

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
EL PASO DIVISION**

LEAGUE OF UNITED LATIN AMERICAN
CITIZENS, *et al.*,

Plaintiffs,

v.

GREG ABBOTT, *et al.*,

Defendants.

Case No. 3:21-cv-00259
[Lead Case]

Expert Report of Sean P. Trende

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. I am slated to teach it again in Fall of 2022. In the Springs of 2020, 2021, and 2022, 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.

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.

II. Scope of Engagement

I have been retained by the Attorney General of Texas on behalf of defendants in the above matter, to evaluate Texas's Congressional, state Senate, and state House districts, enacted by the Texas Legislature and signed by the state's governor, Greg Abbot [hereinafter "Enacted Plan[s]" or "Enacted Map[s]"]. These maps replace the previous maps [hereinafter "Benchmark Plan[s]" or "Benchmark Map[s]"]. In the course of this, I respond to points made in the expert reports of Dr. J. Morgan Kousser, Dr. Moon Duchin, Dr. Cristina Morales and Mr. George Korbel. I have been retained and am being compensated at a rate of \$450.00 per hour to provide my expert analysis.

III. Summary of Opinions

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:

- All three maps improve Republican performance by separating out Republican and Democratic partisans.
- The plaintiffs' alternative maps typically function only by stitching together non-compact minority populations from disparate areas of the region.

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 Texas Redistricting Website, available at <https://redistricting.capitol.texas.gov/>;
- Shapefiles for Texas political materials and demographic information at the block, precinct, and county level, downloaded from the Redistricting Data Hub, available at <https://redistrictingdatahub.org/>;
- Shapefiles for historic congressional districts, maintained by at <https://cdmaps.polisci.ucla.edu/>
- Election results taken from various Almanacs of American Politics (*supra* page 2), a biennial publication that compiles statistics and results from congressional elections, dating back to 1972.
- District descriptions are taken from the Texas Legislature's Redistricting Website, <https://redistricting.capitol.texas.gov/history#maps-section>.
- The State Board of Elections archive of election results, at <https://www.sos.state.tx.us/elections/historical/elections-results-archive.shtml>.
- 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.

Third parties are eliminated from all election results, resulting in a calculation of two-party vote share. This is standard practice in the study of elections.

All shapefiles are projected using the WGS 84 projection.

V. Analysis of Texas's Congressional Districts

A. Racial gerrymandering

Dr. Duchin, and to a lesser extent Drs. Korbelt and Kousser, contend that a careful examination of the congressional districts reveal that they were drawn with racial intent. This is complicated by the fact that race and politics are surely at least somewhat correlated in the state of Texas. Nevertheless, a close examination of the historical context behind the districts, of the districts themselves, and of their political and racial composition, clearly demonstrates that they are consistent with districts drawn to substantially improve the political advantage of the Republican Party.

In the post-2010 redistricting, Republicans sought to maximize their advantage in the state by spreading Democratic partisans over a number of districts, leveraging Republicans' advantage in suburban districts to create a large number of heavily Republican districts. But as the decade progressed, these suburbs swung toward Democrats. The political gerrymander fell apart as Republicans lost two districts that had been held by Republicans for decades, and saw their margins fall into the single digits in several more.

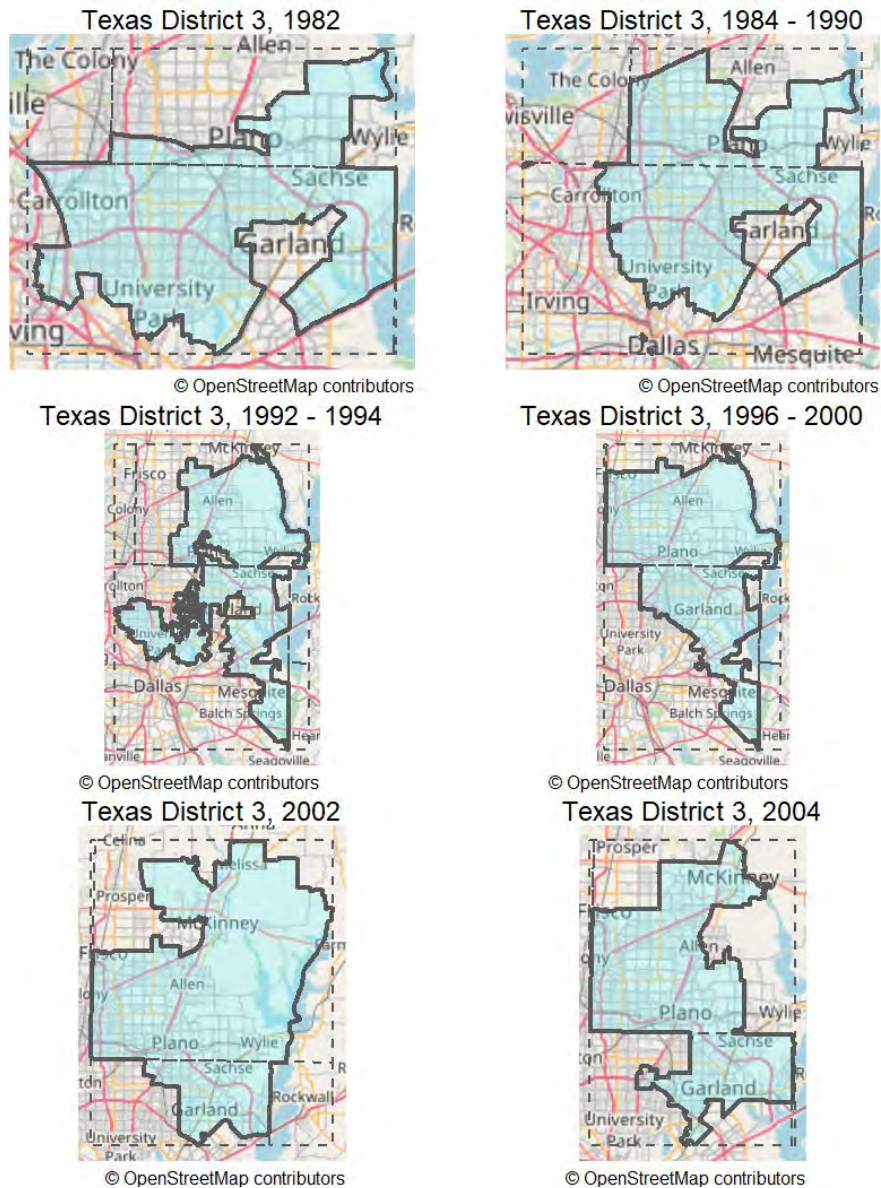
If we consider the major metropolitan areas in the state as a whole, the repeated pattern of creating safely Democratic districts that take in the most heavily "blue" precincts, and farming out almost every available Trump-won precinct to neighboring districts appears repeatedly. In the Austin area, where Democrats had not flipped a congressional district, Republicans nevertheless created a new, heavily Democratic district. In Houston and Dallas, Republicans took marginal districts that Democrats had flipped in 2018 and created heavily Democratic seats. Neighboring districts where Republican margins had weakened over the preceding decade were then turned into heavily Republican districts.

B. Dallas/Ft. Worth Area

1. Districts 3 and 4

Congressional District 3 moved from its traditional location in East Texas to Dallas County in the wake of the Supreme Court's one-person-one-vote cases from the 1960s. As the population of the Dallas-Ft. Worth metroplex grew, the district followed that population out into Collin County. It has traditionally been a Republican stronghold, having elected Republicans to Congress in every election since 1968.

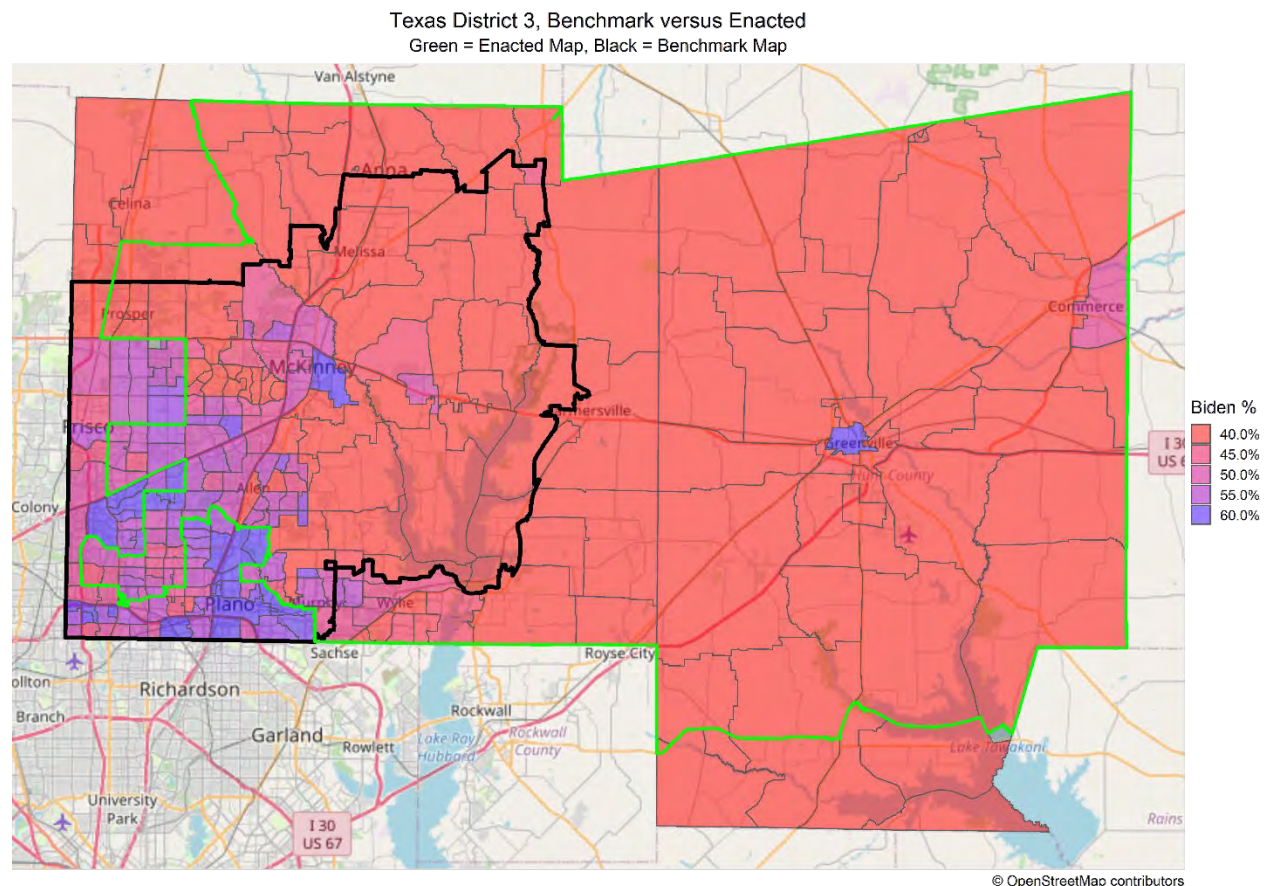
Fig. 1: Texas' 3rd District, 1982-2004



In the 2010 redistricting, the district was moved fully into Denton County. The seat was heavily Republican as initially drawn, and Republican presidential nominee Mitt Romney defeated President Barack Obama by 30 points here. But over the course of the 2010s, suburban areas moved against the Republican Party nationally, and Texas was no exception. In 2016, Donald Trump won the district by 16 points against Democratic nominee Hillary Clinton, while four years later President Trump's margin decreased to just a point. This manifested in Congressional races as well; Congressman Van Taylor's margin was 10 points in 2018 and 12 points in 2020.

Upon receipt of the 2020 Census, the district was also heavily overpopulated. It had 933,008 residents, and therefore needed to shed 166,021 residents to achieve population equality. The Enacted Plan achieves this goal, but in the process shores up Republican vote shares in the district, as Figure 2 illustrates.

Figure 2:



The district is pushed eastward to include most of neighboring Hunt County, which Trump carried by 50 points in 2020, as well as adding heavily Republican precincts on the outer edges of Collin County. All told, the district gains 205,008 residents, pulling in 140,042 residents from the old Fourth District and 64,966 from the old 32nd. Biden won just 26.2 percent of the vote in the portions donated from the 4th, while he won just 44.6% of the vote in the portions taken from the 32nd. Overall, these newly added areas gave Trump around 68% of the vote.

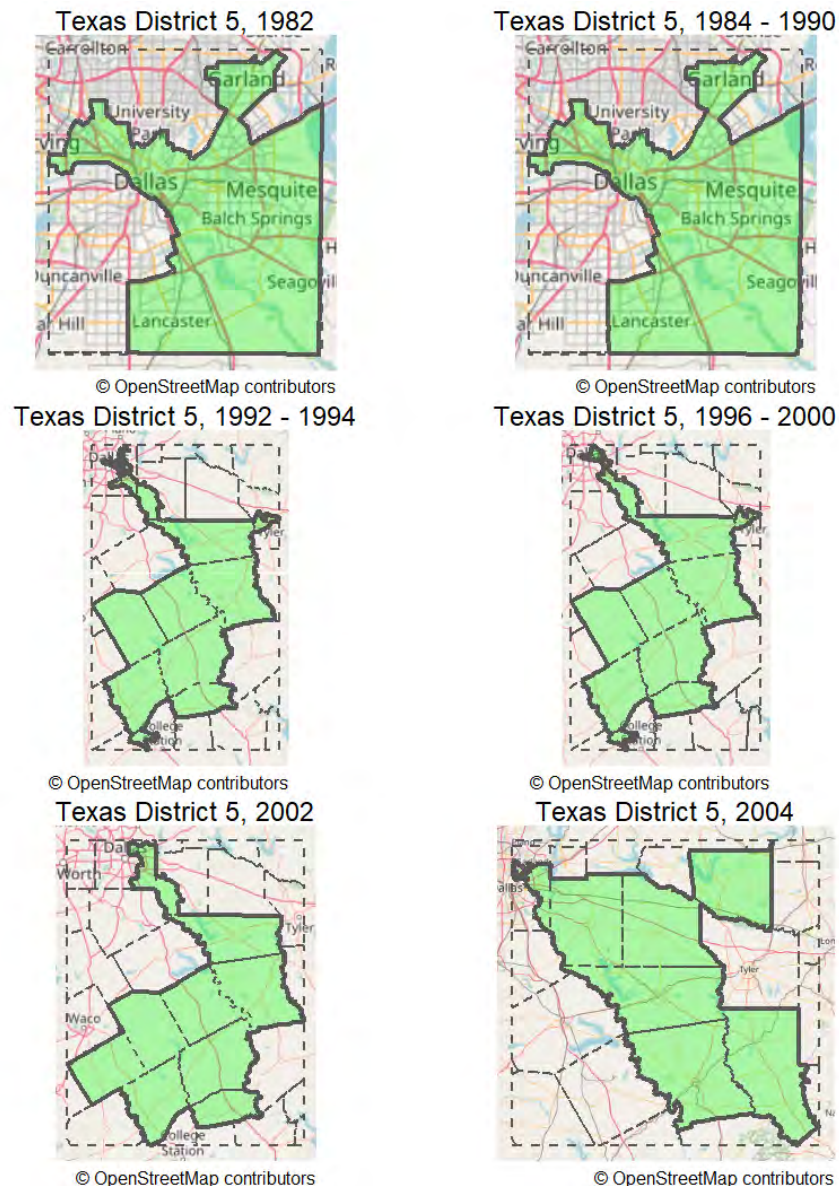
In exchange, the district gives up 371,209 former residents. It gives heavily Democratic sections of Plano, a former Republican stronghold that swung heavily against the party during the 2010s and which President Biden carried by ten points in 2020, to the heavily Republican Fourth District and the newly Democratic 32nd (discussed below). It also gives the northern part of Richardson – another area that has swung toward Democrats -- to the 32nd, and the Collin County portion of Dallas to the 4th. Some Democratic areas of Frisco and McKinney are also placed in the 4th. Overall, 294,509 residents are transferred to the 4th; these voters gave Biden 54% of the two-party vote. 76,520 residents are given to the 32nd, the voters here gave Biden 60.5% of the two-party vote. On balance, the voters subtracted from the 3rd gave Biden 55.5% of the vote.

The net effect of these changes is that the 3rd District transforms from a district where Biden won 49.5% of the two-party vote in 2020, to one where he won 42.7%. The 4th District remains heavily Republican; Biden won just 24.7% under the old lines; he wins 36.9% under the new lines.

2. District 5

The Fifth District is the traditional home of the modern Republican Party of Texas. Originally consisting of Dallas County alone, it elected Bruce Alger from 1954 to 1964, then just the third Republican elected from the Lone Star State in the 1990s.

Figure 3: Texas' 5th District, 1982-2004



In the 1992 redistricting, Democratic mapmakers pushed the district out of southeastern Texas and into politically marginal rural areas; Bill Clinton carried the district by six points. Democrat John Bryant was able to hold onto the seat for two terms under this map, but after the

redraw in 1996 improved Republican performance by three points, Bryant opted to run for Senate and was replaced by a 41-year-old Republican named Pete Sessions.

Sessions ran in the newly created 32nd District in 2002 and was replaced by Republican Jeb Hensarling. Hensarling retired in 2018, and was replaced by the current officeholder, Lance Gooden, also a Republican. While Republican performance in the district has degraded somewhat, it was still solidly Republican; Romney won the district by 30 points in 2012; Trump won by just over 20 in 2020. It only needed to add 16,129 residents to achieve population equality.

As Figure 4 demonstrates, the district does some reshuffling of heavily Republican precincts in the more rural areas of the district. Anderson and Cherokee counties are added to the 6th (discussed below), while portions of Wood and Upshur counties are added to the 5th. A little more than half of the district's residents, however, live in Dallas County. This portion of the district, including Mesquite, Balch Springs, and Seagoville, voted for Biden by a 24-point margin in 2020. As Figure 5 illustrates, this portion of the district was substantially reconfigured. Heavily Democratic areas of the city of Dallas proper and Balch Springs were moved into the neighboring 32nd, while the 32nd gave up swing areas in Garland, Rowlett and Sachse.

On balance, the changes added 287,587 new residents to the district, while subtracting another 303,716. Of the residents leaving the district, 108,334 went to the 6th District (these gave 21% of the vote to Biden), 19,766 went to the 24th District (these gave 52.2% of their vote to Biden), 14,977 went to the 30th District (these gave 64.9% of their vote to Biden), and 160,639 went to the 32nd District (these gave 68.7% of their vote to Biden). The district then takes on 16,141 residents from the 1st District (these gave Trump over 80% of the vote), 14,116 residents from the 4th District (also over 80% Trump), and 257,330 residents from the 32nd (these gave Biden 52.6% of the vote).

The net result of this is that the partisanship of the 5th is basically unchanged. President Biden won 38.4% of the two-party vote under the old lines and 38.9% of the vote under the new lines. However, the district is substantially reconfigured, freeing up 100,000 rural voters to shore up the 6th District, and offsetting this by swapping Democratic voters for swing voters in the Dallas area. As Figure 5 shows, the district's lines now follow the political contours of Dallas County's precincts much more closely, as well.

Fig 4

Texas District 5, Benchmark versus Enacted
Green = Enacted Map, Black = Benchmark Map

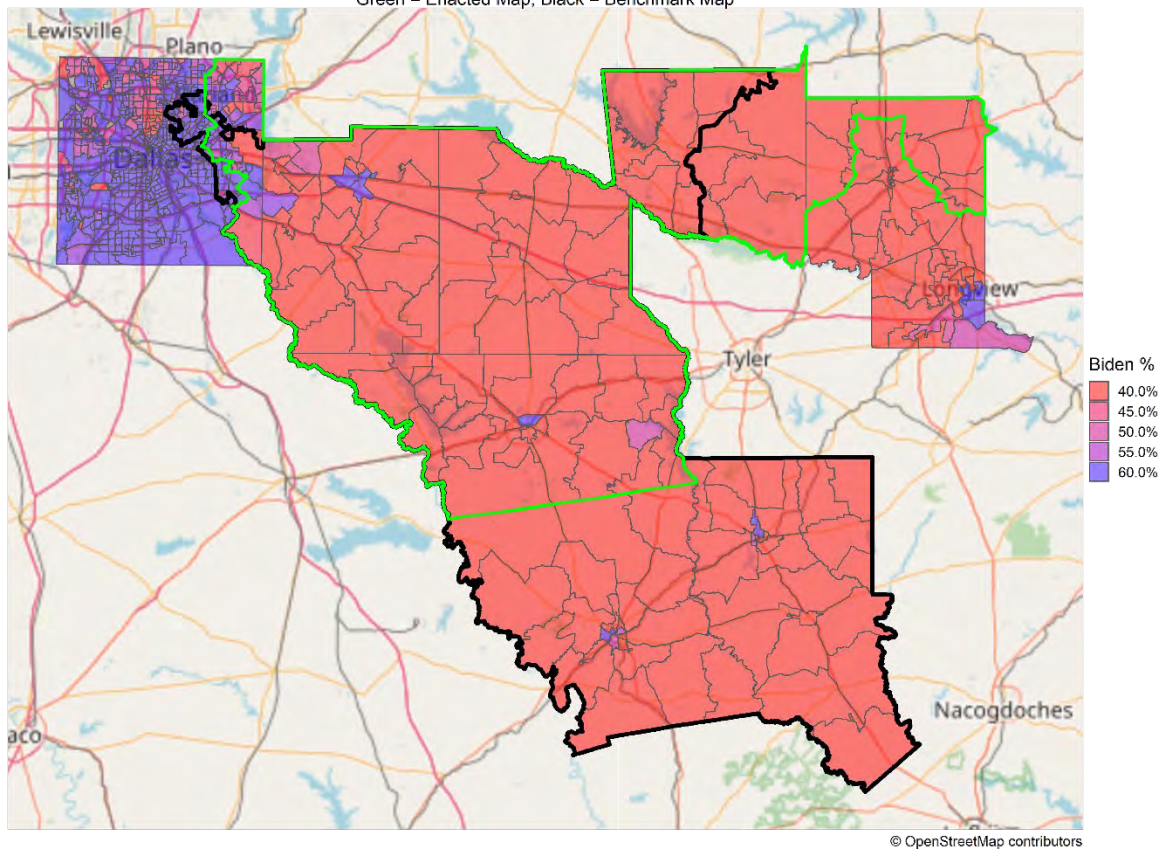
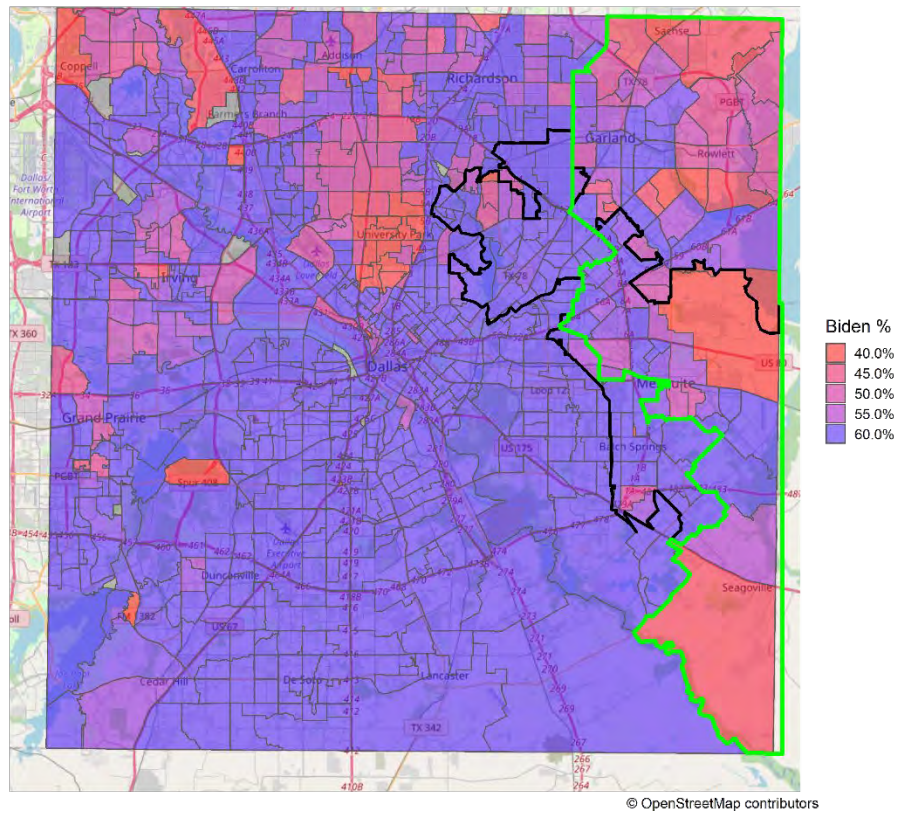


Fig. 5

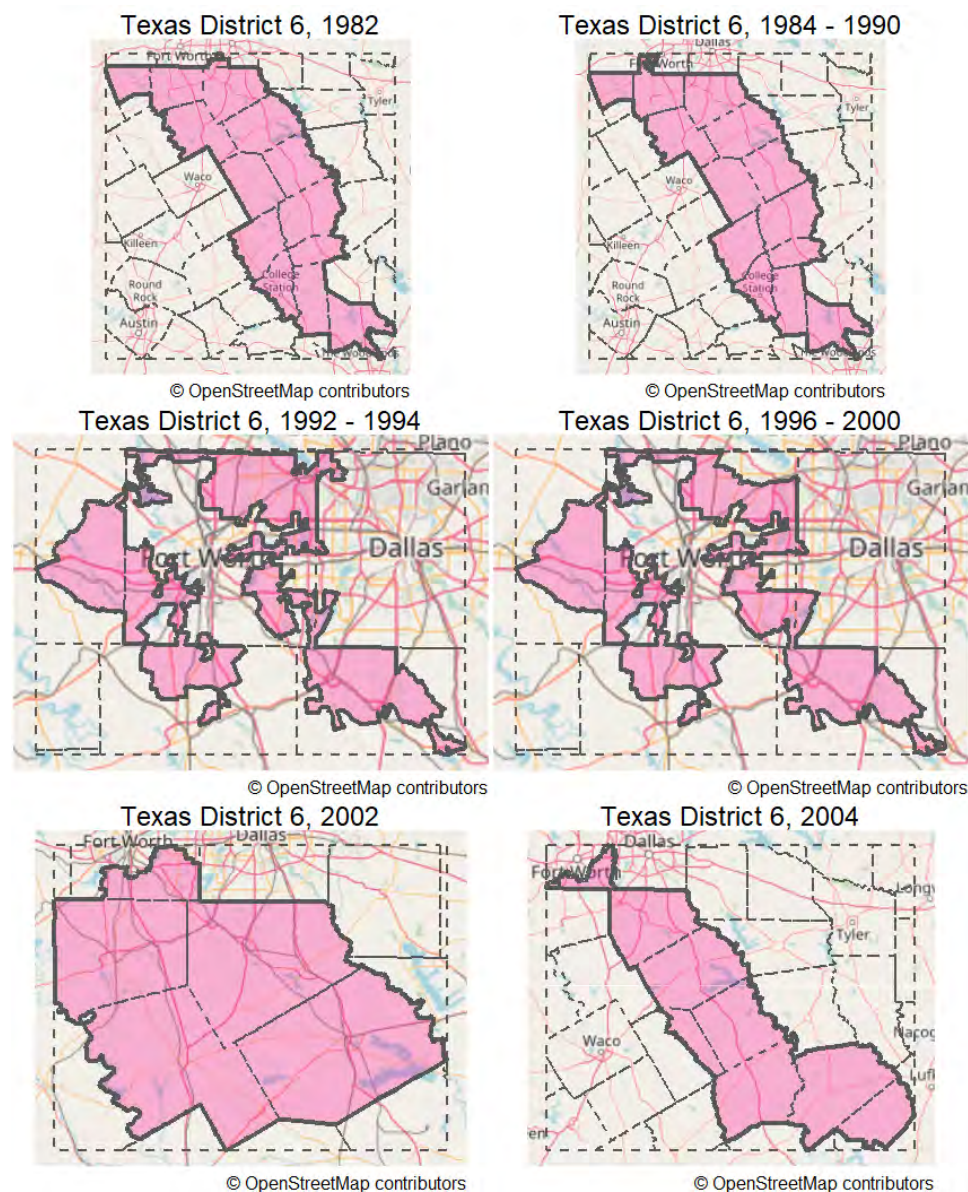
Texas District 5, Benchmark versus Enacted, Dallas County Only
 Green = Enacted Map, Black = Benchmark Map



3. District 6

Like the 3rd District, the 6th began as a rural district running south of Dallas and Tarrant counties, until one-person-one-vote requirements pushed it up into Tarrant County. The district still favored conservative Democrats like Olin “Tiger” Teague until 1980, when Phil Gramm switched parties before winning a senate seat. It has been represented by Republicans ever since. In 1992, the district was dramatically reconfigured into a Republican district in Tarrant County to help keep the 12th District competitive. The 6th was returned to a combination of southern Tarrant County and rural (though suburbanizing) counties south of the metroplex in the 2000s.

Fig. 7: Texas’ 6th District, 1982-2004

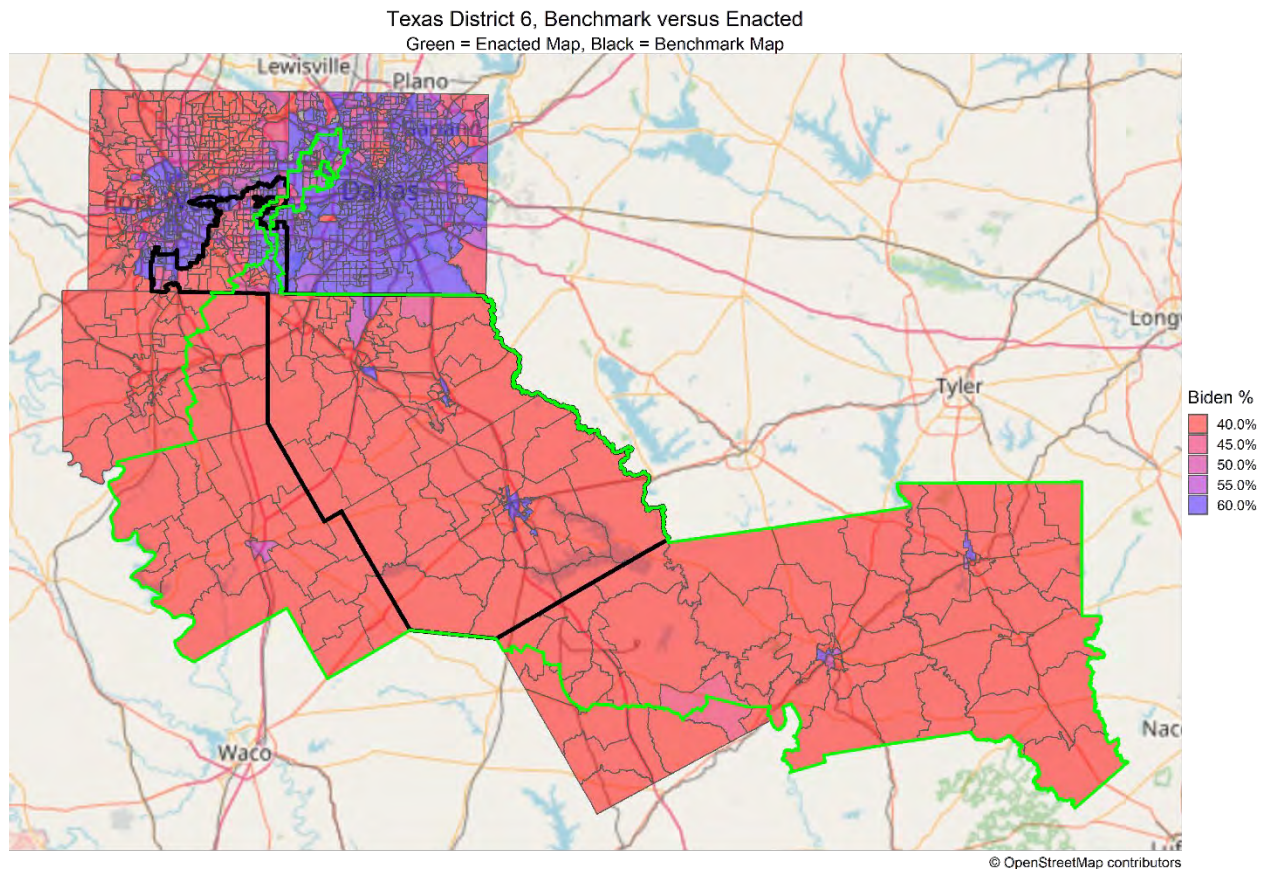


But in a continuing theme, the movement of suburbs against the Republican Party made the district increasingly competitive. Mitt Romney won the 6th by 17 points in 2012, but Trump won it by just 12 in 2016. In 2020, that margin was further reduced to just three points. Former Rep. Ron Wright won an open seat election by just eight points in 2018, and by nine in 2020.

