blacks voting alone had voted alone Whitmer would have been elected.

She was.

And then of course if whites voted alone, it would have been the republican candidate who was elected.

Below I have the primary for this election.

I have the gubernatorial primary of 2018.

We have the three candidates listed here:

We have they are all democrats.

We have their race.

We have the percentage of votes they received.

And you will see that this contest is also polarized.

This contest you have a plurality of the Black voters supporting Thanedar and majority of the white voters supported Whitmer.

So, this contest is also polarized.

Okay, now I did this, and you will see tables in the report that I eventually produce for every election but I'm going to show you summaries of this in a little bit.

So, over all statewide in the 13 elections that I looked at, 12 were polarized.

And those elections that are most probative to the courts, that is those that included minority candidates, 6 out of the 6 were polarized in the democratic primary which there was only one it was polarized.

And I mean -- mentioned I looked at four counties and these are the results of the analysis in four counties in Genesee County we have nine of the 13 contests polarized with five of the six with minority candidates.

The democratic primary was polarized.

And Saginaw it's 11 out of 13 of the contests, six out of six of those contests with minority candidates.

And the democratic primary was polarized.

In Oakland all 13 of the general elections were polarized including the six with minority candidates but the democratic primary was not.

And finally in Wayne County where voting is less polarized you will see that 7 of the 13 contests were polarized, three of those were minority candidates and the democratic primary was polarized.

What this tells me is that voting is polarized in Michigan.

And what that means is the Voting Rights Act comes into play in districts that provide minority voters with the opportunity to elect their candidates must be drawn.

Okay, so voting is polarized.

Exhibit 4

DETERMINING IF A REDISTRICTING PLAN COMPLIES WITH THE VOTING RIGHTS ACT

Dr. Lisa Handley

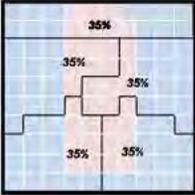
1

Redistricting Plans that Violate the Voting Rights Act

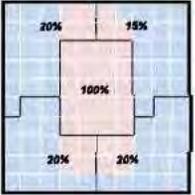
Redistricting plans cannot:

- crack, or
- pack

a geographically concentrated minority community across districts or within a district in a manner that dilutes their voting strength.



Plan that cracks minority community across 5 districts



Plan that packs minority community into single district

3

Redistricting Criteria Priority Pyramid: Voting Rights Act of 1965

- Section 2 prohibits any voting standard, practice or procedure, including a redistricting plan, that results in the denial or dilution of minority voting strength.
- All state and local jurisdictions are covered by Section 2 of the Voting Rights Act.



2

Thornburg v. Gingles: Three-Pronged Test

U.S. Supreme Court held that plaintiffs must satisfy three preconditions to qualify for relief under Section 2 of the Voting Rights Act:

- The minority group must be sufficiently large and geographically compact to form a majority in a single-member district
- The minority group must be politically cohesive
- Whites must vote as a bloc to usually defeat the minority-preferred candidates

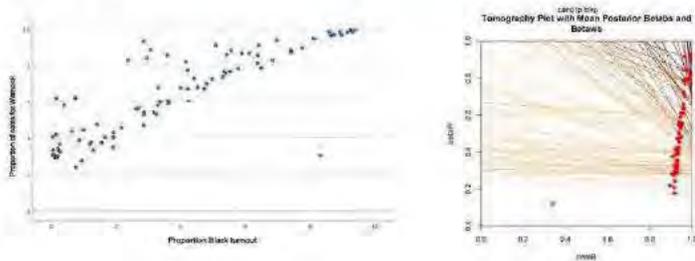
A racial bloc voting analysis is used to ascertain whether minority voters are politically cohesive and if white voters bloc vote to usually defeat minority-preferred candidates.

4

Analyzing Voting Behavior by Race

Two standard statistical techniques for estimating voting patterns of minority and white voters:

- Ecological regression analysis (ER)
- Ecological inference analysis (EI)



5

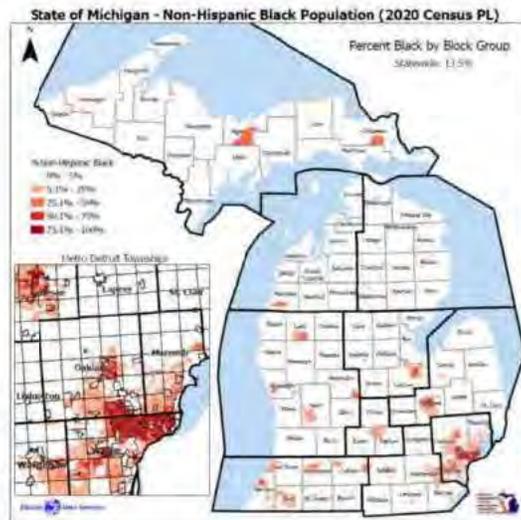
Elections Analyzed to Date

- All federal and statewide general election contests, 2012-2020.
 - Four election contests included minority candidates:
 - 2012 U.S. President (Barack Obama)
 - 2014 Secretary of State (Godfrey Dillard)
 - 2018 U.S. Senate (John James)
 - 2020 U.S. Senate (John James)
 - Two contests included minority candidates as running mates
 - 2018 Governor (Gretchen Whitmer/Garlin Gilchrist)
 - 2020 U.S. President (Joseph Biden/Kamala Harris)
- Only Democratic primary for statewide office this past decade: 2018 race for governor

7

Area-Specific Analyses

- Wayne
- Oakland
- Genesee
- Saginaw



6

Example of RBV Results: 2018 General and Democratic Primary for Governor

Statewide	Party	Race	Vote	Estimates for Black Voters				Estimates for White Voters				
				HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC	
2018 General												
Governor												
	Whitmer/Gilchrist	D	W/AA	53.3%	95.6	104.9	98.6	95.3	41.1	38.9	40.6	44.8
	Schulte/Lvons	R	W	49.8%	2.5	-6.4	-0.6	1.8	56.0	57.9	56.2	52.8
	Others				1.9	2.1	2.6	2.9	2.9	3.2	2.9	2.5
	votes for office				36.6	31.6	35.2	35.2	61.9	61.7	63.9	63.9

Statewide	Party	Race	Vote	Estimates for Black Voters				Estimates for White Voters				
				HP	ER	EI 2x2	EI RxC	HP	ER	EI 2x2	EI RxC	
2018 Democratic Primary for Governor												
STATEWIDE												
	Abdul El-Sayed	D	ME	30.2%	21.0	24.2	23.5	26.0	25.7	27.1	30.2	28.5
	Shri Thanedar	D	A	17.7%	42.5	44.2	42.2	39.0	15.8	12.9	10.8	9.4
	Gretchen Whitmer	D	W	52.0%	36.5	31.6	33.5	35.0	58.6	60.0	59.4	62.0
	votes for office				23.0	22.5	24.5	24.5	13.0	12.0	14.0	14.0

- **votes for office** = percentage of voting age population who turned out and cast a vote for the office
- **HP** = vote percentages from homogeneous precincts
- **ER** = estimates derived from ecological regression analysis
- **EI 2x2** = estimates derived from standard EI (as developed by Prof. Gary King)
- **EI RxC** = estimates derived from EI technique that takes into account differences in participation by race

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Number of Racially Polarized Elections

	General Elections with Minority Candidates	All Statewide General Election Contests	Statewide Democratic Primary
Statewide	6/6	12/13	1/1
Genesee	5/6	9/13	1/1
Saginaw	6/6	11/13	1/1
Oakland	6/6	13/13	0/1
Wayne	3/6	7/13	1/1

Number of polarized contests / total number of contests

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Drawing Minority Opportunity Districts

- Line drawers cannot simply set an arbitrary demographic target (e.g., 50% black voting age population) for all minority districts across the jurisdiction (*Alabama Legislative Black Caucus v. Alabama*, 2015).
- A district-specific, functional analysis is required to determine if a proposed district will provide minority voters with the ability to elect minority-preferred candidates to office.

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Complying with the Voting Rights Act

- If, based on the racial bloc voting (RBV) analysis, it is determined voting is racially polarized, and candidates preferred by a politically cohesive minority group are usually defeated by white voters not supporting these candidates, a district(s) that offers minority voters an opportunity to elect their candidates of choice must be drawn.
- If such districts already exist, and minority-preferred candidates are winning only because these districts exist, then these minority districts must be maintained in a manner that continues to provide minority voters with an opportunity to elect their preferred candidates.

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District-specific, Function Approaches

- Estimates of participation rates, minority cohesion and white crossover voting for minority-preferred candidates derived from the RBV analysis can be used to calculate the percent minority population needed in a specific area for minority-preferred candidates to win a district in that area.
- Election results from previous contests that included minority-preferred candidates (“bellwether elections” as identified by the RBV analysis) can be recompiled to reflect the boundaries of the proposed district to determine if minority-preferred candidates would consistently carry this proposed district.

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Michigan STATEWIDE Percent Black VAP needed to win	race of B+P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B+P cand would have received if district was 55% Black VAP	percent of vote B+P cand would have received if district was 50% black VAP	percent of vote B+P cand would have received if district was 45% black VAP	percent of vote B+P cand would have received if district was 40% black VAP	percent of vote B+P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B+P	all others	votes cast for office	B+P	all others					
GENERAL ELECTIONS												
2020 President	W	55.2	96.2	3.8	79.0	40.0	60.0	85.9	63.1	60.4	57.9	55.4
2020 US Senate	W	55.0	93.9	6.1	76.1	35.4	60.6	64.6	61.9	59.3	56.8	54.4
2018 Governor	W	35.2	95.3	4.7	63.3	44.8	55.2	65.2	62.8	60.6	58.5	56.4
2018 Secretary of State	W	35.1	95.6	4.4	62.2	43.9	56.1	65.0	62.6	60.2	58.0	55.9
2018 Attorney General	W	34.6	94.4	5.6	61.7	39.4	60.6	61.8	59.2	56.7	54.4	52.2
2018 US Senate	W	35.0	94.3	5.7	63.1	43.7	59.3	64.1	61.8	59.5	57.4	55.3
2016 President	W	54.1	97.6	2.7	67.2	34.2	65.7	65.5	62.4	59.3	56.3	53.4
2014 Governor	W	35.1	95.7	4.3	49.1	36.5	61.5	65.2	62.3	59.6	57.0	54.4
2014 Secretary of State	AA	34.8	95.8	4.2	47.8	33.5	66.5	62.8	59.7	56.8	53.9	51.0
2014 Attorney General	W	34.6	95.2	4.8	47.8	35.0	65.0	63.3	60.3	57.4	54.6	51.9
2014 US Senate	W	35.0	96.5	3.5	46.5	47.3	52.7	70.4	67.9	65.6	63.3	61.1
2012 President	AA	59.1	97.8	2.2	66.1	44.5	55.5	71.9	69.3	66.6	64.0	61.5
2012 US Senate	W	58.8	96.8	3.2	66.0	50.6	49.4	74.5	72.2	69.8	67.7	65.4

Statewide				Estimates for Black Voters				Estimates for White Voters			
2018 General	Party	Race	Vote	HP	ER	E1 2x2	E1 RxC	HP	ER	E1 2x2	E1 RxC
Governor	D	W/AA	53.3%	95.6	104.3	99.6	95.3	41.2	38.9	40.6	44.8
Schaetzle/Lyons	R	W	43.8%	2.5	-6.4	0.6	1.8	56.0	57.9	56.2	52.8
others				1.9	2.1	2.0	2.9	2.9	3.2	2.0	2.5
votes for office				35.6	32.6	35.2	35.2	67.9	61.7	63.2	63.2

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GENESEE COUNTY Percent Black VAP needed to win	race of B+P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B+P cand would have received if district was 55% Black VAP	percent of vote B+P cand would have received if district was 50% black VAP	percent of vote B+P cand would have received if district was 45% black VAP	percent of vote B+P cand would have received if district was 40% black VAP	percent of vote B+P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B+P	all others	votes cast for office	B+P	all others					
GENERAL ELECTIONS												
2020 President	W	53.0	96.1	3.9	79.6	42.1	57.9	66.3	63.7	61.1	58.7	56.4
2020 US Senate	W	56.6	95.0	5.0	78.7	43.5	56.5	67.6	65.0	62.6	60.2	57.9
2018 Governor	W	45.1	95.3	4.7	59.6	46.2	53.8	69.8	67.3	64.9	62.6	60.4
2018 Secretary of State	W	44.9	95.2	4.8	58.6	48.0	52.0	70.8	68.5	66.2	64.0	61.8
2018 Attorney General	W	44.6	94.1	5.9	58.4	41.1	58.9	66.7	64.0	61.6	59.0	56.5
2018 US Senate	W	45.1	95.2	4.8	59.6	45.8	54.2	69.5	67.1	64.7	62.4	60.1
2016 President	W	59.0	96.4	3.6	67.3	37.4	62.6	67.9	65.0	62.0	59.2	56.3
2014 Governor	W	35.8	95.8	4.2	47.5	51.8	48.2	72.9	70.7	68.6	66.5	64.5
2014 Secretary of State	AA	35.9	95.6	4.4	46.1	46.2	53.8	70.3	67.8	65.4	63.1	60.8
2014 Attorney General	W	35.9	95.6	4.4	45.5	45.2	54.8	69.9	67.4	65.0	62.6	60.2
2014 US Senate	W	36.1	95.6	4.4	47.1	58.6	41.4	76.5	74.7	72.8	71.1	69.4
2012 President	AA	61.0	97.6	2.4	68.4	53.7	46.3	76.6	74.4	72.2	70.1	67.8
2012 US Senate	W	60.7	96.7	3.3	67.5	60.2	39.8	79.3	77.4	75.7	73.9	72.1

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SAGINAW COUNTY Percent Black VAP needed to win	race of B+P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B+P cand would have received if district was 55% Black VAP	percent of vote B+P cand would have received if district was 50% black VAP	percent of vote B+P cand would have received if district was 45% black VAP	percent of vote B+P cand would have received if district was 40% black VAP	percent of vote B+P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B+P	all others	votes cast for office	B+P	all others					
GENERAL ELECTIONS												
2020 President	W	48.6	95.3	4.7	79.6	36.3	63.7	61.5	58.7	56.0	53.4	50.9
2020 US Senate	W	48.4	93.8	6.2	78.7	37.5	62.5	61.7	58.9	56.3	53.9	51.5
2018 Governor	W	37.7	93.6	6.4	63.0	40.9	59.1	83.2	80.6	78.2	75.9	73.7
2018 Secretary of State	W	38.0	93.7	6.3	61.4	38.2	60.8	82.7	80.0	77.5	75.1	72.8
2018 Attorney General	W	37.6	93.4	6.6	61.0	33.3	66.7	59.1	56.2	53.4	50.8	48.3
2018 US Senate	W	37.8	93.6	6.5	62.6	39.6	60.7	62.3	59.7	57.2	54.8	52.4
2016 President	W	52.3	95.0	5.0	70.2	30.6	69.4	61.3	58.1	55.0	52.0	49.0
2014 Governor	W	32.7	94.1	5.9	50.8	42.2	57.8	65.1	62.5	60.1	57.8	55.6
2014 Secretary of State	AA	32.6	94.4	5.6	49.2	36.3	63.7	62.3	59.5	56.7	54.1	51.6
2014 Attorney General	W	32.4	94.1	5.9	50.1	32.6	67.4	59.8	56.8	53.9	51.1	48.5
2014 US Senate	W	32.7	94.1	5.9	50.1	50.6	49.4	66.9	67.8	65.7	63.8	61.9
2012 President	AA	56.2	95.7	4.3	70.3	42.9	57.1	69.0	66.4	63.8	61.3	58.8
2012 US Senate	W	55.7	95.4	4.6	68.7	52.3	47.7	73.8	71.6	69.5	67.4	65.4

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OAKLAND COUNTY Percent Black VAP needed to win	race of B+P candidate	turnout rate for office and percent vote for black-preferred candidates						percent of vote B+P cand would have received if district was 55% Black VAP	percent of vote B+P cand would have received if district was 50% black VAP	percent of vote B+P cand would have received if district was 45% black VAP	percent of vote B+P cand would have received if district was 40% black VAP	percent of vote B+P cand would have received if district was 35% black VAP
		Black votes			White votes							
		votes cast for office	B+P	all others	votes cast for office	B+P	all others					
GENERAL ELECTIONS												
2020 President	W	71.6	93.4	6.6	86.4	45.9	54.1	69.8	67.4	65.1	62.8	60.6
2020 US Senate	W	71.4	92.1	7.9	85.4	43.5	56.5	68.1	65.6	63.2	60.9	58.6
2018 Governor	W	53.2	94.1	5.9	68.8	47.4	52.6	70.1	67.8	65.5	63.3	61.1
2018 Secretary of State	W	53.1	94.2	5.8	67.2	47.5	52.5	70.4	68.0	65.8	63.5	61.4
2018 Attorney General	W	52.5	93.8	6.2	67.0	43.0	57.0	67.9	65.3	62.8	60.4	58.1
2018 US Senate	W	53.2	93.0	7.0	66.7	45.6	54.5	68.6	66.2	63.9	61.7	59.5
2016 President	W	65.6	95.1	4.9	73.5	39.1	60.9	86.3	85.3	82.7	80.3	77.9
2014 Governor	W	46.3	94.8	5.2	54.6	30.6	69.4	63.3	60.1	56.9	53.8	50.7
2014 Secretary of State	AA	45.9	94.6	5.4	53.1	26.4	73.6	61.4	58.0	54.7	51.3	48.1
2014 Attorney General	W	45.8	94.1	5.9	52.6	32.9	67.1	64.5	61.4	58.4	55.4	52.4
2014 US Senate	W	46.5	95.0	5.0	53.7	46.7	53.3	71.6	69.1	66.7	64.4	62.1
2012 President	AA	68.9	95.7	4.3	75.7	42.1	57.9	70.3	67.8	65.0	62.3	59.7
2012 US Senate	W	67.8	95.8	4.2	74.0	47.8	52.4	73.1	70.6	68.3	65.9	63.5

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WAYNE COUNTY Percent Black VAP needed to win	race of B4P candidate	runout rate for office and percent vote for Black preferred candidates						percent of vote B4P cand would have received if district was 55% Black VAP	percent of vote B4P cand would have received if district was 50% Black VAP	percent of vote B4P cand would have received if district was 45% Black VAP	percent of vote B4P cand would have received if district was 40% Black VAP	percent of vote B4P cand would have received if district was 35% Black VAP
		Black votes			White votes							
		votes cast for office	B4P		votes cast for office	B4P						
			all	others		all	others					
GENERAL ELECTIONS												
2020 President	W	58.0	97.5	2.5	76.6	47.5	52.5	71.5	69.0	66.6	64.3	62.0
2020 US Senate	W	57.8	95.2	4.8	75.6	47.2	52.8	70.4	68.0	65.7	63.4	61.2
2018 Governor	W	33.2	97.0	3.0	65.2	53.5	46.5	70.5	68.5	66.6	64.8	63.1
2018 Secretary of State	W	33.1	97.0	3.0	62.2	53.6	46.4	70.7	68.7	66.8	65.0	63.3
2018 Attorney General	W	32.7	95.5	4.5	61.3	49.4	50.6	67.6	65.4	63.4	61.5	59.7
2018 US Senate	W	33.1	95.8	4.2	63.1	52.3	47.7	69.3	67.3	65.4	63.6	61.9
2016 President	W	57.0	98.4	1.6	64.0	39.7	60.3	70.3	67.4	64.4	61.2	58.7
2014 Governor	W	35.8	96.5	3.5	47.7	41.3	58.7	67.7	65.0	62.3	59.7	57.2
2014 Secretary of State	AA	35.5	96.8	3.2	46.1	36.9	63.2	65.0	62.9	60.0	57.2	54.4
2014 Attorney General	W	35.3	95.7	4.3	45.8	41.0	59.0	67.5	64.8	62.1	59.5	57.0
2014 US Senate	W	35.7	98.0	2.0	46.8	53.4	46.6	74.9	72.7	70.5	68.4	66.4
2012 President	AA	60.4	99.0	1.0	65.7	51.9	48.1	76.8	74.5	72.1	69.8	67.5
2012 US Senate	W	50.9	98.1	1.9	64.4	57.6	42.4	78.1	77.1	75.1	73.1	71.3

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State House District	Total VAP	Black VAP	Percent Black VAP	Name	Party	Race	Percent of Vote 2020
1	30043	52250	94.28%	Brianna Scott	D	Black	83.0
2	60448	38082	62.98%	Necoshia A. Young	D	Black	86.7
3	54188	8939	16.51%	Ken Thompson	D	Asian	83.3
4	61933	48801	78.81%	Karen Whitmer	D	Black	94.3
5	60108	65477	108.93%	Mary Lynn Smith	D	Black	84.8
6	32289	30751	95.22%	Teresa B. Tandy	D	Black	75.8
7	74916	62565	83.50%	Walter B. Butler	D	Black	82.9
8	39401	30411	77.18%	Cynthia B. Newby	D	Black	86.7
9	10993	83492	75.93%	Bob Cain	D	Black	74.1
10	69291	27100	39.12%	Cynthia A. Johnson	D	Black	91.4
11	64700	36384	56.23%	Yvette Carter	D	Black	88.0
12	60179	32161	53.45%	Abraham Jones	D	Black	89.8
13	22415	39401	175.71%	Brenda Turner	D	Black	72.9
14	58404	21320	36.50%	Almos O'Neal	D	Black	70.1
15	44804	19388	43.27%	John D. Curry	D	White	68.9
16	72416	22212	30.67%	Bernita Dean Peterson	D	Black	72.7
17	70967	20010	28.34%	Alia Gentry	D	Black	62.4
18	17388	12610	72.52%	David Smith	D	Black	85.2
19	64015	16592	25.92%	Terryl Smith	D	White	85.3
20	75317	50111	66.55%	Ernie White	D	White	78.4
21	44994	16377	36.42%	Diane Lancaster	D	White	74.6
22	74817	17356	23.19%	Robin Goodman	D	White	62.5
23	71623	14808	20.55%	Barbara Johnson	D	Black	75.9
24	20157	18139	90.00%	David Daniel	D	White	88.3
25	42146	15887	37.70%	Jeffrey A. Rogers	D	White	73.4
26	68758	11888	17.29%	Richard M. Scorsone	D	White	59.9
27	78921	14168	17.95%	Shawanda Beckwith	D	White	62.9
28	79318	14018	17.67%	Tom M. Stone	D	White	88.3
29	63811	22812	35.75%	Franklin Wendzel	D	White	86.6
30	71189	15017	21.11%	William J. Swartz	D	White	56.3
31	78921	14168	17.95%	Shawanda Beckwith	D	White	62.9
32	69843	13311	19.19%	Ben Fuchtmann	D	White	61.3
33	71495	11421	16.00%	Burton Pitt	D	Asian	59.2
34	73817	12158	16.47%	Rachel Hood	D	White	62.8
35	65415	28419	43.43%	Shawn Robinson	D	White	54.1
36	74864	6571	8.78%	Tom Swick	D	White	54.3
37	72355	8025	11.09%	Steve Martin	D	White	57.5
38	71401	8121	11.37%	Polina Adams	D	White	72.8
39	64767	5877	9.08%	Eric Alexander	D	White	60.0

Threshold of Representation: State House

- All districts over 36% Black elect minority candidates
- 89% of districts over 25% Black elect minority candidates
- No state house districts between 37 and 47% Black

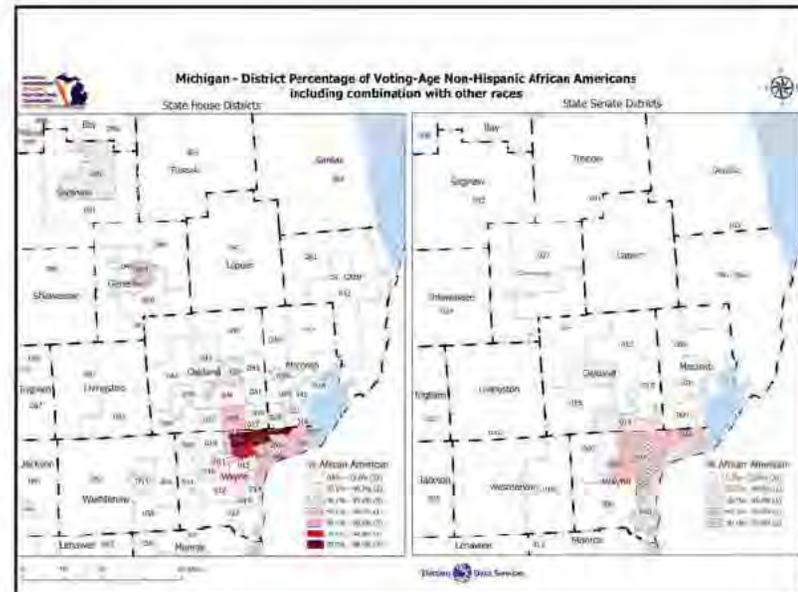
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State Senate District	Total VAP	Black VAP	Percent Black VAP	Name	Party	Race	Percent of Vote 2018
1	202828	113418	55.92%	Betty Jean Alexander	D	Black	77.4
2	149357	60981	40.83%	Adam Haller	D	Black	75.7
3	186756	30747	16.47%	Nydia Santiago	D	Black	51.8
4	180199	85641	47.53%	Marshall Bullock	D	White	78.3
5	199387	87075	43.68%	Stephanie Chung	D	Asian	72.0
6	222870	82816	37.16%	Lorena Moss	D	White	76.7
7	175918	54071	30.74%	Jim Ananich	D	White	71.2
8	219325	50800	23.16%	Paul Worhe	D	White	83.8
9	217731	44997	20.66%	Erica Gots	D	Black	61.6
10	211638	32204	15.22%	Rosemary Bayer	D	White	49.4
11	243119	36728	15.11%	Jeff Irwin	D	White	76.8
12	215027	35729	16.57%	Justin Havel Jr.	D	White	68.3
13	202944	28006	13.80%	Ken Horn	D	White	55.1
14	224176	43876	19.57%	Winnie Strick	D	White	46.8
15	204248	24831	12.16%	John McGinn	D	White	43.3
16	185675	19134	10.31%	Jan Burrows	D	White	50.7
17	207587	20185	9.72%	Kim LaSota	R	White	58.1
18	232106	19162	8.26%	Michael Macdonald	R	White	51.0
19	225533	17825	7.90%	Savva Polshanski	D	White	50.8
20	204186	15775	7.73%	John Biron	R	White	58.8
21	226099	14436	6.38%	Jim Novak	R	White	51.7
22	227852	15053	6.61%	John J. Luciani	R	White	51.4
23	212780	14313	6.73%	Eric Nesbitt	R	White	56.7
24	189553	12509	6.60%	Missie Shurley	R	White	62.7
25	203692	11250	5.52%	Ruth Johnson	R	White	55.7
26	214199	10152	4.74%	Peter Macgregor	R	White	58.4
27	213883	8997	4.21%	Tom Barrett	R	White	53.5
28	229773	9353	4.07%	William Monerow	D	White	52.8
29	183451	7761	4.23%	Rick DeSena	R	White	58.4
30	205216	8438	4.11%	State W. Zorn	R	White	57.9
31	226056	9258	4.09%	Robert Votaw	R	White	63.3
32	204658	4401	2.15%	Jan Lenners	R	White	68.0
33	202410	4676	2.31%	Wayne Schmidt	R	White	59.4
34	193335	3241	1.68%	Kevin Deane	R	White	60.8
35	207228	2805	1.35%	Ed McBratney	R	White	54.1
36	213084	2912	1.37%	John Deas	R	White	56.0
37	204742	2728	1.33%	Curt VanderWall	R	White	63.2
38	196847	1877	0.95%	Jim Stamas	R	White	64.3

Threshold of Representation: State Senate

- All districts over 48% Black elect minority candidates
- 67% of districts over 35% Black elect minority candidates
- No state senate districts between 36 and 45% Black

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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR. et al.,

Plaintiffs,

v.

JOCELYN BENSON, et al.,

Defendants.

Case No. 1:22-CV-00272-PLM-RMK-JTN

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Handley Table 4 Reconfiguration DemonstrativeJA00857

Exhibit 5



NORTH CAROLINA LAW REVIEW

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Drawing Effective Miority Districts: A Conceptual Framework and Some Empirical Evidence

Bernard Grofman

Lisa Handley

David Lublin

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DRAWING EFFECTIVE MINORITY DISTRICTS: A CONCEPTUAL FRAMEWORK AND SOME EMPIRICAL EVIDENCE

BERNARD GROFMAN, LISA HANDLEY, AND DAVID LUBLIN*

When applying the Voting Rights Act, courts and commentators alike have too often fixated on the distinction between “majority-minority” districts and “majority-white” districts, while paying relatively little attention to the likely electoral outcomes that any given districting plan will actually generate. In this Article, three political scientists provide a conceptual framework for predicting minority electoral success, taking into account the participation rates and voting patterns of minority and white voters, as well as incorporating the multi-stage election process (primaries plus general elections, and sometimes runoff elections). The Authors also analyze empirical election data to demonstrate how the model can be applied to address voting rights disputes.

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* The listing of co-authors is alphabetical: Bernard Grofman, School of Social Sciences, University of California, Irvine, C.A.; Lisa Handley, Frontier International Electoral Consulting, Washington, D.C.; David Lublin, Department of Government, American University, Washington, D.C. This research was partially funded by grant 99-6109, Program in Political Science, National Science Foundation (to Lublin) and grant SBR 97-30578 (to Grofman and Anthony Marley), Program in Methodology, Measurement and Statistics, National Science Foundation. Basic research for this Article was begun under an earlier grant to Grofman from the Ford Foundation. We are indebted to Clover Behrend and Annabel Azim for library assistance. Many of the ideas discussed in this Article, including the graphic representation of the formal model, originated in discussions between the co-authors and Sam Hirsch, an attorney with the Washington, D.C. office of Jenner & Block.

general election⁷⁴—and sometimes the highest percentage is in the runoff, sometimes in the general election. Both Bishop and McKinney, for example, needed a higher percentage black to win the Democratic runoff than to win the general election in their districts in 1992.

Table 6: Percent Black Needed for Black Candidate to Win, Incorporating Cohesion & Crossover: Selected Southern Congressional Primary, Runoff & General Elections with Black Candidates

Congressional District	Year	% Black Participation	% White Participation	% Black Needed To Equalize Turnout	% Black Votes for Black Candidate* (Cohesion)	% White Votes For Black Candidate* (Crossover)	% Black Needed Given Both Cohesion & Crossover
DEMOCRATIC PRIMARY							
FL 3 (Brown)	1992 Primary	28.7	21.6	42.9	93.5	34.4	31.9
GA 2 (Bishop)	1992 Primary	39.8	44.4	52.7	84.4	31.2	43.7
GA 11 (McKinney)	1992 Primary	27.3	38.2	58.3	89.7	60.4	27.4
GA 4 (McKinney)	1996 Primary	30.5	12.8	29.6	93.3	24.6	27.0
DEMOCRATIC RUNOFF							
FL 3 (Brown)	1992 Runoff	24.0	14.5	37.7	92.0	15.8	36.7
GA 2 (Bishop)	1992 Runoff	35.3	30.3	46.2	79.0	25.5	45.7
GA 11 (McKinney)	1992 Runoff	20.9	34.5	62.3	90.8	26.5	49.3
GENERAL ELECTION							
FL 3 (Brown)	1992 General	57.8	68.6	54.3	97.1	25.6	41.7
GA 2 (Bishop)	1992 General	55.9	62.6	52.8	98.3	32.4	36.5
GA 11 (McKinney)	1992 General	60.3	57.8	48.9	96.7	36.0	33.0
GA 4 (McKinney)	1996 General	58.3	66.4	53.2	98.1	31.2	37.5

* The estimates of % white & black votes for black candidates is the % of whites & blacks voting for any of the black candidates, not simply the winning black candidate.

The highest of the three percentages necessarily interests us most because it is the percentage needed for the black-preferred candidate to win all three elections—the Democratic primary, the Democratic runoff and the general election—and attain a seat in the legislature. The fact that the highest percentage black needed to win is not always found in the general election illustrates the importance of examining

74. The percent black needed to win the Democratic primary is somewhat misleading if more than one black candidate ran in the primary—the estimates for the percentage of whites crossing over and the percentage of blacks voting cohesively are a reflection of the percentage of whites and blacks voting for any of the black candidates, not simply the winning black candidate. For example, in the 1992 Democratic primary in the Georgia 11th, 60.4% of the whites voted for one of the four black candidates running, but not necessarily the black candidate (McKinney) who won.

2001]

EFFECTIVE MINORITY DISTRICTS

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all stages of the election process, and not simply relying on an analysis of the general election.

Before we conclude that black Democratic candidates can win in congressional districts that are not majority black, several cautionary notes must be added. First, black candidates may not have been persuaded to compete for congressional office in the South if majority black districts had not been created—and black candidates cannot win if they cannot be convinced to run. Second, black voters may not have turned out to vote in such high numbers if they did not think black-preferred candidates had a chance to win. Third, a district that was less than majority black may have attracted more experienced and well-funded white candidates, and that in turn could lower the level of white crossover voting and result in the defeat of black candidates. Fourth, white incumbents can play a major role in retarding the prospects for black electoral success. Only one of the congressional contests examined included a white incumbent; if white incumbents had run in more of these districts, the black electoral success rate almost certainly would have been much lower. For example, in the Georgia 10th, which is 38% black, a black Democratic candidate was easily defeated by the white Republican incumbent in the 1998 general election. Finally, and perhaps most importantly, we must not over-generalize from the congressional data to other offices. As the data from state legislative districts in South Carolina demonstrate, sometimes legislative districts well in excess of 50% black are necessary to provide black voters with an equal opportunity to elect black candidates to office—a district-specific analysis is essential to make this determination.

C. Factors that Affect the Opportunity to Elect Minority-Preferred Candidates: Data from South Carolina State Legislative Elections

Our examination of the outcome of elections in black majority districts for the South Carolina House of Representatives during the 1990s reinforces the importance of a jurisdiction-specific analysis of the factors that affect the opportunity to elect minority-preferred candidates to office. Table 7 lists the election results for all majority black state house districts in South Carolina for the 1992, 1994, 1996 and 1998 elections.⁷⁵

75. Table 7 does not include results from special elections, including the round of special elections held in 1997 due to court-ordered redistricting.

Exhibit 6²¹⁸

From: Pastula, Julianne (MICRC)
Sent: Monday, September 13, 2021 5:19 PM
To: Szetela, Rebecca (MICRC); Rothhorn, MC (MICRC)
Cc: Badelson1
Subject: Privileged & Confidential: Significant Concerns from General Counsel and VRA Counsel

THIS EMAIL IS A PRIVILEGED AND CONFIDENTIAL ATTORNEY-CLIENT COMMUNICATION THAT CONSTITUTES ATTORNEY WORK PRODUCT AND CONTAINS LEGAL ADVICE.

PLEASE DO NOT COPY, DISTRIBUTE, SHARE OR DISCLOSE THE PRIVILEGED & CONFIDENTIAL INFORMATION IN THIS EMAIL.

Dear Chair Szetela and Vice Chair Rothhorn,

Bruce and I are very concerned and alarmed about the drafting of packed districts that is occurring during today's mapping session. While the work is preliminary and future steps can be taken to remediate - this will become much more difficult the more packed districts that are drawn. In addition to not being able to justify the numbers coming out of today to a court, these drafts also create expectations on behalf of the public that will also be difficult to address moving forward.

The disaggregated election data was not available last Thursday when the Commission first moved into areas where the VRA is implicated. This was the data Lisa highlighted during her presentation on Sept 2nd which is critical for the Commission (and Bruce) to move forward. Today, the data appears to be loaded but there was no coordination of a presentation by Kim (which he offered over the weekend) to introduce the data and orient the Commission to it in advance of your mapping work. It has been 2 weeks and the Commission still does not have the critical updates it needs to the software even scheduled. This cannot be accepted by Commission any longer.

This complete breakdown of communication and the lack of information the Commission needs to perform its work is unacceptable and will continue to negatively impact its work unless it is addressed. The Commission desires to create best practices which will be measured by a successful defense of its maps after all legal challenges are done not by any other metric. The complete opposite is being done by the lack of information and coordination. The Commission is running out of time and have an enormous amount of work to do. The current course of action is against the advice of counsel and your RPV expert.

Everyone is making personal sacrifices but there needs to be uniform emergency among a majority of the Commission and unanimous understanding of the law. The current environment is not allowing either to take center stage.

The Commission should consider extending its meeting time for Mon-Wed, consolidating locations (instead of driving 6 hours round trip for a 6 hour meeting) and consider adding Friday meetings in order for the work to get done.

I recommend we have a call to discuss this email as soon as possible and would be happy to coordinate it to accommodate everyone's busy schedules.

Sincerely,

Julianne Pastula
General Counsel
State of Michigan

Independent Citizens Redistricting Commission
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PastulaJ1@Michigan.gov

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MICRC

09/30/21 10:00 am Meeting

Captioned by Q&A Reporting, Inc., www.gacaptions.com

Exhibit 7

>> VICE CHAIR ROTHORN: As Vice Chair of the Commission, we will bring the Michigan Independent Citizens Redistricting Commission to order at 10:02 a.m.

This Zoom webinar is being live streamed on YouTube at [redistricting MI](http://redistrictingmi.com).

For anyone in the public watching who would prefer to watch via a different platform than they are currently using, please visit our social media at [Redistricting MI](http://RedistrictingMI.com) to find the link for viewing on YouTube.

Our live stream today includes closed captioning. Closed captioning, ASL interpretation, and Spanish and Arabic and Bengali translation services will be provided for effective participation in this meeting. Please E-mail us at Redistricting@Michigan.Gov for additional viewing options or details on accessing language translation services for this meeting.

People with disabilities or needing other specific accommodations should also contact [Redistricting at Michigan.gov](http://RedistrictingatMichigan.gov).

For the public record, this meeting is also being recorded and will be available at www.Michigan.gov/MICRC for viewing at a later date and this meeting also is being transcribed and those closed captioned transcriptions will be made available and posted on Michigan.gov/MICRC along with the written public comment submissions.

There is also a public comment portal that may be accessed by visiting Michigan.gov/MICRC, this portal can be utilized to post maps and comments which can be viewed by both the Commission and the public.

Members of the media who may have questions before, during or after the meeting should direct those questions to Edward Woods III, our Communications and Outreach Director for the Commission at WoodsE3@Michigan.gov or 517-331-6309.

For the purposes of the public watching and for the public record I will now turn to the Department of State staff to take note of the Commissioners present.

>> MS. SARAH REINHARDT: Good morning, Commissioners. Please say present when I call your name. If you are attending the meeting remotely, please Announce during roll call you are attending remotely and disclose your physical location. I will call on Commissioners in alphabetical order starting with Doug Clark.

>> COMMISSIONER CLARK: Present.

>> MS. SARAH REINHARDT: Juanita Curry.

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I understand that that may cause some level of uneasy and disappointment in people who are watching these hearings and are voters of Michigan.

But that's part of redistricting.

The Voting Rights Act and the U.S. Constitution say what they do.

And that has been my ongoing advice to the Commission.

Thank you.

>> VICE CHAIR ROTHORN: Commissioner Witjes? Then Commissioner Orton.

>> COMMISSIONER WITJES: Based on advice of General Counsel this needs to be finalized and be reviewed so we can quote unquote start fixing it I move that we stop working on the house map and let it go in for analysis over the next two days so we can fix it next week.

>> VICE CHAIR ROTHORN: Okay that was a motion and I just want to make sure that because I think the fixing there was a District 18 that I think needed to be quote unquote fixed.

>> MS. JULIANNE PASTULA: And 16.

>> VICE CHAIR ROTHORN: And 16.

>> MS. JULIANNE PASTULA: Pardon me 6 and 18 specifically.

>> VICE CHAIR ROTHORN: Yeah 6 and 18.

And then in District – and I do think that Commissioner Eid pointed out there is a community of interest in Hamtramck in District 10 we might sort of try to pull into 2 just to comply and I don't think it's going to be a voting rights thing but that's meaning I think it's going to be okay but I just want to acknowledge that, that I think is where the spirit of fixing, it's in this map and it's District 18, District 16, and District 1.

No.

General Counsel please help.

>> MS. JULIANNE PASTULA: What I would recommend is that the Commissioner consider doing is for the active matrix to scroll starting with 1 and glance at the districts, anything that is higher than 40% for the Black voting age population and the population difference I mean just to glance at and just go down the list and then when we get to I anticipate number 6, number 18, and others that those quote unquote fixes can be dealt with and then this map can be ready for the partisan fairness analysis.

That would be my recommendation.

And if the Commission was desiring of having an alternate house map, then the map that is the product of this analysis could be used to start the clone for the new one.

But this would that changed.

Did you scroll John?

>> MR. MORGAN: Sorry I moved the two yesterday where we were comparing Commissioners Szetela's plan with the previously done plan and I was making this matrix show the combined so we could do what you described which is look at each individual District I can also bring it up in the active matrix.

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>> VICE CHAIR ROTHORN: Thank you for that helpful direction General Counsel? It's Commissioner Curry's turn and so I want to acknowledge Commissioner Orton first and turn it back to you Commissioner Curry and direct of fixing 6 and 18 so yeah it will be your turn after Commissioner Orton Commissioner Curry.

>> COMMISSIONER ORTON: So General Counsel I guess, I can't see you guys over there but I think we have been asking for specifics and the specific that I heard is that 6 and 18 need to be further unpacked? And you gave a number and 1 through all of them and if it's over a certain percent we need to look at that. So can you tell me again what that number was.

>> MS. JULIANNE PASTULA: My suggestion was and Mr. Morgan was very helpful with it, however the data is best displayed but that the Commission start with the data chart and look at the list starting with one and I would recommend anything with a higher than 40% Black voting age population be looked at.

This will also give the Commission an opportunity to look at their population numbers at this time and that way by the time we get to District 110 we will know this map is okay for -- to have Dr. Handley run the partisan fairness measures.

So that would be my recommendation is just scrolling down the data and if there is anything, again, that looks percentages that look kind of high, the Commission can take a closer look.

But again with the modifications that the Commission has made, again, looking at the current data percentages would be what I would recommend and then when we see those districts, we can address them and make sure that all of them are addressed is my goal.

By going through the chart in this fashion.

>> VICE CHAIR ROTHORN: Okay so our Chair has returned. So I'm going to turn it over to Chair Szetela and.

>> CHAIR SZETELA: Yep so, I will take over from here. First, I'd like to remind everyone, take it off? Commissioner Woods were you going to ask me to remind everybody?

>> MR. EDWARD WOODS: Yes.

>> CHAIR SZETELA: That is what I was about to do remind everybody we are required to wear masks in the building so if everybody could get their masks on, I would appreciate that.

This map we have open right now just so I'm oriented this is a full map we have of the full state with the changes I had suggested yesterday. Is that.

>> MR. MORGAN: Yes, that's correct. I made the changes as directed. We stipulated I would do that.

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But it does bring our percentages down in most districts below 40% and we have a few like 53, 52, I think the highest is 53.

So I did send that over to John if you guys want to look at it.

I think it might be easier than having us do it individually.

Again I'm not vouching for these districts.

I just I tried.

I did what Mr. Adelson asked and tried to lower the numbers.

And we've got some crazy show string districts but if everybody wants to look at that, I think it might and have Mr. Adelson look at it and see if this is what you are thinking we might do to be compliant that might be helpful.

>> MS. SARAH REINHARDT: Is this draft distinct from the version submitted the day before yesterday?

>> CHAIR SZETELA: Yes.

>> MS. SARAH REINHARDT: Okay, per our process they must be submitted to the Secretary of State one day before so they can be publicly posted.

>> CHAIR SZETELA: Okay

>> VICE CHAIR ROTHORN: Commissioner Clark I saw your hand and want to make sure General Counsel gets in while we are waiting for mapping for Commissioner Eid because I think partisan fairness was something we wanted to address Commissioner Clark do you have something quick?

>> COMMISSIONER CLARK: Rebecca.

>> CHAIR SZETELA: Yes.

>> COMMISSIONER CLARK: Changes you made you just referred to are they just in the Detroit area?

>> CHAIR SZETELA: Yes.

>> COMMISSIONER CLARK: Okay thank you.

>> VICE CHAIR ROTHORN: Okay while we are waiting for our mapping software to boot up Commissioner or General Counsel would you like to address partisan fairness?

>> MS. JULIANNE PASTULA: I would thank you so much Vice Chair Rothorn. So very briefly I wanted to highlight again for the benefit of the public that partisan fairness according to subsection 13 of the Constitution, which sets forth the ranked criteria that the Commission is legally required to follow, the language regarding partisan fairness is districts shall not provide a disproportionate advantage to any political party.

A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.

That language does not require and actually prohibits the Commission from considering the election results while they are mapping.

Accepted measures of partisan fairness and measures are run on statewide plan. Which the Commission run on statewide plans.

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They cannot map in the manner in which the public is advocating.

They are legally prohibited from doing so.

The partisan fairness measures when run again the Commission's expert Dr. Lisa Handley will be here tomorrow to run those partisan fairness measures on the statewide plans.

And then the Commission will be able to make amendments, if necessary, based on those measures.

And again the language is shall not provide a disproportionate advantage.

This language is key.

This language is what must be followed and the Commission cannot vary this language or modify the Constitution or not follow the Constitution or else the entire map will be put in jeopardy.

In legal jeopardy.

So it really is critical I think for the public to understand and appreciate the position that the Commission is in.

And that they are required to follow the Constitution as adopted.

By the voters in Michigan.

Again, to the goal was to end partisan gerrymandering and not draw maps based on political considerations which is what this Commission has done to date and will continue to do, get the partisan fairness results and then their legal team can advise on appropriate next steps.

Thank you Mr. Vice Chair se Szetela thank you General Counsel so Anthony I think we will hand it over to you to direct the line drawers.

Looks like Mr. Morgan over there.

>> MR. BRUCE ADELSON: Madam Chair can I interject.

>> CHAIR SZETELA: Yes.

>> MR. BRUCE ADELSON: Thank you for your ongoing efforts and there is something that occurred to me that I wanted to make clear.

One of the things that this Commission is doing, which is quite different than the typical approach to redistricting, you are essentially unpacking districts.

You are essentially leveling the playing field as the Voting Rights Act was intended when it was passed in 1965.

And the Supreme Court has said that is a more challenging process than just packing people of color together willy-nilly.

Frankly that is not difficult to do.

But you are doing the opposite.

And I think it's really important that everybody realize that.

And that, that is why the process is challenging and the process does involve many steps here and there, so I just wanted to make that clarification because I think it is a very salient one.

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MICRC

10/20/21 1:00 pm Public Hearing

Captioned by Q&A Reporting, Inc., www.qacaptions.com

Exhibit 8

>> CHAIR SZETELA:

Thank you, good afternoon I apologize in the delay, on getting started. As Chair of the Commission, we will bring the Michigan Independent Citizens Redistricting Commission to order at 1:25 p.m.

This Zoom webinar is being live streamed on YouTube at the www.Michigan.gov/MICRC Commission YouTube channel.

For anyone in the public watching who would prefer to watch via a different platform than they are currently using, please visit our social media at Redistricting MI

Our live stream today includes closed captioning. Closed captioning, ASL interpretation, and Spanish and Arabic and Bengali translation services will be provided for effective participation in this meeting. Please E-mail us at Redistricting@Michigan.Gov for additional viewing options or details on accessing language translation services for this meeting.

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For the purposes of the public watching and for the public record I will now turn to the Department of State staff to take note of the Commissioners present.

>> MS. SARAH REINHARDT: Good afternoon, Commissioners.

Please say present when I call your name. If you are attending the meeting remotely, please announce you are attending remotely and disclose your physical location where you are attending from.

I will call on Commissioners in alphabetical order starting with Doug Clark.

>> COMMISSIONER CLARK: Present.

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Dispensing them in less compact districts that radiate out for the City of Detroit to suburban parts of Macomb and Oakland County.

As a result the maps feature 0 Black majority districts.

I'm asking Detroiters to stay and if we cannot consist have a consistent on the map I would recommend that we should look.

>> CHAIR SZETELA: Your allotted 90 seconds has ended could you please conclude your statement.

Ma'am, out of respect for the fellow ma'am you are being disruptive we have a lot of people here who want to speak today so please honor the time limits.

Thank you.

Five, six, seven and eight.

>> Number five you can go ahead when you reach the podium.

>> Good afternoon, Commission and staff my name is Sharon Wilson.

I was born, raised and educated in the City of Detroit.

I now serve on the board of Delta manor which is a senior apartment complex located on the west side of the City.

I am vested.

Please note issues important to the African/American community have not been given sufficient attention.

Commissioners, now is the time to address these injustices via a correction of the proposed maps.

VRA districts must be created to allow Black voters to elect representatives of their choice.

Thus consideration of voting participation and election results must be taken into consideration.

Currently you have cracked multiple districts and have weakened our voice.

I support the promote the vote maps for Congress, map ID0615.

And the Michigan State University institute for social policy and public research recommendation that the MICRC reevaluate its approach towards compliance with the V RA.

No excuses.

We are demanding fair and equitable maps.

Thank you for listening.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number six.

>> Good afternoon my name is Christine Peck and I'm a resident of Birmingham I was also an active volunteer in the 2018 prop two ballot initiative.

I participated in the process and continue to be invested because I believe a basic requirement of a true democracy is the right for citizens to choose their elected officials by vote.

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However, if the proposed map this Commission has published stands it's as if the democratic party and independents on this Commission had their voices completely silenced.

Primarily in the City of Detroit.

This proposed map spreads the African/American block into multiple districts where their voting influence is greatly diminished and probably violates what is left of the Federal Voting Rights Act.

By the Trump support Court it was supposed to protect a voting groups ability to elect candidates but this Commission proposed map will rob the African/American community of the biggest City the edge in the population of Detroit allowing carpet baggers from suburbs and Lansing to dictate policy where and how state and Federal funds are spent for so many necessary endeavors in our City.

For shame.

This is not what we sent you here to do.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 12.

>> My name is Marianne and live in hunting ton Woods Michigan.

I appreciate what you're doing Commissioners and as I delved into the maps, I cannot imagine the complexity of the work however today I want to focus on my State House District 21 on all of the maps.

The efficiency gap is between 5.7 and 7.4% this is definitely completely wrong.

If you keep in mind that many elections in our state are decided by less percentages than that, that needs to be reconsidered so first of all District 21 you drew part of 7 cities Detroit, Huntington Woods, Berkeley, Royal Oak, Oak Park, and Clawson, parts of all of these cities which amounts to an African/American population between 48-50% depending on the particular map. You have not drawn a majority minority District even though I believe that some of your work has been to do vertical as opposed to horizontal districts.

But this did not accomplish the goal of having any kind of minority majority districts so what I believe that you need to do is you need to create horizontal districts in the area between Woodward and green field north of 8 mile and the same thing, the same area south of 8 mile.

So this could give you a majority Black District.

Otherwise you will be totally disenfranchising the votes of Black Americans thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Commenters 13, 14, 15 and 16 may approach the microphone and number 13 when you reach the podium you are free to speak.

>> Good afternoon, Commission my name is Norman from Detroit.

I'm here today to ask you guys to make sure you are listening to the people out here in the community.

I understand that you guys have a tough job to do.

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This is not my first time speaking to you guys.

And how you have done the districts using 35 percentage of how you are drawing is inaccurate based on the primary of what happened last year and Michigan has low primaries so I'm asking you to go back and redraw the maps not as fast as you can but as accurate as you can and increase it up to 50% and you get the accurate message you need out here.

Also think about the people you represent.

Hear what we are saying and not go by idly and hear what I say.

That is all I ask.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 14.

>> Hi can you hear? You got my thing on the screen.

Can you throw yours up Congressional up on the screen next to it before you start the clock.

>> MS. SARAH REINHARDT: We are only able to share one map at a time.

>> Yeah, so this is the Congressional you know map I came up with.

It's not really the best option but at least it's something different this is Anthony in southwest Detroit and care about southwest and Down River.

Your Congressional maps have the same configuration throughout Apple, Birch, Cedar, Maple and V1RAS240 all use the same configuration for Congressional one and it's not the UP Commissioner Lange and Kellom when you were on the thing yesterday Congressional District one is right here in Detroit and they use the same for six out of your 7, 8 maps.

There was nothing methodical about it Commissioner Rothorn and you said it was methodically drawn and we lean on the data and it drove us here.

I watched every meeting the data did not drive you to what you draw for Congressional District one for Detroit.

If I want to ride a bus from the bottom to the top, I have to make a transfer.

If I ride a bus from the bottom of mine where Down River is to the top, I can pick 3, 4, 5, 6 buses to take me all the way.

That is one basis by which I just came up with that.

And so you copied and pasted it.

Then Commissioner Eid you just switched out Warren for Romulus and that is different not really.

Commissioner Lange I appreciate you for at least trying to draw something different so please make wholesale change.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 15.

>> Nina from south Oakland.

In the State House and Senate maps two different communities of interest are being treated unfairly.

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Specifically in District 110.

Every one of these maps divides.

>> CHAIR SZETELA: Your 90 seconds is up.

Thank you for addressing the Commission. Number 17, 18, 19 and 20 and number 17 when you reach the microphone you may begin speaking.

>> Hello Commissioners and thank you for your work.

I appreciate the effort to remove politics from the political process.

However, I also want to express my concerns of elimination of a District and possible of decreased representation of a minority community that needs it the most in Detroit.

My name is and my family and I live in the City of Rochester. I'm a member of the Sikh faith.

I'm here today to speak on behalf of my religious community in Oakland and Macomb Counties because we have not yet advocated for ourselves in this progress. As a smaller community we used to be together to amplify our voice and have our Congress person notice us as a constituency group.

Our concerns are not only for our own religious community, but the communities at large which we live in. That is why I'm supporting the Birch version of the draft map, which keeps the Sikh places of worship in Oakland, Macomb Counties together by keeping Troy, Rochester, Rochester Hills and Sterling Heights in one District.

We will see many comments from my community on the Birch map. I ask you to consider Michigan six of community of interest on the final Congressional map. Thank you for the opportunity to comment today.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 18.

>> This Commission was set up to prevent partisan fairness gerrymandering.

The members on this committee should be ashamed of the stacking cracking and packing these so called maps put forward and show.

People see through this.

How much influence has Alec had on Commissioners and the map, ALEC, how much influence have they had on you guys? Start over.

Those maps are garbage.

Go with the maps with the AFLCIO, promote the vote and the Showers, Schwartz maps. Start with those and start over.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 19.

>> Good afternoon, Commission my name is Yvette Anderson.

We need you to draw maps that are 51% Black.

We know that you can draw better maps for Black Michiganders.

Honor the Voting Rights Act to ensure Black people are able to elect leaders that look like themselves.

Let's not return to the Jim crow politics of old.

Going from 17 majority Black districts to 0 is unacceptable.

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It's important to me that Detroit be able to elect its own representatives and I'm not sure your maps will guaranty that.

Look at the AFLCIO fair maps project for ideas on how to get to partisan fairness while respecting real communities of interest.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 23.

>> I am Susan.

I live in northwest Detroit in north Rosedale Park and I'm a proud member of Congressional District 13.

I've lived in Detroit since 1975.

I know you have a very difficult job and I know you're doing it to the best of your ability. However, the currently drawn map cracks my neighborhood and puts my neighborhood in a Congressional District combined with suburban Livonia which I think is 95 percentage white.

I and my neighbors in Detroit in this northwest Detroit are truly a community of interest and have different concerns and needs than suburban Livonia.

I know the intent of this map is not racist.

But it is functionally racist because it dilutes the Black vote.

And will decrease Black representation.

There are examples of maps that are fairer.

Check out the AFLCIO and one fair vote as possible guides.

I think it is incumbent upon you to draw maps that are fair for my neighbors or me and for all Detroiters.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 24.

>> My name is Rick blocker.

And excuse me.

I come today to ask again that you draw majority-minority maps and districts.

We have Black people in the State of Michigan representing 14% of the population.

We currently represent 12% of the people in the State Senate and the State House.

We represent six percent of people in the Congress of the United States.

Under your current proposal that number could be eliminated to no representatives in the Congressional and very few, if any, in the State House and State Senate.

You must do better.

We deserve fair representation.

The people in this area have fought hard.

We cannot go backwards.

We are sick and tired of being sick and tired.

We need fair maps now.

We need for you to stop, no excuses, draw fair maps.

Make sure we have Black representation.

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If that current Congressional maps you have, neither one of them and I looked at all the maps on the portal goes to 50%.

If you have to go to other communities where Black people are to get 50%, you need to do so.

It is not acceptable for us to have the maps that does not reflect our community and does not protect Black people in this area.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Numbers 25, 26, 27, and 28 please approach the microphone and number 25 you can begin speaking. And just to orient people online watching proceedings, we are at 25 and at it for about 35 minutes.

We currently have 116 people signed up for in person public comment.

So it is likely that we will not get to online remote public comments before the 3:30 close and I think we are probably going to push a little past 3:30 to give people more time to speak so orient the people online we are 25 and have 116 in person.

Go ahead number 25.

>> Thank you, good afternoon, everyone my name is Michael and I'm here with my vice president Tonya Ray and Michelle Thomas and Pam Smith and other members of labor unions.

Michigan independent Redistricting Commission you are failing us.

Congress will not end the filibuster so John Lewis Voting Rights Act and freedom to vote act are laying in the waste land.

States right has been the excuse for not passing that legislation and it has been historically been the reason for the disenfranchise of Black Brown Jews and others and needs to focus on Michigan rights and do the right thing for the state and citizens.

Fair should be the benchmark your plan negates what fairness and voting democracy in the communities.

Your plan for the next ten years denies Black Brown in Michigan the opportunity to select representatives from their neighborhoods to send to Lansing, Washington or the school boards.

You can incorporate the AFLCIO maps project or the Michigan Black caucus or even come to the UAW or CBT and we will improve your product to present to the people that will provide racial justice and ensure nonpartisan fairness.

Do the right thing.

Do not put barriers on our boundaries and chains on our voting machines.

Please do not sell the citizens of Michigan by offering a youth that divides us and greatness and power of our democracy.

We all know the big lie.

We ask you today why.

We are asked to have maps on behalf of the politicians or the people in power.

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We must protect the voice of people.

Do the right thing.

Listen, think and act.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 26.

>> Good afternoon my name is Carla Meijer and I'm from Troy and Oakland County. New House District 32 which is all of Troy is perfect.

Thank you.

New Congressional District 6 not so much.

Troy and Oakland County share new districts with Macomb County.

I lived in Troy since the early 70s but I have always been employed in Oakland I'm sorry always been employed in Macomb County and I know we are not communities of common interest nor do we share common characteristics.

The new Congressional District 6 needs work.

It needs work.

As proposed currently proposed it weighs heavily republican.

Troy should be with Oakland County as proposed on the Juniper maps all other maps it's with Macomb and affiliates with Oakland County and school and library affiliations bus teams Commerce and our Oakland County water resource efforts and goes to Lake St. Clair and the City of St. Clair shores a Lake voting community with nothing similar to Troy.

My ask is that Troy and other Oakland cities that have been placed in CD6 be moved to neighboring CD3 it just makes sense.

Over all maps must be completely nonpartisan and must, must comply with the Voting Rights Act rules.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 27.

>> Good afternoon, Commissioners.

My name is Betty Edwards, I'm a lifelong Detroitter who has voted in every election since I was 18.

I'm a concerned citizen.

And also a member of Delta Sigma Theta sorority. It was created for Black people to elect representatives that look like them and of their choosing.

Your current maps crack Detroit and make this impossible by radically changing districts.

Today that means congresswoman Tali, Senator Stephanie Chang and Guise and rep Sarah Anthony's community should not be carved up into districts that do not keep their communities' interests together.

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>> Good afternoon my name is Danielle Steven I'm a retired public servant, native Detroit and member of multiple civic including Delta significant that and Detroit alumni chapter and Detroit Branch NAACP.

I thank you for this opportunity to provide comment again.

But after review of the maps you submitted, I do not believe they best represent the interests of African/American voters and they're about to select other African/Americans to represent them.

A report recently issued by the Michigan State University's institute for public policy and social research concludes that the methodology used by the Commission, quote, breaks apart the geographical compact Black majority in the City of Detroit dispensing them with less compact districts.

That radiate outward from the City of Detroit towards suburban parts Macomb County and Oakland County.

As a result this engineered partial dilution of concentrated Black vote the maps future 0 Black majority districts.

The purpose of the Voting Rights Act was to ensure equity and the ability for African/Americans to fully participate and a state with African/American population of 13.79 percentage there should be some consideration of our community.

We also point out the majority of this percentage resides in Southeast Michigan and in Detroit furthering our argument.

We strongly recommend that the Commission look to the promote the vote maps.

I have my full statement in the portal.

Thank you.

>> CHAIR SZETELA: Thank you for doing that.

And to clarify we welcome people to also submit their statements into the portal particularly if you feel you don't have time to complete it or just in general because it gives us a written record and you can access that outside the room here there are people there who can assist you or go to the website at www.Michigan.gov/MICRC. And you can submit your comments there as well.

Thank you, number 48.

>> Good afternoon Honorable Commissioner I'm Eddie McDonough and I think I'm your last speaker before we break.

I would just like to say I've been around for a little while.

70 years old.

I've had the opportunity of growing up in Pontiac.

But I have lived in Wayne County, I've lived in other parts of Oakland County and lived in Canton, I've lived in Farmington Hills, I've got a relatives all over Southeast Michigan.

The one thing that I know plain and simple is in all of my living whoever we chose to represent us were part of us from those various communities.

That needs to stay the same.

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Speaking as respectfully and as candidly as possible we know the lawsuits are coming so why are we compromising on the integrity of this constitutional amendment.

I urge you not to compromise our chance at representation for the sake of numbers.

As you know because of the lack of census representation there is no Federal protections, no Federal Voting Rights Act, no grant funding or research no recognition for Arab Americans and the battle for basic equity will be even harder because all the current maps will restrict the only opportunity to gain legislative representation.

The only avenue we have left for a voice.

I'm frustrated because we are making history at the local level with record numbers of Arabs voting and running for office and done what we are told to do on the table instead we are put at the menus.

>> CHAIR SZETELA: Your allotted 90 seconds is up please conclude your statement.

>> P6764 and P6762 which have been collectively drafted by our community thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. . Number 56.

>> Okay looks like we don't have 56 so 57 if you want to go ahead.

>> Hello, my name is Anthony Watkins.

And I'd like to thank you for the opportunity to share my important comments on the public hearing.

I would like to comment on how the Commission has gone from 17 majority Black districts primarily based in Detroit to 0.

That's a problem.

That is a serious problem.

The Detroit neighborhoods and communities should be drawn together.

Majority Black districts are important.

And we can draw them.

NAACP has drawn them.

Several community groups have drawn them.

Fellow Detroit citizens have drawn them.

But these maps need to be seriously looked at and seriously considered and not just request to be submitted.

So we are aware we can beat this and we are aware that we need to have this done.

Because districts do not have a majority of Blacks.

In large part having elected Black individuals.

Black issues are important.

And led by Black people.

And it's Black people continuously able to lead on these issues.

I thank you.

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>> CHAIR SZETELA: Thank you for addressing the Commission. Numbers 58, 59, 60 and 61.

>> What number are you sir?

>> 59.

>> CHAIR SZETELA: I don't see 58 so go ahead number 59.

>> I'm Percy Johnson, UAW cap chairman, Local 22.

I'm also a member of liberty temple Baptist church.

We were involved with getting the petitions for you guys to be able to have the position that you have today.

And I need you to get me out of the hot seat because right now the encouragement that I gave our voters in Detroit and people who signed the petition and were willing to participate and be in one of your you know we took names of people to also be a Commission in our church and union halls.

And they were encouraged this will give them a chance to have a fair vote to represent their communities.

And we, seriously I got over 8, 900 signatures on our petitions for this to be on the ballot.

And 90% of them were Detroiters.

So please I'm asking you to please give Detroiters a 50% or plus better to represent their vote when they vote.

So to weaken them and give them a weak vote would hurt them.

I'm from Troy but yet I know if I see -- when I see something that is not justly done or unfair, I'm going to speak up for them and represent them.

My heart and soul is in Detroit and Detroit deserves to have fair, good representation and they can't get it if you take away their strength of their vote.

Give them a 51 plus vote.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 60.

>> All right we will move on to 61, 62, 63, 64 and just in case there is in I confusion it's my understanding when people were first arriving that people who were higher than 50 were told we might not get to them.

So I'm keeping track of everyone who is not here so if those people happen to show up at 5:00 you will be given a chance to speak.

So I don't want people to think because they are not here, we won't give you a chance to speed because I know some people were given that guidance what number are you ma'am.

>> 64.

>> CHAIR SZETELA: 54.

>> No 64.

>> CHAIR SZETELA: 61, 62 or 63.

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It has the second largest Asian community of any City and Township behind Troy which you basically kept whole in the State House and it's 28 percentage Asian and the number has risen significantly over the decade and projected to grow.

African/American voters which I agree with the folks in the room we need more of and better off there are few communities in Michigan that have large populations of color from different racial backgrounds like Hispanic and Asian community.

I want the Commissioner to consider Novi and Troy has significant Asian population and this community should be kept whole to keep it intact and elect districts that we can select a candidate of choice.

I think the map that has gone the most right direction is the one that is proposed by Commissioner Szetela for the State House.

But it's missing several Novi and precincts out to Livingston County and for Ann Arbor for partisan fairness and do not include it with Livingston County and I would take Commissioner Szetela and swap precincts in Livingston Township for remaining in Novi it does not deserve to be split three ways and have much with Livingston County border and increases the Asian share of population and fits within the population deviation I did double check.

Thank you for your time and being here to take comments.

>> CHAIR SZETELA: Thank you for addressing the Commission. At this time I'll call up 66, 67, 68 and 69 and 66 as soon as you reach the microphone you can start speaking.

>> Good afternoon my name is Reno, 892 out of Saline Michigan and asking the Commission to withdraw the maps so it's fair for democrats and republicans the entire purpose of the independent redistrict Commission is making things fair. And their work is not complete until they have maps that are fair across the board. I'm also asking for the Ypsilanti centric districts Ypsilanti voters should not have their voices silenced by getting packed into the shadow of Ann Arbor. It's okay if they have Ypsilanti and only a portion of Ann Arbor share districts. But they should not have Ypsilanti and all of Ann Arbor packed together.

This is because Ypsilanti is a major population centered with different demographics than Ann Arbor.

Some newer maps made the split and hope they will follow through. Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 67.

>> Hello, my name is Yancey and representing 892 and concerned how you sliced Detroit into thin strips and put with heavy white areas in the suburban.

The democratic Commissioners and in particular need to stay strong and veto any unfair maps until we get fairness.

And under 13 Commissioners should approve any maps that has a boundless advantage to a particular party.

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All of the maps so far have been approved by democrats of the Commission and all of them favor the republic party.

Where is the fairness in that? The fairness is a priority above all local boundaries and compactness.

Do not be afraid to unpack the City.

And by doing so it may make a weird shape in the map but that is okay.

What is not okay if the map does not represent Michigan, it's important Detroit be able to elect its own representative and I'm not sure your maps warrant that.

I believe Detroiters should be represented by Detroiters who understand their concerns.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. Number 68 or 69. Do we have number 70, 71, 72 or 73? If you could just let me know your number, ma'am.

73 thank you.