The district had to shed just 57,991 voters to meet the population equality criteria. But instead, the district was substantially reconfigured (see Figure 7). It shed a total of 468,137 residents. 34,722 went into the 12th District (these gave Biden 67% of the vote), 52,650 went into the 30th District (these gave Biden 69% of the vote), 34,601 went into the 33rd District (these gave Biden 70.7% of the vote), and 346,164 went into the 25th District (see below; these gave Biden 51.9% of the vote). On balance, the district shed residents that gave Biden 56% of the vote.

By shedding this many residents, the district was able to pick up large numbers of Republican voters from other districts, particularly in rural areas. As noted above, it took in 108,334 residents from the 5th District, who voted for Trump by a 60-point margin, and 12,511 from the 17th District who voted for Trump by similar margins. South of Ft. Worth, it gained 83,797 residents from the 25th District, who voted for Trump by a more modest 50-point margin.

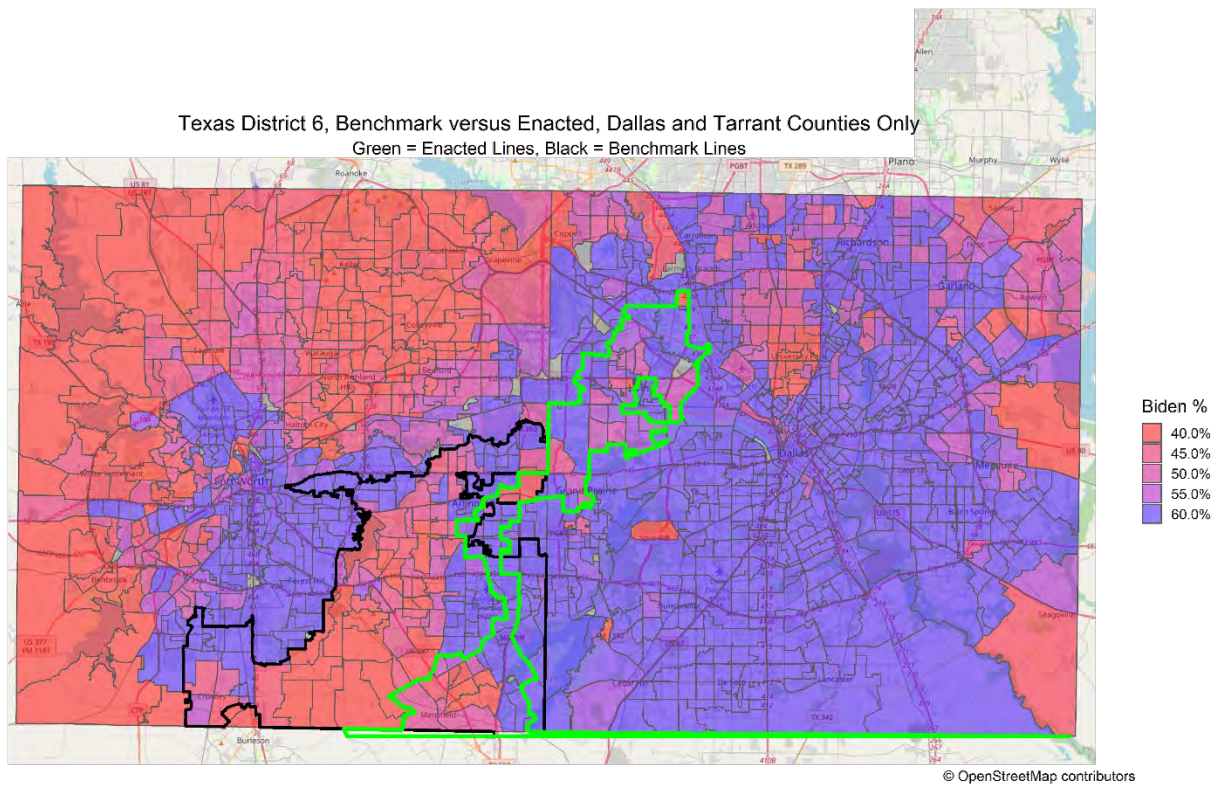
Figure 8:



In the DFW metroplex itself, see Figure 9, the district gains residents by extending into politically marginal portions of Dallas County. It adds 65,722 residents from the old 24th District and 139,732 residents from the old 33rd (both areas gave Biden 58% of the vote). On balance, the residents added to the district gave Trump 63.2% of the vote.

The net result of all this is that heavily Democratic areas of the district were placed into the heavily Republican 12th or the heavily Democratic 30th and 33rd. Swing areas went into the 25th. In exchange, the district picked up overwhelmingly Republican territory from rural Texas and pulled in politically marginal territory from the highly vulnerable 24th District. It took a route through marginal portions of the 33rd District to get there.

Fig. 9:

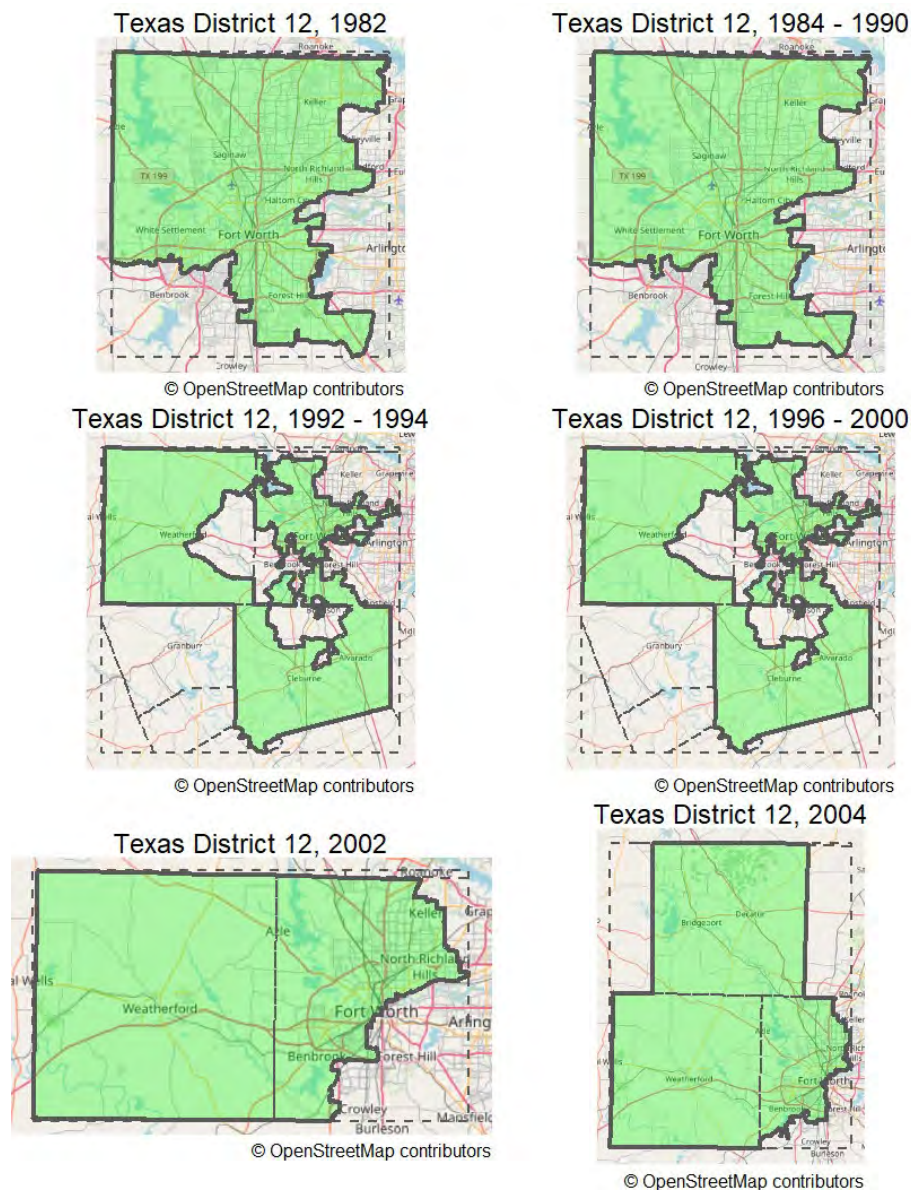


On balance, the district was transformed from a district Trump won by just three points, to one where he received 62% of the two-party vote.

4. District 12

The 12th Congressional District was the “sister” district to the 5th; until the one-person-one-vote cases it included the entirety of Tarrant County. Even after these cases, it took in the majority of the county, mostly in the northwestern quadrant. It continued to elect Democrats to the House until 1996, first by sending House Speaker Jim Wright and then Pete Geren. In 1992, Democrats carved up the Republican portions of Tarrant County and placed them in the 6th, leaving the 12th politically competitive; Bill Clinton won by three points here in 1992. Future renditions of the district, however, left it with more regular lines and more Republican voters.

Fig. 10: Texas’ 12th District, 1982 – 2004

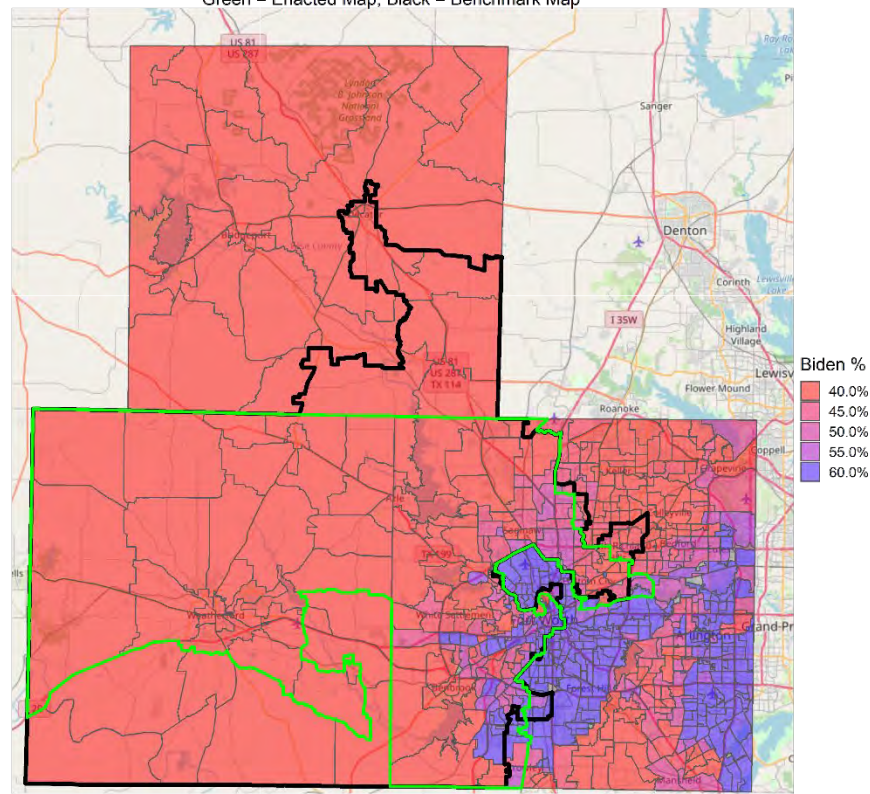


The district had 864,524 residents by the end of the '10s; it therefore had to shed 97,537 residents. Unlike other Republican-held districts in the area, however, the 12th had not become politically marginal. Joe Biden managed just 38.5% of the two-party vote here, and its representative, Kay Granger, has won her re-elections handily throughout her career. Its lines were changed only marginally. It added 34,722 residents from District 6 (these gave Biden 67% of the vote), 9,198 residents from the 24th District (Biden won them with 52.6% of the vote), and 4,591 residents from the 33rd District (Biden won with 56.6% of the vote). 71 residents also came in from the 26th. On balance, it took in residents who gave Biden a little more than a third of the vote.

In exchange, it shed 146,119 residents. Most significantly, 65,587 residents went into the marginal 24th District (see below); these residents voted for Donald Trump by around 15 points in 2020. Another 50,048 residents were given to the 25th, who gave Biden 31% of the vote. Finally, 26,779 heavily Republican residents went into the 26th District; these residents gave Biden 18.4% of the vote.

Fig. 11:

Texas District 12, Benchmark versus Enacted
Green = Enacted Map, Black = Benchmark Map



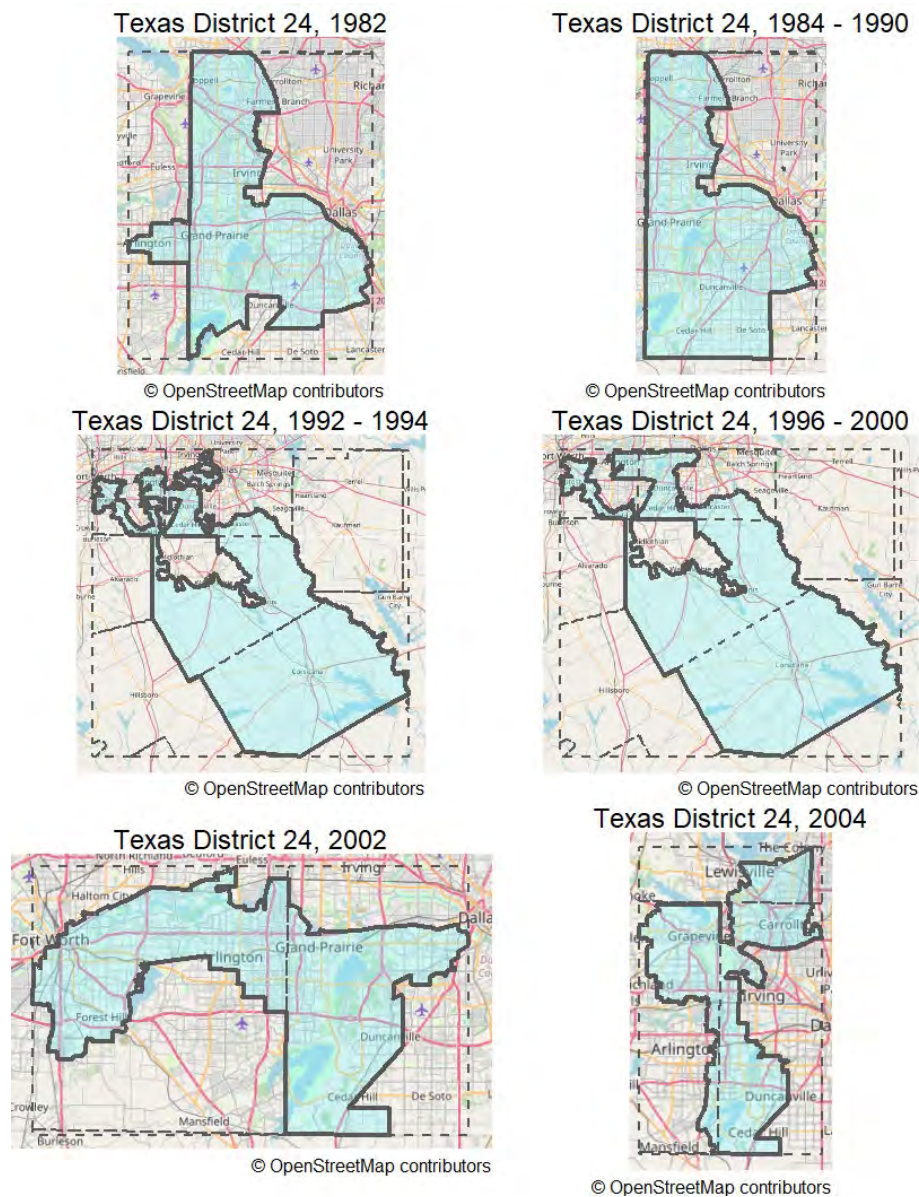
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The net effect of this is that the district was made modestly more Democratic, with President Trump's vote share dropping from 61.4% to 59.2%.

5. District 24

Unlike the districts examined thus far, the 24th District does not have a lengthy pedigree. It was created in the 1970s as a Democratic district that would accommodate population growth in the Dallas area. The 1990s redistricting altered the lines substantially, sending it into rural areas south of Dallas; the 2002 court-drawn map created a district that ranged from downtown Dallas to downtown Ft. Worth. In the 2004 mid-decade redistricting, Republicans carved out the downtown areas and pushed the district into the suburbs. It elected a Republican in 2004, Kenny Marchant, who represented the district before retiring in 2020.

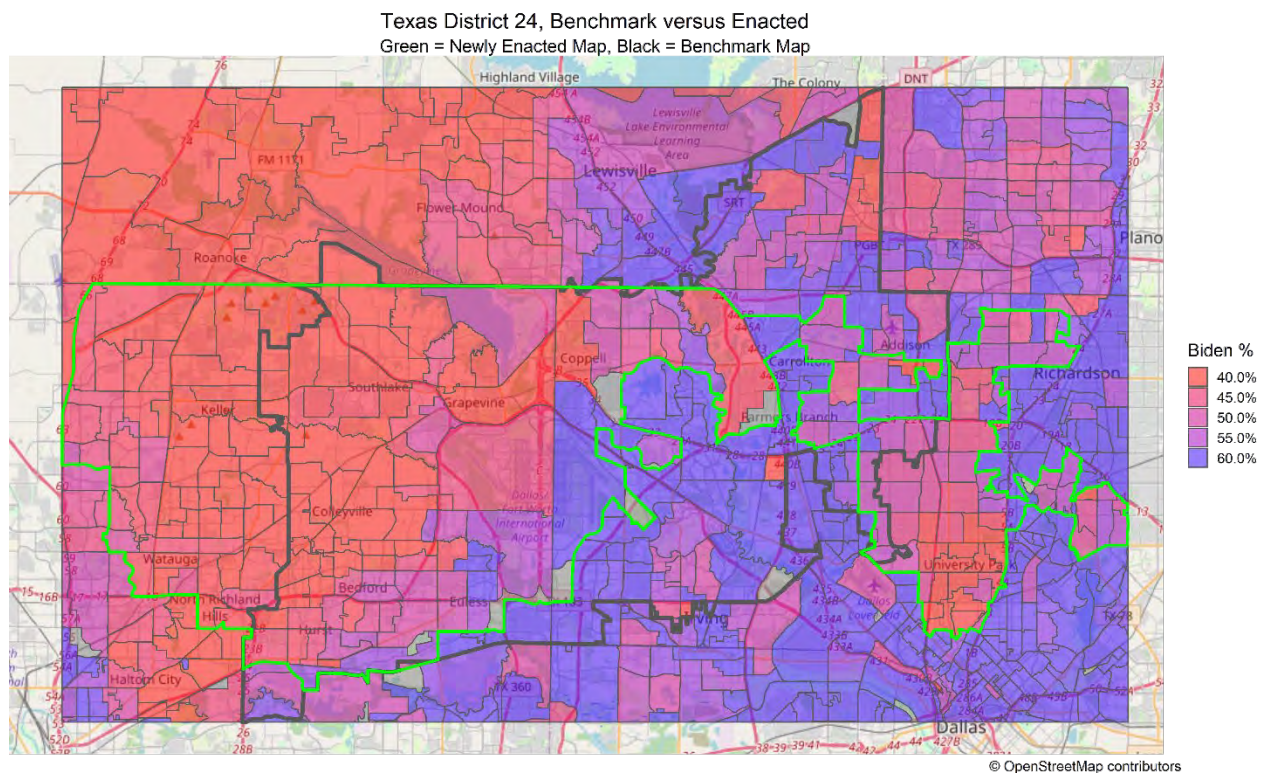
Fig. 12: Texas' 24th District, 1982 - 2004



This district saw some of the most substantial political shifts in the state over the course of the following decade. In its 2012 incarnation, it gave Romney a 22-point win. Donald Trump, however, carried it by just six points in 2016. Biden carried it by six points in 2020. Congressional results followed a similar pattern. In 2018, Marchant won by just three points. He announced his retirement and his successor, Republican Beth Van Duyne, won by just over a point in 2020.

The post-2021 redistricting creates a heavily Republican district. As Figure 13 shows, the district gained a substantial number of heavily Republican precincts in north central Tarrant County, while shedding heavily blue precincts in Dallas County. It hews carefully to the partisan contours of Dallas County, carving out blue precincts while reaching out to take in red precincts, on a journey toward adding (still) heavily red Highland Park and University Park north of Dallas.

Fig. 13:



Although it was required to shed 55,719 residents to achieve population equality, it picks up 394,292 new residents. In Tarrant County, it adds 65,587 residents from the 12th District (42.1% Biden) and 176,455 residents from the 26th (37.4% Biden). In Dallas County, it picks up 19,766 residents from the 5th District (52.2% Biden), and 132,452 from the 32nd (46% Biden). Finally, it

picks up 32 residents from the 33rd (the four voters here cast two votes from Trump and two votes for Biden). Overall, the district gained residents that voted a net of 57.8% for Trump in 2020.

The 450,011 residents shed by the district, by contrast, were heavily Democratic. As detailed above, a small number of residents went into the 12th district, while around 66,000 residents were placed into the 6th. 101,220 residents, mostly in northern Carrollton, were given to the 26th district (52.8% Biden)), while another 113,363 went into the 32nd (65.2% Biden). Finally, 160,458 residents, who collectively gave Biden 69.3% of the two-party vote, were placed in the 33rd district. Overall, the 450,011 residents removed from the district gave Trump just 38.8% of the vote.

On balance, the net effect of this was to substantially shore up Republican performance in the district. It went from a district where he won 47.3% of the two-party vote to a district where he won 56.3% of the vote.

6. District 25

The 25th district is an odd case. Over the course of the past 20 years, it has been located in almost every major metro area in Texas. Originally placed in Houston during the 1980s redistricting, it was stretched from the Austin area to South Texas in 2004. After the Supreme Court struck down that version of the district, it was placed solidly in Austin. In 2011, it was stretched from Austin to the outskirts of Ft. Worth. Because of this, most of the discussion of the district will be contained in the discussions of other districts in the Dallas area or the Austin area. Donald Trump won 55% of the vote in the old district in 2020, while its incumbent, Roger Williams, consistently put up solid, if unspectacular margins.

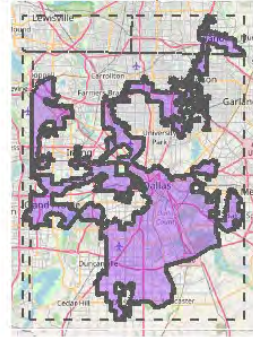
In this round of redistricting, as a result of the decision to create a new district in downtown Austin (see below), the 25th was reconfigured as a north Texas district. The district is effectively a new district, having added 596,675 new residents and lost 676,140 of its former residents. By removing solidly blue areas of the district in Austin (discussed below) and adding heavily Republican areas from rural districts 11, 13 and 19 (the 8,472 residents added from district 13 gave Biden just 8.8% of the vote), mapmakers enabled the 25th to take on around 350,000 politically marginal voters from the 6th district (discussed above). The net effect of all this an overwhelmingly Republican district, where Trump won 65.8% of the vote in 2020.

7. District 30

The 30th Congressional district has been based in south Dallas County since its creation in the 1990s round of redistricting. It was at the epicenter of Texas redistricting battles in the 1990s, with the Supreme Court eventually deciding that it was an unconstitutional racial gerrymander. Its lines have been more regular since then, but it has consistently been a heavily Democratic district. Throughout its history, it has been represented by Eddie Bernice Johnson, a Democrat.

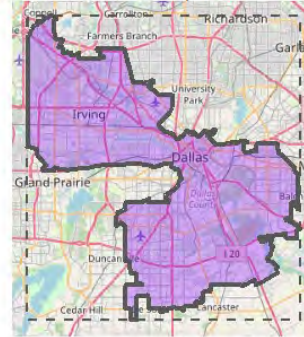
Fig. 14: Texas' 14th District, 1992 - 2004

Texas District 30, 1992 - 1994



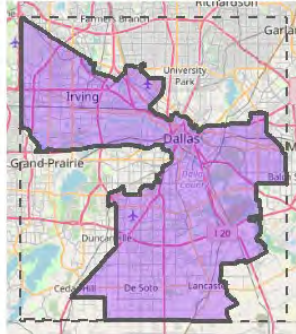
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Texas District 30, 1996 - 2000



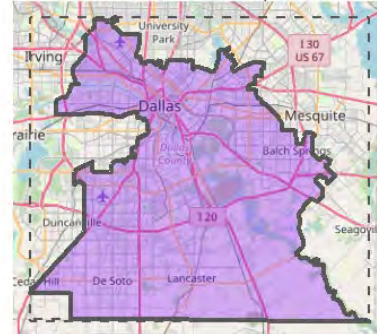
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Texas District 30, 2002



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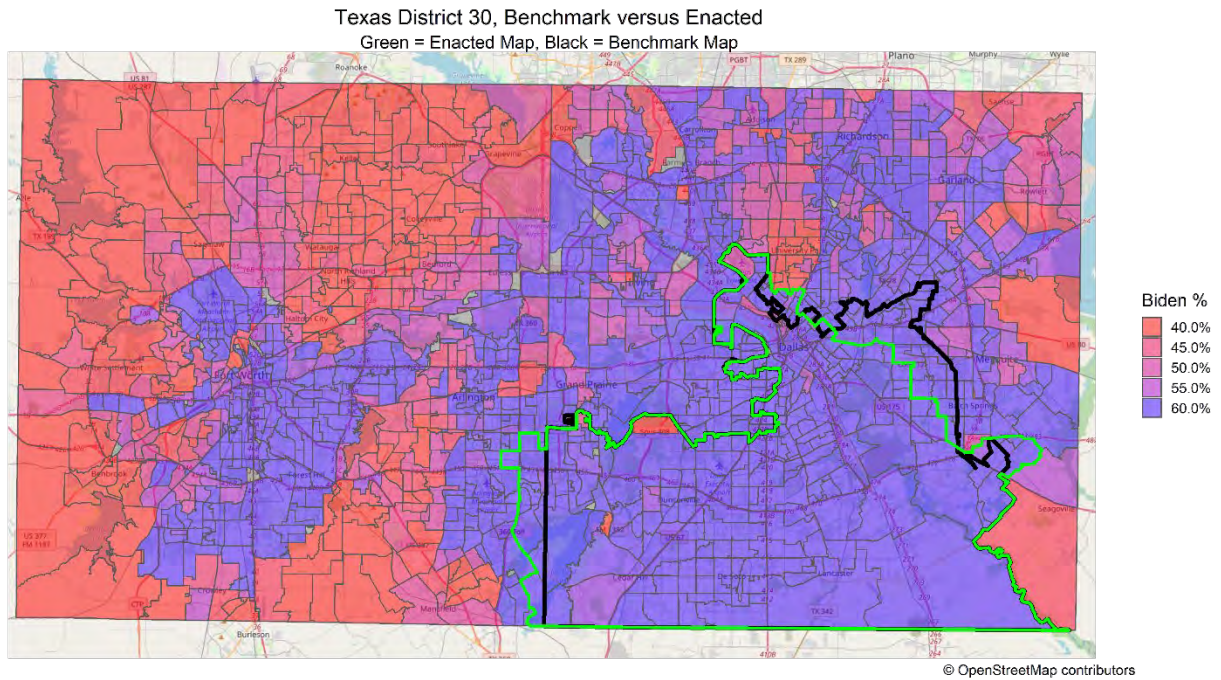
Texas District 30, 2004



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The Enacted Map makes relatively minor changes to this district, as demonstrated in Figure 15. As described above, the district takes in 14,977 residents from District 5 (64.9% Biden), and 52,650 residents from District 6 (68.5% Biden). It also adds 44,492 voters from District 32 (66.7% Biden). It also gives 126,039 voters to District 32 (80.1% Biden) and 2,069 residents to District 33 (70.1% Biden). Overall, the district goes from one where Trump won 19.1% of the vote to one where he won 21.3% of the vote.

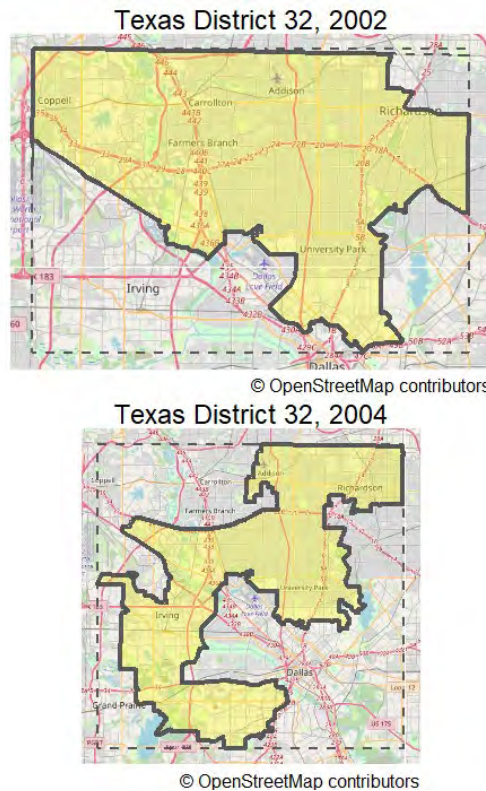
Fig. 15:



8. District 32

Although the 32nd District only needed to shed 22,679 residents for population equality purposes, it was the site of one of the most significant redrawings of a district in the state. The district was created in the 2002 round of redistricting as a heavily Republican district in northern Dallas. In the 2004 mid-decade redistricting, Republican mapmakers extended it southwest of Dallas, as part of the dismemberment of Democratic Rep. Martin Frost's 24th District (see above). Rep. Pete Sessions moved to the district in 2002 and occupied it until 2018.

Fig. 16: Texas' 32nd District, 2002-2004



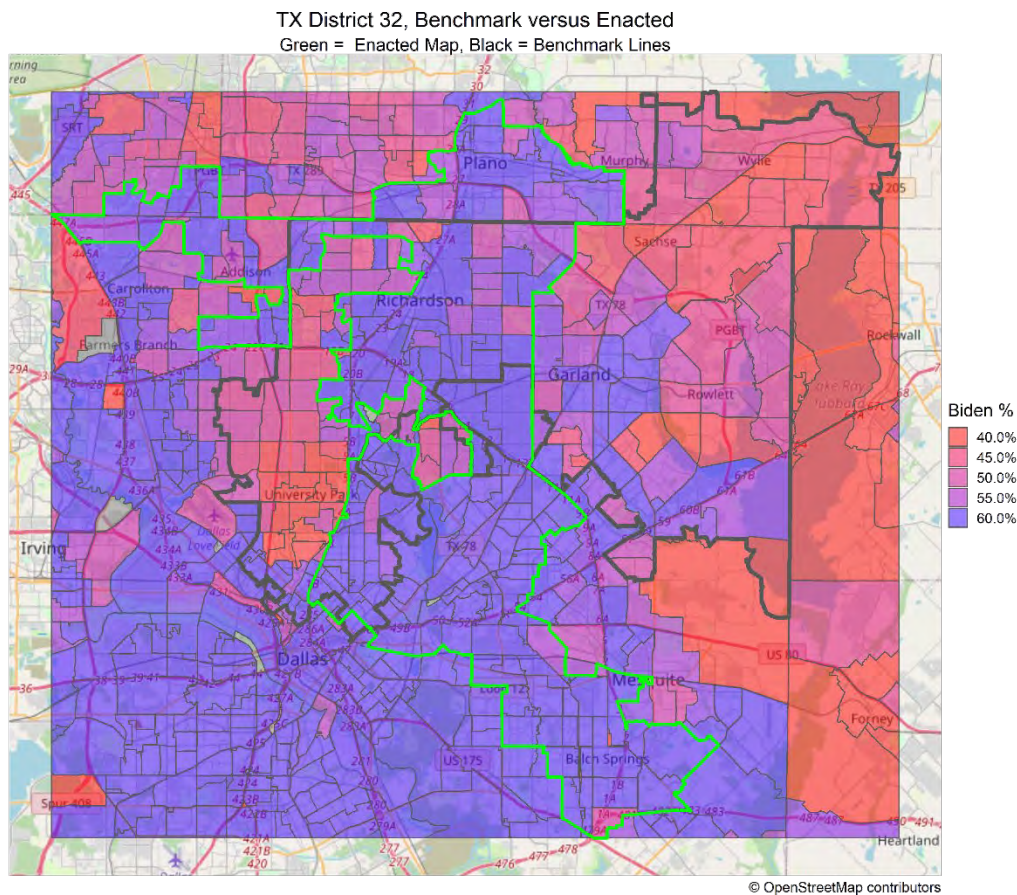
The shifts in the Texas suburbs hit here hard. Although Romney won here by a 15% margin, Hillary Clinton carried the district by two points. That margin grew in 2020, when Trump lost the district by a stunning 11-point margin, as former Republican bastions in Richardson and Garland moved sharply against the GOP. The Congressional race followed suit. Rep. Pete Sessions won 58% of the vote in 2012 and 62% in 2014, before running unopposed in 2016. But in 2018, he lost to Colin Allred by almost seven points. Allred won re-election by an almost identical margin in 2020.