>> Hi, I'm Sherri from Livingston County and while as I listen to the people speaking here today, I realize I don't have as much on the line as many of them.

So I'm hoping that you all take it to heart and listen to what these people are saying.

As a member of the League of Women Voters, I was very strong support of the independent redistricting committee.

And my -- I do live in a currently horribly gerrymandered District that has taken away my voice and my community.

And although the maps are significantly better than they were, they are still skewed in the U.S. Congress and the Senate to favor the GOP by 5-8%.

That's not good enough.

We want fair maps.

The partisan fairness is one of the criteria in the Michigan Constitution.

And I hope you all take that to heart.

Basic principle is that the party that receives the most votes statewide should receive the most seats in the Michigan legislature.

I would urge you to look again at the AFLCIO and the one fair vote maps.

And I'm requesting that you please make partisan fairness a priority in your map.

Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission. A call for 70, 71 and 72 what number are you ma'am?

>> 74.

>> CHAIR SZETELA: Go ahead.

>> My name is Ethyl.

I'm a resident of White Lake Michigan in northern Oakland County.

I want to mention that I appreciate the work you're doing.

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>> I'm number 95 and I'm a republican and did not vote for proposal two but people of the state did and it's the law of the land and a process that has to go forward and so I commend you for doing work but your work needs work and the one thing you failed to do or at least not at the start but as you got going and sort of listened to your experts first of all Voting Rights Act expert I think I would fire your first order of business after these hearings should be to fire the voting rights expert because he has it dead wrong that is why this community here is dissected as bad as. It has been smashed like a toothpaste tube all over southeast Michigan and I think that is wrong.

But you stopped looking at people and stopped looking at communities and started looked at numbers on a spreadsheet. And all you wanted to do is come up with numbers on the spreadsheet. From the partisan fairness you are. And you couldn't have over 40% African/American in any District, so on and so forth. And then you started dividing things up. And I just want to point out District 15 on the State House map, which begins Schoolcraft and Greenfield in Detroit, an area I grew up very close to. And goes through Oak Park, Berkley, Southfield Township, Bloomfield Township and Birmingham and ends at Long Pine and Loser.

Schoolcraft and Greenfield have very little, if nothing in common with Long Pine and Loser, so get back to work and understand politics.

I know you were not supposed to be involved, and it's clear you weren't. So get back to work and draw fair districts and draw African/American districts. It needs to be done.

>> CHAIR SZETELA: Thank you for addressing the Commission. Sir. If you would like to go ahead and speak and let me know what number you are as well, that will be helpful.

>> Hi. Excuse me. My name is Bruce.
My number is 101.

>> CHAIR SZETELA: We can't hear you it's okay to take your mask off while speaking in the microphone.

>> With the mask.

How you doing my name is Bruce I want to thank the Commission for letting me speak today and I'm blind and I see clearly what is going on with redistrict.

And y'all can see but y'all are blind.

My parents came here from Georgia and Tennessee.

I represent Detroit and northwest area.

And I'm going to speak for the kids that don't have a vote that we are supposed to represent they are our future and for y'all to have districts where I'm not represented by my color and my community, I hope y'all do the right thing and represent the minorities and people of Detroit and the people of my District to represent me and the kids who can't speak for themselves.

I am grateful to see everybody coming out to let you all know how we feel about Districting stuff here.

Szetela, Rebecca (MICRC)

From: Pastula, Julianne (MICRC)
Sent: Wednesday, October 20, 2021 10:12 PM
To: Pastula, Julianne (MICRC)
Subject: Privileged & Confidential: VRA/Partisan Fairness

Follow Up Flag: Follow up
Flag Status: Flagged

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Dear Commissioners and Staff,

Congratulations on a very successful first public hearing! As expected, many of the comments centered around the VRA and partisan fairness. Many speakers advocated for strong consideration of the MDP backed AFL-CIO and Promote the Vote maps which are based on criteria and methodologies that are simply not in the MI Constitution (resulting in partisan fairness numbers so different from the MICRC maps which adhered to the MI Constitution and still score very well).

I circulated a privileged and confidential summary prepared by Bruce Adelson in regard to the Voting Rights Act on October 14th. Under MI law, this memorandum (which is an attorney-client communication) can serve as a basis to convene a closed session. This would enable the MICRC to have a frank and direct discussion with their legal counsel in regard to the memo and address the issues surrounding VRA compliance in more detail. This would benefit the MICRC by having one conversation where all members present hear the same information at the same time, benefit from hearing questions of your colleagues and, more importantly, receiving the answers and legal advice from your team. This is a far more effective communication option than one-on-one conversations which lack the depth or breadth of a collective conversation.

If the Commission would like to pursue this option, coordination of this conversation would be needed to facilitate participation of remote members and preparation of the appropriate script to satisfy the legal requirements of holding closed session in MI. This could be arranged in very short order.

Please do not hesitate to reach out with any questions or concerns.

Sincerely,

Julianne Pastula
General Counsel
State of Michigan
Independent Citizens Redistricting Commission
517.331.6318
PastulaJ1@Michigan.gov

Exhibit 10

Szetela, Rebecca (MICRC)

From: Pastula, Julianne (MICRC)
Sent: Monday, October 18, 2021 10:07 AM
To: Pastula, Julianne (MICRC)
Subject: Privileged & Confidential Information and Update

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Good morning Commissioners and Staff!

Congratulations on all of your hard work to date. As we move into the second round of public hearings and the final deliberation/adjustment period I wanted to provide the following information and reminders:

- Please do not respond to comments in the portal. Similar to the presentations, this creates a record that will give your opponents the ammunition for your sworn deposition and trial testimony on your intent and rationale for your mapping selections and on whom you chose to engage.
- Some individual Commissioner maps were submitted after 10 am deadline on Thursday due to ongoing software and data issues. Given each of your individual constitutional rights to submit maps and the difficulty in resolving technical issues for some Commissioners, I strongly recommend any maps received after the deadline be welcomed by the Commission. In addition, the Constitution does not empower the Commission to reject these individual commissioner maps. All published collaborative and individual maps will receive feedback from the public and vetting by the Commission itself.
- Another language reminder:
 - The rationale provided during the deliberations and adjustment period must be very specific and provide the legal justifications your mapping decisions. The privileged and confidential document titled *Legal Considerations and Discussion of Justifications Re: Criteria* circulated on October 7th provides appropriate legal guidance. The compliance tracking form can also assist in capturing rationale and must be completed for each final map. This rationale is the basis for your decisions that will be highlighted in court (used to challenge or support your work), as has happened with other state commissions, such as in Arizona. Remember, Arizona's transparent, thorough compliance justifications enabled the Arizona Commission to successfully defend all its maps, achieve DOJ preclearance for the first time in state history, and win 9-0 before the US Supreme Court. Let's follow their lead and match their track record.
 - During the post public hearing deliberation and adjustment period (only 8 days) it is appropriate to highlight that you are responding to public comments, looking to unite/reunite communities of interest and/or increasing diversity. Statements about eliminating blacks or adding whites cannot be made at the table or placed on the public record. There is already too much on the record that can be used against the Commission's work taken out of context and without full appreciation of the MICRC's process.

- It is critical for compliance with the 5th criteria (districts shall not favor/disfavor incumbents or candidates) that Commissioners not consider, know, discuss, analyze, look at, listen to or otherwise allow incumbent information to infiltrate your process, deliberations or work product.
- I would urge the Commission to avoid hyperbole and personal attacks during deliberation and adjustment period. As expected, criticism and attempts to split the Commission into factions will be increasing, particularly during the public hearings.
- If you choose to speak to the media, please remember Friday's great PR training sessions by Edward and Mike (which also reinforced the Subsection 11 messaging that started in January). In addition to "I don't know" or "playing it by ear" and giving an answer that could potentially damage the ongoing work of the MICRC, an appropriate answer can reference legal advice given or redirect to your lawyers (Edward always reaches out to me and I anticipate Mike would not hesitate to as well). By design, the Commission is comprised of 13 regular citizens that should not be expected to have a command of a body of law dating back to the 1960s.
- If you would like to discuss the contents of the Privileged & Confidential VRA memo circulated on October 14th Bruce and I are available to you. We are concerned that the misinformed media narrative will result in additional complications in the Commission's compliance with the VRA. Remember the MICRC has been consistent in its data driven process. The draft proposed maps are based on RBV analysis and the law. Creating districts with overwhelmingly minority or "safe" districts is not supported by either the data or the law. This media narrative is being advanced by lobbyists and politicians driving emotion in a very sensitive and critical area.

PLEASE consult with your lawyers if you have any questions, concerns, or uncertainties. Our job and ethical obligation is to advise and guide you through this final, more difficult mapping phase.

Sincerely,

Julianne Pastula
General Counsel
State of Michigan
Independent Citizens Redistricting Commission
517.331.6318
PastulaJ1@Michigan.gov

Exhibit 11

From: Szetela, Rebecca (MICRC)
Sent: Wednesday, December 15, 2021 10:10 PM
To: Pastula, Julianne (MICRC); Lett, Steven (MICRC); Rothhorn, MC (MICRC); Woods, Edward (MICRC); Hammersmith, Suann (MICRC); Clark, Douglas (MICRC); Kellom, Brittni (MICRC); Orton, Cynthia (MICRC)
Subject: Re: P&C: Update on Proposed Legislation

Julianne:

I do not appreciate you attempting to put words in my mouth. I did not say I no longer have concerns. In fact, I have grave concerns regarding your conduct.

Specifically, I am deeply concerned to have learned that you personally became aware of critical issues with Dr. Handley's VRA analysis earlier this week and, in addition to not notifying the Commission about this alarming development, have also directed staff members, vendors, and the SOS not to alert Commissioners as to the issue until the week of December 28th - almost two weeks away. It's my understanding that Dr. Handley has informed you, staff, vendors, and members of the SOS that her analysis was deeply flawed and that, as a result of her flawed analysis, not a single one of our Senate maps are VRA compliant. Accordingly, the Commission will likely need to redraw and republish, at a minimum, our Senate maps with BVAP numbers closer to 45-48%, which will require significant map revisions. The alternative is for us to approve non-VRA compliant maps and let our lawyers attempt to defend them, which would be an affront to this entire process.

This information should have immediately been communicated to the Commission and certainly should have been placed on the agenda for tomorrow. The fact that you have instructed other staff members and the SOS to not disclose this information to the Commission for a further two weeks is outrageous and is a perfect example of you exceeding the scope of your duties and making decisions that should be made by the Commission. As an attorney, you have an ethical obligation to keep your client informed. Squirreling away critical information for weeks and hiding it from the client does not satisfy this obligation.

In addition, it's my understanding that you were hoping to conceal this information from the public by having yet another closed session the week of the 28th, which contradicts our mission, vision, and values.

I was planning on discussing this situation with you in person in the morning to encourage you to share this information immediately with Commissioners. Unfortunately, your email made me reconsider that path.

See you in the morning.

Rebecca

From: Pastula, Julianne (MICRC) <PastulaJ1@michigan.gov>
Sent: Wednesday, December 15, 2021 8:59 PM
To: Szetela, Rebecca (MICRC); Lett, Steven (MICRC); Rothhorn, MC (MICRC); Woods, Edward (MICRC); Hammersmith, Suann (MICRC)
Cc: Clark, Douglas (MICRC)
Subject: RE: P&C: Update on Proposed Legislation

Dear Rebecca,

My offer to connect was in response to your statement during the Dec 2nd meeting that I had stepped outside of my role as General Counsel. I was confused by those allegations. I'm glad to hear it's no longer a concern and I look forward to seeing you in the morning.

Sincerely,

Julianne Pastula
General Counsel
State of Michigan
Independent Citizens Redistricting Commission
517.331.6318
PastulaJ1@Michigan.gov

From: Szetela, Rebecca (MICRC) <SzetelaR@michigan.gov>
Sent: Monday, December 13, 2021 11:57 AM
To: Pastula, Julianne (MICRC) <PastulaJ1@michigan.gov>; Lett, Steven (MICRC) <LettS@michigan.gov>; Rothhorn, MC (MICRC) <RothhornM@michigan.gov>; Woods, Edward (MICRC) <WoodsE3@michigan.gov>; Hammersmith, Suann (MICRC) <HammersmithS@michigan.gov>
Cc: Clark, Douglas (MICRC) <ClarkD32@michigan.gov>
Subject: RE: P&C: Update on Proposed Legislation

Julianne:

Thank you for your note. While I appreciate your offer to connect, I don't believe there are any issues we need to discuss at this time? If there is something in particular you are concerned about that I am unaware of, you are certainly free to reach out to me at my number below. Keep in mind I am back to working full time and may be tied up in meetings, so please leave a message if you call and I don't answer.

Rebecca Szetela
Commissioner
Michigan Independent Citizens Redistricting Commission
szetelar@michigan.gov
(517) 898-9366



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MICRC

Exhibit 12

09/30/21 5:00 pm Meeting

Captioned by Q&A Reporting, Inc., www.qacaptions.com

>> CHAIR SZETELA: As Chair of the Commission, we will bring the Michigan Independent Citizens Redistricting Commission to order at 5:00 p.m.

This Zoom webinar is being live streamed on YouTube at the Michigan Independent Citizens Redistricting Commission on the YouTube channel.

For anyone in the public watching who would prefer to watch via a different platform than they are currently using, please visit our social media at Redistricting MI to find the link for viewing on YouTube.

Our live stream today includes closed captioning. Closed captioning, ASL interpretation, and Spanish and Arabic and Bengali translation services will be provided for effective participation in this meeting. Please E-mail us at Redistricting@Michigan.Gov for additional viewing options or details on accessing language translation services for this meeting.

People with disabilities or needing other specific accommodations should also contact Redistricting at Michigan.gov.

This meeting is also being recorded and will be available at www.Michigan.gov/MICRC for viewing at a later date and this meeting also is being transcribed and those closed captioned transcriptions will be made available and posted on Michigan.gov/MICRC along with the written public comment submissions.

There is also a public comment portal that may be accessed by visiting Michigan.gov/MICRC, this portal can be utilized to post maps and comments which can be viewed by both the Commission and the public.

Members of the media who may have questions before, during or after the meeting should direct those questions to Edward Woods III, our Communications and Outreach Director for the Commission at WoodsE3@Michigan.gov or 517-331-6309.

For the purposes of the public watching and for the public record I will now turn to the Department of State staff to take note of the Commissioners present.

>> MS. SARAH REINHARDT: Good Evening, Commissioners.

Please say present when I call your name. If you are attending the meeting remotely, please disclose you are present and you are attending remotely.

I will call on Commissioners in alphabetical order starting with Doug Clark.

>> COMMISSIONER CLARK: Present.

>> MS. SARAH REINHARDT: Juanita Curry.

>> COMMISSIONER CURRY: Attending from Detroit Michigan.

>> MS. SARAH REINHARDT: Anthony Eid?

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People are represented in our legislatures, not geography.

My second concern is about partisan fairness.

As was discussed before too.

We need you to reconsider the maps that are currently drawn to ensure that this principle is applied.

I understand that the current drafts are pretty much all leaning towards one party.

And that's the republicans.

This is contrary to the criteria established for the Commission and cannot stand.

Those elected from such districts whether they are one party or the other dominant will not feel as compelled to take into consideration conflicting sets of opinions and to be willing to compromise on legislation.

And that's what we have going on now.

Now, this is a major reason why many of us voted for the proposition, so we are asking you to please work harder on this point. Thank you.

>> CHAIR SZETELA: Thank you for addressing the Commission.

Number five.

>> Hi, can you hear me all right? Is this good? Hey, everyone, my name is Max and live in Wayne County and thank you to the Commission I know this task is complicated and difficult and thank you for your time and dedication on it.

I was here this afternoon and compelled to respond to something.

The Commission was told they cannot use partisan data while making the maps.

But I just want to say that is nowhere in our state Constitution.

That prohibits saying that you cannot use partisan data while making your maps.

I do understand there are some partisan fairness measures such as the efficiency gap that you need a full complete statewide map of districts to use.

But let's not kid ourselves.

The current draft maps as they stand are heavily favored towards one party over the other and tomorrow's analysis is going to show that.

So the question I have for the Commission is: How are we supposed to un-gerrymander the current draft maps if we are not able to use partisan data while you are actually making the maps themselves? I know there was a lot of fun metaphors earlier this afternoon I want to try one for myself.

This is like saying that the Constitution is requiring you to bake a cake and yet you are also being told the Constitution prohibits you from measuring ingredients or taste testing the batter that you simply are supposed to put it in the oven and hope it turns out great.

Which it begs the question then what? Like what are you supposed to do for the next cake do you want to guess and check and do trial and error? To me it sound like a waste of cake baking and map drawing time.

Just like everyone else I want a delicious slice of fair constitutional cake.

Exhibit 13

From: Pastula, Julianne (MICRC)
Sent: Wednesday, October 6, 2021 7:12 PM
To: kbrace@aol.com
Cc: Hammersmith, Suann (MICRC); Szetela, Rebecca (MICRC); Rothhorn, MC (MICRC); Reinhardt, Sarah (MDOS); Badelson1
Subject: Partisan Data/Partisan Fairness Measures
Importance: High

Dear Kim,

We urgently need to have a telephone conference this evening to address this issue. The manner in which the partisan data is being presented does not assist the Commission in determining how and where to make focused adjustments to districts. The "trial and error" approach being employed today is far too time consuming and does not have any cognizable methodology. Even worse the time spent is not resulting in productive improvements. Given that the Commission only has 3 days left to finalize its draft proposed maps this must be addressed immediately.

On or about August 6th, I expressed concern with the display of partisan data as the Commissioners were focusing on the displayed political data and because we don't have competitiveness as a criteria, drawing with partisan data was inappropriate. At the time, you indicated it could be "hidden" leading me to believe it is in the active matrix. We need to discuss a more productive way forward so the Commission can interact with partisan data in a more meaningful and time efficient way.

I have taken the liberty of sending an invite for 8:30 pm. I acknowledge you are traveling to the East coast, please advise an alternate time this evening is needed.

Sincerely,

Julianne Pastula
General Counsel
State of Michigan
Independent Citizens Redistricting Commission
517.331.6318
PastulaJ1@Michigan.gov

Exhibit 14

From: Pastula, Julianne (MICRC)
Sent: Sunday, October 3, 2021 9:49 PM
To: Kim Brace
Cc: Hammersmith, Suann (MICRC); Szetela, Rebecca (MICRC); jmorgan4@cox.net; wkstigall@gmail.com
Subject: RE: Plan to Score

Dear Kim,

I am available to discuss tomorrow. I will be remote in the morning/early afternoon so it may be best to connect when I arrive in person or after the meeting - depending on Sue's availability of course!

Also, can you please confirm Polsby-Popper in in the software. If so, does the report display individual district scores as well as the plan min/max/median/standard deviation?

Thanks,

Julianne Pastula
General Counsel
State of Michigan
Independent Citizens Redistricting Commission
517.331.6318
PastulaJ1@Michigan.gov

From: Kim Brace <kbrace@aol.com>
Sent: Sunday, October 3, 2021 9:22 PM
To: Szetela, Rebecca (MICRC) <SzetelaR@michigan.gov>; jmorgan4@cox.net; wkstigall@gmail.com
Cc: Kim Brace <kbrace@aol.com>; Hammersmith, Suann (MICRC) <HammersmithS@michigan.gov>; Pastula, Julianne (MICRC) <PastulaJ1@michigan.gov>
Subject: Re: Plan to Score

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Rebecca – OK, your plan is uploaded and viewable by the public on the MyDistricting site..

Attached is also the report on political fairness that I ran on your plan.

Sue & Julianne – One of the things that staff and I need to discuss on Monday is how much of some of the additional reports do you want to unveil. Like this political fairness report there are a bunch of other data, tables and reports that are possible in EDGE, but we should talk about what do we want to release.

Thanks

Kimball Brace
Election Data Services, Inc.
6171 Emerywood Ct
Manassas, VA 20112-3078
(202) 789-2004 or (703) 580-7267 <-- landline
Fax: 703-580-6258
Cell: 202-607-5857
KBrace@aol.com or KBrace@electiondataservices.com
www.electiondataservices.com

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-----Original Message-----

From: Szetela, Rebecca (MICRC) <SzetelaR@michigan.gov>
To: Kim Brace <kbrace@aol.com>; jmorgan4@cox.net <jmorgan4@cox.net>; wkstigall@gmail.com <wkstigall@gmail.com>
Cc: Kim Brace <kbrace@aol.com>
Sent: Sun, Oct 3, 2021 7:20 pm
Subject: Re: Plan to Score

Yes, unveil it

From: Kim Brace <kbrace@aol.com>
Sent: Sunday, October 3, 2021 7:13:01 PM
To: Szetela, Rebecca (MICRC) <SzetelaR@michigan.gov>; jmorgan4@cox.net <jmorgan4@cox.net>; wkstigall@gmail.com <wkstigall@gmail.com>
Cc: Kim Brace <kbrace@aol.com>
Subject: Re: Plan to Score

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hey Rebecca --

Will do, now that I'm in our Lansing hotel.

Dustin sent me a CD plan he worked on yesterday, and Sue wanted me to upload it to our MyDistricting site for the public. Are you ok with unveiling your plan?

Let me know.

Thanks

Kimball Brace
Election Data Services, Inc.
6171 Emerywood Ct
Manassas, VA 20112-3078
(202) 789-2004 or (703) 580-7267 <-- landline
Fax: 703-580-6258
Cell: 202-607-5857
KBrace@aol.com or KBrace@electiondataservices.com
www.electiondataservices.com

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-----Original Message-----

From: Szetela, Rebecca (MICRC) <SzetelaR@michigan.gov>

To: Kim Brace <kbrace@aol.com>; John Morgan <jmorgan4@cox.net>; Kent Stigall <wkstigall@gmail.com>

Sent: Sun, Oct 3, 2021 6:38 pm

Subject: Plan to Score

Can you run this through the software and send back the spreadsheet reflecting the Partisan Balance scores? Thanks!

Rebecca Szetela

Commissioner

Michigan Independent Citizens Redistricting Commission

szetelar@michigan.gov

(517) 898-9366



Exhibit 15

From: Pastula, Julianne (MICRC)
Sent: Monday, October 4, 2021 7:23 PM
To: Rothhorn, MC (MICRC); Szetela, Rebecca (MICRC)
Cc: Badelson1
Subject: P&C: Congressional Map Considerations

Importance: High

Dear Rebecca and MC,

Bruce and I have reached back out to ██████ in an effort to get context on his map submissions. Given that his initial map analyzed by Dr. Handley received near perfect scores, why should he try to better what is arguably incomparable, particularly if subsequent maps do not score as well as the initial analyzed map. Our concern is that the map was influenced by partisan data or considerations that are not allowed under MI criteria. While it is clear the AFL/CIO maps were drawn focused on partisan data (both competitiveness and proportionality by districts) to better their overall partisan fairness scores (also near perfect) – this cannot taint the Commission’s collaborative work. A map that does not follow the criteria can never be “better” than those that do.

Bruce and I remain steadfast in our recommendation to ██████ that he not advance his map we discussed with him last week and strongly encouraged him to submit any desired drafts as an individual Commissioner map, not insert it into the collaborative pool.

Please do not hesitate to reach out with any questions or concerns.

Sincerely,

Julianne Pastula
General Counsel
State of Michigan
Independent Citizens Redistricting Commission
517.331.6318
PastulaJ1@Michigan.gov

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MICRC

12/28/21 10:00 am Meeting

Captioned by Q&A Reporting, Inc., www.qacaptions.com

Exhibit 16

>> CHAIR SZETELA: As Chair of the Commission, I call the meeting of the Michigan Independent Citizens Redistricting Commission to order at 10:06 a.m.

This Zoom webinar is being live streamed on YouTube at Michigan Independent Citizens Redistricting Commission YouTube channel.

For anyone in the public watching who would prefer to watch via a different platform than they are currently using, please visit our social media at Redistricting MI.

Our live stream today includes closed captioning. Closed captioning, ASL interpretation, and Spanish and Arabic and Bengali translation services will be provided for effective participation in this meeting. Please E-mail us at Redistricting.gov or details for language translation services for this meeting.

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There is also a public comment portal that may be accessed by visiting Michigan.gov/MICRC, this portal can be utilized to post maps and comments which can be viewed by both the Commission and the public.

Members of the media who may have questions before, during or after the meeting should direct those questions to Edward Woods III, our Communications and Outreach Director for the Commission at WoodsE3@Michigan.gov or 517-331-6309.

For the purposes of the public watching and for the public record I will now turn to the Department of State staff to take note of the Commissioners present.

>> MS. SARAH REINHARDT: Good morning, Commissioners. please say present when I call your name. If you are attending the meeting remotely, please disclose you are attending remotely and as well as your physical location you are attending from. I will call on Commissioners in alphabetical order starting with Doug Clark.

>> COMMISSIONER CLARK: Present.

>> MS. SARAH REINHARDT: Juanita Curry.

>> COMMISSIONER CURRY: I'm present, attending remotely from Detroit Michigan.

>> MS. SARAH REINHARDT: Anthony Eid?

Brittini Kellom?

>> COMMISSIONER KELLOM: Present, attending remotely from Detroit, Michigan.

>> MS. SARAH REINHARDT: Rhonda Lange?

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My name is mark Payne a resident of Detroit, I ask that the vote process you have established be adhered to on the actual vote so the public can witness a transparent conclusion to your work.

In addition these lines will last ten years and have a lasting impact.

You can still do better especially on the State House maps Hickory is least bad but you can do better for Michigan taking a little bit more time drafting.

Please take more time to additionally address our ability to elect candidates of choice and assure compliance with the voter rights act z, as a voting rights expert Handley says in 2C we compile election results where all draft districts can be used whether your proposed will provide minority voters with the opportunity to elect.

No mention of this however no mention of this being done is made.

>> CHAIR SZETELA: Thank you for addressing the Commission. Next in line is number 28, Nicole Bedi.

>> Hi everyone.

My name is Nicole Bedi from Birmingham I'm in support of the Birch Congressional map.

We are part of the congregation of a Sikh technical of Rochester Hills.

You heard a lot from my community earlier in the process we support the Birch map because it keeps together the neighborhoods of Sterling Heights Troy and Rochester Hills so that our religious community as well as the south Asian cultural community can be a constituency with member of Congress.

I've been following this process really closely and I've actually taken the time to tally the pins on the portal.

And I want you to pay attention to the fact that there are actually 1500 comments between the Birch and Chestnut maps where 67% of comments are positive on the Birch map where only 55% are positive on or green on the Chestnut map.

There has been a lot of T attention on these verbal comments like mine organized by groups but a ton of individuals do not have the luxury to take time away.

>> CHAIR SZETELA: Thank you for addressing the Commission. Next in line is number 29, Claudia Warren.

>> Good morning.

Good morning, Commissioners and thank you for your service in this extremely important process.

I am one of the many Voters Not Politicians volunteers residing in Midland County.

We collected 21,000 signatures to get proposal two on the ballot.

50-60% of Midland County voters approved proposal two.

50-60% of Midland County voters understood that Michigan's redistricting process was rigging the election in favor of one party.

In Midland County and in the rest of the state we all witnessed what happens when one party dominates with a closed mindset.

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Comments, thoughts? Views? Cheerleading for your plan? Commissioner Eid?

>> COMMISSIONER EID: Well, in my opinion I think the Chestnut plan is the one we should adopt.

I see it as kind of a compromise between all of the plans that we have.

For example, you know we have Ottawa County and Apple it's not split at all.

And Birch it's split twice.

Chestnut there is a compromise and only split once with part of it going in the lower District and the other half going in the Grand Rapids-Muskegon District.

Likewise I see a compromise in Midland County.

And this map almost all of Midland is kept whole except for a few sparsely populated Townships that only have about 9500 people in them total.

Which is less than some single precincts in the more populated areas of the state.

And I see that as a compromise because most of that County is kept whole.

And finally I think the next biggest difference is the BVAP is a little bit higher on districts 12 and 13 in Metro Detroit.

They are at about I believe they are, I will find it out now, they are about 45 and 43.8%.

Which are just a couple of percentage points higher on Birch and Apple configuration.

And finally I think while it wasn't made to be this way, I would ends up shaking out is it also has more competitive districts than Apple or Birch.

So I think it's the best one.

I think that is what we should adopt.

And I also like Commissioner Szetela's individual map.

And I also like Birch.

>> CHAIR SZETELA: Any additional discussion? Rhonda, I can't see you Commissioner Wagner I can't see you, miss Reinhardt?

>> MS. SARAH REINHARDT: Thank you.

Per the Commission's adopted final vote procedure, if you're entering into step two for U.S. Congressional, the first step or step 2A states a motion will be made that each Commission shall state the top plans under consideration and then proceed into discussion after disclosure of your top two favorite plans.

Did you hear me okay? Do you want to repeat it.

>> CHAIR SZETELA: Thank you for the reminder I would entertain a motion for Commissioners to state their top two favorites among the Congressional plans. Motion made by Commissioner Eid and seconded by Commissioner Witjes is there any discussion or debate on the motion? Hearing none let's vote we have a motion by Eid and seconded by Commissioner Witjes to request that Commissioners identify their top two favorite Congressional plans all in favor please raise your hands and say aye.

Opposed raise your hands and say nay.

>> COMMISSIONER LANGE: Nay.

>> CHAIR SZETELA: Commissioner Lange.

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>> CHAIR SZETELA: No, we are not voting at this point, identifying the top two favorite maps and move into a discussion.

And per our planned document we are supposed to do it in alphabetical order so starting with collaboratives that would be in Apple.

Is there any discussion or debate on the Apple?

>> MS. SARAH REINHARDT: Commissioner Wagner for your reference, in the voting procedure document, the final vote procedure we are moving into 2B which the Commission will discuss each published plan for the District type under consideration in alphabetical order.

>> COMMISSIONER WAGNER: Thank you.

>> CHAIR SZETELA: I'm not seeing any hands on the Apple.

Okay, do you want to talk about the Birch, any comments about the Birch? Commissioner Rothhorn?

>> VICE CHAIR ROTHORN: So I think the reason I'm choosing Birch is because there has been in the southeast Michigan area it's the most populated area.

And I guess concerned about the way that and recognizing that Grand Rapids is our second most populated City.

But with I believe Detroit and then I think Warren and Sterling Heights it has the top four cities are the most populated area and I think Birch treats that area that the communities of interest that are preserved or the community of interest that we heard from during our process are most reflected in that Birch map.

I recognize that it's not perfect as many have said.

But that is why because it's the most populated area that has the most communities of interest, the most diverse communities of interest preserved that is why I'm leaning towards Birch.

>> CHAIR SZETELA: Commissioner Witjes then Commissioner Clark then Commissioner Lett.

>> COMMISSIONER WITJES: I'm basing my decision I know we are talking about Birch here for a good second but going to hit two birds with one stone.

1 I'm taking my own personal beliefs here out of almost everything we are doing when coming to voting. There has been an overwhelmingly positive response to Chestnut. More so than Birch.

So that would be the reason why I put Chestnut above Birch however both maps are decent.

>> CHAIR SZETELA: Commissioner Clark?

>> COMMISSIONER CLARK: Yeah, and I'd like to talk about Birch and Chestnut together.

2 The reason I selected Chestnut was I felt it had more swing districts that depending who the candidates are I could go republican or democrat and that is one of the things we

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heard from the public a lot, they used the word competitiveness and I just associated that word with the way Anthony configured this.

So I think that's a very positive thing and something the public talked about quite a bit.

>> CHAIR SZETELA: Commissioner Lett?

>> COMMISSIONER LETT: Yeah, I agree with Commissioner Clark and Commissioner Witjes.

3 Clearly the sentiment from the public was for Chestnut.

Really without many reservations at all as I recall.

And it seems I recall that people would say you know Birch looks good but Chestnut looks better.

And number two I think our deliberations as we develop Birch and develop Chestnut, I think we made the corrections to the Birch that provided us with Chestnut and therefore I believe that is the one that should be voted in.

>> CHAIR SZETELA: Okay, so I have some comments on this.

I think in terms of the public comment it's been frankly equal and actually favors the Birch and that was something I believe Chris Andrews mentioned today that when you tally that 67% of the comments related to the Birch are positive 55% of the comments related to Chestnut are so I think the Birch actually has more favorable comments.

I think the Chestnut in particular it wasn't something that we drew as a collaborative map.

It was something this Commissioner Eid did on his own and adopting it and making it a collaborative map.

Unlike the Birch where we did draw it in live meetings and discussed at length what we were doing and why we were doing it we never had that sort of background with the Chestnut and I think you see that reflected the in the communities of interest on the two maps because for the Birch we have particular configurations particularly Detroit and Oakland County where we have you know little jut outs here and there and done with a deliberate purple and we went through the communities of interest.

We were specifically discussing the Bengali and Asian and Chaldean, the Hispanic communities, the Arab and Muslim in Dearborn in particular and really trying to preserve those communities of interest and we ended up with the lines we drew.

Where I feel the Chestnut disease not preserve those communities of interest in the same way and I think from a defensibility perspective that makes it difficult to go in and say Yeah, we considered the Bengali in Birch we carved out its own District for it yet we completely threw that in the dumpster when it came to Chestnut.

If it was important for us to incorporate in the Birch it should have been incorporated in the Chestnut as well and a big weakness with the plan.

I feel that is a big weakness that a lot of people have identified with the Chestnut in particular including outside entities that have looked at both maps.

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Have consistently rated the Chestnut as being the lowest on communities of interest in terms of taking those into account.

And I think that is concerning because we have the Birch which does well with communities of interest.

We have the Apple which does well with the communities of interest then we have the third ranked which is the Chestnut.

So I think if you are looking at all things being equal which they mostly are because the public impression of it is equal if slightly favoring Birch and we have different metrics we are looking at.

Whether it be population, whether it be efficiency gap, whether it be mean median.

They are pretty equal.

And so the big differentiating factor for me is the COIs and we have one map that I think does a really good job of respecting the COIs and in addition to that was well documented as to why we were doing that.

And very open to the public then we have another map that frankly I think compromises COIs.

In favor of competitiveness which is not even one of our constitutional criteria.

Nowhere in our constitutional criteria is competitiveness and I'm sure our General Counsel will jump in on that point so that is not something we should be considering as a factor.

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And when people are asking us to consider that they are asking us to deviate from the 7 ranked criteria we are supposed to be following.

So I think they are both good maps.

It's not going to kill me either way if we adopt one or the other but I definitely think in terms of complying with our constitutional mandate I think the Birch is superior.

And I would encourage everybody to think about that and consider whether we want to make sure that we are going with the map with better COIs versus the map that is more competitive.

Commissioner Witjes I think you had your hand up first then Commissioner Eid.

I'm sorry can we let Commissioner Curry go first thank you.

>> COMMISSIONER CURRY: I just want to reply that I agree with Madam Chair in her response to the Birch map.

I agree wholeheartedly with that.

>> CHAIR SZETELA: Thank you Commissioner Curry.

Commissioner Witjes then Commissioner Eid.

>> COMMISSIONER WITJES: Between the two I think communities of interest are represented both quite well in the Birch and the Chestnut map.

That being said when it came to percentages that were brought up today in public comment by the individual from Haslett I'm wondering if he went on to the actual public

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comment not the portal but the website with the proposed maps where you can place the pins.

I'm taking it in account when we actually had our first maps to that we published and all of our public comments hearings we went on the next five plus everything that we've heard in our public meetings that we had every two weeks Chestnut is indeed superior out of the two in regards to what the public has said.

>> CHAIR SZETELA: Commissioner Eid?

>> COMMISSIONER EID: A couple things.

One I just want to point out that the Detroit configuration that is in Chestnut was also in map Juniper that went on the second round of public comments which was a collaborative map and we came back and selected this map and made it a collaborative map on Chestnut based on what Commissioners said was the preferred Detroit configuration.

So that is the first thing.

Second, just looking at how people said their preferences, there were 7 preferences, 7 first place preferences for Chestnut.

And four for Birch.

And out of those for Chestnut there were more than -- there were two independents two republicans and one democrat and just wanted to point that out.

Finally I think the independent analysis actually shows the opposite.

I think independent analysis are good tools we should use but most of the ones I read specifically IPPSR report from MSU preferred the Chestnut map.

I looked at other things, the Princeton gerrymander project, which has the maps as A's, which are good.

And 538 also has them all being the same.

So I think from an independent analysis standpoint they are all pretty good all three of them.

As far as community of interest goes, I think the Chestnut map is better in supporting communities of interest because the biggest community of interest here is the you know the minority community in Detroit.

And the BVAP being higher I think it does a better job of having that community of interest being represented.

While we have the Bengali community of interest represented very well in other versions of maps.

You know we said all along that not everybody is going to get every single thing they want in every map but I think it's a good compromise.

There are other pluses to as far as Oakland and Troy is included with the Oakland County District which is something that at Oakland University the community made very clear to us, they want to be in with most of Oakland County.

There are negatives though, you know.

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It's not a perfect map.

I don't like how Chestnut has upper Oakland County.

I think the Birch map is superior to Chestnut in that regard.

But overall looking at all things in totality, I prefer Chestnut and going by what most people said 7 people said Chestnut was their preference.

So I'm wondering if we can get any wiggle room, maybe have somebody change their mind so we can come to consensus something like that.

>> CHAIR SZETELA: Commissioner Lange?

>> COMMISSIONER LANGE: This is why I have a problem of listing the top two it's like a round Robin and I don't think that this is how we should do it.

I don't think we should be forced to say which ones we are.

And put somebody on the spot saying oh, well, 7 Commissioners think this one is the way to go so we just need to swing the last one.

That is round Robin in my opinion and I don't like it.

I just want to put that out there.

>> CHAIR SZETELA: Thank you for your comment, Commissioner Lange.

So I do want to address the MSU report because I did read that in full like I read everything.

And the primary reason why MSU tipped in favor of Chestnut is because number one they are of the opinion that we are required to have 50% BVAP in order to have voting rights compliance and they favored Chestnut because it has a slightly higher BVAP in District 12 and 13 so to me I disregard that entirely because I trust the expert opinion of Mr. Adelson and he what's said we do not have to have 50% so the fact they are favoring one map over another because it has a slightly higher BVAP when that is not what we are supposed to be -- that is not a goal we are trying to achieve, I disregarded that analysis entirely.

Otherwise their analysis was there was no difference between the Birch and Chestnut they were functionally the same in terms of every factor they looked at.

All right, I feel like we talked about Birch and Chestnut so do we want to talk about I think Lange would be next on the list.

Any discussion, comments about Lange? And anything about Szetela? Did you have a comment Commissioner Eid?

>> COMMISSIONER EID: I was going to say I like the Szetela version.

It would rank after Chestnut and Birch because I think the collaborative maps should be ranked first but just generally speaking, I think I saw what you are trying to do.

I saw you did a good job of trying to put together the best parts of both maps.

>> CHAIR SZETELA: All right so let's go back to our.

>> MS. JULIANNE PASTULA: Madam Chair.

>> CHAIR SZETELA: Let's go to Clark.

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>> COMMISSIONER CLARK: I liked the Lange map and represented some of the areas that I think needed more representation than they have had. I think she did a decent job on that.

>> CHAIR SZETELA: Commissioner Witjes?

>> COMMISSIONER WITJES: Okay this is okay so we just discussed the Congressional maps now we are going to move on to Senate then the house basically do the same thing.

Does that make sense? Now we actually discussed the Congressional map, wouldn't it make more sense to go through the voting process now?

>> CHAIR SZETELA: I think Ms. Reinhardt wants to chime in and General Counsel probably wanted to chime in too.

>> MS. SARAH REINHARDT: Yes, Commissioner Witjes that is how what the voting plan contemplates is that we will go through all of the steps for each plan sequentially and then move on to the next District type.

So first we would go through all the steps for U.S. Congressional and then move on to the next set, which I believe is State Senate.

>> CHAIR SZETELA: Just to clarify going through all the steps you are saying voting at this point.

Okay that is what I understood.

Commissioner Lange?

>> COMMISSIONER LANGE: There was the topic of potentially making changes to the maps.

At the beginning that said we would be coming back to after discussion.

So when do we come back to that?

>> CHAIR SZETELA: Commissioner Witjes?

>> COMMISSIONER WITJES: I'm going to make a motion right now that we do not make any changes to the maps.

>> CHAIR SZETELA: Is that all maps or just these Congressional maps?

>> COMMISSIONER WITJES: All maps.

>> CHAIR SZETELA: Okay so we have a motion by Commissioner Witjes seconded by Commissioner Vallette to oh, gosh, how do I want to say this not make any changes to the map I guess, any maps, just any District type maps any discussion or debate on the motion?

>> COMMISSIONER WAGNER: My hand has been up a while this is Commissioner Wagner.

>> CHAIR SZETELA: I can't see you.

Please go ahead.

>> COMMISSIONER WAGNER: Thank you I also wanted to get back to actually amending the maps because as everyone on the Commission is aware I've got a letter of demand out there.

Exhibit 17

From: Pastula, Julianne (MICRC)
Sent: Monday, September 20, 2021 12:25 AM
To: Pastula, Julianne (MICRC)
Subject: Privileged & Confidential: Update

Follow Up Flag: Follow up
Flag Status: Flagged

THIS EMAIL IS A PRIVILEGED AND CONFIDENTIAL ATTORNEY-CLIENT COMMUNICATION THAT CONTAINS LEGAL ADVICE.

OPEN MEETINGS ACT REMINDER: DO NOT "REPLY ALL" OR CREATE "CONSTRUCTIVE QUORUMS" AMONG A QUORUM OF THE PUBLIC BODY THROUGH CONVERSATIONS WITH OTHER COMMISSIONERS OR THROUGH SHARED ELECTRONIC COMMUNICATIONS. DELIBERATIONS BETWEEN A QUORUM OF COMMISSIONERS OR MEMBERS OF A COMMITTEE CAN ONLY OCCUR AT AN OPEN MEETING. PLEASE CONTACT JULIANNE AT 517.331.6318 WITH QUESTIONS.

Dear Commissioners and Staff,

I wanted to provide updates on the following issues:

Competitiveness. I have consistently stated that competitiveness is not a constitutional criteria in Michigan. Attempting to add this consideration as a criteria creates a significant legal problem and leaves the MICRC wide open to a court challenge. First, there is no legal basis for including competitiveness in the criteria that the MICRC is constitutionally mandated to follow. This would likely be viewed as arbitrary and capricious by a court, particularly after receiving legal advice against inserting competitiveness. To date, it has been included in the not only the drawing of districts but establishing it as part of the MICRC record as well as the rationale by which districts were evaluated. Second, as I indicated again during the second meeting last Thursday, the data in the active matrix is disaggregated election results utilized for VRA compliance analysis and is not an approved method to evaluate political advantage (competitiveness). The full election dataset is not currently included in the data cube. I acknowledge that the MICRC has received public comment advocating for competitiveness to be considered. Again, there is no legal basis for this and inserting it as a consideration undermines our legal risk management strategy. Political considerations are expressly excluded from diverse population/COI criteria so that argument would also fail and put the MICRC's work at risk. Political boundaries (county, city, townships) are a discrete criterion so attempting to align under diverse population/COI criteria absent demonstration of shared characteristics is also highly inadvisable as the MICRC will have to defend its' decision to identify entire counties or other political units as a COI when it is defending its maps. Other examples of redistricting principles that are not included in Michigan's criteria and therefore cannot be considered are nesting, establishing multi-member districts, and maintaining cores of districts.

In his prior work, Mr. Adelson evaluated political competitiveness in a state that has competitiveness as a specific constitutional redistricting criterion, He well understands the difference between complying with that state's requirements and Michigan's and will share those distinctions with the MICRC. Again, competitiveness is NOT in Michigan's constitution and cannot be included now by the MICRC in its drafting. Looking at VRA selected election results is NOT an approved method for evaluating "disproportionate advantage" and "fairness" and must be avoided.

Partisan Fairness. This is one of the constitutional criteria in Michigan but it cannot and should not be intertwined with competitiveness. The mathematical models accepted by the courts are employed on statewide plans to determine symmetry and measure partisan fairness by establishing whether a statewide seats to vote comparison and relevant statistical analysis demonstrate disproportionate advantage. As I indicated during the second meeting on Thursday, the

data in the active matrix is disaggregated election results utilized for VRA compliance analysis. Courts have held that election results cannot be used to demonstrate disproportionate advantage or competitiveness. The partisan fairness measures will require another update by EDS.

Additional Analysis by Dr. Handley. Dr. Handley is available to perform the partisan fairness analysis as well as additional evaluation of voting patterns by race and ethnicity to identify whether homogeneous populations that are too small for RBV analysis or are not a separate racial category in the census (i.e., concentration of Hispanic voters or MENA population being categorized as White in the census form). A draft Appendix to amend the EDS contract is being finalized for the Commission to discuss and consider.

Incumbents. The language of the 5th constitutional criteria “[d]istricts shall not favor or disfavor an incumbent elected official or a candidate” also demonstrates the intent of the constitutional amendment to remove partisan considerations from the MICRC’s work. The most effective way to accomplish this and shield the MICRC from individual requests of individuals stating where they intend to run is to not take into consideration any incumbent data and rely upon the partisan fairness measures in the 4th criteria. Any intentional actions taken by the MICRC relative to incumbents will need to be explained and rationale provided for the record. This will be almost impossible in heavily gerrymandered areas of Michigan allowing for a challenge of favoring out state candidates. Additionally, there is no meaningful way to gauge compliance with this criteria once that information is taken into consideration intentionally. Your legal team advises against incumbent considerations and has asked the Communications and Outreach Director to stop including articles outlining the impact of the MICRC’s work on current or prospective elected officials.

Compactness. The Polsby-Popper test is currently in the EDS software. This test is essential to evaluate legal compliance with the final constitutional criteria. Mr. Adelson has indicated it is a best practice method used across the country and compactness cannot be legally evaluated without it.

Reconciliation of Legacy Data. EDS has indicated that the reconciliation between the legacy data released August 12th and the PL 94-171 data released September 16th is complete and the data sets have been verified. As you recall, this was an important part of mitigating legal risk and demonstrating that the data set is accurate, particularly earlier this year when there was uncertainty about the releases.

Another Michigan Supreme Court Order. On Saturday, I received an Administrative Order from the MSC stating that until emergency rules are adopted, the MSC will be issuing case management orders for any lawsuits brought by or against the MICRC. A copy of the Order is attached for your convenience. These case management orders will set forth dates/deadlines and procedural requirements and will be extremely helpful. However, it does note the likelihood of shorter timeframes and “nonuniform” periods which underscores the need to secure local counsel as soon as practicable. The Baker Hostetler contract has been signed but the engagement letter has not been finalized. The proposed engagement letter was not consistent with the contract terms or the terms set forth in the RFP. I forwarded recommended edits so that process is ongoing and I am hopeful it will be concluded this week.

Analysis of VRA Compliance. Barring any travel delays, Mr. Adelson will arrive at tomorrow’s meeting about 1 pm which coincides with the end of the recess period for lunch. He has reviewed the Senate and Congressional plans drafted last week, is happy to address questions the Commissioners may have and he also has questions for the Commission. He will share his thoughts in regard to the draft districts drawn last week and discuss overall VRA compliance at the beginning of the afternoon session.

Lastly, another reminder to be thoughtful in your terminology to ensure it is not freighted as each of you are creating a record that you will need to defend not only collectively as a public body but also as individual Commissioners. Again, I urge that public engagement consist of active listening as opposed to talking. The MICRC has shifted into the mapping phase of its work, advocacy efforts have significantly increased, and the increased risk of creating a record that will undermine the MICRC’s work is too great.

As always, I remain committed to the work of the MICRC and each of you individually. Please do not hesitate to reach out to me.

Sincerely,

Julianne Pastula

General Counsel

State of Michigan

Independent Citizens Redistricting Commission

517.331.6318

PastulaJ1@Michigan.gov

INSTITUTE FOR PUBLIC POLICY
AND SOCIAL RESEARCH

MICHIGAN REDISTRICTING MAP ANALYSIS

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MICHIGAN STATE UNIVERSITY

EXECUTIVE SUMMARY

Michigan has embarked on an historic redrawing of boundaries for its 13 U.S. House, 38 Senate and 110 House districts. Redistricting was entrusted this year to 13 members of the Michigan Independent Redistricting Commission (MICRC) randomly selected from a pool of qualified applicants.

This report provides a quantitative analysis of the collaborative Draft maps and of the Proposed maps. The collaborative Draft maps were, as their name indicates, collaboratively drawn by the MICRC and released on Oct. 11, 2021. The Commission voted to release four congressional maps, three Michigan Senate maps, and three Michigan House maps. These Draft maps were subject to a round of public hearings to be conducted around the state from Wednesday, Oct. 20 to Tuesday, Oct. 26. Following these public hearings, the MICRC released the Proposed maps during the week from Nov. 1-5, 2021, which are the maps that advance to the final 45-day period of public hearings to stretch from Nov. 15, 2021 to Dec. 29, 2021.

In this report, the Institute for Public Policy and Social Research at Michigan State University analyzes 10 collaborative Draft maps and nine Proposed maps, each bearing a number identifier and the names of trees found in Michigan's forests, orchards and backyards.

This report offers a powerful tool and a guide the Commission and the public can use to compare and evaluate each of the maps to weigh the benefits of adhering closer to some criteria over others, and how maps can change characteristics as they change shape and move toward different metrics. The unique feature is a comparison of the Draft maps and the Proposed maps against maps submitted by the public as well as computer-generated maps, enabling an assessment of where MICRC maps stand out.

The report also includes a brief description of answers to survey questions posed to Michigan citizens, and to Michigan policy leaders who work in state politics, about their understanding of the MICRC and likelihood of engaging with the commission. Michigan's citizens seem positive about the MICRC and its goal of preventing gerrymandering and bringing about more fairness in new districts and elections.

This review doesn't evaluate whether a complete map is "good" or "bad;" it proposes a battery of objective quantitative analyses reflecting how each Draft map and each Proposed map performs on each of the seven criteria specified in a modification of the Michigan Constitution in 2018.

This updated report on Proposed maps, first released on Nov. 15, 2021, and based on analysis to that date, makes a set of observations:

- Plan Chestnut scores well on our measures of meeting the criteria, with notable advantages on some metrics among the three congressional redistricting plans.
- Any deviations from perfect Population Equality in congressional plans need justification.
- All collaborative Michigan Senate plans pursue a controversial path to comply with the Voting Rights Act. They all split the City of Detroit in such a way that every district has less than 45 percent African-American population. Individual Plan SD Kellom (named for Democratic commissioner Brittini Kellom of Detroit) offers an alternative approach in drafting three such districts.

- House plans Pine V5 and Hickory, and to a lesser extent Magnolia, lead to more Democratic seats than almost any computer-generated map. In an attempt to reduce Republican geographic advantages, these plans became outliers not expected by chance.
- It remains unclear how the Commission prioritized or selected among Communities of Interest submitted by the Michigan public for protection.
- The Commission would give itself more options and reduce legal risk by taking the time to make insubstantial edits to improve Population Equality in its congressional plans and by elevating Plan SD Kellom to an official Proposed collective state Senate map.

The first report on the Draft maps, released on Oct. 18, 2021, and based on analysis to that date, made a set of observations due immediate consideration:

- Some maps appear to be incomplete, with a number of U.S. Census blocks not assigned to districts, a finding that can be repaired with revision.
- Population deviations from perfect equality may need justification.
- Draft plans pursue an unusual path to compliance with the Voting Rights Act, maximizing districts that are near 40 percent African-American population, but that are below majority.
- It isn't yet clear whether the MICRC has followed a systematic way to choose among which Communities of Interest to honor.
- Most Commission maps help Democrats to partially --- but not fully --- compensate for the unfavorable geographic concentration of Democratic voters. All maps favor Democrats according to some measures and favor Republicans according to other measures. Taking both views into account, we argue such maps generally follow Criterion F.

Since our first report, the Commission has repaired incomplete and non-contiguous maps. They also modified their Voting Rights Act compliance strategy for state House districts. Population equality, Voting Rights Act compliance, Communities of Interest prioritization, and partisan fairness measures all still deserve further consideration. But we are confident that the maps produced by the Commission will better meet the criteria outlined in the Constitution than the prior maps. Despite some complaints, the Michigan public and policymaking community share our confidence. This report is designed to help the Commission best achieve its objectives and help the public hold the Commission accountable.

Some maps await analysis and some measures are not yet available. Please see <https://ippsr.msu.edu/redistricting> as analysis continues to be updated. Under MICRC's published schedule, a final vote on all approved maps is expected Thursday, Dec. 30, 2021. In addition to this initial analysis, IPPSR plans a full report of Michigan's new redistricting initiative in 2022.

INTRODUCTION

As [Michigan's Independent Citizens Redistricting Commission](#) embarked on its history making work, Michigan State University's Institute for Public Policy and Social Research helped provide training and technical assistance to the fledging commission. In all its work, the Institute for Public Policy and Social Research (IPPSR) applies research to pressing public policy issues and builds problem-solving relationships between the academic and policymaking communities. For the Michigan Independent Citizens Redistricting Commission (MICRC) and its staff, IPPSR has played a role in promoting and conducting research on redistricting and related public policy issues, has provided survey research, and produced education and training programs.

In this role, IPPSR worked alongside the [University of Michigan's Center for Local, State and Urban Policy in the Ford School of Public Policy at the University of Michigan \(CLOSUP\)](#). All work was under the direction of IPPSR Director Dr. Matt Grossmann and CLOSUP Executive Director Tom Ivacko. This work was undertaken with the support of [The Joyce Foundation](#), which invests in evidence-informed public policies and strategies to advance racial equity and economic mobility in the nation's Great Lakes heartland states.

Before the Redistricting Commission began drawing any lines, IPPSR and CLOSUP were involved in orienting the Commission. The first day, on the afternoon of Sept. 17, 2020 the Commission heard about the Basics of Article IV, Section 6 of the Michigan Constitution. That article and section held the constitutional mandate giving the MICRC the exclusive authority to redistrict the state. The discussion included information on process and especially the mapping criteria, the constitution's seven priorities – in order – for proposing and adopting a redistricting plan. As part of that session, the panel presentation brought together Dr. John Chamberlin, professor emeritus of public policy, University of Michigan, and Dr. Jon X. Eguia, professor of economics, at MSU. Dr. Grossmann moderated the session.

The following morning, Ivacko moderated a discussion on redistricting history and the Voting Rights Act. That panel included Ellen Katz, professor of law, University of Michigan Law School, and Justin Levitt, professor of law, Loyola Law School.

Dr. Grossmann moderated a second panel presentation that day on redistricting in Michigan. The panelists were Chris Thomas, former director of the Michigan Bureau of Elections, and John Pirich, veteran elections attorney and faculty member, Michigan State University Law School.

A third session, on Michigan demographics and the U.S. Census, took place just a month later. In that session, the Redistricting Commission heard from Michigan State Demographer Eric Guthrie; Lisa Neidert, retired data archivist from the U of M Population Studies Center and Noah Durst, an MSU assistant professor of urban and regional planning whose expertise focuses on population measures of housing and location. Commissioners heard about Michigan's diversity of people, economic sectors and regional interests, especially as those are measured through the U.S. Census. The goal: to give redistricting commissioners the knowledge needed to identify most likely Michigan locations for public hearings and to understand population dynamics.

The following spring brought a series of four panels outlining and explaining redistricting duties as they relate to the Voting Rights Act, Communities of Interest and Map-Drawing. These duties are essential to complying with laws and constitutional requirements of Michigan's newly enacted redistricting mandates calling for a fairly drawn, citizen-led and transparent process to map boundaries for the state Congressional, House and Senate district lines.

Three experts were scheduled to speak about the Voting Rights Act details and requirements. Those specialists were Leah Aden, deputy director of litigation, NAACP Legal Defense and Educational Fund, Inc.; David J. Becker, executive director and founder, Center for Election Innovation & Research and Michael Li, senior counsel, Brennan Center for Justice. IPPSR Director Grossmann moderated.

A second spring session featured a panel of experts who described and defined Communities of Interest for the MICRC work. Those specialists were Mariana C. Martine, Director of Civic Engagement Initiatives, Michigan Nonprofit Association; Susan Smith, Vice President – Advocacy, League of Women Voters of Michigan. Ivacko, CLOSUP executive director, moderated.

In a highly interactive presentation, IPPSR then brought together software expertise, a demographer and political scientists to lead the discussion of how maps would ultimately be drawn and the challenges in outlining their shapes and the people who would vote within them. The first session presented tips about understanding trade-offs among the criteria and difficulties in the mapping process, led by Dr. Grossmann and Guthrie. Members of the Redistricting Commission were then invited to begin their own map drawing practice of the State of Ohio and receive feedback from experts on their practice maps.

IPPSR and CLOSUP consulted with experts to review the commissioners' maps and to conclude the exercise with a process of collectively practicing map-drawing. Those experts were Dr. Moon Duchin, professor of mathematics, Tufts University; Dr. Ashton Shortridge, professor, Department of Geography, Environment and Spatial Sciences, MSU; Dr. Corwin Smidt, interim director, Department of Political Science, MSU; Chamberlin, of the University of Michigan; Ivacko of CLOSUP, and Dr. Jon X. Eguia. State Demographer Guthrie and Dr. Grossmann of IPPSR led the collective practice mapping process of Ohio Congressional Districts.

In the fall of 2021, IPPSR, with CLOSUP, helped produce three online webinars sharing resources on redistricting and communities of interest (COIs). [Recordings of these events](#), open to the public, illuminated the importance of public input, data collection and aggregation and how, even as preliminary redistricting commission maps were made available for public hearings, members of the public were still invited and empowered to make their views known.

From the start, IPPSR helped to prepare and compile – in conjunction with the Michigan Department of State, which oversees elections and redistricting within Michigan, CLOSUP and the [Princeton Gerrymandering Project](#), a set of publicly available [Commissioner Orientation and Resource Materials](#). These materials outlined an initial agenda for the commission's convening, constitutional language setting forth required redistricting criteria, hands-on mapping resources, draft timelines for meetings and decision-making and a glossary of terms.

IPPSR also provided race-of-candidate data from Dr. Eric Gonzales Juenke for use in the Commission's Voting Rights Act analysis by Dr. Lisa Handley, president of Frontier International Consulting, an election consulting firm.

In 2021, Michigan State University's Institute for Public Policy and Social Research was the recipient of a two-year, \$250,000 grant extended from The Joyce Foundation of Chicago.

The grant engaged IPPSR to provide training and technical assistance to the Michigan Independent Citizens Redistricting Commission. IPPSR was also to evaluate the state's first redistricting process under the MICRC.

Through the life of the two-year grant, IPPSR is working with the University of Michigan's Center for Local, State, and Urban Policy, sharing resources, conducting educational programming and evaluating the redistricting process. This report represents the interim version of the evaluation. In addition to updating this report, IPPSR and CLOSUP will provide a final report on the full redistricting process in 2022. This report is designed to provide information and materials that the Commission and the public can still use now before voting on final maps.

IPPSR is engaging with Dr. Eguia, lead author of this report, to coordinate the analysis and reporting on the maps. This analysis brings together results from independent research teams at Tufts University, Yale University, Princeton University, University of Michigan, Duke University, and Michigan State University, all of them contributing their work to provide a better understanding of these maps and their consequences for the citizens of Michigan.

We rely primarily on materials made public by Prof. Moon Duchin's Metric Geometry and Gerrymandering Group (MGGG Redistricting Lab) at Tisch College of Tufts University, which include many metrics and scores for the MICRC plans, the plans submitted by the public, and randomly generated alternative plans. On partisan fairness, we use five independent sources of results: first, the results provided by the MGGG Redistricting Lab; second, results obtained by Dr. Christian Cox from Yale University; third, results from computational ensembles generated by the Princeton Gerrymandering Project (directed by Professor Samuel Wang) and released to the public through the project's Redistricting Report Cards; fourth, results from computational ensembles generated by the University of Michigan Redistricting Team (directed by Professor Timothy Ryan) in collaboration with the Duke Redistricting Group led by Professor Jonathan Mattingly and Professor Joseph Herschlag at Duke University; and fifth, results made freely available to the public by the redistricting application DRA 2020, available due to the work of a team of volunteers and housed online at davesredistricting.org

We are grateful that this entire network of researchers has generously contributed their expertise to this report.

Under the U.S. Constitution, congressional and legislative districts must be redrawn every 10 years upon completion of a new U.S. Census. A state constitutional amendment, forwarded by the grassroots organization [Voters Not Politicians](#) and approved by Michigan voters in 2018 empowered a commission randomly selected from a pool of pre-qualified applicants to draw the boundaries outlining the state's U.S House, state Senate and state House of Representative districts.

The constitutionally revised task that had traditionally been overseen by Michigan's Legislature and governor instead moved into the hands of the 13-member MICRC – constituted of four people aligned with the Democratic Party, four identified as Republicans and five members who claimed allegiance to no specific party.

This effort was complicated by the COVID pandemic and associated delay in receiving U.S. Census data. This redistricting will be written about, evaluated, tested, retested and challenged in the coming months and years – potentially decades – as Michigan and its populace, policy and politics follow this new path to drawing the boundaries from which voters will cast their ballots. Our full evaluation of the Commission and its final maps will come in the summer of 2022 and we are excited to be a part of such a comprehensive effort.

We are indebted to The Joyce Foundation, to postdoctoral fellow Christian Cox at the Jackson Center for Global Affairs at Yale University, to IPPSR Director Dr. Matt Grossmann and CLOSUP Executive Director Tom Ivacko, to Dr. Duchin and her team at MGGG, to the Princeton Gerrymandering Group, to Mike Wilkinson at Bridge Michigan, to Dr. Ellen Katz and Henry Fleischmann at the University of Michigan, to Alec Ramsay at DRA 2020, to MICRC Director Suann Hammersmith and staff, and to all those at Michigan State University and the University of Michigan who contributed to this informative and educational effort, especially Cindy Kyle, Bonnie Roberts, Nick Pigeon, Julian Trevino, Natalie Harmon and Lia Bergin.

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PART I. ABOUT THIS REPORT

This report provides a quantitative analysis of the collaborative Draft maps and the Proposed maps for Michigan Congressional Districts, for Michigan Senate districts, and for Michigan House of Representatives districts. The collaborative Draft maps were released to the public by the Michigan Independent Citizen Redistricting Commission (MICRC) to be considered during a second round of public hearings conducted from Oct. 20, 2021 to Oct. 26, 2021. The Proposed maps were released by the MICRC to be considered during a final round of public hearings scheduled from Nov. 15, 2021 to Dec. 29, 2021.

On October 11, the Commission voted to release four congressional maps, three Michigan Senate maps and three Michigan House maps, all drawn collaboratively by commissioners. We analyze these 10 collaborative Draft maps. The Commission assigned each plan a name, and a codename based on a tree native to Michigan. We refer to the Draft maps by these codenames. Here is a table with the Draft maps and their names, obtained from the Commission’s website at <https://www.michigan.gov/micrc/>.

TABLE 1. List of Collaborative Draft Maps		
Type of District	Codename	Plan Number
State Senate	Elm	199
State Senate	Cherry	220
State Senate	Spruce	226
State House	Peach	228
State House	Oak	229
State House	Pine	227
Congressional	Apple	201
Congressional	Birch	230
Congressional	Maple	219
Congressional	Juniper	218

Each Commissioner also had an opportunity to submit an individually drawn map of each type (Congressional, state House, state Senate) of district, which are not detailed in this report. [Analyses are available here.](#)

From Nov. 1, 2021 to Nov. 5, 2021, the Commission voted to release three collaborative congressional maps, three collaborative Michigan Senate maps, and three collaborative Michigan House maps. We analyze these nine collaborative maps, advanced to a 45-day public comment period, and to differentiate them from earlier maps, deemed Proposed maps. The Commission assigned each map a name based on a tree native to Michigan. Here is a table with the Proposed maps and their names. The information was obtained from the Commission’s website.

TABLE 2. List of Collaborative Proposed Maps		
Type of District	Codename	Plan Number
State Senate	Cherry V2	251
State Senate	Linden	260
State Senate	Palm	261
State House	Pine V5	259
State House	Hickory	262
State House	Magnolia	263
Congressional	Apple V2	252
Congressional	Birch V2	253
Congressional	Chestnut	254

To inform the public in a timely manner, the first report on the Draft maps yielded analysis available in time for the first of the second round of public hearings. We subsequently complemented this initial report with additional analyses. The report is thus intended as a “living document,” updated as more content becomes available. This document is version 2.1. of the report. The history of versions is as follows:

- Initial release on Oct. 18, 2021.
- Version 1.1: Includes a check of Contiguity in House maps, and a new recommendation to remedy House maps to address this criterion.
- Version 2.0: Introduces an analysis of Proposed maps.
- Version 2.1: Adds an abridged analysis of congressional plans CD Lange and CD Szetela, and expands on the analysis of Criterion E (fairness to candidates).

The latest version of this report is available at: jpsr.msu.edu/redistricting

Our report evaluates whether each map is complete and how well it meets the Commission’s criteria. A complete redistricting plan must divide the entire area of the state into districts, so that each point in the geography of the state is in one — and only one — district in each of three maps: districts for the U.S. Congress, for the state House, and for the state Senate. The Michigan Constitution, Art IV, § 6(13) states that in proposing and adopting each redistricting plan, the Commission shall abide by seven criteria, ranked in order of priority.

We first check that each map is a complete redistricting map that assigns each place of residency to exactly one district. We then assess each map on the basis of these seven criteria. We assess the congressional district maps in Part III (Draft maps) and in Part IV (Proposed maps); the Senate district maps in Part V (Draft maps) and Part VI (Proposed maps); and the House district maps in Part VII (Draft maps) and Part VIII (Proposed maps). For each type of map, and for each criterion, we describe quantitative measures of performance. Then, we report how each map performs

according to each of these measures. Our analysis is based on the map boundaries reported on the Commission website, though the Commission is using different software to produce the maps than to make them publicly available, so some variations are possible.

For comparison, we report the distribution of scores across all maps in what we term the “Public Ensemble,” which are all the maps submitted by the public on the MICRC online portal, and what we term the “Computational Ensemble,” which is a set of 100,000 computer-generated maps. For each type of map, and for each criterion, we describe quantitative measures of performance on the basis of this criterion. The Commission has reviewed measures of its maps’ performance, but it has compared them against a theoretical baseline, rather than the range of maps submitted by the public and a range of computer-generated maps.

The scores on some of our measures are easy to interpret directly. For instance, if we have a measure of “contiguity” (Criteria Two) that assigns a value “1” if each district is connected in one piece, and a value of “0” if it is not. If a proposed map scores a “1” on this measure, then we know that all the districts on this map are connected. Other measures follow more complicated mathematical formulas, and any given score is harder to interpret in isolation. Comparing the performance of the MICRC maps to both the Public Ensemble and the Computational Ensemble makes scores interpretable on a distribution of potential maps.

For each of the three types of districts (Congressional, Michigan Senate, and Michigan House), the Public Ensemble is the collection of all complete and sufficiently close-to-valid maps of districts submitted by the public through the MICRC’s submission portal at <https://www.michigan-mapping.org> by Oct. 1, 2021.¹ The Public Ensemble of congressional district maps contains 112 maps; the Public Ensemble of Senate maps contains seven maps. Unfortunately, all Michigan House plans submitted by the public have a population difference across districts greater than 25%, so we are not able to include any to construct the Public Ensemble for the state House. In other words, no citizen succeeded in drawing 110 Michigan House districts of near equal population (in part because many maps were drawn before the new Census data was available).

For each of the three types of districts, the Computational Ensemble contains 100,000 maps created by the MGGG Redistricting Lab using the Recombination (ReCom) algorithm. All the computationally generated maps are within 1% of the ideal district population, and attempt to respect county boundaries, but are not designed to follow any other criteria. This algorithm starts with a starting map, also known as a “seed” map. From that start, the algorithm constructs new maps following a random path (what we know in statistics as a “Markov Chain Monte Carlo” or “MCMC”) that at each step transforms a given map into the next map. At each step of this path, the algorithm randomly selects two adjacent districts in the current map, it merges them, and then re-splits the merger into two new districts, thus generating a new map.² At each step, the change from the prior map to the next one is therefore small.

In this way, our report offers a powerful tool and a guide that the public can use to compare and evaluate each of the maps so members of the public can weigh the benefits of adhering closer to

¹ MGGG deemed a map sufficiently close to valid if it leaves unassigned no more than five Census’ Voting Tabulation Districts (all must be assigned); the maximum population deviation from the ideal equal population across its districts is below 5% (it must be much lower than that), and if it violates contiguity, it is only in a minor way.

² <https://mggg.org/uploads/ReCom.pdf>

some criteria over others, and how maps can change characteristics as they change shape and move toward different metrics.

We stress that we do not evaluate whether a complete map is “good” or “bad,” nor do we offer an opinion as to whether it is legal or illegal under the Michigan Constitution. We leave it up to each Michigan citizen to decide whether each map sufficiently meets the criteria, and up to jurists and courts to determine if the maps meet legal tests.

What we offer is a battery of objective quantitative analyses reflecting how every collaboratively Draft map and every collaboratively Proposed map performs on each of the seven criteria specified in the Michigan Constitution, noting concerns for further consideration and issuing recommendations based on our quantitative analysis.

PART II. THE SEVEN CONSTITUTIONAL CRITERIA

Article IV §6 (13) of the Michigan Constitution instructs that “*The commission shall abide by the following criteria in proposing and adopting each plan, in order of priority:*”

Criterion A. Districts shall be of equal population as mandated by the United States constitution, and shall comply with the [Voting Rights Act] and other federal laws.

Criterion B. Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.

Criterion C. Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.

Criterion D. Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.

Criterion E. Districts shall not favor or disfavor an incumbent elected official or a candidate.

Criterion F. Districts shall reflect consideration of county, city, and township boundaries.

Criterion G. Districts shall be reasonably compact.”³

³

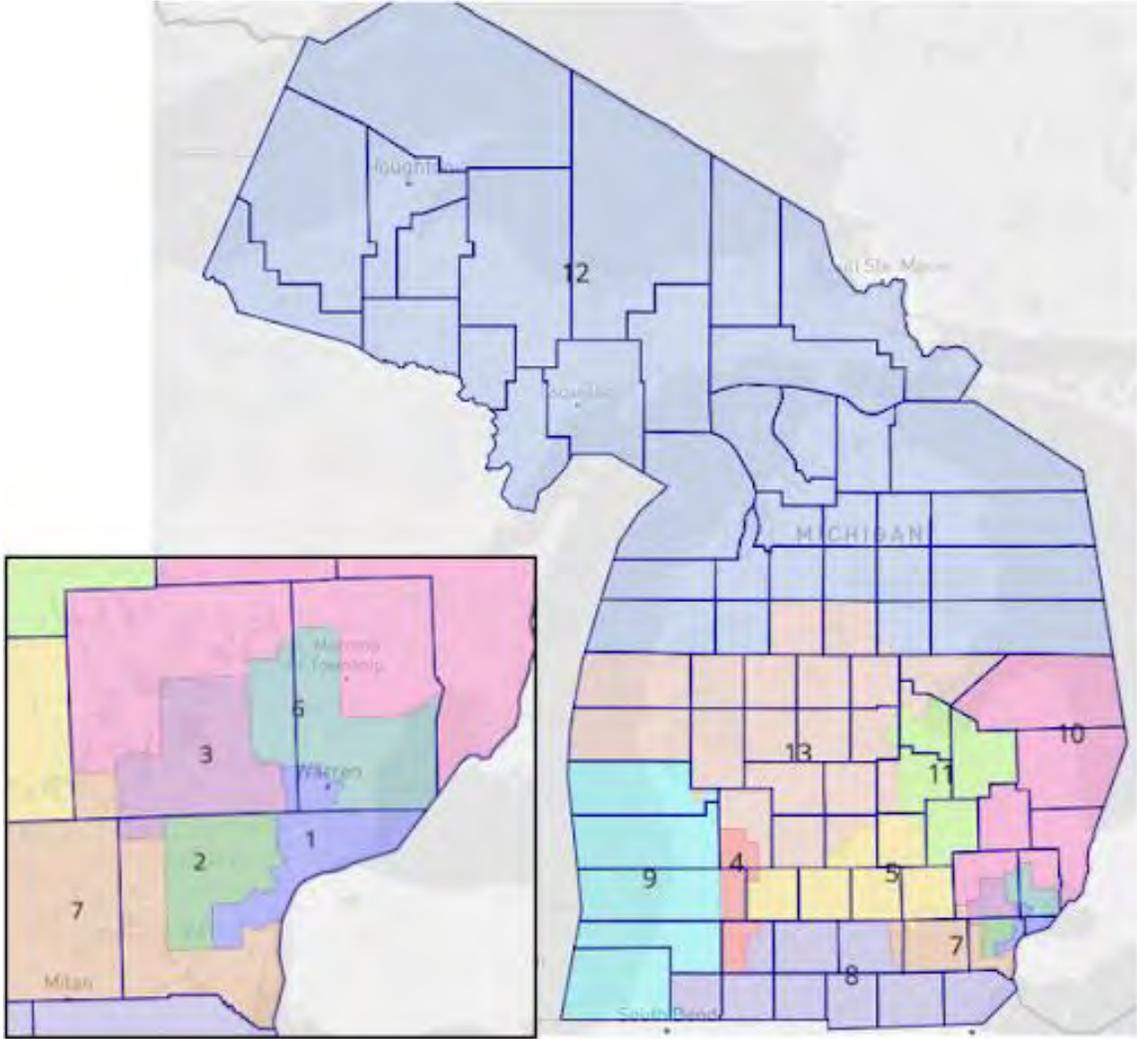
[http://www.legislature.mi.gov/\(S\(4kdli1sqztuxeeo1svfgodhz\)\)/mileg.aspx?page=getObject&objectName=mcl-Article-IV-6](http://www.legislature.mi.gov/(S(4kdli1sqztuxeeo1svfgodhz))/mileg.aspx?page=getObject&objectName=mcl-Article-IV-6)

PART III. ANALYSIS OF DRAFT MAPS FOR MICHIGAN’S CONGRESSIONAL DISTRICTS

III.1. THE DRAFT CONGRESSIONAL DISTRICT MAPS

On October 11, the MICRC approved the following collaborative Draft maps for U.S. Congressional Districts, for consideration in the Second Round of Public Hearings (Oct 20th – Oct 27, 2021):⁴

-Plan “Apple,” name “10-05-21 v1 CD DW” (map number #201), on a vote of 13-0.

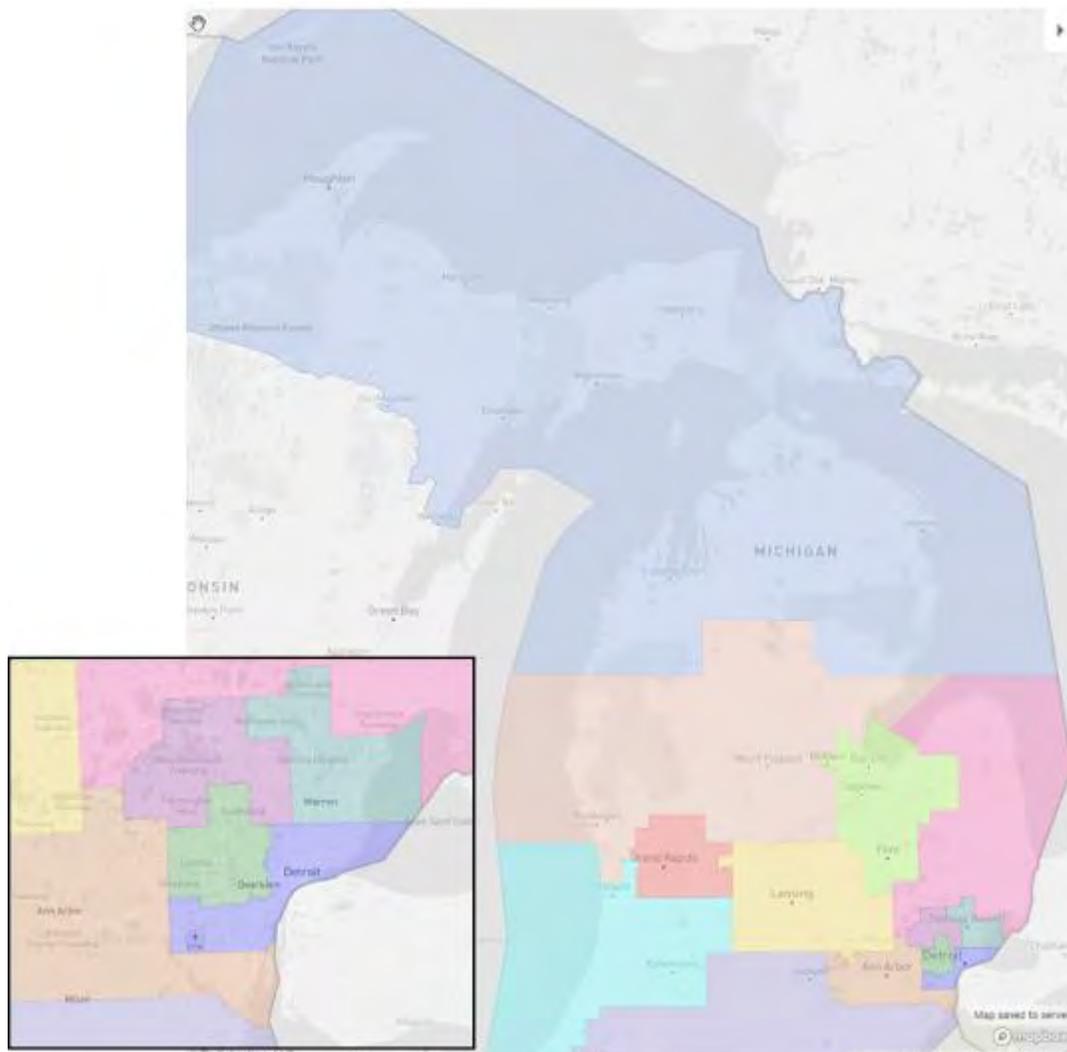


Plan Apple

⁴ These maps are available for download here: https://michigan.mydistricting.com/legdistricting/michigan/comment_links

-Plan “Juniper,” name “10-07-21 v1 CD AE” (map number #218), on a vote of 13-0.

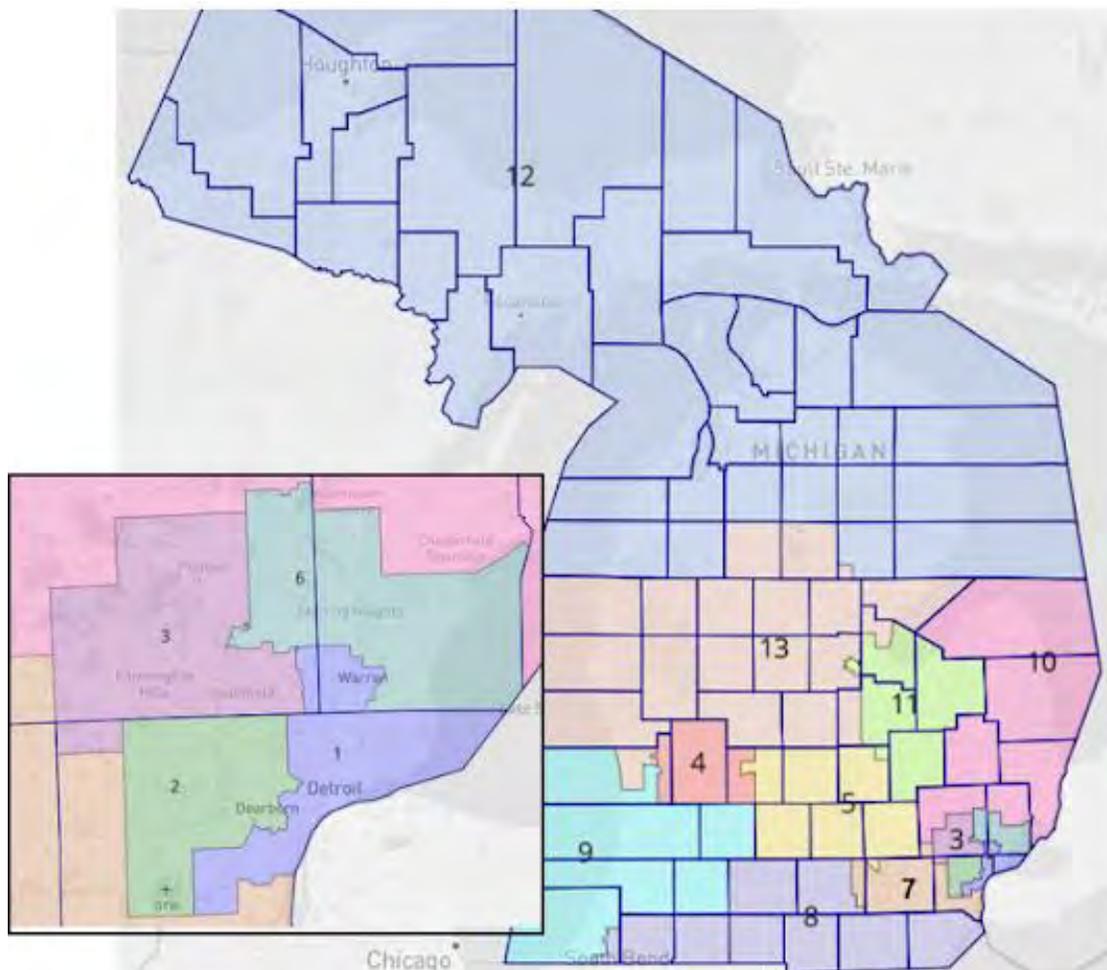
Note that the Juniper map appears to not be a valid redistricting plan, as it fails to assign a district to all the areas of Michigan. A triangle contained in Census Block 2000 in Ray Township (Macomb Co.) is unassigned to any district. This triangle is delimited by 29 Mile Rd, Indian Trail, and the line divider between Ray Township and Lenox Township, and contains 14 residents.⁵



Plan Juniper

⁵ See grid map 7 in Census map https://www2.census.gov/geo/maps/DC2020/DC20BLK/st26_mi/county/c26099_macomb/DC20BLK_C26099.pdf
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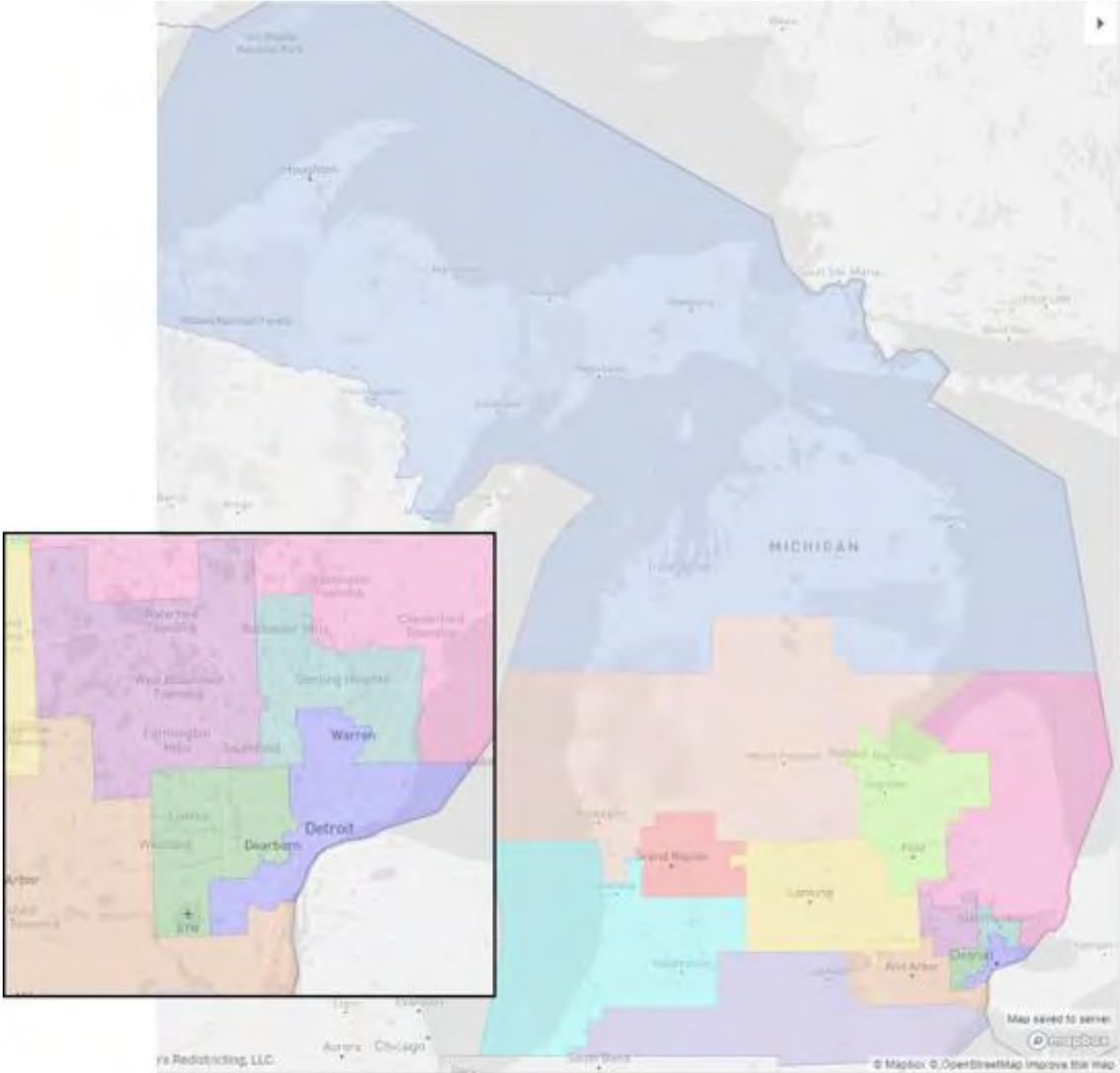
-Plan "Maple", name "10-07-21 v1 CD DC" (map number #219), on a vote of 13-0.



Plan Maple

-Plan “Birch,” name “10-08-21 v1 CD RAS” (map number #230), on a vote of 12-1.

Note that the Birch map appears to not be a valid redistricting plan, as it fails to assign a district to all the areas of Michigan. Plan Birch fails to assign any district to census blocks 1010 and 1014 in census track 1724 in Oak Park (Oakland County.) These blocks contain 25 inhabitants. These blocks must be assigned to a district.⁶



Plan Birch

⁶ See grid map 35 and Inset J on Census map https://www2.census.gov/geo/maps/DC2020/DC20BLK/st26_mi/county/c26125_oakland/DC20BLK_C26125.pdf

III.2. MEASURING PERFORMANCE ON EACH CRITERIA

CRITERION A: POPULATION BALANCE AND VOTING RIGHTS ACT

“Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

Understanding the Criterion.

This criterion has three parts. The first is that districts shall be of equal population. The second is that they shall comply with the Voting Rights Act. And the third is an open-ended guarantee for future redistricting cycles that complying with criteria B through F will always be secondary to complying with any future federal law.

With regard to equal population, the population is the total number of inhabitants, as measured according to the most recent U.S. Census, in this case the 2020 U.S. Census. The Michigan population according to the 2020 U.S. Census is 10,077,331 inhabitants. Michigan has 13 Congressional Districts. So, the ideally equal population is 775,179 inhabitants per district. The United States Supreme Court has ruled that any deviation from exact equal population must be “necessary to achieve some legitimate state objective,” but “small differences in the population of Congressional Districts” are acceptable if these differences are required to satisfy a state’s redistricting criteria.⁷ In practice, The Court has accepted a deviation as large as 0.79% of difference between the most and least populous district.⁸ Therefore, any deviation from perfect population equality must be required to better satisfy one of the criteria A-F, and such deviation must be small, probably not much larger than 0.79%. If there is any substantial deviation from population equality, supporters of one party should not be systematically placed in larger districts.⁹

With regard to the Voting Rights Act, its Section 2 as amended by Congress, currently prohibits enacting electoral maps that have “*the result of denying a racial or language minority an equal opportunity to participate in the political process.*”¹⁰

The “*equal opportunity to participate*” clause includes an equal opportunity to elect candidates of their choice. It does not require that, nor is it necessarily satisfied if, members of the relevant minority are themselves elected in any proportion. For a district to provide to a minority an opportunity to elect its preferred candidate requires that if the minority overwhelmingly votes for a candidate, then this candidate wins both the party primary and the general election, given the standard voting patterns of voters not in this minority. Any such district is a “district of opportunity” for the relevant minority. This opportunity to elect candidates of their choice does not require—but it is guaranteed—if the relevant minority is a majority of the population in the district (a so called “majority-minority” districts).

⁷ Karcher v. Daggett, 462 U.S. 740-741 (1983).

⁸ Tennant v. Jefferson County 567 U.S. 758 (2012).

⁹ Cox v. Larios, 542 U.S. 947.

¹⁰ <https://www.justice.gov/crt/section-2-voting-rights-act#sec2>

Measures of performance on Criterion A.

A1. Measure of population inequality.

We compute the difference between the most and least populous district, using the formula:

$$\frac{\text{Population of most populous district}}{\text{Population of least populous district}} - 1,$$

in percentage points.

For convenience, we also report the largest deviation to the ideal population size of a district, namely,

$$\frac{\text{Population of most populous district}}{775,179} - 1,$$

again, in percentage points.

A2. Number of Districts of Opportunity.

The ideal way to quantify a measure of compliance with the Voting Rights Act is to use past election results by race and precinct, in both primary and general elections, to estimate how many districts of opportunity for minorities there are there in a new redistricting plan.

To determine whether a new district is a district of opportunity for a given minority, we need to know which candidate the minority preferred in each past election under consideration, and whether or not the candidate preferred by the minority won most votes in the primary and in the general in this district.

We first need to determine which candidate is preferred by the minority under consideration. Because voting is private, this is not a given. Rather, we infer it from the difference in voting patterns in precincts with a large share of minority adult population, compared to precincts with a small such share. Popular methods to estimate this minority vote are the Ecological Inference methods proposed by Gary King, and other ecological regression method.¹¹ While the precise statistical methods vary, the idea is always that if Candidate A’s vote share grows with the share of minority voting age population, we can infer that minority voters for Candidate A more than non-minority ones, and under some assumptions, we can quantify how much more.

Having established minorities’ preferences, we could then check whether these candidates won the most votes in the proposed districts to determine how many districts of opportunity exist in the proposed redistricting plan. We can then compare this number to the proportion of minority population. For instance, the “Black Alone” population is 13.7% of the Michigan population, a percentage that corresponds to approximately two Congressional Districts. We can also compare it to the number of opportunity districts in the previous redistricting plan, which is again two districts. Further, the U.S. Supreme Court has ruled that a pre-condition for the VRA to apply to any given minority is that this minority is “sufficiently large and geographically compact to constitute a majority in a single-member district.”¹² We can then find how many such

¹¹ King, Gary, Martin A. Tanner, and Ori Rosen, eds. *Ecological inference: New methodological strategies*. Cambridge University Press, 2004.

¹² Thornburg v. Gingles, 478 U.S. 30.

geographically independent minority groups we can construct in Michigan, and we can estimate whether each of these minority groups lives in a district of opportunity.

Unfortunately, the data for this preferred analysis is insufficiently available. In particular, there is no centralized repository of primary election results by precinct, precluding the preferred analysis. That means the Commission can estimate how often a minority population has succeeded in having its preferred candidate win general elections, but is severely limited in assessing whether a minority party would have succeeded in nominating its preferred candidate in a contested primary election. The 2018 Democratic primary for Governor included two candidates from the Detroit area against the eventual winner; group voting determinants in this primary may have had idiosyncratic determinants that would not match racial group preferences in congressional primaries.

Nonetheless, following the Commission's intent, we pursue a simpler analysis that bypasses the need for the unavailable data by race and precinct. We refer to "determining if a redistricting plan complies with the Voting Rights Act" by Dr. Handley, presented to the MICRC. Based on an analysis of four counties (Wayne, Oakland, Genesee, and Saginaw) and on only one election with a primary on the Democratic side (the 2018 gubernatorial race), plus an additional 12 general elections with no primary on the Democratic side, she estimates that any district that is at least 40% Black would be likely to elect the Black-preferred candidate, and most districts having a population at least 35% Black would as well. This analysis was based on Dr. Handley's finding that there is significant shared support for the same candidates among black and non-black voters in many of the Detroit area precincts. This is undoubtedly true in general elections, but there may be insufficient data to know how true it is in primary elections.

In a simpler analysis that bypasses the need for the unavailable data by race and precinct, we can use Dr. Handley's estimates, and simply compute the number of districts in the proposed plan that are at least 35% or at least 40% Black. If Dr. Handley's estimates are correct, any 40% Black district is a district of opportunity and will elect candidates preferred by the Black minority. We report these measures:

- Number of districts with >50% of their voting age population identifying as Black.
- Number of districts with >40% of their voting age population identifying as Black.
- Number of districts with >35% of their voting age population identifying as Black.

We compare these measures to the number of districts (two) proportional to the Black population in the state, and to the number of districts with these percentages of Black voting age population in the previous Congressional Districts plan.

We do not find a sufficient geographic concentration of Hispanic or Latino, or other minorities, in any county, to constitute a majority in a geographically compact district.

The data for these measures is from the 2020 US Census.

Results.

We present the results of Population Equality in the following table. Each row lists a redistricting plan for Michigan Congressional Districts. The first column reports difference between the most and the least populated district. The second column reports the maximum deviation from the ideal district population.

	Population difference	Maximum deviation
	%	%
Plan Apple	0.12%	0.07%
Plan Juniper	0.20%	0.12%
Plan Maple	0.28%	0.17%
Plan Birch	0.27%	0.15%

Note that all these population deviations are small; they are less than half the deviation that the U.S. Supreme Court has deemed admissible if necessary to pursue appropriate state goals. But such small deviations require justification. If any of these plans were adopted, the Commission should explain why these small population differences were necessary to better comply with other criteria in the state Constitution, such as, for instance, to preserve whole precincts in order to evaluate VRA claims more accurately (Criterion A), or to preserve Communities of Interest (Criterion C).

We report the number of districts in which more than 50%, more than 40%, and more than 35% of the Voting Age Population (VAP) identifies as “Black” or “African-American” (alone), as computed by the MGGG Lab for this report, in the following table. These numbers serve as proxy for the number of Black-minority districts of opportunity. As comparison benchmarks, we list the numbers for the Congressional map in place in the 2012-2021 redistricting cycle, and the number that would be proportional to the share (13.7%) of the state population that identifies as “Black.”

	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Apple	0	2	2
Plan Juniper	0	2	2
Plan Maple	0	2	2
Plan Birch	0	2	2
2012-2021 Official Plan	2	2	2
Proportional to Population	2		

The most striking result is that neither of the two majority-minority districts in the previous plans survives in any of the four proposed plans. The following graph shows the Black share of the Voting Age Population in each district. Districts are ordered from lowest to highest Black share (that is, the labels in the horizontal axis are not the district number in the Plan; rather, they should be interpreted as lowest Black VAP share (1), 2nd lowest Black VAP share (2), all the way to the district with the highest Black VAP share (13). The colored dots represent each map. The boxes represent the typical Black VAP shares in maps in the Computational Ensemble, and the arms stretching out of the boxes represent the Black VAP share at the least common maps such that only 2.5% of maps have shares above or below the range covered by the arms.

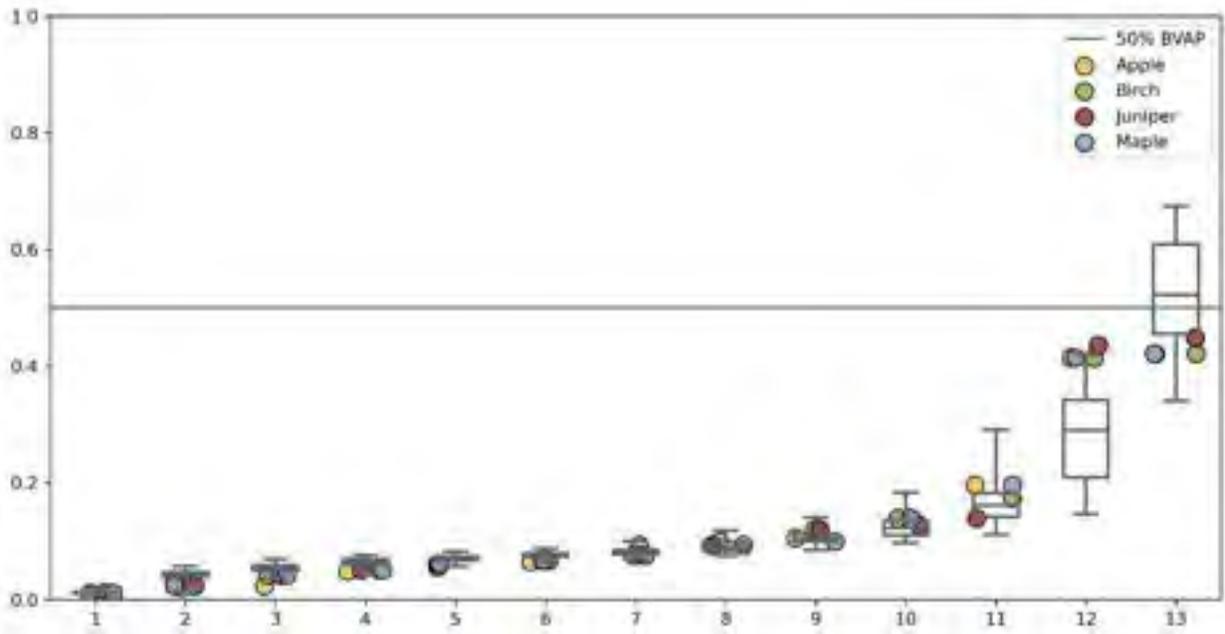


Figure 1. Distribution of Black VAP by Congressional District

As we can see, the four congressional plans are unusual, but not extremely so, in that they take what in most maps are a pair of districts — in and around Metro Detroit — with Black VAP shares of about 55% and 30%, and reconfigure them into two districts, both with slightly over 40% of Black VAP. Keep in mind that the computer-generated maps are just drawing lots of different districts that would maintain equal population and are not designed to maximize Black representation or comply with the VRA.

CRITERION B: CONTIGUITY

“Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.”

Understanding the Criterion.

Contiguity means that a district is all connected in a single piece.

Two issues arise. The first is about islands. Islands are physically disconnected into a separate piece, separated from the mainland by water. The criterion says that islands are to be imagined to be physically attached to the county of which they are a part. If the county of which a given island is a part of is split into two districts is the island interpreted to be contiguous to the nearest point of mainland in the county? Or are commissioners free to imagine the island attached to any part of the county of their choosing? For example, Mackinaw Island is to the Southeast of Mackinaw County. Suppose a map assigned the island to a district that took only the westernmost part of Mackinaw County. Would that satisfy “contiguity”? It would not if we imagine the physical attachment to land to be at the nearest point, i.e. by St. Ignace.

The second issue is about what constitutes contiguity. A laxer definition, so called “queen contiguity” allows for contiguity only at a single point, like the diagonal pieces of a chess board that queen, king and bishop chess pieces can transit but other pieces cannot. A stricter definition is “rook contiguity”, which requires that the connection between pieces be everywhere by more than a single point. For instance, Van Buren County and St. Joseph County satisfy queen contiguity, as their corners touch upon a single point, but they do not satisfy rook contiguity.

Measure of Contiguity.

We report a binary “Yes” or “No” for whether a plan satisfies the stricter definition of contiguity, satisfying rook contiguity with islands attached to the land at the nearest point in the county of which they are a part of.

Results.

All four Draft congressional maps satisfy contiguity.

TABLE 5. <i>Contiguity.</i>	
	Are all districts contiguous?
Plan Apple	Yes
Plan Juniper	Yes
Plan Maple	Yes
Plan Birch	Yes

CRITERION C: COMMUNITIES OF INTEREST

“Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.”

Understanding the Criterion.

The Brennan Center for Justice defines communities of interest as “*groups of individuals who are likely to have similar legislative concerns, and who might therefore benefit from cohesive representation in the legislature.*”¹³ The goal is to keep such communities of citizens with common legislative concerns together in the same district, so that they can better press their common concern to their representatives.

The difficulty is to identify which geographic areas represent one such community of interest. The language of the criterion gives a suggestion: “*populations that share cultural or historical characteristics or economic interests*”, but this list is non-exclusive, and these common characteristics or interests are difficult to ascertain.

The Brennan Center for Justice suggests two means to identify communities of interest.¹⁴ One is top-down, in which mapmakers can use quantitative data to find geographic areas of the state with aligned indicators of shared cultural, historical or economic characteristics. A second approach is bottom-up, in which mapmakers, instead of trying to pro-actively find communities in the data, can sit back and allow the public report the communities of interest that mapmakers should consider.

The Michigan Independent Citizen Redistricting Commission in 2021 has followed this second option, a bottom-up approach, inviting the public to submit maps and descriptions of communities of interest for the Commission to consider. We can distinguish two ways in which communities of interest could be revealed from public input.

One is for communities to be self-declared: every geographic area has some elected boards that represents it (neighborhood associations; city, town or county councils; county commissions, etc.). Any such organization could declare that the community it represents is a community of interest with shared cultural, historical and economic interests. Any community of interest that cuts across several of these units of democratic representation (for instance, a community of interest comprising parts of two adjacent townships) could be self-declared by a proclamation made jointly by representatives of units of democratic representation that together cover the entire community.

¹³ “Communities of Interest.” *Brennan Center for Justice* report, November 2010. Retrieved from <https://www.brennancenter.org/sites/default/files/analysis/6%20Communities%20of%20Interest.pdf> on Sept. 2021.

¹⁴ Yuriy Rudenski and Annie Lo. “Creating strong rules for drawing maps.” *Brennan Center for Justice* report, last updated January 29, 2020.

A second mode of public input allows individual members of the public to submit their conceived community of interest, without requiring democratic consent from the rest of the conceived community to be grouped in this manner. A stricter version of this form of individual submissions requires the individual to be a member of the community, so that submissions amount to “*This is my community and we should be together*” A laxer form waives this requirement, allowing submissions of the kind “*that is their community and they should be together.*”

The Michigan Independent Citizen Redistricting Commission allowed for the laxer form of public input, encouraging any form of public input on communities of interest, including through submissions by individual citizens about communities that do not include the individual making the submission.

The public responded, uploading — as of Oct. 13, 2021 — 1,225 Community of Interest (COI) submissions through the Commission’s portal.

Such broad collection of public submissions poses challenges for rigorous quantitative analysis. The submissions vary in their nature, from the whimsical (a combination of dislocated precincts whose geography spells out the word “Hello”), to those more thoughtful; some explaining in detail the common interests that bind the community together, while others lacking such explanation. And while undoubtedly many of the public submissions were drawn in a good-faith to communicate a true community of interest to commissioners, it is impossible to rule out that some were calculated attempts to influence commissioners for partisan gain.

We also note that some submissions were as large as Congressional Districts and may have been more designed as full-district proposals rather than communities to be kept together within larger districts. Some citizens used this criterion as an invitation to describe more broadly what kinds of people and geographic areas they wanted to see in their districts and what kinds of people and areas they wanted to see out of their districts. Commissioners sometimes referred to these public comments, stating that one area wanted to be with another or did not want to be with another without identifying a particular community of interest. This criterion is not a general attempt to maximize district homogeneity, but to respect communities that can be contained within districts.

It would therefore be somewhat misleading to treat all individual public submissions equally, as if they all represent equally true and valid communities of interest. It would be more informative to conduct a qualitative analysis, sifting through each of the submissions to ascertain which of them constitute a veritable community of interest with a valid explanation. If we could, without controversy, separate the submissions that truly reflect communities of interests, from ones that do not, we could then consider the subset of submissions that do represent communities of interest, and we could quantify how many of these had been kept together in the Commission’s maps.

Alas, we cannot easily evaluate whether individual submissions are valid or not. We are left then with a limited quantitative analysis of the pool of submissions. But evaluating an aggregate measure of communities enables less responsiveness to any one submission or type of submission.

Measure of Respect for Communities of Interest.

The MGGG Redistricting Lab and Open-Maps Coalition have released a report on “Communities of Interest Clusters for Michigan.”¹⁵ This report identifies 34 communities of interest clusters that were identified through aggregation from all Community of Interests submissions by the public up to September 1, 2021. A “cluster” is a geographic area in which several individual submissions overlap. The choice of how to organize the hundreds of submissions into a smaller number of clusters presents a trade-off: we can have either more clusters, each of them backed by fewer individual submissions; or fewer clusters, each of them backed by more individual submissions. In settling for 34 clusters, the MGGG and Open-Maps report aimed to strike a balance between having enough testimony of support for each cluster and having clusters that are small enough to demonstrate tightly connected themes in the submissions supporting each of them.

At the website districtr.org/Michigan, viewers can observe the 34 clusters, and the individual COI submissions supporting each of them. After uploading or opening a new district map of Michigan, under the tab “communities,” viewers can toggle each of the clusters “on” or “off” to superimpose its boundaries on the Michigan district map, so as to visually observe the overlap with the map’s districts.

Respect for communities of interest should be assessed holistically, taking into account not just the number or share of COI submissions that an individual map respects, but also the strength of the arguments in support of each individual submission. We can report the number of clusters that are split and that are mostly contained within a district, together with the population and demographics of each cluster. We use a cut off of 90 percent to establish whether a COI cluster either has 90 percent of its residents contained within a district or a district has 90 percent of its residents within a COI cluster. This accounts for COI clusters that are smaller and larger than the district size. It is easier to fit a COI cluster within a larger district and easier to fit a smaller district within a COI cluster.

IPPSR plans to release further analyses on individual COI simulations, if and when they become available. Districting plans could preserve individual COIs even if they do not preserve clusters.

Results.

As seen in the COI preservation in Michigan (Congress) histogram by the MGGG lab, the Tree maps do not stand out for their preservation of Community of Interest clusters, at least not as these clusters are computed by the MGGG Lab. Out of 34 submitted COIs, Apple preserves 11, Birch preserves 13, Maple preserves 12, and Juniper preserves 12. That means most COI clusters are not 90 percent contained within districts and most districts are not 90 percent contained within COI clusters, but that is also what would be expected of randomly-drawn maps.

¹⁵ We follow version 2.0 of this report, dated Sept. 13, 2021.
MICHIGAN REDISTRICTING

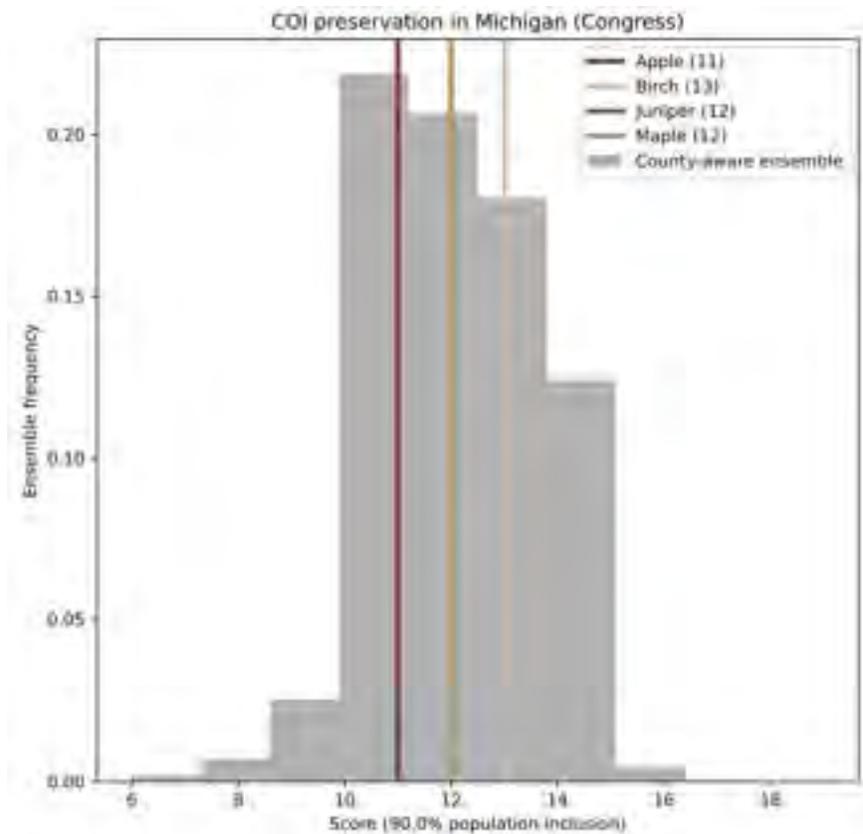


Figure 2. Community of Interest Preservation in Congressional Maps

CRITERION D: PARTISAN FAIRNESS

“Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.”

Understanding the Criterion.

The “seat outcome” of an election is the number of seats each party obtains. This seat outcome depends on how each registered voter in the state votes, and on the redistricting map in use to aggregate votes by district. The idea behind partisan fairness is that given how people vote, there is a fair seat outcome, and that the redistricting plan is fair if the seat outcome under this plan is close to the fair seat outcome. The following question is fundamental: what is the “fair” seat outcome, given the vote tally in each precinct in an election?

There are two alternative ideas as to what is “fair.” One notion of fairness is an idea of symmetry: each party must be equally able to translate statewide vote share into seats. For instance, if two parties each net exactly half the votes, symmetry requires that they each are awarded half the seats. Despite its intuitive appeal, the Supreme Court of the United States has ruled that this idea of fairness as symmetry is “*based on a norm that does not exist in our electoral system.*”¹⁶

The Supreme Court of Pennsylvania proposed a different notion of fairness: the seat outcome is “neutral” if it is similar to the outcome we would expect if the electoral institutions were designed without considering partisan considerations. A redistricting map is “fair” under this second notion if it leads to neutral seat outcomes.

In practice, the symmetry and the neutrality notions lead to the same fair seat outcomes if voters for each party are distributed similarly across the state. However, if voters are distributed geographically so that even if two parties split the vote evenly, one party wins heavy landslides in a few areas while another party wins smaller majorities in a larger share of communities across the state, then the symmetric and the neutral notions of fairness diverge. Namely, if the redistricting map is drawn without partisan considerations, the party that wins smaller majorities over more communities will win most seats. Under the neutral notion, this unequal outcome is “fair,” as it corresponds to the actual geographic distribution of voters’ political preferences. Whereas, under the symmetry notion of fairness, the districts should be drawn to favor the party with concentrated support, until the map leads to an equal split of seats.

If the geographic distribution of partisan support is sufficiently uneven, the quest for symmetric outcomes comes into tension with other criteria, such as respecting Communities of Interest (Criterion C), respecting county and town boundaries (Criterion E), or compactness (Criterion F), because in order to favor the party with concentrated support enough for this party to attain a symmetric seat outcome, non-compact districts that break communities of interest and jurisdictions apart must be drawn. In Michigan, Democratic voters are more geographically concentrated, especially in urban areas, which might make it more difficult to draw districts with fully symmetric outcomes that also meet these other criteria.

We evaluate the maps according to several measures of symmetry and neutrality.

¹⁶ Opinion of the Court in *Rucho v. Common Cause*, 139 S. Ct. 2484, 2499 (2019).
MICHIGAN REDISTRICTING

Measures of partisan fairness.

D1. Partisan Bias.

The Partisan Bias¹⁷ is a measure of symmetry for a given pair of parties, and for a given vote share. It is most often computed for an equal vote share between the two largest parties. Following the MGGG Lab definition, we compute it for the pair of two largest parties (Republican and Democratic), and for an equal average district vote share between these two parties.¹⁸

The Partisan Bias is then the difference between the number of seats that the Republican Party wins, and the number of seats that the Democratic Party wins, given that each of the two parties obtains the same number of votes. Perfect fairness, under the symmetry notion, requires a Partisan Bias of zero. For less than perfectly fair values, it is standard to report them as percentages of the total number of seats in the delegation.

The Partisan Bias is a value obtained in a hypothetical election in which both parties obtained an equal number of votes. No such election exists. Instead, MGGG uses actual results from five elections to construct this tied hypothetical: the Governor's election, the U.S. Senate election, the Secretary of State election and the Attorney General election in 2018; and the Presidential election in 2016. For each of these elections, we construct a hypothetical election result in which the statewide vote share is tied, and in which the party that won the most votes in the real election wins only the districts in which it won the real election by a greater vote share margin than its statewide vote share margin. For instance, if the GOP candidate won the 2016 Presidential election by 0.2% of the vote, in the hypothetical tied election constructed from the 2016 Presidential results, GOP candidates only win districts in which in the real election the GOP candidate won by more than 0.2%.¹⁹ We therefore obtain a Partisan Bias score for each of the five hypothetical elections. We average across all five to obtain the Partisan Bias score.

D2. Efficiency Gap.

The Efficiency Gap²⁰ is a measure of symmetry in how parties translate statewide votes into seats. The Efficiency Gap is the difference in the number of "wasted" votes for each party, where all votes cast for a losing candidate and all votes cast for a winning candidate beyond the 50%+1 number necessary to win are deemed "wasted." The Efficiency Gap is typically expressed as a percentage of the total number of votes, so that it can be interpreted as the share of votes for a party that did not contribute to giving the party more seats.

¹⁷ Butler, David E. 1951. "Appendix: An Examination of the Results." In *The British General Election of 1950*, ed.

H.G. Nicholas, 306–333. London, UK: McMillan.

¹⁸ This average is the sum of vote shares in each district over the number of districts; if turnout varies across districts, then it does not coincide with the statewide vote share.

¹⁹ This construction is based on the idea of a "uniform swing", by which we shift vote share results by an equal percentage in every district, but it avoids the logical impossibility that arises when uniform swing pushes the vote share in some district below 0% or above 100%.

²⁰ Stephanopoulos, Nicholas O., and Eric M. McGhee. "Partisan gerrymandering and the efficiency gap." *U. Chi. L. Rev.* 82 (2015): 831.

If turnout is equal across districts, then the Efficiency Gap is just the difference between seat share, and $50\% + 2(\text{vote share} - 50\%)$. That is, under equal turnout, this symmetry measure defines the fair seat outcome to be such that parties with vote share between 25% and 75% get 2% seat share per each 1% of vote share above 25%. The measure is not meaningful, and not intended to be used in states in which a party gets more than 75% of votes.

This is one of four measures used by Dr. Handley in her memo on Partisan Fairness, presented to the MICRC on Oct. 1, 2021.²¹

D3. Deviations from proportionality.

This is perhaps the simplest measure of symmetry. The deviation from proportionality is the difference between the seat share and the vote share. This is a second of the four measures used by Dr. Handley in her memo on Partisan Fairness, presented to the MICRC on Oct. 1, 2021.

D4. Median-Mean difference.

The median-mean is a measure of symmetry that captures how difficult it is for a party to obtain a majority of the delegation.²² Suppose we order the districts from least to most Republican, by vote share in a previous election. The median-mean difference then compares the vote share in the 7th most Republican district (the median in a delegation with 13 seats) to the statewide vote-share (the mean). If this number is positive, then the party can win seven districts (a majority of the delegation) even if it loses the vote statewide, and the magnitude of the median-mean difference shows by how much it can lose the statewide vote and still win seven seats.

This measure is more informative for state legislatures where winning the median district gives a party a majority. This is a third of the four measures used by Dr. Handley in her memo on Partisan Fairness, presented to the MICRC on Oct. 1, 2021.

D5. Lopsided Test.

The lopsided test is a measure of symmetry defined as the difference between the average vote share of Party A in the district won by Party A, and the average vote share of Party B in districts won by Party B.²³

This is the fourth of the four measures used by Dr. Handley in her memo on Partisan Fairness, presented to the MICRC on Oct. 1, 2021.

D6. Partisan Advantage.

The Partisan Advantage is a measure of neutrality that computes the difference between the seat outcome and a neutral benchmark based on the state's jurisdictions. This benchmark is the seat outcome in which seats are assigned to jurisdictions in proportion to their population.²⁴ The neutral benchmark depends on which list of jurisdictions we use: counties, or cities and towns. For the U.S. Congressional map in Michigan, we use the counties. For each county, the benchmark assigns seats in proportion to the population of the county, to the party that won most votes in

²¹ Handley, Lisa. "Measuring Partisan Fairness." Presented on Oct 1, 2021. Retrieved from: https://www.michigan.gov/documents/micrc/MICRC_Measuring_Partisan_Fairness_737248_7.pdf

²² McDonald, Michael D., and Robin E. Best. "Unfair partisan gerrymanders in politics and law: A diagnostic applied to six cases." *Election Law Journal* 14.4 (2015): 312-330.

²³ Sam Wang, "Three Tests for Practical Evaluation of Partisan Gerrymandering," *Stanford Law Journal*, 16, June 2016.

²⁴ Jon X. Eguia. "A measure of partisan fairness in redistricting." *Election Law Journal*, forthcoming.

this county. Aggregating by counties in this manner, the benchmark takes into account the geographic distribution of votes for each party across the state. The Partisan Advantage based on this county benchmark is then the difference between the seats that a party obtains given the map, and the seats that it would obtain under this county benchmark.

D7. Outlier test.

The outlier test is a measure of neutrality based on comparing the seat outcome under a given map, to the distribution of seat outcomes under a large ensemble of alternative, computationally generated maps. It answers the question as to how exceptional is the seat outcome we see under the map under consideration.

We compare the seat outcome under this map to the seat outcomes under the maps in a County-aware computational ensemble containing one million maps, generated by the Princeton Gerrymandering Project.

Their methodology is explained at <https://gerrymander.princeton.edu/reforms/MI>

We use their ensemble to answer the following question: how many of those maps would give more seats to the Democratic party than the map under consideration? How many of them would give more seats to the Republican party? If almost all maps would give more seats to, say, the Democrats, then the analyzed map is an outlier, and thus suspect.

D8. Other measures.

We note here that other measures of partisan fairness, some capturing a notion of symmetry, and others capturing a notion of neutrality, are publicly available through the web redistricting application DRA 2020 at www.davesredistricting.org

For readers' convenience, we published the four draft congressional maps in DRA 2020 under the names: "MICRC Plan Apple", "MICRC Plan Juniper", "MICRC Plan Maple" and "MICRC Plan Birch." Under the "Advanced" tab, DRA 2020 displays several measures of partisan fairness, including variations of the ones we include in this report, for the Democratic Party. Included in their display is a votes-to-seats curve, mapping the Democratic seat share for any vote share. They also include a measure of Partisan Bias (D1), which they call "Seat Bias"; a measure of median-mean difference (D4), which they call "Votes Bias"; a measure of the Efficiency Gap (D2); a measure of deviation from Proportionality (D3); and a measure of Partisan Advantage (D6), which they call "Boundary Bias."

All these alternative measures are computed using a smoothing function of past election results: instead of recording whether a party lost or won a district as a binary 0 or 1 value, as in our report, the measures of DRA 2020 assign to the party a fraction between 0 and 1 of the seat in this district that is increasing in the party's vote share. The motivation is that DRA 2020 uses voting tallies in past elections not to determine what would have happened give those voting tallies under the new map (as we do in this report), but rather, to estimate what will probably happen in the future under the new maps. A narrow win in the past is then only a small indication that the party will win again in the future.

- - -

The election data that we use to compute the measures in this section is as follows:

The 2018 Governor election; the 2018 Secretary of State election; the 2018 Attorney General election; the 2016 presidential election; and the 2018 U.S. Senate election, are used by the MGGG lab to report results on Partisan Bias (D1), Efficiency Gap (D2), Deviations from Proportionality (D3), Median-Mean Difference (D4), and the Outlier test (D7). The 2014, 2016, 2018, and 2020 US House election, and the 2016 and 2020 U.S. Presidential election, are used by Dr. Christian Cox from Yale University to compute the Lopsided Margins (D5) and the Partisan Advantage (D6). For all these measures, we compute results election by election, and then we average out. The Princeton Gerrymandering Project uses the 2018 MI Governor, 2020 US Senate and 2020 US Presidential election, first averaging them out to construct an electoral composite in each precinct, and then using this composite to compute the results reported under the Outlier Test (D7).

DRA 2020 allows users to choose their preferred election data input to compute the measures described under D8.

Results.

We present the results on partisan fairness across all Draft maps for Michigan Congressional Districts in the following table. Each row indicates a redistricting plan. Each column indicates a measure of partisan fairness, from D1 to D7. Positive numbers indicate deviations from the fair ideal that favor the Republican Party, and negative values indicate deviations that favor the Democratic Party. Zero indicates perfect fairness according to each measure. The values of some measures are in seats; others are in percentage of the total number of votes. The “Outlier” (D7) indicates a party (“D” for Democratic or “R” for Republican) and a range of percentages. The letter indicates the party that this map favors, relative to the one million other maps in the Princeton Gerrymandering Project ensemble. The first number is the share of maps in the ensemble that are less favorable to this party (in the sense that the party would obtain fewer seats), and the second is the share of maps that are even more favorable (in the sense that the party would obtain more seats).

TABLE 6. *Measures of Partisan Fairness for Congressional District plans.*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Apple	+0.7 seats	+0.7%	-0.33 seats	+1.8%	+3.4%	+0.06 seats	D: 82% - 2%
Plan Juniper	+1.7 seats	+6.7%	+0.47 seats	+2.0%	+4.5%	+0.39 seats	D: 82% - 2%
Plan Maple	+1.7 seats	+6.7%	+0.47 seats	+2.1%	+4.5%	+0.73 seats	D: 82% - 2%
Plan Birch	+0.7 seats	+5.0%	+0.27 seats	+1.7%	+4.1%	+0.06 seats	D: 82% - 2%

Compare these results to the results on the measures of partisan fairness used by the Commission, as advised by Dr. Handley, displayed in the table below. The values below were obtained from a composite of all 13 statewide elections (Presidential, U.S Senate, Governor, Secretary of State, and state Attorney General) from 2012 to 2020, and we report them here directly from the MICRC website.

TABLE 7. *Selection of Measures of Partisan Fairness used by the Commission.*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Apple	--	+1.3%	-1.5%	+2.4%	+4.0%	--	--
Plan Juniper	--	+0.8%	-1.5%	+2.2%	+4.0%	--	--
Plan Maple	--	+0.8%	-1.5%	+2.7%	+4.1%	--	--
Plan Birch	--	+0.7%	-1.5%	+2.2%	+4.1%	--	--

The values, and their differences across tables, can be interpreted as follows: first, on the measures common to both tables, measures D2, D4 and D5 are measures of symmetry that capture ways in which the political geography of Michigan favors the GOP. With the heavy concentration of Democratic voters in and around Metro Detroit, and smaller majorities for the GOP in most other areas of the state, Democratic candidates end up winning their districts (particularly the Detroit-based ones) by more lopsided margins (D5), so they waste more votes (D2), and their vote share in their seventh-best district is typically worse than the statewide vote share (D4).

Figure 3 illustrates this regularity, using the election results from the 2018 Senatorial election.²⁵ The horizontal axis shows the value of the median-mean difference, where greater values favor the GOP more. The gray bars represent the frequency of the observed value among the 100,000 computationally generated map, and the blue columns, among the 112 maps submitted by the public. When added together, nearly all 100,112 maps favor Republicans according to this measure. Values between 4% and 5% are typical. The four proposed plans are less favorable to Republicans than most others, with their values around 2%.

²⁵ All graphs are based on whichever is the most representative of the five elections for which MGGG provided results for all 100,112 maps in the ensembles. That is, two of the other five elections would show results even more skewed to the right, and the other two would show results distributed closer to zero, so this one graph is the one least misleading, relative to comparing all five graphs side to side.

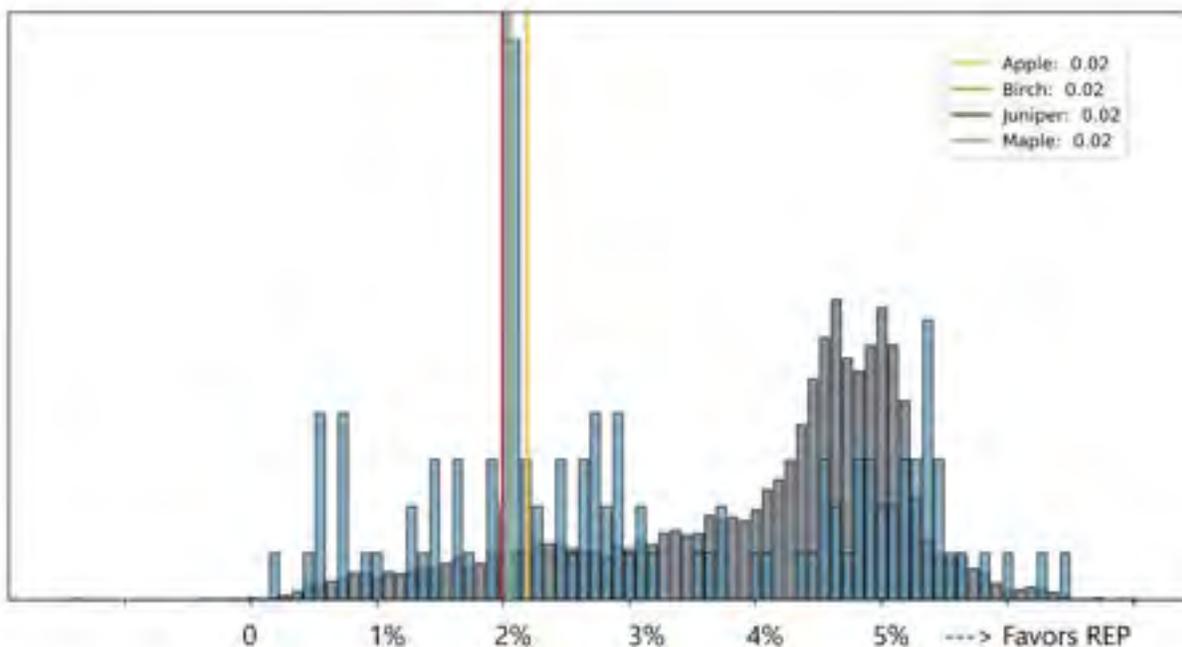


Figure 3. Median-Mean Difference, Congressional Maps, Senate 2018 Election

Proportionality (D3), in contrast, captures one way in which the political geography of the state favors Democrats. Since our election system favors more than proportionally parties that win more votes, and since the Democrats typically win more votes in Michigan statewide elections, if they were to replicate in U.S. House elections the kind of win margins that they obtained, in say, U.S. Senate elections, then they would win a more than proportional number of seats.

Second, the difference between the values in these measures from Table 4 to Table 5 is due to the different selection of election results to use to compute them; only the five statewide elections from 2016 and 2018 in Table 4, and the thirteen such elections from 2012 to 2020 in Table 5.

Third, Partisan Bias (D1) is another measure of symmetry that also reflects how the political geography of the state favors the GOP, so depending on the map, the GOP would likely win an extra seat or two in an election with tied vote share. In contrast, the Partisan Advantage (D6) finds it fair that a party with a better distribution of voter support gets more seats for the same votes, and it only deems unfair the additional advantage attributable to electing representatives through districts drawn according to these plans. Under this standard, plans Apple, Birch and Juniper pass with flying colors: their deviation rounds out to zero. Only Maple shows a small Republican advantage.

The Outlier test (D7) finds a map unfair if the outcomes it generates are unusual, relative to what is normal under other maps. The test can be applied to any of the other measures, but it is most easily interpretable if applied to the number of seats, as in Figure 4.

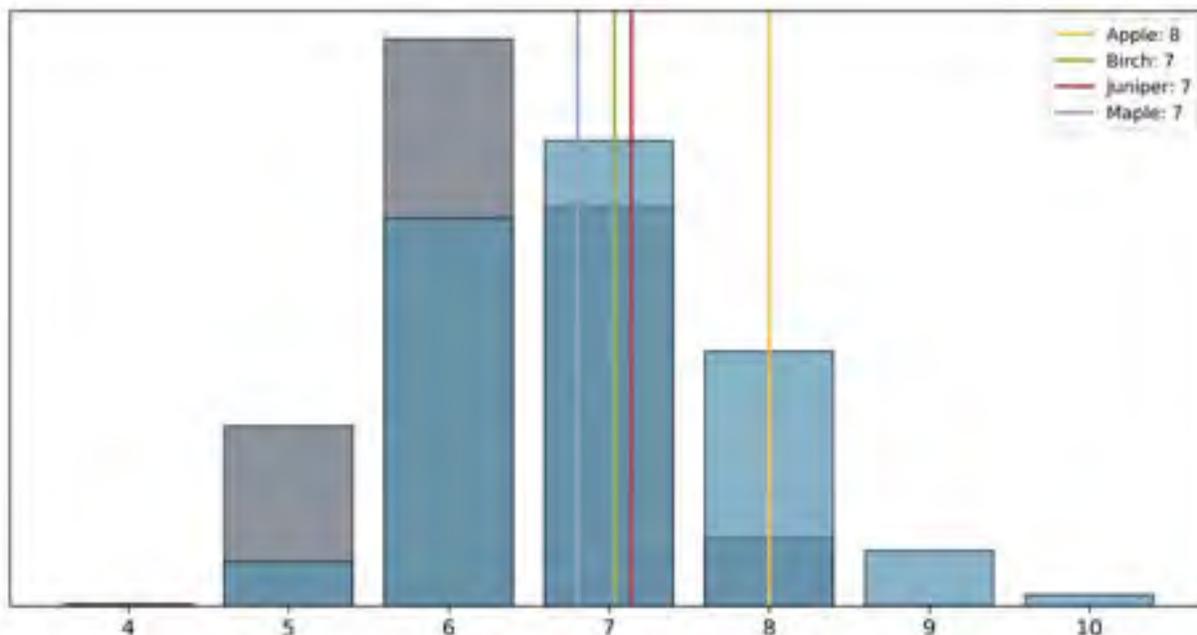


Figure 4. Number of Seats Democrats Would Win with Senate 2018 Results

The horizontal axis in Figure 4 are numbers of seats that Democrats could win, with vote tallies according to the Senate 2018 election results (Stabenow (D) 52%-46% James (R)). The gray and blue bars, respectively, represent how many of the 100,000 Computer maps and the 112 maps submitted by the public would lead to such a number of Democrat seats with those election results. As we can see, under most maps, Democrats would obtain 6 or 7 (out of 13) seats, as they would under Birch, Juniper or Maple. These are normal maps that lead to normal outcomes. Under Apple they would obtain 8. That’s among the most favorable maps for Democrats, and it is close to, but not quite an outlier, because quite a few maps would give them 8 maps as well. The publicly submitted maps that would let Democrats win nine or even 10 seats are outliers, never generated by the computer. But then, the computer is not motivated to draw partisan maps, the way passionate citizens can be. Since Democrats won this statewide election, some would argue that they should clearly win a majority of seats under a scenario where voters made the same partisan choices. All Commission maps meet this standard, but not all ensemble maps do.

Across the 10 elections for which we have computed results (all five statewide elections in 2016 and 2018, the Presidential one in 2020, and all four U.S. House elections from 2014 to 2020), and across most measures, Plan Apple is the most favorable to Democrats, followed by Plan Birch and Plan Juniper, and Plan Maple the least so. It is easy to see why. Plans Birch, Juniper and Maple have six likely or safe Republican seats: one around Grand Rapids (number 4), others along the South (8), West (9), Thumb (10), Central LP (13) and UP (12). Plan Apple makes the Grand Rapids district a likely Democratic one, instead, by dropping its GOP-leaning suburbs and linking urban Grand Rapids to urban (and Democratic-leaning) Kalamazoo.

All four of these plans appear to favor Republicans if measured according to measures that rate (almost) any plan as favoring Republicans, but the magnitudes of the values are not large. According to measures that discount the effect of the better geographic distribution of Republican voters, or that compare the performance of the plans to that of other possible maps, these four maps perform well. They generate a range of normal outcomes that one would expect to arise under maps that are not politically motivated.

These maps differ in their details, and some are slightly friendlier to one or the other party. Their differences notwithstanding, considering a range of measures of partisan fairness, Plan Apple, Plan Juniper, Plan Maple and Plan Birch are all generally fair to political parties. The Commission has sometimes discussed aiming for zero, or no partisan bias. That could still be a different useful benchmark, but it might be difficult to achieve given the rest of its mandates. Compared to maps not explicitly trying to achieve any partisan outcome, Commission maps mostly fall within the middle range. The same is true compared to maps generated by the public.

CRITERION E: FAIRNESS TO CANDIDATES

“Districts shall not favor or disfavor an incumbent elected official or a candidate.”

Understanding the criterion.

This criterion prevents the kind of bipartisan gerrymander that arises when a cross-party coalition of mapmakers draws a redistricting map that makes districts safer for incumbents. It also rules out using the redistricting process to reward or to punish particular incumbent by drawing a district in which it is easier or harder to be reelected.

This criterion can be interpreted as a “process” criterion, or as an “outcome” criterion. As a “process” criterion, it would mean that districts shall not be drawn with the intent of favoring or disfavoring an incumbent or candidate; and that districts shall be drawn without considering their impact on any individual candidate. Interpreted as a “outcome” criterion would mean to leave aside the motivations, and it would require that the map approved do not favor or disfavor any candidate. Arguably, a literal, absolutist “outcome” interpretation would render the criterion impossible to satisfy (any map that reduces the number of districts from 14 to 13 must be unfavorable to at least one incumbent), the “outcome” interpretation must be laxer, and relative to what is feasible. We suggest a possible “outcome” interpretation to be that districts shall not favor or disfavor incumbents more than other potential alternative maps.

Measures of fairness to candidates.

This criterion is one of two criteria in the Michigan Constitution that is not endorsed by the Brennan Center for Justice,²⁶ and the social science literature around it is much more limited. If we interpret it as a “process” criterion, the best evaluation is qualitative: analyzing the publicly posted videos of the MICRC meetings to check whether implications for a given incumbent or candidate were taken into account. Although we did not observe all ICRC meetings, we did not see any overt attempt to harm or help a particular candidate or incumbent.

Interpreted as an “outcome” criterion, we can quantify two measures of favoring or disfavoring incumbents as a whole.

The first is so-called “double-bunking”, by which two (or more) non-term limited incumbents are placed in the same new district.

The second is to consider the competitiveness of the new districts. While competitiveness is not a criterion in the Michigan Constitution, and thus it is not an in itself a legally desirable district characteristic, competitiveness relates to favoring or disfavoring incumbents. Low competitiveness favors incumbents; high competitiveness disfavors them. We thus argue that the criterion of neither favoring nor disfavoring incumbents indirectly calls for intermediate, or normal according to historical standards, levels of competitiveness.

We can quantify competitiveness (or, more accurately, “swingness” or “flippability”) by the fraction of recent elections in which a party other than the one that most frequently wins, won the most votes in the district. A district in which other parties -- besides the one that typically wins -- never

²⁶ Yuriy Rudenski and Annie Lo. “Creating strong rules for drawing maps.” *Brennan Center for Justice* report, last updated January 29, 2020.

win is under this measure non-competitive, whereas a district in which other parties win quite often is highly competitive (or “highly swingy” or “easy to flip”).