Figure 17 shows, the changes made to the district. Most of these changes have been described above: It sheds Republican areas around University Park and Highland Park that now

help shore up the 24th as a Republican district and donates some Republican leaning precincts in Eastern Dallas County to the 5th District. Republican areas around Wylie go into the 3rd. On balance, the 499,240 residents it gives to other districts cast 49% of their vote for Donald Trump; Trump carried the residents not placed in the 30th District.

At the same time, it scoops up 476,561 residents, including 160,639 from District 5 and 113,363 from District 24, both portions of which gave President Biden support in the high 60s. As a result of this, this Democratic version of the district gave Trump just 33.2% of the vote.

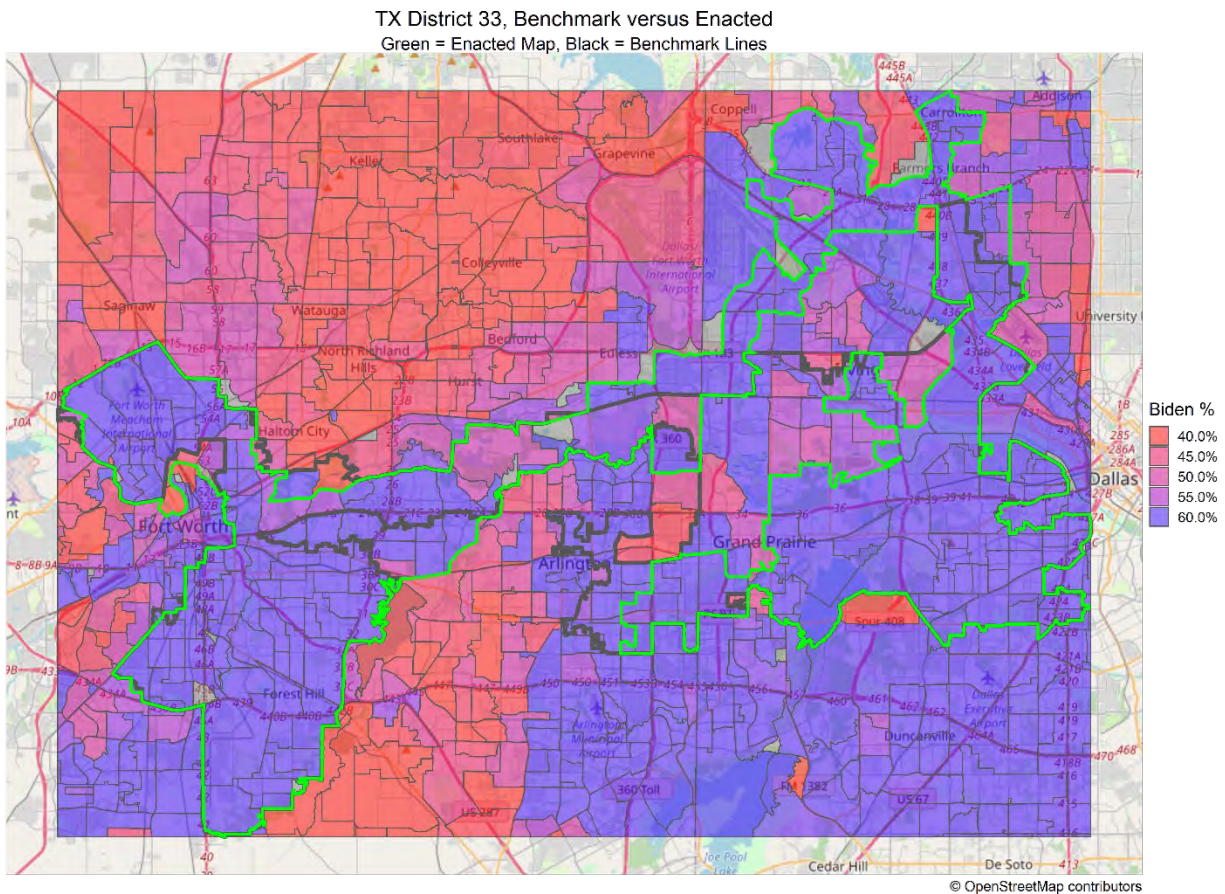
Fig. 17:



9. District 33

Finally, we turn our attention to District 33, which was created in the wake of the litigation over the 2011 redistricting. District 33 as drawn was a close approximation to the court-drawn 24th District from the 2002 map, stretching from western Dallas to eastern Ft. Worth. The changes have been described in more detail above, but on balance, they result in a 33rd District that more closely follow the partisan contours of the counties, particularly in Tarrant County. In Dallas County the “connector” shifts northward to take in more Democratic sections of the county, and to allow the 6th District to reach marginal precincts in Grand Prairie and Irving. Overall, the district shifts from a 26% Trump district to a 24.7% Trump district.

Fig. 19:



10. Putting it all together.

The overall effect of these changes can be seen by viewing the following two figures, which show the previous lines in the Dallas-Ft. Worth area along with the newly enacted lines. Even a cursory glance at the maps shows how the changes in the boundaries improve Republican performances in the area. Under the old lines, the 24th District is an amalgam of red and blue precincts, as are the 3rd and 32nd. The 6th and 5th both jut into overwhelmingly Democratic areas of the metroplex. The 33rd contains a fair number of purple precincts, while avoiding some blue ones. Under the second map, the situation is less precarious for Republicans. The 24th is shifted out of the blue metro areas into the red. The 33rd now separates blue and red areas almost perfectly. The 5th and 32nd swap blue and purple regions, while the 24th skirts around Democratic areas to neatly carve out red precincts north of downtown Dallas.

Fig. 20:

Dallas-Ft. Worth Districts, Benchmark Map

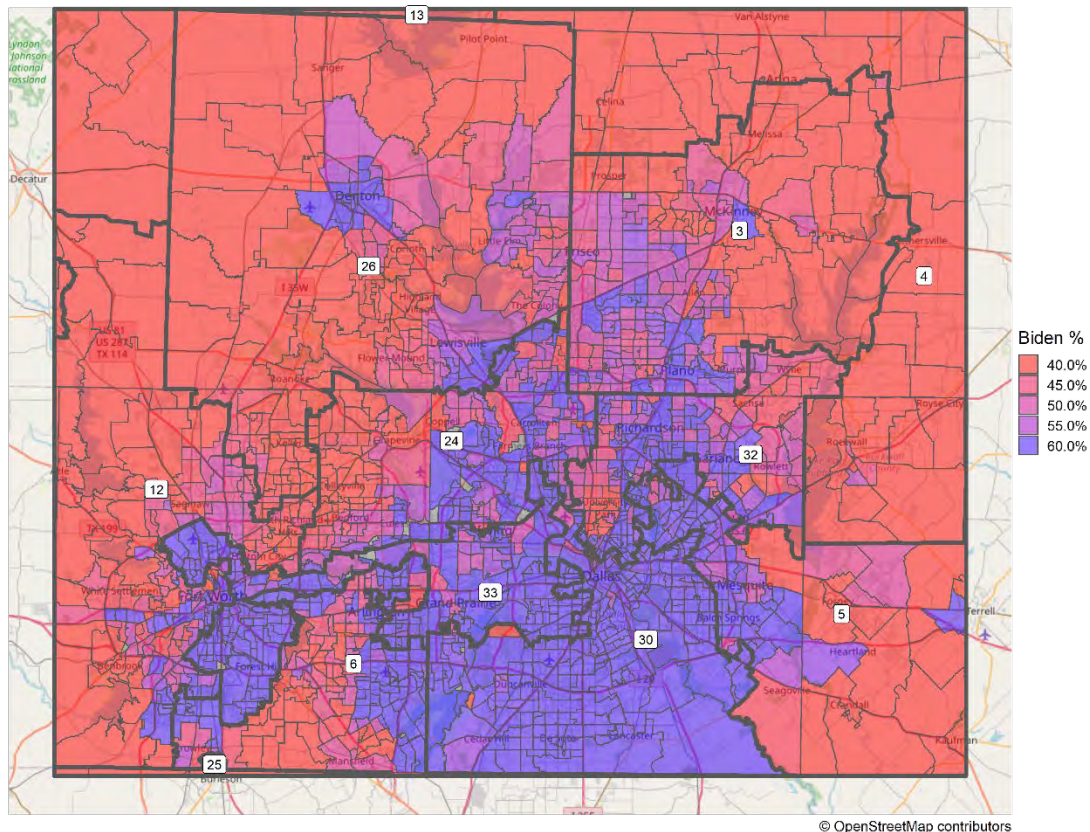
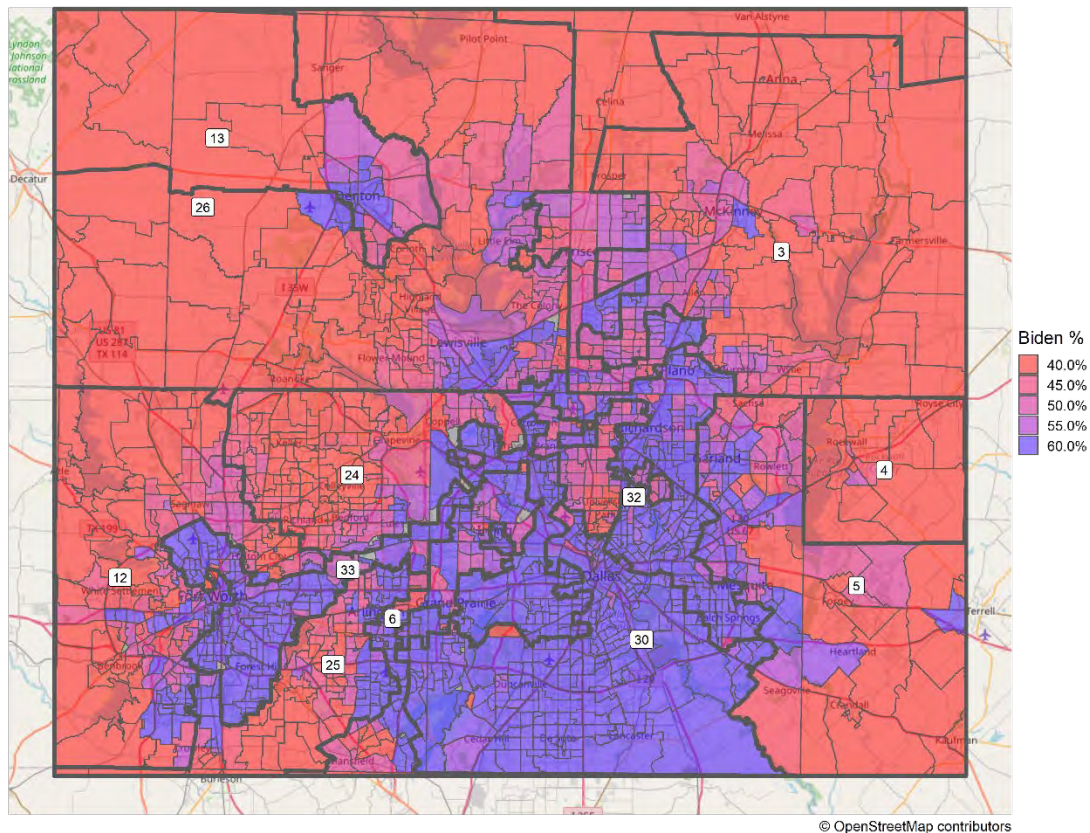


Fig. 21:

Enacted Dallas-Ft. Worth Districts



But we don't need to rely upon a visual inspection of precincts, however compelling that may be. Table 1 takes the precincts that Biden won in Collin, Dallas, Denton and Tarrant counties and tallies them by the district to which they are assigned under both the old and new plans. It also calculates the percentage of all Biden-won precincts contained in a given district under both the old and new lines.

As you can see, three Republican-held districts had over 100 precincts won by Biden in 2020, all of which were only marginally Republican by decade's end. District 24 contained 12% of the Biden-won precincts under the old map. The number of Biden-won precincts in District 24 is cut in half by the Enacted Plan, and it goes from containing 11.8% of the Biden-won precincts in the area to 6.2% of these precincts. Note too that the number of Biden-won precincts in Districts Four and 25 increases substantially, but these districts have overwhelmingly red rural regions

offsetting this. District 13 is not shown because it was not included in these counties under the previous lines.

Table 1: Biden-won VTDs, by DFW-area Districts

District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
3	106	60	8.88%	4.85%	-4.03%
4	0	44	0.00%	3.55%	3.55%
5	88	65	7.37%	5.25%	-2.12%
6	103	82	8.63%	6.62%	-2.00%
12	79	87	6.62%	7.03%	0.41%
24	140	77	11.73%	6.22%	-5.51%
25	0	62	0.00%	5.01%	5.01%
26	50	46	4.19%	3.72%	-0.47%
30	238	235	19.93%	18.98%	-0.95%
32	149	200	12.48%	16.16%	3.68%
33	241	260	20.18%	21.00%	0.82%

Not only are the Biden-won precincts shifted into heavily Republican or heavily Democratic districts, but among those Biden-won precincts, the president's vote share declines substantially in the most vulnerable districts. This is depicted in Table 2. So, for example, under the old lines, the Biden-won precincts in District 6 gave the president 66.22% of the vote. Under the new lines, the Biden-won precincts in District 6 gave the president 60.69% of the vote. So, not only did the number of Biden-won precincts decrease in the competitive districts, but the remaining Biden-won precincts were less blue. (Note that, because districts 4, 13, and 25 were either not in these four counties or had no Biden precincts under the old map, they are not included in these comparisons).

Table 2: Biden Share in Biden-Won VTDs, DFW-area Districts

District	Percent, Benchmark	Percent, Enacted	Change
3	55.84%	53.69%	-2.15%
5	64.40%	59.49%	-4.90%
6	66.22%	60.69%	-5.53%
12	59.75%	60.16%	0.41%
24	60.53%	54.36%	-6.16%
26	59.57%	56.75%	-2.82%
30	81.06%	78.85%	-2.21%
32	61.61%	67.19%	5.58%
33	74.44%	75.38%	0.94%

Also, if we look only at the heavily Democratic precincts, defined here as districts where Biden won more than 60% of the vote, we see that 62.9% of the Biden-won precincts were located in districts 30, 32 and 33 under the old lines. Under the new lines, that rises to 72.7%. Moreover, under the old lines, 21.8% of these precincts were located in the three most marginal districts: 3, 6, and 24. Under the new lines, only 8.2% of the precincts were located in these districts.

This is even more apparent when we consider Trump-won VTDs (Table 3). Under the new lines, only 16 precincts won by Trump – around 2.5% of the Trump-won precincts in the area – are contained in the three Democratic districts. The Republican districts tended to see an increase in the number of Trump-won precincts. The exceptions are the 6th – which is shifted out to the rural areas – and the 12th, which was heavily Republican to begin with.

Table 3: Trump-won VTDs, by DFW-area Districts

District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
3	93	104	14.49%	16.07%	1.59%
4	20	30	3.12%	4.64%	1.52%
5	8	24	1.25%	3.71%	2.46%
6	72	16	11.21%	2.47%	-8.74%
12	136	123	21.18%	19.01%	-2.17%
24	91	167	14.17%	25.81%	11.64%
25	2	63	0.31%	9.74%	9.43%
26	147	91	22.90%	14.06%	-8.83%
30	7	5	1.09%	0.77%	-0.32%
32	61	5	9.50%	0.77%	-8.73%
33	5	6	0.78%	0.93%	0.15%

In short, the 2021 redistricting effort resulted in DFW-area districts sorted along partisan lines in the 2020 redistricting effort. Three marginal districts for the Republicans became districts that will be more difficult for Democrats to contend in. This was possible because a fourth marginal district became substantially more Democratic. Almost every Trump-won precinct in the area is pushed into the Republican-leaning districts. Biden-won precincts are pushed into the three overwhelmingly Democratic districts, and those Biden-won precincts that remain in the Republican districts are less heavily Democratic than they were before.

Consider also the following three maps. The first shows the location of Donald Trump-carried precincts in the DFW area. The second shows the location of non-Hispanic White citizens in the Dallas-Ft. Worth area, with the district lines laid over them. Each dot represents 100 citizens. The last one displays non-Hispanic White plurality CVAP precincts, shaded by whether or not Donald Trump won them.

Fig. 23:

Trump Precincts, By District, DFW Area

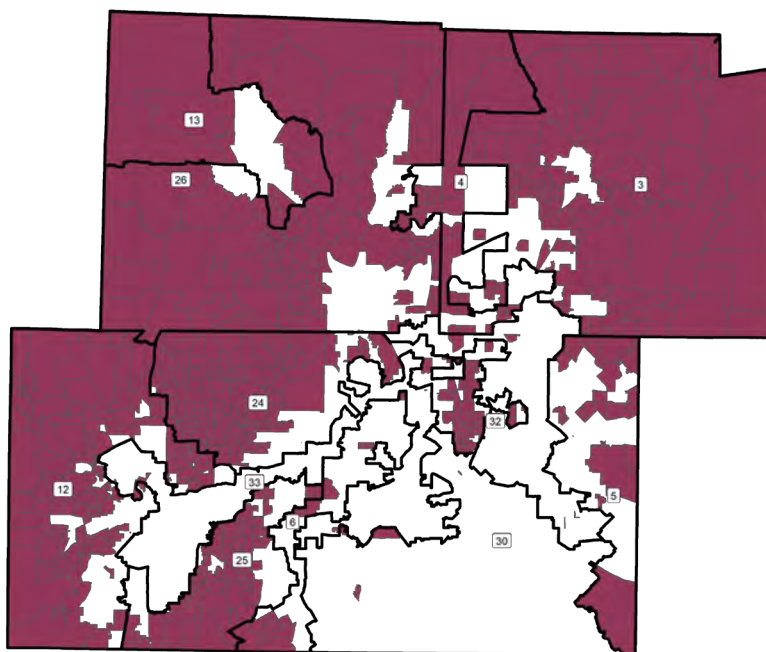


Fig. 24:

White Population of Congressional Districts, Dallas/Ft. Worth Area

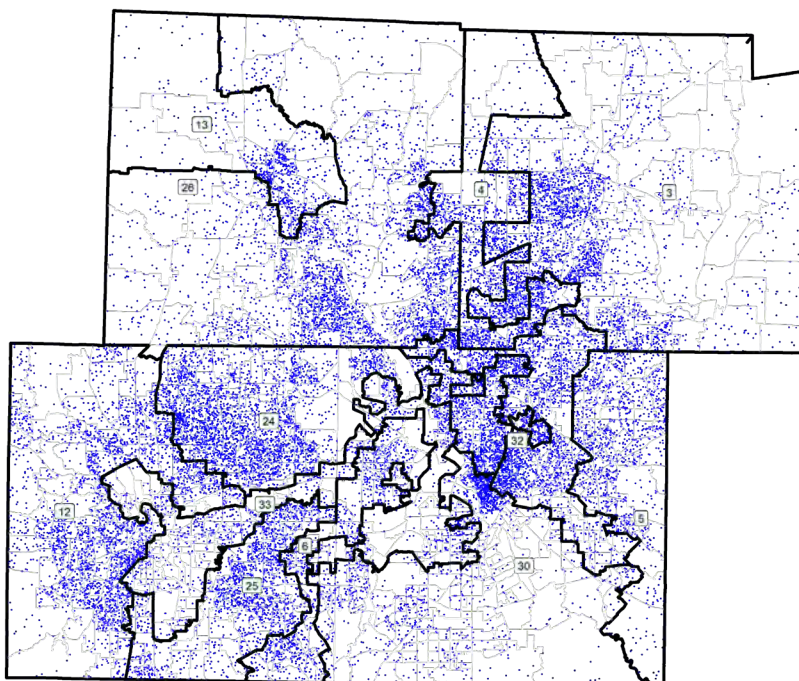
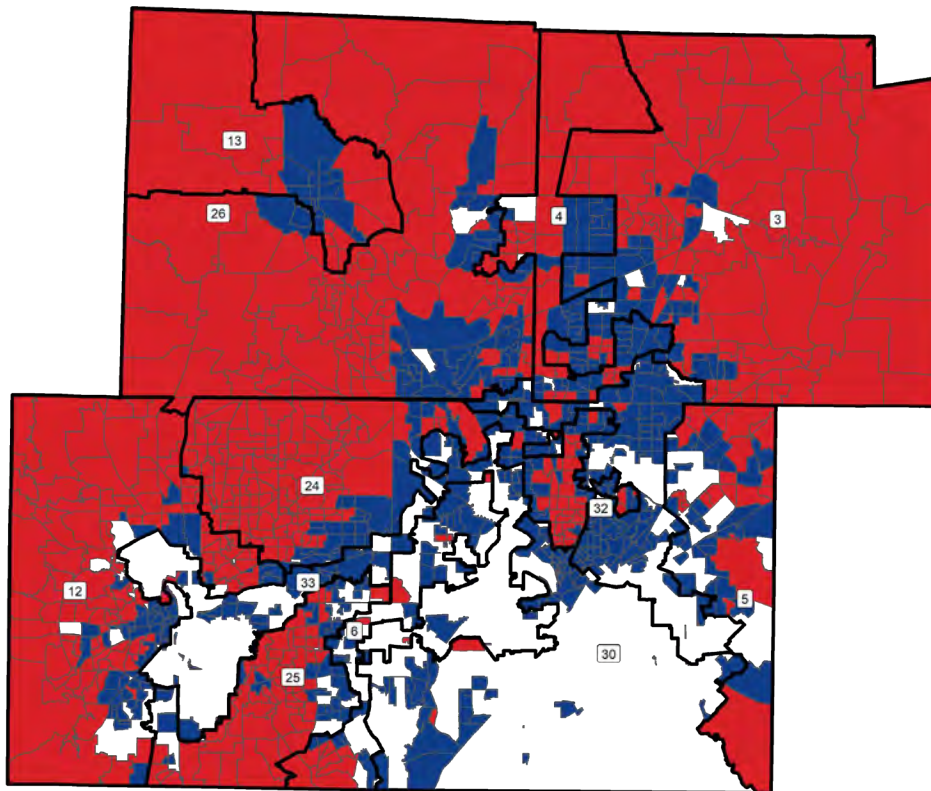


Fig. 25:

NH White Plurality Precincts, By District and Voting, DFW Area



As we can see in the first map, the Trump/Biden districts are almost perfectly sorted under this map. In particular, the boundary in Dallas/Ft. Worth between the 32nd, 24th and 30th districts almost perfectly conforms to whether a district was won by Trump or not. The dotplots, however, demonstrate that they do not perfectly sort White residents of the area. The heavy concentration of White citizens at the intersection of these three districts are split up among the three districts.

The third map effectively merges the two maps above. Plurality White CVAP precincts are spread across the Dallas-area districts; concentrations of plurality White CVAP precincts are routinely split up in seemingly inconsequential ways, until one looks at who won the precincts. Plurality White CVAP precincts carried by Joe Biden are placed in the Democratic districts, while plurality White CVAP precincts carried by Donald Trump are placed in the Republican districts. In other words, Democratic voters went into the three Democratic districts regardless of their race.

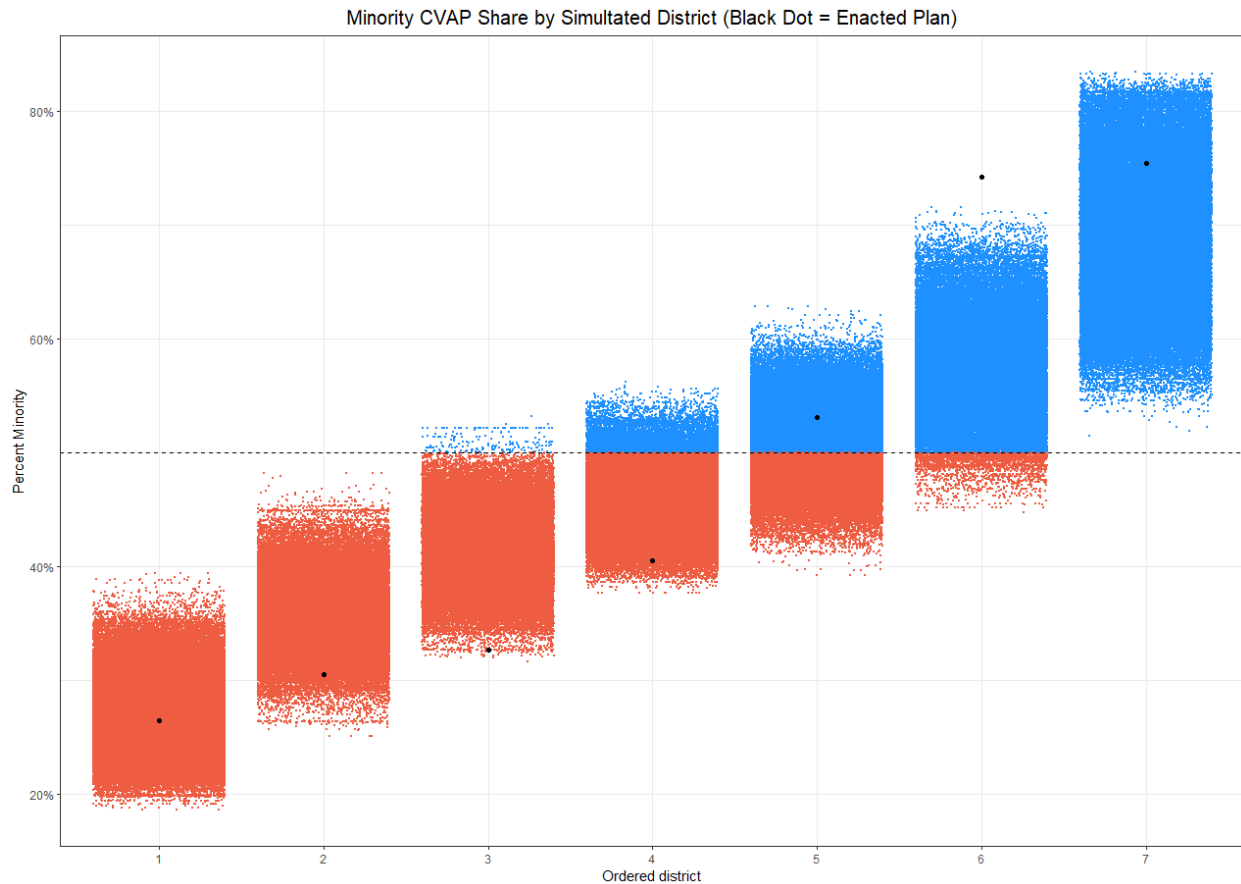
Dr. Duchin suggests that by creating simulated maps and comparing the Enacted Map to the simulation outcomes, we might be able to conclude that the maps were drawn with racial

intentions. First, Dr. Duchin's maps are drawn without respect to partisanship or race. First, in a context where plaintiffs' experts offer evidence consistent with partisan intentions in line drawing, Kousser Report at 54, this represents a bug, rather than a feature. The simulations work best when they control for the legitimate factors upon which the legislature relied when drawing their maps; this ensures the simulations sample from the same distribution of maps as the legislature effectively did. In other words, Dr. Duchin's simulations assume that partisan considerations played no role in the map making process; to the extent that they *did*, the simulations aren't necessarily probative of racial intent.

To test this, I examine the partisanship of an ensemble of simulated maps. Rather than using Dr. Duchin's program, I rely instead upon Sequential Monte Carlo ("SMC"), developed by Harvard political methodologist Kosuke Imai and implemented through the 'redist' package in R. This approach has been employed in redistricting cases in Ohio, North Carolina and Kentucky, and by myself in Maryland and New York. I generate 100,000 maps, and first examine whether there are meaningful differences between the output of the SMC approach and Dr. Duchin's approach with respect to race. In run after run, the results are very similar to Dr. Duchin's with respect to race, which gives a high degree of confidence that we sample from the same basic distribution of plans.

To present these data, I employ what I find to be the more intuitive approach of dotplots. Like Dr. Duchin's boxplots, these are simply summaries of the data. Here, every dot on the plot represents a district on the map. The program takes the first map from the simulation, finds the least heavily minority district from that map, and places a dot in the column "1", according to that district's minority vote share. It then places a dot in the column "2" for the second-most minority district, and so-forth. After completing the first map, it does the same for the second map, third map, and so forth, until each district for every map is represented. Solid areas indicate many districts falling in that CVAP share for each "slot," while sparse areas indicate relatively few districts. White areas mean no districts in that "slot" have that CVAP share.

Fig 26: Simulation Results, DFW Area, Race

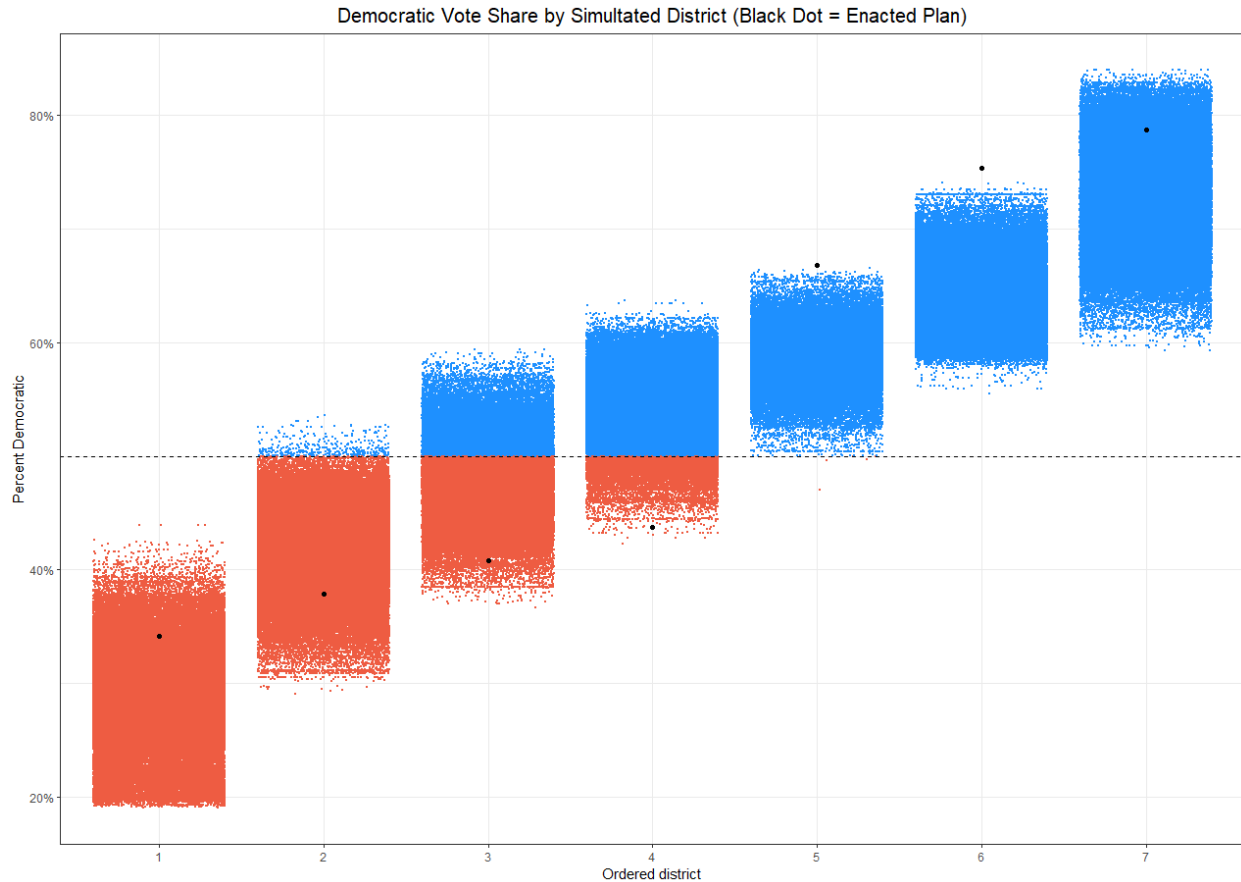


As you can see, the SMC algorithm produces results substantially similar to Dr. Duchin's. The districts with the third and fourth lowest CVAP shares tend to have higher CVAPs than the ensemble. The second-highest CVAP district in the Enacted Map is substantially higher than what the ensemble finds. Note too that in both Dr. Duchin's and my simulations, the Enacted Plan produces the same number of minority CVAP majority districts as the race- and politics- blind simulation expects. In other words, a fourth majority CVAP district is not naturally occurring. Put differently, map drawers did not create a majority-White CVAP district that we would otherwise expect to exist if they were proceeding blind to race.