Results.

The analysis on double-bunking (placing two incumbents in the same district) is seen in the histogram below. Compared to the computer-generated maps, the publicly drawn maps have a greater tendency to double-bunk incumbents. The Apple and Birch maps both feature three districts with two incumbents, while Maple and Juniper feature four.

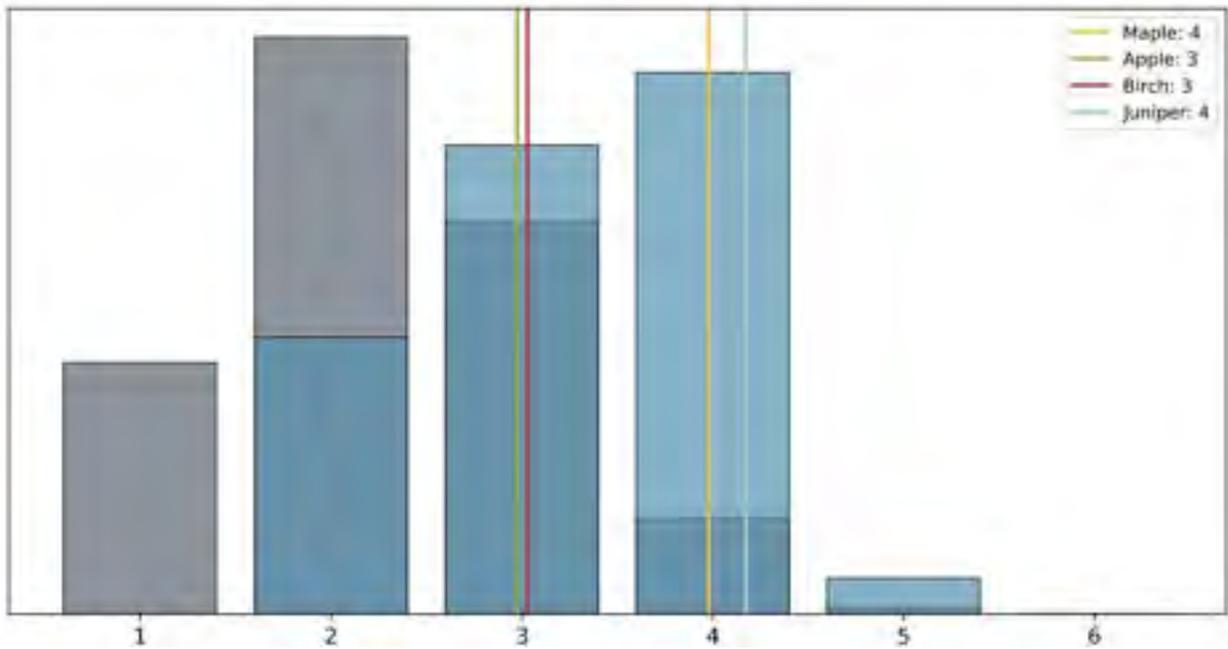


Figure 5. Districts with Multiple Incumbents in Congressional Maps

On competitiveness, plans Apple, Maple and Juniper have two closely contested, competitive districts that can swing and be won by either party under the range of recently observed election results: A Capital Region district centered in the Greater Lansing area (# 5), and district based on the southern half of Macomb Co. (#6). Plan Birch makes the Macomb Co. District 6 lean clearly Democratic by shifting it westward into heavily Democratic areas in Oakland County, reducing the number of competitive or swing districts to just one (the “Capital Region” district #5).

If we compare these results to those of the ensembles, we see that most maps feature three or four competitive districts. In other words, these plans, especially Birch, would feature a higher number of safe incumbents than most other plans. Under Plan Birch, the only challenges likely to succeed in unseating an incumbent in a general election would be those in District 5. Figure 6 illustrates this finding. Perhaps in an effort to respond to public requests for districts that fit local views of the boundaries of their areas, the Commission seemed to have moved toward politically homogenous districts. Although staff have advised the Commission that competitiveness is not an explicit criterion, we note that respecting Communities of Interest does not require creating homogenous districts or responding to public requests that advise not joining together Democratic and Republican areas.

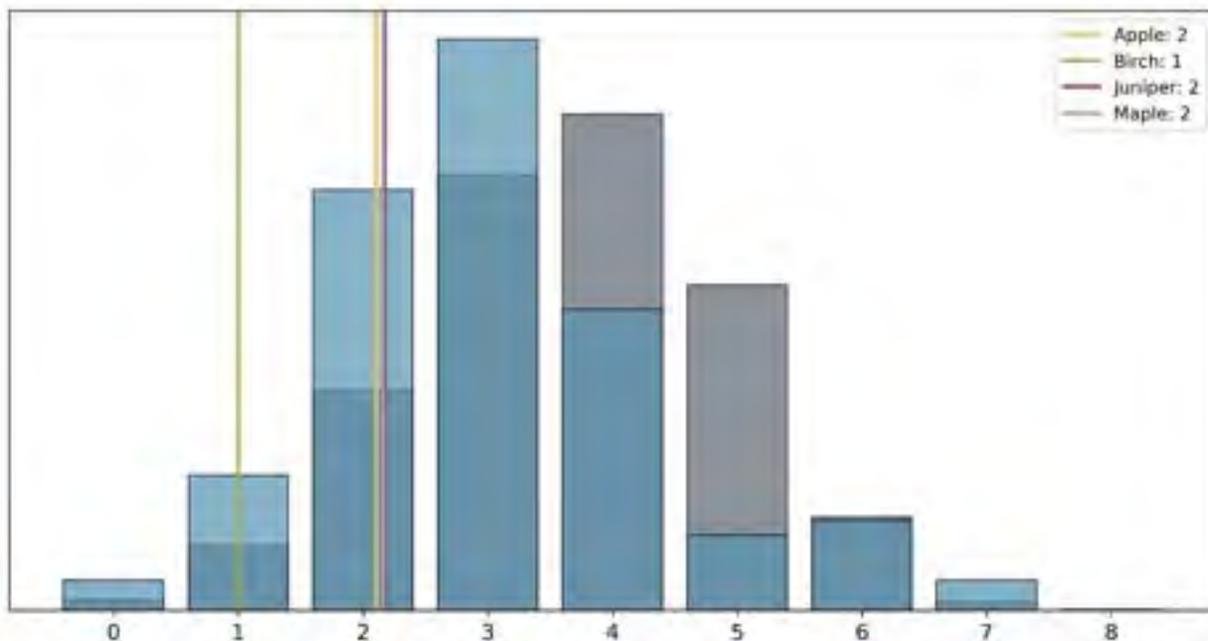


Figure 6. Number of Competitive Districts in Congressional Maps

CRITERION F: JURISDICTIONAL BOUNDARIES

“Districts shall reflect consideration of county, city, and township boundaries.”

Understanding the criterion.

This criterion says that, to the extent possible, jurisdictions such as counties, cities and townships should each be kept whole in the same district. District boundaries should follow county or township boundaries and should not cut across jurisdictions splitting them into pieces that belong to different districts. This is a traditional redistricting criterion. Indeed, representation by county, city and township historically precedes the drawing of electoral districts, and at the origins of American democracy, counties were drawn precisely to have the right size and shape to serve as units of representation.²⁷

Some counties, cities and townships can also be communities of interest, and respecting the boundaries of these jurisdictions is then covered as a higher criterion. But even the boundaries of jurisdictions that are not communities of interest shall be considered, albeit as a lower priority.

Population equality requires splitting some counties, cities and towns. Given that some splits are necessary, questions arise: is it better to minimize the number of jurisdictions that get split? Or to minimize the number of times that a jurisdiction is split?

Measures of respect for jurisdictional boundaries.

The standard way to measure satisfaction of this criterion is to count the number of splits. But we can compute what is the minimum number of county, city and township splits, and we can compare it to the number of county, city, and township splits in the map.

With given weights for county splits, city splits, and township splits, we could even produce a single measure of splits. But the Constitution does not provide such weights.

We count:

E1. Number of counties, cities and towns that are split.

E2. Total number of times that counties, cities and towns are split, resulting in the total number of pieces of each of these units assigned to different districts.

Results.

We present results on splits.

TABLE 8. Split counties and County Splits		
	Split Counties	Number of Pieces
Plan Apple	17	40
Plan Juniper	13	31
Plan Maple	13	33
Plan Birch	13	33
2011 Map	10	14

²⁷ Kromkowski, Charles A. 2002. *Recreating the American Republic*. Cambridge, UK: Cambridge University Press. In particular, county lines were drawn so that a horse rider could reach the county seat in one day of riding from any point in the county.

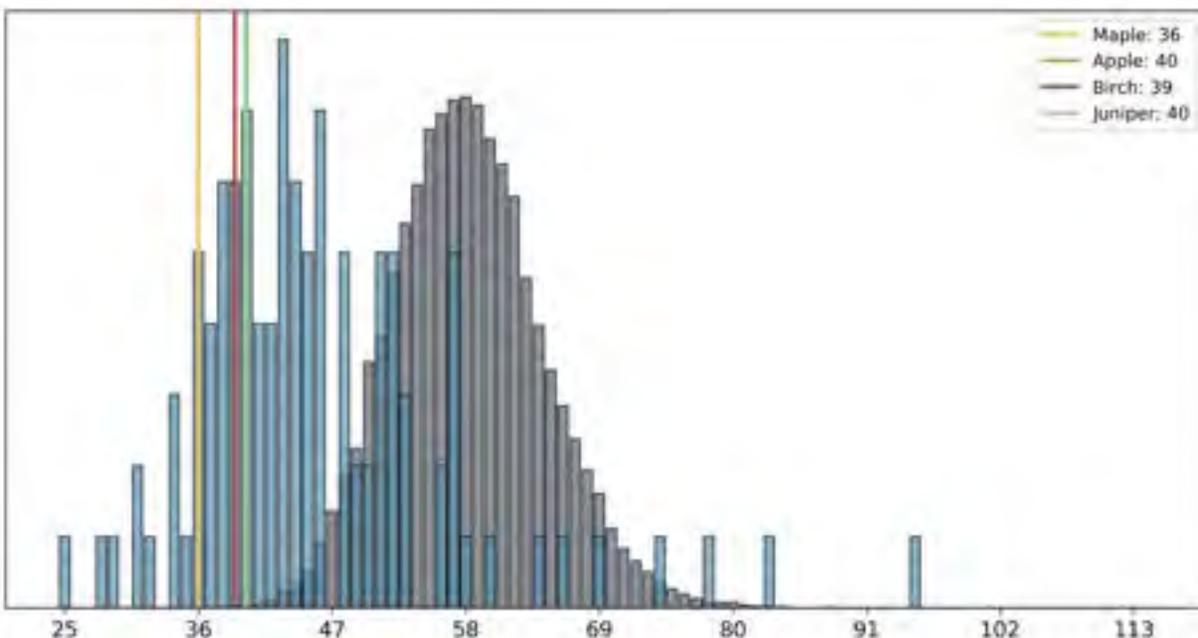


Figure 7. Split Municipalities in Congressional Maps

As seen in the Split Municipalities histogram, the Tree maps and publicly drawn maps split municipalities far less than computer generated maps do. Maple splits 36 municipalities, Birch splits 39, and Maple and Juniper both split 40. Most publicly drawn maps and nearly all computer-generated maps split more municipalities (including townships, cities, and villages).

These maps do a poor job at respecting county boundaries compared to the ensembles.

As Figure 8 shows, they are outliers in their disregard for county boundaries, compared to the maps in the Computer Ensemble, and compared to the official congressional district map for 2011-2020 (even though that one required to draw 14 districts, which induces a greater number of county splits). Plan Apple’s connection of urban Grand Rapids with urban Kalamazoo comes at the cost of splitting the counties of Kent, Allegan, Barry and Kalamazoo, which are kept whole in the other plans.

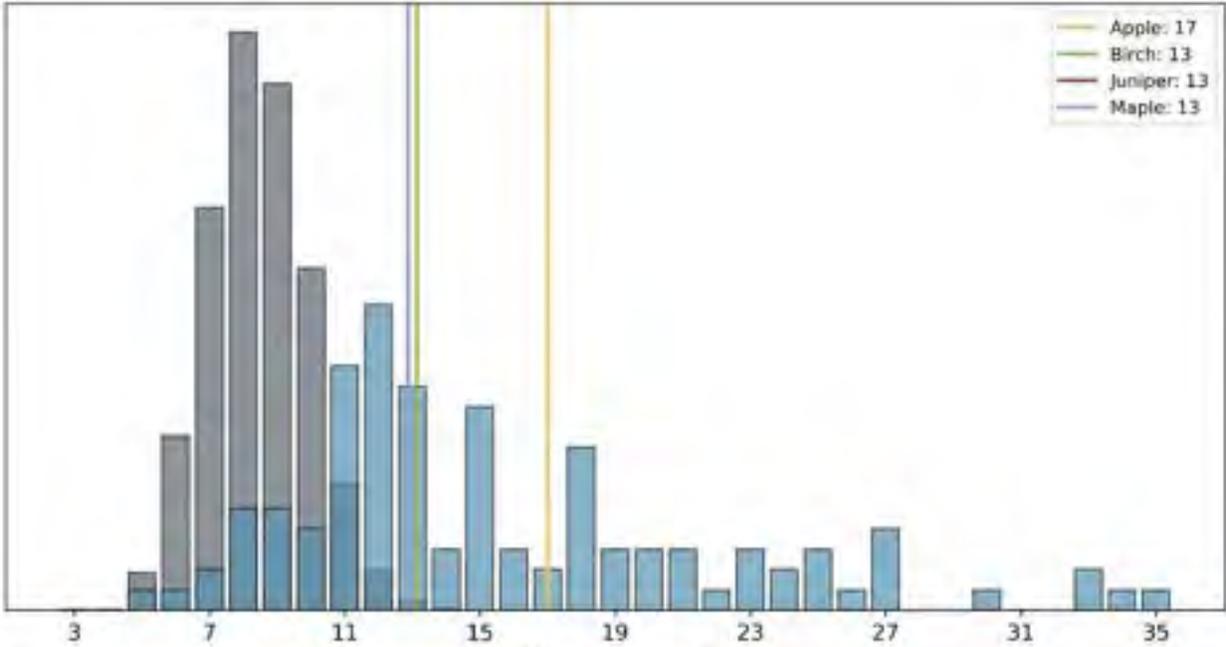


Figure 8. Number of Split Counties in Congressional Maps

CRITERION G: COMPACTNESS

“Districts shall be reasonably compact.”

Understanding the criterion.

Reasonably compact districts are chunky and squat, with shapes that are square, rounded, or like potatoes without arms, legs, tendrils and tentacles venturing out and away from the heart of the district. Formally, there are shapes that have a lot of area relative to their perimeter (the length of their border), and that have all their area relatively close to their center. This criterion can be visually apprehended: if a district seems weirdly or funnily shaped, it is likely not compact.

This criterion, however, is the last and lowest priority, secondary to all the others. It is the only one of the seven criteria in the Michigan Constitution that the Brennan Center for Justice explicitly recommends against taking into account. Because compactness is the easiest criterion to assess at first glance, there is a risk that a superficial evaluation may be overly swayed by compactness. Redistricting plans with very compact districts may be unacceptable if they fail to satisfy higher-ranked criteria, and conversely, less compact districts in other plans that better satisfy higher-ranked criteria may be “reasonably compact” enough.

Measures of compactness.

G1. Polsby-Popper compactness score.

This measure is the ratio of the area of the district to the area of a circle whose circumference is equal to the perimeter of the district. Mathematically, it is defined for each district as: 4π times the area of the district, divided by the square of the district’s perimeter (boundary). $\frac{4\pi \text{ Area}}{(\text{Perimeter})^2}$

A score of 1 is maximally compact (a circle attains this score), while a score of 0 is minimally compact (a straight line). We report the minimum and the average score across all districts.

G2. Reock compactness score.

The Reock compactness score of a district is defined as the ratio of the area of the district to the area of the smallest circle that would completely enclose the district.

Again, the minimum value is zero, and the maximum compactness, attained by a circular district, is 1.

We report the minimum and the average score across all districts.

G3. Number of cut edges.

An alternative approach is to consider compactness -- not with respect to the physical geography of the land -- but with respect to the network graph of voting precincts. Construct a network by considering each precinct a node (informally, a dot), and drawing a connecting edge (link) between any two nodes that are physically adjacent. Then superimpose a district map on this network, and then count the number of edges (links) that connect nodes in separate districts. These edges are interpreted to be “cut” by the district map. Compact districts will cut few edges, whereas snaking non-compact ones will cut many more.

We report the number of cut edges.

Results.

In the next table, for each redistricting plan in each row, we provide the Polsby-Popper, Reock and Cut Edges measures of compactness, respectively in columns 1, 2 and 3.²⁸

TABLE 9. Compactness Measures in Congressional District Plans			
	Polsby-Popper	Reock	Cut Edges
Plan Apple	0.38	0.38	715
Plan Juniper	0.38	0.39	697
Plan Maple	0.38	0.39	682
Plan Birch	0.38	0.40	697
2011 map	0.29	0.36	n.a.

Recall that Polsby-Popper and Reock are measures of compactness from 0 (not compact), to 1 (a perfectly compact circle); whereas, Cut Edges is a measure of violation of compactness that loosely, tracks the number of precincts located at the borders of a district (the less compact, the greater number of precincts at the border). The maps perform similarly, with once again Apple slightly worse than the others, probably due to that elongated configuration of District 4 from Grand Rapids to Kalamazoo.

All four maps are reasonably compact, much more so than the official map in the previous redistricting sample, and about as much as typical maps in the Ensembles, as illustrated in Figure 9.

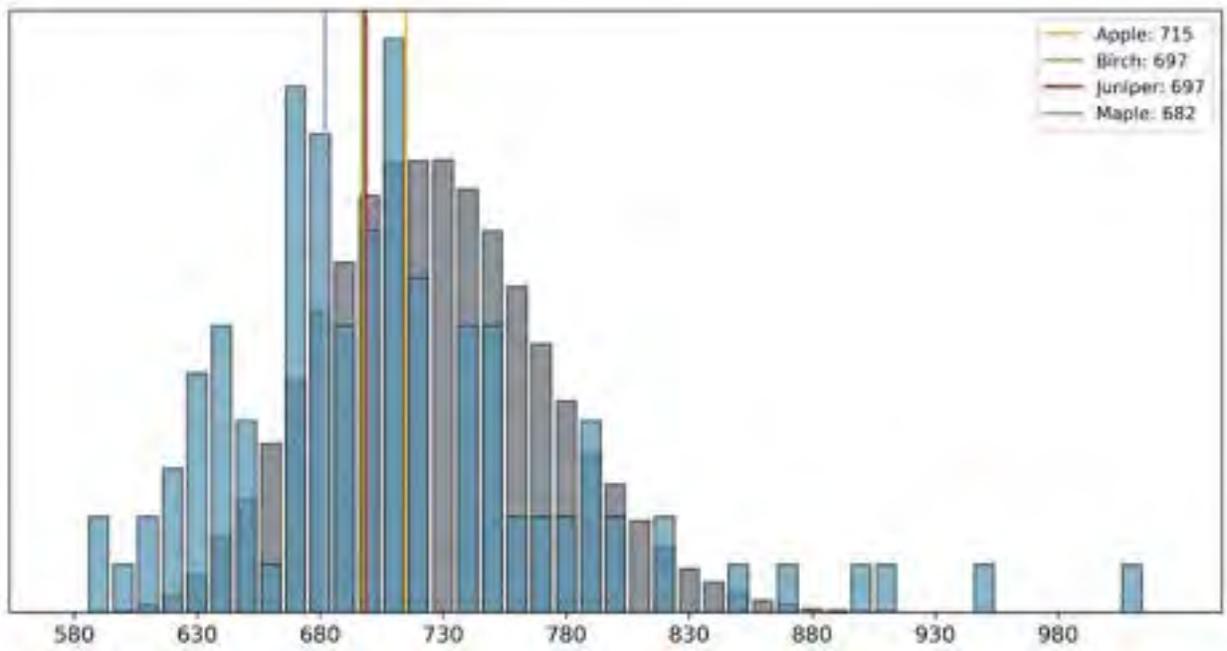


Figure 9. Number of Cut Edges (fewer is more compact)

²⁸ The Reock and Polsby-Popper measure are as reported by DRA 2020. The Cut Edges measure is computed by MGGG for this report.
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III.3. SUMMARY OF RESULTS

Plans Apple and Maple are complete redistricting plans. Plans Juniper and Birch are not, as they leave a score of residents each in a single U.S. Census block unassigned to any precinct. These omissions are easy to fix by assigning these two U.S. Census blocks to the district of an adjacent block, which would not alter results in any meaningful way.

All four plans feature small deviations from population equality, below 0.3%.

All four feature two districts with more than 40% of their Voting Age Population identifying as “Black,” but none feature a district with a majority of the VAP identifying as “Black” (the previous plan featured two).

All four satisfy contiguity. While all four feature districts that represent geographically recognizable areas that can be meaningfully described in few words, we cannot say that they fully reflect the collection of Communities of Interest submitted by citizens.

All four plans perform well overall according to a collection of accepted measures of partisan fairness.²⁹ Plan Apple is the most favorable to Democrats of the four, and Plan Maple the most favorable to Republicans, but the differences between them amount to less than a seat on average.

While the exact boundaries vary, these four plans are similar. Juniper and Maple feature five districts that are safe or leaning Democratic, two swing districts, and six districts that are safe or leaning Republican. The five Democratic districts are: one based on Detroit (1), one on West Wayne County (2), one on Oakland County (3), one on Ann Arbor (7), and one on the Tri-cities/Flint (11). The two swing districts are one in the Capital Region (5), and one based on Macomb County (6). The six Republican districts are one around Grand Rapids (4), one along the South (8), one along the West Lakeshore (9), one based on the Thumb (10), one in the North and UP (12) and one in the Central-North Lower Peninsula (13). Plan Birch pushes the Macomb swing district (6) westward into Oakland, making it into a 6th Democratic district. Plan Apple keeps the two swing districts (5 and 6), but it transforms the Republican Grand Rapids district (4) into a 6th Democrat district by shedding its outer suburbs and connecting Grand Rapids to Kalamazoo instead.

These plans feature relatively few competitive seats, so most districts will be deemed safe for their incumbents.

These plans do not reflect consideration of county boundaries as much as the ensemble plans, but they are reasonably compact.

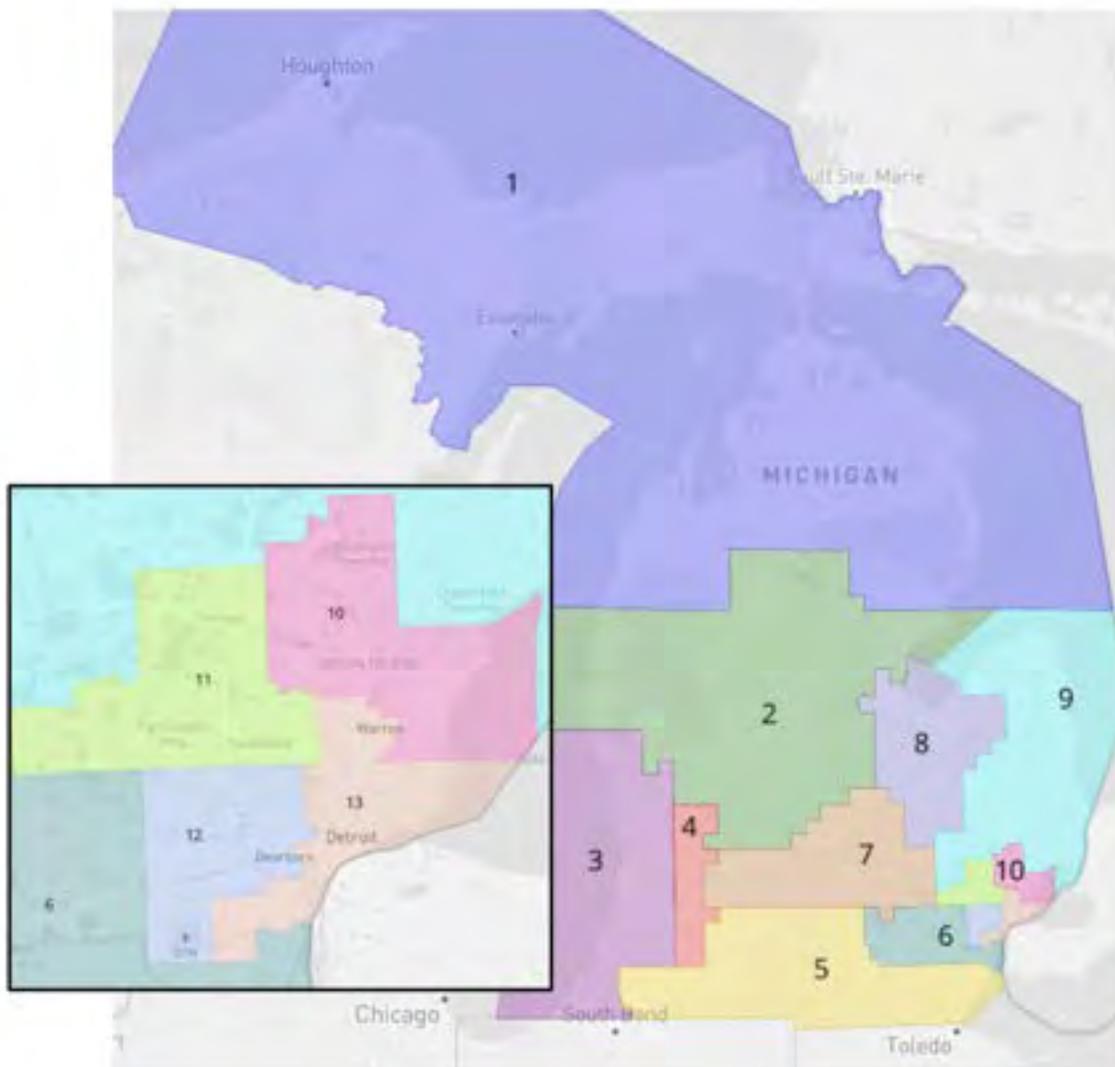
²⁹ The plans do not perform well on each individual measure. It is impossible to score well on all at the same time, as different measures have conflicting demands. We mean that, overall, taking their scores across all measures, the maps perform well on this criterion.

PART IV. ANALYSIS OF PROPOSED MAPS FOR MICHIGAN’S CONGRESSIONAL DISTRICTS

III.1. THE PROPOSED CONGRESSIONAL DISTRICT MAPS

On Nov. 1, 2021, the MICRC approved the following Proposed maps for U.S. Congressional Districts, for consideration in what is expected to be the final round of public hearings (Nov. 15 – Dec. 29, 2021):³⁰

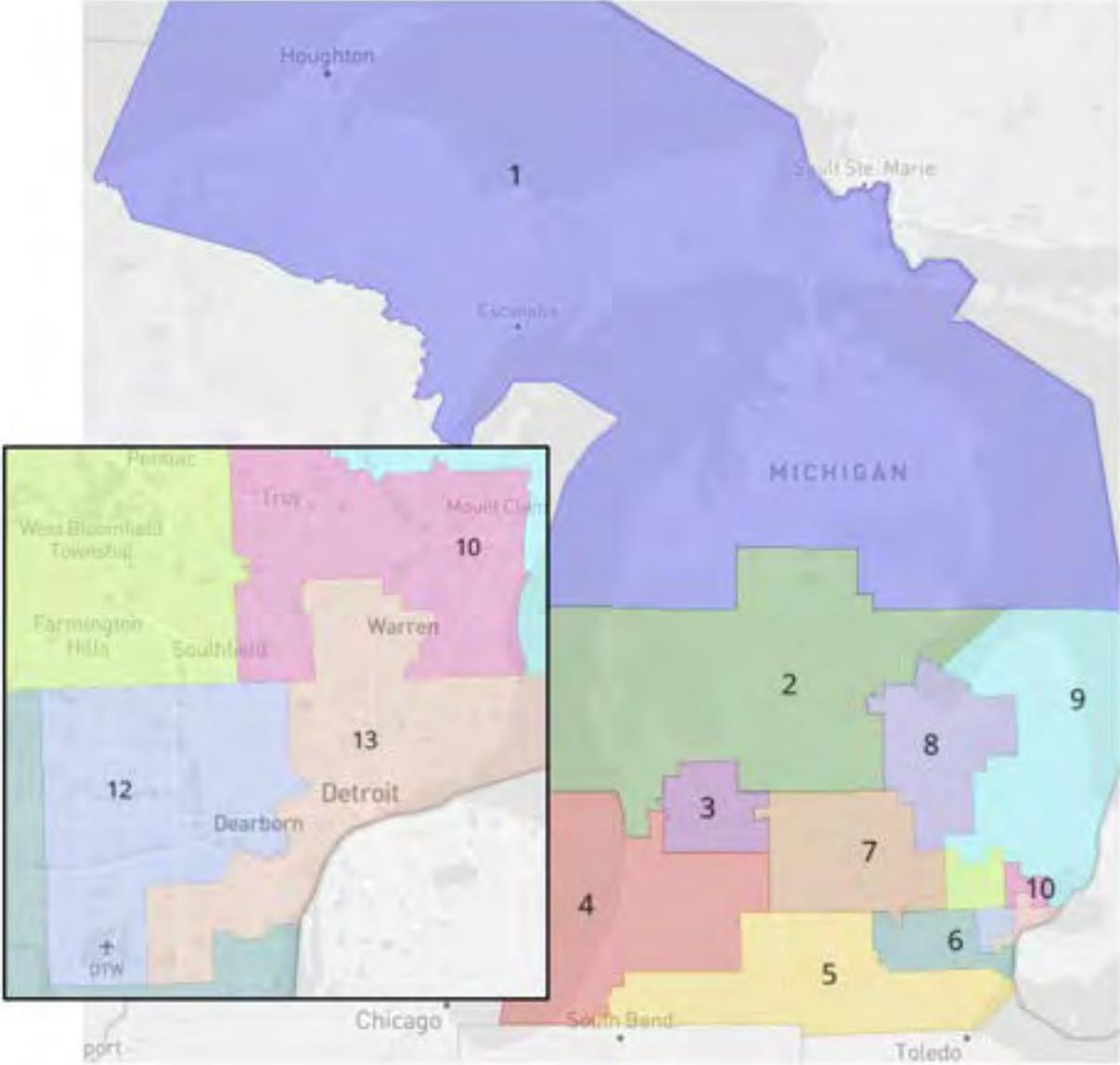
-**Plan “Apple V2”**, (map number #252), on a vote of 11-2 (Commissioners Clark (R) and Wagner (R) opposed; Curry (D) and Lange (R) not voting).



Plan Apple V2

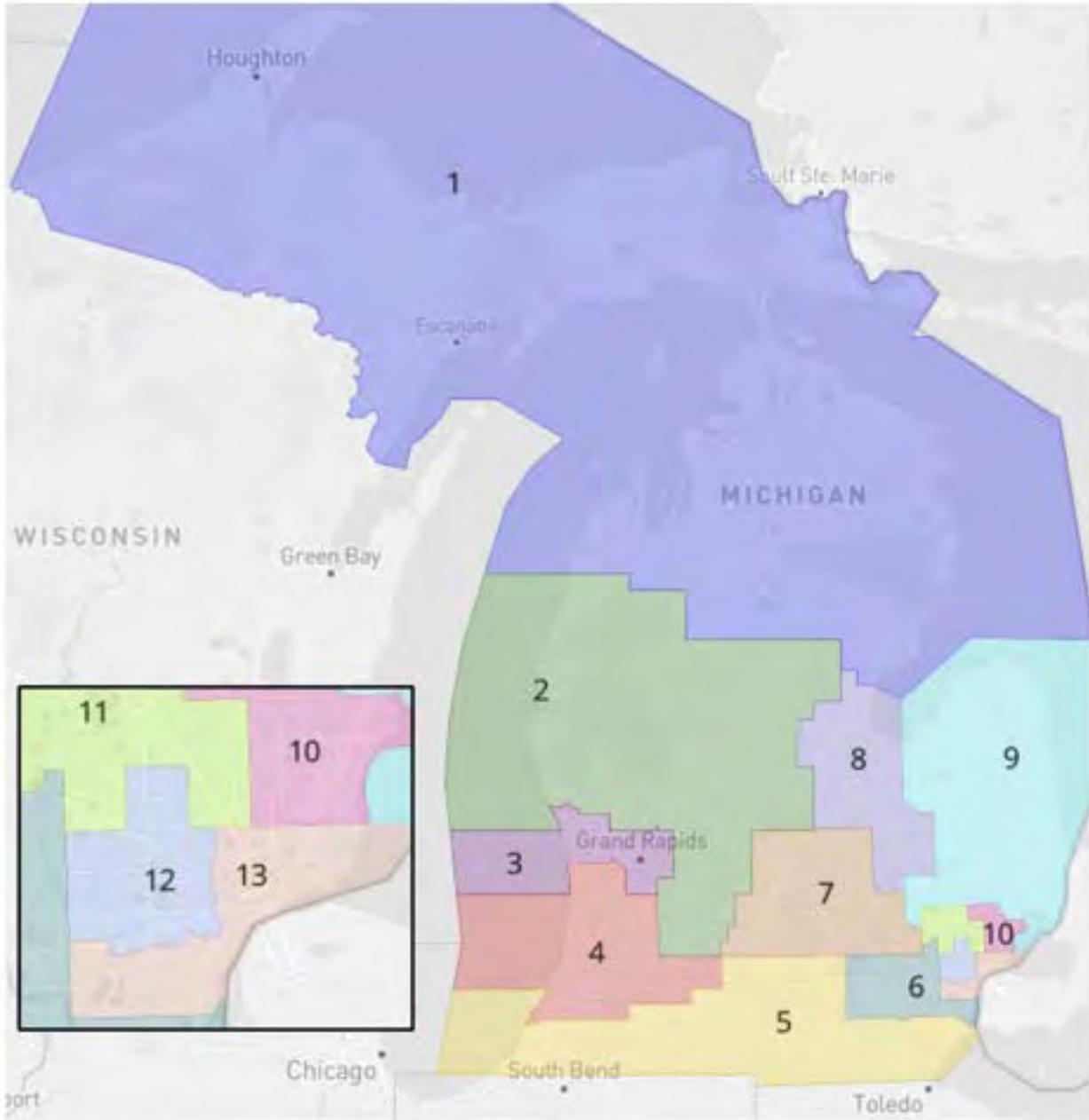
³⁰ These maps are available for download here:
https://michigan.mydistricting.com/legdistricting/michigan/comment_links

-Plan Birch V2 (map number #253), on a vote of 9-2 (Commissioners Wagner (R) and Kellom (D) opposed; Curry (D) and Lange (R) not voting).



Plan Birch V2

-Plan Chestnut, (map number #253), on a vote of 10-1 (Commissioner Wagner (R) opposed; Curry (D) and Lange (R) not voting).



Plan Chestnut

IV.2. MEASURING PERFORMANCE ON EACH CRITERIA

CRITERION A: POPULATION BALANCE AND VOTING RIGHTS ACT

“Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

Understanding the Criterion.

We refer to the discussion under Section III.2.A.

Measures of performance on Criterion A.

We refer to the discussion under Section III.2.A.

Results.

We present the results of Population Equality in the following table. Each row lists a redistricting plan for Michigan Congressional Districts. The first column reports difference between the most and the least populated district. The second column reports the maximum deviation from the ideal district population.

	Population difference	Maximum deviation
	%	%
Plan Apple V2	0.48%	0.26%
Plan Birch V2	0.26%	0.15%
Plan Chestnut	0.14%	0.08%

Note that the population difference in Plan Apple V2 (0.48%) is close to a population difference that the Supreme Court, in at least one instance, has found unjustified (0.7%), rendering that plan unconstitutional.³¹ Even the smaller deviations in Plan Birch V2 and Plan Chestnut require justification. If any of these plans were adopted, the Commission should explain why these small population differences were necessary to better comply with other criteria in the state Constitution, such as, for instance, to preserve whole precincts in order to evaluate VRA claims more accurately (Criterion A), or to preserve Communities of Interest (Criterion C).

Justifying the small deviation in Plan Chestnut (about 1,000 inhabitants; less than a typical precinct) would be easier than justifying the deviation in Plan Birch V2 (about 2,000 inhabitants, about as much as a typical precinct). Justifying the deviation in Plan Apple V2 (over to 3,700 inhabitants, much larger than a typical precinct) would be hardest of all three.

³¹ Karcher v. Daggett, 462 U.S. 725 (1983), ruling on the New Jersey 1981 congressional plan.
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For the sake of comparison, across all 43 states that were apportioned as more than one congressional district by the 2010 U.S. Census, only one (West Virginia) adopted a plan with a population difference at least as large as that of any of the three Proposed plans, and that one plan was challenged in Court due to its deviation from population equality.³² In other words, these population deviations are unusually large.³³ In particular, in terms of population deviation, Plan Apple V2 is closer to what has been ruled unconstitutional, than to any deviation level that was not challenged in Court in the latest redistricting cycle.

With regard to districts of opportunity, we report the number of districts in which more than 50%, more than 40%, and more than 35% of the Voting Age Population (VAP) identifies as “Black” or “African-American” (alone), as computed by the MGGG Lab for this report, in the following table. These numbers serve as proxy for the number of Black-minority districts of opportunity. As comparison benchmarks, we list the numbers for the congressional map in place in the 2012-2021 redistricting cycle, and the number that would be proportional to the share (13.7%) of the state population that identifies as “Black.”

TABLE 11. *Black Minority Districts of opportunity in Congressional Proposed Maps.*

	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Apple V2	0	2	2
Plan Birch V2	0	2	2
Plan Chestnut	0	2	2
2012-2021 Official Plan	2	2	2
Proportional to Pop.		2	

The most notable result is that neither of the two majority-minority districts in the previous plans survives in any of the three Proposed plans. The following graph shows the Black share of the Voting Age Population in each district. Districts are ordered from lowest to highest Black share (that is, the labels in the horizontal axis are not the district number in the Plan; rather, they should be interpreted as lowest Black VAP share (1), 2nd lowest Black VAP share (2), all the way to the district with the highest Black VAP share (13). The colored dots represent each map. The boxes represent the typical Black VAP shares in maps in the Computational Ensemble, and the arms stretching out of the boxes represent the Black VAP share at unusual maps such that only 2.5% of maps have shares above or below the range covered by the arms.

³² *Tennant v. Jefferson County Com'n*, 133 S. Ct. 3, 567 U.S., 183 L. Ed. 2d 660 (2012).

³³ 2010 Redistricting Deviation Table. National Conference of State Legislatures. Available at <https://www.ncsl.org/research/redistricting/2010-ncsl-redistricting-deviation-table.aspx>

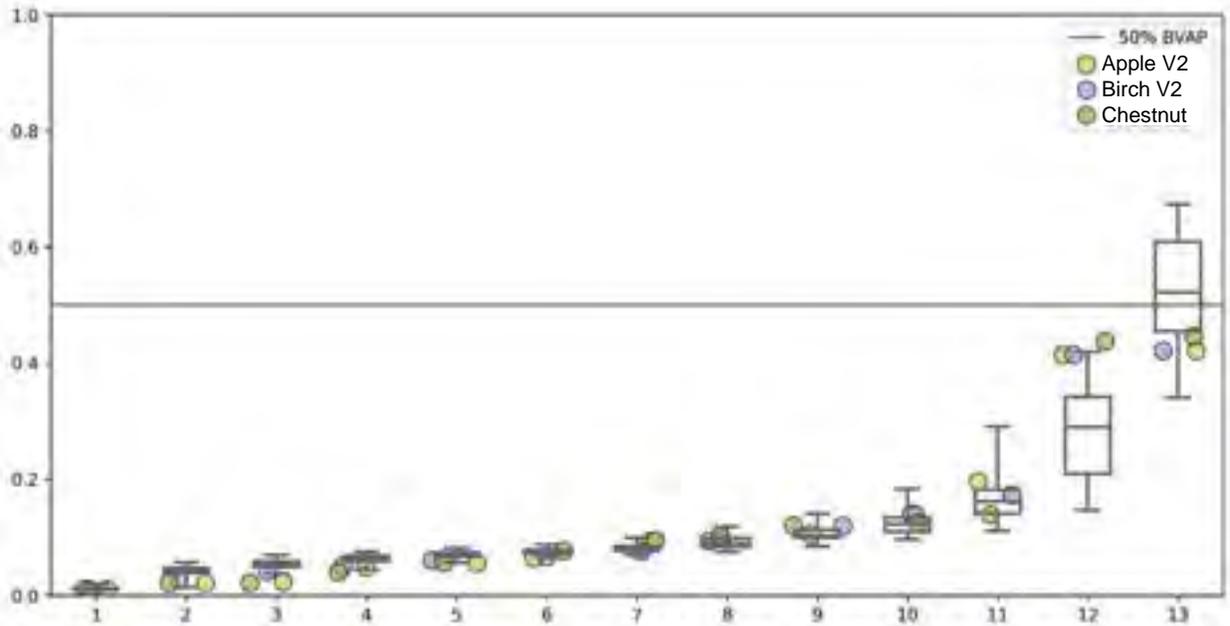


Figure 10. Distribution of Black VAP by Congressional District

As we can see in Figure 10, these three plans are unusual, but not extremely so, in that they take what in most maps are a pair of districts — in and around Metro Detroit — with Black VAP shares of about 55% and 30%, and reconfigure them into two districts, both with approximately 42% of Black VAP in plans Apple V2 and Birch V2, and approximately 44% of Black VAP in Plan Chestnut.

While the difference between 42% and 44% VAP share may seem small, the consequences could be important. There is no exact threshold of Voting Age Population that turns a district into a district of opportunity, and we lack sufficient data on recent primaries to be confident about our predictions on racially polarized voting. Based on the estimates we have, a 42% share of VAP probably suffices for a minority to be able to elect its candidates of choice, but districts with a 44% share are safer, stronger districts of opportunity, in which the minority can most likely elect its preferred candidates if it votes cohesively.

Therefore, as with population equality, we find that Plan Chestnut may measure up better than plans Apple V2 or Birch V2 on any question about compliance with the VRA that a reasonable person might harbor.

CRITERION B: CONTIGUITY

“Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.”

Understanding the Criterion.

We refer to the discussion under Section III.2.B.

Measure of Contiguity.

We report a binary “Yes” or “No” for whether a plan satisfies the stricter definition of contiguity, satisfying rook contiguity with islands attached to the land at the nearest point in the county of which they are a part of.

Results.

All three Proposed congressional maps satisfy contiguity.

	Are all districts contiguous?
Plan Apple V2	Yes
Plan Birch V2	Yes
Plan Chestnut	Yes

CRITERION C: COMMUNITIES OF INTEREST

“Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.”

Understanding the Criterion.

We refer to the discussion under Section III.2.C.

Measure of Reflection of Communities of Interest.

The MGGG Redistricting Lab and Open-Maps Coalition have released a report on “Communities of Interest Clusters for Michigan.”³⁴ This report identifies 34 communities of interest clusters that were identified through aggregation from all Community of Interests submissions by the public up to September 1, 2021. A “cluster” is a geographic area in which several individual submissions overlap. In settling for 34 clusters, the MGGG and Open-Maps report aimed to strike a balance between having enough testimony of support for each cluster and having clusters that are small enough to demonstrate tightly connected themes in the submissions supporting each of them.

At the website districtr.org/Michigan, viewers can observe the 34 clusters, and the individual COI submissions supporting each of them. After uploading or opening a new district map of Michigan, under the tab “communities,” viewers can toggle each of the clusters “on” or “off” to superimpose its boundaries on the Michigan district map.

Respect for communities of interest should be assessed holistically, taking into account not just the number or share of COI submissions that an individual map respects, but also the strength of the arguments in support of each individual submission.

For a quantitative measure that can aid—but not supplant—the holistic evaluation, we report the share of clusters that overlap with a district, in the sense that either at least 90% of the population of a district is inside the cluster, or at least 90% of the population in the cluster is inside a district, and we compare this share with the shares across all maps in the computational ensemble.

Results.

Of the 34 COI clusters, Apple V2 meets the criteria for 11, Birch V2 for 12, and Chestnut for 10. Most county-aware ensembles meet the criteria for at least 10 and up to 15. That means the plans do not show a lot of responsiveness to COI clusters compared to computer maps drawn without attention to COIs.

³⁴ We follow version 2.0 of this report, dated September 13, 2021.

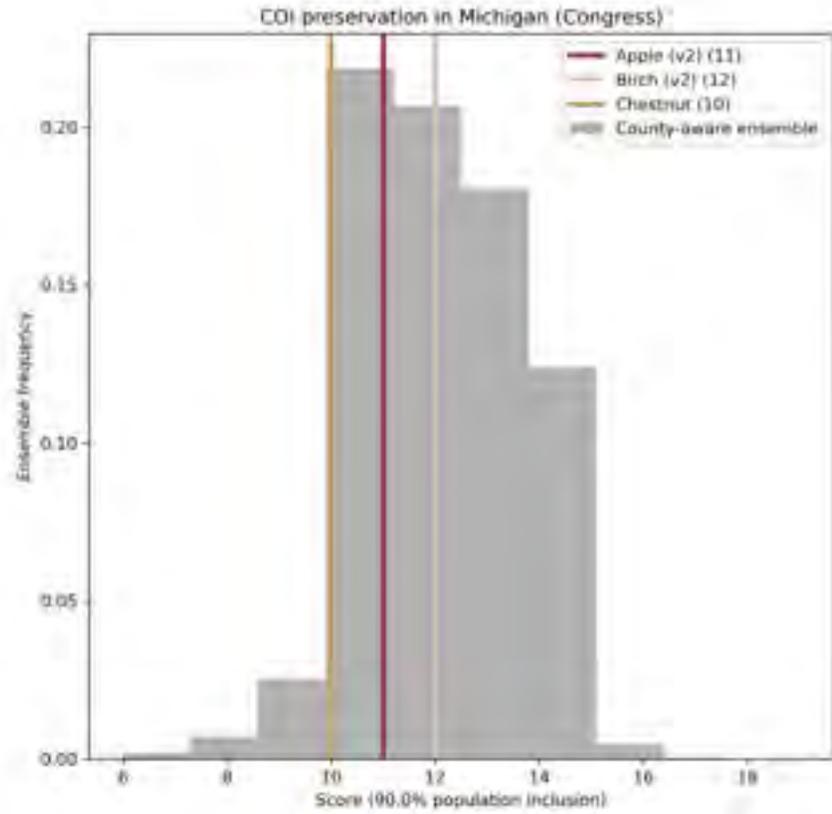


Figure 11. Communities of Interest Preservation in Congressional Maps

CRITERION D: PARTISAN FAIRNESS

“Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.”

Understanding the Criterion.

We refer to the discussion under Section III.2.D.

Measures of partisan fairness.

We refer to the discussion under Section III.2.D.

For the measures described under D8, for readers’ convenience, we published the three Proposed congressional maps in DRA 2020 under the names: “CD Apple V2”, “CD Birch V2”, and “CD Chestnut”.

- - -

The election data that we use to compute the measures in this section is as follows:

The 2018 gubernatorial, the 2018 Secretary of State; the 2018 Attorney General elections; the 2016 Presidential election; and the 2018 U.S. Senate election, are used by the MGGG lab to report results on Partisan Bias (D1), Efficiency Gap (D2), Deviations from Proportionality (D3), Median-Mean Difference (D4), and the Outlier test (D7). The 2014, 2016, 2018, and 2020 U.S. House election, and the 2016 and 2020 U.S. Presidential election, are used by Dr. Christian Cox from Yale University to compute the Lopsided Margins (D5) and the Partisan Advantage (D6). For all these measures, we compute results election by election, and then we average out. The Princeton Gerrymandering Project uses the 2018 Michigan Governor, 2020 U.S. Senate and 2020 U.S. Presidential election, first averaging them out to construct an electoral composite in each precinct, and then using this composite to compute the results reported under the Outlier Test (D7).

DRA 2020 allows users to choose their preferred election data input to compute the measures described under D8.

Results.

We present the results on partisan fairness across all Proposed Maps for Michigan Congressional Districts in the following table. Each row indicates a redistricting plan. Each column indicates a measure of partisan fairness, from D1 to D7. Positive numbers indicate deviations from the fair ideal that favor the Republican Party, and negative values indicate deviations that favor the Democratic Party. Zero indicates perfect fairness according to each measure. The values of some measures are in seats; others are in percentage of the total number of votes. The “Outlier” (D7) indicates a party (“D” for Democratic or “R” for Republican) and a range of percentages. The letter indicates the party that this map favors, relative to the million other maps in the Princeton Gerrymandering Project ensemble. The first number is the share of maps in the ensemble that are less favorable to this party (in the sense that the party would obtain fewer seats), and the second is the share of maps that are even more favorable (in the sense that the party would obtain more seats).

TABLE 13. *Measures of Partisan Fairness for Congressional District Proposed Plans.*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Apple V2	+0.7 seats	+0.6%	-0.33 seats	+1.8%	+3.4%	+0.06 seats	D: 82% - 2%
Plan Birch V2	+0.7 seats	+5.0%	+0.27 seats	+1.7%	+3.3%	+0.06 seats	D: 82% - 2%
Plan Chestnut	+1.3 seats	+0.4%	-0.33 seats	+1.7%	+1.9%	-0.28 seats	D: 82% - 2%

Compare these results to the results on the measures of partisan fairness used by the Commission, as advised by Dr. Handley, displayed in the table below. The values below were obtained from a composite of all 13 statewide elections (Presidential, U.S. Senate, Governor, Secretary of State and State Attorney General) from 2012 to 2020, and we report them here directly from the MICRC website.

TABLE 14. *Selection of Measures of Partisan Fairness Used by the Commission.*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Apple V2	--	+1.2%	-1.5%	+2.4%	+4.0%	--	--
Plan Birch V2	--	+0.7%	-1.5%	+2.2%	+4.1%	--	--
Plan Chestnut	--	+0.6%	-1.5%	+2.3%	+4.0%	--	--

The values, and their differences across tables, can be interpreted as follows: first, on the measures common to both tables, measures D2, D4 and D5 are measures of symmetry that capture ways in which the political geography of Michigan favors the GOP. With the heavy concentration of Democratic voters in and around Metro Detroit, and smaller majorities for the GOP in most other areas of the state, Democratic candidates end up winning their districts (particularly the Detroit-based ones) by more lopsided margins (D5), so they waste more votes (D2), and their vote share in their seventh-best district is typically worse than the statewide vote share (D4).

Figure 3 in Section III.2.D illustrated this regularity, using the election results from the 2018 U.S. Senate election. The horizontal axis showed the value of the median-mean difference, where greater values favor the GOP more. Nearly all 100,112 maps in the computational or public ensembles favor Republicans according to this measure. Values between 4% and 5% are typical. The three proposed plans are less favorable to Republicans (or, equivalently, more favorable to Democrats) than most others, with their values much closer to 0%.

Proportionality (D3), in contrast, captures one way in which redistricting maps favor Democrats. Since our election system favors parties that win more votes more than proportionally, and since the Democrats typically win more votes in Michigan statewide elections, if they were to replicate in U.S. House elections the kind of win margins that they obtained, in say, U.S. Senate elections, then they would win a more than proportional number of seats.

Second, the difference between the values in these measures from Table 13 to Table 14 is due to the selection of election results used to compute them, the five statewide elections from 2016 and 2018 in Table 13 and the thirteen such elections from 2012 to 2020 in Table 14.

Third, Partisan Bias (D1) is another measure of symmetry that also reflects how the political geography of the state favors the GOP. As a result, under this measure and depending on the map, the GOP would likely win an extra seat or two in an election with tied vote share.

In contrast, the Partisan Advantage (D6) compares the seat outcome to a benchmark based on county and city boundaries, which captures what would happen under a neutral electoral system designed without partisan considerations. According to this standard, all three plans perform very well, delivering approximately the same number of seats as the neutral benchmark.

The Outlier test (D7) finds a map unfair if the outcomes it generates are unusual, relative to what is normal under other maps. The test can be applied to any of the other measures, but it is most easily interpretable if applied to the number of seats, as in Figure 12.

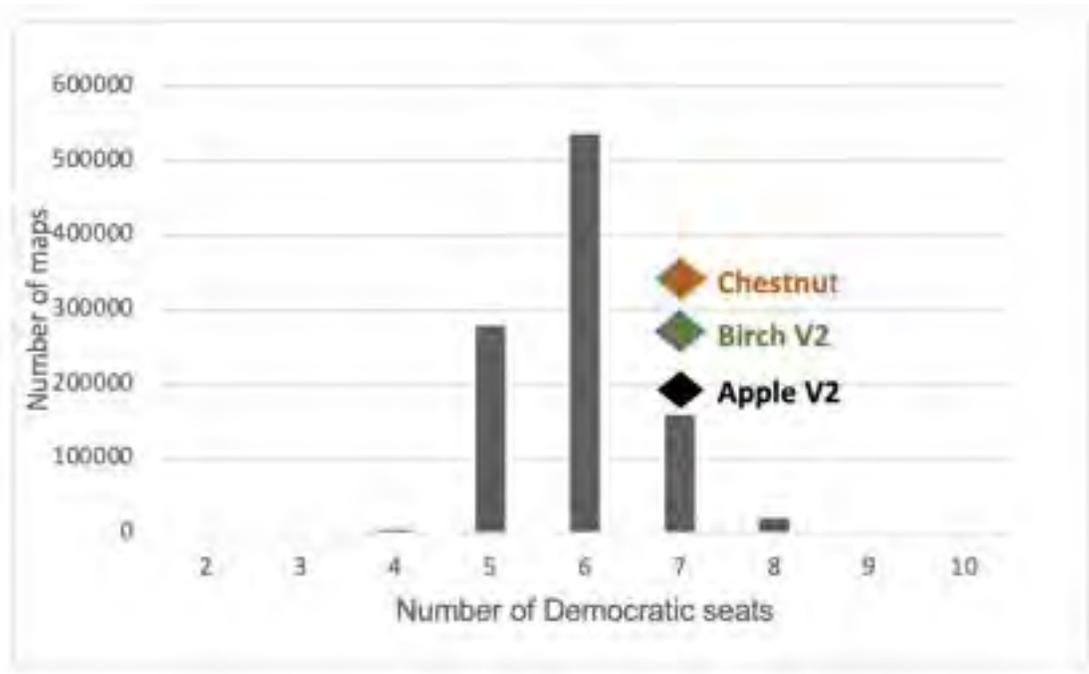


Figure 12. Outlier test (D7) for Congressional Maps

Figure 12 is copied from the Redistricting Report Cards elaborated by the Princeton Gerrymandering Project for these three maps. The horizontal axis in Figure 12 are numbers of seats that Democrats would win, in a hypothetical composite election with vote tallies that were equal to the average tallies of the most recent race for Michigan governor (2018), U.S. Senate in Michigan (2020) and U.S. President in Michigan (2020). The bars represent the number of maps (from among a million) in the Princeton Gerrymandering Project’s ensemble in which Democrats would obtain such number of seats in such a composite election. The diamonds locate where the three Proposed maps in this distribution of columns. As desired by this test, the maps are not outliers; rather, they locate among the tall stacks at the center of the distribution. Most maps would give Democrats five, six or seven seats. These maps do too, and are thus fair according to this criterion.

All three plans feature six leaning, likely or safe Republican districts, six leaning, likely or safe Democratic districts, and a seventh, marginal district in the Capital region around Greater Lansing.

Five districts based in the Upper Peninsula (1); north-central-west Lower Peninsula (2); Southwest Lakeshore (3 or 4; number varies); Indiana border (5); and the Thumb (9) lean

Republican in all maps. Another five districts, around Ann Arbor (6), the Tri-cities and Flint (8), Oakland County (11), western Wayne County (12) and the city of Detroit (13) lean Democrat in all maps, albeit District 8 weakly so.

The sixth Republican-leaning district in plans Apple V2 and Chestnut is District 10 in Macomb County; in Plan Birch, District 10 has a different configuration that makes it lean Democrat, and instead, the 6th Republican-leaning district is District 3 around Grand Rapids. Plans Apple V2 and Chestnut tilt the Grand Rapids district Democrat by pairing Grand Rapids with Kalamazoo (Apple V2) or with Muskegon (Chestnut).

On any elections with a close to tied or slightly more Democratic vote share, as in the 2016 and 2020 Presidential elections, all three of these maps would be likely to generate 7-6 delegations, with either party capable of attaining a majority, depending on the outcome in the Capital Region district (7). At their recent electoral peak, under plans Apple V2 or Chestnut, Democrats could carry the Macomb-based district (8) and obtain an 8-5 majority. Republicans, at their recent electoral peak, could carry the Tri-Cities district (11) and obtain an 8-5 majority under plans Apple V2 or Birch V2. But a 7-6 majority on either side remains far more likely with any of these maps.

Considering a range of measures of partisan fairness, Plan Apple V2, Plan Birch V2, and Plan Chestnut are all fair to political parties. All three maps score within the range of acceptable values in every measure. Compared to maps not explicitly trying to achieve any partisan outcome, these maps are a bit more favorable than average to Democrats, but they fall within the middle range of normal maps. The same is true if we compare the Proposed maps to maps generated by the public.

CRITERION E: FAIRNESS TO CANDIDATES

“Districts shall not favor or disfavor an incumbent elected official or a candidate.”

Understanding the criterion.

We refer to the discussion under Section III.2.E.

Measures of fairness to candidates.

We refer to the discussion under Section III.2.E.

Results.

We present first results on double-bunking, i.e. assigning two incumbents to the same district.

Plan	Count
Plan Apple V2	3 [4]
Plan Birch V2	3 [4]
Plan Chestnut	4 [4]

We present two numbers. The first uses the incumbents’ addresses reported in the 2020 Candidate Listing made public by the MI Secretary of State. Using these addresses, the typical range in the computational ensemble is from 1 to 3, and in the public ensemble, from 2 to 4.

The second number, in brackets, is computed using incumbents’ addresses obtained from the Michigan Voter file by Mike Wilkinson for Bridge Michigan.³⁵

On competitiveness, all three plans have a competitive district (#7) in the Capital Region centered in the Greater Lansing area. District 8 (Tri-Cities Flint) in plans Apple V2 and Birch V2, and District 10 (Macomb County) in plans Apple V2 and Chestnut are somewhat competitive as well.

In the five elections used by MGGG to compute results for the ensembles (namely, the 2018 Senate, Governor, Secretary of State, and Attorney General elections, and the 2016 Presidential election), only one district in Plan Birch V2 ever switched, with six staying Democrat and six staying Republican throughout; two districts switched in Plan Apple V2, with six staying Democrat and five staying Republican throughout, and three switched in Plan Chestnut, with five staying with each of the two parties.

If we define a “competitive district” as one that each of the two parties won in at least one of the five elections in the MGGG data set, and we compare these results to those of the ensembles, Figure 13 shows that most maps feature at least two, three or four competitive districts. In other words, Plan Birch V2 features fewer competitive districts than most other maps, while Plan Apple V2 and Plan Chestnut are typical in this regard.

Plans Apple V2 and Birch V2 also feature fewer results decided by a less than 6% margin: 9 and 10, respectively, among 65 results (5 elections in each of 13 districts). Plan Chestnut features 13 competitive elections, more in line with most maps in the ensembles, which feature anywhere

³⁵ Sergio Martinez-Beltrán and Mike Wilkinson, “Redistricting may oust half of incumbents in Michigan, analysis finds”, November 23, 2021, Bridge Michigan.

between 12 and 22 competitive elections. Competitiveness is not a criterion in the Michigan Constitution, but too much or too little might be perceived as an environment that favors or disfavors incumbents as a class. In this regard, Plan Chestnut performs better, more like a typical plan, while Apple V2 and Birch V2 will feature more safe incumbents than most other maps.

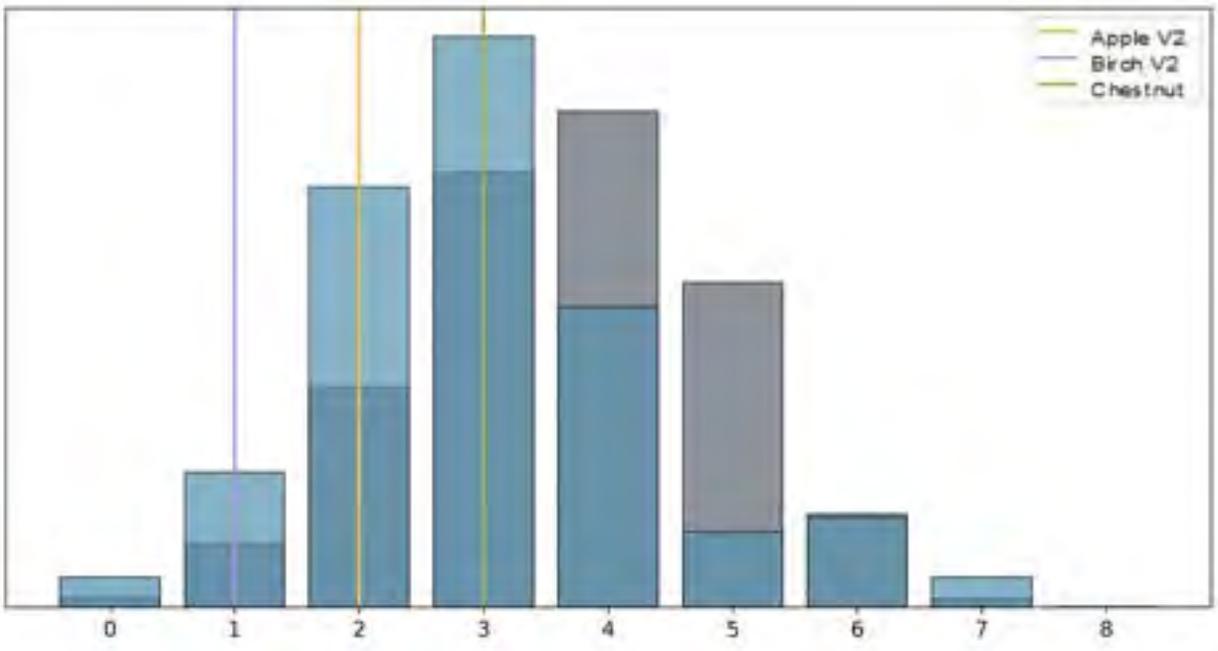


Figure 13. Number of Competitive Congressional Districts

CRITERION F: JURISDICTIONAL BOUNDARIES

“Districts shall reflect consideration of county, city, and township boundaries.”

Understanding the criterion.

We refer to the discussion under Section III.2.F.

Measures of respect for jurisdictional boundaries

The standard way to measure satisfaction of this criterion is to count the number of times that a single unit of government is split – or geographically subdivided into potentially smaller units. One could compute the minimum number of county, city and township splits, and compare it to the number of county, city, and township splits in the map. With given weights for county splits, city splits, and township splits, we could even produce a single measure of splits. But the Michigan Constitution does not provide such weights.

We count:

E1. Number of counties that are split.

E2. Total number of times that counties are split, resulting in the total number of pieces of each county assigned to different districts.

E3. Number of U.S. Census “County Subdivisions” (COUSUB variable in the Census data; typically, cities, towns, and townships) that are split.

E4. Total number of times that county subdivisions are split, resulting in the total number of pieces of each county assigned to different state House, state Senate or U.S. Congressional Districts.

Results.

We first present the results in table format.

	Split Counties	Number of Pieces	Split Municipalities	Municipality Pieces
Plan Apple V2	18	40	40	98
Plan Birch V2	13	31	39	98
Plan Chestnut	14	34	38	91
2011 Map	10	14	n.a.	n.a.

These maps, and specially Plan Apple V2, do a poor job at respecting county boundaries compared to the map adopted in 2011. We also compare these three maps to the ensembles.

It is important to note here that the computational ensemble aims to preserve counties, but is entirely oblivious to municipal boundaries.³⁶ Therefore, the computational ensemble offers a benchmark of comparison with complete disregard to city and township boundaries (the maps ought to outperform this benchmark), and a more challenging benchmark with 100,000 maps that tried moderately hard to keep counties intact. The MICRC maps may not do as well if counties

³⁶ Informally, the algorithm that generates maps may be thought of as treating a boundary that cuts through a county as three times more economically costly than one that goes along the borders, and trying to keep the total cost of these boundaries low.

are split to satisfy higher ranked criteria (which are not included aside from population equality by the computational algorithm). No such consideration applies to the public ensembles; public submissions may or may not follow city, county, city or township boundaries.

As Figure 14 shows, these maps do not reflect county boundaries as well as those in the computational ensemble; but Plan Birch V2 and Plan Chestnut perform about as well as the maps submitted by the public; Plan Apple V2 underperforms Birch V2, Chestnut, and most of the maps submitted by the public.

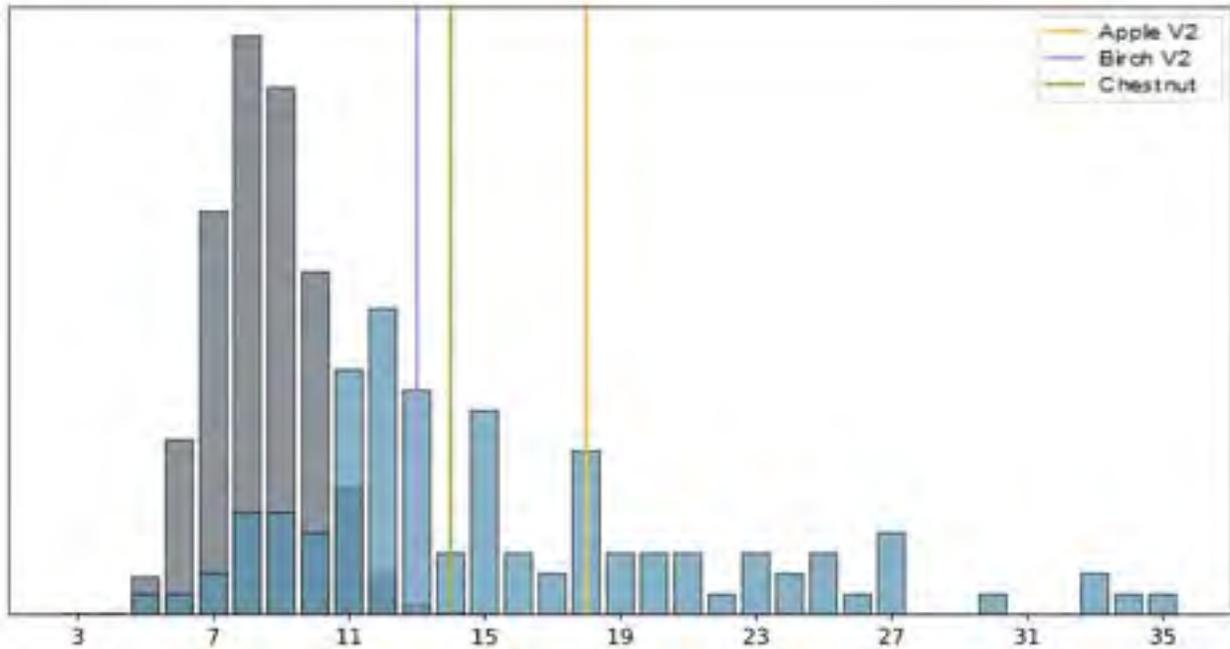


Figure 14. Number of Split Counties

As shown in Figure 15, all three MICRC Proposed plans reflect city and township boundaries about as well as is typical of maps submitted by the public, and better than the computational benchmark that was entirely unaware of municipalities. This indicates that the MICRC has taken municipal boundaries into account. We infer that the MICRC has also taken county boundaries into account, though not as much perhaps as the 2011 plans or computer-generated plans. It is relevant to this comparison that neither 2011 mapmakers nor the computational algorithm were required to consider additional criteria reflecting communities of interest or partisan fairness that currently take precedence over respect for boundaries in the current redistricting round.

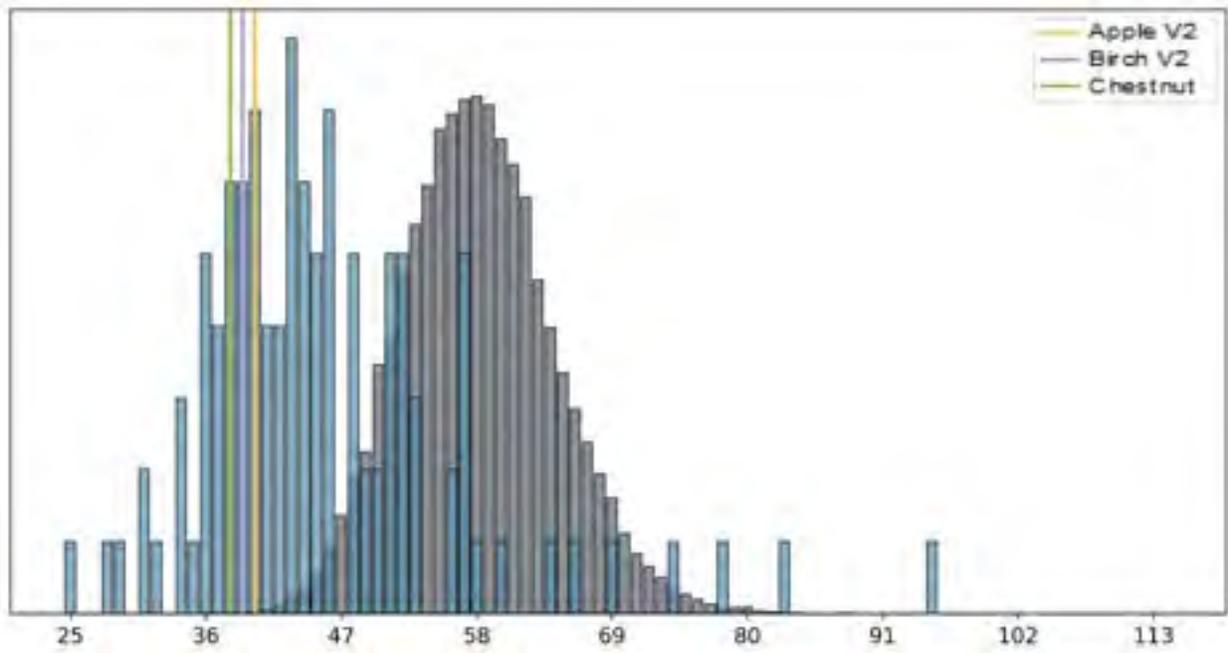


Figure 15. Number of Split Municipalities (County Subdivisions)

CRITERION G: COMPACTNESS

“Districts shall be reasonably compact.”

Understanding the criterion.

We refer to the discussion under Section III.2.G.

Measures of compactness.

We refer to the discussion under Section III.2.G.

Results.

In the next table, for each redistricting plan in each row, we provide the Polsby-Popper, Reock and Cut Edges measures of compactness, respectively in columns 1, 2 and 3.³⁷

TABLE 17. Compactness Measures in Congressional District Plans			
	Polsby-Popper	Reock	Cut Edges
Plan Apple V2	0.38	0.37	710
Plan Birch V2	0.39	0.40	685
Plan Chestnut	0.39	0.38	700
2011 map	0.29	0.36	n.a.

Recall that Polsby-Popper and Reock are measures of compactness from 0 (not compact), to 1 (a perfectly compact circle); whereas, Cut Edges is a measure of violation of compactness that loosely, tracks the number of precincts located at the borders of a district (the less compact, the greater number of precincts at the border). The maps perform similarly, with once again Apple V2 slightly underperforms the others.

All three maps are reasonably compact, much more so than the official map in the previous redistricting sample, and about as much as most maps in the Ensemble group, as illustrated in Figure 16.

³⁷ The Reock and Polsby-Popper measures are as reported by DRA 2020. The Cut Edges measure is computed by MGGG for this report.

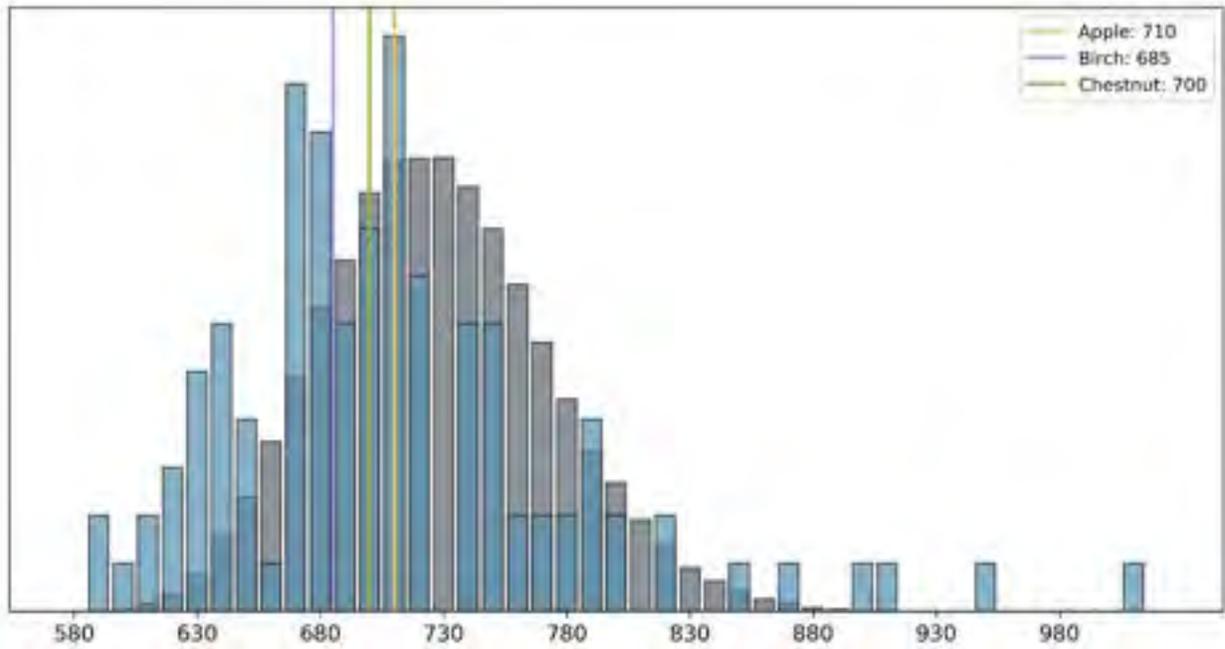


Figure 16. Number of Cut Edges

III.3. SUMMARY OF RESULTS AND PLAN COMPARISON

Plan Apple V2, Plan Birch V2, and Plan Chestnut are all complete redistricting plans that divide the entire state into 13 districts, as required by the latest U.S. Census of the state.

Plan Chestnut features a small deviation from population equality: 0.14%, or just over 1,000 inhabitants, which is less than the size of a typical voting precinct. Plan Birch V2 features a twice as large deviation: 0.28% or just over 2,000 inhabitants; close to the size of the average voting precinct. Plan Apple V2 features a substantially larger population deviation: 0.48%, or over 3,700 inhabitants, which is a greater population than the population in most voting precincts in Michigan. These differences across the three plans are large relative to the magnitude of the deviations exhibited in Congressional District plans across all states. Therefore, on population equality, Plan Chestnut performs significantly better than either Plan Birch V2 or Plan Apple V2, and Plan Apple V2 underperforms either of the other two.

None of these three plans feature a district in which a majority of the Voting Age Population identifies as “Black.” All three plans feature two districts with at least 40% Black Voting Age Population, but Plan Chestnut features two districts with greater than 43% Black Voting Age Population. Therefore, Plan Chestnut provides stronger and safer districts of opportunity for the Black minority population to elect candidates of its choice.

Plan Chestnut, therefore, outperforms Plan Birch V2 and Plan Apple V2 with regard to all aspects of Criterion A.

All three plans satisfy contiguity.

While all three plans feature districts that represent geographically recognizable areas that can be meaningfully described in few words, we cannot say that they fully reflect the collection of Communities of Interest submitted by citizens. There are slight variations between the plans in their preservation of COI clusters, but none perform significantly better than most randomly-drawn maps.

All three plans perform well overall according to a collection of accepted measures of partisan fairness.³⁸ Under any of these three plans, and with election results similar to those in the recent past, the most likely outcome would be a congressional delegation with a 7-6 or 6-7 Democratic-Republican partisan split.

Plan Chestnut features a normal number of districts and elections in which the incumbent party has lost or come close to losing. This number is typical in maps drawn by the public or by computational algorithms that did not take incumbency into account. Plans Apple V2 and Birch V2 feature relatively few districts and few elections in which the incumbent party has lost or has come close to losing, so they may be regarded as plans that relatively favor incumbents.

Plans Chestnut and Birch V2 reflect county, city and township boundaries more closely than Plan Apple V2.

All three maps are reasonably and similarly compact; Plan Birch V2 slightly more so.

³⁸ The plans do not perform well on each individual measure. It is impossible to score well on all at the same time, as different measures have conflicting demands. We mean that, overall, taking their scores across all measures, the maps perform well on this criterion.

Proposed Plan Apple V2 is immediately derived from the earlier Draft Plan Apple, with some adjustments that lowered population equality scores. The plan's score was lowered by adding Koylton Township to the now-largest district (District 9), and taking half of Lyndon Township out of what is now the smallest district (District 6). Notably, each of the two assignments also create a county split, also lowering performance on Criterion F.

Proposed Plan Birch V2 is immediately derived from the earlier Draft Plan Birch, with some adjustments to the district boundaries around the city of Midland that did not materially affect any of the compliance.

Proposed plans Apple V2, Apple, Birch V2 and Birch are all ultimately variations rooted on a shared draft, and their commonalities remain visible in many of their districts. We find that the changes from Draft Apple to newer Proposed Apple V2 actually lowered rather than improved performance on Criteria A and F.

Proposed Plan Chestnut offers more differences. It is originally rooted in, or at least inspired by, the same draft that is a common predecessor to Apple and Birch and the newer Apple V2 and Birch V2.

In each, the basic configuration outlines District 1 in the Upper Peninsula and the northern Lower Peninsula (including Marquette and Traverse City); District 2 in the mid/central/northern Lower Peninsula (including Mt. Pleasant); District 3 or 4 around Grand Rapids; District 4 or 3 on Michigan's southwestern lakeshore; District 5 along the state's southern border; District 6 around Ann Arbor; District 7 based on the Capital Region around Greater Lansing; District 8 including the Tri-cities and Flint; District 9 covering the Thumb; District 10 taking in much of the population of Macomb County; District 11 based on Oakland County; District 12 in western Wayne County; and District 13 in and around the city of Detroit. This framework is common to all three plans and all their predecessors.

The most distinctive geographic feature of Apple and newer Apple V2 turns the Grand Rapids district into a north-south strip that brings in Kalamazoo and leans Democratic. The most distinctive feature of Birch and the updated Birch V2 is that they move the Macomb County district (District 10) westward into Oakland County and turn it into one that leans Democratic. Plan Chestnut's most geographic distinctive feature is arguably its solution for the Grand Rapids district, stretching the district to Lake Michigan at Muskegon and yielding a district that tilts toward the Democratic Party. Plan Chestnut also introduces many other border adjustments. The overall effect of these changes improves population equality and strengthens the two districts of opportunity.

In summary, Plan Chestnut performs better than the other two plans on the top-ranked Criterion A (population equality and compliance with the Voting Rights Act). It performs at least as well or better than Plan Birch V2 in most other criteria, and at least as well or more sharply improved than Apple V2 on most other criteria.

Overall, we conclude that, across our measures, Plan Chestnut performs best on these seven ranked criteria, with Plan Birch V2 second best, and Plan Apple V2 ranked lowest of the three.

We next reorganize the material above, reiterating the key points by plan, instead of by criterion, and discussing possible concerns or considerations about these plans.

Proposed Plan Chestnut.

Proposed Plan Chestnut features a small population deviation at 0.14%. It features two districts of opportunity in which the share of Voting Age Population that identifies as “Black” is above 43%.

This plan performs well on a collection of partisan fairness measures, and on fairness to candidates. It shows some consideration for county, city and township boundaries and is reasonably compact.

The small population deviation from equality would need to be justified as necessary to satisfy other criteria. Since the deviation is smaller than the population size of most precincts, greater population equality may require breaking up a precinct. However, since this plan follows pre-existing precinct lines (which helps with compliance with the VRA), the deviation can probably be justified as stemming from a desire to preserve whole precincts, which in and of itself helps satisfy other criteria.

Given public concern about the Commission’s approach to Black representation, the Commission may need to explain that this plan complies with the Voting Rights Act by creating two districts of opportunity in which voting-age residents who identify as “Black” constitute more than 43% of the population of the district.

Proposed Plan Birch V2.

Proposed Plan Birch V2, compared to Proposed Plan Chestnut, features a larger population deviation, at 0.28%. It features two districts of opportunity in which the share of Voting Age Population that identifies as “Black” is above 40% but below 43%.

It performs well on a collection of partisan fairness measures. It performs less well on measures of fairness to candidates, as it appears to create many seats that will be safe to incumbents. It shows some consideration for county, city and township boundaries, and is reasonably compact.

The larger population deviation from equality would need to be justified as necessary to satisfy other criteria. This might be more difficult, given that Proposed Plan Chestnut exists as an alternative.

It outperforms other maps on compactness, the lowest ranked of the criteria.

Plan Apple V2.

Plan Apple V2 features a much larger population deviation of 0.48%. It features two districts of opportunity in which the share of Voting Age Population that identifies as “Black” is above 40% but below 43%.

It performs well on a collection of partisan fairness measures. It performs less so on fairness to candidates, as it appears to create districts that will see very few competitive elections. County, city and township boundaries are less favored and the updated Apple map appears slightly less compact than the other two alternatives.

Since it performs no better than the other plans on any criteria, based on our measures, it appears much more difficult to justify why the large population deviation present in this plan is necessary to satisfy some other of the state’s redistricting criteria.

We next provide an abridged analysis of individually submitted congressional plans in an Appendix to Part IV within this report.

IV. APPENDIX. PROPOSED CONGRESSIONAL PLANS SUBMITTED BY INDIVIDUAL COMMISSIONERS.

There are two individual commissioner submissions for congressional District plans:

- Proposed Szetela Congressional District Map Number #275, submitted by Commissioner Rebecca Szetela, Independent, of Canton.
- Proposed Lange Congressional District Map Number #273, submitted by Rhonda Lange, Republican of Reed City.

Proposed congressional District Map Szetela incorporates the Grand Rapids area districts from Plan Chestnut with the remaining districts from Plan Birch V2.

Proposed congressional District Map Lange keeps the overall framework of Plan Birch V2 and keeps its six districts around Washtenaw, Wayne, Oakland and Macomb counties and the thumb intact, but makes considerable border adjustments elsewhere.

TABLE 10 Appendix. *Population Equality in Proposed Congressional Individual Plans*

	Population difference	Maximum. Deviation
Plan Apple V2	0.48%	0.26%
Plan Birch V2	0.26%	0.15%
Plan Chestnut	0.14%	0.08%
Plan CD Lange 273	0.25%	0.15%
Plan CD Szetela 275	0.22%	0.12%

Plan Chestnut continues to outperform all other plans on population equality once we take into consideration the two individual submissions.

TABLE 11 Appendix. *Districts of Opportunity in Proposed Congressional Individual Plans*

	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Apple V2	0	2	2
Plan Birch V2	0	2	2
Plan Chestnut	0	2	2
Plan CD Lange 273	0	2	2
Plan CD Szetela 275	0	2	2
2011 Official map	2	2	2
Proportional to Population	2		

On VRA, plans CD Lange 273 and CD Szetela 275 follow Plan Birch V2 in the Greater Detroit and surrounding areas, and thus obtain the same scores on districts of opportunity as Plan Birch V2. Again, we prefer Plan Chestnut. Both individually submitted plans satisfy contiguity.

	Efficiency Gap	Proportionality	Median-mean	Partisan Advantage
	D2	D3	D4	D6
Plan Apple V2	+1.2%	+0.14 seats	+2.4%	+0.06 seats
Plan Birch V2	+0.7%	+0.14 seats	+2.2%	+0.06 seats
Plan Chestnut	+0.6%	-0.20 seats	+2.3%	-0.28 seats
Plan CD Lange 273	+1.0%	+0.47 seats	+2.0%	+0.39 seats
Plan CD Szetela 275	+0.6%	-0.03 seats	+2.4%	-0.11 seats

Both of the individually submitted plans perform similarly to the collaborative ones on partisan fairness measures, albeit CD Lange 273 is slightly more favorable to Republicans.

	Split Counties	County Pieces
Plan Apple V2	18	40
Plan Birch V2	13	31
Plan Chestnut	14	34
Plan CD Lange 273	13	31
Plan CD Szetela 275	17	39

Plan CD Lange 273 splits counties as much as much as Plan Birch V2; Plan CD Szetela inherits the county-splitting configuration of Plan Apple V2 around Grand Rapids and Kalamazoo. Plan CD Lange 273 is the best performing on compactness, together with Plan Birch V2, whereas, Plan CD Szetela 275 is the worst performing map on compactness.

	Polsby-Popper	Reock
Plan Apple V2	0.38	0.37
Plan Birch V2	0.39	0.40
Plan Chestnut	0.39	0.38
Plan CD Lange 273	0.38	0.41
Plan CD Szetela 275	0.37	0.37

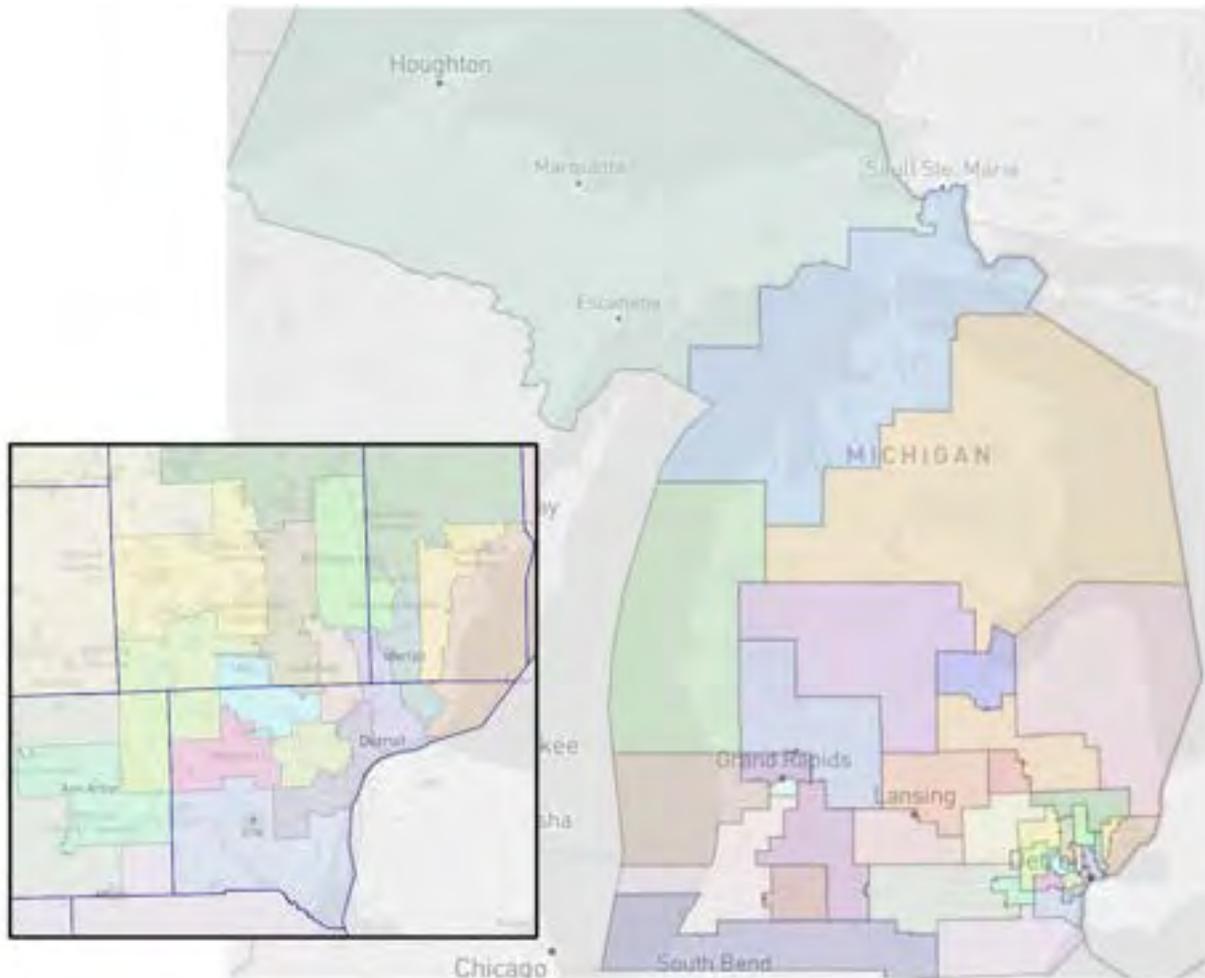
The results on Tables 10 Appendix, 11 Appendix and 31 Appendix are from DRA 2020, using the 2020 U.S. Census population data. On Table 13 Appendix, the measures for the Efficiency Gap and the Median-Mean difference are from the MICRC Compliance Sheet, using all 10 statewide elections from 2012 to 2020; and the deviation from proportionality and the Partisan Advantage are computed by Dr. Christian Cox of Yale University and based upon 2016 and 2020 presidential elections and the 2014, 2016, 2018 and 2020 U.S. House election in Michigan. Deviations from proportionality or from the neutral jurisdictional benchmark in the partisan advantage are measured in seats; whereas, the Efficiency Gap and the Median-Mean measure differences in shares of votes.

PART V. ANALYSIS OF DRAFT MAPS FOR MICHIGAN'S SENATE DISTRICTS

V.1. THE DRAFT MICHIGAN SENATE DISTRICT MAPS

On Oct. 11, 2021 the MICRC approved the following Draft maps for Michigan Senate districts, for consideration in the Second Round of Public Hearings (Oct 20 – Oct 27, 2021):³⁹

-Plan "Spruce," name "10-08-21 v1 SD" (map number #226). Voted for publication 13-0.

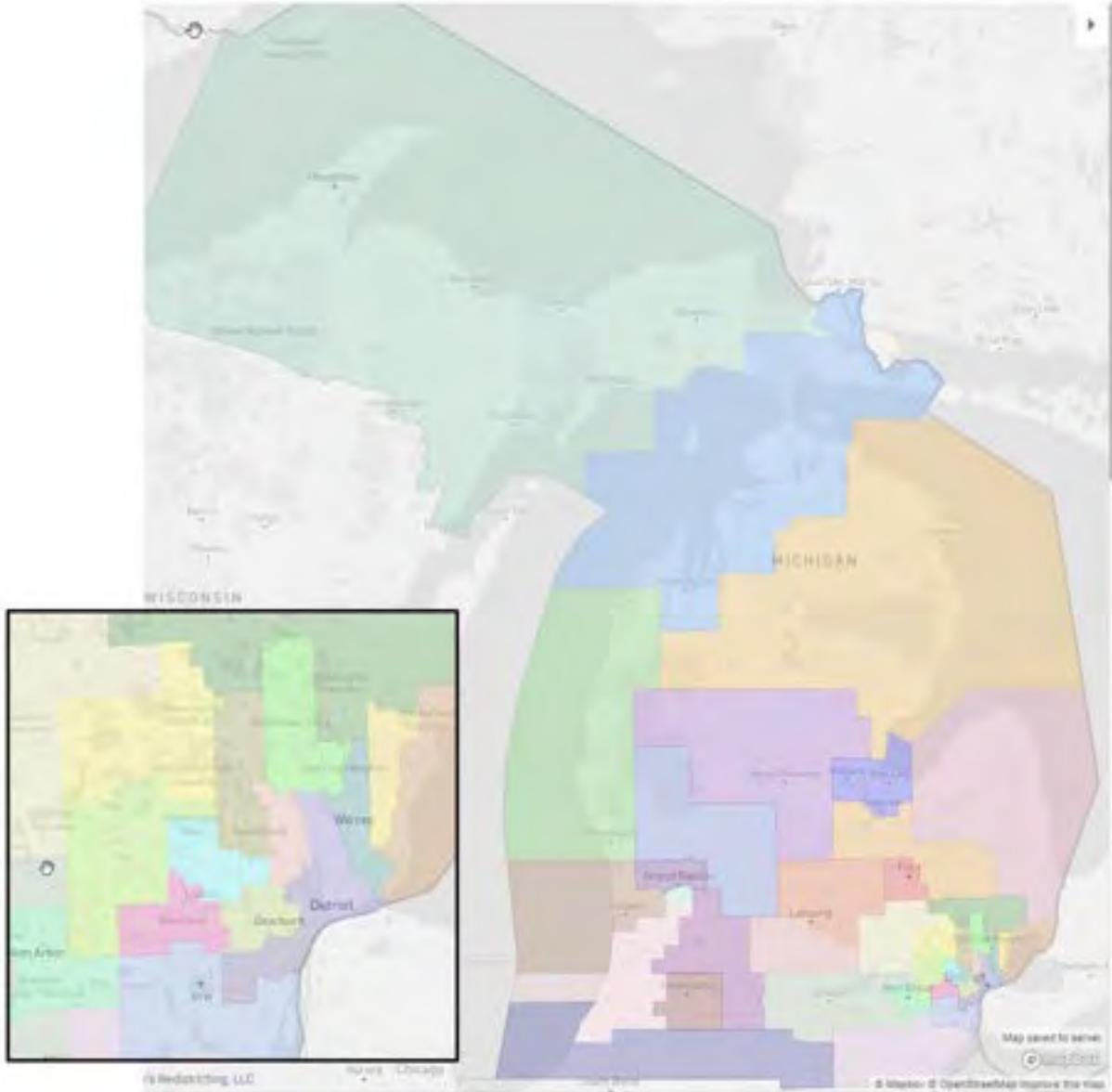


Plan Spruce

³⁹ These maps are available for download here:
https://michigan.mydistricting.com/legdistricting/michigan/comment_links
MICHIGAN REDISTRICTING

-Plan “Elm,” name “10-04-21 v2 SD” (map number #199). Voted for publication 12-1.

Note that the Elm map does not appear to be a valid redistricting plan, as it fails to assign a district to all the areas of Michigan. Plan Elm fails to assign any district to Census Block 4006 in Census Tract 1590, in Southfield Township (Oakland County).⁴⁰ This block has 13 inhabitants.

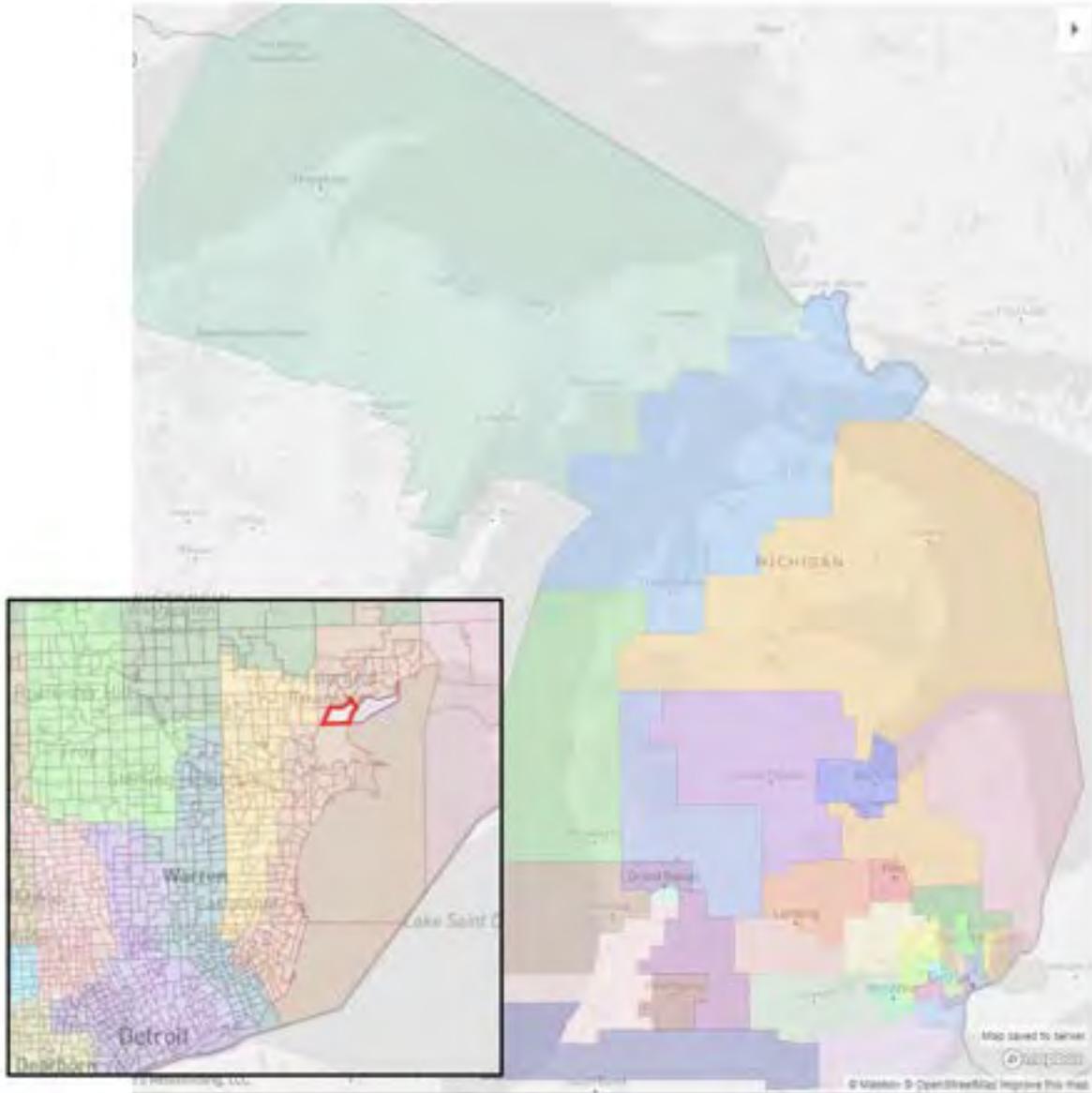


Plan Elm

⁴⁰ <https://tigerweb.geo.census.gov/tigerweb2020/>
MICHIGAN REDISTRICTING

-Plan “Cherry,” name 10-07-21 SD RAS BK (map number #220). Voted for publication 13-0.

Note that the Cherry map does not appear to be a valid redistricting plan, as it fails to assign a district to all the areas of Michigan. Plan Cherry fails to assign any district to a precinct with population 1,946 in the neighborhood of Anchor Bay Shores in Macomb County. This area, highlighted in red in the inset map below, must be assigned to a district.



Plan Cherry (incomplete)

V.2. MEASURING PERFORMANCE ON EACH CRITERIA

CRITERION A: POPULATION BALANCE AND VOTING RIGHTS ACT

“Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

Understanding the Criterion.

The Michigan population according to the 2020 U.S. Census is 10,077,331 inhabitants. Michigan has 38 districts for state Senate elections. So, the ideally equal population is 265,193 inhabitants per district. The United States Supreme Court has ruled that, solely on U.S. constitutional grounds, the population in state legislative districts must be roughly equal; however, “some deviations from the equal-population principle are constitutionally permissible,” for a rational state interest, and in particular to respect jurisdictional boundaries of counties, cities and towns.⁴¹ In particular, population differences of up to 10% between the least and most populous districts are “minor” and do not require “justification from the State.”⁴² Population deviations greater than 10% must be justified by the State, and instances with a deviation as large as 89% away from the ideal size have been deemed legitimate.⁴³ However, the Equal Population federal requirement under the U.S. Constitution is much tighter for federal elections to the U.S. House of Representatives, in which any population deviation requires justification, and the largest deviation that has been found acceptable is 0.79% (as discussed in the section relating to Criterion A in the evaluation of the Congressional District map).

If there is any substantial deviation from population equality, supporters of one party cannot be systematically placed in larger districts.⁴⁴

In explicitly mentioning “equal population as mandated by the U.S. Constitution” as the first clause of the top priority criterion, the Michigan Constitution might open a question as to whether this clause means no more than the lax standard of equal population for state legislative districts under the U.S. Constitution (our interpretation), a stricter standard of equal population for federal elections to the U.S. House of Representatives, or something in between these two extremes.

With regard to the Voting Rights Act, we refer verbatim to the discussion of Criterion A under Section III.2. for the Congressional District maps.

⁴¹Reynolds v. Sims, 377 US 579-580.

⁴²Brown v. Thomson, 462 US 842.

⁴³Brown v. Thomson, 462 US 835.

⁴⁴Cox v. Larios, 542 U.S. 947

Measures of performance on Criterion A.

A1. Measure of population inequality.

We compute the difference between the most and least populous district, using the formula:

$$\frac{\textit{Population of most populous district}}{\textit{Population of least populous district}} - 1,$$

in percentage points.

For convenience, we also report the largest deviation to the ideal population size of a district, namely,

$$\frac{\textit{Population of most populous district}}{265,193} - 1,$$

again, in percentage points.

If the difference between the most and least populous district surpasses 1%, we also compare the average population of districts won by Democratic Party candidates to the average population of districts won by Republican Party candidates, in all U.S. Presidential or Michigan Senate elections from 2014 to 2020 (namely, the 2016 and 2020 Presidential elections, and the 2014 and 2018 Michigan Senate elections). This is a measure of partisan malapportionment.

A2. Number of Districts of Opportunity.

As discussed in Section III.2.A2 with regard to the application of the Voting Rights Act to Congressional District maps, we seek to compute the number of districts of opportunity for ethnic and linguistic minorities. We can then compare this number to the proportion of minority population. For instance, the “Black Alone” population is 13.7% of the Michigan population (with a percentage as high as 37.6% in Wayne Co.), a statewide percentage that corresponds to at least five state Senate districts. Further, 5.6% of the Michigan population is Hispanic or Latino, a percentage that corresponds to two state Senate districts (though in this case the highest concentration by county is 15.4% in Oceana County.); and 3.3% of the state population is Asian-American (with 9% in Washtenaw County.), a percentage that corresponds to one state Senate district.

We can also compare the number of opportunity districts for the Black minority to the number of such opportunity districts in the previous redistricting plan. We refer to the report “determining if a redistricting plan complies with the Voting Rights Act” by Dr. Lisa Handley, presented to the MICRC. If Dr. Handley’s estimates are correct, any 40% Black district is a district of opportunity and will elect candidates preferred by the Black minority.

If so, there were three (or six at the lower threshold of 35%) Black districts of opportunity in the previous redistricting plan.

So, the measure we report is:

- Number of districts with >50% of their voting age population identifying as Black.
- Number of districts with >40% of their voting age population identifying as Black.
- Number of districts with >35% of their voting age population identifying as Black.

We compare these measures to the number of districts (five) proportional to the Black population in the state, and to the number of districts with these percentages of Black voting age population in the previous Congressional Districts plan (two, five and six).

We do not find a sufficient geographic concentration of Hispanic or Latino, or other minorities, in any county, to constitute a majority in a geographically compact district.

Results.

We present the results on Population Equality in the following table. Each row indicates a redistricting plan for Michigan Senate districts. The first column reports the population difference between the most and the least populated district. The second column reports the maximum deviation from the ideal district population. And the third column reports the partisan malapportionment measure, with a result bigger than zero meaning that districts won by Democrats have more population (which indicates an advantage to the Republican Party), and thus negative numbers indicating that districts won by Republicans have more population (which indicates an advantage to the Democratic Party).

TABLE 18. <i>Population Equality in Draft Senate Plans</i>			
	Population. difference	Maximum. deviation	Partisan malapportion.
Plan Spruce	9.02%	4.89%	+0.32%
Plan Elm	9.45%	5.22%	-0.03%
Plan Cherry [*]	5.06%	2.50%	-0.29%

[*] Recall that Plan Cherry is not a valid plan, as it fails to assign a district to each precinct. Population Equality measures will change if the plan is remedied by assigning a district to each precinct.

These deviations are within the range that is acceptable for state legislative districts under the US Constitution, but they are not within the range of deviations that are potentially acceptable (if suitably justified) for Congressional Districts under the US Constitution. If the explicit Population Equality clause under the Michigan Constitution were understood to be stricter than the population equality requirement implicit in the federal Equal Protection clause, then these deviations would be too large.

We report the number of districts in which more than 50%, more than 40%, and more than 35% of the Voting Age Population identifies as “Black” or “African-American” (alone), as computed by the MGGG Lab, in the following table (with official map numbers from IPUMS NHGIS, University of Minnesota, www.nhgis.org, that reflect current numbers rather than those at adoption). These numbers, serve as proxy for the number of Black-minority districts of opportunity.

TABLE 19. <i>Black Minority Districts of Opportunity in State Senate Draft Maps</i>			
	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Spruce	0	3	6
Plan Elm	0	3	6
Plan Cherry [*]	0	3	6
2011 Official map	1	5	5
Proportional to Population		5	

As in the case of the Congressional District maps, the most striking result is no majority-minority districts in these three proposed plans. The following graph shows the Black share of the Voting Age Population in each district. Districts are ordered from lowest to highest Black share (that is, the labels in the horizontal axis are not the district number in the Plan; rather, they should be interpreted as lowest Black VAP share (1), 2nd lowest Black VAP share (2), all the way to the district with the highest Black VAP share (38). The colored dots represent each map. The boxes represent the typical Black VAP shares in maps in the Computational Ensemble, and the arms stretching out of the boxes represent the Black VAP share at unusual maps such that only 2.5% of maps have shares above or below the range covered by the arms.

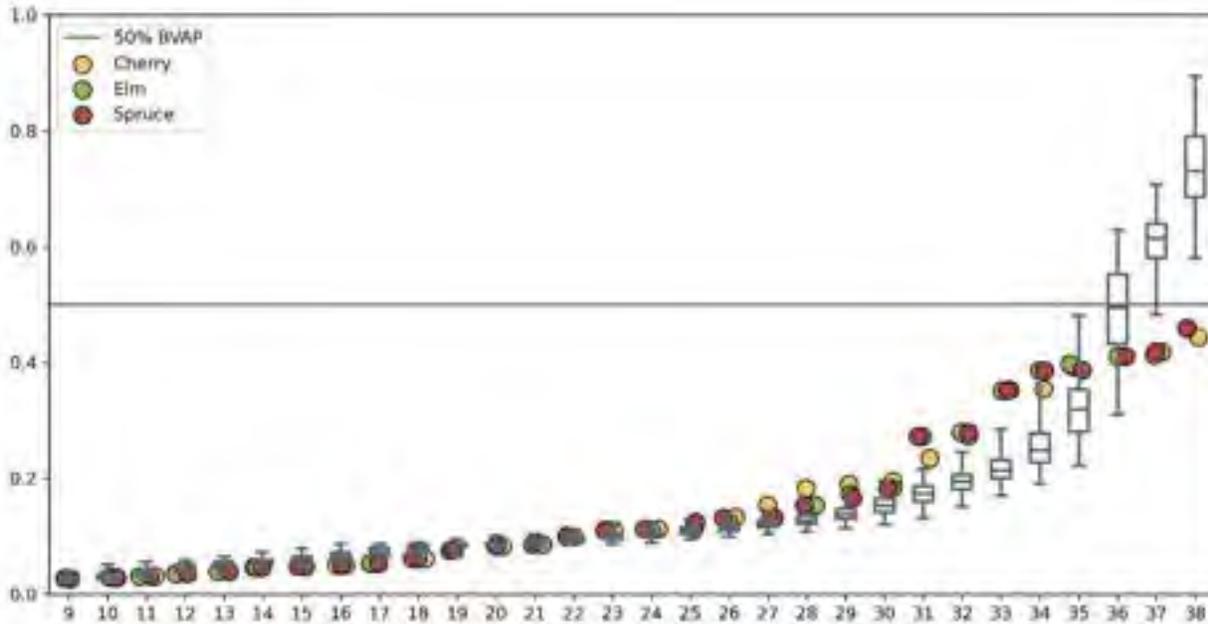


Figure 17. Distribution of Black VAP by Senate District

As we can see, these three Senate plans are unusual in engineering maps without a single majority-Black district. Almost all Senate maps in the Computer Ensemble feature two majority-Black districts; and half feature three. These maps appear to deliberately dilute concentrations of Black voting age population above 50%, to create instead as many districts as possible in which the Black vote constitutes a large minority above 35%. All three of these plans generate six such districts with a large Black minority, which is twice as many as in most other maps.

The large distance between the dots representing these three plans, and the arms of the boxes representing the computer-generated plans imply that the probability that plans like these without a Black-majority district arise by chance are remote. Rather, these plans' outcome with no majority-Black district, and twice as many districts with a large minority of Black voters as in most other plans, is attained by design, following the advice to the Commission from its Voting Rights Act legal counsel and consultant.

CRITERION B: CONTIGUITY

“Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.”

Understanding the Criterion.

See the discussion under Section III.2.B on the analysis of Congressional Districts.

Measure of Contiguity.

We report a binary “Yes” or “No” for whether a plan satisfies the stricter definition of contiguity, satisfying rook contiguity with islands attached to the land at the nearest point in the county of which they are a part of.

Results.

All three Draft Michigan Senate maps satisfy contiguity.

	Are all districts contiguous?
Plan Spruce	Yes
Plan Elm	Yes
Plan Cherry	Yes

CRITERION C: COMMUNITIES OF INTEREST

“Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.”

Understanding the Criterion.

See the discussion under Section III.2.C on the analysis of Congressional District maps.

Measure of Respect for Communities of Interest.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Results.

All of the draft plans preserve 26 COI clusters out of 34 at the 90 percent inclusion criteria. Many computer-generated maps include fewer, so each map shows some evidence of taking COI clusters into consideration.

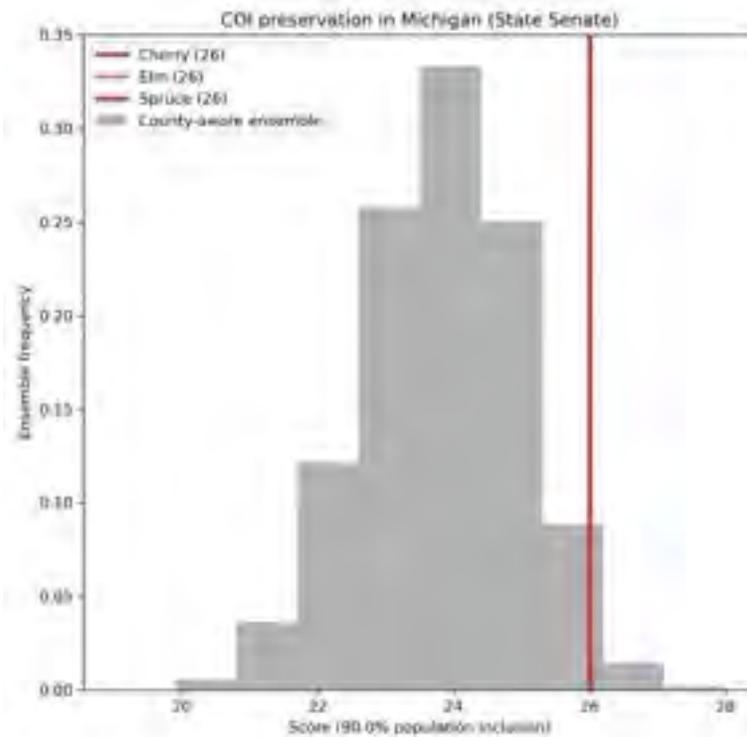


Figure 18. Community of Interest Preservation in State Senate Maps

CRITERION D: PARTISAN FAIRNESS

“Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.”

Understanding the Criterion.

See the discussion under Section III.2.D on the analysis of the Congressional district maps, verbatim.

Measures of partisan fairness.

D1. Partisan Bias.

D2. Efficiency Gap.

D3. Deviations from proportionality.

Measures D1-D3 are exactly as described in Section III.2.D.

D4. Median-Mean difference.

The median-mean is a measure of symmetry that captures how difficult it is for a party to obtain a majority of the delegation.⁴⁵ Suppose we order the districts from least to most Republican, by vote share in a previous election. The median-mean difference then compares the vote share in the average of the 19th and 20th most Republican districts (these two are the median districts in a map of 38 senatorial districts) to the statewide vote-share (the mean). If this number is positive, then the party can win nineteen seats (half of the Michigan Senate) even if it loses the vote statewide, and the magnitude of the median-mean difference shows by how much it can lose the statewide vote and still win nineteen seats and come closer to winning the 20th than to losing the 19th.

This measure is more informative for state legislatures, where winning the median district gives a party a majority.

D5. Lopsided Test.

Exactly as described in Section III.2.D.

D6. Partisan Advantage.

The Partisan Advantage is a measure of neutrality that computes how much the seat outcome deviates from a neutral benchmark based on the state’s map of jurisdictions (counties, cities and towns). This benchmark is the seat outcome in which seats are assigned to jurisdictions in proportion to their population.⁴⁶ The list of jurisdictions we use to compute the neutral benchmark for the redistricting plan for the Michigan Senate, contains the seventy-nine counties with population smaller than two ideal Senate districts (530,396 inhabitants). It also contains the largest cities and townships in the four counties with population greater than this threshold (Wayne, Oakland, Macomb and Kent), taking out from each county and adding to the list as many

⁴⁵ McDonald, Michael D., and Robin E. Best. "Unfair partisan gerrymanders in politics and law: A diagnostic applied to six cases." *Election Law Journal* 14.4 (2015): 312-330.

⁴⁶ Jon X. Eguia. "A measure of partisan fairness in redistricting." *Election Law Journal*, forthcoming.

of the largest cities and towns as needed until the rest of the county has fewer than 530,396 residents; this rest of the county is then also included in the list. For each jurisdiction in this list, the jurisdictional benchmark assigns seats in proportion to the population of the jurisdiction, to the party that won most votes in this jurisdiction. Aggregating by jurisdictions in this manner, the benchmark considers the geographic distribution of votes for each party across the state. The Partisan Advantage based on this jurisdictional benchmark is then the difference between the seats that a party obtains given the map, and the seats that it would obtain under this jurisdictional benchmark.

D7. Outlier test.

Exactly as described in Section III.2.D.

D8. Other measures.

We note here that other measures of partisan fairness, some capturing a notion of symmetry, and others capturing a notion of neutrality, are publicly available through the web redistricting app DRA 2020 at www.davesredistricting.org

For readers' convenience, we published the three Draft Senate maps in DRA 2020 under the names: "MICRC Plan Spruce", "MICRC Plan Elm" and "MICRC Plan Cherry". Under the "Advanced" tab, DRA 2020 displays several measures of partisan fairness, including variations of the ones we include in this report, for the Democratic Party. Included in their display is a votes-to-seats curve, mapping the Democratic seat share for any vote share. They also include a measure of Partisan Bias (D1), which they call "Seat Bias"; a measure of median-mean difference (D4), which they call "Votes Bias"; a measure of the Efficiency Gap (D2); and a measure of deviation from Proportionality (D3).

All these alternative measures are computed using a smoothing function of past election results: instead of recording whether a party lost or won a district as a binary 0 or 1 value, as in our report, the measures of DRA 2020 assign to the party a fraction between 0 and 1 of the seat in this district that is increasing in the party's vote share. The motivation is that DRA 2020 uses voting tallies in past elections not to determine what would have happened give those voting tallies under the new map (as we do in this report), but rather, to estimate what will probably happen in the future under the new maps. A narrow win in the past is then only a small indication that the party will win again in the future.

- - -

The election data that we use to compute the measures in this Section is again:

Michigan's 2018 Governor election; the 2018 Secretary of State election; the 2018 Attorney General election; the 2016 Presidential election; and the 2018 U.S. Senate election, are used by the MGGG lab to report results on Partisan Bias (D1), Efficiency Gap (D2), Deviations from Proportionality (D3), Median-Mean Difference (D4), and the Outlier test (D7). The 2014, 2016, 2018, and 2020 US House election, and the 2016 and 2020 US Presidential election, are used by Dr. Christian Cox from Yale University to compute the Lopsided Margins (D5) and the Partisan Advantage (D6). For all these measures, we compute results election by election, and then we average out. The Princeton Gerrymandering Project uses the 2018 Michigan Governor, 2020 U.S. Senate and 2020 U.S. Presidential election, first averaging them out to construct an electoral

composite in each precinct, and then using this composite to compute the results reported under the Outlier Test (D7).

DRA 2020 allows users to choose their preferred election data input to compute the measures described under D8.

Results.

We present the results on partisan fairness across all Draft maps for Michigan Senate districts in the following table. Each row indicates a redistricting plan. Each column indicates a measure of partisan fairness, from D1 to D7. Positive numbers indicate deviations from the fair ideal that favor the Republican Party, and negative values indicate deviations that favor the Democratic Party. Zero indicates perfect fairness according to each measure. The values of some measures are in seats; others are in percentage of the total number of votes. The “Outlier” (D7) indicates a party (“D” for Democratic or “R” for Republican) and a range of percentages. The letter indicates the party that this map favors, relative to the 1,000,000 other maps in the Princeton Gerrymandering Project ensemble. The first number is the share of maps in the ensemble that are less favorable to this party (in the sense that the party would obtain fewer seats), and the second is the share of maps that are even more favorable (in the sense that the party would obtain more seats).

TABLE 21. *Measures of Partisan Fairness for Senate District Plans*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Spruce	+5.3%	+3.0%	-0.3 seats	+3.0%	+5.4%	+0.4 seats	D: 85%-3%
Plan Elm	+5.3%	+3.1%	-0.3 seats	+3.5%	+5.2%	+0.2 seats	D: 85%-3%
Plan Cherry[*]	+2.7%	+2.5%	-0.5 seats	+2.8%	+4.5%	-0.3 seats	D: 97%-0%

[*] Recall that Plan Cherry is not a complete plan, as it fails to assign a district to each precinct. Results will change if Plan Cherry is remedied by assigning all precincts to become a complete redistricting plan.

Compare these results to the results on the measures of partisan fairness used by the Commission, as advised by Dr. Lisa Handley, displayed in the table below. The values below were obtained from a composite of all thirteen state-wide elections (Presidential, U.S. Senate, Governor, Secretary of State, and State Attorney General) from 2012 to 2020, and we report them here directly from the MICRC website.

TABLE 22. *Selection of Measures of Partisan Fairness Used by the Commission.*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Spruce	--	+3.1%	-0.3%	+2.7%	+4.0%	--	--
Plan Elm	--	+6.2%	+2.1%	+3.4%	+4.0%	--	--
Plan Cherry[*]	--	+3.4%	-0.3%	+2.2%	+4.1%	--	--

Once again, because the political geography of Michigan concentrates Democratic voters more than Republican voters, measures that seek symmetric outcomes (D1, D2, D4 and D5) for both parties detect that under these maps (just as under almost any other map), the GOP is favored. The measure that sets the advantage stemming from a favorable political geography aside and evaluates only the net partisan added effect of the maps (D6) shows that these maps are all very close to fair. And proportionality (D3) ends up close to fair again, through two opposing factors

that cancel out: proportionality requires winning parties to win smaller seat majorities that they typically do, and this effect favors the Democrats, just about cancelling the effect of political geography.

Figure 19 illustrates that these plans are more favorable to Democratic candidates than many other maps (Democratic candidates win one additional seat than under the average map), but with these election results, they are within the normal range, not extreme outliers. The public and computer ensembles both produce more maps that would favor Republicans more than these.

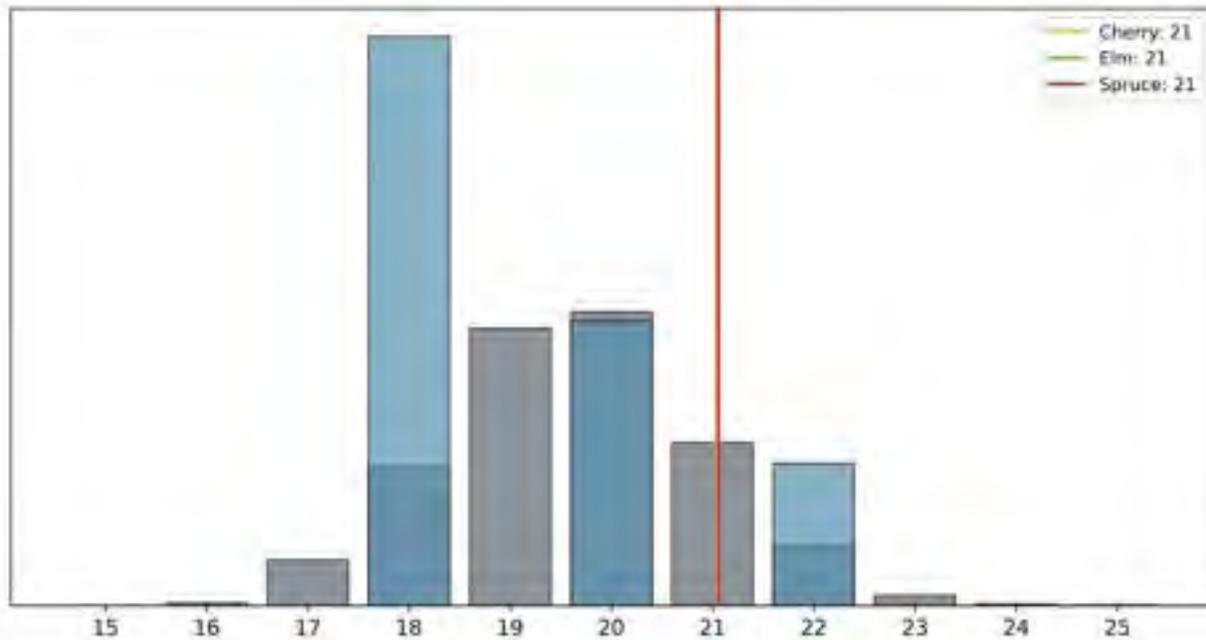


Figure 19. Number of Seats Democrats would Win with Senate 2018 Results

Figure 19 illustrates outcomes under one particular election result. Under other election results in our sample, Democratic candidates win an additional seat under Plan Cherry.

Overall, the Spruce and Elm plans are fair to parties. Their differences are small, and well within the range we would expect under typical maps that were not designed to favor or disfavor a party.

Plan Cherry introduces some questions: while it appears to favor Republicans on some measures, it also appears to be an unusual map in favor of Democrats according to the outlier test, as conducted by the Princeton Gerrymandering group.

CRITERION E: FAIRNESS TO CANDIDATES

“Districts shall not favor or disfavor an incumbent elected official or a candidate.”

Understanding the criterion.

See the discussion under Section III.2.E on the analysis of the Congressional district maps, verbatim.

Measures of fairness to candidates.

See the discussion under Section III.2.E on the analysis of the Congressional District maps. In addition, two considerations apply differently to candidates to the Michigan Senate.

The first is that, unlike Representatives to the U.S. House, incumbent Michigan senators who have already served two terms are term-limited; placing a term-limited incumbent in the same district as another incumbent does not pose an advantage or disadvantage to any candidate.⁴⁷ We can also test whether two (or more) non-term limited incumbents are placed in the same new district, assessing whether non-term-limited incumbents are treated differently than term-limited incumbents.

The second is that, unlike Representatives to the U.S. House, candidates for a seat in the Michigan Senate must be registered voters in the district they seek to represent.⁴⁸ Therefore, incumbents put in the same district cannot avoid facing each other simply by seeking to represent a different district.

Results.

The analysis on double-bunking (placing two incumbents in the same new district) can be seen in the histogram below. The Tree maps keep fewer districts from double bunking incumbents. Cherry, Spruce, and Elm maps each double bunk 6 incumbents. That is fewer than would be expected by chance and fewer than most publicly-generated maps.

⁴⁷ Mich. Constitution, Article IV § 54.

⁴⁸ Mich. Constitution, Article IV § 7.

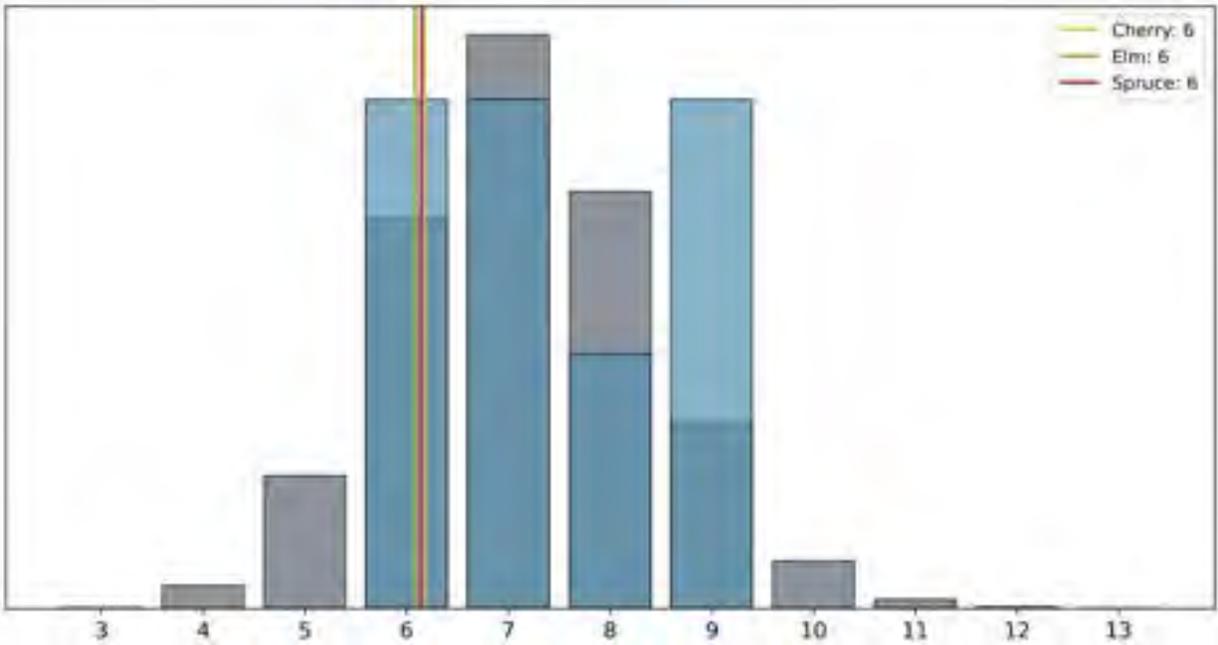


Figure 20. Double Bunked Incumbents in State Senate Maps

On competitiveness, plans Spruce, Elm and Cherry each have exactly six “swing” districts that have been won at least once by each of the two parties in a statewide election in 2016 or 2018. This is the average number of such districts in the Computer Ensemble.

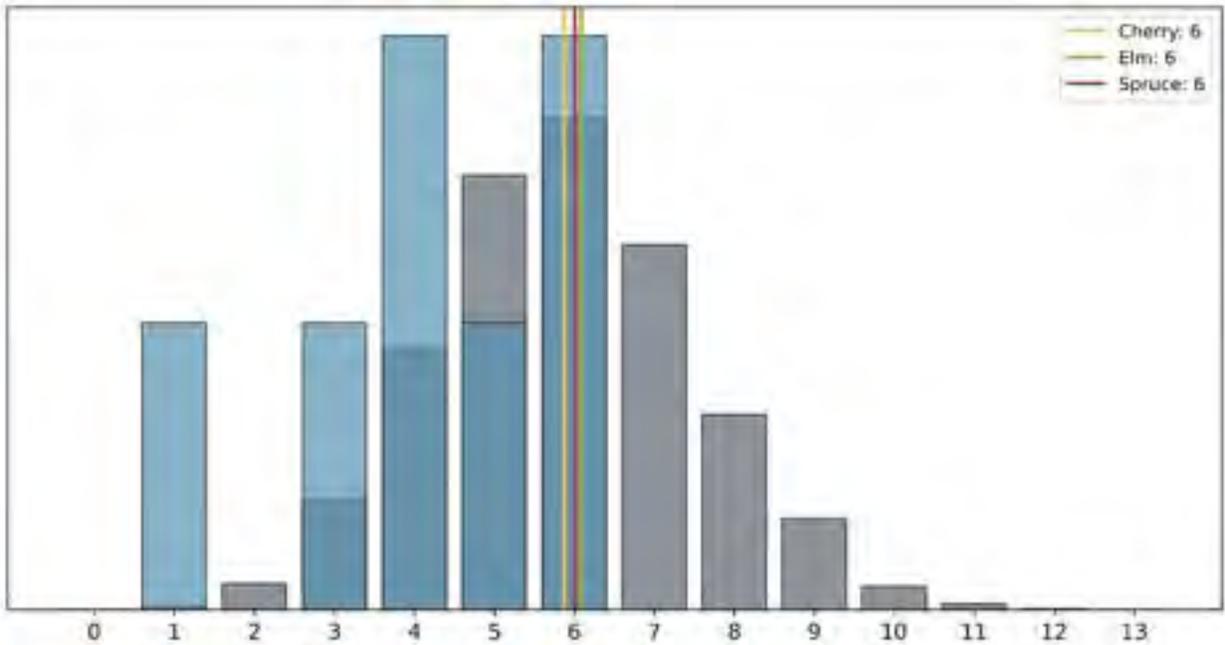


Figure 21. Number of Swing Senate Districts

CRITERION F: JURISDICTIONAL BOUNDARIES

“Districts shall reflect consideration of county, city, and township boundaries.”

Understanding the criterion.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Measures of respect of jurisdictional boundaries.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Results.

We present results on county splits.

	Split Counties	Number of Pieces
Plan Spruce	21	73
Plan Elm	21	73
Plan Cherry	25	84

Plan Cherry features more splits than plans Spruce or Elm. The number of splits in Plan Spruce and Plan Elm is larger than average, but still typical of maps in the Computational Ensemble, whereas the high number of splits in Plan Cherry is an outlier. These findings are illustrated in Figure 22. Note that the computer-generated plans are explicitly taking counties into consideration, so they succeed in limiting county splits more than the publicly-generated plans.

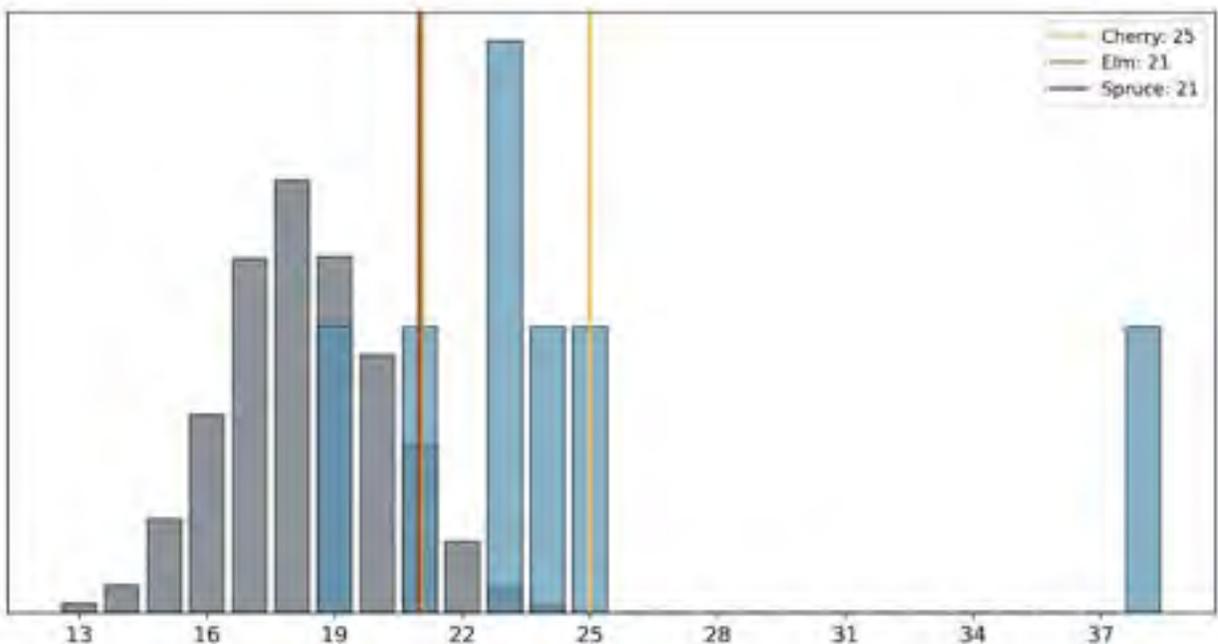


Figure 22. Split Counties in Senate Maps

As indicated by the histogram below, the Tree maps split municipalities far less than the computer-generated maps do and fewer than most publicly-drawn maps. Cherry splits 57 municipalities while Elm and Spruce split 53 each.

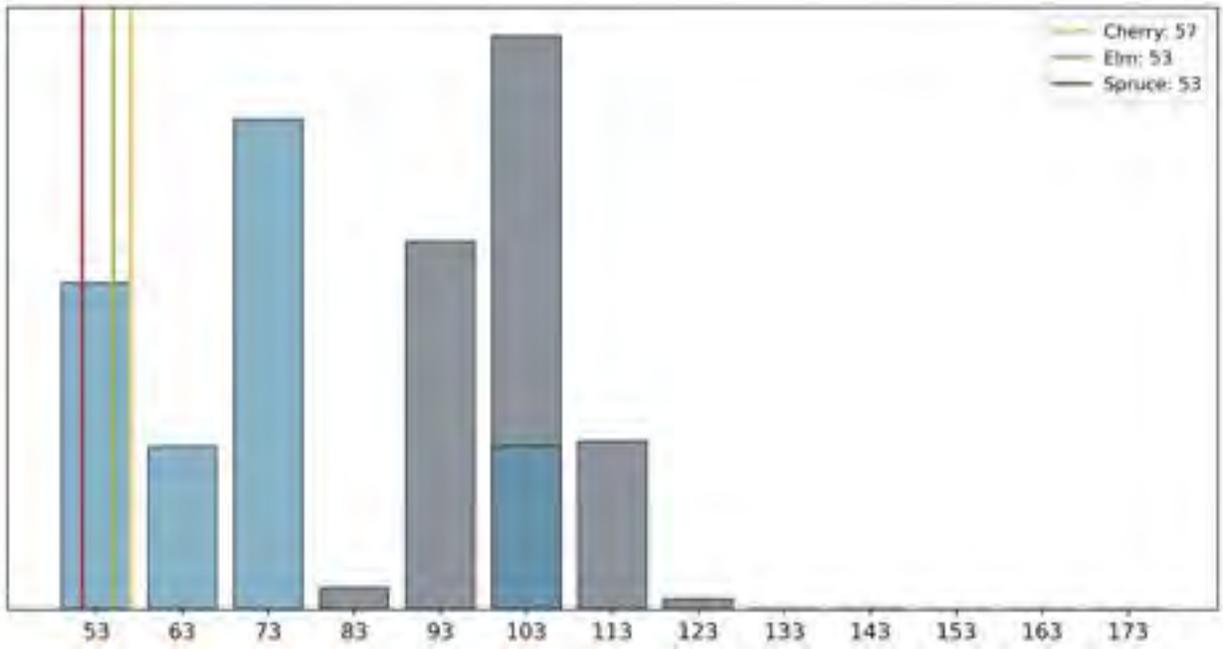


Figure 23. Number of Split Municipalities in State Senate Maps

CRITERION G: COMPACTNESS

“Districts shall be reasonably compact.”