However, when we look at the political features of these districts, we see results at least as extreme as the racial features, if not more so. Both the fifth and sixth most heavily Democratic districts in the Enacted Plan are more heavily Democratic than any of the corresponding districts in the ensembles. This is accomplished by lowering the Republican vote shares in the 3rd and especially the 4th-most Republican districts (in the Enacted Map, the 32nd and the 33rd). Moreover, the politics-neutral simulations expect four districts carried by Joe Biden, and expect a close call

in a fifth. The Enacted Map, however, produces four districts where Donald Trump won in excess of 55% of the vote. In other words, the map makers *did* create a Republican district where were wouldn't expect a politically neutral process to create one.

Fig 27: Simulation Results, DFW Area, Politics



In a world where race and politics often correlate, it can sometimes be difficult to sort the two out. What to do in that situation is a question for lawyers to argue about and judges to decide. But here, the data and history are more consistent with a political story: That Republicans sought to take an area where they would naturally win two or three seats and turn it into one where they win four.

C. Houston Area

1. District 2

Like the 25th, the 2nd District has traveled across Texas a bit. For most of its existence, it was located in rural and small-town East Texas. It had long elected Democrats such as Charlie Wilson, the so-called “liberal from Lufkin,” who was also one of the staunchest anti-communists in the House. But, as rural Texas depopulated, the district began to encroach increasingly on the Houston suburbs. Wilson was succeeded by Jim Turner, at a time when the district was still supportive of Democrats even at the presidential level.

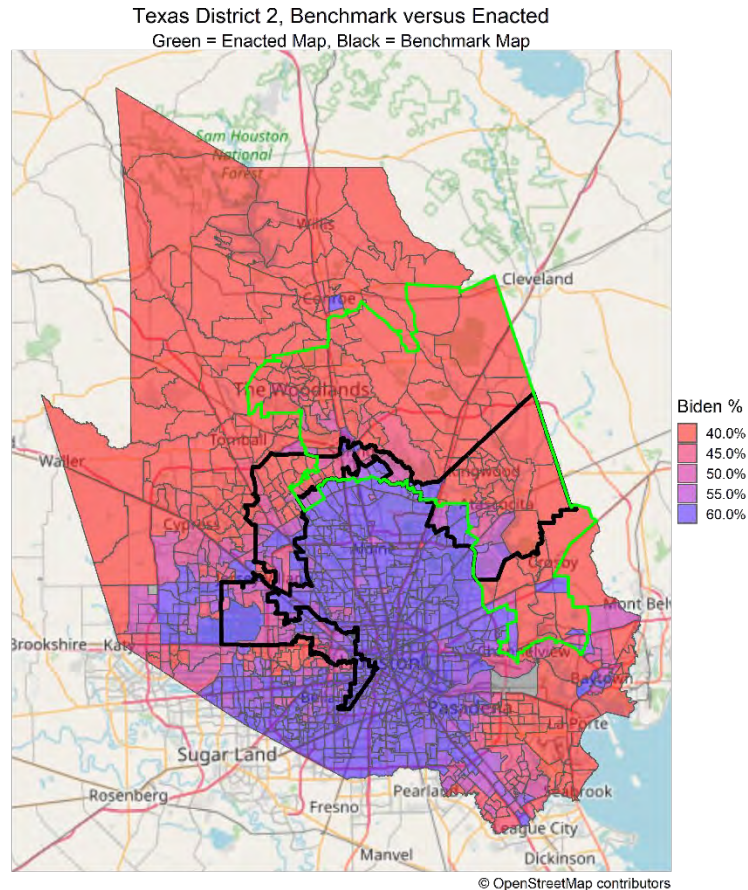
This state of affairs came screeching to a halt in the mid-decade redistricting of 2004. Republican legislators moved the 2nd down to Jefferson County and into the Harris County outskirts. The Benchmark Plan completed the task, transforming the district into one that was entirely in Harris County. Starting at the intersection of Harris, Montgomery and Liberty counties, the district followed the Harris County border around the edges of the county in a thin strip, scooping up heavily Republican precincts northeast of Houston before descending southward through marginal territory and picking up heavily Democratic precincts southwest of Houston.

As we have seen though, suburbs across the nation, and across Houston in particular, have swung heavily against the Republican Party over the course of the past decade. Many districts that were drawn to be safely Republican at the outset of the decade became politically marginal or, in some cases, Democratic. The 2nd didn’t become Democratic, but the deterioration of the Republican position here was nevertheless astonishing. In 2012, Mitt Romney defeated Barack Obama by almost 30 points. Four years later, Donald Trump’s margin dropped to nine points. In 2020, Trump won by just two points. This was the 8th-largest swing against Republicans in any congressional district during this time. In 2018, after Republican Ted Poe retired, Rep. Dan Crenshaw won the seat, but by just seven points. Two years later his margin increased, but only after Crenshaw spent \$11 million.

Redistricting clearly worked to shore up Republican prospects here. The district needed to shed just 47,717 residents in redistricting. Instead, it was substantially reconfigured into northeastern Harris County, as Figure 28 demonstrates. The appendage into now-blue precincts west of Houston is chopped off, and the district boundary crisply follows the sharp divide between blue and red precincts in northern Harris County. The district now protrudes into Williamson County, taking in dark red precincts in The Woodlands and less dense areas to the east. Overall,

it takes in 382,026 residents from the heavily Republican 8th district (Biden won 35% of the vote here), 41,090 residents from the 18th District (though the 18th is deeply blue, these voters gave Biden just 58.1%), and 79,050 residents from the overwhelmingly red 36th (they gave Trump just shy of 60% of the vote). In total the residents added to the district gave Trump 62.8% of the vote.

Fig. 28:

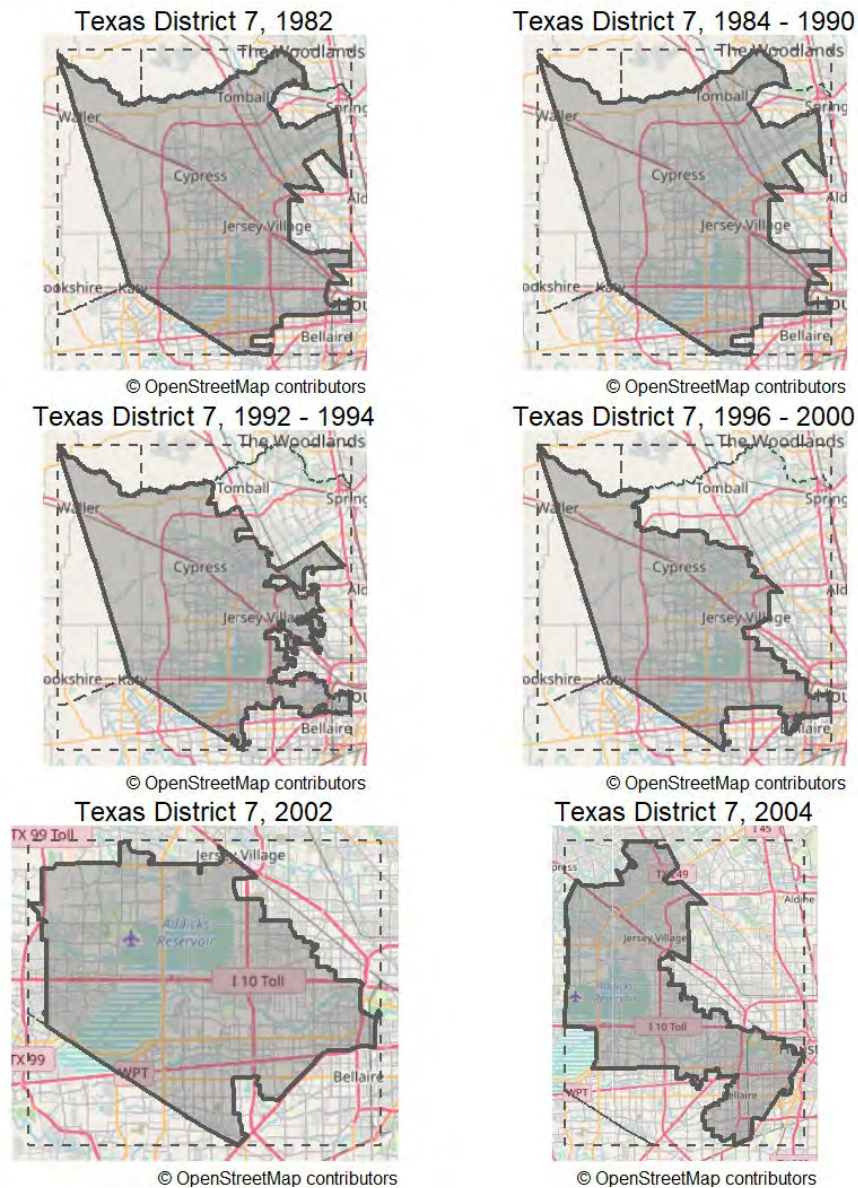


At the same time, it gives up 549,883 residents. These voters gave President Trump just 46% of the vote. 96,982 residents were placed in the 7th district (70% Biden), while 153,179 residents were placed in the heavily Democratic 18th (these residents were 60.6% Biden). 14,344 residents were placed in the 8th (these voters gave Biden 58.1% of the vote) while 4,379 residents were placed in the heavily Democratic 9th (these voters gave Biden 66.4%). Having shed a large number of Democratic voters and added a huge number of Republican voters, the district also shed 280,099 residents to the newly created 38th district. These voters gave Biden just 44% of the vote.

The net result of all of this is to shore up a district that had become increasingly marginal over the years. Trump received 61.5% of the two-party vote in the newly drawn district in 2020.

2. District 7

If the 5th district in Dallas represents the ancestral home of Dallas Republicans, the 7th represents the same for Houston. Created in roughly its present form in the wake of the Supreme Court's one-person-one-vote decisions, this west Harris County district was originally represented by George H.W. Bush. The district was solidly Republican throughout most of its existence, with Republican candidates routinely earning double digit victories here. Several things conspired, however, to end the Republicans' dominance. First, population growth in the metro area pushed the district in further toward the city, forcing it to take smaller and smaller chunks of outer Harris County. Second, as remarked upon repeatedly, White suburbanites began to swing toward the Democratic Party.

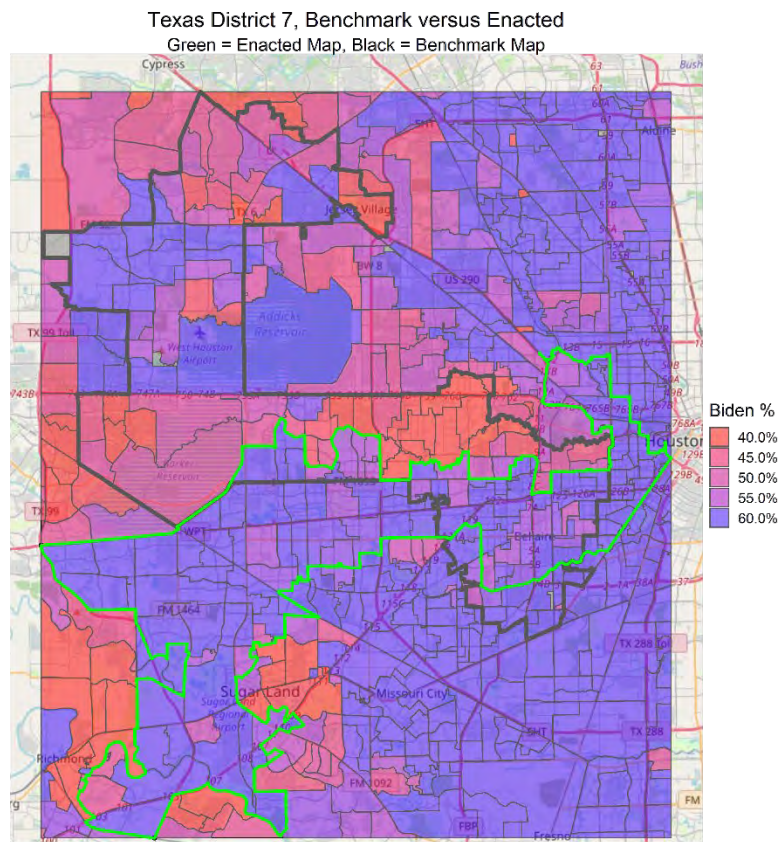
Fig. 29: Texas' 7th District, 1982 - 2004

This movement was especially pronounced in the 7th. At the beginning of the decade, the district was overwhelmingly Republican; portions of it soaked up Democratic portions of Harris County surrounding Bellaire and University Park, pushing the 9th District further south and to helping to make the 22nd more Republican. Mitt Romney won this district with 61% of the two-party vote. Donald Trump, however, lost the district by a little less than a point in 2016, and received just 45.7% of the two-party vote in 2020. This 30-point net swing against Republicans was the third largest (after Georgia's 6th District and Utah's 3rd) in the country. In 2018, Republican

Rep. John Culberson lost to now-Rep. Lizzie Fletcher. But the district was still marginal, as Fletcher won re-election by just three points in 2020.

Rather than seeking to make the district more winnable for Republicans, Republicans effectively ceded the district to Democrats, excising the Republican areas and turning the Seventh into another heavily Democratic district. As you can see from Figure 30, the district now almost perfectly follows the boundary between Republican and Democratic precincts in western Harris County. It also extends into heavily Democratic areas in Fort Bend County, carefully avoiding Republican precincts in Sugarland and Pecan Grove.

Fig. 30:



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Despite the fact that the district only needed to lose 33,924 residents for population equality purposes, it underwent a substantial re-engineering. It added over 500,000 residents. The bulk of these residents were taken from the heavily Democratic 9th District, which sent 257,829 people. These residents voted 66.4% for Joe Biden. Another 140,431 came from the 22nd; they gave Biden 62.4% of the two-party vote. The district removes the Democratic precincts from west of Houston

(see above) from the 2nd District; these 96,962 residents gave Biden almost 70% of the vote. Finally, the 18th sends 8,898 people, who voted 68% for Joe Biden.

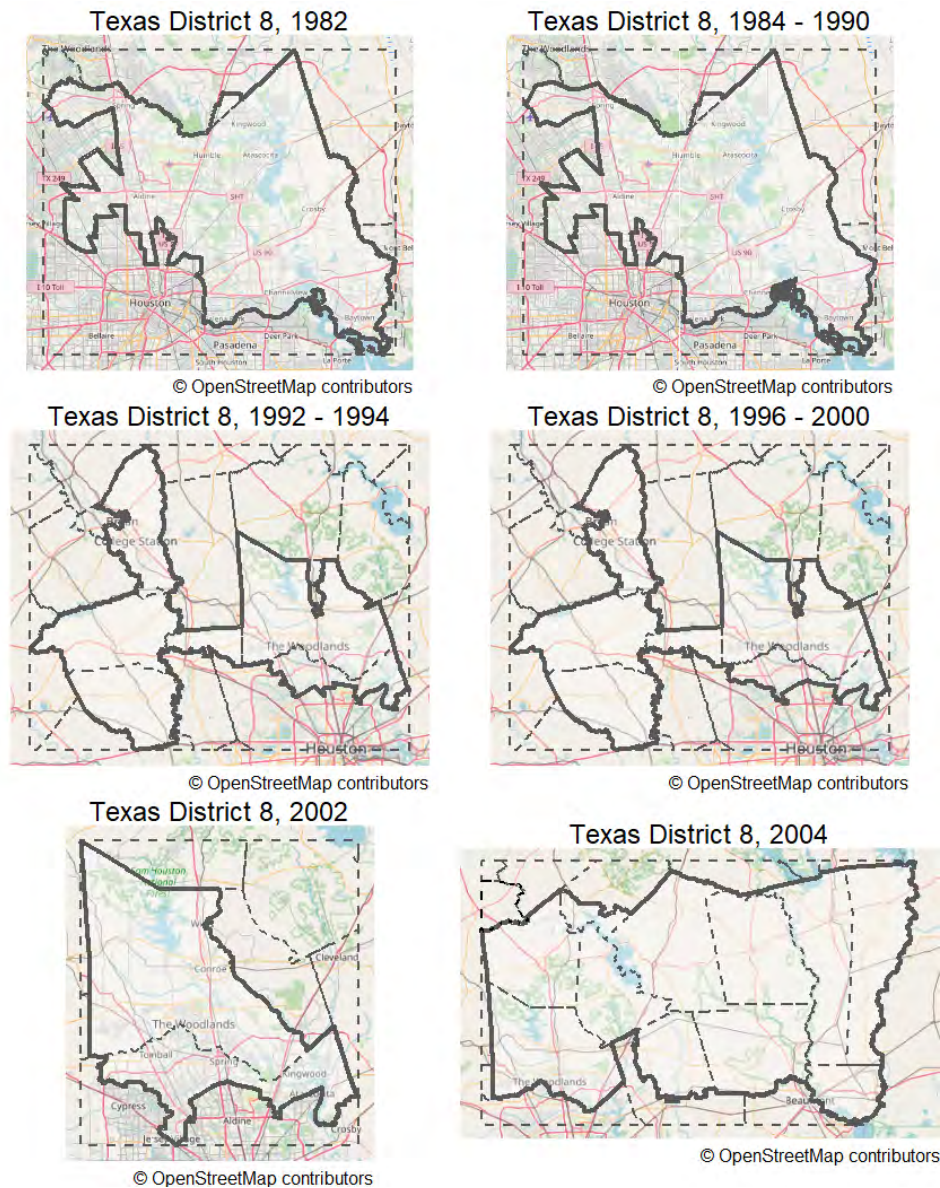
In exchange, the district sheds 538,064 residents. An arm from the heavily Republican 8th now extends into the area. These 231,116 residents gave Joe Biden a 57.6% win. It also sends 50,584 residents into the 9th; these voters gave Biden 63.6% of the vote. On the other side, it improves Republican performance in the increasingly marginal 22nd District (see below) further by donating 27,610 residents who gave Biden 43.7% of the vote. Finally, 228,754 residents who gave Trump just over 55% of the two-party vote are sent to the newly created 38th.

Overall, the voters removed from the district gave Biden just under 50% of the two-party vote, while the incoming residents gave him almost 67% of the vote. The net effect of these changes is to create a district where Biden won almost 65% of the vote overall.

3. District 8

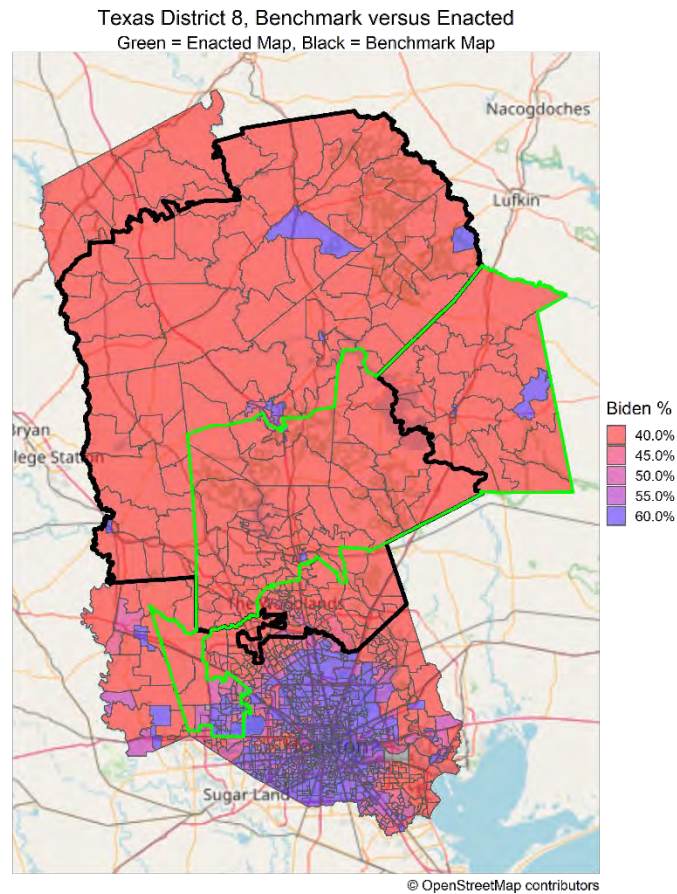
The 8th district was historically the Harris County seat, until the area's burgeoning population forced the legislature to split the county. If the 7th was the western, more Republican portion of the county, the 8th was the more Democratic district in the East and downtown, (the 22nd then occupied the southern third of the county). The 1970 census forced the legislature to place three whole districts and parts of others in the county, and the 8th became steadily more Republican; it elected Republican Jack Fields in 1980.

In the 1980s, the district began to move into the fast-growing suburbs in Montgomery County. The 1990s pushed it even further out, adding some rural areas, while the 2004 mid-decade redistricting sent it entirely out of Harris County and into suburban areas. The district was a Republican stronghold, and Rep. Kevin Brady routinely won with over two-thirds of the vote. This continued into the 2010s; while other suburban Republicans were struggling, Brady was winning over 70% of the vote. Donald Trump won 71.5% of the vote here in 2020.

Fig. 31: Texas' 8th District, 1982 - 2004

In this redistricting, the district had to shed 149,399 residents, but instead was substantially reconfigured. It returned to its Harris County roots, albeit now on the west side rather than the east side, expanding upon a small salient that jutted into the county in the Benchmark Map. It added 441,459 residents. As described above, many of these were Democratic residents from the 2nd and 7th districts. It also took in 145,876 residents from the now-Austin-based 10th District (see below) who split their votes evenly between Trump and Biden. Around 50,000 residents came from the 36th district; the voters among them were heavily Republican (22.5% Biden).

Fig. 32:

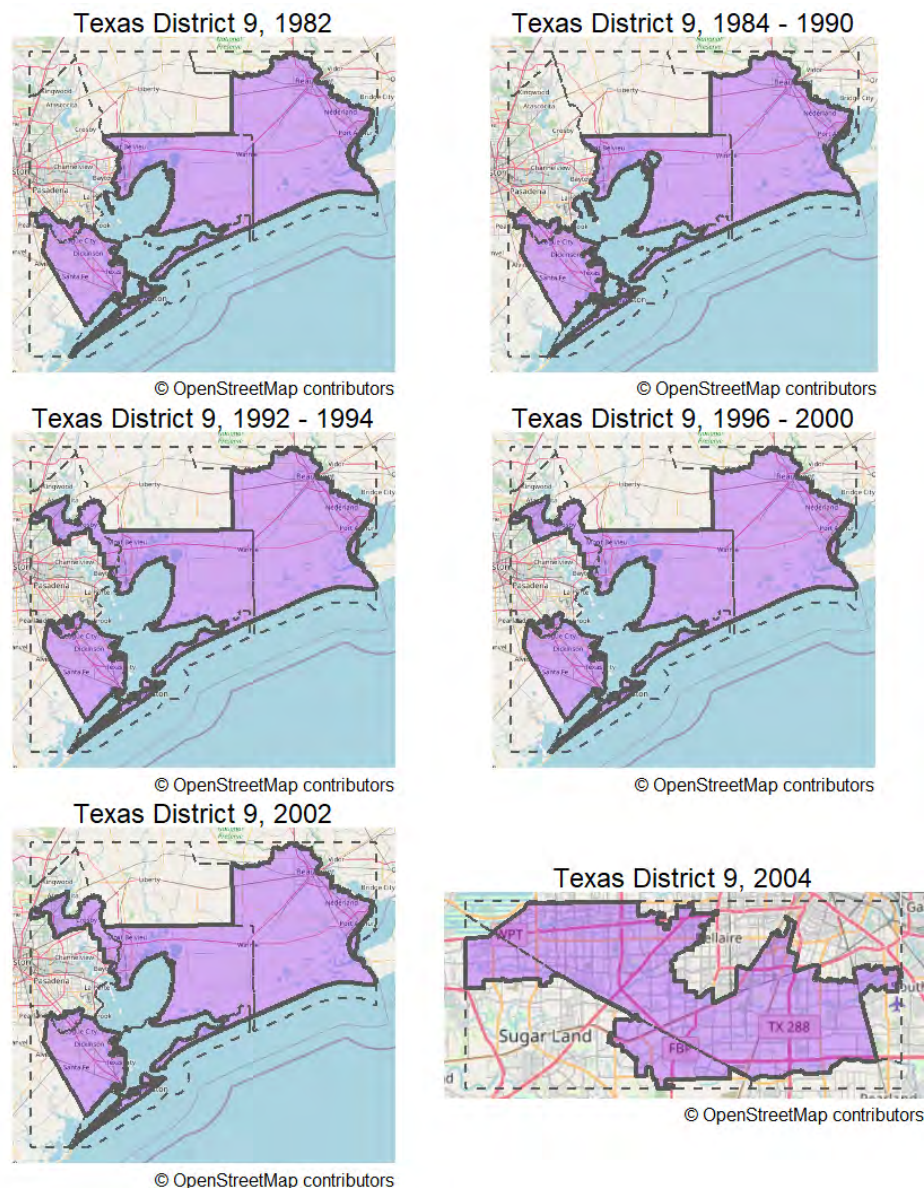


It then sacrificed 590,858 residents. As described above, the bulk of these residents came went to the 2nd District, which became substantially more Republican. 42,723 went to the 10th (22.3% Biden), while 102,253 went into the 17th (28.2% Biden). 63,856 went into the 38th (37.1% Biden). On balance, the residents added to the district split their votes between Biden and Trump almost evenly, while those subtracted gave Trump 66.8% of the vote. Trump's vote share was decreased substantially, but he still won 63.8% of the vote.

4. District 9

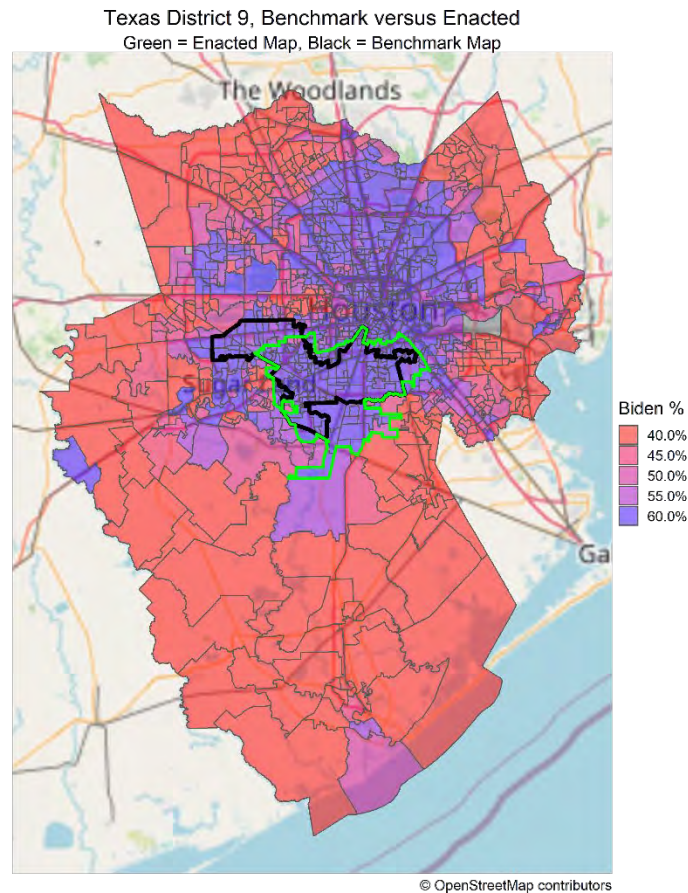
In the post-*Baker* years, the 9th District was anchored in Beaumont and Port Jefferson. It was represented by the legendary Jack Brooks for decades, until his stunning defeat in the 1994 election. The 1992 redistricting added a finger-like tendril into Harris County; on balance the district still leaned Democratic, and sent Democrat Nick Lampson to Congress until the 2004 redistrict effort. In that round of mapping, the district replaced the 25th Congressional District in southern Houston (see above), where it has resided ever since. The heavily Democratic district has been represented by Rep. Al Green since then.

Fig. 33: Texas' 9th District, 1982 - 2004



The district was only 3,811 residents above what the equal population standard required in 2021, but nevertheless was reconfigured when the 7th district (see above) was extended into Fort Bend County. Opening a pathway from Harris County to heavily Democratic precincts west of Sugarland, the district gives 257,829 residents to the 7th (see above). Another 7,000 residents are sent to the 22nd; Biden won 52.7% of their votes.

Fig. 34:

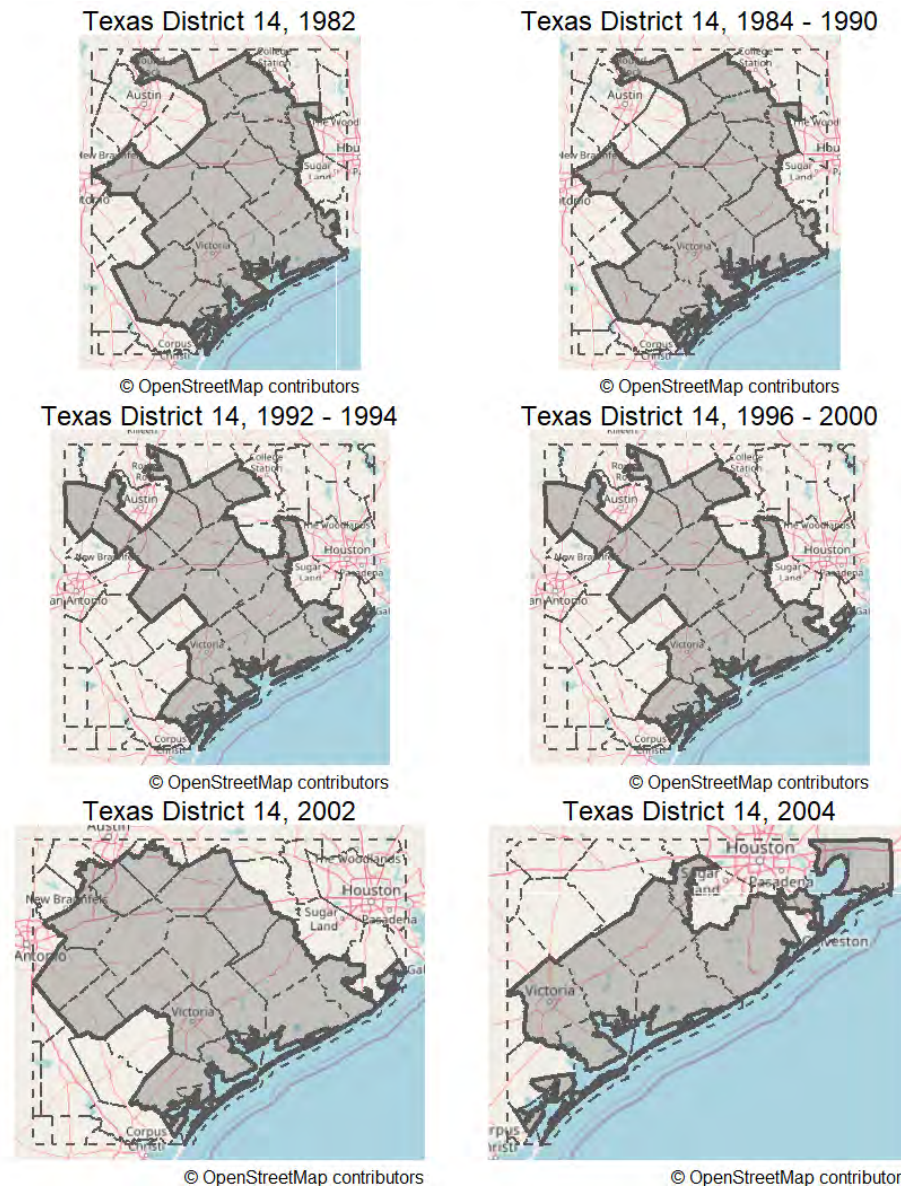


To make up for this shortfall, the district moves into northeastern Fort Bend and northern Brazoria counties. The roughly 260,000 residents it takes in here don't come from any particular district but are instead spread across a variety of districts. It takes 4,379 residents from the 2nd (66.4% Biden), 50,584 from the 7th (63.6% Biden), 6,806 from the 14th (76.1% Biden), 29,562 from the 18th (93.8% Biden), 133,151 from the 22nd (66.6% Biden) and 36,820 from the 29th (71.1% Biden). This has no substantial impact on the partisanship of the 9th; the changes mostly change the partisanship of neighboring districts and hence are largely discussed elsewhere.