Understanding the criterion.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Measures of compactness.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Results.

In the next table, for each redistricting plan in each row, we provide the Polsby-Popper, Reock and Cut Edges measures of compactness, respectively in columns 1, 2 and 3.

	Polsby-Popper	Reock	Cut Edges
Plan Spruce	0.40	0.39	1338
Plan Elm	0.41	0.39	1330
Plan Cherry	0.39	0.38	1335
2011 Official Map	0.39	0.40	n.a.

All three of these plans are similarly and reasonably compact, more so than more than half in the computational ensemble, as illustrated by Figure 24.

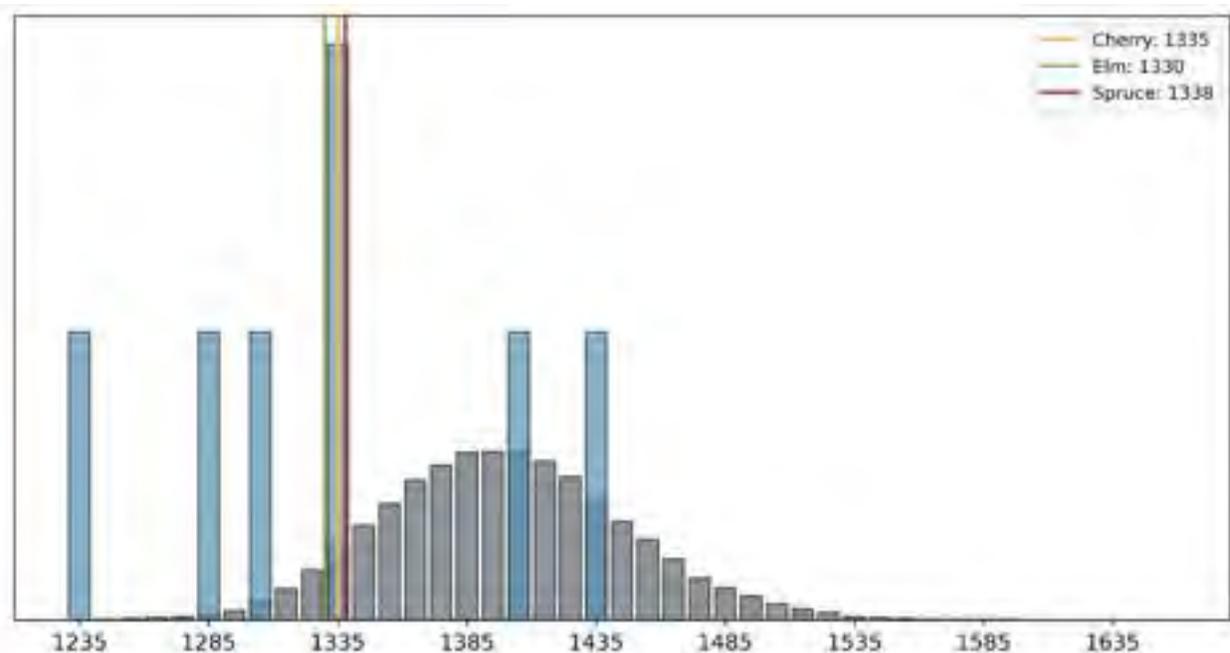


Figure 24. Number of Cut Edges in Senate District Plans

V.3. SUMMARY OF RESULTS

Plan Spruce appears to be the only complete Senate map. Plan Elm misses one U.S. Census block, with 13 residents unassigned to any district. Plan Cherry has a more major deficiency, leaving an entire precinct with more than 1,900 inhabitants unassigned to any district. These omissions are easy to fix. The omission in Plan Elm is easy to fix by assigning the omitted U.S. Census block to the district of adjacent blocks, which would not alter results in any meaningful way. The larger deficiency in Plan Cherry involves population close to 1% of that of a district, but the omitted precinct is surrounded by an underpopulated district that would remain underpopulated if this precinct were added to it. Therefore, Plan Cherry could be remedied as well by assigning the unassigned precinct to the district that surrounds it.

These three plans feature large deviations from population equality: more than 5% in all three plans, and more than 9% in Plan Spruce and Plan Elm.

All three of these plans feature three districts with more than 40% of their Voting Age Population identifying as “Black”, and six with more than 35%, but none feature a district with a majority of the VAP identifying as “Black” (the previous plan featured two). This absence of majority-Black districts is their most striking feature. It is achieved by breaking apart the large concentration of Black voters in the City of Detroit and reconfiguring them in thin North-South strip districts (numbers 5, 6, 7 and 8) that radiate northbound beyond the city limits and across county boundaries into suburban and mostly non-Black Macomb and Oakland counties.

All three plans satisfy contiguity.

It is unclear how the districts in these plans — and in particular the cross-county North-South strip districts 5, 6, 7 and 8 — reflect Communities of Interest in the state of Michigan. Multiple small communities of Interest may be contained within these districts, even if they do not reflect county geography and did not request to be districted together, but they have not been fully specified. The maps reflect more Community of Interest clusters than computer-generated maps.

All three plans perform well overall according to a collection of accepted measures of partisan fairness.⁴⁹ Plan Cherry is the most favorable to Democratic candidates, but the differences between the three plans are small, amounting to less than a seat on average.

While the exact boundaries vary, these three plans are very similar, offering variations on the same scheme, rather than three truly distinct plans.

These plans feature a standard number of seats that change hands across elections.

Plan Cherry fails to reflect consideration of county boundaries, while Plan Spruce and Plan Elm perform not as poorly in this regard. All three plans are compact.

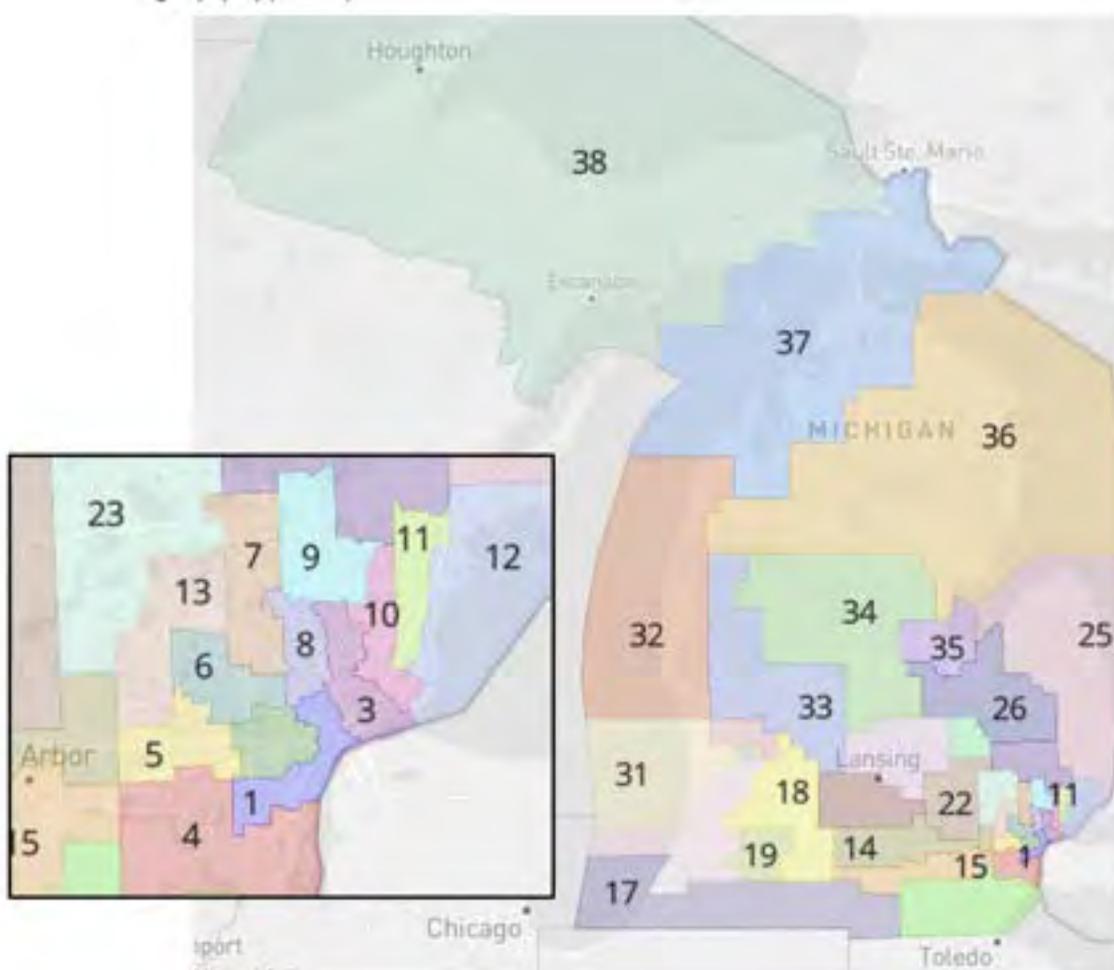
⁴⁹ The plans do not perform well on each individual measure. It is impossible to score well on all at the same time, as different measures have conflicting demands. We mean that, overall, taking their scores across all measures, the maps perform well on this criterion.

PART VI. ANALYSIS OF PROPOSED MAPS FOR MICHIGAN’S SENATE DISTRICTS

VI.1. THE PROPOSED MICHIGAN SENATE DISTRICT MAPS

On Nov. 1, 2017 the MICRC approved the following Proposed map for Michigan Senate districts for consideration in the final round of public hearings now set for (Nov 15 – Dec 29, 2021):⁵⁰

-Plan Cherry V2 (map number #251). Voted for publication 11-2 (Commissioners Kellom (D) and Lange (R) opposed).

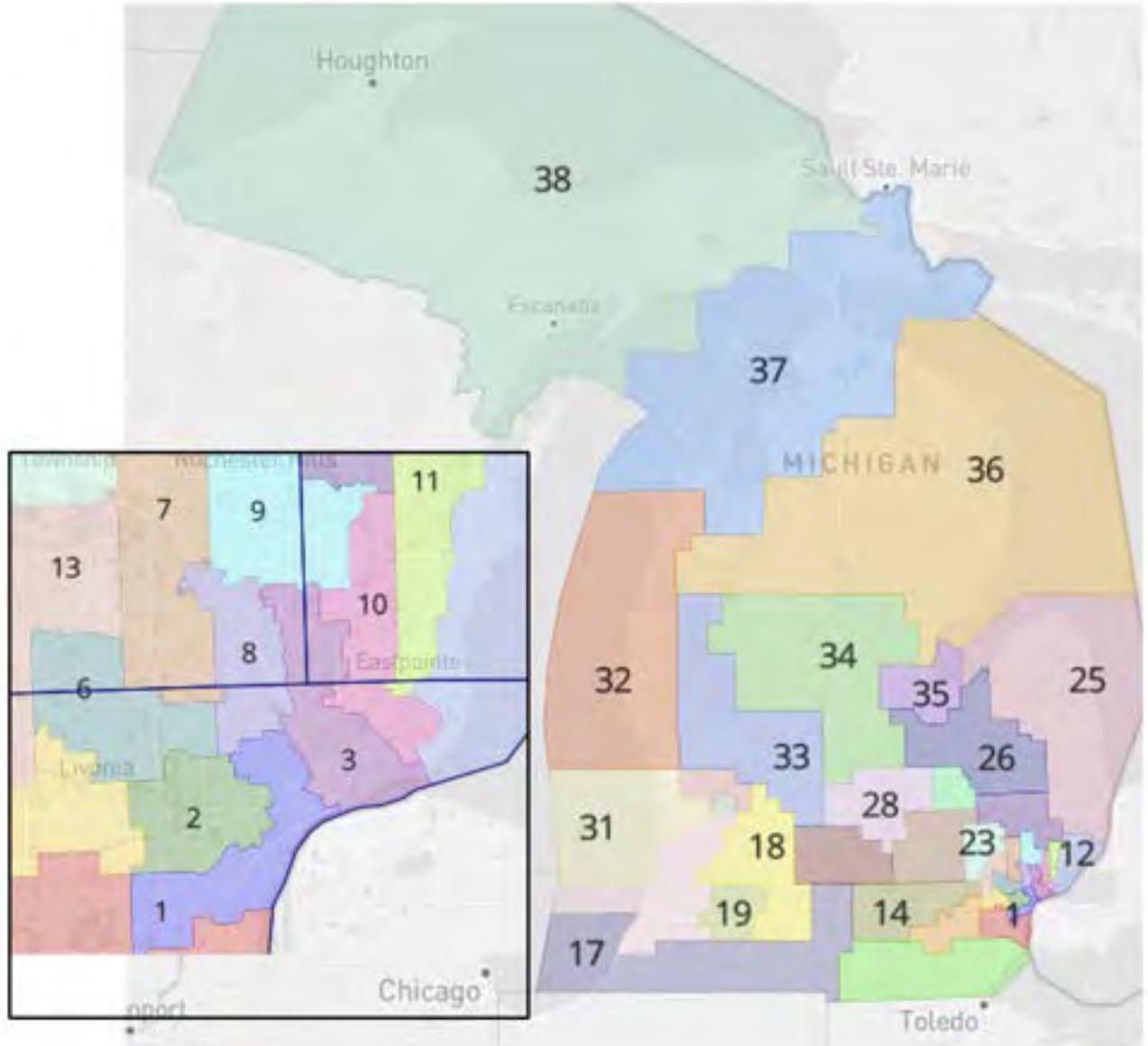


Plan Cherry V2

⁵⁰ These maps are available for download here:
https://michigan.mydistricting.com/legdistricting/michigan/comment_links

On Nov. 4, 2021, the MICRC approved the following Proposed maps for Michigan Senate districts to be forwarded for what is expected to be the final round of Public Hearings now scheduled for Nov 15 – Dec 29, 2021):⁵¹

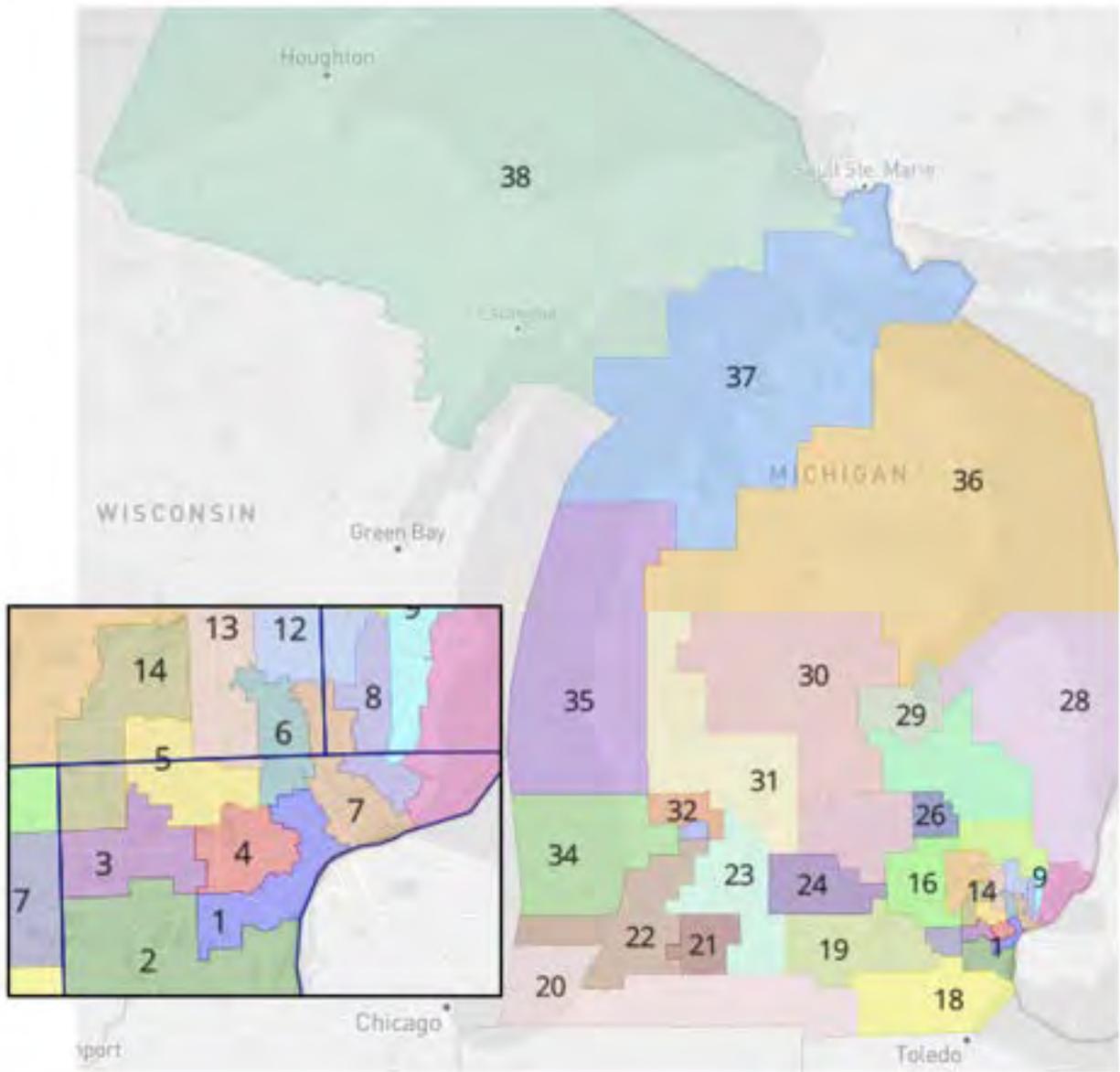
-Plan Linden (map number #260), voted 11-2 for publication. Opposed: Commissioners: Lange (R) and Wagner (R).



Plan Linden

⁵¹ These maps are available for download here: https://michigan.mydistricting.com/legdistricting/michigan/comment_links
MICHIGAN REDISTRICTING

-Plan Palm (map number #261). Voted 8-5 for publication. Opposed: Commissioners Eid (I), Kellom (D), Szetela (I), Valette (I), and Witges (D).



Plan Palm

VI.2. MEASURING PERFORMANCE ON EACH CRITERIA

CRITERION A: POPULATION BALANCE AND VOTING RIGHTS ACT

“Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

Understanding the Criterion.

With regard to population equality, we refer to the discussion under Section V.2.A.

With regard to the Voting Rights Act, we refer to the discussion of Criterion A under Section III.2. for the Congressional maps.

Measures of performance on Criterion A.

A1. Measure of population inequality.

We compute the difference between the most and least populous district, using the formula:

$$\frac{\text{Population of most populous district}}{\text{Population of least populous district}} - 1,$$

in percentage points.

For convenience, we also report the largest deviation to the ideal population size of a district, namely,

$$\frac{\text{Population of most populous district}}{265,193} - 1,$$

again, in percentage points.

If the difference between the most and least populous district surpasses 1%, we also compare the average population of districts won by Democratic Party candidates to the average population of districts won by Republican Party candidates, in all U.S. Presidential or Michigan Senate elections from 2014 to 2020 (namely, the 2016 and 2020 Presidential elections, and the 2014 and 2018 Michigan Senate elections). This is a measure of partisan malapportionment.

A2. Number of Districts of Opportunity.

As discussed in Section III.2.A2 with regard to the application of the Voting Rights Act to Congressional district maps, we seek to compute the number of districts of opportunity for ethnic and linguistic minorities. We can then compare this number to the proportion of minority population. For instance, the “Black Alone” population is 13.7% of the Michigan population (with a percentage as high as 37.6% in Wayne Co.), a statewide percentage that corresponds to at least five senatorial districts. Further, 5.6% of the Michigan population is Hispanic or Latino community, a percentage that corresponds to two senatorial districts (though in this case the highest concentration by county is 15.4% in Oceana Co.); and 3.3% of the state population is Asian-American (with 9% in Washtenaw Co.), a percentage that corresponds to one senatorial district.

We can also compare the number of opportunity districts for the black minority to the number of such opportunity districts in the previous redistricting plan. We refer to the report “determining if a redistricting plan complies with the Voting Rights Act” by Dr. Lisa Handley, presented to the

MICRC. If Dr. Handley’s estimates are correct, any 40% Black district is a district of opportunity and will elect candidates preferred by the Black minority.

If so, there were three (or six at the lower threshold of 35%) Black districts of opportunity in the previous redistricting plan.

So, the measure we report is:

- Number of districts with >50% of their voting age population identifying as Black.
- Number of districts with >40% of their voting age population identifying as Black.
- Number of districts with >35% of their voting age population identifying as Black.

We compare these measures to the number of districts (five) proportional to the Black population in the state, and to the number of districts with these percentages of Black voting age population in the previous Congressional Districts plan (two, five and six).

We do not find a sufficient geographic concentration of Hispanic or Latino, or other minorities, in any county, to constitute a majority in a geographically compact district.

Results.

We present the results on Population Equality in the following table. Each row indicates a redistricting plan for MI Senate districts. The first column reports the population difference between the most and the least populated district. The second column reports the maximum deviation from the ideal district population. And the third column reports the partisan malapportionment measure, with a result bigger than zero meaning that districts won by Democrats have more population (which indicates an advantage to the Republican Party), and thus negative numbers indicating that districts won by Republicans have more population (which indicates an advantage to the Democratic Party).

	Pop. difference	Max. deviation	Partisan malapportion.
Plan Cherry V2	4.91%	2.96%	-0.06%
Plan Linden	4.91%	2.96%	-0.13%
Plan Palm	5.00%	2.46%	-0.08%

These deviations are within the range that is acceptable for state legislative districts under the U.S. Constitution.

We report the number of districts in which more than 50%, more than 40%, and more than 35% of the Voting Age Population identifies as “Black” or “African-American” (alone), as computed by the MGGG Lab (with official map current numbers from IPUMS, not at the time of adoption). These numbers serve as proxy for the number of Black-minority districts of opportunity.

	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Cherry V2	0	4	5
Plan Linden	0	4	5
Plan Palm	0	4	5
2011 Official map	1	5	5
Proportional to Pop.		5	

As in the case of the congressional maps, the most striking result is that no majority-minority district survives in any of these three proposed plans. The following graph shows the Black share of the Voting Age Population in each district. Districts are ordered from lowest to highest Black share (that is, the labels in the horizontal axis are not the district number in the Plan; rather, they should be interpreted as lower Black VAP share all the way to the district with the highest Black VAP share (38). The colored dots represent each map. The boxes represent the typical Black VAP shares in maps in the Computational Ensemble, and the arms stretching out of the boxes represent the Black VAP share at unusual maps such that only 2.5% of maps have shares above or below the range covered by the arms.

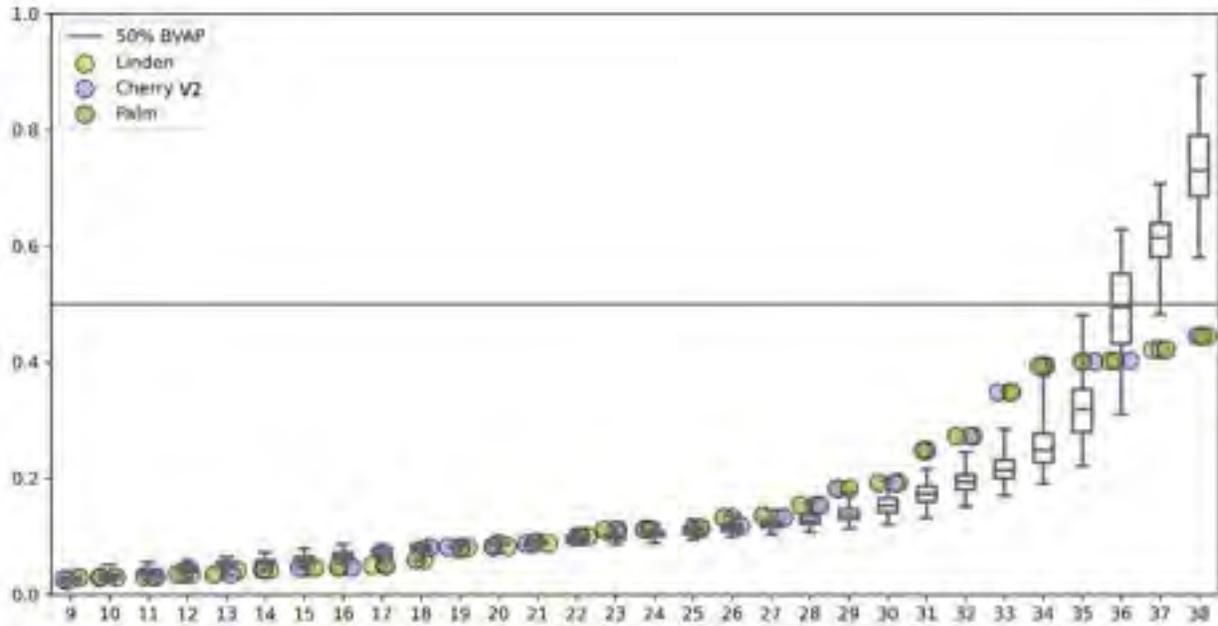


Figure 25. Distribution of Black VAP by Senate District

As we can see, these three Senate plans are unusual in engineering maps without a single majority-Black district. Almost all Senate maps in the Computer Ensemble feature two majority-Black districts; and half feature three. These maps appear to deliberately dilute concentrations of Black voting age population above 50%, to create instead as many districts as possible in which the Black vote constitutes a large minority above 35%. All three of these plans generate five such districts with a large Black minority.

The large distance between the dots representing these three plans, and the arms of the boxes representing the computer-generated plans imply that the probability that plans like these without a Black-majority district arise by chance are remote. Rather, these plans' outcome with no majority-Black district, and twice as many districts with a large minority of Black voters as in most other plans, is attained by design, following the advice to the Commission formulated by its VRA Legal Counsel and its VRA Consultant.

This strategy toward compliance with the VRA is inherited from Draft Plan Cherry, and it received ample criticism during the second round of public hearings earlier this fall from Black community members and elected representatives in the city of Detroit. Our initial report released on Oct. 18,

2021, and its sentiment echoed by Voters Not Politicians, recommended that the Commission reassess this strategy. On Oct. 20, the Michigan Department of Civil Rights, through its director, declared that these districts “*violate federal civil rights law*” and “*dilute majority-minority districts and strip the ability for a minority voter to elect legislators who reflect their community.*”⁵²

Subsequently, and at the intense urging of Detroit commissioner Kellom, the Commission abandoned this strategy in its revision of its House plans that led to developing Proposed House Plan Magnolia. In the discussion associated with this revision of House plans, some commissioners questioned whether the VRA allows for majority-Black districts; this doubt could explain why the Commission would adhere to plans with no such districts. The Commission’s VRA legal counsel resolved this doubt, explaining that districts with a Black majority drawn are allowed under the VRA if they are drawn to respect neighborhoods or communities, and not to concentrate minority voters in a district in order to reduce their influence in adjacent districts (i.e. “packing”). The revision of House plans thus proceeded apace, leading to the inclusion of several Black-majority districts in Proposed Plan Pine V5, Proposed Plan Hickory, and Proposed Plan Magnolia for the state House.

However, even after the Commission clarified that majority-minority districts constructed to reflect communities of interest are consistent with the VRA, the Commission did not conduct a revision of state Senate maps analogous to the one it conducted in the state House maps.

The racial composition of districts in Proposed plans Cherry V2, Linden and Palm are very similar to each other and to the results in the original Draft map Cherry from which all three are derived. Minor adjustments to better preserve some neighborhood boundaries in the city of Detroit lead only to small changes in the racial composition of districts.

⁵² Clara Hendrickson. “Redistricting commission told its draft maps violate federal Voting Rights Act.” *Detroit Free Press*, Oct. 20, 2021.

CRITERION B: CONTIGUITY

“Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.”

Understanding the Criterion.

See the discussion under Section III.2.B on the analysis of Congressional Districts.

Measure of Contiguity.

We report a binary “Yes” or “No” for whether a plan satisfies the stricter definition of contiguity, satisfying rook contiguity with islands attached to the land at the nearest point in the county of which they are a part of.

Results.

All three proposed Michigan Senate maps satisfy contiguity.

	Are all districts contiguous?
Plan Cherry V2	Yes
Plan Linden	Yes
Plan Palm	Yes

CRITERION C: COMMUNITIES OF INTEREST

“Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.”

Understanding the Criterion.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Measure of Respect for Communities of Interest.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Results.

Each proposed map preserves 24 or 25 COI clusters, based on the 90 percent inclusion criteria (either the COI cluster is 90 percent within a district or a district is 90 percent within the COI cluster). In this case, most COIs are preserved by having districts within them because most are large. The results are similar to the computer-generated maps, which were not designed to preserve COIs but were designed to try to preserve counties. This does not show much Commission effort to preserve COI clusters, with little variation across plans.

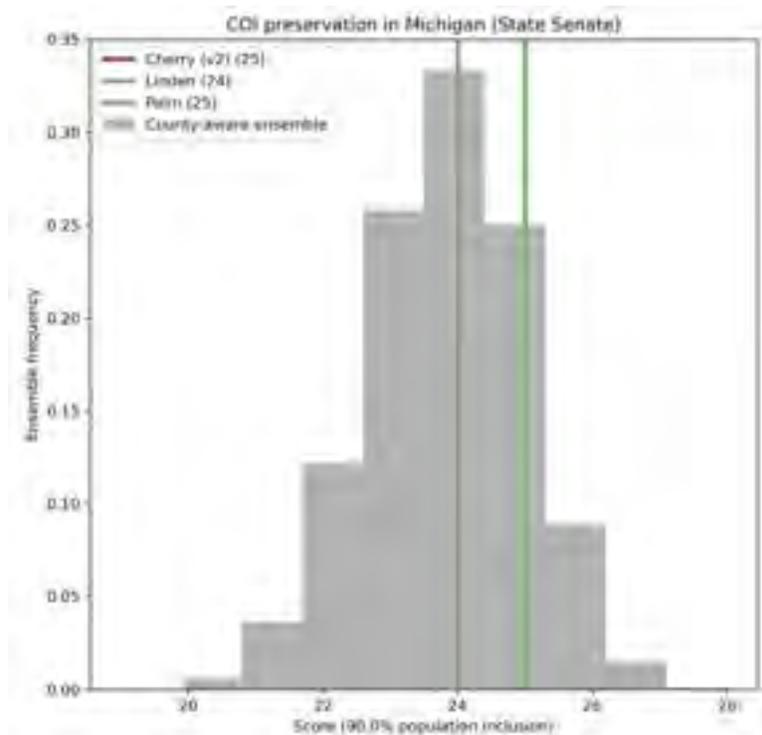


Figure 26. Community of Interest Preservation in State Senate Maps

CRITERION D: PARTISAN FAIRNESS

“Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.”

Understanding the Criterion.

See the discussion under Section III.2.D on the analysis of the Congressional District maps, verbatim.

Measures of partisan fairness.

D1. Partisan Bias.

D2. Efficiency Gap.

D3. Deviations from proportionality.

Measures D1-D3 are exactly as described in Section III.2.D.

D4. Median-Mean difference.

Measure D4 is exactly as described in Section V.2.D on the Draft maps for state Senate districts.

D5. Lopsided Test.

Exactly as described in Section III.2.D.

D6. Partisan Advantage.

Exactly as described in Section V.2.D.

D7. Outlier test.

Exactly as described in Section III.2.D.

D8. Other measures.

We note here that other measures of partisan fairness, some capturing a notion of symmetry, and others capturing a notion of neutrality, are publicly available through the web redistricting app DRA 2020 at www.davesredistricting.org

For readers' convenience, we published the three Proposed Senate maps in DRA 2020 under the names: "SD Cherry V2", "SD Linden" and "SD Palm". Under the "Advanced" tab, DRA 2020 displays several measures of partisan fairness, including variations of the ones we include in this report, for the Democratic Party. Included in their display is a votes-to-seats curve, mapping the Democratic seat share for any vote share. They also include a measure of Partisan Bias (D1), which they call "Seat Bias"; a measure of median-mean difference (D4), which they call "Votes Bias"; a measure of the Efficiency Gap (D2); and a measure of deviation from Proportionality (D3).

All these alternative measures are computed using a smoothing function of past election results: instead of recording whether a party lost or won a district as a binary 0 or 1 value, as in our report, the measures of DRA 2020 assign to the party a fraction between 0 and 1 of the seat in this district that is increasing in the party's vote share. The motivation is that DRA 2020 uses voting tallies in past elections not to determine what would have happened give those voting tallies under the new map (as we do in this report), but rather, to estimate what will probably happen in the future

under the new maps. A narrow win in the past is then only a small indication that the party will win again in the future.

- - -

The election data that we use to compute the measures in this Section is again:

The 2018 Governor election; the 2018 Secretary of State election; the 2018 Attorney General election; the 2016 Presidential election; and the 2018 U.S. Senate election as they are used by the MGGG lab to report results on Partisan Bias (D1), Efficiency Gap (D2), Deviations from Proportionality (D3), Median-Mean Difference (D4), and the Outlier test (D7). The 2014, 2016, 2018, and 2020 US House election, and the 2016 and 2020 US Presidential election, are used by Dr. Christian Cox from Yale University to compute the Lopsided Margins (D5) and the Partisan Advantage (D6). For all these measures, we first compute results election by election, and second, calculate averages. The Princeton Gerrymandering Project uses the 2018 Michigan Governor, 2020 U.S. Senate and 2020 U.S. Presidential elections, first averaging them to construct an electoral composite in each precinct, and then using this composite to compute the results reported under the Outlier Test (D7).

DRA 2020 allows users to choose their preferred election data input to compute the measures described under D8.

Results.

We present the results on partisan fairness across all Proposed maps for Michigan Senate districts in the following table. Each row indicates a redistricting plan. Each column indicates a measure of partisan fairness, from D1 to D7. Positive numbers indicate deviations from the fair ideal that favor the Republican Party, and negative values indicate deviations that favor the Democratic Party. Zero indicates perfect fairness according to each measure. The values of some measures are in seats; others are in percentage of the total number of votes. The “Outlier” (D7) indicates a party (“D” for Democratic or “R” for Republican) and a range of percentages. The letter indicates the party that this map favors, relative to the one million other maps in the Princeton Gerrymandering Project ensemble. The first number is the share of maps in the ensemble that are less favorable to this party (in the sense that the party would obtain fewer seats), and the second is the share of maps that are even more favorable (in the sense that the party would obtain more seats).

TABLE 28. Measures of Partisan Fairness for Senate District Plans							
	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Cherry V2	+1.0 seat	+1.5%	-0.92 seats	+1.9%	+3.5%	-1.1 seats	D: 99.8% -0.0%
Plan Linden	+1.0 seat	+1.4%	-0.92 seats	+1.9%	+3.5%	-1.1 seats	D: 97% - 0.0%
Plan Palm	+2.0 seats	+4.2%	+0.08 seats	+3.1%	+4.9%	-0.1 seats	D: 85% - 3%

Compare these results to the results on the measures of partisan fairness used by the Commission, as advised by Dr. Lisa Handley, displayed in the table below. The values below were obtained from a composite of all 13 statewide elections (Presidential, U.S. Senate, Governor, Secretary of State, and State Attorney General) from 2012 to 2020, and we report them here directly from the MICRC website.

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Cherry V2	--	+3.4%	-0.3%	+1.2%	+4.6%	--	--
Plan Linden	--	+3.3%	-0.3%	+1.2%	+4.5%	--	--
Plan Palm	--	+6.2%	+2.3%	+3.2%	+5.7%	--	--

Once again, because the political geography of Michigan concentrates Democratic voters more than Republican voters, measures that seek symmetric outcomes (D1, D2, D4 and D5) for both parties detect that under these maps (just as under almost any other map), the GOP is favored. The measure that sets the advantage stemming from a favorable political geography aside and evaluates only the net partisan added effect of the maps (D6) shows that these maps are close to fair. And proportionality (D3) ends up close to fair again, through two opposing factors that cancel out: proportionality requires winning parties to win smaller seat majorities that they typically do, just about cancelling the effect of political geography.

Figure 27 illustrates that these plans are more favorable to Democratic candidates than many other maps. Compare Figure 27 to Section V.2D, which showed the same figure for the Draft. Under Proposed Plan Palm, Democratic candidates win one seat more than under the average map, which is within the normal range, not an outlier. But under Proposed Plan Cherry V2 or Plan Linden, they win two seats more than under the average map.

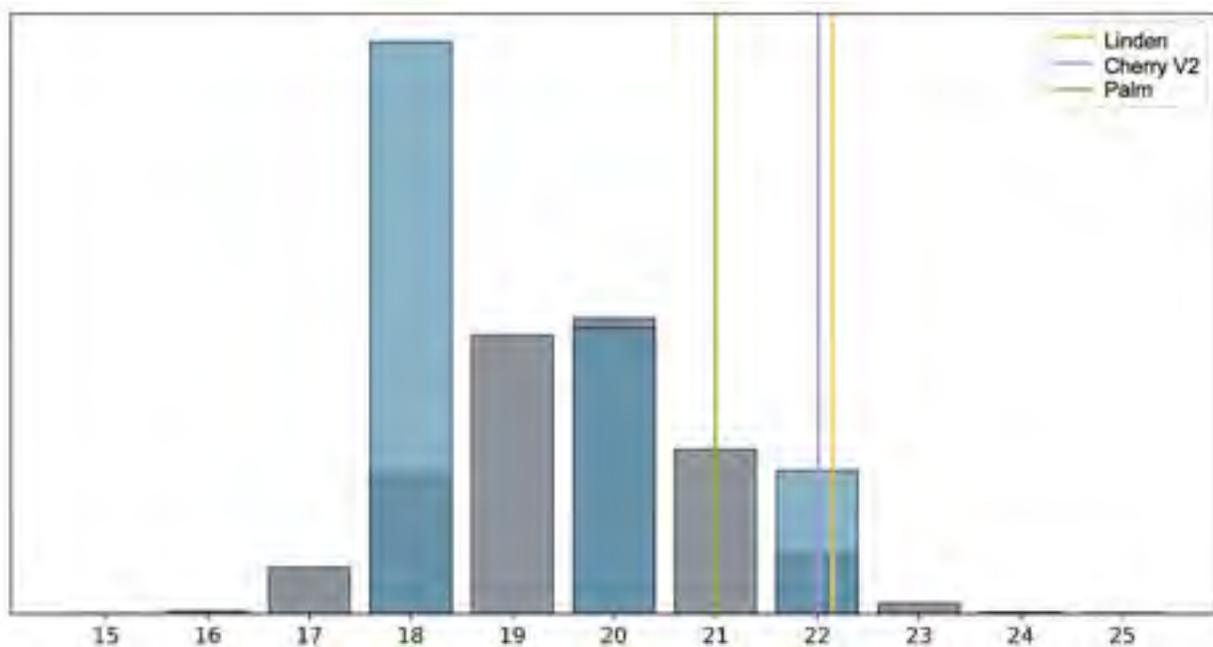


Figure 27. Number of Seats Democrats would Win with Senate 2018 Results

This is not a fluke from this particular election. Take instead the independent results with the Princeton computer ensemble (one million maps) and the Princeton election composite (the average of the 2020 Presidential, 2020 U.S. Senate in Michigan, and 2018 Governor elections).

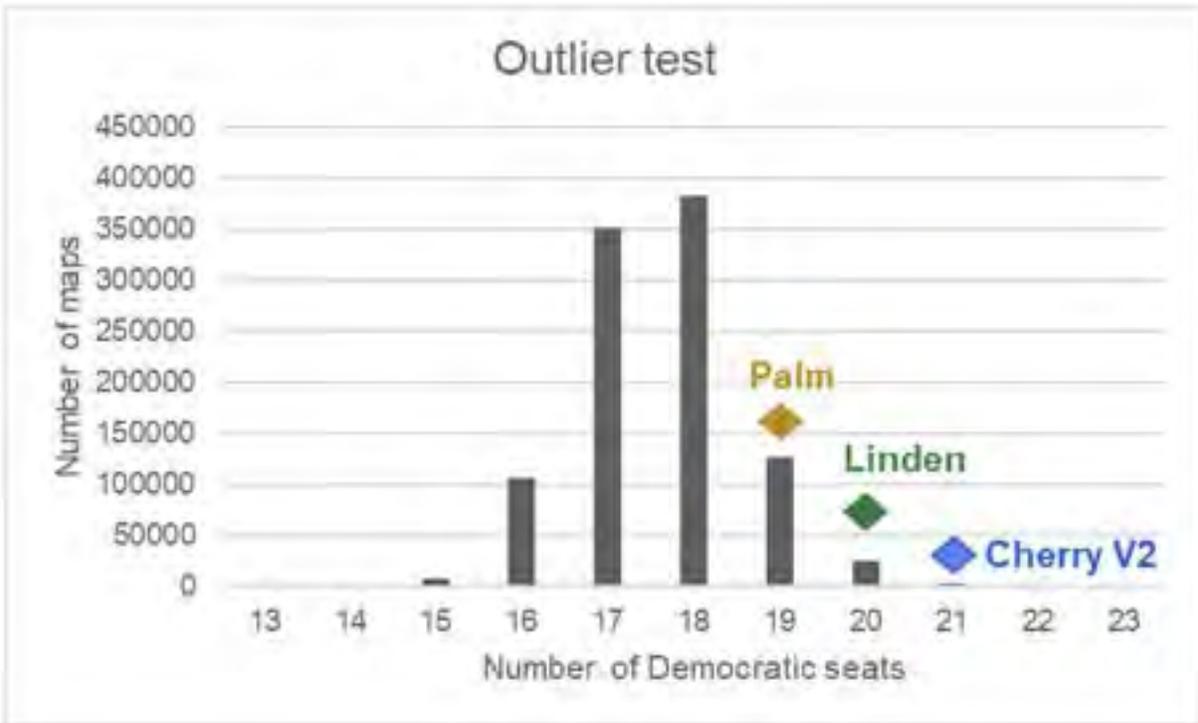


Figure 18. Democratic Seats with Princeton Composite Election Results.

Once again, Proposed Plan Palm appears within range of computer-generated maps, but Proposed Plan Linden and Proposed Plan Cherry V2 become outliers that give more seats to Democrats than almost any other map. It is easy to see why: Proposed Plans Cherry V2 and Linden split a potential Democratic district in Ann Arbor into two urban-rural districts for a partisan gain of one seat to Democrats. Proposed Cherry V2 creates two, four-county districts heading west from the city. Linden creates two, more compact two-county districts.

Proposed Plan Cherry V2 and Proposed Plan Linden’s appearance may make them susceptible to legal claims on grounds of inadmissible partisan intent and partisan outcome. We do not venture a prediction as to how courts would view such claims, since under other measures of partisan fairness neither Proposed Plan Cherry V2 nor Proposed Plan Linden favor Democrats enough. If courts consider measures of symmetry, concerns about neutrality could be mitigated. In prior cases, criticized maps often scored poorly on both symmetry and neutrality, meaning they did not raise the trade-off between an intent to improve symmetry by drawing maps that would be unlikely to be drawn without partisan intent. We note that the Michigan Constitution states that the advantage to a political party shall be determined using “*accepted measures of partisan fairness*,” and under one such measure -- the outlier test -- that Courts have deemed acceptable, these maps are more favorable to Democrats.

We also note that it is possible to draw maps (such as Plan Spruce and Plan Elm among the Draft plans) that fall within the normal range in all measures. Such maps could favor Democrats in some measures, and Republicans by other measures, but always in small to moderate amounts. Proposed Plan Cherry V2 and Plan Linden instead move toward symmetry at the cost of neutrality.

CRITERION E: FAIRNESS TO CANDIDATES

“Districts shall not favor or disfavor an incumbent elected official or a candidate.”

Understanding the criterion.

See the discussion under Section III.2.E on the analysis of the Congressional district maps, verbatim.

Measures of fairness to candidates.

We refer to the discussion under Section V.2.E on the analysis of the Draft state Senate maps.

Results.

We present first results on double-bunking, i.e. assigning two incumbents to the same district. We report two numbers. The first considers all incumbents and uses addresses from the 2020 Michigan Candidate Listing file made public by the MI Secretary of State. With this data, the typical range in the computational ensemble is from 5 to 9, and in the public ensemble, from 6 to 9, so these three maps all fall within these ranges.

Plan Cherry V2	7 [4]
Plan Linden	6 [4]
Plan Palm	6 [4]

However, many incumbents are term-limited, and cannot run again, so placing them in the same district with another incumbent is irrelevant. The second number, in brackets, considers only incumbents who are not term-limited, and uses addresses obtained from the Michigan Voter file by Mike Wilkinson for Bridge Michigan.⁵³

On competitiveness, if we define a “competitive district” as one that each of the two parties won in at least one of the five elections in the MGGG data set (namely, the 2018 Senate, Governor, Secretary of State, and Attorney General elections, and the 2016 Presidential election), then all three Proposed Senate plans feature five such districts, close to the middle of the range of the computational ensemble (among those maps, most feature between three and nine competitive districts, with the most frequent result being six).

Proposed Plans Cherry V2 and Linden feature 23 election results decided by a less than 6% margin, from among 190 total election results (five elections in each of 38 districts). Proposed Plan Palm features 26 competitive districts, more in line with what is typical of maps in the Computational Ensemble.

⁵³ Sergio Martinez-Beltrán and Mike Wilkinson, “Redistricting may oust half of incumbents in Michigan, analysis finds”, November 23, 2021, Bridge Michigan.

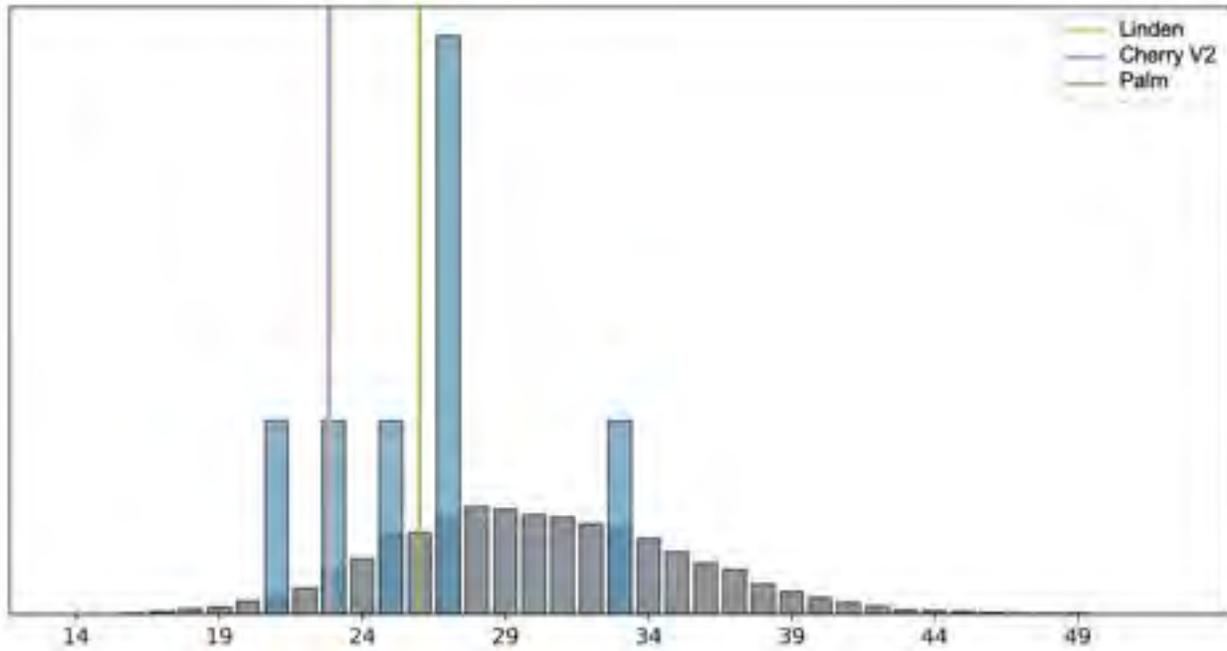


Figure 29. Number of Elections within 6% Margin, Senate Maps

CRITERION F: JURISDICTIONAL BOUNDARIES

“Districts shall reflect consideration of county, city, and township boundaries.”

Understanding the criterion.

See the discussion under Section III.2.F on the analysis of the Congressional District maps, verbatim.

Measures of respect of jurisdictional boundaries.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Results.

We first present the results in table format.

	Split Counties	County Pieces	Split Municipalities	Municipality Pieces
Plan Cherry V2	28	92	65	154
Plan Linden	31	95	61	146
Plan Palm	27	90	59	142

Proposed Plan Palm features fewer splits than Proposed Plan Cherry V2 or Proposed Plan Linden. All three plans are variations on the original Draft Plan Cherry, but Proposed Plan Palm keeps Ann Arbor whole. The original Proposed Plan Cherry splits 25 counties. Proposed Plan Cherry V2 and Proposed Plan Linden split Ann Arbor into two cross-county districts.

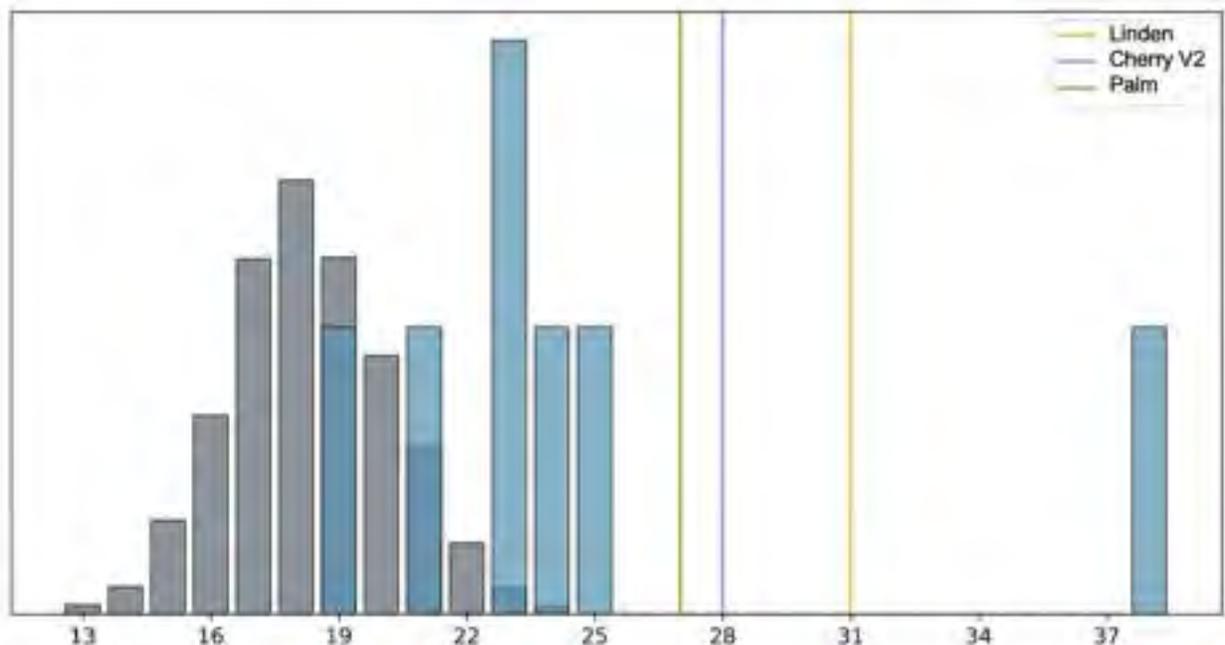


Figure 30. Split Counties in Proposed Senate Maps

CRITERION G: COMPACTNESS

“Districts shall be reasonably compact.”

Understanding the criterion.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Measures of compactness.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Results.

In the next table, for each redistricting plan in each row, we provide the Polsby-Popper, Reock and Cut Edges measures of compactness, respectively in columns 1, 2 and 3.

	Polsby-Popper	Reock	Cut Edges (fewer is better)
Plan Cherry V2	0.40	0.38	1368
Plan Linden	0.40	0.39	1353
Plan Palm	0.41	0.40	1319
2011 Official Map	0.39	0.40	n.a.

All three of these plans are reasonably compact. Plan Palm is more so.

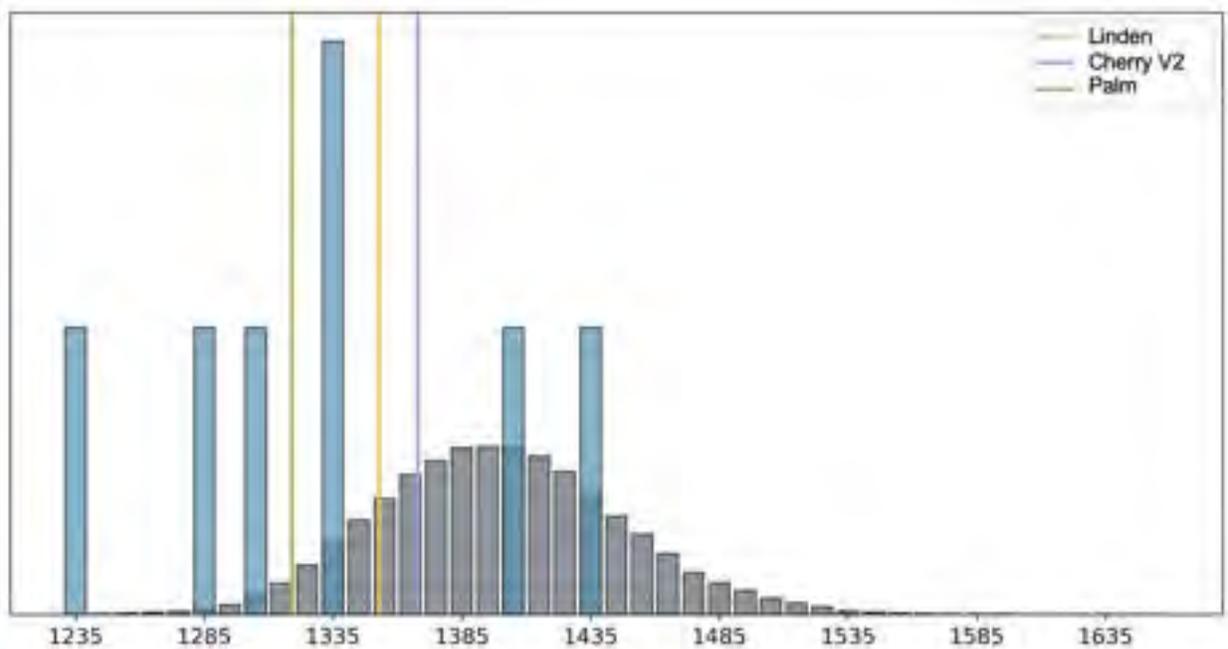


Figure 31. Number of Cut Edges in Proposed Senate District Plans

VI.3. SUMMARY OF RESULTS

Proposed Plan Cherry V2, Plan Linden, and Plan Palm are all complete redistricting plans that divide the entire state into 38 contiguous districts. All three stem from the Draft Plan Cherry, offering three different configurations for the City of Ann Arbor and its surrounding area: Plan Palm would keep the City of Ann Arbor whole in a district; while Plan Linden would split it into two two-county urban-rural districts, and Plan Cherry V2 would split it into two, four-county East-West rural-urban strips, with adjustments reverberating into nearby districts and counties. They are otherwise very similar to each other, and to their common predecessor Draft Plan Cherry, with many district boundaries common to all four plans.

All three of these plans feature large deviations from population equality, between 4.9% and 5%, or between 12,600 and 13,000 inhabitants.

All three follow the same strategy toward compliance with the VRA, inherited from Draft Plan Cherry: they feature four districts with more than 40% of their Voting Age Population identifying as “Black,” and five with more than 35%. None feature a district with more than 45% of its Voting Age Population identifying as “Black” (the previous plan featured two). This absence of more than 45% Black districts is the most striking feature within these Proposed maps. It is achieved by breaking apart the large concentration of Black voters in the city of Detroit and reconfiguring them in thin North-South strip districts (numbered 3, 10, 11 and 12 in Proposed Cherry V2 and Proposed Linden; and numbered 7, 8, 9 and 10 in Proposed Palm) that radiate northbound beyond the city limits and across county boundaries into suburban and less Black Macomb and Oakland counties.

It is not readily apparent how the districts in these plans — specially the cross-county North-South strip districts 5, 6, 7 and 8 — reflect Communities of Interest in the state of Michigan.

All three of these plans perform well on most measures of partisan fairness, but Proposed Plan Cherry V2 and Proposed Plan Linden are outliers on tests of neutrality: they create more Democratic districts than almost every computationally generated map created without partisan considerations. Plan Palm performs well on all partisan fairness measures, though it is more favorable toward Republicans on tests of symmetry. Plans Cherry V2 and Linden thus create maps more favorable to Democrats and closer to symmetry than maps drawn without partisan considerations, while Plan Palm preserves a bit more of the Republican geographic advantage.

These plans feature a standard number of seats that change hands across elections.

Proposed Plan Palm reflects county, city and township boundaries better than Proposed Plan Cherry V2 or Proposed Plan Linden. All three plans are reasonably compact; Proposed Plan Palm more so.

These three plans are very similar. They offer different solutions for the city of Ann Arbor and the surrounding areas stretching into neighboring counties, but they are three variations of the same general plan, rather than three truly distinct plans. Proposed Plan Palm performs better on lower-ranked criteria.

Again, we stress a concern that applies to all three of these plans. The city of Detroit contains more than half a million inhabitants who identify as “Black.” Under any map that keeps this urban community as a whole or regions of the city with more Black residents together, Blacks would

constitute a majority in at least two and probably in three Michigan Senate districts. Proposed Plan Cherry V2, Proposed Plan Linden and Proposed Plan Palm slice this community in order to create urban-suburban cross-county districts, diluting the Black urban vote in such a way that Black voters do not constitute more than 45% of voters in any district. The intent appears to be to create more total districts of opportunity for Black voters, but it is unconventional.

We lack sufficient data to know that districts in and around Detroit with 40%-42% of Black Voting Age Population will allow the Black minority population to elect its candidates of choice in both primaries and general elections. If it cannot elect its candidate of choice, then these three plans do not comply with the Voting Rights Act. Members of the public, elected representatives, and the Michigan Department of Civil Rights expressed this concern during the second round of public hearings prior to the drawing of the current Proposed maps.

Thereafter, the Commission revamped state House District maps in its latest iteration of Proposed maps scheduled for another round of public comment. State Senate District maps, however, appear little changed and again be subject to question.

We understand that many candidates preferred by Black voters elsewhere in the United States are able to be elected in districts with minority Black populations. If that is true of these districts, the proposed maps would likely increase Black representation in the State Senate. But perceptions of opportunity also matter for its realization. If African-American candidates and other candidates preferred by Black voters do not perceive these districts as favorable, that could reduce the chance they compete in primary elections, reducing Black representation.

We continue to recommend that *the MICRC reevaluate its approach toward compliance with the Voting Rights Act*. And that the Commission give due consideration to draw state Senate District maps demonstrating more robust districts of opportunity for the Black community in the city of Detroit, especially if they better reflect communities of interest. We find Proposed Plan Cherry V2, Proposed Plan Linden and Proposed Plan Palm share the problems we identified in the Draft maps. These maps could fail to adequately represent the communities of interest of the citizens of Detroit or its surrounding areas, based on their neighborhoods.

Since these considerations reflect concerns about the performance of these maps on constitutional Criteria A, population balance and Voting Rights Act, and Criteria C, population diversity and Communities of Interest, these concerns dominate consideration of other criteria.

Because none of these collaboratively proposed Michigan Senate plans showed responsiveness to our recommendations (unlike some state House maps), we look to plans submitted by individual commissioners that create plans with different approaches toward compliance with the Voting Rights Act that are less open to criticism or question. We present a plan with at least two districts with a Black Voting Age Population of at least 45 percent and with three districts with a Black Voting Age Population of at least 43% in the following Appendix.

VI. APPENDIX. PROPOSED SENATE PLANS SUBMITTED BY INDIVIDUAL COMMISSIONERS.

There are three individual commissioner submissions for state Senate District plans:

- Proposed Szetela Senate District Map Number #268, submitted by Commissioner Rebecca Szetela, Independent, of Canton.
- Proposed Kellom Senate District Map, Number #270, submitted by Commissioner Brittni Kellom, Democrat of Detroit
- Proposed Senate District Map Lange, Number #274, submitted by Rhonda Lange, Republican of Reed City.

Proposed Senate District Map Szetela and Proposed Senate District Map Lange follow the same strategy toward compliance with the Voting Rights Act as Proposed Cherry V2, Plan Linden and Plan Palm. Districts are arranged in a similar manner. We do not analyze these plans further.

Proposed Senate District Map Kellom, on the other hand, presents a distinct alternative, and a very different configuration of the region including Detroit, with three Black-majority districts, similar to race-blind maps in the Computational Ensemble. We thus analyze SD Kellom further, appending some its scores to those of the Proposed plans.

	Population difference	Maximum. Deviation	Partisan malapportionment
Plan Cherry V2	4.91%	2.96%	-0.06%
Plan Linden	4.91%	2.96%	-0.13%
Plan Palm	5.00%	2.46%	-0.08%
Plan SD Kellom	4.27%	2.27%	n.a.

Plan SD Kellom slightly outperforms all three Proposed plans on population equality. Table 26 Appendix returns to the number of potential districts of opportunity for the Black minority in Table 26, but from a different source (DRA 2020), and a different categorization. Where Table 26 defined “Black” as “Black or African-American only” in the U.S. Census, the DRA 2020 results feeding into Table 26 Appendix categorize as “Black” any individual who identifies as “Black,” possibly as one of multiple racial identifications.

	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Cherry V2	0	5	6
Plan Linden	0	5	6
Plan Palm	0	5	6
Plan SD Kellom	3	4	5
2011 Official map	2	5	6
Proportional to Population	5		

We find that SD Kellom outperform alternative maps in the number of districts of opportunity. When multiple Black racial identities are taken into consideration, the Proposed Kellom map’s four Black 40% Black VAP districts actually measure in excess of 45% Black VAP. Only one in

five of all other Proposed maps assessed measures at more than 45% VAP Black. Proposed SD Kellom map also satisfies contiguity requirements.

	Efficiency Gap	Proportionality	Median-mean	Partisan Advantage
	D2	D3	D4	D6
Plan Cherry V2	+3.4%	+1.1 seats	+1.2%	-1.1 seats
Plan Linden	+3.3%	+1.1 seats	+1.2%	-1.1 seats
Plan Palm	+6.2%	+2.3 seats	+3.2%	-0.1 seats
Plan SD Kellom	+3.2%	+1.4 seats	+2.1%	-0.8 seats

On Partisan Fairness measures, SD Kellom looks similar to Proposed Plan Linden or Proposed Plan Cherry V2, but we await an analysis of its outlier status.

	Split Counties	County Pieces
Plan Cherry V2	28	92
Plan Linden	31	95
Plan Palm	27	90
Plan SD Kellom	30	87

Plan SD Kellom performs about as well on respecting boundaries and on compactness as other Proposed Senate District maps.

	Polsby-Popper	Reock
Plan Cherry V2	0.40	0.38
Plan Linden	0.40	0.39
Plan Palm	0.41	0.40
Plan SD Kellom	0.40	0.39
2011 Official Map	0.39	0.40

The results on Tables 25 Appendix, 26 Appendix and 31 Appendix are from DRA 2020, using the 2020 U.S. Census population data. On Table 28 Appendix, the measures for the Efficiency Gap and the Median-Mean difference are from the MICRC Compliance Sheet, using all 10 statewide elections from 2012 to 2020; and the deviation from proportionality and the Partisan Advantage are computed by Dr. Christian Cox of Yale University and based upon 2016 and 2020 presidential elections and the 2014 and 2018 elections to the Michigan Senate. Deviations from proportionality or from the neutral jurisdictional benchmark in the partisan advantage are measured in seats; whereas, the Efficiency Gap and the Median-Mean measure differences in shares of votes.

SD Kellom outperforms all three Proposed Plans for state Senate districts (Plan Cherry V2, Plan Palm and Plan Linden) on both aspects of Criterion A.

We note that SD Kellom may also appear as a partisan outlier, giving more seats to Democrats than computer-generated maps, and perhaps one additional seat than Proposed Plan Palm. Proposed Plan SD Kellom follows the Proposed Plan Linden split for the Ann Arbor area, resulting in partisan scores similar to those of Proposed Plan Linden.

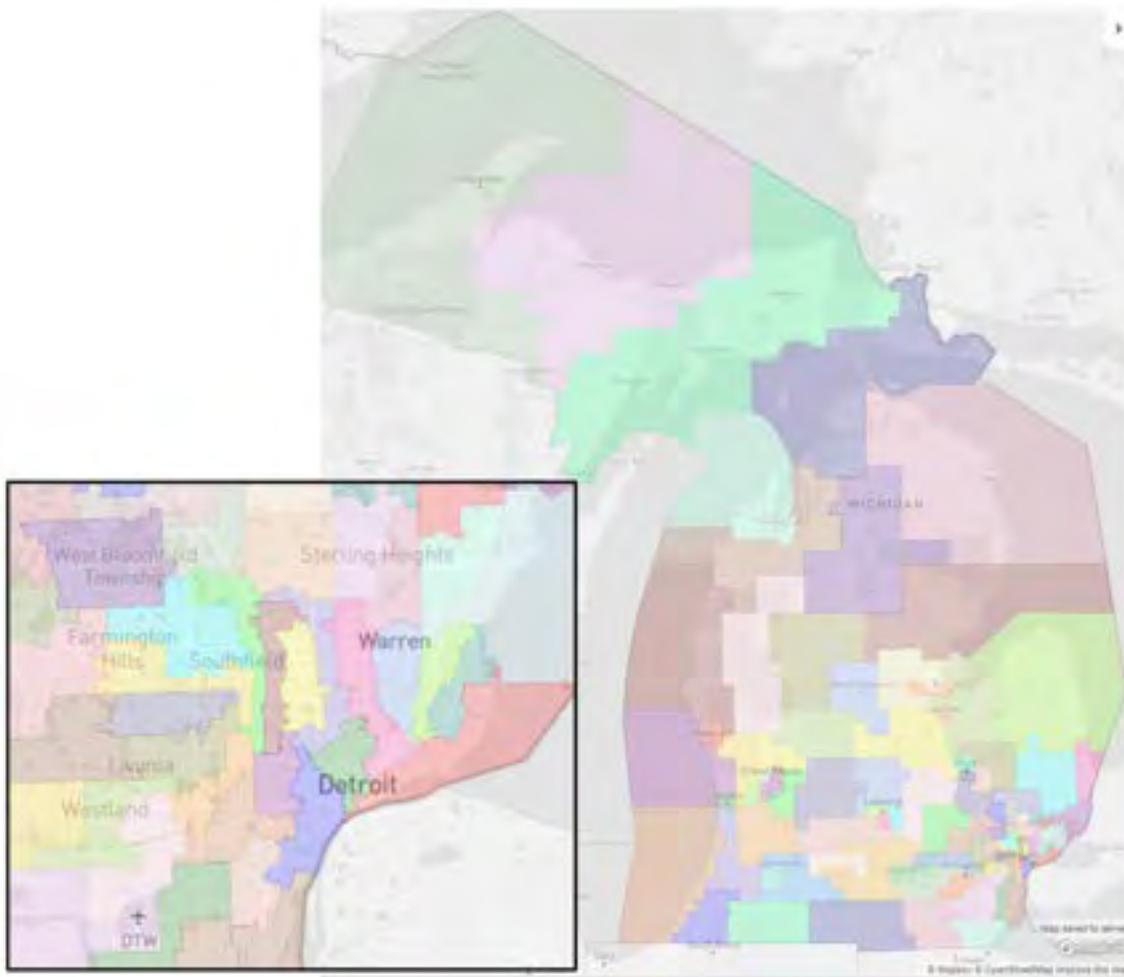
Yet we advise consideration of SD Kellom because it creates an alternative path toward compliance on the top-ranked Criterion A, which could outweigh any loss on partisan fairness measures based on neutrality compared to Plan Palm. As with plans Cherry V2 and Linden, plan SD Kellom sacrifices neutrality to achieve slightly more symmetry.