5. District 14

The 14th District has steadily migrated up the Gulf Coast, from its historic location in Corpus Christi (a part of the district until 1982) to its present location in the Houston suburbs. The ancestrally Democratic district briefly elected a Republican in the mid-1980s, but has elected exclusively Republicans since Greg Laughlin switched parties to join the GOP in 1995.

Fig. 35: Texas' 14th District: 1982 - 2004

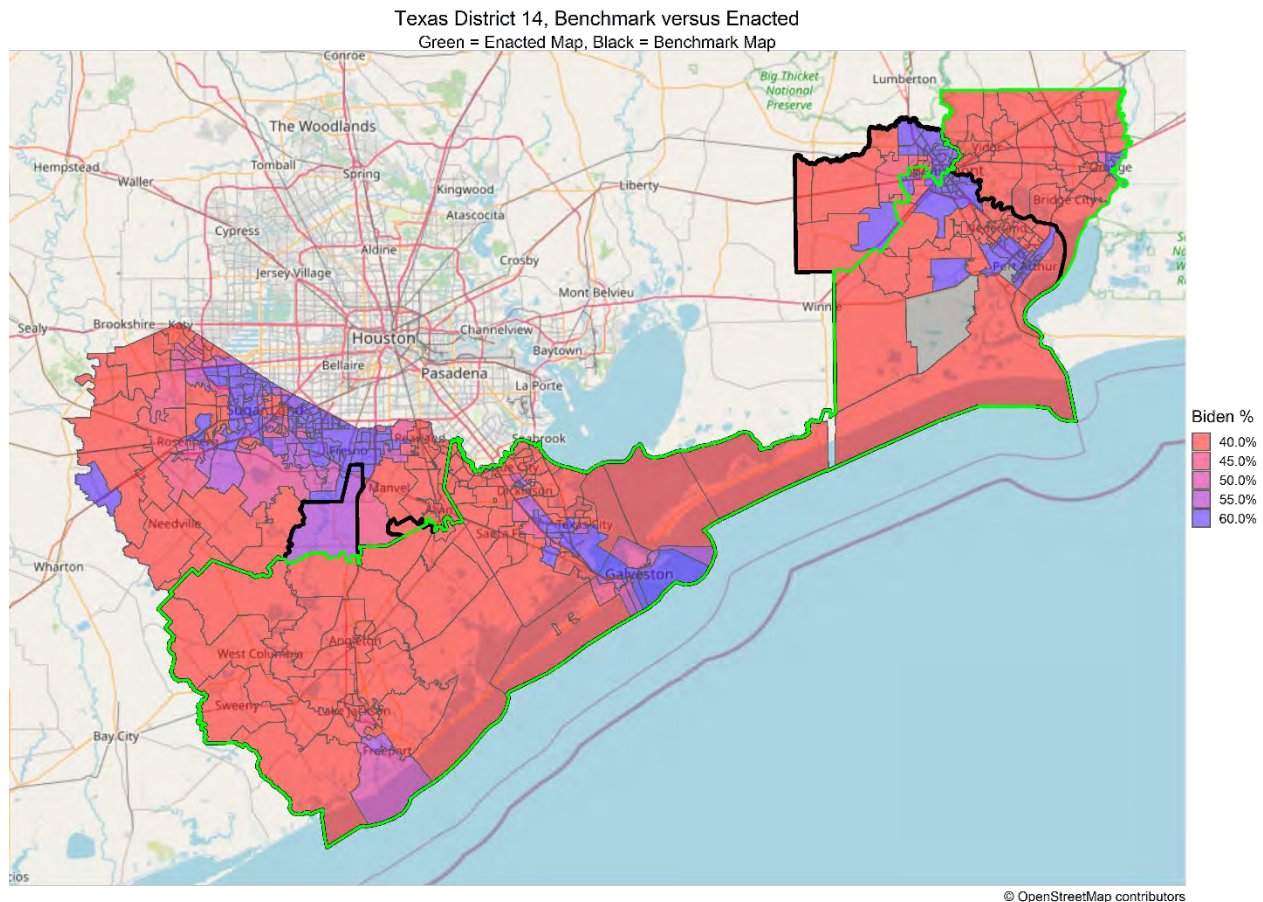


The 2004 mid-decade redistricting converted the district into a heavily coastal and largely suburban district, adding all of Brazoria and Galveston counties and injecting a portion of Fort

Bend County into the district. The district has remained heavily Republican; in 2020 President Trump won 60% of the two-party vote here.

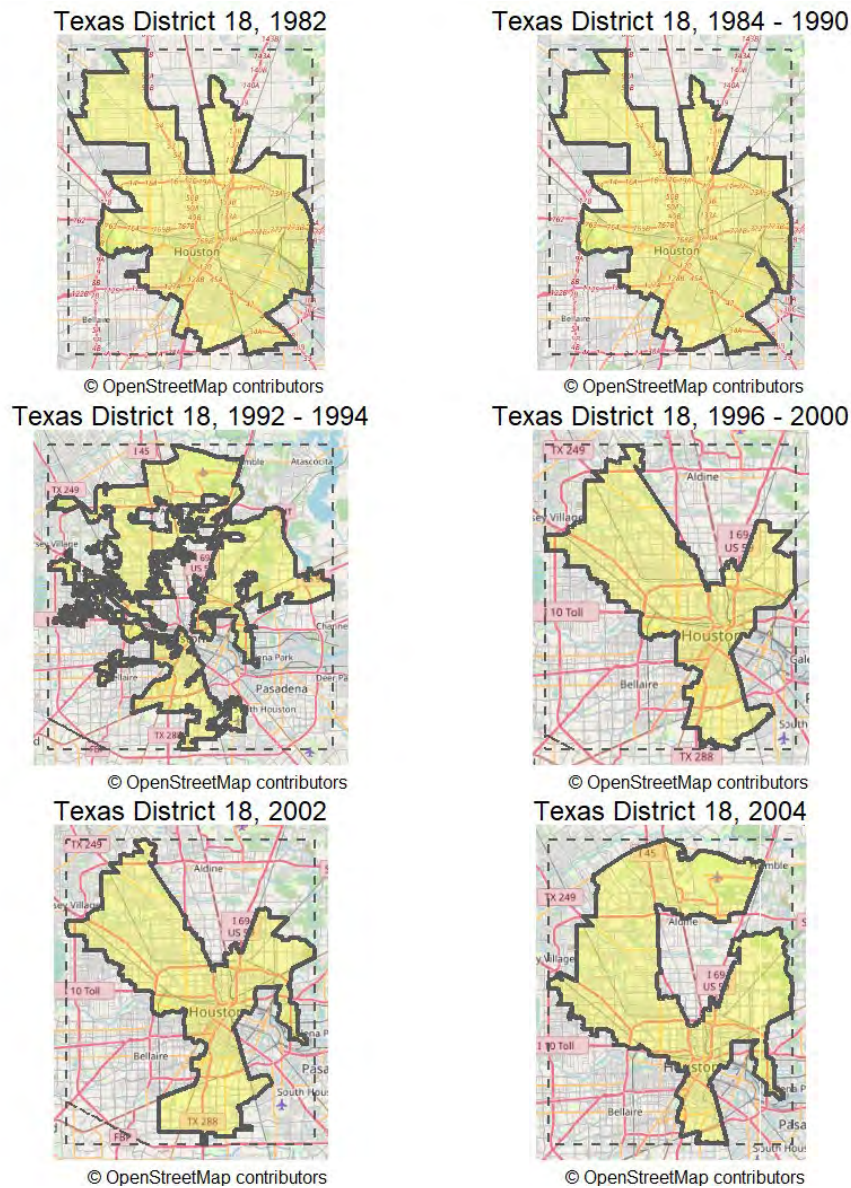
The population of the district was almost exactly at the level required for equal population requirements, needing to gain only 7,699 residents. It received relatively minor adjustments to its boundaries. 85,373 residents were added, mostly from the 36th district. These voters gave Joe Biden just 17.9% of the vote. It then gave up 93,072 residents, mostly to the 36th District. 6,806 heavily Democratic residents went to the 9th district (76.1% Biden). Another 14,686 residents went into the 22nd (50.1% Biden). Finally, 71,580 residents were placed in the 36th. These residents voted 56% for Joe Biden. The net results of this pushed the Republican vote share in the district back above 60%; Trump won 64.5% of the vote here.

Fig. 36:



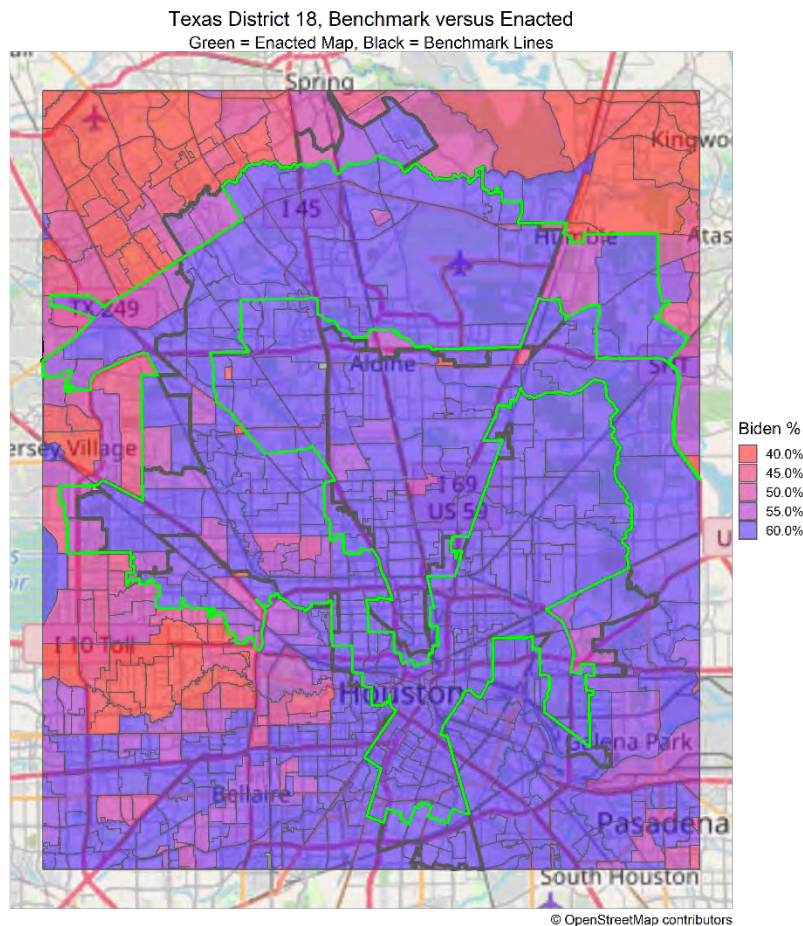
6. District 18

The 18th Congressional District was created in 1918 as an Amarillo-based district. By the time the *Baker* line of cases were decided, it had become underpopulated. It was moved to central Houston in the 1972 redistricting, where it promptly elected Barbara Jordan to Congress and has consistently elected African-American representatives since. In 1992, it was given a bizarre shape, and was promptly struck down as a racial gerrymander. The remedial map featured much more regular lines, albeit in a “Y” shape resembling a hawk dropping down to pick up a field mouse. The 2004 redistricting bent the hawk’s wing eastward to facilitate the creation of the 9th in the southern portion of the county (see above).

Fig. 37: Texas' 18th District: 1982 - 2004

In 2021, the district needed to shed just 29,921 residents. Unlike other districts in the area, its boundaries were not wildly reshaped. The district swings out wider to take in blue precincts previously in the 2nd and 7th, and the “wing” extends past Humble to encompass blue precincts there.

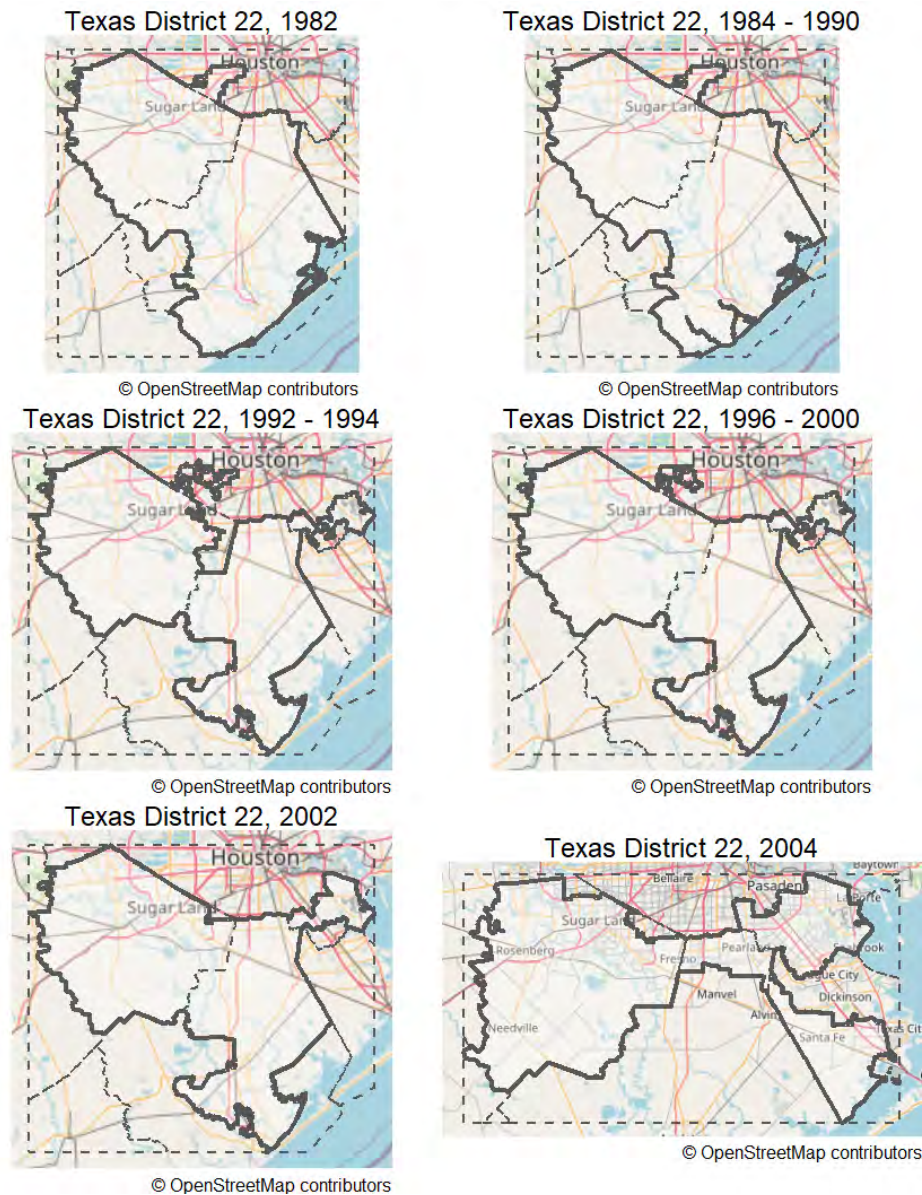
Fig. 38:



It adds 153,179 residents from the 2nd District in all; these residents voted 60% for Joe Biden in 2020. It also adds 6,540 residents from the 29th; these are overwhelmingly Republican. It also gives up 41,090 residents to the 2nd (58.1% Biden), 8,898 to the 7th (68% Biden), 29,562 to the 9th (93.8% Biden) and 110,090 to the 29th (75.9% Biden). The district remained overwhelmingly Democratic.

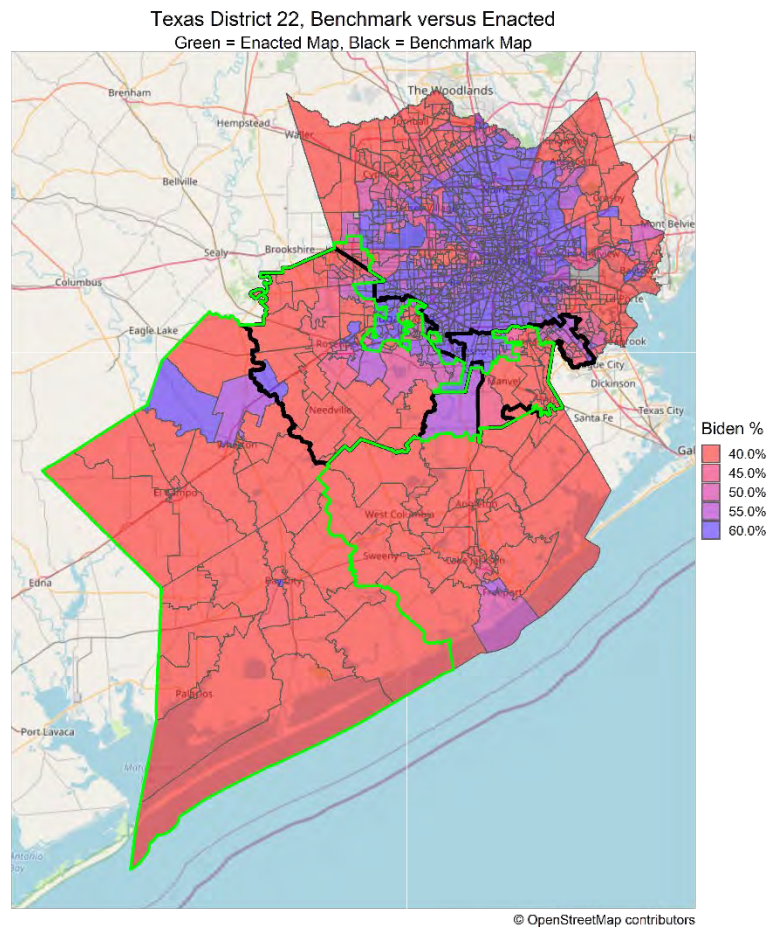
7. District 22

The 22nd district was created in southern Harris County during the 1958 mid-decade redistricting. In 1972, it was pushed out into Ft. Bend County, where it has remained anchored ever since. The district last elected a Democrat in 1978, save for a brief interregnum in 2006 when Rep. Tom DeLay was forced to resign late in the cycle, and Republicans had to pursue a write-in campaign for the awkwardly named “Shelley Sekula-Gibbs.” The district was Republican enough that it flipped back to Republicans in the 2008 Democratic landslide.

Fig. 39: Texas' 22nd District, 1982 - 2004

This changed once again in the late 2010s. Romney carried the district by over 25 points in 2012; Trump won by 8 in 2016 and by just one in 2020. The Republican Congressman elected in 2008, Pete Olson, saw his vote share drop below 60% in 2016. He won re-election in 2018 by just five points. He promptly announced his retirement. His Republican successor, Troy Nehls, won by just seven points two years later.

Fig. 40:



The district was substantially redrawn for 2022, giving up blue suburban territory while pushing out into heavily Republican rural Texas. Even though the district was overpopulated by more than 200,000 residents, it adds 159,719 new residents. It takes 27,610 residents from the 7th; these residents were primarily in Republican areas of the district and gave Joe Biden just 43.7% of the two-party vote. It received 7,284 residents from the 9th district, of whom 52.7% voted for Joe Biden. An additional 54,111 residents were taken from the 10th District, which loses its Houston voters under the new plan; Joe Biden won just 42.6% of their votes. 14,686 residents come out of the 14th; as described above, they voted 50.9% for Biden in the two-party vote. Finally, 77,825 largely rural residents were added from the 27th district. They gave Biden only 27.9% of the vote. Overall, the residents that were added to the district gave Trump 62.3% of the vote.

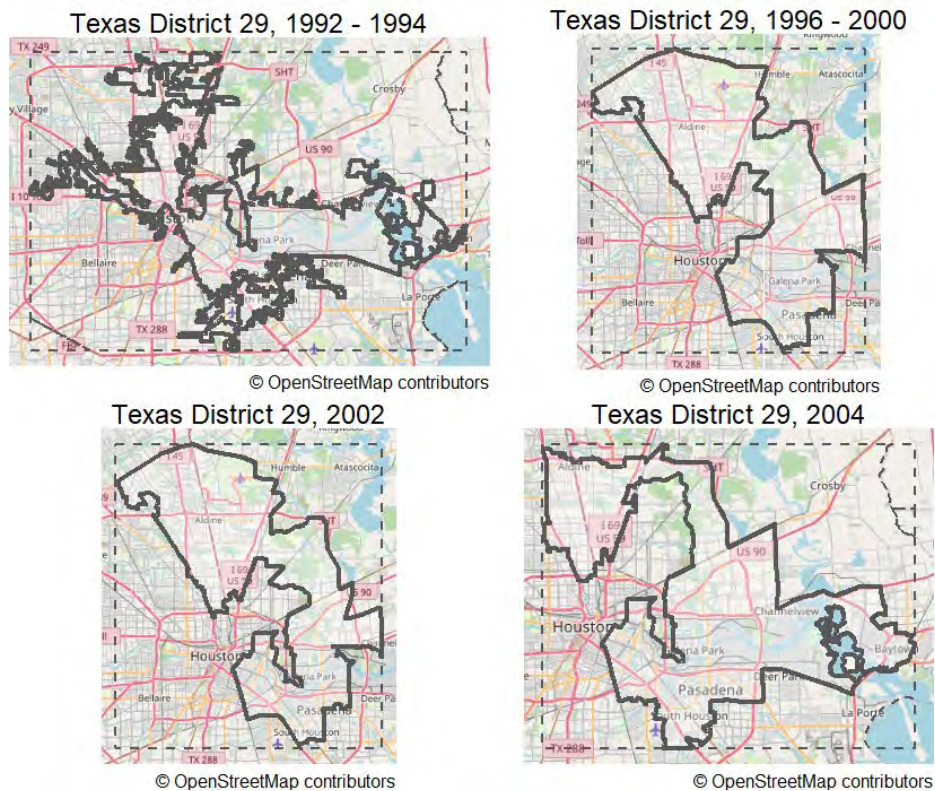
On the other hand, map drawers severed 386,838 residents from the district, mostly sending Democratic voters into the 7th and 9th districts. 140,431 residents were placed in the 7th district;

they voted for Biden by over 20 points. The 133,151 residents who were sent to the 9th district gave Biden almost 2/3 of the two-party vote. There were 565 residents placed in the 14th (24.8% Biden) and 9,046 placed in the 29th (62.7% Biden). Finally, the 36th District receives 103,645 residents whose voters split evenly between the parties. The end result of this is that the 22nd sees its Republican performance improve substantially. Trump received 58% of the vote in the newly drawn district.

8. District 29

The 29th District was created in 1992, but its scorpion-like shape quickly drew the attention of federal courts; the Supreme Court of the United States declared it an unconstitutional gerrymander in *Bush v. Vera*. Since then, it has had the same basic shape, wrapping around the downtown area and increasingly coming to resemble a baby dragon still in its egg. The district was represented by Gene Green until 2018, when he retired and was replaced by Rep. Sylvia Garcia.

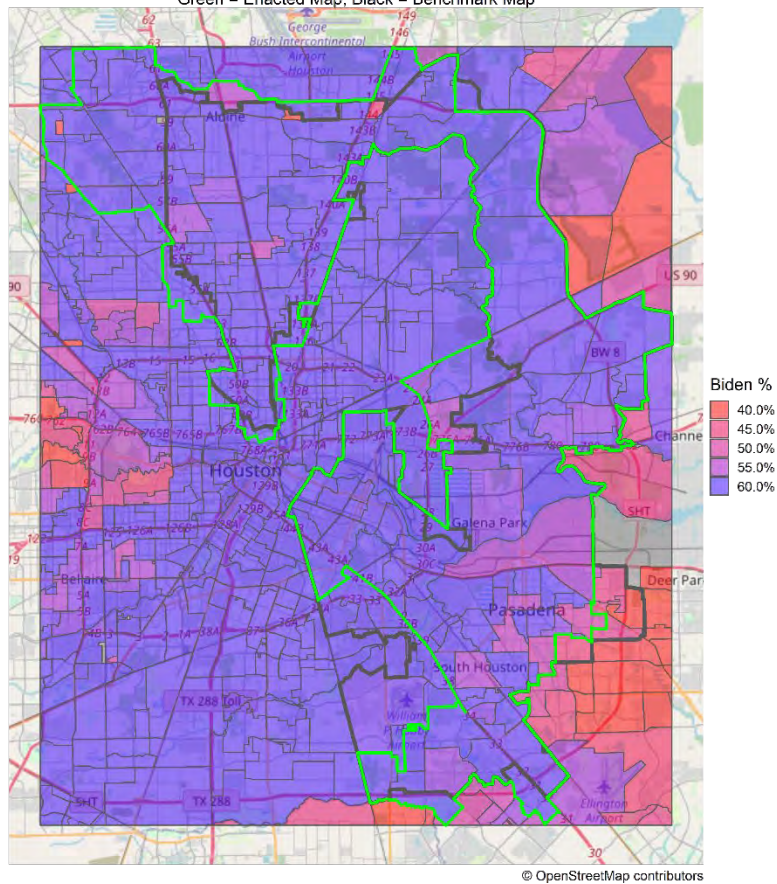
Fig. 41: Texas' 29th District, 1992 - 2004



The 29th is unusual in Texas in that it had to gain almost 50,000 residents. Mapmakers made relatively minor changes to the boundaries. It gained 69,418 residents from districts 9 and 18 (described above); it also took in 26,058 residents from District 36 (they gave Biden 45.6% of the vote). It then added 119,150 residents. Most of these came from District 18 (described above), although around 9,000 came from the 22nd District (described above). 14 voters were gained from the 36th District.

Fig. 42:

Texas District 29, Benchmark versus Enacted
 Green = Enacted Map, Black = Benchmark Map

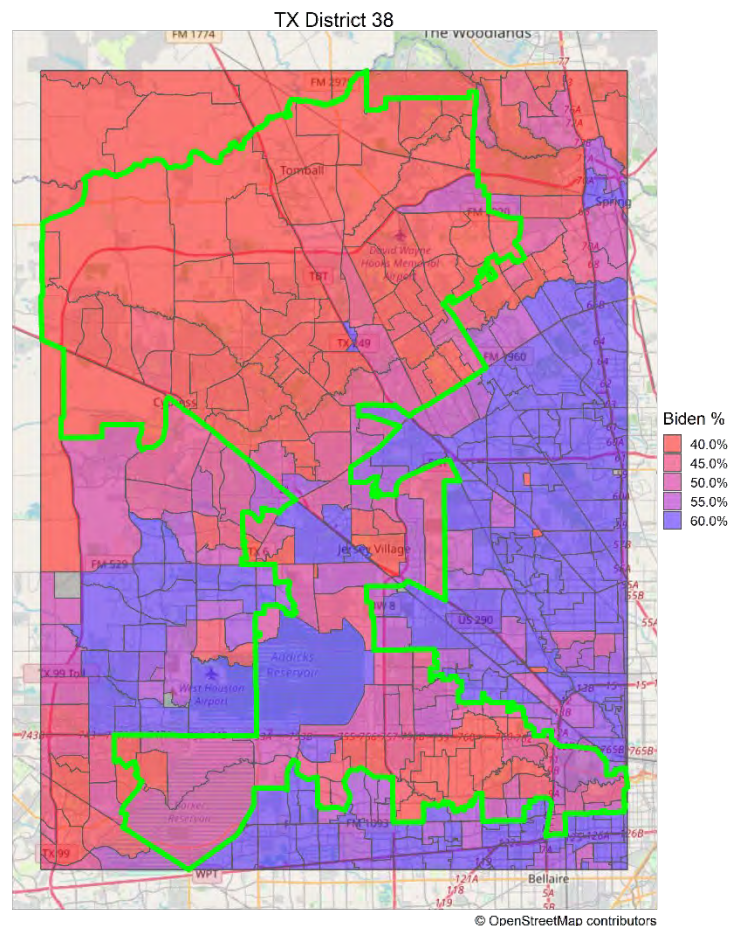


The district was, and still is, overwhelmingly Democratic, with Trump winning 25% of the vote under the Benchmark Plan and 31.3% of the vote under the Enacted Plan.

9. District 38

The 38th District is a newly created district. The changes are all described above, but overall, this district received about 2/3 of its residents in roughly equal parts from the 2nd and 7th districts. Trump won around 55% of the vote in each. A small number (8%) is taken from the old 8th District, these residents gave Biden just 37.1% of the vote. Finally, 25.2% came from District 10, they gave Biden just 32.5% of the vote. The district is heavily Republican; Donald Trump won 59.1% of the vote here in 2020. Wesley Hunt – an African-American Republican who previously ran against Rep. Fletcher in the 7th District – won the Republican primary and is generally expected to win the general election in November. Of note is how closely the district follows the political contours of Harris County, carefully separating red precincts from blue ones.