PART VII. ANALYSIS OF DRAFT MAPS FOR MICHIGAN'S STATE HOUSE DISTRICTS

VII.1. THE DRAFT MICHIGAN HOUSE DISTRICT MAPS

The MICRC approved the following Draft maps for Michigan House of Representatives districts, for consideration in the second round of public hearings (Oct 20 – Oct 27, 2021):⁵⁴

-Plan "Pine," name "10-08-21v1HD RAS" (number #227). Voted for publication 13-0.

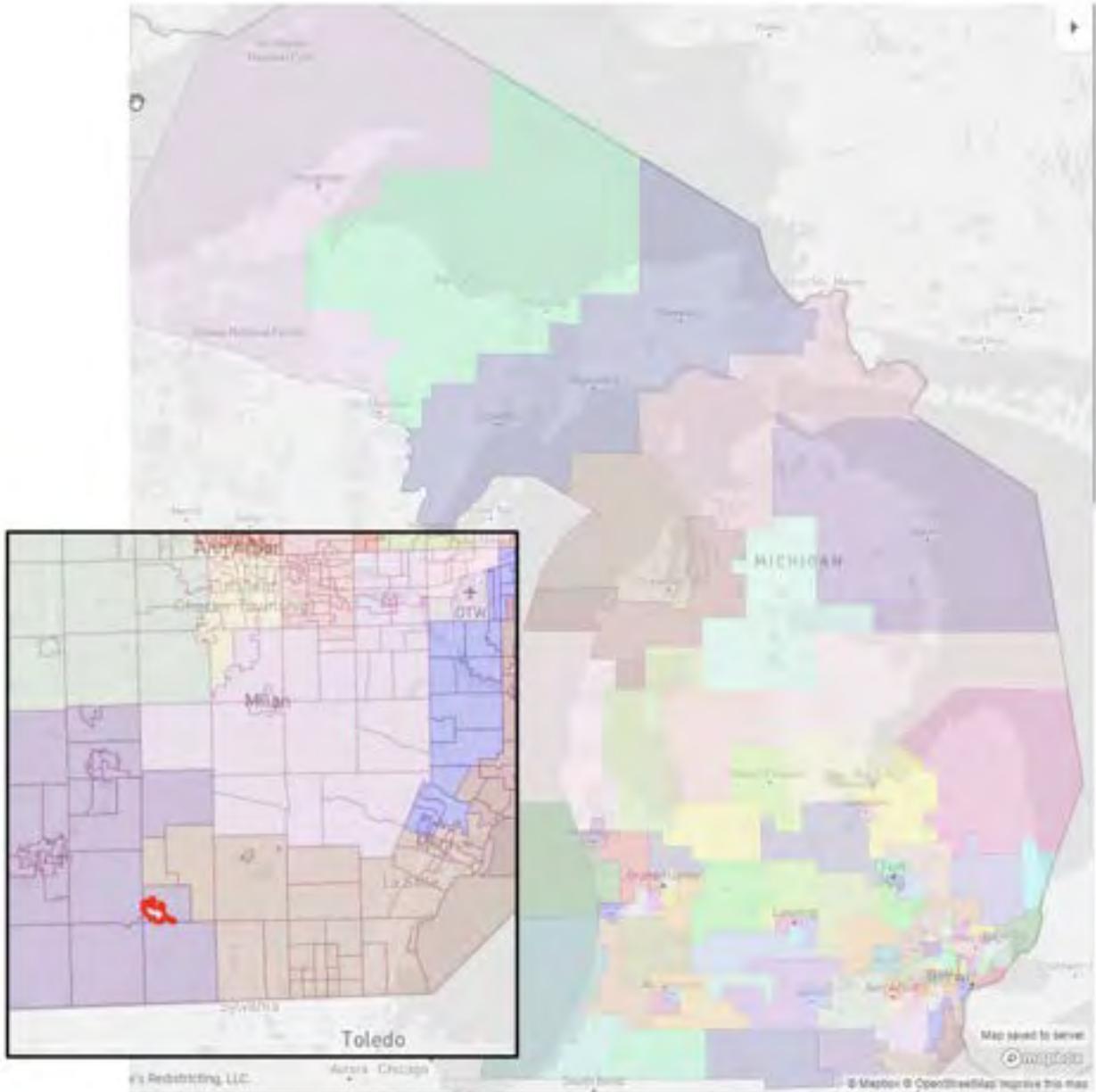


Plan Pine

⁵⁴ These maps are available for download here:
https://michigan.mydistricting.com/legdistricting/michigan/comment_links

-Plan “Peach,” name “10-08-21v2 HD” (number #228). Voted for publication 13-0.

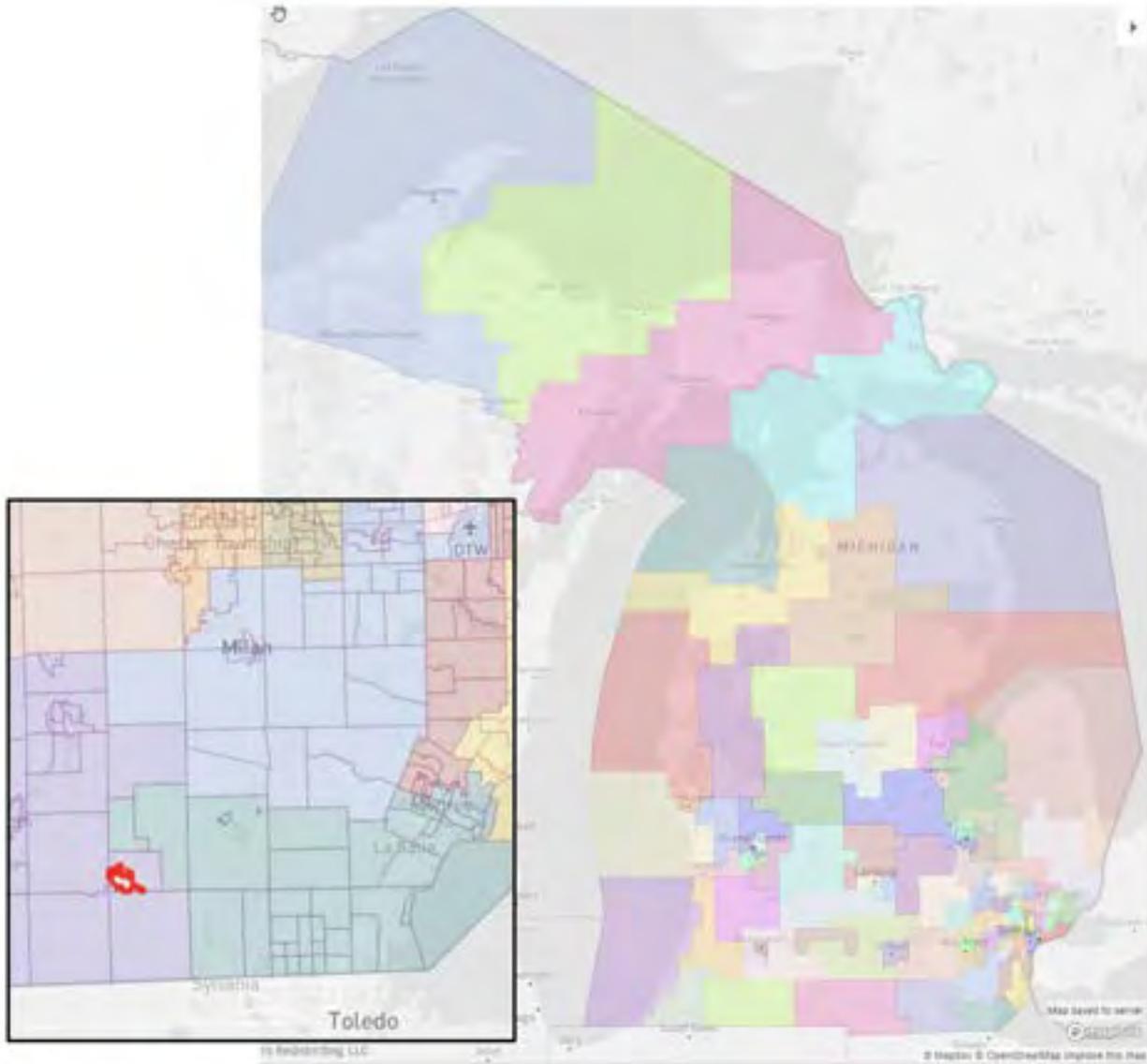
Note that the Peach map does not appear to be a valid redistricting plan, as it fails to assign a district to all the areas of Michigan. Plan Peach fails to assign any district to a precinct with population 3,204 in the village of Blissfield (Lenawee County). This area — highlighted in red on the inset map below — must be assigned to a district.



Plan Peach (incomplete)

-Plan “Oak,” name “10-08-21v1HD” (number #229). Voted for publication 13-0.

Note that the Oak map does not appear to be a valid redistricting plan, as it fails to assign a district to all the areas of Michigan. Plan Oak fails to assign any district to a precinct with population 3,204 in the village of Blissfield (Lenawee County). This area —highlighted in **red** on the inset map below — must be assigned to a district.



Plan Oak (incomplete)

VII.2. MEASURING PERFORMANCE ON EACH CRITERIA

CRITERION A: POPULATION BALANCE AND VOTING RIGHTS ACT

“Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

Understanding the Criterion.

The Michigan population according to the 2020 US Census is 10,077,331 inhabitants. Michigan has 110 districts for state house elections. So, the ideal equal population is 91,612 inhabitants per district.

The U.S. Supreme Court has ruled that, solely on U.S. constitutional grounds, the population in state legislative districts must be roughly equal; however, “some deviations from the equal-population principle are constitutionally permissible,” for a rational state interest, and in particular to respect jurisdictional boundaries of counties, cities and towns.⁵⁵ In particular, population differences of up to 10% between the least and most populous districts are “minor” and do not require “justification from the State.”⁵⁶ Population deviations greater than 10% must be justified by the State, and instances with a deviation as large as 89% away from the ideal size have been deemed legitimate.⁵⁷

If there is any substantial deviation from population equality, supporters of one party cannot be systematically placed in larger districts.⁵⁸

With regard to the Voting Rights Act, we refer verbatim to the discussion of Criterion A under Section III.2. for the congressional maps.

Measures of performance on Criterion A.

A1. Measure of population inequality.

We compute the difference between the most and least populous district, using the formula:

$$\frac{\text{Population of most populous district}}{\text{Population of least populous district}} - 1,$$

in percentage points.

For convenience, we also report the largest deviation to the ideal population size of a district, namely,

$$\frac{\text{Population of most populous district}}{91,612} - 1,$$

again, in percentage points.

If the difference between the most and least populous district surpasses 1%, we also compare the average population of districts won by Democratic Party candidates to the average population of districts won by Republican Party candidates, in all U.S. Presidential or Michigan Senate

⁵⁵ Reynolds v. Sims, 377 US 579-580.

⁵⁶ Brown v. Thomson, 462 US 842.

⁵⁷ Brown v. Thomson, 462 US 835.

⁵⁸ Cox v. Larios, 542 U.S. 947

elections from 2014 to 2020 (namely, the 2016 and 2020 Presidential elections, and the 2014 and 2018 Michigan Senate elections). This is a measure of partisan malapportionment.

A2. Number of Districts of Opportunity.

As discussed in Section III.2.A2 with regard to the application of the Voting Rights Act to Congressional district maps, we seek to compute the number of districts of opportunity for ethnic and linguistic minorities. We can then compare this number to the proportion of minority population. For instance, the “Black Alone” population is 13.7% of the Michigan population (with a percentage as high as 37.6% in Wayne Co.), a statewide percentage that corresponds to fifteen Michigan House districts. Further, 5.6% of the Michigan population is Hispanic or Latino community, a percentage that corresponds to six Michigan House districts (though in this case the highest concentration by county is 15.4% in Oceana Co.); and 3.3% of the state population is Asian-American (with 9% in Washtenaw Co.), a percentage that corresponds to three or four Michigan House districts.

In addition, since a Michigan House district comprises only less than 92,000 inhabitants, a geographically concentrated ethnic or linguistic minority as small as 46,000 inhabitants (less than 0.5% of the state’s population) can constitute a majority in a geographically compact district, being thus subject to consideration under the VRA.

We can also compare the number of opportunity districts for the black minority to the number of such opportunity districts in the previous redistricting plan. We refer to the report “Determining if a redistricting plan complies with the Voting Rights Act” by Dr. Lisa Handley, presented to the MICRC. If Dr. Handley’s estimates are correct, any 40% Black district is a district of opportunity and will elect candidates preferred by the Black minority. We do not have any comparable estimate for Hispanic, Asian, or other minority districts of opportunity.

If Dr. Handley’s estimate is correct for Black minority districts of opportunity, there were twelve (or up to 14 at the lower threshold of 35%) Black districts of opportunity in the previous redistricting plan.

We do not have such estimate for Hispanic, Asian, or other minority districts.

So, the measure we report is:

- Number of districts with >50% of their voting age population identifying as Black.
- Number of districts with >40% of their voting age population identifying as Black.
- Number of districts with >35% of their voting age population identifying as Black.

We also report the number of districts, if any, with >40% or >35% of their voting age population identifying as some other ethnic or linguistic minority (in the previous redistricting plan, there were none).

Results.

We present the results on Population Equality in the following table. Each row indicates a redistricting plan for MI House districts. The first column reports the population difference between the most and the least populated districts. The second column reports the maximum deviation from the ideal district population. And the third column reports the partisan malapportionment measure, with a result bigger than zero meaning that districts won by Democrats have more

population (which indicates an advantage to the Republican Party), and thus negative numbers indicating that districts won by Republicans have more population (which indicates an advantage to the Democratic Party).

	Population difference	Maximum deviation	Partisan malapport.
Plan Pine	7.20%	3.49%	-0.22%
Plan Peach [*]	8.36%	4.12%	-0.24%
Plan Oak [*]	8.83%	4.32%	-0.24%

[*] Note that Plan Peach and Plan Oak are not complete redistricting plans, as they fail to assign a district to each district. Results would change if these plans were remedied by assigning a district to each precinct.

As in the case of Senate maps, these deviations are within the range that is acceptable for state legislative districts under the U.S. Constitution, but they are not within the range of deviations that are potentially acceptable (if suitably justified) for Congressional Districts under the U.S. Constitution. If the explicit Population Equality clause under the Michigan Constitution were understood to be stricter than the population equality requirement implicit in the federal Equal Protection clause, then these deviations would be too large.

We report the number of districts in which more than 50%, more than 40%, and more than 35% of the Voting Age Population identifies as “Black” or “African-American” (alone) in the following table, as computed by the MGGG Lab for this report (except official map numbers again from IPUMS). These numbers serve as proxy for the number of Black-minority districts of opportunity.

	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Pine	0	14	20
Plan Peach [*]	0	14	20
Plan Oak [*]	0	14	20
2011 Official Map	11	12	12
Proportional to Pop.		15	

As in the case of the congressional maps and Senate maps, the most striking result is that none of the 11 majority-minority districts in the previous plans survives in any of these three proposed plans. This is truly extraordinary. The following graph shows the Black share of the Voting Age Population in each district. Districts are ordered from lowest to highest Black share (that is, the labels in the horizontal axis are not the district number in the Plan; rather, they should be interpreted as lowest Black VAP share (1), 2nd lowest Black VAP share (2), all the way to the district with the highest Black VAP share (38). The colored dots represent each map. The boxes represent the typical Black VAP shares in maps in the Computational Ensemble, and the arms stretching out of the boxes represent the Black VAP share at unusual maps such that only 2.5% of maps have shares above or below the range covered by the arms.

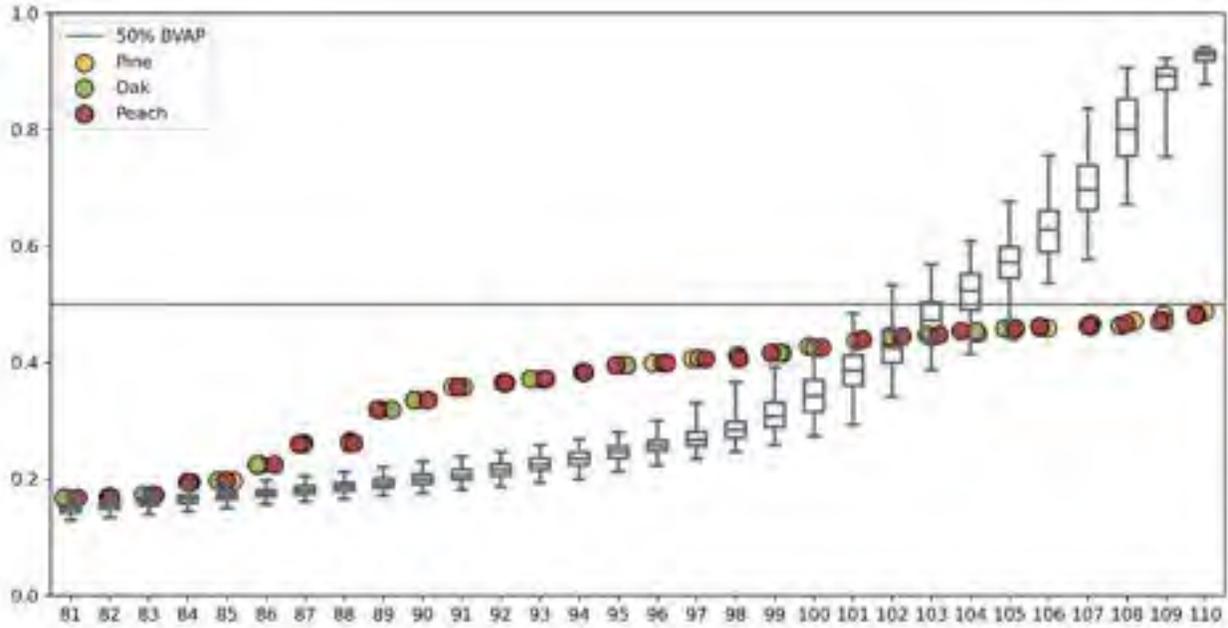


Figure 32. Distribution of Black VAP by House District

Almost all maps in the Computational Ensemble feature at least five Black-majority districts (most feature at least seven), including at least two with more than 80% Black VAP, and one more than 90% Black VAP. The 2011 redistricting map arguably packed Black voters around Metro Detroit so that the number of such Black-majority districts increased to eleven, higher than in almost any of the computational (race-blind) maps. These plans go in the opposite direction to an extraordinary degree, arguably cracking the large majorities of Black voters to studiously avoid configuring a single district that would cross the 50% threshold of Black voters. By diluting the concentration of Black voters in the districts with greatest share of them, these plans manage to generate an improbably high number of districts with over 40% and over 35% of Black voters.

The wisdom, appropriateness, or legality of maximizing the number of districts with Black VAP population between 35% and 49.9% while avoiding any Black-majority district may be questionable, but these three plans clearly reflect the Commission’s success in achieving such a goal.

We note that all three plans also contain one district with Hispanic share of VAP above 35%, but none above 40% (39.2% of the Voting Age Population in District 1 identifies as “Hispanic”). There was no such district in the 2011 map, but this falls short of the number proportional to the Hispanic population in the state (5).

No district contains a share of Asian VAP above 35%.

CRITERION B: CONTIGUITY

“Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.”

Understanding the Criterion.

See the discussion under Section III.2.B on the analysis of Congressional Districts.

Measure of Contiguity.

We report a binary “Yes” or “No” for whether a plan satisfies the stricter definition of contiguity, satisfying rook contiguity with islands attached to the land at the nearest point in the county of which they are a part of.

Results.

None of these plans satisfies contiguity.

<i>TABLE 35. Contiguity in Draft State House plans</i>	
	Are all districts contiguous?
Plan Pine	No
Plan Peach	No
Plan Oak	No

Each of these maps feature districts that violate contiguity by having small geographic areas isolated from the rest of the district. For instance, in all three maps, census block 2005 in census tract 4211 in Washtenaw County is in District 61, even though all the census blocks surrounding it are in District 65.

CRITERION C: COMMUNITIES OF INTEREST

“Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.”

Understanding the Criterion.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Measure of Respect for Communities of Interest.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Results.

Each of the proposed maps preserves 31 COIs by the 90 percent inclusion criteria, mostly by having districts within larger COIs rather than COIs within districts. That is slightly below what would be expected from chance.

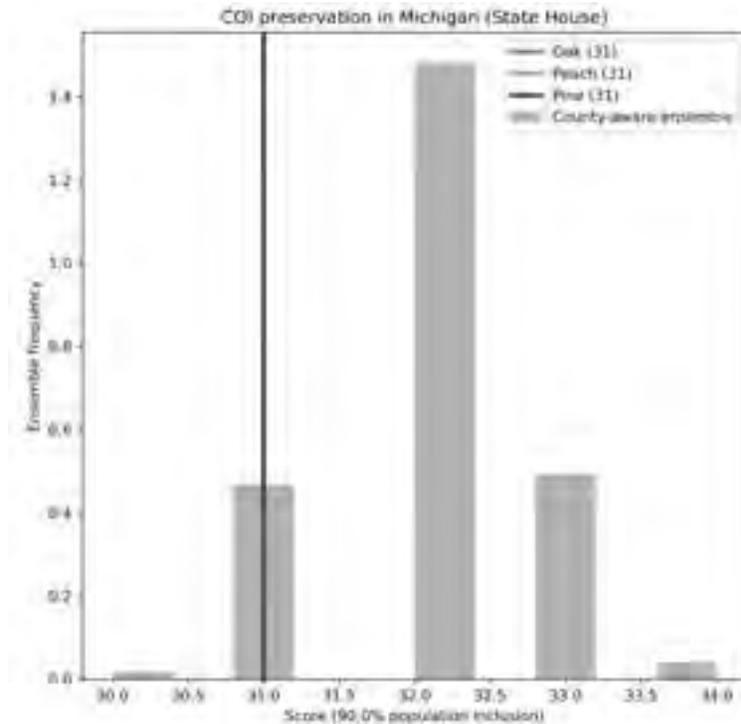


Figure 33. Community of Interest Preservation in State House Maps

CRITERION D: PARTISAN FAIRNESS

“Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.”

Understanding the Criterion.

See the discussion under Section III.2.D on the analysis of the Congressional district maps, verbatim.

Measures of partisan fairness.

D1. Partisan Bias.

D2. Efficiency Gap.

D3. Deviations from proportionality.

Measures D1-D4 are exactly as described in Section III.2.D.

D4. Median-Mean difference.

We refer to the discussion under Section VII.2.D on the analysis of the Draft state House maps.

D5. Lopsided Test.

Exactly as described in Section III.2.D.

D6. Partisan Advantage.

We refer to the discussion under Section VII.2.D on the analysis of the Draft state House maps.

D7. Outlier test.

Exactly as described in Section III.2.D.

D8. Other measures.

The measures available in DRA 2020 are as described in subsection V.2.D8 on the analysis of Draft district plans for the state Senate.

The election data that we use to compute the measures in this Section is again:

The 2018 Governor election; the 2018 Secretary of State election; the 2018 Attorney General election; the 2016 Presidential election; and the 2018 U.S. Senate election, are used by the MGGG lab to report results on Partisan Bias (D1), Efficiency Gap (D2), Deviations from Proportionality (D3), Median-Mean Difference (D4), and the Outlier test (D7). The 2014, 2016, 2018, and 2020 US House election, and the 2016 and 2020 U.S. Presidential election, are used by Dr. Christian Cox from Yale University to compute the Lopsided Margins (D5) and the Partisan Advantage (D6). For all these measures, we compute results election by election, and then we average. The Princeton Gerrymandering Project uses the 2018 Michigan Governor, 2020 U.S. Senate and 2020 U.S. Presidential election, first averaging them to construct an electoral composite in each precinct, and then using this composite to compute the results reported under the Outlier Test (D7).

DRA 2020 allows users to choose their preferred election data input to compute the measures described under D8.

Results.

We present the results on partisan fairness across all Draft maps for Michigan House districts in the following table. Each row indicates a redistricting plan. Each column indicates a measure of partisan fairness, from D1 to D7. Positive numbers indicate deviations from the fair ideal that favor the Republican Party, and negative values indicate deviations that favor the Democratic Party. Zero indicates perfect fairness according to each measure. The values of some measures are in seats; others are in percentage of the total number of votes. The “Outlier” (D7) indicates a party (“D” for Democratic or “R” for Republican) and a range of percentages. The letter indicates the party that this map favors, relative to the one million other maps in the Princeton Gerrymandering Project ensemble. The first number is the share of maps in the ensemble that are less favorable to this party (in the sense that the party would obtain fewer seats), and the second is the share of maps that are even more favorable (in the sense that the party would obtain more seats).

TABLE 36. *Measures of Partisan Fairness for House District Plans*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Pine	+10.3%	+5.8%	+2.4 seats	+3.1%	+5.7%	-1.3 seats	D: 99.9%-0%
Plan Peach [*]	+10.9%	+6.4%	+3.3 seats	+4.1%	+5.8%	-0.9 seats	D: 99.3%-0%
Plan Oak [*]	+10.9%	+6.6%	+3.5 seats	+4.2%	+5.9%	-0.8 seats	D: 97%-1%

Compare these results to the results on the measures of partisan fairness used by the Commission, as advised by Dr. Lisa Handley, displayed in the table below. The values below were obtained from a composite of all 13 state-wide elections (Presidential, US Senate, Governor, Secretary of State, and State Attorney) from 2012 to 2020, and we report them here directly from the MICRC website.

TABLE 37. *Selection of Measures of Partisan Fairness Used by the Commission.*

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Pine	--	+5.7%	+1.4%	+2.7%	+5.8%	--	--
Plan Peach [*]	--	+6.4%	+2.3%	+3.4%	+6.3%	--	--
Plan Oak [*]	--	+8.4%	+3.2%	+3.8%	+6.8%	--	--

[*] Recall that Plan Peach and Plan Oak are not complete redistricting plans, as they fail to assign a district to each district. Results would change if these plans were remedied by assigning a district to each precinct.

The pattern is similar to the one we identified in Congressional and Senate maps, but the Republican political geography is more pronounced at the level of House legislative districts. For instance, the average map in the Computational Ensemble feature an Efficiency Gap of about 7%. Confronted with this large Republican advantage in the geographic distribution of its voters, the Commission’s plans seem to have taken a deliberate step toward tilting the maps toward the Democratic Party, in order to partially — but only partially — cancel out the underlying Republican geographic advantage a little bit. This is reflected in the negative value of the Partisan Advantage (D6), which suggests that, net of the effect of political geography, the maps help Democratic candidates a little bit (by about one seat), but, as reflected by measures D1 through D5, this help is nowhere near enough to compensate for the large underlying Republican advantage due to the political geography of the state.

This same effect is perhaps best illustrated by Figure 34. The Democratic candidate (J. Benson) won the 2018 Secretary of State election with an 8.9% vote margin. Across all states, parties and elections, an 8.9% vote margin typically translates to about a 17%-18% seat margin, which would be about 65 seats. But Michigan House elections don't work that way, and even with such a hefty margin, under a typical map, Democratic candidates would only win 60 or 61 seats. Plan Oak and Plan Peach would give the Democratic Party an extra seat, up to 62, and Plan Pine yet another one, up to 63. But all three plans stay within the range of normal outcomes, none stepping out into the extremes to aid any party. On the other hand, according to the computational ensemble and the composite election used by the Princeton Gerrymandering Project, the maps are outliers that favor the Democratic Party, especially Plan Pine and Plan Peach: under most plans Democrats would obtain between 50 and 55 seats, but under Plan Oak they would obtain 56, under Plan Peach 57, and under Plan Pine 58.

However, these plans, while outliers relative to that ensemble under that particular composite election results, are tilting the outcome in the direction that is more symmetric for the two main parties, so the fairness of the plans depends on the preferred notion of fairness.

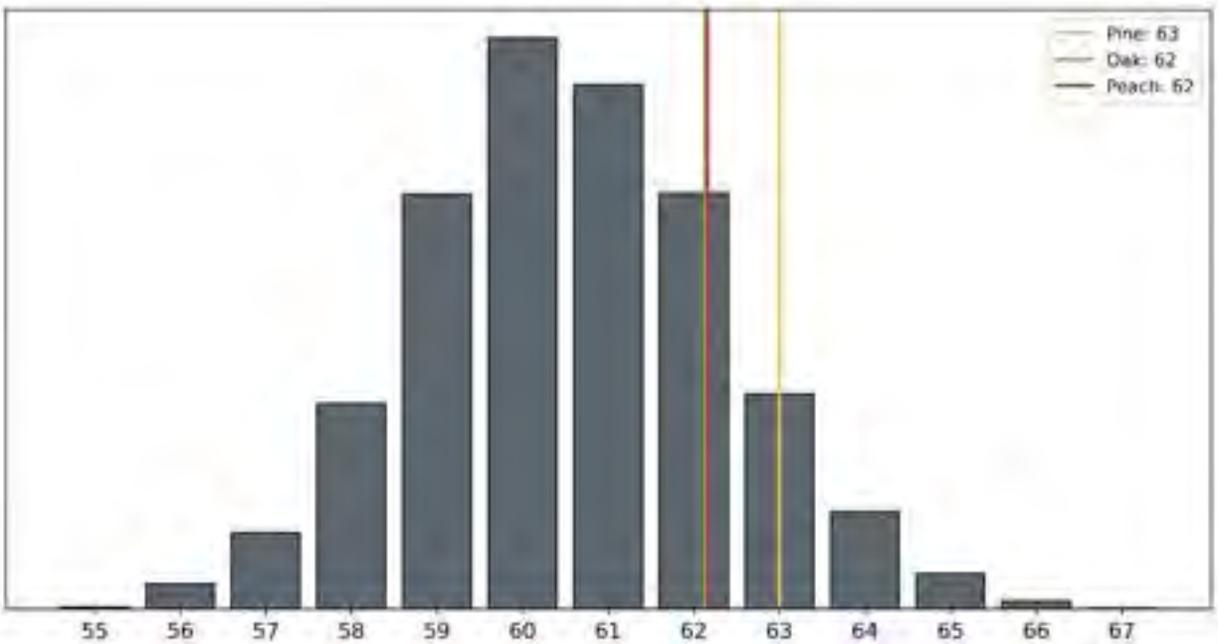


Figure 34. Number of Seats Democrats Would Win with 2018 SoS Results

CRITERION E: FAIRNESS TO CANDIDATES

"Districts shall not favor or disfavor an incumbent elected official or a candidate."

Understanding the criterion.

See the discussion under Section III.2.E on the analysis of the Congressional district maps, verbatim.

Measures of fairness to candidates.

See the discussion under Section III.2.E on the analysis of the Senate district maps.

Results.

The analysis on double-bunking (placing two incumbents in the same new district) is available in the histogram below. The computer-generated maps double-bunk incumbents far more than the Tree maps do. Pine and Peach each double-bunk 19 incumbents while Oak double-bunks 20.

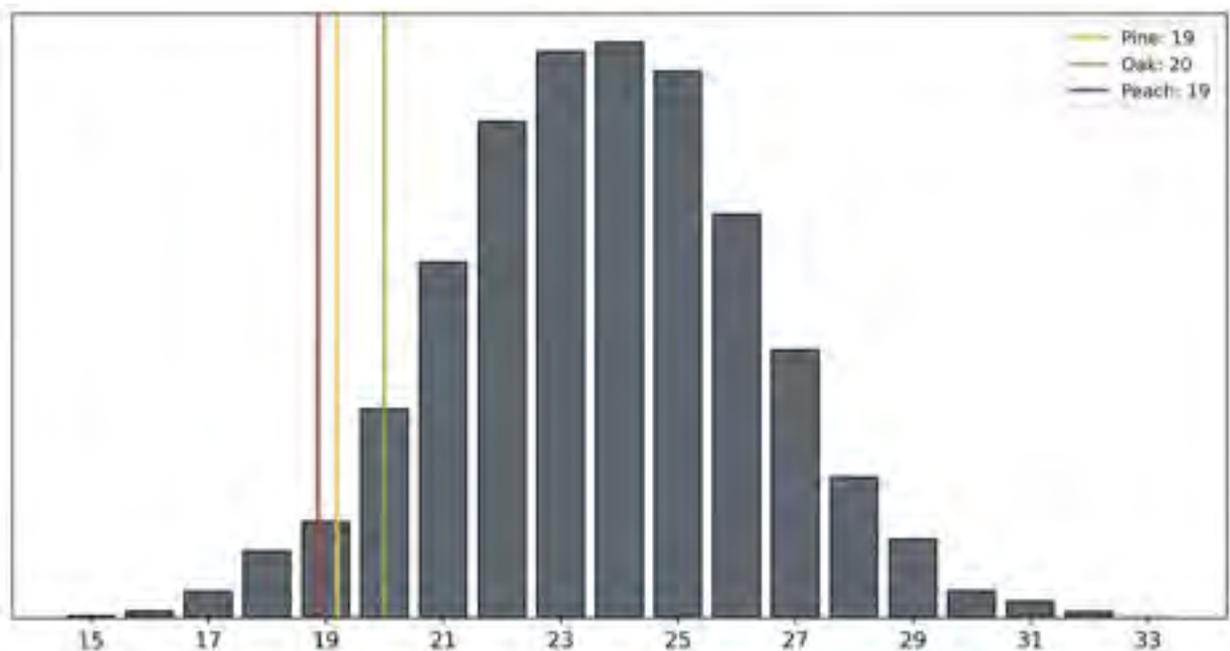


Figure 35. Double Bunked Incumbents in State House Maps

On competitiveness, plans Pine, Peach and Oak each have exactly 20 “swing” districts that have been won at least once by each of the two parties in a statewide election in 2016 or 2018. This is close to the average number of such districts in the Computer Ensemble.

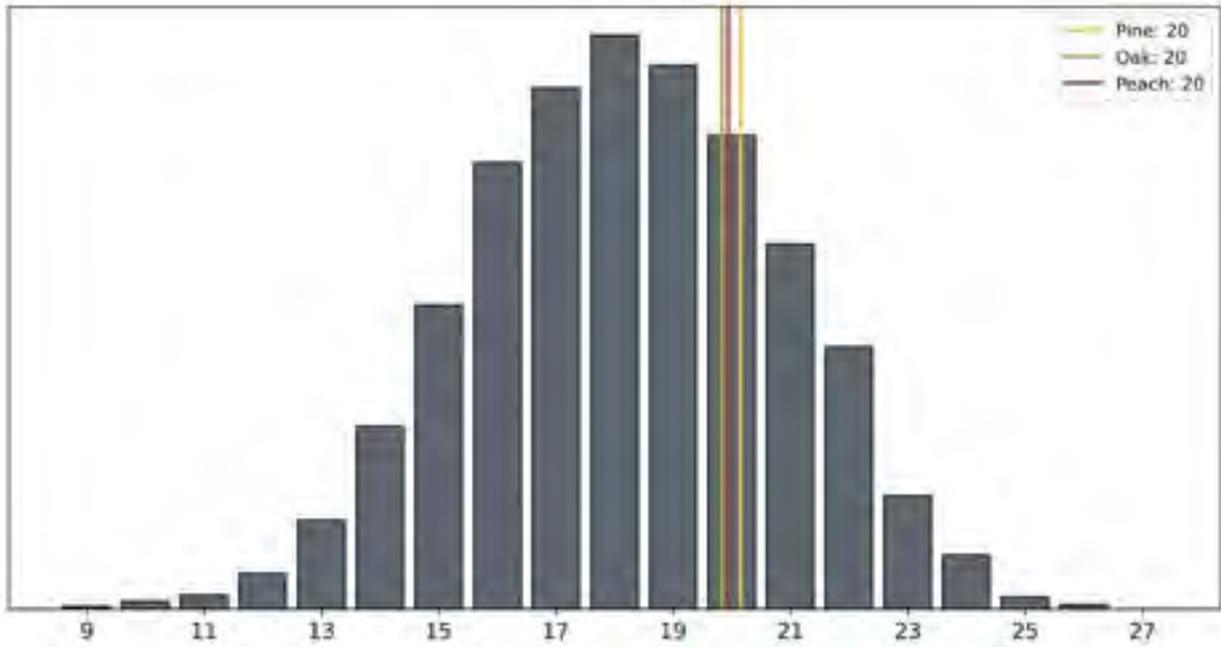


Figure 36. Number of Swing State House Districts

CRITERION F: JURISDICTIONAL BOUNDARIES

"Districts shall reflect consideration of county, city, and township boundaries."

Understanding the criterion.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Measures of respect of jurisdictional boundaries.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Results.

We present results on county splits, as computed by the MGGG Lab for this report.

	Split Counties	Number of Pieces
Plan Pine	47	202
Plan Peach	47	201
Plan Oak	46	199

The number of splits counties is large in all three maps, especially compared to the computer-generated maps that explicitly minimize split counties.

The computer-generated maps split municipalities far more than the Tree maps. Oak splits 117 municipalities, Peach splits 124, and Pine splits the most at 130.

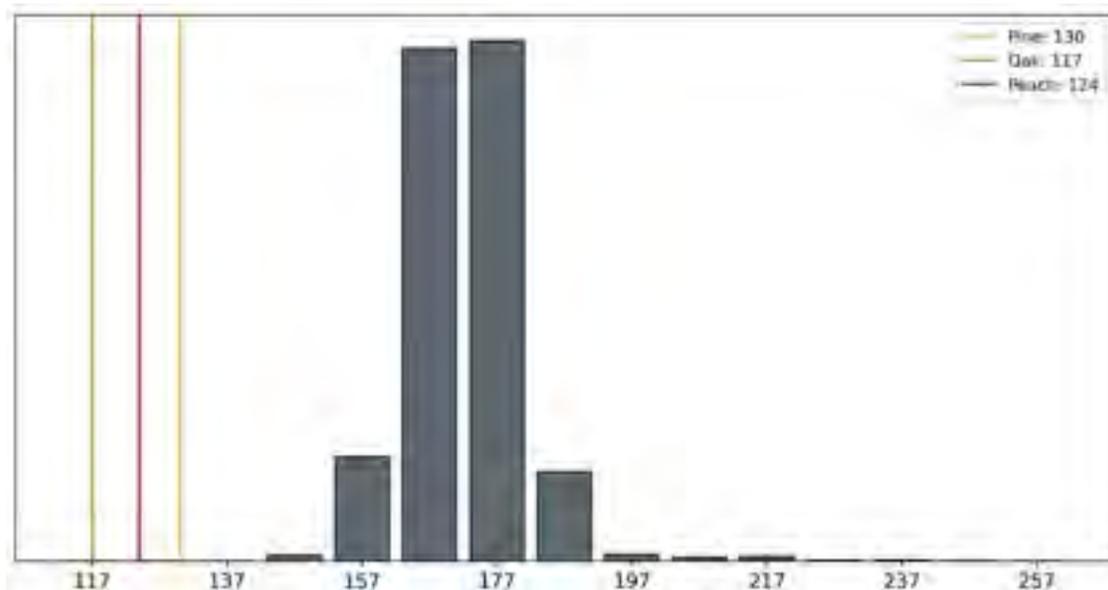


Figure 37. Split Municipalities in State House Districts

CRITERION G: COMPACTNESS

“Districts shall be reasonably compact.”

Understanding the criterion.

See the discussion under Section III.2.G on the analysis of the Congressional district maps, verbatim.

Measures of compactness.

See the discussion under Section III.2.G on the analysis of the Congressional district maps, verbatim.

Results.

In the next table, for each redistricting plan in each row, provide the Polsby-Popper, Reock and Cut Edges measures of compactness, respectively in columns 1, 2 and 3. The Polsby-Popper and Reock scores areas reported by the Princeton Gerrymandering Project Redistricting Report Cards for Michigan maps, and the Cut Edges is as computed by the MGGG Lab.

TABLE 39. Compactness Measures in Draft State House District Plans			
	Polsby-Popper	Reock	Cut Edges
Plan Pine	0.36	0.41	2644
Plan Peach [*]	0.37	0.41	2600
Plan Oak [*]	0.38	0.42	2579

The Cut Edges scores are poor, at the high (bad) end of the distribution of the Computational Ensemble.

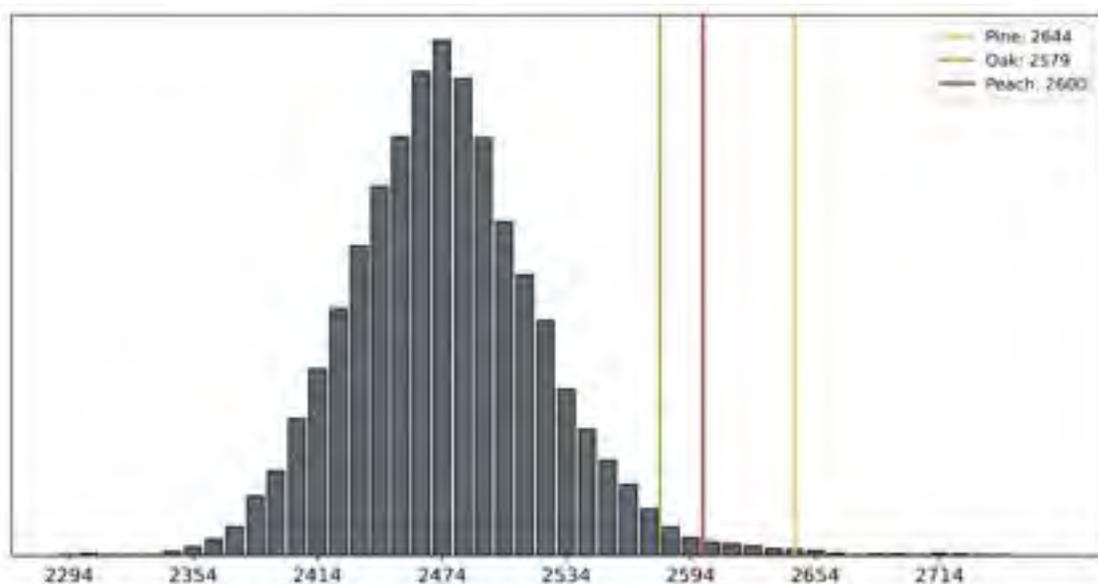


Figure 38. Number of Cut Edges in House District Draft Plans

Viewers can confirm, by visual inspection, that compactness was not a guiding factor in the design of these maps. The elongated, serrated, tool-like or key-like shapes of the North-South, cross-city, cross-country districts (such as 8, 16 or 21 in all three plans) respond to the racially motivated design of splitting the Black community in the City of Detroit so that no district be majority-Black. Districts 71 and 74 (again in all three maps) near Battle Creek are intertwined in each other's arms, and 71 straddles four counties. Such examples abound, and when aggregated and quantified, they lead to the non-compact result illustrated by Figure 38, which dovetails with the high number of county splits.

VII.3. SUMMARY OF RESULTS

Plan Pine is the only complete House map. Plan Peach and Plan Oak leave a precinct with 3,204 inhabitants in the town of Blissfield (Lenawee County) unassigned to any district. This is a major omission, representing more than 3% of the population of a state House district. These omissions are fixable. The precinct could be assigned to the district surrounding it, but doing so would increase the population of the district beyond the ideal population, inviting perhaps further adjustments to the map.

These three plans feature large deviations from population equality: more than 7% in all three plans.

All three of these plans feature 14 districts with more than 40% of their Voting Age Population identifying as “Black”, and an additional six with more than 35%, but none feature a district with a majority of the VAP identifying as “Black” (the previous plan featured two). This absence of majority-Black districts is extraordinary, and impossible to arise except by careful design. It is achieved by breaking apart the large concentration of Black voters in the City of Detroit, and reconfiguring them in thin strip districts that radiate outward, across city lines and across county lines.

It is unclear how the districts in these plans — in particular the thin cross-county strip districts and the non-compact earmuff-shaped districts — reflect Communities of Interest in the state of Michigan. We cannot say that they fully reflect the collection of Communities of Interest submitted by citizens.

The maps’ performance on partisan fairness varies more across measures of fairness, than across maps. All three plans appear to favor the Republican Party according to some measures, and the Democratic Party according to other measures. Plan Pine is the most favorable to Democratic candidates, but the differences between the three plans are small, amounting to less than a State House seat on average over several elections.

While the exact boundaries vary, these three plans are very similar, offering variations on the same scheme, rather than three truly distinct plans.

These plans feature a standard number of seats that change hands across elections.

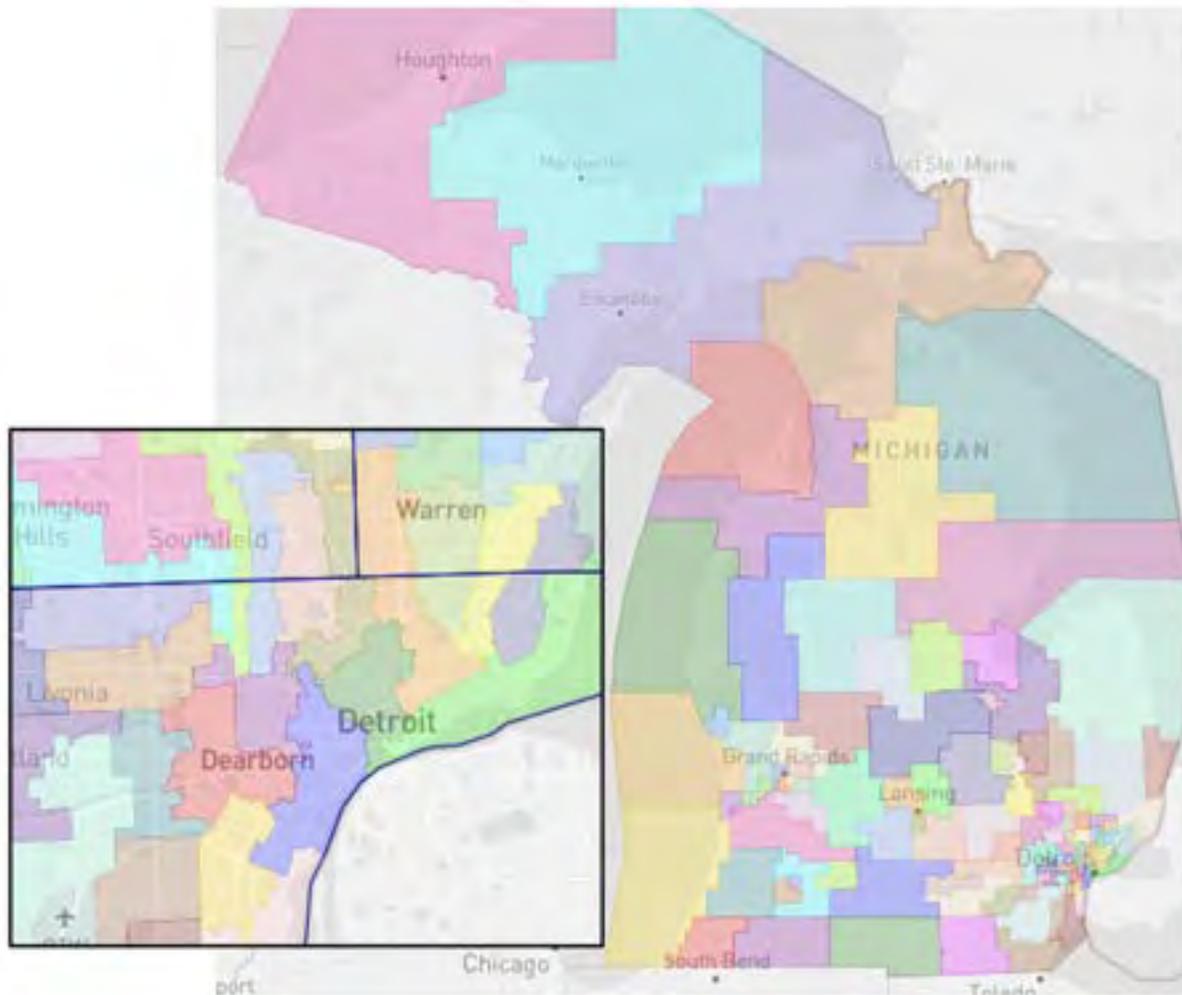
They all three reflect less consideration of county boundaries than the maps in the computational ensemble, and contain numerous districts that are not reasonably compact.

PART VIII. ANALYSIS OF PROPOSED MAPS FOR MICHIGAN'S STATE HOUSE DISTRICTS

VIII.1. THE PROPOSED MICHIGAN HOUSE DISTRICT MAPS

The MICRC approved the following Proposed maps for Michigan House of Representatives districts, for consideration in what is scheduled as the final round of public hearings (Nov. 15 – Dec. 29, 2021):⁵⁹

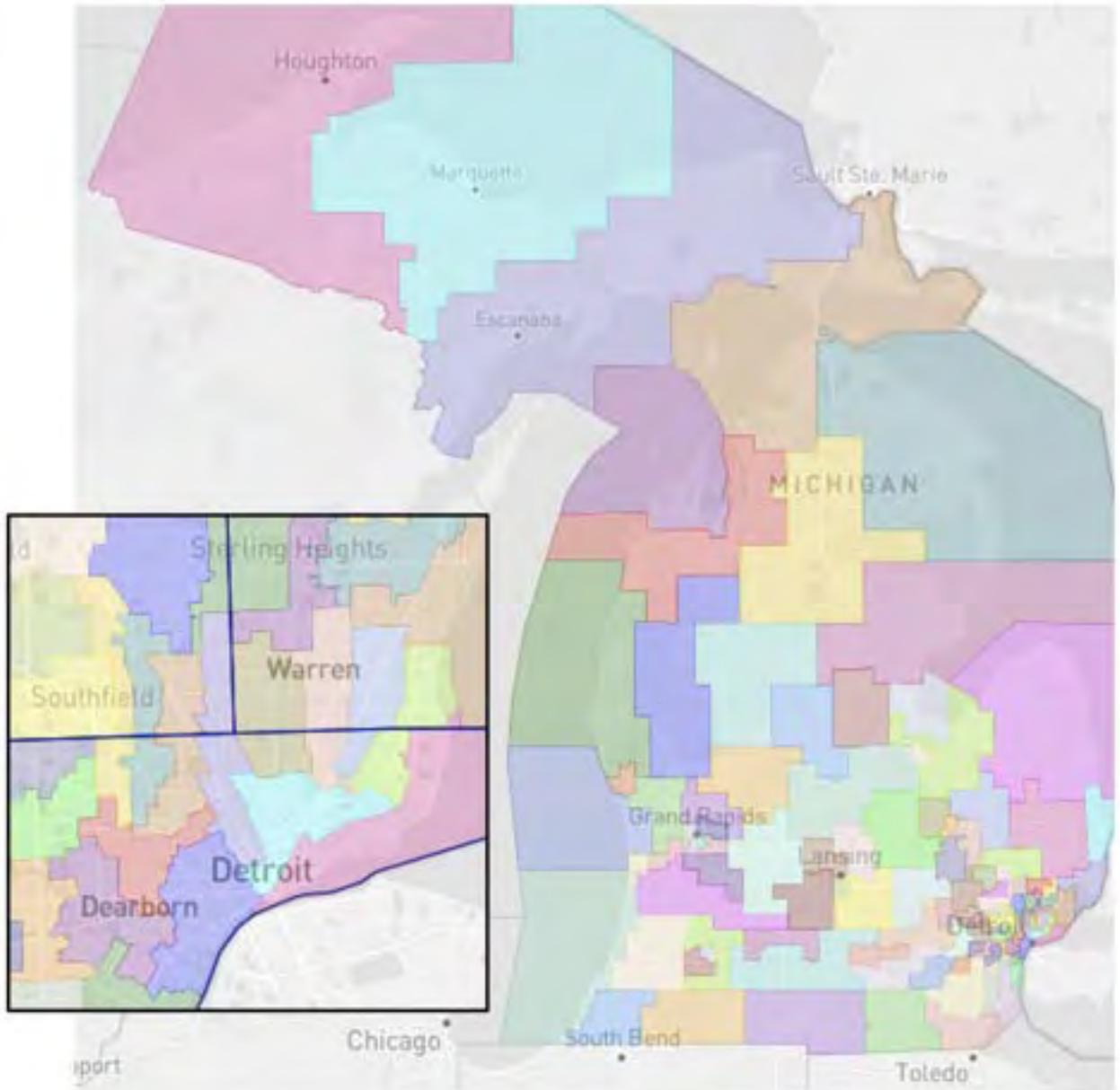
-Plan Pine V5, (number #259). Voted 7-4 on Nov. 3, 2021. Commissioners Clark (R), Kellom (D), Orton (R) and Rothhorn (D). Opposed; Curry (D) and Lange (R) not voting.



Plan Pine V5

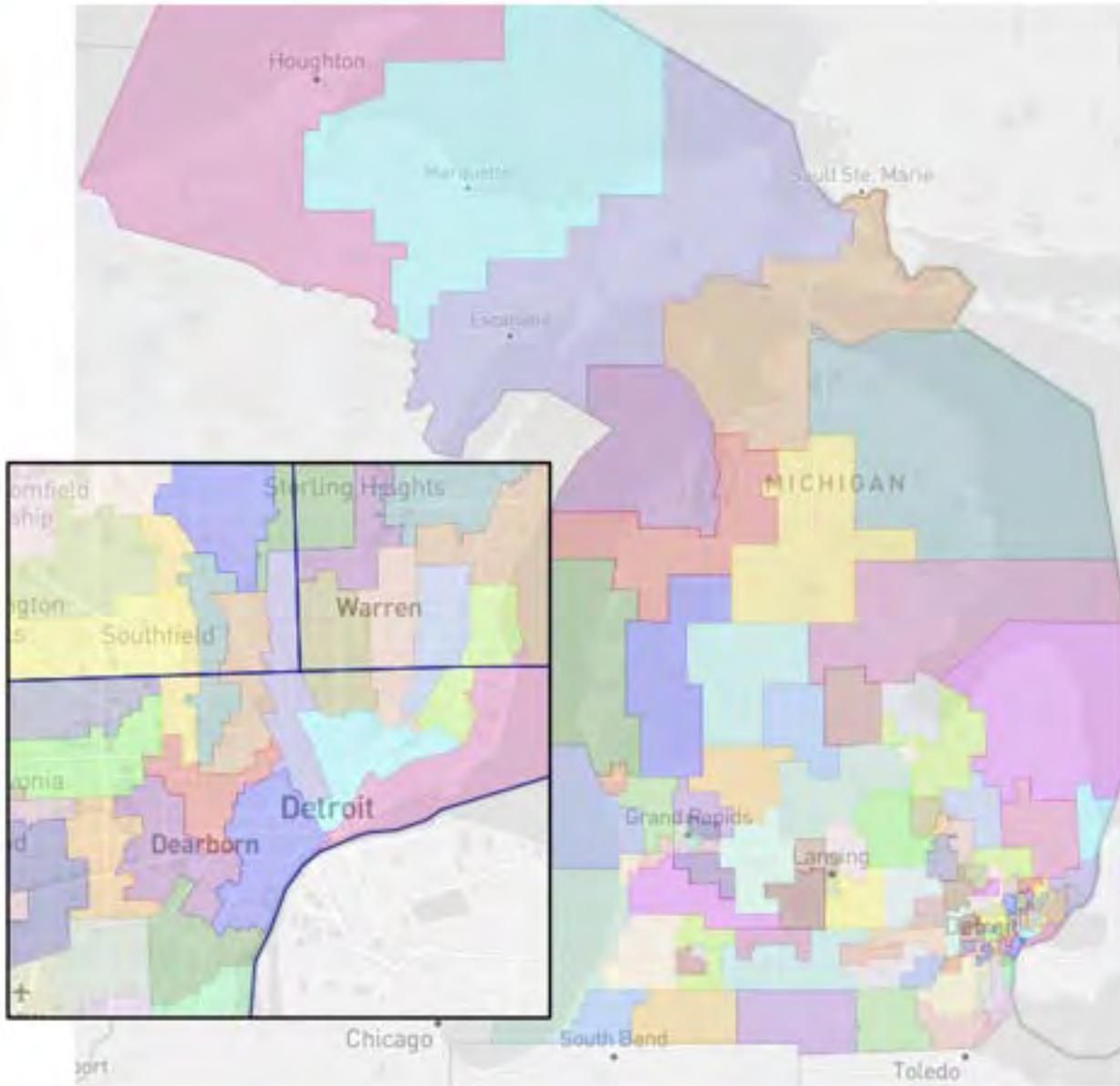
⁵⁹ These maps are available for download here:
https://michigan.mydistricting.com/legdistricting/michigan/comment_links

-Plan Hickory (number #262). Voted 10-3 on Nov. 4, for publication. Opposed: Commissioners Lange (R), Wagner (R) and Witges (R).



Plan Hickory

-Plan Magnolia (number #263). Voted 11-1 for publication on Nov. 4, 2021. Opposed Commission: Lange (R). Absent commissioner: Wagner (R).



Plan Magnolia

VIII.2. MEASURING PERFORMANCE ON EACH CRITERIA

CRITERION A: POPULATION BALANCE AND VOTING RIGHTS ACT

“Districts shall be of equal population as mandated by the United States constitution, and shall comply with the voting rights act and other federal laws.”

Understanding the Criterion.

With regard to population equality, we refer to the discussion under Section VII.2.A on the analysis of Draft maps for state House districts.

With regard to the Voting Rights Act, we refer to the discussion of Criterion A under Section III.2. for the Congressional maps.

Measures of performance on Criterion A.

A1. Measure of population inequality.

We compute the difference between the most and least populous district, using the formula:

$$\frac{\text{Population of most populous district}}{\text{Population of least populous district}} - 1,$$

in percentage points.

For convenience, we also report the largest deviation to the ideal population size of a district, namely,

$$\frac{\text{Population of most populous district}}{91,612} - 1,$$

again, in percentage points.

If the difference between the most and least populous district surpasses 1%, we also compare the average population of districts won by Democratic Party candidates to the average population of districts won by Republican Party candidates, in all U.S. Presidential or Michigan Senate elections from 2014 to 2020 (namely, the 2016 and 2020 Presidential elections, and the 2014 and 2018 Michigan Senate elections). This is a measure of partisan malapportionment.

A2. Number of Districts of Opportunity.

As discussed in Section III.2.A2 with regard to the application of the Voting Rights Act to Congressional district maps, we seek to compute the number of districts of opportunity for ethnic and linguistic minorities. We can then compare this number to the proportion of minority population. For instance, the “Black Alone” population is 13.7% of the Michigan population (with a percentage as high as 37.6% in Wayne Co.), a statewide percentage that corresponds to fifteen Michigan House districts. Further, 5.6% of the Michigan population is Hispanic or Latino community, a percentage that corresponds to six Michigan House districts (though in this case the highest concentration by county is 15.4% in Oceana Co.); and 3.3% of the state population is Asian-American (with 9% in Washtenaw Co.), a percentage that corresponds to three or four Michigan House districts.

In addition, since a Michigan House district comprises only less than 92,000 inhabitants, a geographically concentrated ethnic or linguistic minority as small as 46,000 inhabitants (less than 0.5% of the state’s population) can constitute a majority in a geographically compact district, being thus subject to consideration under the Voting Rights Act.

We can also compare the number of opportunity districts for the black minority to the number of such opportunity districts in the previous redistricting plan. We refer to the report “Determining if a redistricting plan complies with the Voting Rights Act” by Dr. Lisa Handley, presented to the MICRC. If Dr. Handley’s estimates are correct, any 40% Black district is a district of opportunity and will elect candidates preferred by the Black minority. We do not have any comparable estimate for Hispanic, Asian, or other minority districts of opportunity.

If Dr. Handley’s estimate is correct for Black minority districts of opportunity, there were twelve (or up to 14 at the lower threshold of 35%) Black districts of opportunity in the previous redistricting plan.

We do not have such estimate for Hispanic, Asian, or other minority districts.

So, the measure we report is:

- Number of districts with >50% of their voting age population identifying as Black.
- Number of districts with >40% of their voting age population identifying as Black.
- Number of districts with >35% of their voting age population identifying as Black.

We also report the number of districts, if any, with >40% or >35% of their voting age population identifying as some other ethnic or linguistic minority (in the previous redistricting plan, there were none).

Results.

We present the results on Population Equality in the following table. Each row indicates a redistricting plan for MI House districts. The first column reports the population difference between the most and the least populated districts. The second column reports the maximum deviation from the ideal district population. And the third column reports the partisan malapportionment measure, with a result bigger than zero meaning that districts won by Democrats have more population (which indicates an advantage to the Republican Party), and thus negative numbers indicating that districts won by Republicans have more population (which indicates an advantage to the Democratic Party).

<i>TABLE 40. Population Equality in Proposed State House Plans</i>			
	Population difference	Maximum deviation	Partisan malapport.
Plan Pine V5	4.86%	2.45%	+0.07%
Plan Hickory	5.09%	2.48%	+0.12%
Plan Magnolia	4.80%	2.48%	+0.15%

As in the case of Proposed Senate District maps, these deviations are within the range that is acceptable for state legislative districts under the U.S. Constitution.

We report the number of districts in which more than 50%, more than 40%, and more than 35% of the Voting Age Population identifies as “Black” or “African-American” (alone) in the following table, as computed by the MGGG Lab for this report (except official map numbers again from IPUMS). These numbers serve as proxy for the number of Black-minority districts of opportunity.

TABLE 41. <i>Black Minority Districts of Opportunity in State House Proposed Maps</i>			
	# > 50% VAP Black	# >40% VAP Black	# >35% VAP Black
Plan Pine V5	3	13	19
Plan Hickory	7	13	17
Plan Magnolia	7	13	17
2011 Official Map	11	12	12
Proportional to Pop.	15		

The following graph shows the Black share of the Voting Age Population in the districts with the highest Black populations. Districts are ordered from lowest to highest Black share but only the top 30 districts are included. The colored dots represent each map. The boxes represent the typical Black VAP shares in maps in the Computational Ensemble, and the arms stretching out of the boxes represent the Black VAP share at unusual maps such that only 2.5% of maps have shares above or below the range covered by the arms.

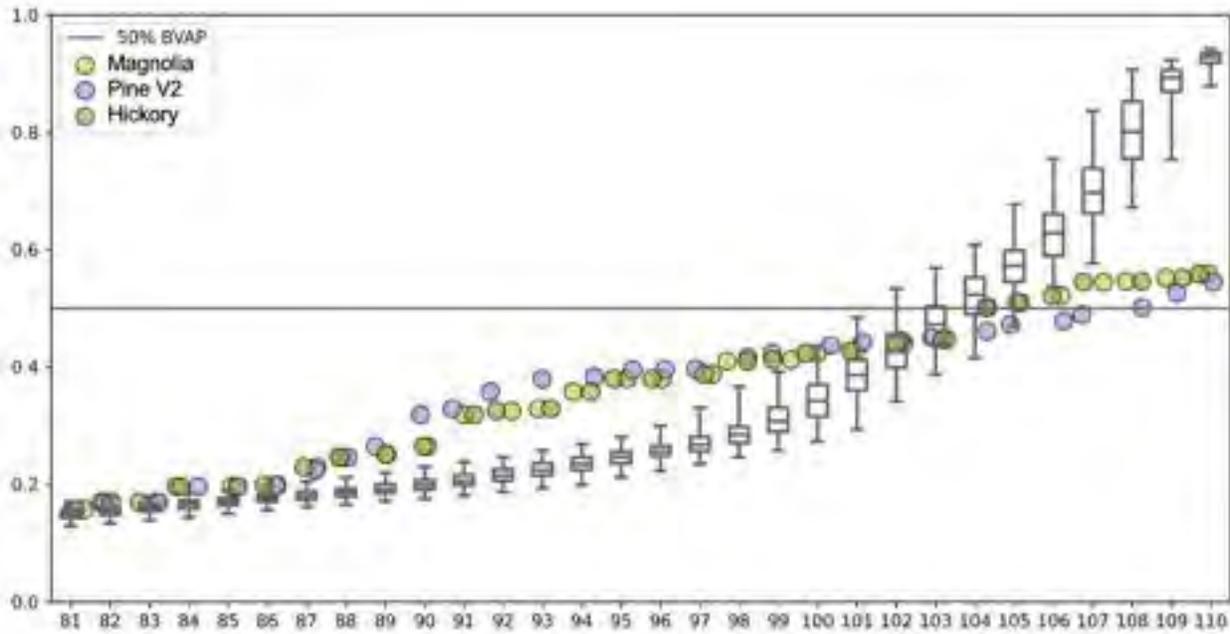


Figure 39. Distribution of Black VAP by State House District

Almost all maps in the Computational Ensemble feature at least five Black-majority districts and a typical map features seven such districts. Proposed Plans Magnolia and Hickory share a common map of districts for the city of Detroit and neighboring areas, and thus have the same results on the distribution of Black Voting Age Population by district. These two plans also feature seven Black majority districts, as is typical of the computational maps, but they arrange the districts radiating outward into suburban areas of Macomb and Oakland counties, and western Wayne County, so that the large urban Black majorities get partially diluted to smaller majorities in these hybrid urban-suburban districts. In addition to the seven majority-Black districts, these plans also create many more districts with a large (but short of a majority) Black Voting Age Population than the maps in the ensemble. The Magnolia/Hickory arrangement is the result of Commissioner Brittni Kellom’s efforts to address the public comments during the second round of public hearings earlier this fall.

Proposed Plan Pine V5 follows a hybrid approach between that of Magnolia/Hickory and its predecessor Draft Plan Pine, resulting in only three Black-majority districts, but in a greater number of districts with Black VAP above 40% or above 35%.

We note that all three plans also contain one district with Hispanic share of VAP above 35%, but none above 40% (over 39% of the Voting Age Population in District 1 identifies as “Hispanic”). There was no such district in the 2011 map, but this falls short of the number proportional to the Hispanic population in the state, which would be five.

No district contains a share of Asian VAP above 35%.

CRITERION B: CONTIGUITY

“Districts shall be geographically contiguous. Island areas are considered to be contiguous by land to the county of which they are a part.”

Understanding the Criterion.

See the discussion under Section III.2.B on the analysis of Congressional Districts.

Measure of Contiguity.

We report a binary “Yes” or “No” for whether a plan satisfies the stricter definition of contiguity, satisfying rook contiguity with islands attached to the land at the nearest point in the county of which they are a part of.