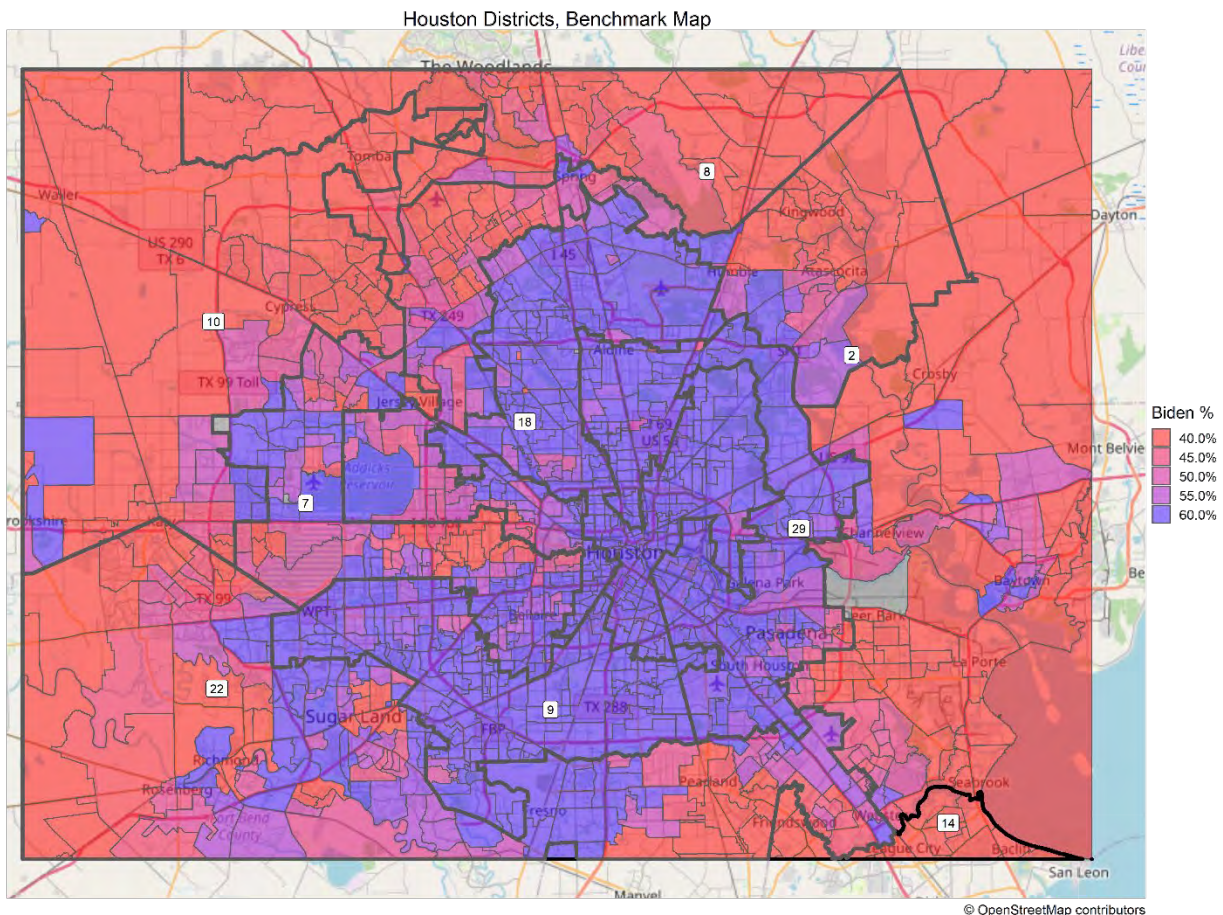
Fig. 43:



10. Putting it all together

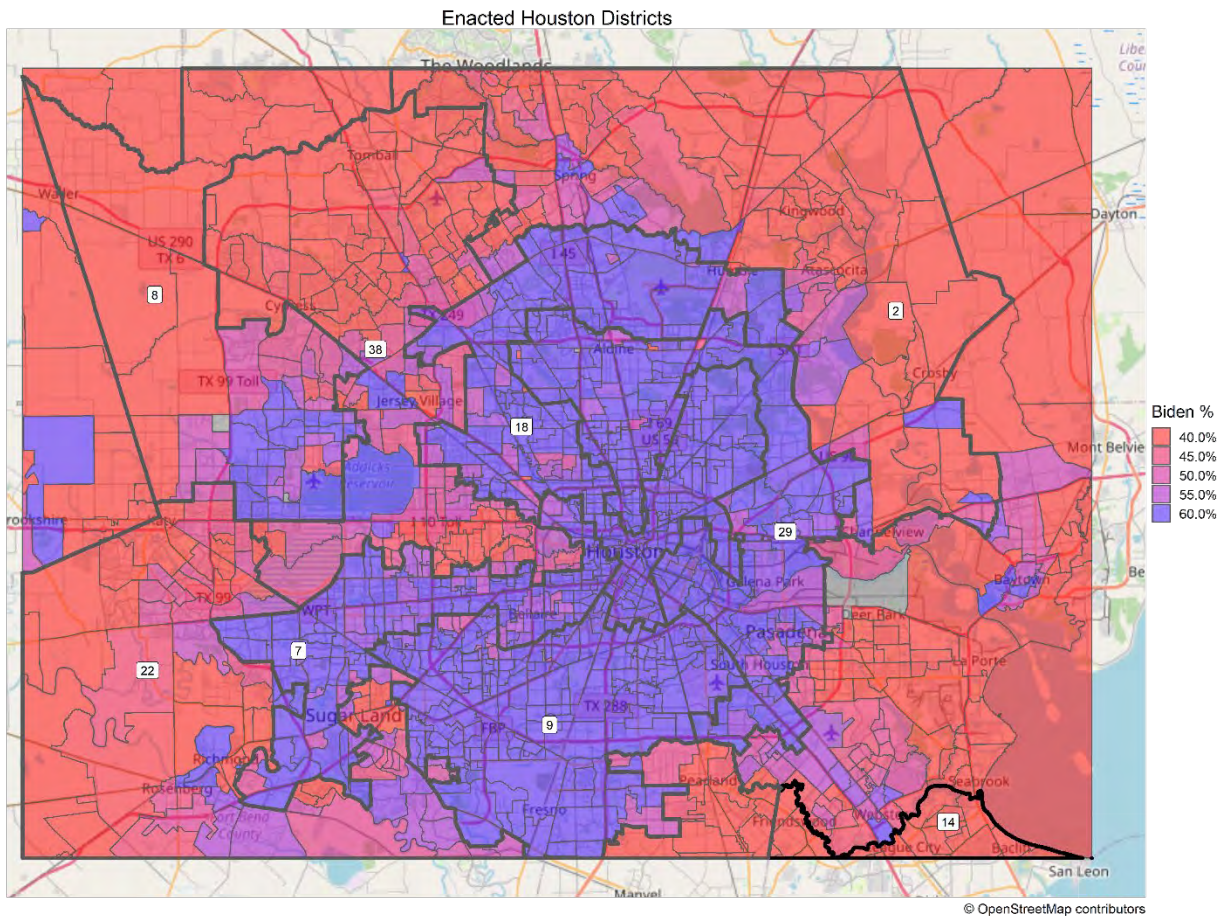
Once again, we begin by juxtaposing the old lines against the new ones. In the Benchmark Map, the Second District includes blue precincts south of Kingwood, on the west side of Houston, and in the sliver near downtown Houston that it takes in. The Seventh is a mixture of blue precincts near Bellaire and in western Harris County, with red in between. The 22nd includes blue areas around Sugarland and Fresno, as well as deep red areas in the more exurban and rural portions of the district.

Fig. 44:



Under the Enacted Map, the four blue districts—7, 9, 18 and 29—all hug up against the dividing line between red and blue precincts. Almost all of the red precincts have been placed in the red districts.

Fig. 45:



We can also look more carefully at the composition of the districts before and after the redistricting was completed. In Table 4, we can see plainly the choices made in the marginal Republican districts: 2, 7, and 22. The number of precincts won by Joe Biden drops by around two-thirds in districts 2 and 22. At the same time, the number of precincts carried by Biden increases substantially in the 7th District, reflecting the transformation of that district from a purple district to a blue one. Overall, 81.5% of the precincts carried by Joe Biden are in the 7th, 9th, 18th or 29th district in the Enacted Plan, up from 73.71% under the Benchmark Plan. While 1-in-5 Biden precincts were once located in districts 2 and 22, today that is just 1-in-17. Not only that, but as Table 5 shows, the Biden shares in those Biden-won precincts is substantially lower than it was under the Benchmark Plan. In other words, once again the swing districts not only have fewer Biden precincts between them, the Biden precincts that they have are redder. Overall, of the 667 precincts where Biden won more than 60% of the vote, 606 of them (90.1%) are placed into the 7th, 9th, 18th and 29th districts.

Table 4: Biden-won VTDs, by Houston Districts

District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
2	77	24	9.04%	2.71%	-6.33%
7	98	134	11.50%	15.11%	3.60%
8	5	34	0.59%	3.83%	3.25%
9	150	195	17.61%	21.98%	4.38%
10	7	—	0.82%	—	—
14	29	27	3.40%	3.04%	-0.36%
18	223	203	26.17%	22.89%	-3.29%
22	90	31	10.56%	3.49%	-7.07%
29	157	187	18.43%	21.08%	2.66%
36	16	24	1.88%	2.71%	0.83%
38	—	28	—	3.16%	—

Table 5: Biden Vote Share in Biden-Won VTDs, Houston-area Districts

District	Biden %, Benchmark	Biden %, Enacted	Change
2	62.30%	58.99%	-3.31%
7	61.48%	65.25%	3.76%
8	55.97%	60.53%	4.56%
9	76.73%	76.96%	0.23%
10	58.69%	—	—
14	64.60%	64.56%	-0.04%
18	76.94%	74.75%	-2.19%
22	60.83%	56.19%	-4.64%
29	67.66%	68.63%	0.97%
36	59.90%	54.72%	-5.18%
38	—	54.67%	—

Finally, as with the Dallas area, the Trump precincts are now almost perfectly sorted. Districts 7, 9, 18, and 29 now have a total of ten Trump-won precincts between them, out of 439

overall. In other words, the Trump precincts are almost entirely placed within districts where Republicans win, while Biden districts are mostly contained within the four Democratic districts.

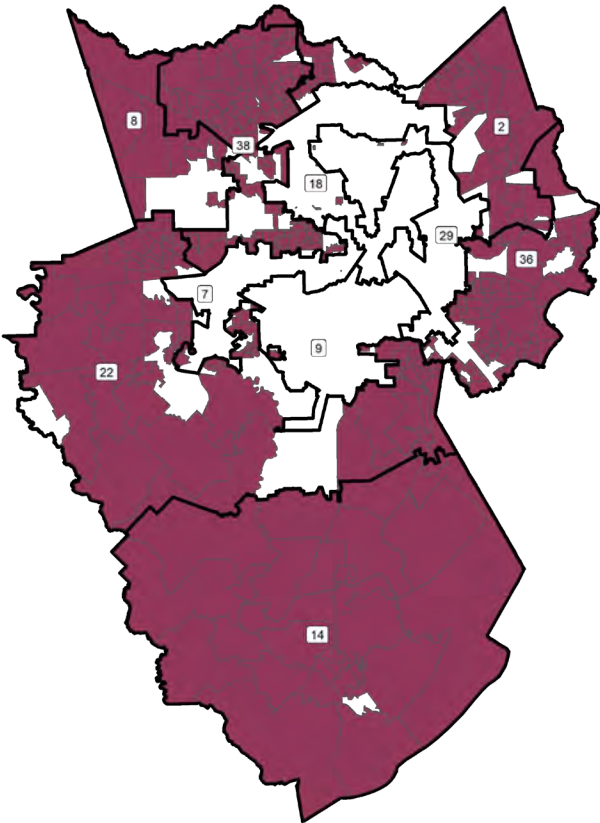
Table 6: Trump-won VTDs, by Houston-area Districts

District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
2	76	109	14.02%	19.43%	5.41%
7	48	2	8.86%	0.36%	-8.50%
8	113	64	20.85%	11.41%	-9.44%
9	1	0	0.18%	0.00%	-0.18%
10	44	—	8.12%	—	—
14	94	95	17.34%	16.93%	-0.41%
18	5	5	0.92%	0.89%	-0.03%
22	89	90	16.42%	16.04%	-0.38%
29	6	3	1.11%	0.53%	-0.57%
36	66	71	12.18%	12.66%	0.48%
38	—	122	—	21.75%	—

Once again, other maps help tell a similar story. Looking at the Trump-won precincts in Harris, Fort Bend and Brazoria Counties, we see that the Trump-won precincts are, in fact, almost perfectly sorted into the Republican districts.

Fig. 46:

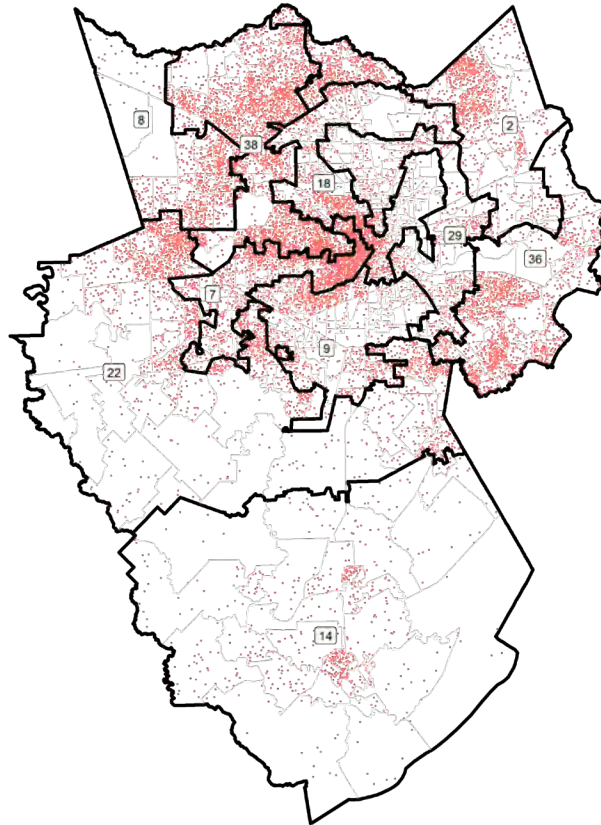
Trump Precincts, By District, Houston Area



Indeed, if we examine the dotplots, we see that substantial White populations are placed into the 7th 9th, and 18th districts.

Fig. 47:

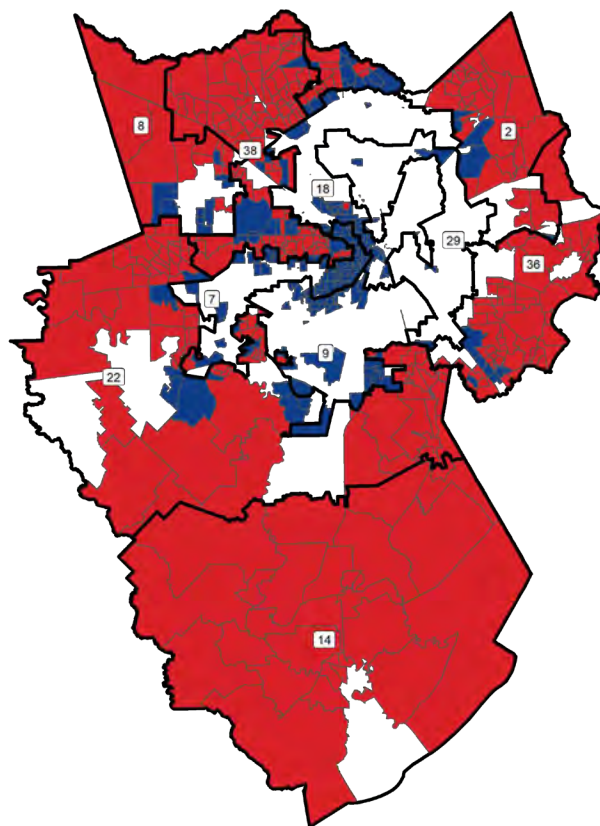
White Population of Congressional Districts, Houston



We can once again put these together by filtering on the White plurality precincts and shading them by how they voted. The substantial blue area of White plurality precincts is mostly placed into the 7th District, carefully carved out of the 38th, and to a lesser degree the 9th. In other words, map drawers placed large numbers of Democrats of all races in the four Democratic districts, irrespective of race or ethnicity.

Fig. 48:

White Plurality Precincts, By Vote, Houston Area



As a final consideration, examine the result of 100,000 simulations conducted within the precincts contained in Dr. Duchin's selected districts for her simulations. Once again, the racial simulations produce results that are substantially similar to those produced by Dr. Duchin, suggesting that the different algorithm still samples from the same basic distribution of maps as does hers. When we look at the political results, however, we see that the Enacted Plan produces political outliers. All four of the Democratic districts are pushed to the extremes of what we might expect here, while the four most Republican districts are substantially more Republican than we would expect; that discrepancy is particularly marked in the third and fourth-most Republican districts. While we would expect to see five districts carried by Joe Biden, we only see four such districts. In other words, both qualitative and quantitative assessments are consistent with the suggestion that politics heavily influenced the drawing of the districts.

Fig. 49:

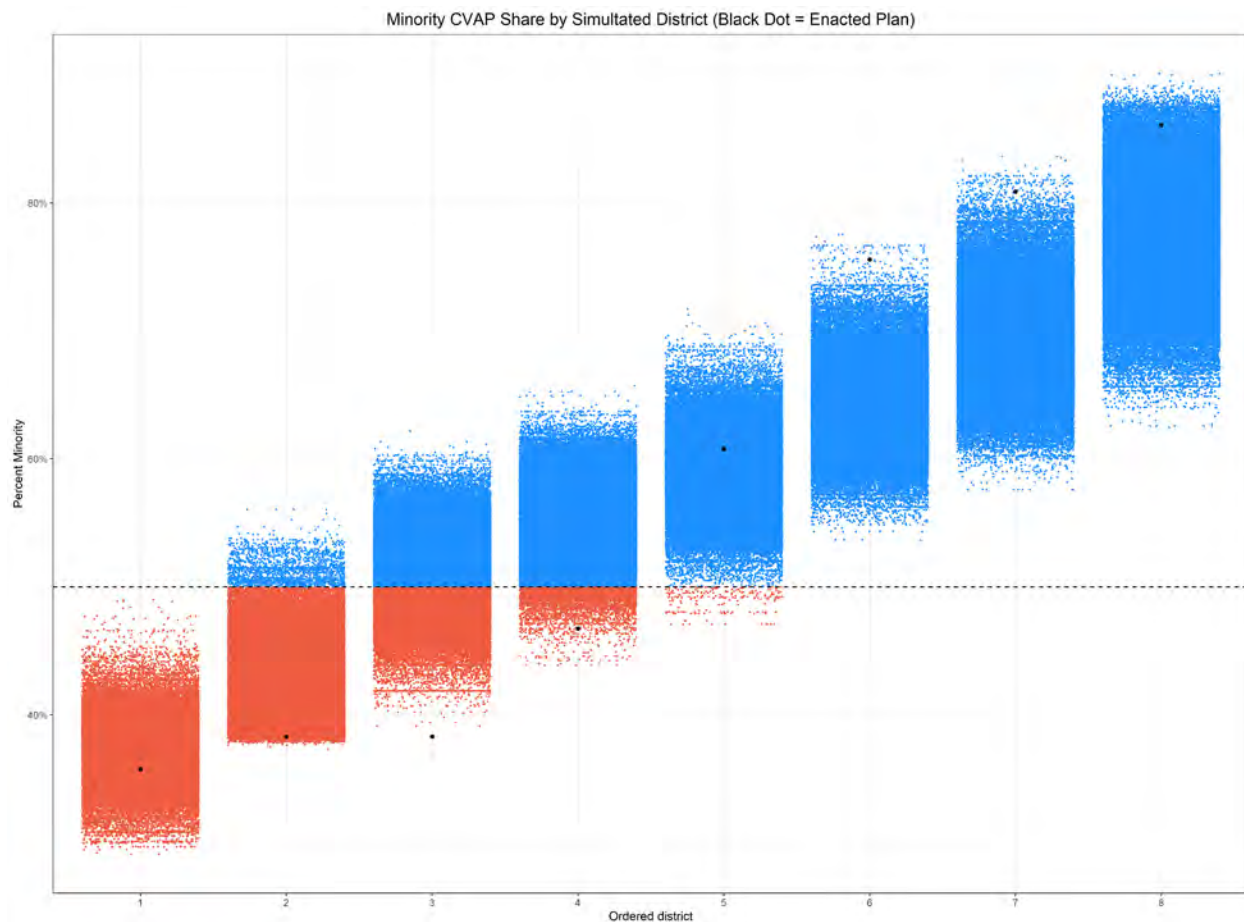
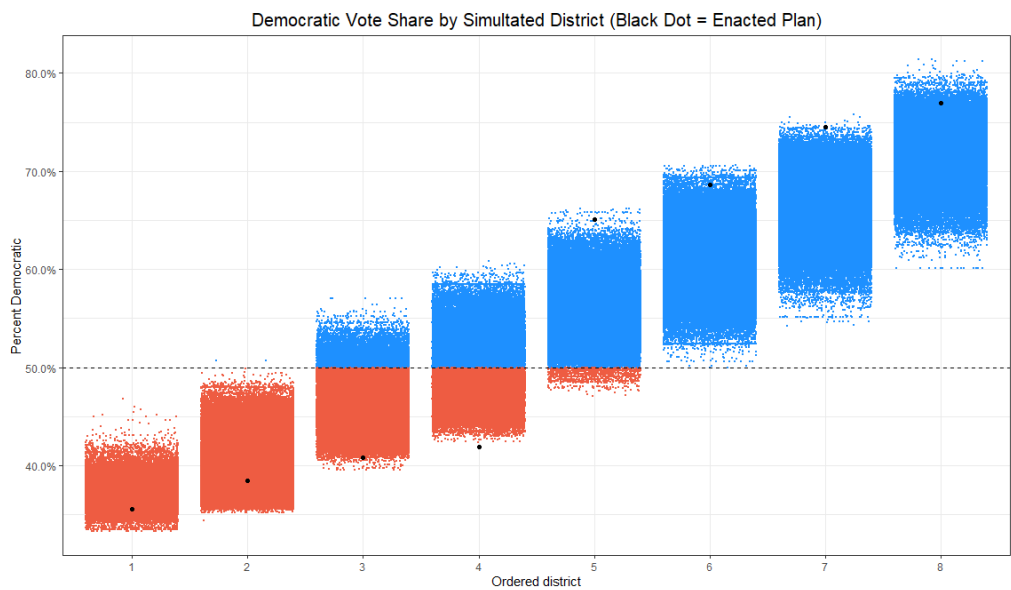


Fig. 50:

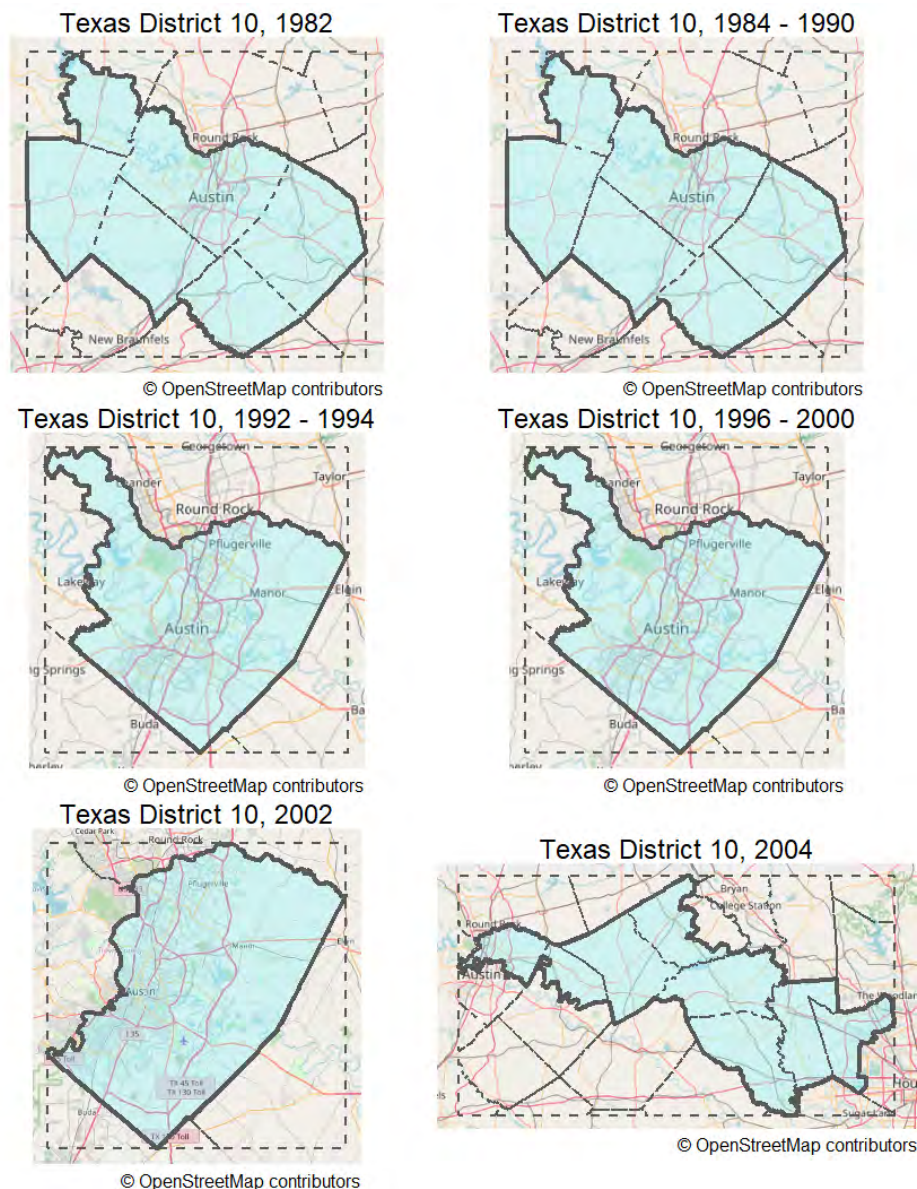


D. San Antonio/Austin Area

1. District 10

Texas' 10th Congressional District has been a Travis County-based district for over 100 years. As Austin's population grew, transforming it from a sleepy southern capital into the bustling, diverse metropolitan area that we know today, the district increasingly became centered only on Austin. The district sent surprisingly liberal members of Congress to D.C., men like Lyndon Johnson, Homer Thornberry, J.J. Pickle and Lloyd Doggett.

Fig. 51: Texas' 10th

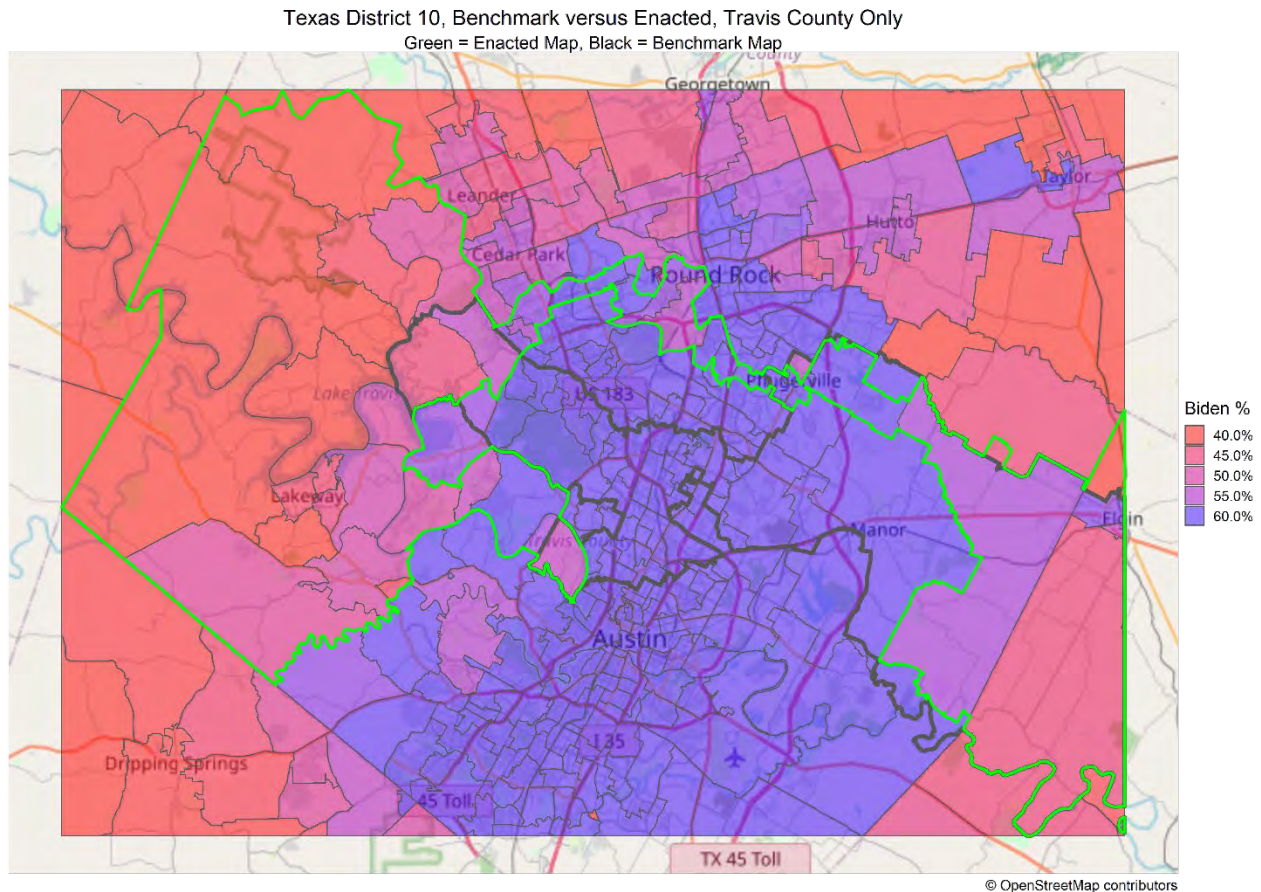


In 2004, Republican lawmakers redrew the map in a mid-decade redistricting. They split Travis County roughly into thirds, taking the 10th and extending it to the Houston suburbs. This created a Republican district and forced Rep. Doggett into a newly created Hispanic opportunity district that meandered down to the Rio Grande Valley (after that district was struck down as unconstitutional, Doggett won re-election in a revamped version of the 25th).

Under the Benchmark Plan, Democratic voters in Travis County were split between five districts. The 10th continued to take in the Republican Harris County exurbs, as well as some less densely populated counties between Harris and Travis County. It then crossed the northern portion of Harris County, taking in parts of suburbs such as Pflugerville and Cedar Park as well as large sections of Austin. The Travis County portion of the district was overwhelmingly Democratic; Joe Biden won 74.2% of the vote in 2020. At the beginning of the decade, the Harris County and rural portions of the district clearly outvoted the Travis County portions of the district. Romney won the district by over 20 points. But, as we have seen before, Republican areas of the state located in the suburbs moved toward Democrats, and in 2016 the Republican margin decreased to 9 points. By 2020, Trump was only winning the district by a little more than a point. The GOP incumbent, Michael McCaul, saw a close call in the 2018 election, winning by just five points.

The Austin area is growing quickly, and the district needed to shed 170,995 residents. It did so first by dropping Republican voters in the outer Harris County suburbs, shoring up Republican districts there (see above). The 145,876 residents it lost there went into the 8th district, and split 50-50 between the major candidates. Another 193,378 went into the new 36th district; they gave Biden just 32.5% of the vote. Finally, 54,111 went into the 22nd district; they gave Donald Trump a little more than 57% of the two-party vote.

Fig. 52:



The biggest changes, however, were in Travis County. The heart of the district there, which passed just north of downtown Austin, was placed into the newly created 37th District. Joe Biden won these voters with 78.2% of the vote. Similarly, 58,265 voters went into the 35th District (see below); Joe Biden won 75.4% of the two-party vote here. Very small portions were added to the 17th (7, 403 residents, 61.1% Biden) and 27th (2,264 residents, 38.3% Biden). All told, the district gave up 658,609 residents, who voted on balance for Joe Biden with 55.2% of the vote.

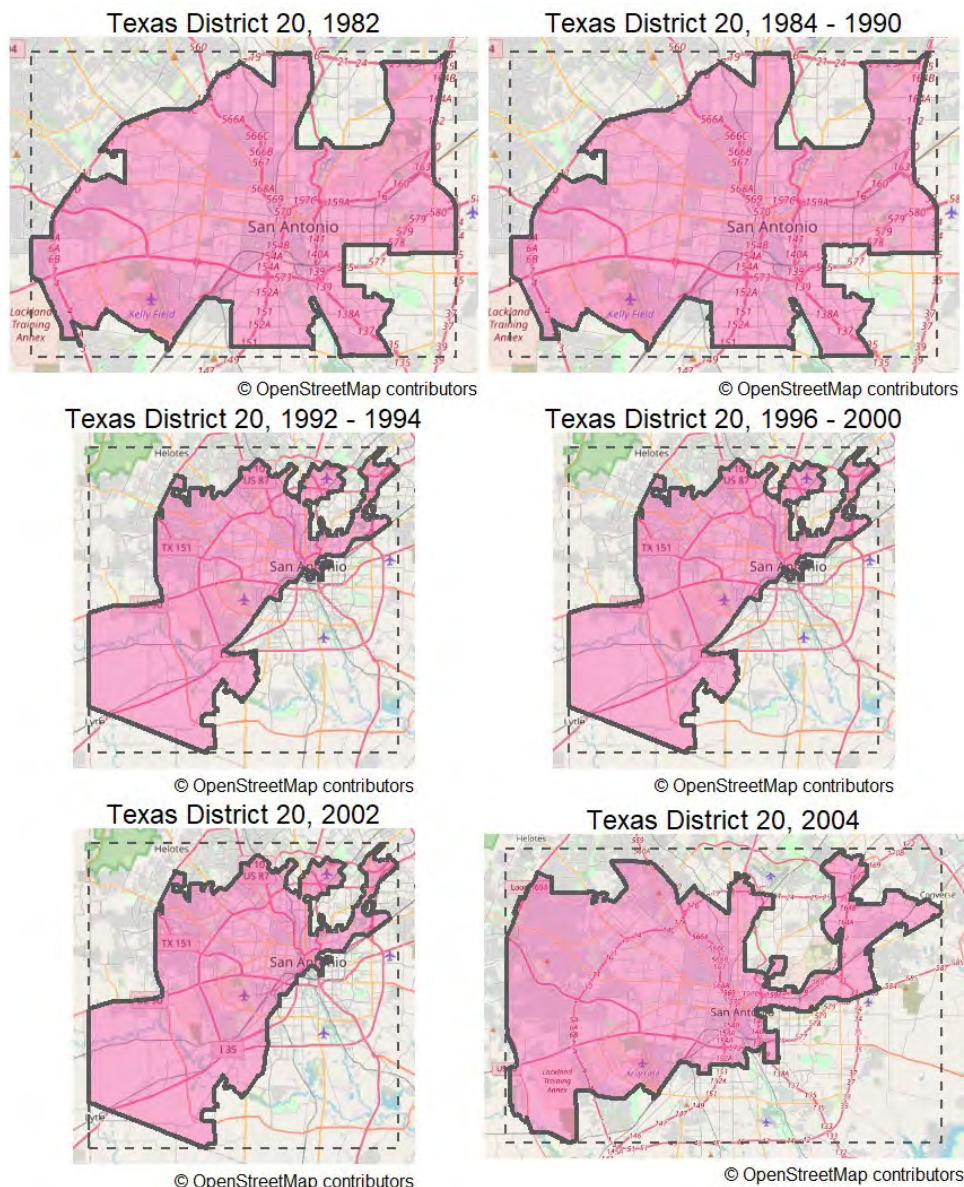
Having donated a fair number of Republican residents in Houston and placed many overwhelmingly Democratic residents into other Austin-area districts, the map makers proceeded to add 487,614 residents who gave Trump 56.4% of the vote. The district moves northward, into a thin strip passing through Round Rock, before extending into Republican precincts in the Hill Country near Lake Travis. It takes 117,248 residents from the 25th (45.6% Biden), 601 from the 21st (43.7% Biden), and 49,199 from the 31st (59.1% Biden). It then adds large numbers of residents from Republican areas, including 277,843 voters from the 17th (42.4% Biden; some of these are from Travis County) and 42,723 from the 8th (22.3% Biden). The net effect of all of this

is to substantially improve Republican performance in the district, giving Trump 59.6% of the vote.