Results.

All three of these plans satisfy contiguity.

	Are all districts contiguous?
Plan Pine V5	Yes
Plan Hickory	Yes
Plan Magnolia	Yes

CRITERION C: COMMUNITIES OF INTEREST

“Districts shall reflect the state’s diverse population and communities of interest. Communities of interest may include, but shall not be limited to, populations that share cultural or historical characteristics or economic interests. Communities of interest do not include relationships with political parties, incumbents, or political candidates.”

Understanding the Criterion.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Measure of Respect for Communities of Interest.

See the discussion under Section III.2.C on the analysis of Congressional district maps.

Results.

Hickory and Magnolia preserve 30 COI clusters and Pine V2 preserves 31. That is slightly below the number preserved by computer-generated maps. Again, most of the preservation comes from districts within large COI clusters rather than COI clusters within districts. We do not see much evidence of responsiveness to COI clusters, though there could be more responsiveness to individual COI maps submitted by the public and selected by the Commission.

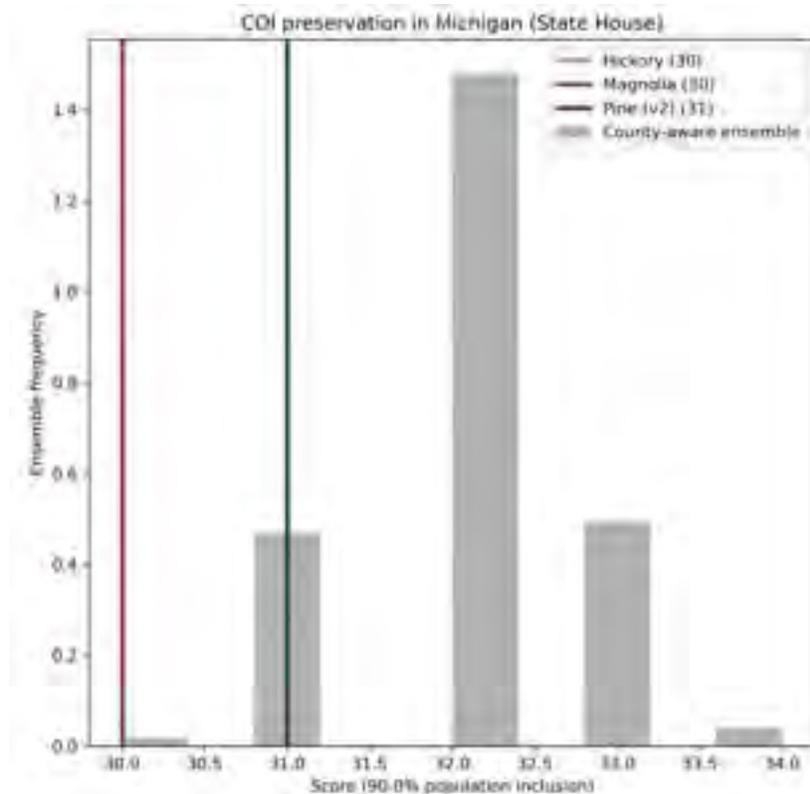


Figure 40. Community of Interest Preservation in State House Maps

CRITERION D: PARTISAN FAIRNESS

“Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness.”

Understanding the Criterion.

See the discussion under Section III.2.D on the analysis of the Congressional district maps, verbatim.

Measures of partisan fairness.

D1. Partisan Bias.

D2. Efficiency Gap.

D3. Deviations from proportionality.

Measures D1-D3 are exactly as described in Section III.2.D.

D4. Median-Mean difference.

Measure D4 is exactly as described in Section VII.2.D on the analysis of Draft plans for state House districts.

D5. Lopsided Test.

Exactly as described in Section III.2.D.

D6. Partisan Advantage.

Measure D4 is exactly as described in Section VII.2.D on the analysis of Draft plans for state House districts.

D7. Outlier test.

Exactly as described in Section III.2.D.

D8. Other measures.

The measures available in DRA 2020 are as described in subsection V.2.D8, on the analysis of Senate district plans.

For readers' convenience, we published the three Proposed state House maps in DRA 2020 under the names: "HD Pine V5", "HD Hickory" and "HD Magnolia".

The election data that we use to compute the measures in this Section is again:

The 2018 Governor election; the 2018 Secretary of State election; the 2018 Attorney General election; the 2016 Presidential election; and the 2018 U.S. Senate election, are used by the MGGG lab to report results on Partisan Bias (D1), Efficiency Gap (D2), Deviations from Proportionality (D3), Median-Mean Difference (D4), and the Outlier test (D7). And the 2014, 2016, 2018 and 2020 Michigan House election, and the 2016 and 2020 U.S. Presidential election, are used by Dr. Christian Cox from Yale University to compute the Lopsided Margins (D5) and the Partisan Advantage (D6). DRA 2020 allows users to choose their preferred election data input to compute the measures described under D8.

Results.

We present the results on partisan fairness across all Proposed maps for Michigan House districts in the following table. Each row indicates a redistricting plan. Each column indicates a measure of partisan fairness, from D1 to D7. Positive numbers indicate deviations from the fair ideal that favor the Republican Party, and negative values indicate deviations that favor the Democratic Party. Zero indicates perfect fairness according to each measure. The values of some measures are in seats; others are in percentage of the total number of votes. The “Outlier” (D7) indicates a party (“D” for Democratic or “R” for Republican) and a range of percentages. The letter indicates the party that this map favors, relative to the 1,000,000 other maps in the Princeton Gerrymandering Project ensemble. The first number is the share of maps in the ensemble that are less favorable to this party (in the sense that the party would obtain fewer seats), and the second is the share of maps that are even more favorable (in the sense that the party would obtain more seats).

TABLE 43. Measures of Partisan Fairness for Proposed State House District Plans

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Pine V5	+11.4 seats	+2.9%	-1.3 seats	+2.3%	+5.1%	-2.1 seats	D: 100%-0%
Plan Hickory	+11.6 seats	+3.1%	-0.9 seats	+2.4%	+4.8%	-2.4 seats	D: 99.9%-0%
Plan Magnolia	+11.4 seats	+3.4%	-0.7 seats	+2.6%	+5.1%	-2.1 seats	D: 99.9%-0%

Compare these results to the results on the measures of partisan fairness used by the Commission, as advised by Dr. Lisa Handley, displayed in the table below. The values below were obtained from a composite of all 13 state-wide elections (Presidential, U.S. Senate, Governor, Secretary of State, and State Attorney General) from 2012 to 2020, and we report them here directly from the MICRC website.

TABLE 44. Selection of Measures of Partisan Fairness Used by the Commission.

	Bias	Eff. Gap	Proport.	Med-mn	Lopsided	Advantage	Outlier
	D1	D2	D3	D4	D5	D6	D7
Plan Pine V5	--	+4.3%	+0.5%	+2.7%	+5.3%	--	--
Plan Hickory	--	+4.3%	+0.5%	+2.7%	+5.3%	--	--
Plan Magnolia	--	+5.4%	+1.4%	+2.9%	+5.7%	--	--

The pattern is similar to the one we identified in Congressional and Senate maps, but the Republican political geography advantage is more pronounced at the level of House legislative districts. For instance, the average map in the Computational Ensemble (a computer suite of maps created for comparison purposes) feature an Efficiency Gap of about 7%. Confronted with this large Republican advantage in the geographic distribution of its voters, the Commission’s plans make expected results more favorable for the Democratic Party, in order to partially — but only partially — cancel out the underlying Republican geographic advantage. This is reflected in the negative value of the Partisan Advantage (D6), which suggests that, net of the effect of political geography, the maps slightly favor Democratic candidates (by a bit more than two seats), but not enough to compensate for the large underlying Republican advantage due to the political geography of the state, as shown by measures D1, D2, D4 and D5.

The Commission edited and adjusted Proposed state House maps toward more favorable likely outcomes for Democrats, halving the Efficiency Gap from the 7% that is typical of computational maps (drawn neutrally without partisan considerations), to around 3% in Proposed plans Pine V5, Hickory and Magnolia. However, in doing so, the maps performed less well on the Outlier Test (D7). State House district maps that minimally reflect county boundaries and compactness are extremely unlikely to bring the Efficiency Gap close to zero. The Commission thus drew proposed maps that are more favorable to Democrats than computer-generated maps. In other words, these maps — and any maps close to 0% Efficiency gap — are outliers, and they do not meet the Outlier test, which calls on maps to be typical rather than more favorable to one or another political party than maps drawn without partisan intent.

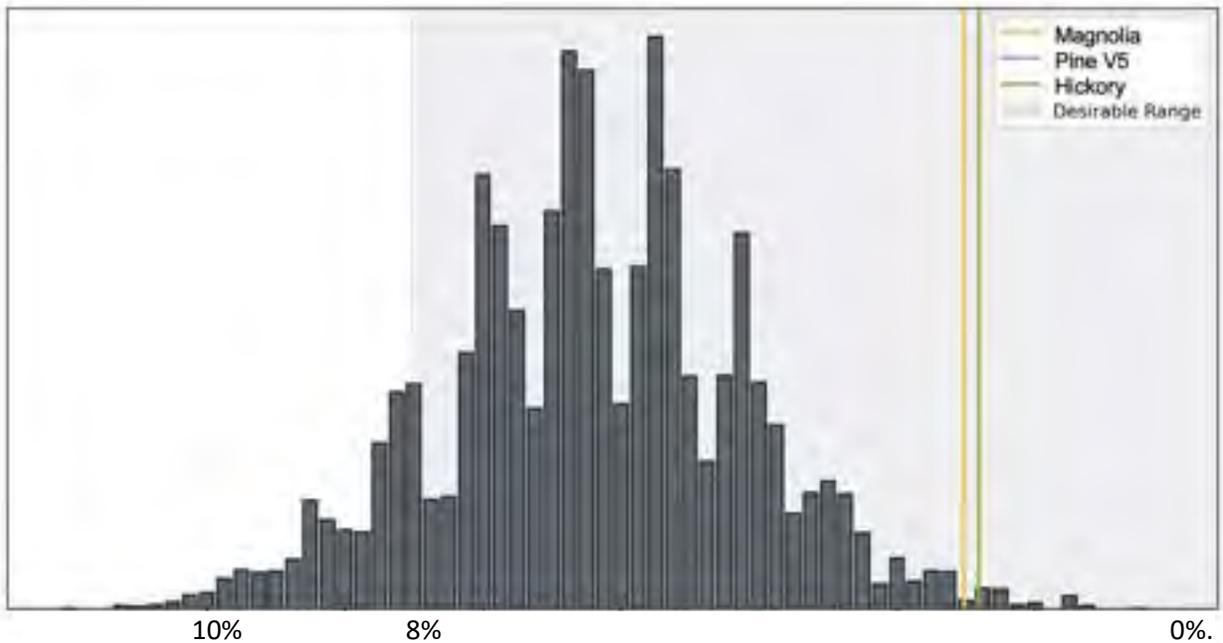


Figure 41. Efficiency Gap given 2018 US Senate Election Results

This is well illustrated by Figure 41. The range of normal Efficiency Gap scores, according to the proposers of this measure, is from -8% to +8%, an area shaded in gray (the horizontal axis goes from more favorable to Republicans to less favorable to Republicans from left to right). It is easy to satisfy this bar, as most maps in the Computational Ensemble fall within this range (as denoted by the height of the bars in the figure). Whereas, hitting zero proved virtually impossible for our computational algorithm. In its effort to draw maps that achieve closer to zero Efficiency Gap, the Commission collaboratively drew maps that feature a lower Efficiency Gap than the vast majority of other maps we have assessed. A lower Efficiency Gap translates into a higher number of seats for the Democratic party, beyond the number proportional to its statewide vote, as shown in the next figure.

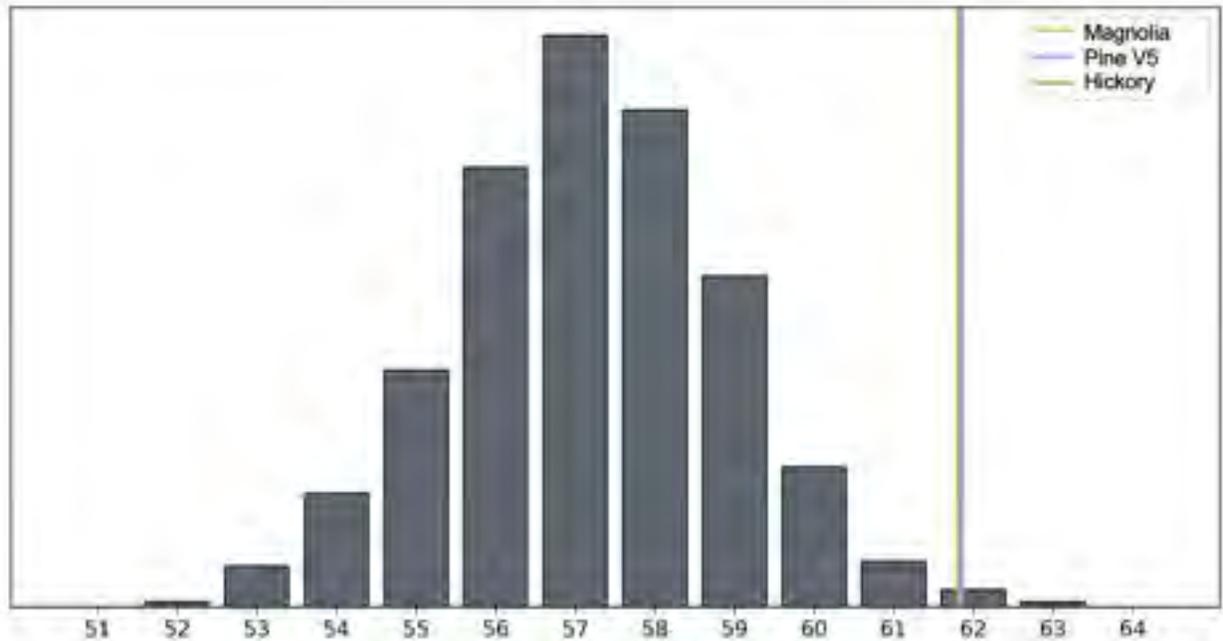


Figure 42. Democratic House seats Given 2018 U.S. Senate Election Results

Based on the 2018 U.S. Senate election results under computer-generated maps, Democrats would predictably win between 54 and 60 seats, with 57 being the most typical number. But under Proposed plans Pine V5, Hickory or Magnolia, Democrats would win 62 seats, overperformance compared to maps drawn without partisan considerations. As a result, these maps are outliers compared to computer-generated maps.

Democrats won this statewide election 52 percent to 46 percent, so the proportional number of seats for Democrats is between 58 and 59. The winning party would normally win a greater share of seats than votes. Reducing the efficiency gap or improving other symmetry scores would achieve outcomes that would give Democrats and Republicans a similar share of House seats in elections in which they won a similar share of the statewide vote. But the concentration of Democrats in urban areas makes that unlikely absent efforts to construct districts with that purpose in mind.

These efforts, if too intense, could put the maps at risk of judicial review, if Courts use the Outlier Test they have used in the past to identify whether a map provides a disproportionate advantage to a political party, and without considering scores on symmetry. If Courts instead compare the maps against symmetric baselines, these maps would be seen as performing well, as they generate slightly more seats for Democrats than the proportional baseline, and slightly less than the number required to fully close the efficiency gap or the median-mean difference.

The next figure replicates an analysis of neutrality with the Princeton computational ensemble of a million maps, using Princeton’s composite election results. We get similar results: all three maps are outliers compared to computer-generated maps; Plan Pine V5 more so; in fact, Plan Pine V5 is tied for the most favorable to Democrats among all one million maps in the Princeton Gerrymandering Project’s computational ensemble. Again, under these plans, Democrats obtain two or three more seats than under most maps drawn without partisan considerations, and five

or six more than typical for computer-generated maps. By pursuing the goal of better scores on some measures of symmetry, these maps result in lower scores on neutrality.

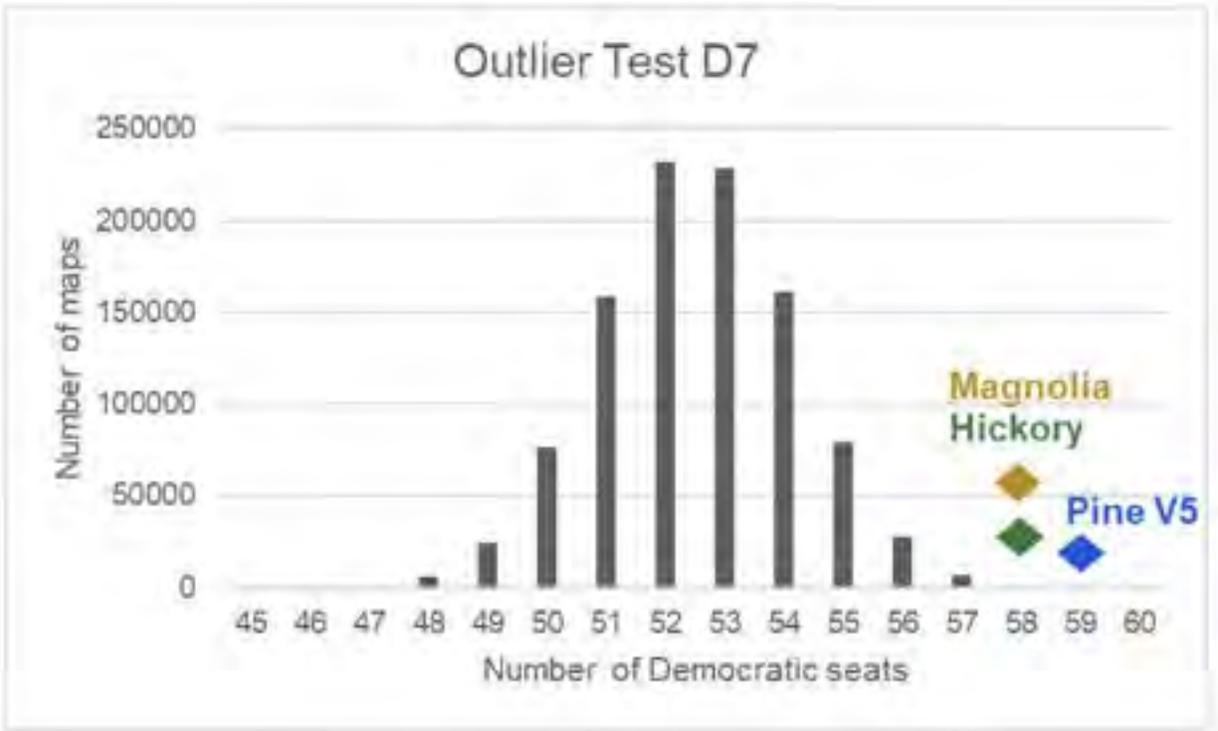


Figure 43. Democratic Seats with Princeton Composite Election Data

CRITERION E: FAIRNESS TO CANDIDATES

"Districts shall not favor or disfavor an incumbent elected official or a candidate."

Understanding the criterion.

See the discussion under Section III.2.E on the analysis of the Congressional district maps, verbatim.

Measures of fairness to candidates.

See the discussion under Section III.2.E on the analysis of the Senate district maps.

Results.

We present first results on double-bunking, i.e. assigning two incumbents to the same district. We report two numbers. The first considers all incumbents and uses addresses from the 2020 Michigan Candidate Listing file made public by the MI Secretary of State. With this data, the typical range in the computational ensemble is from 19 to 29, so these three maps all fall within this range.

TABLE 45. Districts with Two Incumbents in Proposed State House District Plans	
Plan Pine V5	22 [11]
Plan Hickory	21 [10]
Plan Magnolia	21 [10]

However, many incumbents are term-limited, and cannot run again, so placing them in the same district with another incumbent is irrelevant. The second number, in brackets, considers only incumbents who are not term-limited, and uses addresses obtained from the Michigan Voter file by Mike Wilkinson for Bridge Michigan.⁶⁰

On competitiveness, if we define a "competitive district" as one that each of the two parties won in at least one of the five elections in the MGGG data set (namely, the 2018 Senate, Governor, Secretary of State, and Attorney General elections, and the 2016 Presidential election), then all three Proposed Senate plans feature 20 such districts, close to the middle of the range of the Computational Ensemble (most maps feature between 13 and 23, with the most frequent being 18).

Proposed Plan Pine V5 features 84 election results decided by a less than 6% margin, from among 550 total election results (five elections in each of 110 districts). Proposed Plan Hickory features 91, and Proposed Plan Magnolia features 88. Most maps in the Computational Ensemble feature between 73 and 108, with the most typical number being 90, so the three Proposed plans fall within the normal range.

There is no indication that the Proposed maps favor or disfavor incumbents as a class.

⁶⁰ Sergio Martinez-Beltrán and Mike Wilkinson, "Redistricting may oust half of incumbents in Michigan, analysis finds", November 23, 2021, Bridge Michigan.

CRITERION F: JURISDICTIONAL BOUNDARIES

"Districts shall reflect consideration of county, city, and township boundaries."

Understanding the criterion.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Measures of respect of jurisdictional boundaries.

See the discussion under Section III.2.F on the analysis of the Congressional district maps, verbatim.

Results.

We first present the results in table format.

TABLE 46. Split Jurisdictions and Jurisdictional Splits in Proposed State House Maps.				
	Split Counties	County Pieces	Split Municipalities	Municipality Pieces
Plan Pine V5	48	201	129	328
Plan Hickory	48	202	129	329
Plan Magnolia	48	200	127	323

These plans are very similar with respect to reflecting consideration of county, city and township boundaries. They reflect municipal boundaries more than the computer-generated maps drawn without any attention to municipal boundaries, but they reflect county boundaries less than the computer-generated maps drawn to reflect these boundaries.

This is evidence that the plans reflect jurisdictional boundaries somewhat, more than not at all, but not as much as computer algorithms trained to do so.

CRITERION G: COMPACTNESS

“Districts shall be reasonably compact.”

Understanding the criterion.

See the discussion under Section III.2.G on the analysis of the Congressional district maps, verbatim.

Measures of compactness.

See the discussion under Section III.2.G on the analysis of the Congressional district maps, verbatim.

Results.

In the next table, for each redistricting plan in each row, we provide the Polsby-Popper, Reock and Cut Edges measures of compactness, respectively in columns 1, 2 and 3. The Polsby-Popper and Reock scores areas reported by DRA 2020, and the Cut Edges is as computed by the MGGG Lab.

TABLE 47. Compactness Measures in Proposed State House District Plans			
	Polsby-Popper	Reock	Cut Edges
Plan Pine V5	0.39	0.41	2631
Plan Hickory	0.38	0.40	2668
Plan Magnolia	0.39	0.41	2635

The Cut Edges scores are poor, at the very high (bad) end of the distribution of the Computational Ensemble. Viewers can confirm, by visual inspection, that compactness was not a guiding factor in the design of these maps.

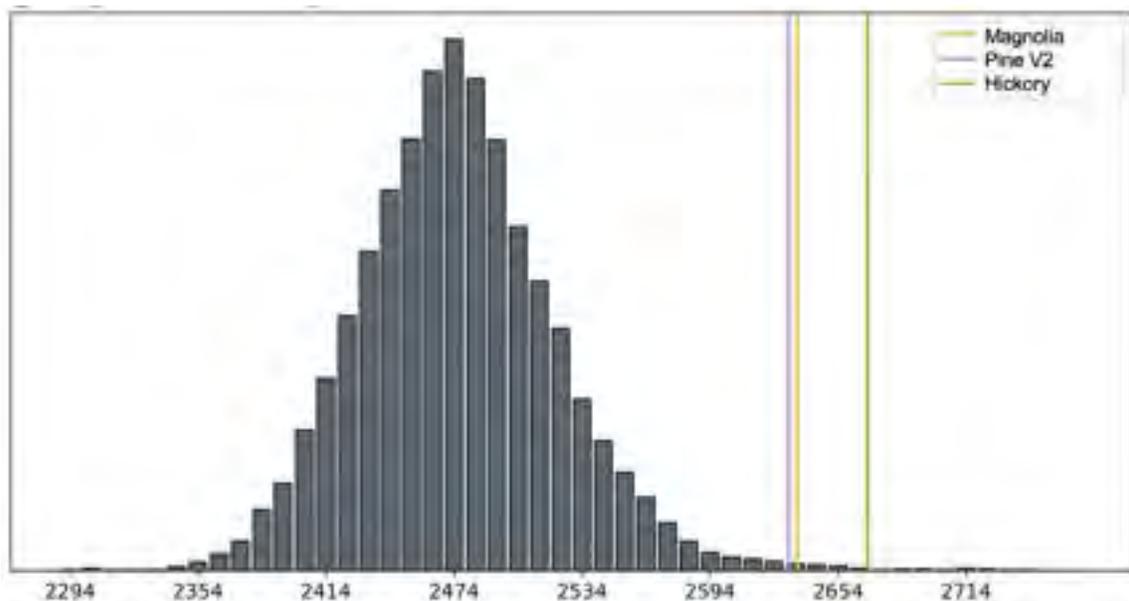


Figure 44. Number of Cut Edges in Proposed House District Plans

VIII.3. SUMMARY OF RESULTS

Proposed plans Pine V5, Hickory, and Magnolia are all complete redistricting plans that divide the entire state into one 110 contiguous districts. The three plans are similar, as they all stem from Draft Plan Pine, and many districts share the same boundaries across all four of these plans. Further, all three Proposed plans feature adjustments to bring the population differences down to approximately 5%, or less than 5,000 inhabitants.

Plan Magnolia and Plan Hickory introduce a new configuration of Detroit districts, as sought by Commissioner Kellom, resulting in compliance with the Voting Rights Act in a manner designed to reflect the communities in the city of Detroit that lessens the consideration of race in the creation of districts (the distribution of racial shares across districts deviates less from the distribution under maps drawn by computer algorithm). Proposed Plan Hickory differs from Proposed Plan Magnolia mostly in Ann Arbor, where Proposed Plan Hickory develops a distinct configuration with a four-district split, while Proposed Plan Magnolia kept the original configuration from Proposed Plan Pine. Proposed Plan Pine V5 adopts neither of these two new configurations in Detroit or Ann Arbor, staying closest to Proposed Plan Pine.

These three plans feature moderately large deviations from population equality: about 5%.

Proposed Plan Magnolia and Proposed Plan Hickory feature seven districts in which a majority of the Voting Age Population identifies as “Black,” and an additional six districts with a Black Voting Age Population share above 40%. Proposed Plan Pine V5 features only three districts with a majority of such population, but an additional ten districts with a share above 40%.

Commissioners made efforts to adjust boundaries in response to requests by specific neighborhood-based communities of interests, but the overall approach to reflect communities of interest remains somewhat unsystematic. Specifically, how the Commission prioritized reflecting communities of interest over lower-ranked criteria remains unclear.

Regarding partisan fairness, different measures put starkly different demands on state House District maps in Michigan. The Commission strained to approach a perfect score in two or three measures selected by consultant Dr. Lisa Handley, but in doing so, lowered the score in other measures. In one measure that has been accepted by courts — the Outlier Test — the scores worsened, so that Proposed Plan Pine V5, Proposed Plan Hickory and Proposed Plan Magnolia all appear as outlier maps that give the Democratic Party a higher number of seats than maps drawn without partisan considerations.

These maps appear fair to incumbents and challengers. They reflect county, city and township boundaries to some extent, but less so than maps designed by algorithms instructed to reflect county boundaries. These maps contain several districts that do not appear reasonably compact by visual inspection, and aggregate numerical scores and their comparison to computationally generated maps confirm that the maps perform worse on compactness than other maps.

We find that the approach toward compliance with the VRA in Proposed Plan Magnolia and Proposed Plan Hickory better address the concerns expressed by Detroit residents, including two Democratic Commissioners Juanita Curry and Brittini Kellom, both of Detroit, and by the Department of Civil Rights, regarding representation of the Black community in Detroit.

Both Proposed plans Hickory and Magnolia appear as outlier maps that give a state House advantage to the Democratic Party than almost any computer-generated map. But these maps perform well instead on measures of symmetry that do not consider the geographic distribution of Democrats and Republicans. Both proposed plans Hickory and Magnolia evolved from Draft Plan Pine, itself something of an outlier. In the most recent map drawing, Proposed plans Hickory and Magnolia updated Draft Pine in a way that would be expected to add an extra seat or two for the Democratic party.

Proposed Plan Hickory and Proposed Plan Magnolia perform well on several other measures of partisan fairness, but it would be possible to redraw both to score within a normal range in a larger class of accepted measures of partisan fairness.⁶¹ The Commission has pursued greater partisan fairness on some measures that aim toward symmetry at the expense of scores on measures of neutrality that they did not consider.

⁶¹ Plan HD Szetela (#276), which is the only House plan submitted by an individual commissioner, also fails the Outlier Test, as it too gives more seats to Democrats than almost any map drawn without partisan considerations. It thus has the same advantages and disadvantages on this criterion.

PART IX. EVALUATING MICHIGAN'S NEW PROCESS

As we write this report, we look to the start of Michigan's next election cycle – midterm elections that take place Tuesday, Nov. 8, 2022. Yet in reality, they are already underway. Michigan's primary for statewide candidates takes place Tuesday, Aug. 2, 2022. Even now, candidates are sharpening their campaign tools, anxious to know the boundaries that will govern their election success – or loss.

No one could predict that a novel Coronavirus, named COVID-19, would entangle presidential politics at its first strike and persist as decennial U.S. Census data were gathered and as Michigan's Independent Citizens Redistricting Commission was empaneled to draw voting boundaries. The Commission faced immediate lawsuits and complaints related to its formation and then was unable to meet its initial deadlines due to the Census delay and unable to get full legal certainty regarding its amended processes. Ultimately, the COVID-19 pandemic and other issues forced significant delays in release of the 2020 Census data, which in turn delayed the MICRC's ability to begin drawing maps, and stretched its timeline for release of final maps.

Under the new constitutional amendment, Michigan's Secretary of State would set the stage for redistricting under the MICRC. From October 24, 2019 to June 1, 2020, the Secretary of State invited Michigan citizens to apply to serve on the MICRC. Some 9,367 applications were processed, 55% male and 45% female. Sixty-one percent of them were over the age of 55. More than 48 percent of the applicants identified themselves as not affiliated with any political party, 38.5 percent of them identified as Democrats and 13 percent as Republican.

Between June and August, the Secretary of State completed the process to randomly draw commissioners from eligible applicants, a three-step process. The MICRC convened September 17-18, 2020, on a fast track to draw legally defensible boundaries governing a decade of citizen voting.

A website was designed, executive director and staff hired and a structure put in place for educating commissioners, inviting public input, hosting a series of public hearings, asking members of the public to draw maps of their own design and submit them through a special online portal. The website included space for preliminary maps as they were drawn and also for housing final maps. Legal resources were also engendered, expecting court battles to come.

After hiring its staff and preparing for public input, the Commission began gathering that input through the online portal and a series of sixteen public hearings around the state in May and June 2021. By late August, the MICRC began to draw draft maps. However, the Commission's early map drawing efforts were significantly influenced by delays in data access and related challenges, including data for the U.S. Census, partisanship, racial voting patterns, and Communities of Interest (COI). Each of these types of data have direct relevance to the criteria the Commission must utilize in drawing maps, making data challenges a key factor in the MICRC's early mapping efforts.

While waiting for the U.S. Census data to arrive, the MICRC made a number of decisions to help guide pending map drawing efforts. In one particularly important decision, the MICRC decided to

begin its efforts with a “blank” slate, rather than relying on either Michigan’s 2010 maps or the hometowns of incumbent Michigan politicians.

The Commission also considered and agreed on a set of regional definitions, dividing that blank slate into manageable geographic areas in hopes of helping to organize and rationalize their mapping approach.

By August 19, 2021, the MICRC had debated and adopted a detailed [mapping process](#) to guide their pending efforts. The process included a flowchart detailing district design steps, a regional approach, steps to review proposed Communities of Interest, opportunities for individual commissioner-drafted mapping as well as a collaborative drawing approach, the handling of alternative maps, documentation and record keeping, and a structured approach to designing decisions.

After the 2020 Census Redistricting Data Summary File was released on August 12, the Commission’s mapping consultant, Electronic Data Services, needed a few days to integrate the data into its GIS systems. At this point the MICRC did not yet have advice from its Voting Rights Act (VRA) consultant or VRA legal counsel—Dr. Lisa Handley and Bruce Adelson, respectively—on whether Michigan’s new maps would need to protect minority voting rights according to the VRA, as was required of the 2010 maps. This information was provided for the first time at the Commission’s meeting in Ann Arbor on September 2. Nor did it yet have COI data integrated into the GIS mapping system, which became available on September 1, or information to help understand how their line drawing would impact measures of partisan fairness.

Thus, when it was finally able to begin drawing maps on August 20, 2021, the MICRC focused primarily on equal population, geographic contiguity, and jurisdiction boundaries, without significant regard to the other criteria. The Commission began by drawing Michigan Senate districts in their previously defined south-central and southeast Michigan regions. One of the newly proposed Senate maps was the first released.

As it began mapping, the Commission settled on a round-robin process whereby each commissioner took a turn designing districts, with the statewide map constructed in a stepwise progression moving from one commissioner to the next. During any commissioner’s turn, all other commissioners were generally able to provide feedback and suggestions in real-time.

While the Commission began the map drawing with state senate districts, it quickly followed with Michigan House districts in the same region. Since most of the state’s Congressional Districts necessarily cover larger geographic areas, the Commission postponed any focus on congressional seats until later in September.

As this map drawing process proceeded, the Commission continued to assess public input, made numerous modifications to previously designed districts, moved into additional regions of the state to continue drafting districts, and began to create additional sets of maps to address the variety of public input they had received. At times, the Commission chose to try to adhere to general public requests that were not associated with specific criteria, such as citizen views on how to split sections of the state or which areas should not be connected in the same district.

While most of the early focus was on equal population, geographic contiguity, and jurisdiction boundaries, commissioners also attempted to incorporate at least some Community of Interest

(COI) input early in the process. Much of this was based initially on jurisdictional relationships, reflecting public input from the first round of public hearings. For instance, the commissioners recalled substantial input on broad COI concepts such as keeping lakeshore communities together, and in many cases keeping urban and rural areas separate from one another, or about other regional relationships such as joining areas of a particular county with parts of a neighboring county due to cultural, economic, historic, and other relationships.

By August 26, 2021, the Commission had received initial maps of COI clusters, prepared by the MGGG group, and began using these as overlays in the GIS system on September 1. As the Commission spent more time considering Communities of Interest, it encountered a difficult learning curve to efficiently and effectively consider the hundreds of submissions it had gathered, and how those submissions interact with each other and with other criteria such as equal population and compactness. These challenges began with consideration of COIs in the Upper Peninsula and northern Lower Peninsula, including tribal communities, lakeshore communities, and rural communities, but over time broadened as the Commission attempted to consider many additional COIs. After trying a few different approaches, including full MICRC consideration during meetings for every COI submission, not just the COI clusters, by early September the Commission decided their approach was taking too much time. They decided instead to have each of the commissioners' review COI information on their own, outside of meetings, and to bring that knowledge to bear while jointly designing maps during their meetings.

Through September 2021, numerous commissioners used their own laptop computers to analyze the available data and draft alternative versions of districts, to examine options and inform the full Commission's discussion.

By early September 2021, the Commission ended the regional approach and focused on completing initial versions of the Michigan Senate maps. After many revisions, this was accomplished on September 15. The Commission then quickly turned to drafting Michigan's U.S. Congressional Districts, completing initial versions of statewide maps in just days, before turning back to Michigan state House maps again on September 20.

The Commission's mapping process through this initial set of draft maps featured significant collaboration, much discussion of input from their consultants and the public, and many rounds of revisions. We note that MICRC tried to respond to its criteria but often did so with incomplete data. It also went beyond its requirements in incorporating public feedback in an effort to be responsive.

With the first round of 16 statewide public hearings concluded on July 1 and the necessary Census data made available on August 20, the Michigan Independent Citizens Redistricting Commission met approximately 39 times over 15 weeks for intensive map drawing sessions to design and publish maps for public comment during its second round of five statewide public hearings.

From that public feedback, the Commission published six maps each for the state House of Representatives and state Senate, and eight maps outlining Michigan's Congressional Districts. For each set of those map types, half had been created collaboratively by the entire Commission, while the other half had been designed and submitted by individual commissioners.

The second round of hearings then took place in Detroit, Lansing, Grand Rapids, Gaylord, and Flint from Oct. 20-27, with hundreds of Michigan residents turning out to voice their opinions and

submit additional mapping suggestions. A number of central themes emerged, including those raising questions about:

- **The Voting Rights Act.**

One of the most common topics addressed by residents was whether the Commission had adequately addressed the [U.S. Voting Rights Act \(VRA\)](#). While the Commission had designed a number of “majority minority” districts, the Commission hadn’t designed any with majorities of Black voting age population residents.

During the earlier August-October mapping sessions, the Commissioners had been advised by their Voting Rights Act consultant and legal counsel that compliance with the VRA could be achieved in Detroit with as little as 35%-40% Black voting age population in a district, and that rising significantly above those targets might unnecessarily pack Black voters into fewer districts than would be appropriate. The Commission followed that advice in drawing the draft districts, but then heard extensive negative feedback about this approach during the second round of public hearings.

- **Partisan Fairness.**

Another common theme of public comments focused on partisan fairness. Again, following its consultants’ advice, the Commission had adopted four measures of partisan fairness: *lopsided margins*, *mean-median difference*, *efficiency gap*, and *seats-vote ratio*. In most of the maps presented during the second round of hearings, many measures demonstrated relatively small but consistent advantages to the Republican Party. In numerous other scenarios, the Democratic Party was projected to win a slight majority of seats. Many commenters urged the MICRC to pursue metrics reflecting zero partisan advantage, though others called for prioritizing other criteria.

- **Communities of interest.**

A third major theme of feedback focused on Communities of Interest, though public comments often went beyond desires to keep COIs within districts. Many addressed geographic relationships (such as keeping lakeshore districts together or Ottawa County whole) or urban-rural characteristics (such as keeping the City of Midland in an urban district with Bay City and Saginaw vs. keeping Midland in a rural district with Midland and surrounding counties). There was more consensus about avoiding splits of small COIs in the Detroit area.

Following the second round of public hearings, the MICRC went back to the drawing board to adjust its maps in nine additional meetings from Oct. 27 to Nov. 8. During this period, the Commission spent significant time discussing citizen Community of Interest feedback, the Voting Rights Amendment requirement and partisan fairness, while working to ensure the latest maps met all seven constitutional mandates. The Commission continued to receive significant public feedback throughout this final mapping process, much of it mutually conflicting – as had been the case for months. Two controversies rose to prominence during this deliberation period.

- **Transparency of Proceedings.**

During fall deliberations, the Commission also faced public questions about whether it had the authority to meet in closed session. The Commission had moved into a private session to discuss circumstances of the Voting Rights Act and the history of voting-related discrimination in Michigan. The commission’s staff cited attorney-client privilege,

Michigan's Open Meetings Act and Freedom of Information Act in supporting the closed session. The move has prompted lawmakers to seek a state Attorney General review.

- **Collaborative or Individual maps.**

One more potentially significant debate emerged on Nov. 5, when the Commission broke off mapmaking to seek legal advice asking when individual commissioners could submit their own redistricting plans. The commission asked whether individual commissioners could submit their maps for public comment at the present time or after the final 45-day public comment period. The constitutional amendment governing redistricting, as now understood, allows 45 days of public comment.

Thereafter, the commission -- late on Monday, November 8 -- paved the way for final public comments and final adoption of the House, Senate and Congressional maps that will govern elections for the next 10 years, barring future legal challenges. The commission forwarded 15 maps -- nine collaborative and an additional six from individual commissioners -- for public comment.

These 15 maps are at least one vote away from their final version, and available to view online [here](#). The Commission's action, barring further updated maps, now calls for processing the proposed maps, data and legal descriptions necessary for official publication. That work, once completed, will start the 45 days allowed for further public comment before final map adoption. The [commission's calendar](#) now calls for a public hearing at the University of Michigan in Ann Arbor on Thursday, Nov. 18, a meeting in downtown Lansing on Thursday, Dec. 2, a session on Thursday, Dec. 16 in downtown Detroit and a final 2021 meeting on Thursday, Dec. 30 in a Lansing location to be determined.

The state Constitution requires for a majority (seven) Commission vote -- from at least two Republicans, two Democrats and three independents -- for maps to be approved. Lacking a majority, the commission will rank maps for final approval. If the Commission cannot agree upon a ranking, the Michigan Secretary of State will randomly select final maps among those forwarded by the Commission.

On the positive side, the Commission has not divided into partisan factions, each with a map for consideration. Given the work of other commissions, this was a distinct possibility that has been avoided due to the cooperation and intent of commissioners. The Commission has largely worked cooperatively to propose and edit maps. But that does not mean the process has been free of drama. Commissioners have at times been in open conflict with one another on some issues. There has also been controversy regarding the role of the Chair relative to other Commissioners in determining drawing processes and making judgements comparing the importance of criteria. We are hopeful that the final maps can be approved with consensus and less acrimony.

To test Michigan's attitudes and opinions about this historic undertaking -- more in the public light than past redistricting efforts, Michigan State University's Institute for Public Policy and Social Research added questions about the MICRC to its September 2021 [State of the State Survey](#). These questions were also asked in the [Michigan Policy Insiders Panel, a group of legislative and executive staff and others that work in and around Michigan government](#).

Michigan's citizens expressed a range of opinions about the MICRC. Among them:

- Though around 4% more respondents indicated they were familiar with the MICRC than respondents in the same poll during the previous spring, more than half of respondents are still unfamiliar or have never heard of the Commission. Only 35.9% of respondents have seen or heard about the progress the Commission has made. In contrast, 91.5% of the policy insiders panel were very aware of the Commission. Much of the public said they were moderately familiar with the Commission, either somewhat familiar (29%) or mostly unfamiliar (26%).
- Of those who have heard of the MICRC, opinions are generally positive. In the fall survey, 53.4% of those responding said that they believe that requiring districts to be drawn by an independent citizen's commission is better than the prior alternative. This figure is up 7.7% from the earlier survey. However, 17.1% of respondents, an increase of 2.6% higher than the earlier survey, said they considered the new redistricting process somewhat or significantly worse than Michigan's earlier redistricting efforts. What is evident is that people are making up their mind and engaging with the Commission, as 7.2% more respondents had an opinion on utilizing a Commission rather than leaving redistricting to the legislature. But still 43% of the Michigan public said they had no positive or negative opinion of the Commission and another 17% said they did not know. In the future, 78.4% say they will pay close or some attention to the commission, while only 8.2% won't pay attention at all. Policy insiders had a comparatively more positive view about the Commission with 51% showing approval. They were also more opinionated, with only 14% having no opinion and 3% saying they did not know.
- Respondents, those close and outside the capital, are, by and large, happy with the process and rules governing the commission. They indicated that it's important that commission members were randomly selected, represent all political parties, and that the Commission conduct 10 public hearings. Around 20% of respondents are interested in sending questions or even attending one of these public hearings. Most will at least engage with the media surrounding the Commission, with 60.1% indicating they will do so. However, though respondents thought it was important that the Commission is transparent and holds public hearings, only 40.6% believe that participating in one of these meetings will have an impact on the Commission's work. Among insiders, 70.5% of those responding believed that engaging in the public portion of the MICRC meetings will have no impact on the Commission's work.
- The public and policy insiders largely agreed that most aspects of the commission's design were important, rating its criteria and structure highly. Policy insiders were less positive about the importance of taking or following public input.
- To date, redistricting has been seen as more of an insider topic, one that attracted policy and media following. But as more of these Commissions have emerged across the country, the issue of gerrymandering has permeated the public's conscious. Michiganders like the idea of the MICRC, but aren't as confident that public input will matter or that will be likely to venture to engage in one of its public hearings.

We also asked both the Michigan public and Michigan policy insiders open-ended questions about what they had heard about the commission, why they had a positive or negative opinion, and what changes they expected from the Commission.

Among Michigan citizens, one of the most common things they reported hearing was that independent members of the commission were actually partisans. One response stated “[two] independents are really Democrats.” Another stated that “I recently learned that one of the “independents” really isn’t independent; he has always voted for one party’s candidates and initiatives, instead of having a mix over the years.”

Another common negative response was that the redistricting commission had accomplished little or had many disagreements. One individual stated “they cannot agree on the maps that need to be drawn and will not finish on time. They can’t agree in general.”

Positive responses included that the redistricting commission will prevent gerrymandering and bring about more fairness in districting and elections. One person said they heard “that it’s supposed to make things more fair and cut down on gerrymandering.” Some individuals said the redistricting commission would fix gerrymandering, often pointing to prior efforts by Republicans.

Another common response indicated that individuals believed that it was best to have an independent redistricting commission to draw districts without the input or influence of politicians or parties. One person said “It’s important for our districts to be identified by an impartial commission rather than the legislators who have a clear stake in the decision.”

Overall, many citizens mentioned that they expected the Commission to bring more fairness in elections and districts. One person said “I hope that it’s a more fair system. One where voters choose their legislators, not the other way around.” Another common answer indicated that many people expected no change to come from the redistricting commission. Several responses were just simply the word “nothing” or “none.”

Among Lansing political insiders who work professionally in state politics, when asked “what have you heard?”, many responded that the commission was moving slowly and failing to meet deadlines. One individual said the commission “moves too slowly. Not particularly competent. But may be best way to draw districts. At least transparent and balanced.” Another political elite stated they “Read about in the media. Sounds like a bunch of people that have no clue performing a duty they know nothing about. Sounds like there will be a ton of legal challenges.”

Many political insiders believed that the standards set to become a commissioner encouraged underqualified individuals to become commissioners. One person said “In what other line of work, are people hired by people who don’t know what or understand the job is, based on the qualification that the people they get to hire are also the least qualified people to do the job?” Several also mentioned they had heard that many of the commissioners were repeatedly absent from meetings. One person said “People keep resigning or not showing up to the meetings that were appointed to the commission”

On the positive side, many political elites said they believed the process was fairer and would help to eliminate gerrymandering, much like the public. One stated “lines should be drawn in a fairer way. It would eliminate gerrymandering.”

Another common answer praised the redistricting commission for its transparency in the redistricting process. One person stated “generally the committee is operating transparently and making an effort to achieve appropriate districts. Some challenges are evident, but the public knowledge of the problems indicates the openness of the process.”

Overall, political elites commonly said they hope the Commission brings more fairness in elections and less gerrymandering. One expected a “reduction in gerrymandering and more equitable districts based on county, city, townships, etc. As a politician, it is your job to listen to ALL of your constituents and not be able to cherry pick certain geographic areas, because they fit the kind of constituency you desire.”

PART X. RECOMMENDATIONS

In light of our assessment of the new redistricting process so far, and our quantitative analysis of each of the Proposed maps, as of December 1, 2021, we issue a number of suggestions for consideration by the Commission as the redistricting process moves forward toward a final vote on adopted plans, at this point expected on December 30, 2021.

We stress that these are not final recommendations on the entirety of the redistricting process. Rather, we restrict our suggestions to recommendations that are actionable at that stage of the process -- before the Commission votes on adopting the official redistricting plans for 2022-2031, on December 30, 2021. We postpone a more comprehensive review of the entire redistricting process, with broader recommendations for 2030, to a Final Evaluative Report that we will conduct in 2022.

In the first version of this Report, made public on Oct. 18, 2021, we issued an earlier set of recommendations for consideration during the Second Round of Public Hearings, and up to the vote on Proposed plans on November 5. Those earlier recommendations are below, at the end of this section. We celebrate that the Proposed maps reflect much progress toward resolving many of the concerns expressed in those earlier recommendations.

The Commission fully addressed our first and third recommendations by resolving all the discrepancies between the population assigned to districts and the total population of Michigan, and resolved all of the contiguity violations as well, so that all the Proposed maps are complete redistricting plans with contiguous districts. It partially addressed our second recommendation, by revising the state legislative maps toward greater population equality. And it partially addressed our fourth recommendation by reassessing its approach toward compliance with the VRA in the Proposed plans for state House districts.

In the version 2.0 of this report, made public on Nov. 15, 2021, we suggested that if it were possible to revisit their decisions, the Commission could correct problems that unnecessarily reduce their compliance with constitutional criteria and increase their legal risk. We made two suggestions for immediate consideration. The first was to reduce population inequality in its Congressional maps. The current maps unnecessarily put the Commission at legal risk and reduce performance on the top constitutional criterion without any substantive gain. We noted that the task of reducing the deviations from population equality could be delegated or performed quickly by moving small border areas from districts with above-average population to neighboring districts with below-average population, and would not require substantial edits, nor focusing on controversial areas of prior maps.

Second, we suggested that the Commission should elevate Plan SD Kellom's state Senate map to the status of a Proposed map with equal standing with the collaborative ones, so that it can be considered in the initial round of voting without moving to a more complicated ranked choice procedure. It is currently the only state Senate map that uses a revised Voting Rights Act compliance strategy, matching the Commission's collaborative efforts in their state House maps. Not considering this map again exposes the Commission to unnecessary risk at not achieving its top criterion.

We also made —and we nor reiterate— the following recommendations for consideration during the final round of public hearings:

1. With regard to the maps for Congressional Districts, we recommend that the Commission not adopt Plan Apple V2 without considerable explication, as the other two Proposed plans perform better on most criteria. Given the better performance of Plan Chestnut over Plan Birch V2 on some criteria, and their similar performance across other criteria, we recommend that the Commission articulate why it would prefer Plan Birch V2 over Plan Chestnut, if it chooses to do so, as to justify the greater population inequality.
2. With regard to the maps for state Senate district, we recommend that the Commission consider individual commissioner Plan SD Kellom (#270) as an alternative. We believe that Plan SD Kellom #270's compliance with the Voting Rights Act is less controversial than the three collaborative Proposed Senate plans. Further, we find that Plan SD Kellom #270 scores better than Plan Cherry V2 or Plan Linden on many other measures of compliance with the criteria.
3. With regard to the maps for state House districts, we recommend that the Commission not adopt Plan Pine V5 without considerable explication, as Plan Magnolia and Plan Hickory comply with the Voting Rights Act in a manner that is less controversial and that reflects Black communities in and around Detroit. A possible concern with both Plan Magnolia and Plan Hickory is that they are outlier maps that deliver more seats to candidates of one party (the Democratic party) than maps drawn without partisan considerations, but mitigating this concern, Plan Magnolia and Plan Hickory perform well on most other notions of partisan fairness that aim for symmetry without regard to the geographic distribution of Democrats and Republicans.
4. We recommend that the Commission accompany the final adoption of a congressional Plan with a written memorandum justifying why the population inequality in the adopted plan is needed to fulfill the seven criteria spelled out in the Michigan Constitution.
5. We recommend that the Commission accompany the final adoption of each Plan with a written memorandum explaining how the adopted plan complies with the Voting Rights Act, and how it reflects specific communities of interest in the state of Michigan. Those explanations should explain not just which communities were protected in each plan, but why they selected those communities to protect among the many that were submitted by the Michigan public. Their explanation for Voting Rights Act compliance should include more than a target percentage of Black residents in each district, with attention to the non-racial considerations that drove their decisions.
6. We recommend that the Commission bear in mind that reflecting Communities of Interest is a high constitutional priority. We acknowledge that our measures of COI cluster inclusion were not those the Commission chose to maximize. We offer them as guides only because we lacked a Commission-approved list of COIs that they sought to protect. Some criteria for exclusion of COIs might include that they are too large to include in districts or that they reflect attempts by citizens to design their entire district, rather than submit a cohesive community that could be included within one district.

7. With regard to Partisan Fairness, we recommend that the Commission consider a broader set of accepted measures of partisan fairness, and in particular measures that Courts have used to rule on partisan gerrymandering cases.⁶² We acknowledge that the Commission has selected some accepted measures of partisan fairness, those based on symmetry, and sought to draw fair maps. But we note that the maps may be challenged under notions of fairness based on neutrality, where maps are compared against maps drawn without partisan considerations.
8. We recommend that in considering public comments, the Commission keep its focus on constitutional criteria. The Commission does not need to adopt the maps that have the most positive overall public feedback if other maps would best meet its criteria.

We remain ready and able to assist the Commission in evaluating their maps on their own interpretations of the criteria or those offered by the public.

For completeness and archiving, here are the recommendations we made for consideration during the second round of public hearings.

1. Six of the 10 Draft plans appear to be incomplete, leaving some (small) populated geographic areas of Michigan unassigned to any district. While the size of the population excluded from any district is small —ranging from 13 inhabitants in one instance, to a maximum of 3,204 inhabitants without a district in two plans — it is imperative that these omissions be remedied. Further, any Proposed Plan must assign every geographic area to a district, and the MICRC should check that any plan satisfies this essential requisite before publishing it as a Proposed Plan. Further, the following discrepancies between total population assigned to districts (according to the MICRC’s compliance sheet), and the total population in Michigan according to the 2020 Census, must be resolved and brought to zero for any Draft Map that advances to Proposed Map.

Type of District	Codename	Total Pop. in all districts	Total Pop. in Michigan	Discrepancy
Congressional	Apple	10,077,331	10,077,331	0
Congressional	Birch	10,077,306	10,077,331	-25
Congressional	Maple	10,077,331	10,077,331	0
Congressional	Juniper	10,077,317	10,077,331	-14
State Senate	Elm	10,080,132	10,077,331	2,801
State Senate	Cherry	10,075,385	10,077,331	-1,946
State Senate	Spruce	10,079,459	10,077,331	2,128
State House	Peach	10,074,127	10,077,331	-3,204
State House	Oak	10,075,381	10,077,331	-1,950

⁶² League of Women Voters v. Commonwealth, 178 A.3d 737 (Pa. 2018) in Pennsylvania and Common Cause v. Lewis, 358 F. Supp. 3d 505 (D.N.C. 2019) in North Carolina.

State House	Pine	10,077,356	10,077,331	25
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Deficits in the Birch, Juniper, Cherry and Peach plans can be fully accounted by the unassigned census blocks (or parts thereof). Once these are assigned, the discrepancies will vanish to zero. Surpluses in the Elm and Spruce plans are harder to account for and raise questions about the quality of the data in the compliance sheet.

2. The population deviations from perfect equality may need justification. The population deviation in congressional maps is small. We recommend that in announcing a Proposed Plan, the Commission articulate in writing which appropriate state interest (such as better complying with any of the seven criteria) justifies maintaining the small population deviations across Congressional Districts. The population deviation in state legislative maps for the Michigan Senate and Michigan House are large, and they require further justification. It may be prudent to adjust these maps to reduce the population deviation across districts to levels closer to those in the congressional maps.
3. All three House plans feature small violations of contiguity: isolated census blocks are assigned to a different district than all the census blocks around them. We recommend that these violations of contiguity be fixed by reassigning each isolated census block to the district that surrounds it (or to any of the districts adjacent to them, if the isolated block is at a district boundary.)
4. The Draft plans pursue an unusual path to seek compliance with the VRA. They all appear to maximize the number of districts in which 35% to 49.5% of the Voting Age Population identifies as Black. Such outcome is accomplished, in large part, by breaking apart geographically compact Black majorities in the City of Detroit and dispersing them in less compact districts that radiate outward from the City of Detroit toward suburban parts of Macomb Co. and Oakland Co. As a result of this engineered partial dilution of the concentrated Black vote, the maps feature zero Black-majority districts (down from over a dozen in previous maps). An argument in support of this approach to comply with the VRA is an estimate that a bit less than 40% of Black Voting Age Population suffices for a district to be a “district of opportunity” for Black voters, so that a candidate preferred by this Black minority would prevail in the primary and in the general election. Yet this estimate is based on incomplete data, especially for primaries. If 35% suffices, the strength of the Black vote is elevated beyond proportionality to population and may separate non-Black suburban and rural populations from their representatives. If it turns out too low, the Black vote, stripped of its majorities in geographically compact areas in the City of Detroit, may not be able to elect its preferred candidates in many of the districts. Black leaders in Detroit have expressed concern about this scenario.⁶³ We recommend that the MICRC reevaluate its approach toward compliance with the VRA in light of these questions. Since primary data is largely unavailable, they need to assess whether their districts are likely to enable preferred candidates to win racially-polarized primary elections. If the MICRC decides that its approach toward compliance with the VRA is indeed optimal, we suggest that it accompany its maps with a justification of how the plans comply with the Voting Rights Act and with the related Equal Protection clause in the U.S. Constitution.

⁶³ <https://www.freep.com/story/news/local/michigan/2021/10/12/detroit-officials-activists-decry-redistricting-maps/6056535001/>

5. With regard to Communities of Interest, it is not clear whether the MICRC has followed a systematic way to choose among COIs, nor how the Draft plans reflect them. Some districts others appear to break apart communities.⁶⁴ In attempting to incorporate publicly submitted COIs, the Commission sometimes goes beyond its criteria to assess whether local residents like the people and places included in their districts. We recommend that the Commission focus on identifiable COIs within districts, not general comments about what areas should go with others. They can accompany any Proposed Map with an explanation of how the map reflects specific COIs, and how any splits were necessary. Reflecting communities of interest does not require creating fully homogenous districts. The congressional maps appear to lean in this direction, creating few competitive seats.
6. With regard to Partisan Fairness, we recommend that the Commission embrace a broader set of measures and take into account court rulings on partisan gerrymandering.⁶⁵ These determined that redistricting maps should be such that the partisan outcomes should not deviate greatly from the outcomes that we would expect under maps that did not take into account partisan considerations. Under this standard, a map may not always be better the closer to zero it brings symmetry measures such as the Efficiency Gap or the Lopsided Margin. Rather, a map is appropriate if its outcomes look normal, relative to what would happen under most maps drawn to satisfy other criteria. In this light, the maps proposed by the Commission perform well: they are not outliers, but within the normal range we would expect. From a symmetry standard, most maps tilt Republican; from a neutrality standard, most maps tilt Democratic. That means they go in the direction of symmetry from a neutral baseline (compared to maps that do not incorporate partisanship) and in the direction of neutrality from a symmetry baseline (compared to maps that were constructed to be exactly even in partisan outcomes).
7. In considering public comments, the Commission should keep its focus on their mapping criteria. General public comments about how well a citizen likes a district's shape or requests to maintain a district that excludes certain areas or types of people will be less helpful than those that point out how the Commission can meet its criteria. Where Communities of Interest can be identified, the public should point those out and should certainly expect the Commission to be responsive. But the Commission does not need to select maps that have the most positive overall public feedback if other maps would best meet its criteria. We remain ready and able to assist the Commission in evaluating their maps on their own interpretations of the criteria or those offered by the public.

These recommendations complete our interim report on Proposed Redistricting Plans for Michigan. A full Final Report will follow in 2022. We thank commissioners for their work on behalf of all citizens of Michigan, and we look forward to a final vote and to the adoption of Michigan electoral district plans for 2022-2031.

⁶⁴ For instance, the congressional Plan Apple splits the suburbs of Greater Grand Rapids, to form instead a narrow district connecting the urban core of Grand Rapids with Kalamazoo. Similar examples arise in Senate and House maps. Public complaints that districts split apart communities are discussed here: <https://www.freep.com/story/news/local/michigan/detroit/2021/10/14/local-leaders-redistricting-commission-keep-communities-intact/6050257001/>

⁶⁵ League of Women Voters v. Commonwealth, 178 A.3d 737 (Pa. 2018) in Pennsylvania and Common Cause v. Lewis, 358 F. Supp. 3d 505 (D.N.C. 2019) in North Carolina

PART XI. MICHIGAN'S REDISTRICTING HISTORY

In Article 1, Section 2 of the United States Constitution, it is specified that every decade an enumeration, or census, of every free person in a state must be utilized to apportion members of congress into districts of at most thirty thousand people. The same magnitude of people within a district was later implemented in 1964 in the Supreme Court Case *Reynolds v. Sims*, 377 U.S. 533 (1964) in the adoption of the 'One-Person, One-Vote Rule. This rule specified that states had to apportion their populations equally among their state senate districts.⁶⁶

The first U.S. census was initiated in 1790.⁶⁷ The census was a way to permit the framers of the Constitution to prioritize the population, rather than monetary status or land ownership, within the context of political power distribution.⁶⁸ Their goals were to ensure the government could determine the population outlook to better strategize and govern in reflection of the people. The data collected from the census would then lead to a redistricting effort that would result in allocation of resources, benefits, and population knowledge.⁶⁹ The manner and execution of how this is conducted and how districts are to be apportioned are left to the states to decide.

The original Michigan Constitution of 1835 set forth its parameters on how to apportion districts for members of its state legislature, stipulating that the quantity of state Senate seats must equate to one third of the state House seats, and the State House should not exceed 100 seats and have a minimum of 48 seats. Then in the Michigan Constitution of 1850, 32 State Senate districts were set which are "representative of the population" and do not split the boundaries of any county. In the ratification of the 1908 Michigan Constitution the number of apportioned State House districts was set to 110 under the similar conditions to the State Senate except that their districts cannot split the boundaries of cities or townships. Only slight provisions were made in the most recently ratified Michigan Constitution of 1963, changing the amount of apportioned state Senate districts to 38 and adding the constraint that state House districts must be contiguous, or that all parts of the district must be adjacent to one another.⁷⁰

In 2018, Michiganders took the drastic initiative to take power over the redistricting process and join only seven other states that utilize an independent commission to redistrict their congressional, state Senate, and state House districts for every census. It was an effort to redraw districts in the best interests of the people and not politicians or more specifically, a particular party. The initiative won 61% of the population's approval, achieving majorities within both Democratic and Republican counties.⁷¹

The next step is to achieve that shared vision for an improved redistricting process. The Commission has the power to improve its maps, following the criteria outlined in the Constitution. We are pleased to continue assisting in that effort to improve democracy.

⁶⁶ <https://supreme.justia.com/cases/federal/us/377/533/>

⁶⁷ https://www.census.gov/history/www/faqs/demographic_faqs/when_was_the_first_census_in_the_united_states.html

⁶⁸ <https://www.census.gov/programs-surveys/decennial-census/about/why.html>

⁶⁹ <https://www.census.gov/programs-surveys/decennial-census/about/why.html>

⁷⁰ [http://www.legislature.mi.gov/\(S\(3as5j3btq3hebs3e5vvet0xc\)\)/mileg.aspx?page=getObject&objectName=mcl-Constitution](http://www.legislature.mi.gov/(S(3as5j3btq3hebs3e5vvet0xc))/mileg.aspx?page=getObject&objectName=mcl-Constitution)

⁷¹ <https://www.brennancenter.org/our-work/analysis-opinion/attack-michigans-independent-redistricting-commission>

Plaintiffs’ Districts Demonstrative

Plaintiff Name	House District Challenged	Senate District Challenged	Count(s)
Donald Agee, Jr.	2	1	I, II, III, IV
Jerome Bennett ¹	14	10	I, II, III, IV
Dennis Leroy Black, Jr.	13	10	I, II, III, IV
Jamee Burbridge	14	10	I, II, III, IV
Beverly Ann Burrell	8	1	I, II, III, IV
Jemell Cotton	10	3	I, II, III, IV
Teresa DuBose		10	II, IV
Karen Ferguson	7	8	I, II, III, IV
Michelle Keeble		6	II, IV
Kimberly Hill Knott	7	8	I, II, III, IV
Barbara Gail London	12	11	I, II, III, IV
Norma McDaniel	26	5	I, II, III, IV
Glenda McDonald	8	3	I, II, III, IV

¹ At the time of the First Amended Complaint, Plaintiff Jerome Bennett resided in House District 13 and Senate District 10. Thereafter, Bennett then changed his residence. His new residence falls within House District 14, though his Senate District remains unchanged. This information was provided to Defendants as part of Bennett’s Responses to the Commission’s First Set of Interrogatories. ECF.49, PageID.528. But this change does not alter the challenged Districts asserted in Plaintiffs’ First Amended Complaint. ECF.8, PageID.88–107. Plaintiffs Jamee Burbridge and Tanesha Wilson were already challenging House District 14 under both the VRA and Equal Protection Clause. Plaintiff Dennis Leroy Black, Jr., was already challenging House District 13 under both the VRA and Equal Protection Clause.

Janet Marie Overall	1	1	I, II, III, IV
Shirley L. Radden	10		I, III
Davonte Sherard	2	1	I, II, III, IV
Michelle T. Smith		6	II, IV
Kenyetta Snapp	11		I, III
Donyale Stephen-Atara	14	10	III, IV
Tanesha Wilson	14	10	I, II, III, IV

Handley Table 4, Reconfigured

BVAP	Type	District	Winner	Winner Race	Unopposed	Incumbent	# Black opponents	# White opponents	Handley Polarization?	Black CoC Lose?
0.572	House	4	Whitsett	Black	-	x	1	1	x	-
0.569	House	5	Price	White	-	-	3	1	x	x
0.565	House	6	Weiss	White	-	x	2	1	-	-
0.565	House	16	Young	Black	-	x	1	1	-	-
0.540	House	18	Hoskins	Black	-	-	2	-	-	-
0.532	House	9	Aiyash	ME	-	x	4	-	-	-
0.465	Senate	7	Moss	White	-	x	1	-	-	-
0.463	Congress	13	Thanedar	Asian	-	-	7	-	-	-
0.459	House	7	Scott	Black	-	x	-	2	x	-
0.457	House	8	McFall	White	-	-	1+	1+	x	x
0.453	Congress	12	Tlaib	ME	-	x	3	-	-	-
0.440	House	11	Paiz	Hispanic	-	-	Several	Several	x	x
0.440	House	17	Pohutsky	White	x	x	-	-	-	-
0.437	Senate	3	Chang	Asian	-	x	x	-	-	-
0.427	House	14	McKinney	Black	-	-	-	2	x	-
0.426	House	12	Edwards	Black	-	-	-	1	x	-
0.417	Senate	10	Wojno	White	x	x	-	-	-	-
0.416	Senate	8	McMorrow	White	-	x	1	-	x	x
0.406	Senate	6	Cavanagh	Hispanic	-	-	1	1	-	-
0.402	House	10	Tate	Black	-	x	1	-	-	-
0.398	House	13	Stone	White	-	x	1	-	-	-
0.397	House	1	Carter	Black	-	x	-	1	-	-
0.378	House	26	Wegela	White	-	-	2	1	x	x
0.366	Senate	1	Geiss	Black	-	x	-	1	x	x
0.343	House	53	Carter	Black	x	x	-	-	-	-
0.340	House	3	Farhat	ME	-	-	-	-	-	-
0.255	Senate	2	Santana	Black	-	x	1	-	-	-

Handley Table 4, Reconfigured, No Incumbents

BVAP	Type	District	Winner	Winner Race	Unopposed	# Black opponents	# White opponents	Handley Polarization?	Black CoC Lose?
0.569	House	5	Price	White	-	3	1	x	x
0.540	House	18	Hoskins	Black	-	2	-	-	-
0.463	Congress	13	Thanedar	Asian	-	7	-	-	-
0.457	House	8	McFall	White	-	1+	1+	x	x
0.440	House	11	Paiz	Hispanic	-	Several	Several	x	x
0.427	House	14	McKinney	Black	-	-	2	x	-
0.426	House	12	Edwards	Black	-	-	1	x	-
0.406	Senate	6	Cavanagh	Hispanic	-	1	1	-	-
0.378	House	26	Wegela	White	-	2	1	x	x
0.340	House	3	Farhat	ME	-	-	-	-	-