2. District 20

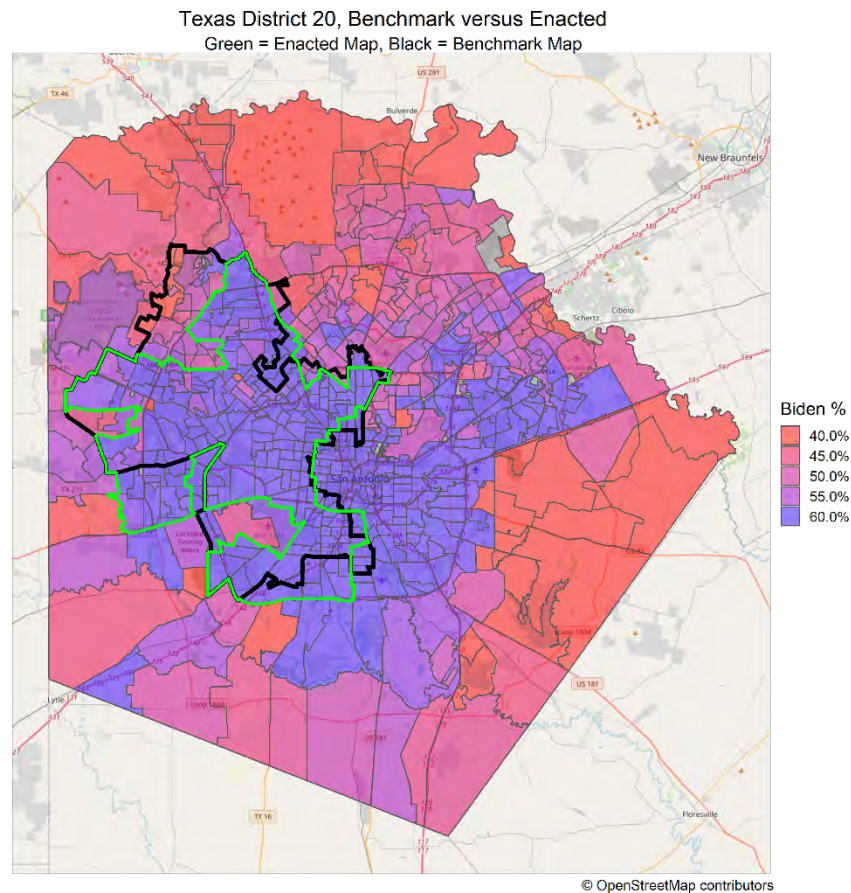
The 20th District is another venerable Texas district, having been located in Bexar County since its initial drawing in 1934. It initially elected Maury Maverick, a liberal who was defeated in the 1938 Democratic primary by Paul Kilday. While Kilday wasn't as liberal as Maverick, he was still fairly progressive by Texas standards. In 1961, Kilday was replaced by the legendary Henry B. Gonzalez; his son, Charlie Gonzalez, represented the district after him. Today, it is represented by Joaquin Castro.

Fig. 53: Texas' 20th District, 1982 – 2004



The district has changed little over the years, consistently covering the western portion of the city and parts of Bexar County. The changes in 2020 are relatively marginal, and mostly involve adjustments to the western boundary of the district, to align more closely with the political contours of Bexar County. Most of the changes come from it taking 104,457 residents from District 23, who gave Biden 66.8% of the vote. Another 20,470 come from the 21st district, who gave Biden 67.1% of the vote. The 35th adds 6,923 residents, who gave Biden 75.5% of the vote. In return, the district sheds 136,966 residents, the lion's share of whom (92,900) went into the 23rd. Unlike the precincts it takes in from the 23rd, the precincts that it gives back are politically marginal. Biden won 52.8% of the vote. 12,096 residents go to the 21st district (56.4% Biden) while small numbers go the 28th (11,216 residents; 68.8% Biden) and the 35th (20,754 residents; 76.7% Biden). The district becomes somewhat more Democratic, decreasing Trump's vote share from 35.3% to 33.2%. It also follows Bexar County's political contours more closely.

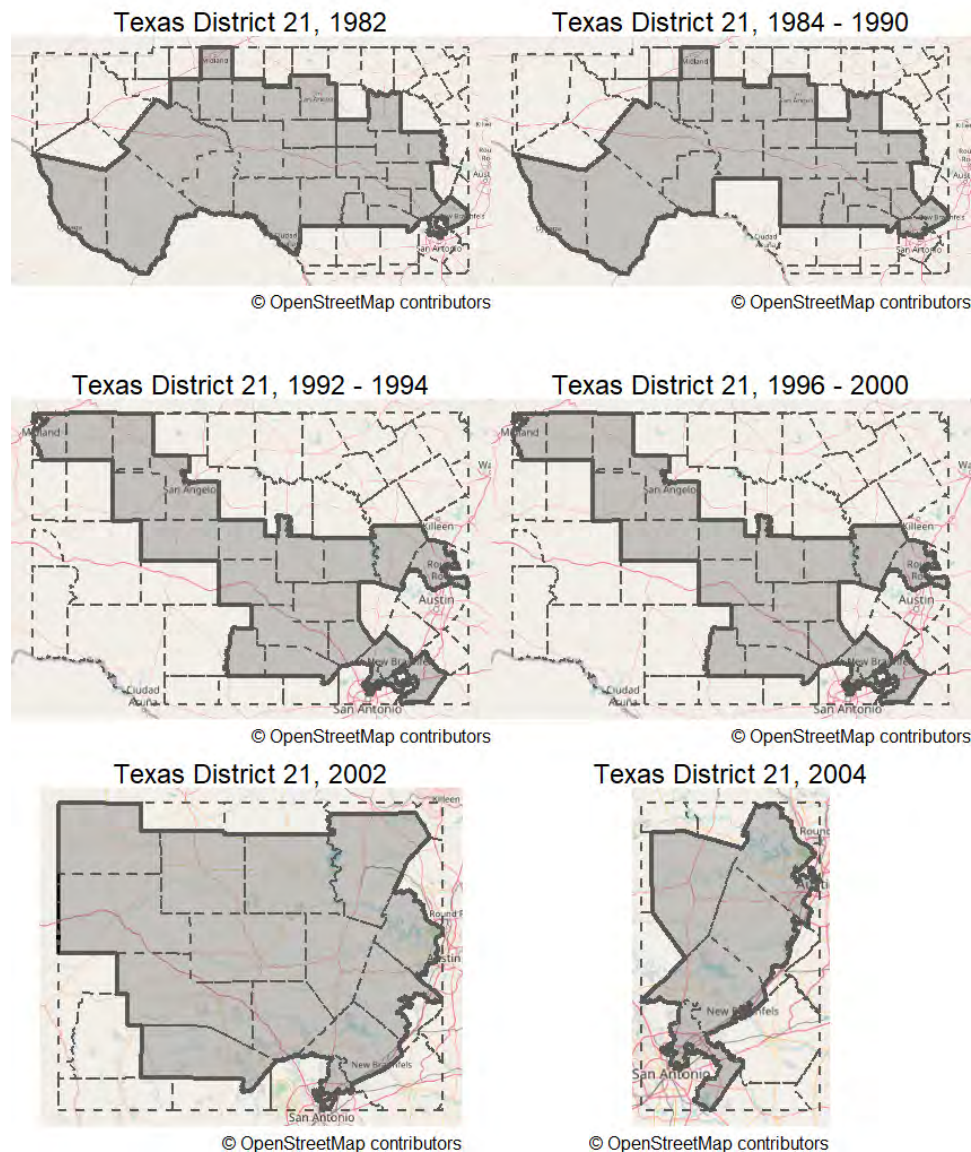
Fig. 54:



3. District 21

The 21st District is historically a Hill Country/West Texas district that, over time, has been pulled increasingly into the urban cores of Texas. For over 30 years it was represented by O.C. Fisher, before briefly electing Bob Krueger to Congress. Since 1978, it has elected Republicans to Congress. In 1992, Democrats in the legislature began pushing the district into northeastern Travis County, creating a heavily Republican district. Republicans reconfigured that district in 2004, adding more Democratic areas of the district (described above).

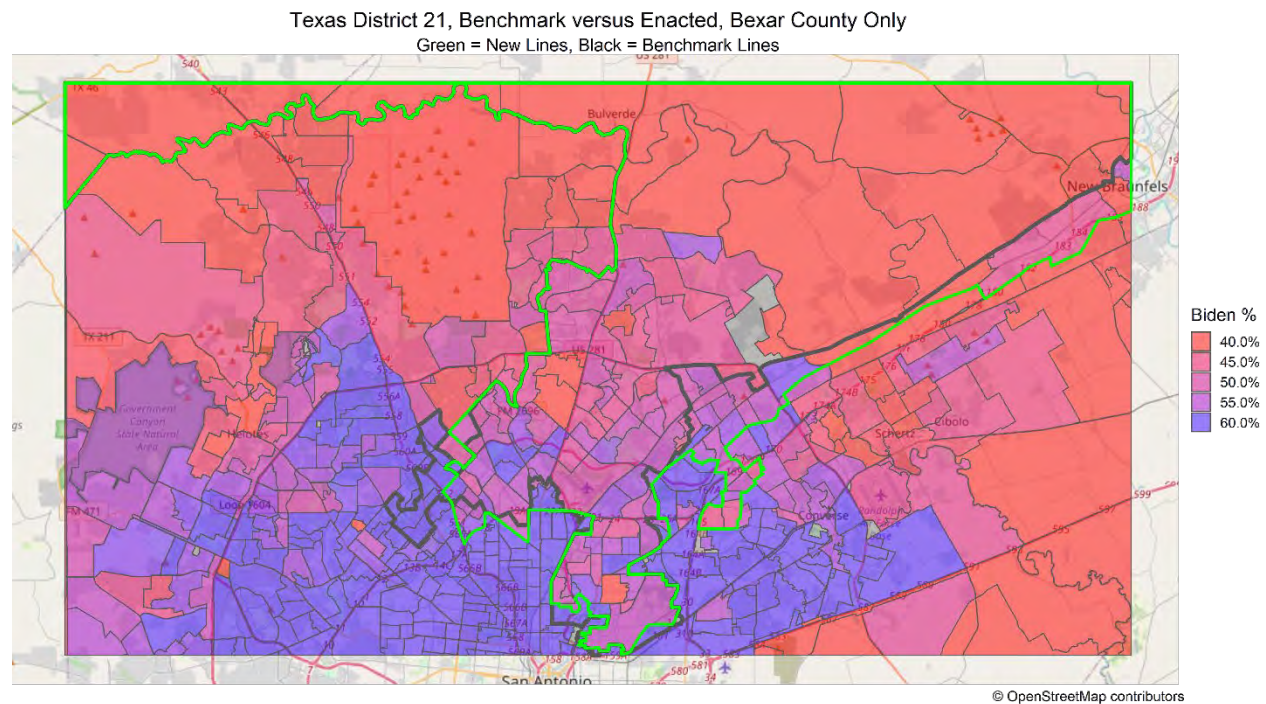
Fig. 55: Texas' 21st District, 1982 - 2004



As with other districts with suburban characters, the 21st District moved toward Democrats over the course of the '10s, endangering what had been previous Republican dominance. Romney carried the district by over 20 points in 2012, while Trump won by just seven in 2016. In 2020, that margin was further reduced to two points. When longtime representative Lamar Smith retired in 2018, his successor, Chip Roy, only won by just over two points over a relatively unheralded opponent. Roy fared better two years later, but still only won by around six points.

The latest redistricting significantly improves Republican performance in the 21st. Fairly minor changes were made in Bexar County. It gave up some deeply blue precincts to the 20th, described above. It also shed 2,134 residents to the 23rd (58.3% Biden) and 41,202 to the 35th (76.9% Biden)

Fig. 56:

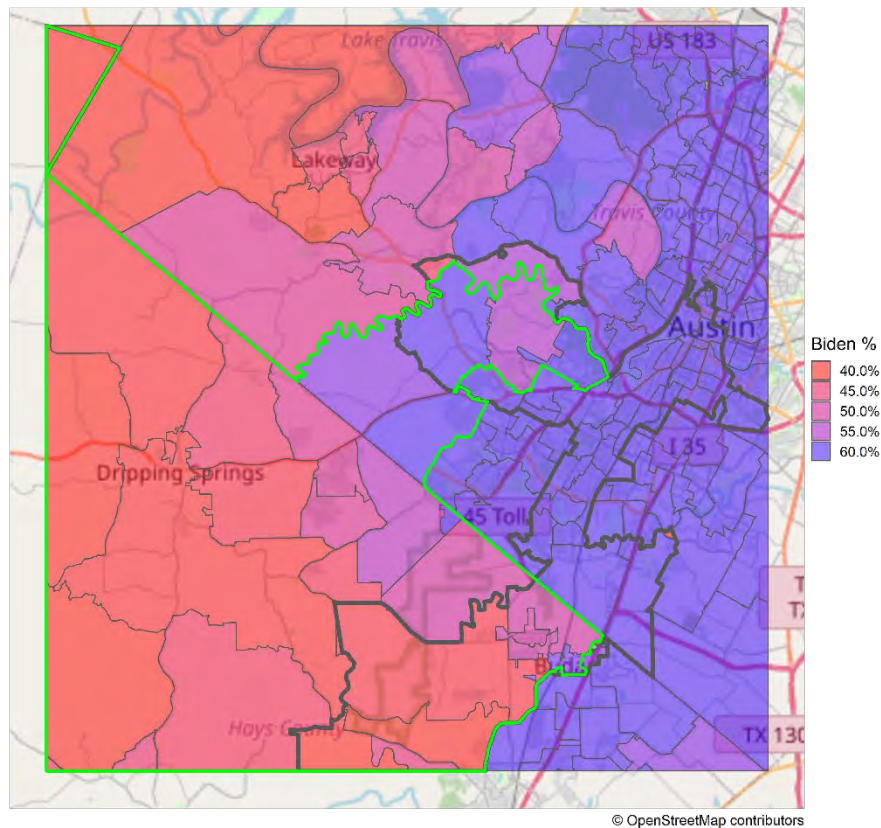


In exchange, the district added 4,466 residents from the 23rd District (55.2% Biden), 12,096 from the 20th (56.4% Biden), 9,476 from the 28th (49.5% Biden) and 74,619 residents from the 35th (51.7% Biden).

The biggest changes, however, once again came in the Austin area. The substantial protrusion into downtown Austin was reduced and the district lines shifted into more marginal territory. Some 600 residents went into the 10th District (43.7% Biden), while 41,202 went into the 35th (77% Biden). 181,131 residents went into the newly created 37th (see below); these were 79% Biden. At the same time, the 25th District added 63,798 residents to the 21st as part of its northward shift (see above); these voters were 54% Trump voters. Another 74,619 came in from the 35th, who were 51.7% Biden. Overall, the district was transformed from a 51% Trump District to a 60% Trump district.

Fig. 57

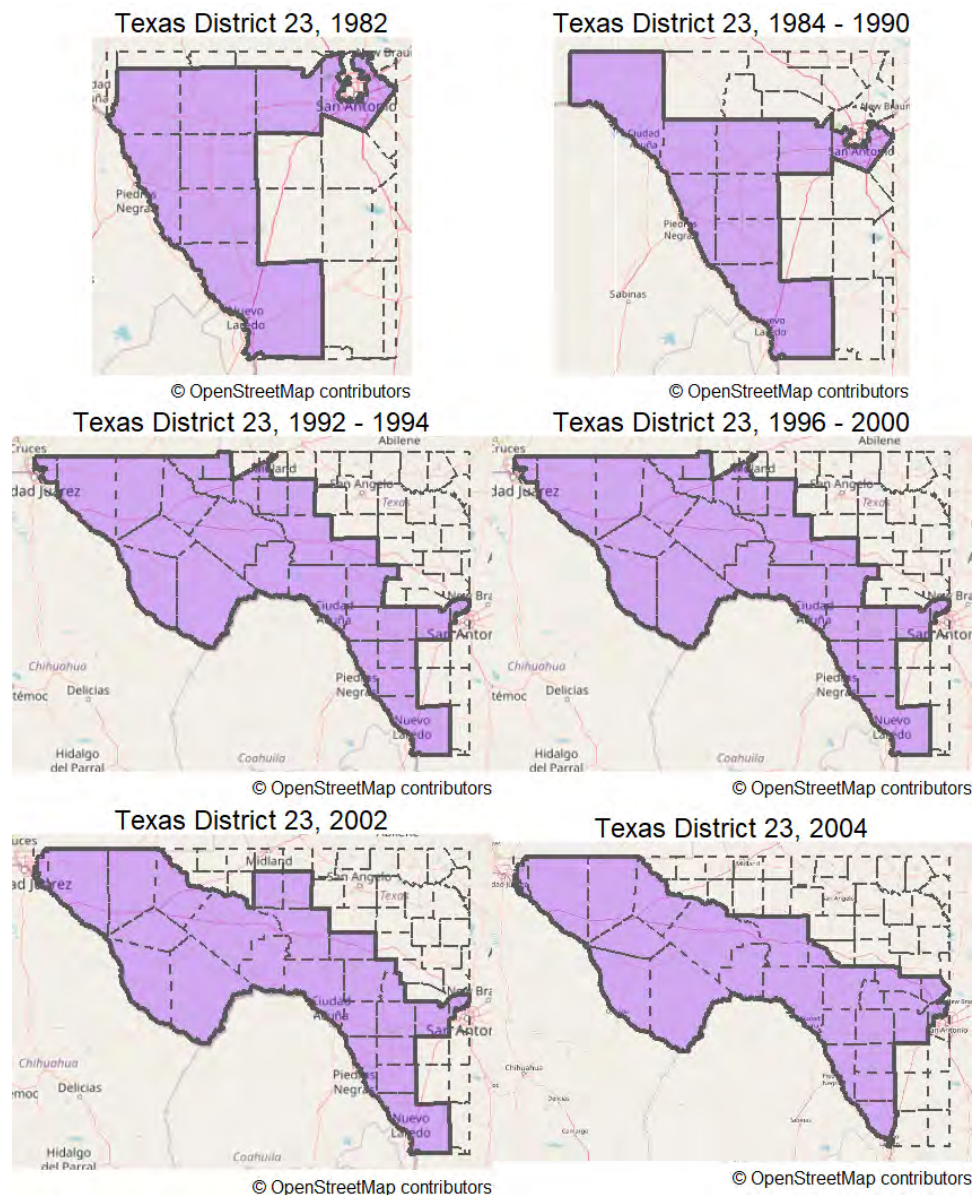
Texas District 21, Benchmark versus Enacted, Bexar County Only
Green = Enacted Map, Black = Benchmark Map



4. District 23

The 23rd was created in mid-1966 as a result of the one-person-one-vote decisions. It split Bexar County from its inception, but gradually shifted westward. In 1992, under the new lines, the district elected Henry Bonilla, a Republican. He lost under newly drawn lines in the 2006 Democratic landslide; after trading hands a few more times, Republicans have held the district since 2014. The district had been politically marginal for decades. Mitt Romney won the district by almost three points, while Donald Trump won by a little less than two in 2020.

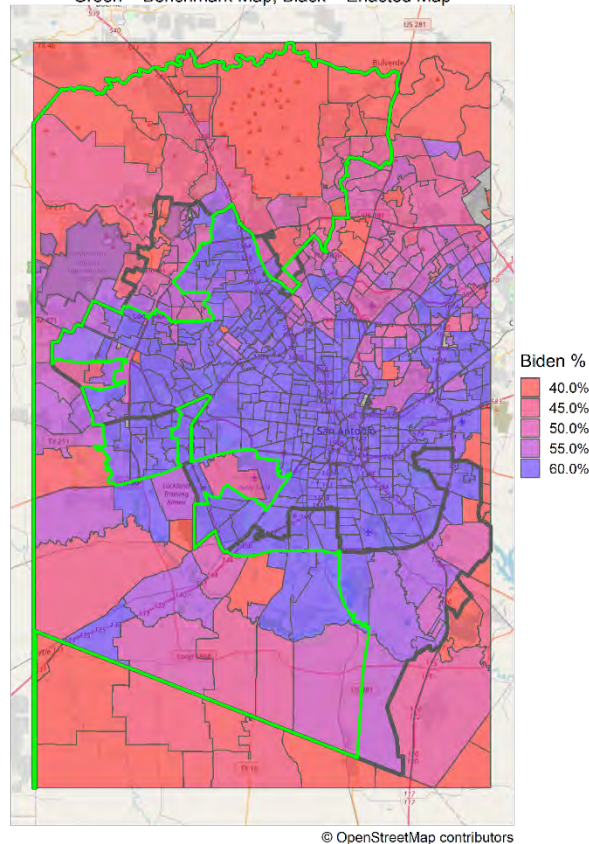
Fig. 58: Texas' 23rd District, 1982 - 2004



The 2020 redistricting leaves the west Texas lines unchanged, save for some precincts around El Paso. There, it adds 36,891 residents from the 16th who voted 60.9% for Joe Biden and sends 46,515 over. The latter group voted 73.1% for Biden. The most significant changes occurred in the Bexar County portion of the district. The district receives a marginal number of residents from districts 21 and 28. It also receives 92,900 from the 20th District. These residents gave Trump around 46% of the vote.

Fig. 59:

Texas District 23, Benchmark vs. Enacted, Bexar County Only
Green = Benchmark Map, Black = Enacted Map



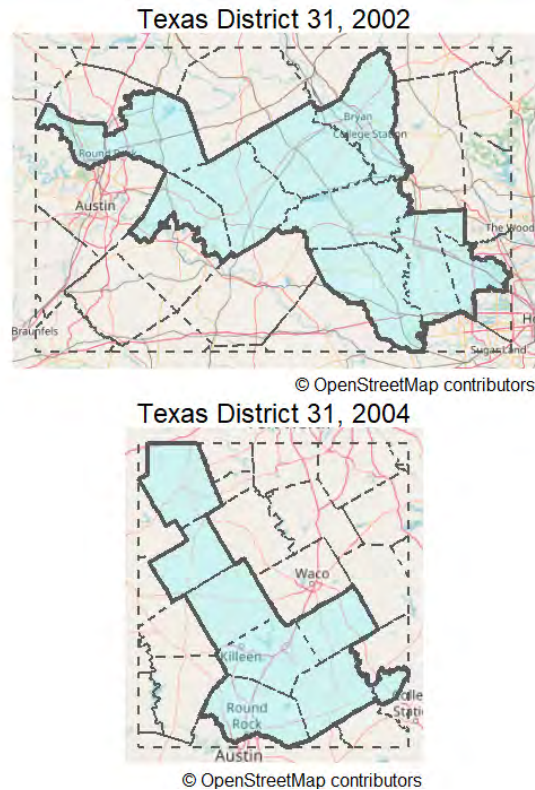
At the same time, it sends 104,457 residents back to the 20th; these residents gave 66.8% of their vote to Joe Biden. 4,446 residents go to the 21st District (55.2% Biden), while 45,597 went to the 28th District (63.5% Biden).

As you can see from Figure 59, the district lines once again smooth out the political contours of the county. Blue precincts go into the already-Democratic 20th, while red and purple precincts are placed in the 23rd. The net effect is to change a 50.9% Biden district into a 46.4% Biden district.

5. District 31

The 31st District is another relative newcomer. Created in the post-2000 round of redistricting, it initially stretched from across Austin into the Houston suburbs. When Republicans redrew the lines, they placed a modified version of the 10th along this stretch (see above) while pushing the 31st into fast-growing Williamson County and the Texas rurals.

Fig. 60: Texas' 31st District, 2002-2004



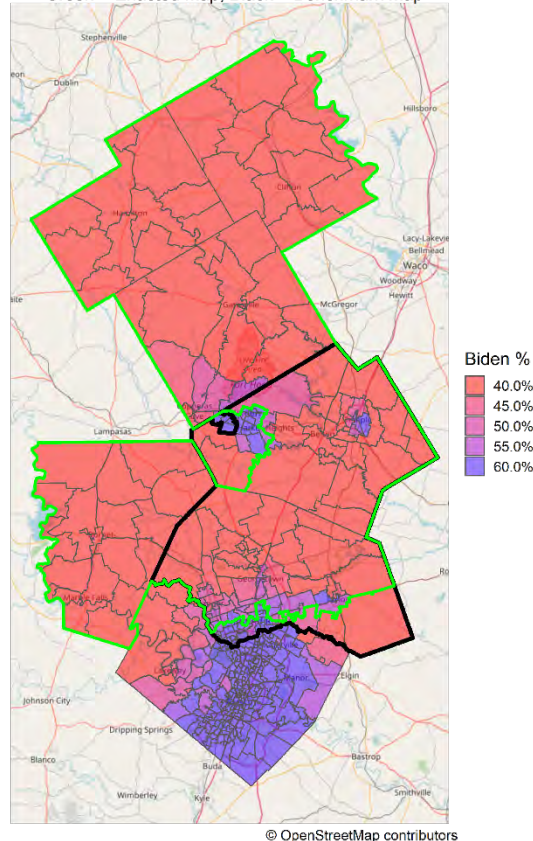
In 2012, population growth pulled the 31st out of the rural areas, and the district was mostly composed of Williamson and Bell Counties. The district was heavily Republican (Romney won by 22 points in 2012), but, in a variation on a familiar theme, the district swung against the GOP. By 2020, Donald Trump won just 51.4% in the district. Its longtime incumbent, John Carter, likewise saw his margins decrease. He fell below 60% of the vote for the first time in 2016, and in 2018 won by just three points against a well-funded opponent.

As was the case in Dallas and Houston, Republicans responded by pulling their districts out of the downtown area and ceding a district to the Democrats (see below). The 31st gives up Democratic areas around Pflugerville and Round Rock, and in exchange, extends itself back out into the rurals. It adds 158,680 residents from the 25th (which, recall from above, was pushed up

into Tarrant County), who voted overwhelmingly for Donald Trump – Biden received 25.4% of the vote here.

Fig. 61:

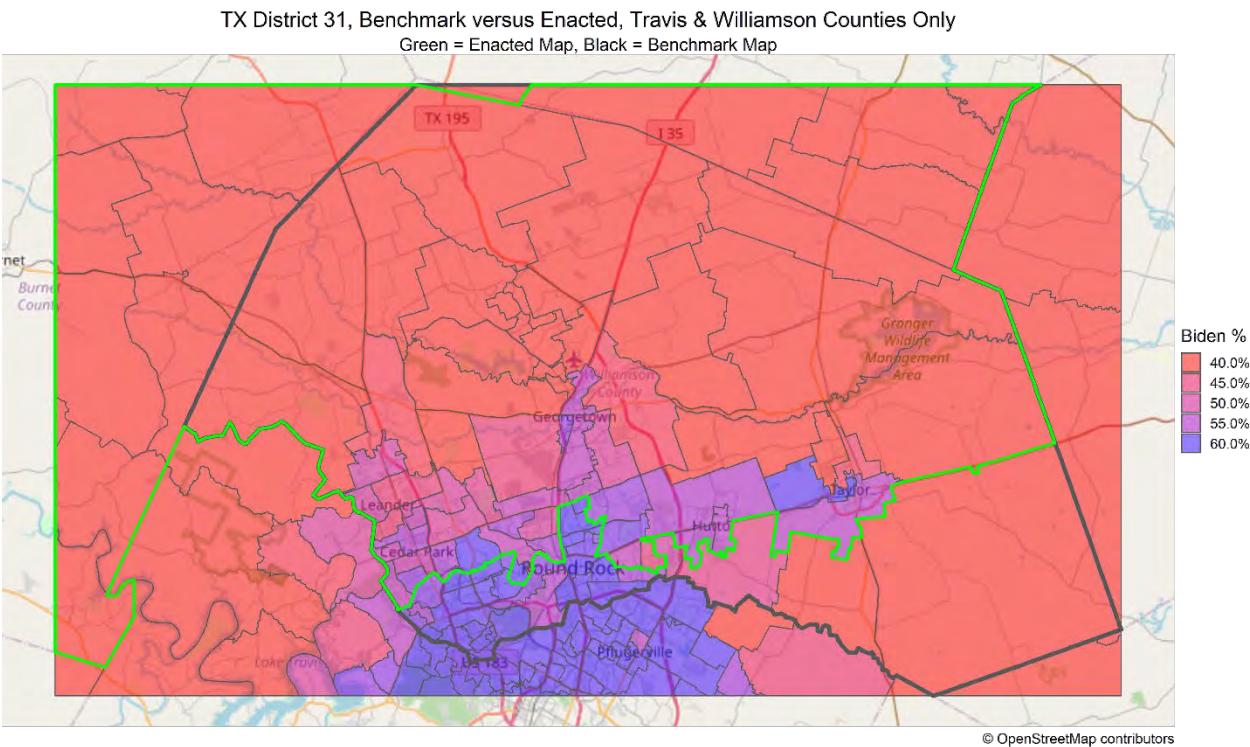
Texas District 31, Benchmark versus Enacted
Green = Enacted Map, Black = Benchmark Map



On the other hand, as Figure 62 shows, it cedes 325,365 residents to other districts. 49,199 go into the 10th District (they gave Biden 59.1% of the vote). 128,783 residents, mostly located in and around Killeen, go into the rural, overwhelmingly red 11th district (59.8% Biden). 86,834 residents are sent into the 17th (58.9% Biden), while 60,649 go the new 37th district. These latter residents are particularly Democratic; Biden won 69.8% of the vote among them.

Overall, this district moves back significantly toward the Republicans. After the switching was finished, Biden's vote share was pushed just below 40% of the vote.

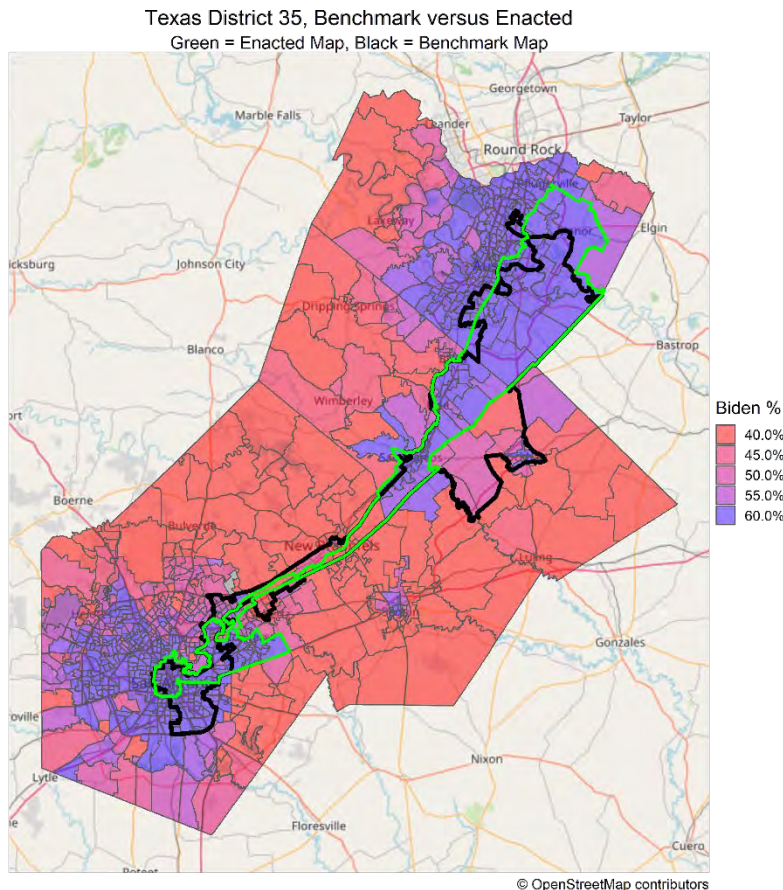
Fig. 62:



6. District 35

The heavily Democratic 35th District was created in 2011 and is represented by longstanding Democratic representative Lloyd Doggett.

Fig. 63:

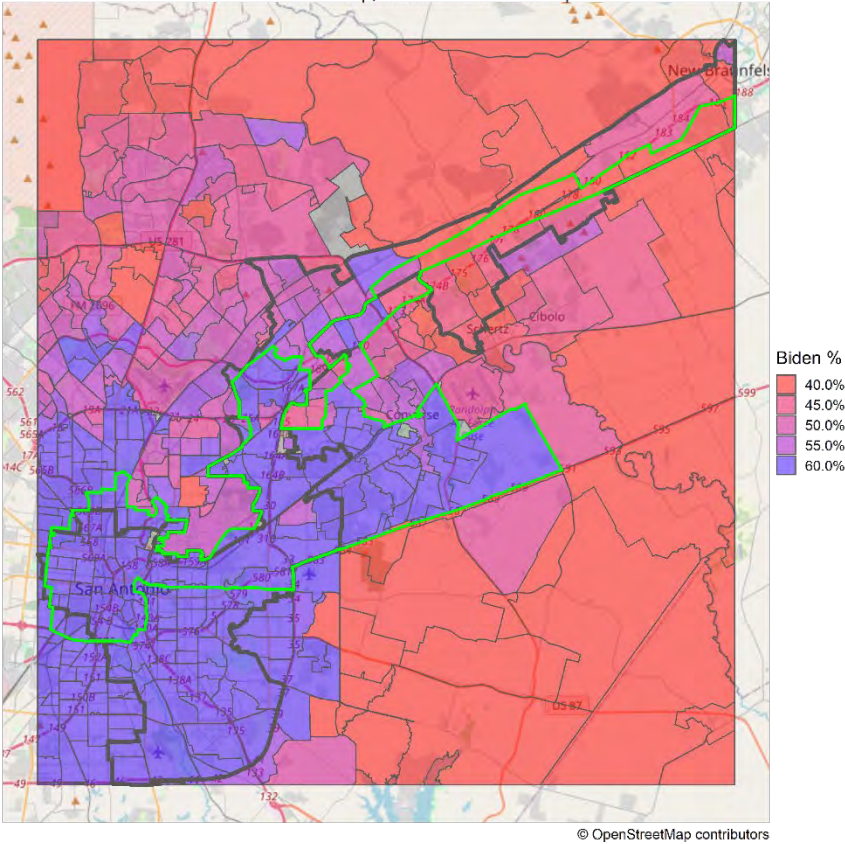


The district adds a number of voters, all of whom are heavily Democratic. As noted above, it takes 58,265 residents from the 10th, who voted 75.4% for Biden. Another 41,202 come in from the 21st; Biden won 76.9% of their votes. From the 25th district it takes 35,895 residents (91.7% Biden). 105,436 residents come in from the 28th. These voters gave Biden almost two-thirds of the vote. Finally, 20,754 residents come in from the Democratic 20th District (discussed above).

On the other hand, 326,961 residents leave the district for other destinations. A small number go into the 20th district, while 74,619 residents are placed into the 21st; they are 51.7% Biden voters. 19,173 residents are placed in the 27th District (54.6% Biden), while 30,483 go into the 28th (63.5% Biden). In Travis County, 82,889 voters are placed in the newly created 37th. Democrat Greg Casar won the March 2022 primary and is widely expected to win the general election in November.

Fig. 64:

TX District 35, Bexar County Only, Benchmark versus Enacted
Green = Enacted Map, Black = Benchmark Map

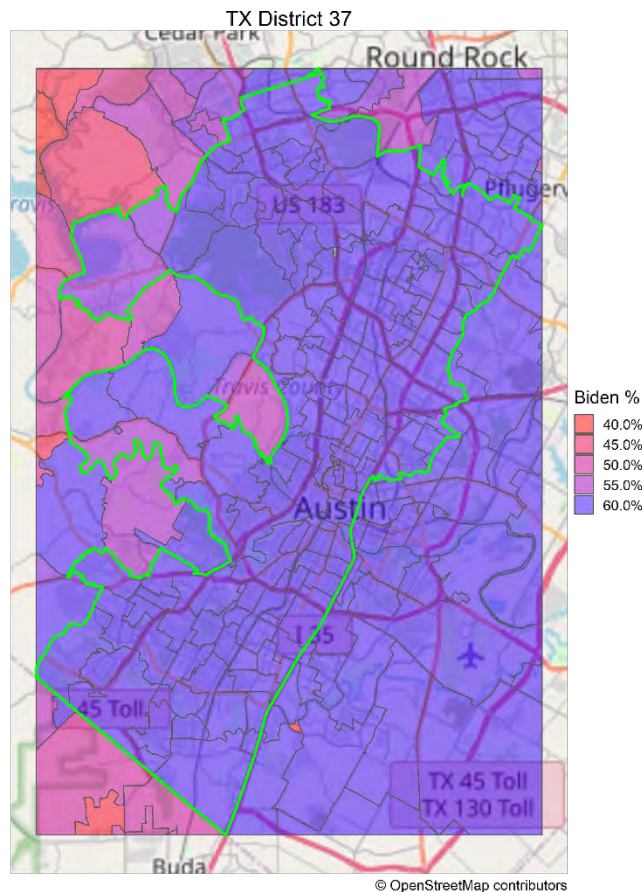


7. District 37

The theme in Texas's metropolitan areas should be plain by now. The Benchmark Map maximized Republican advantage in the Lone Star State by cracking Democratic voters. By 2021, Republicans were spread too thin, and multiple members of their delegations either lost or had uncomfortably close calls as the Texas suburbs moved against Republicans. The 2021 maps are different. Democrats are ceded to core districts in the urban areas, pushing Republican districts out into the Republican countryside.

So too in Travis County. The newly created 37th is pulled together from heavily Democratic areas of other districts. About a half of the residents are pulled in equal parts from the 10th and the 21st districts; these residents gave Biden slightly in excess of 78% of the vote in each instance. A fifth are taken from the 25th district; they voted 74.8% for Biden. The remaining 30% are more-or-less evenly spread across the 17th, 31st and 35th districts; the latter group gave 81.3% of the vote to Biden, while the former two groups gave 75% to Biden.

Fig. 65:



8. Putting it all together.

As with Houston and Dallas-Ft. Worth, redistricting in Travis County sorted Democratic precincts neatly from Republican ones, at least to the maximum extent possible. By the end of the decade, precincts that were safely Republican had swung hard toward the Democrats, blunting Republican performance in these districts. The new maps shore up all the Republican districts in the area by creating a new, heavily Democratic district in central Travis County.

Fig. 66:

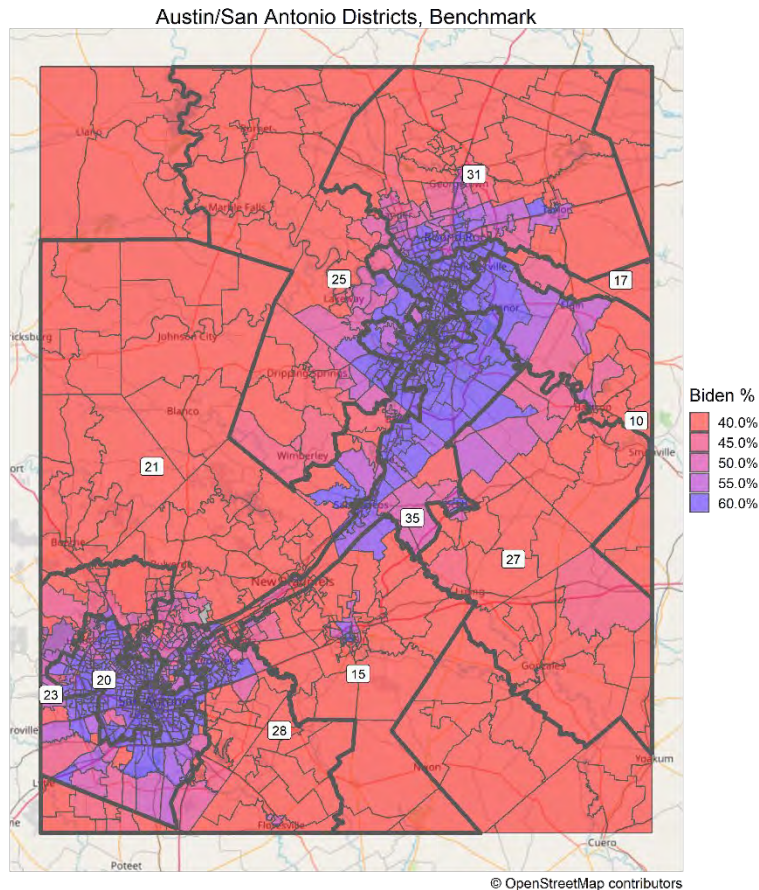
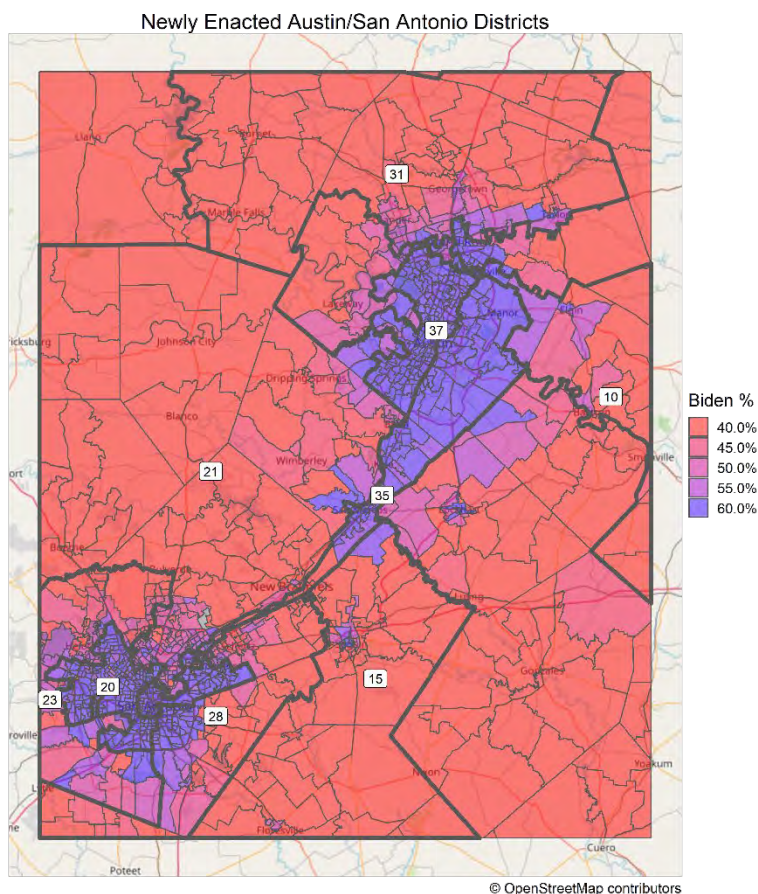


Fig. 67:



This is apparent once again when we examine the Biden-won VTDs. The vulnerable Republican districts described above: 10, 21, 23, and 31 all see their number of Biden-won precincts decline. The Democratic districts – 20, 27, 28, and 35 – are largely stable. And then fully 17% of the Biden-won precincts in the area are placed into the newly created 37th.

Table 7: Biden-won VTDs, by Austin/San Antonio-area Districts

District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
10	64	29	7.05%	3.11%	-3.93%
11	—	18	—	1.93%	—
17	24	20	2.64%	2.15%	-0.49%
20	234	229	25.77%	24.60%	-1.17%
21	133	104	14.65%	11.17%	-3.48%
23	66	55	7.27%	5.91%	-1.36%
25	55	—	6.06%	—	—
27	2	3	0.22%	0.32%	0.10%
28	49	67	5.40%	7.20%	1.80%
31	73	31	8.04%	3.33%	-4.71%
35	208	214	22.91%	22.99%	0.08%
37	—	161	—	17.29%	—

Not only that, but the Biden precincts that remain in the Republican-held Austin/San Antonio-area districts are more Republican than in the Benchmark Map. The map not only ensures that Democratic precincts in Republican districts are minimized, but also that the precincts that remain are as red as possible.

Table 8: Biden Share in Biden-Won VTDs, Austin/San Antonio-area Districts

District	Biden Percent, Benchmark	Biden Percent, Enacted	Change
10	73.57%	58.13%	-15.44%
11	—	64.04%	—
17	71.92%	63.81%	-8.11%
20	65.50%	66.82%	1.31%
21	68.05%	55.42%	-12.63%
23	62.15%	56.30%	-5.85%
25	71.99%	—	—
27	55.59%	55.55%	-0.04%
28	62.91%	68.50%	5.59%
31	59.62%	55.28%	-4.34%
35	73.03%	74.65%	1.62%
37	—	76.88%	—

Finally, as with other areas of the state, the Trump-won precincts become almost perfectly sorted as well. Post-redistricting, only 19 Trump-won precincts are contained in the 20th, 35th or 37th districts. The share of Trump-won precincts contained in the Republican-held districts increases from 78.08% to 81.57%, with a large portion of the balance placed in the now-marginal 28th (see below).

Table 9: Trump-won VTDs, by Austin/San Antonio-area Districts

District	# Trump Precincts, Old Lines	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
10	10	25	3.32%	8.22%	4.90%
11	—	2	—	0.66%	—
17	4	5	1.33%	1.64%	0.32%
20	15	3	4.98%	0.99%	−4.00%
21	73	87	24.25%	28.62%	4.37%
23	49	58	16.28%	19.08%	2.80%
25	26	—	8.64%	—	—
27	7	9	2.33%	2.96%	0.63%
28	41	40	13.62%	13.16%	−0.46%
31	66	62	21.93%	20.39%	−1.53%
35	10	12	3.32%	3.95%	0.63%
37	—	1	—	0.33%	—

The map templates we have examined before reveal the same effect throughout the state. Biden-won precincts are concentrated in the 35th and 37th district in the Austin area, and in the 20th in San Antonio. The remaining Biden precincts are spread among the other districts, while the Trump precincts are placed in the Republican districts. Likewise, when we examine the dotplots of White citizens, we see that they are not packed into districts by race; rather White voters are allocated according to partisanship.

Fig. 68:

Trump Precincts, By District, Austin/San Antonio Area

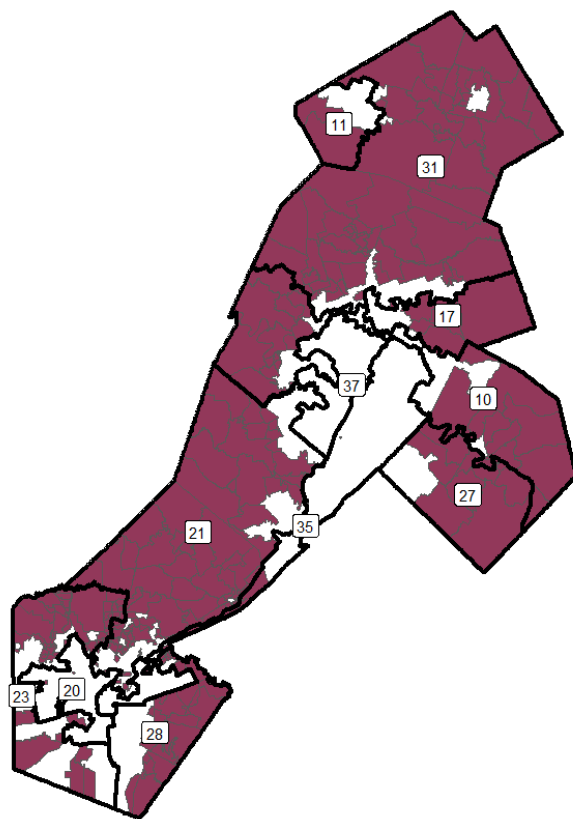


Fig. 69:

White Population of Congressional Districts, Austin/San Antonio

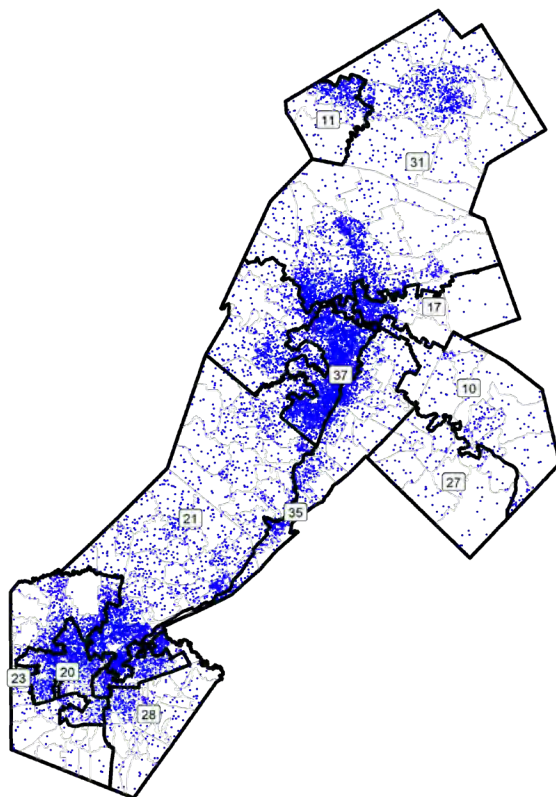
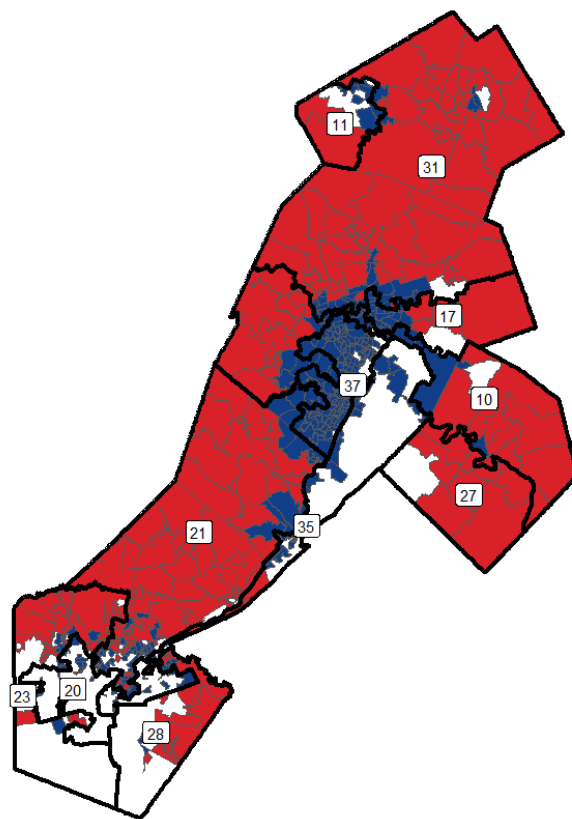


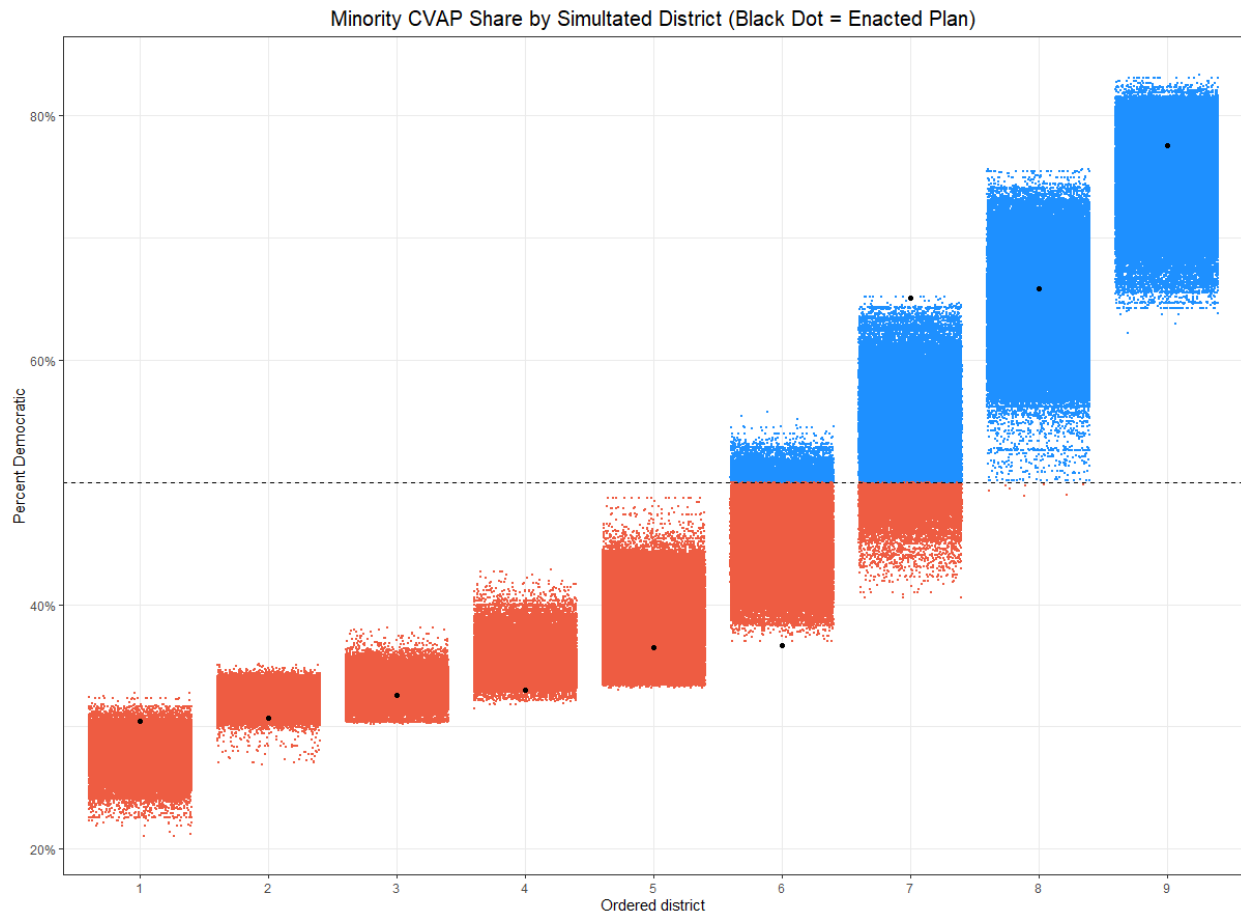
Fig. 70:

NH White Plurality Precincts, By District, DFW Area



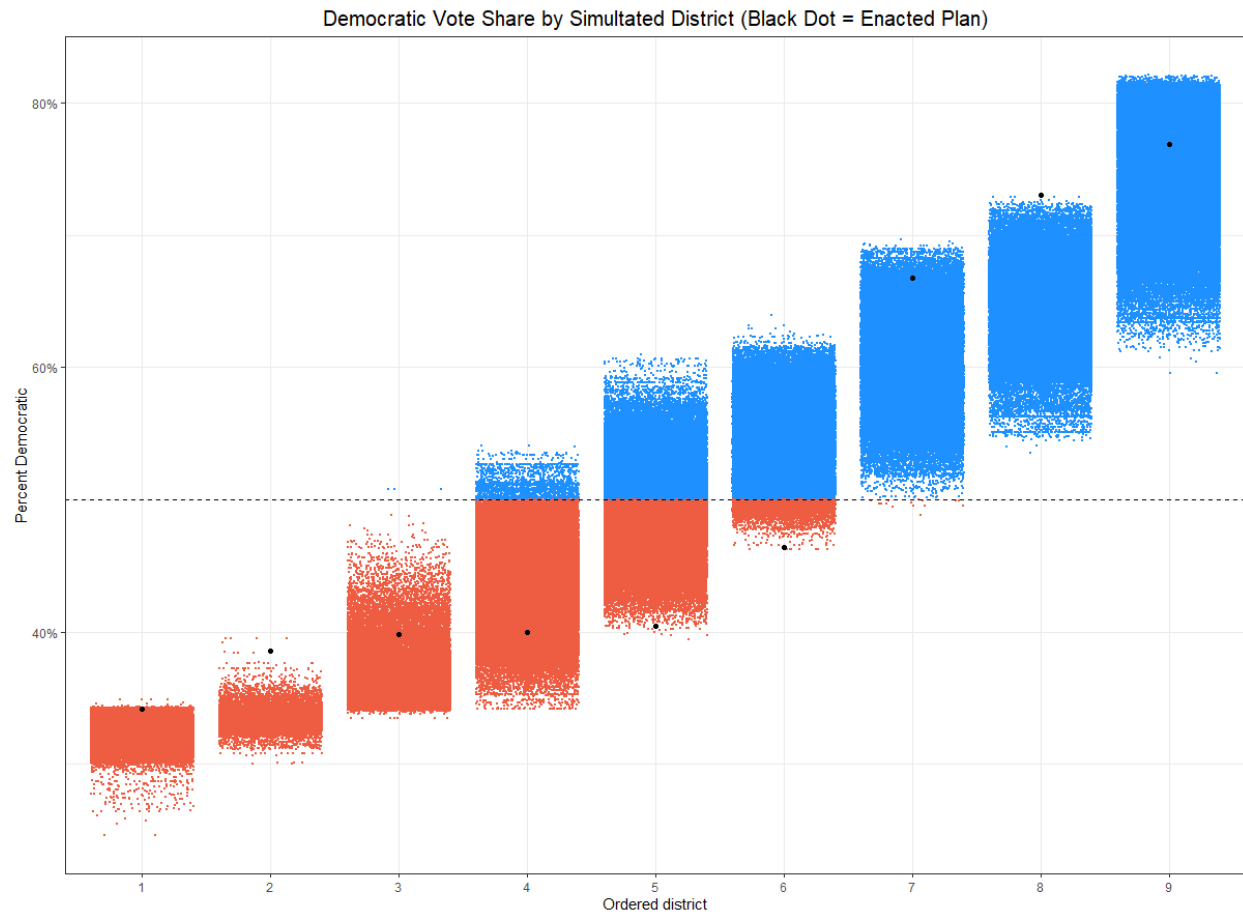
Finally, as with the other regions we have examined, simulations based on the precincts in the 10th, 17th, 20th, 21st, 23rd, 25th, 31st, 35th and 37th districts give insight into the consistency of the plan with partisan effect. Although the Enacted Map deviates in some ways from the ensemble, which we should expect in a place where race correlates with politics and map drawers care about politics, the Enacted Map contains the same number of districts where minority groups are a majority of the citizen voting age population as we find in the ensemble.

Fig. 71:



When we look at the political composition of the Enacted Plan, compared to the districts in the politically and racially neutral ensemble, however, we see that multiple districts are on the fringes of the distribution created by a neutral ensemble. The most heavily two Republican districts are made more Democratic than the politically neutral simulation would predict, as are the three most heavily Democratic districts. The politically neutral simulation would predict the two middling districts to be Biden-won districts, they are Trump-won in the Enacted Map. In other words, the Enacted Map favors Republicans more than the politically neutral ensemble would.

Fig. 72:



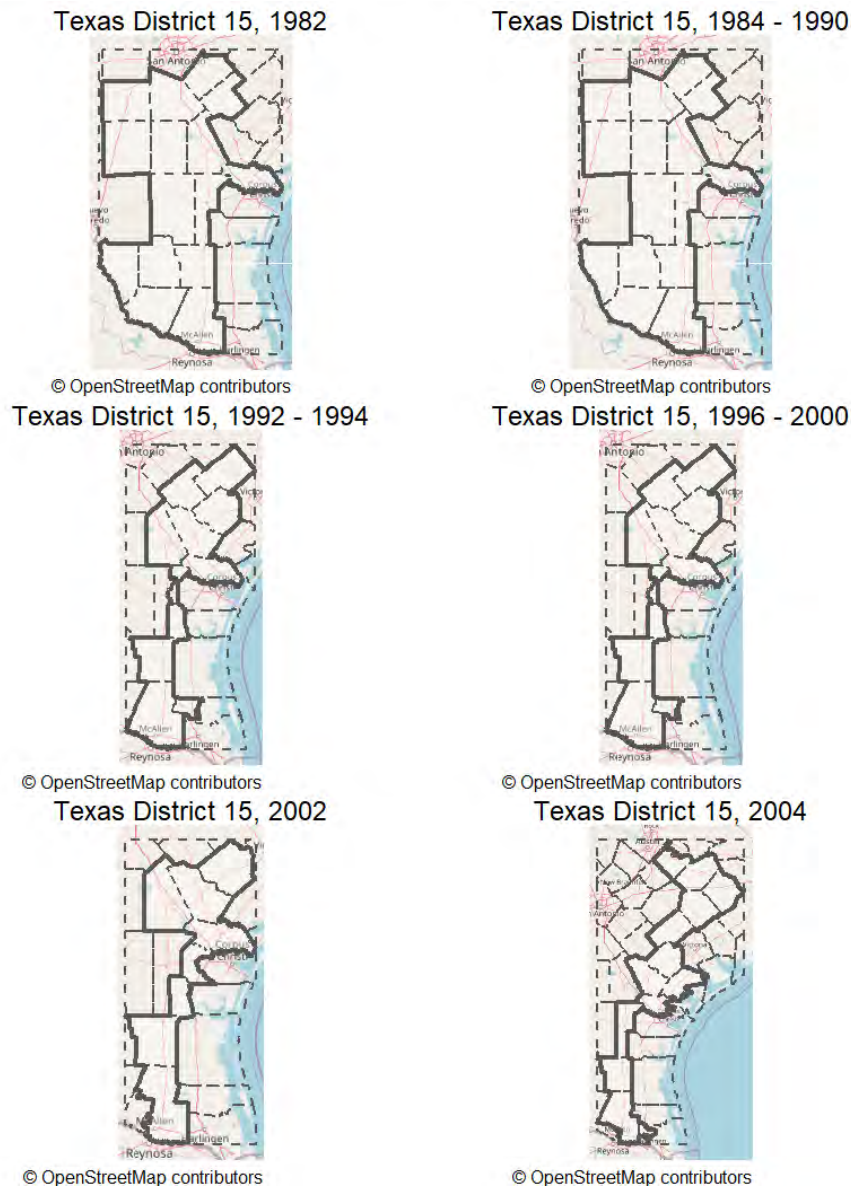
E. South Texas

Finally, we turn to South Texas. South Texas is different in nature. Although the South Texas districts reach up into Bexar County, the population of these districts is concentrated in border towns. Heavily Hispanic, these districts have traditionally been Democratic bastions. But, to the shock of many, the area moved toward the GOP in 2020. Donald Trump, for example, became the first Republican in 100 years to carry Zapata County, and nearly flipped Starr County. <https://www.ksby.com/news/national/traditionally-democratic-county-in-texas-votes-republican-for-1st-time-in-100-years>. Even George W. Bush, who famously courted the Hispanic vote and performed well among those voters, lost Starr by 50 points in 2004. In 2020, Rep. Filemon Vela nearly lost his re-election effort to a low-profile challenger. We'll know more about the size and strength of these trends as time goes by, but these trends seem to be at least somewhat validated by the election of Rep. Mayra Flores in a special election to the Hidalgo County-based 34th District. The districts as drawn are consistent with Republicans trying to leverage that emerging strength.

1. District 15

The 15th District in Texas is of longstanding vintage and has been located in South Texas since its founding. Having produced legendary Texas politicians like John Garner, Lloyd Bentsen and Kika de la Garza, as the population of South Texas has grown, the district has increasingly taken on less and less territory.

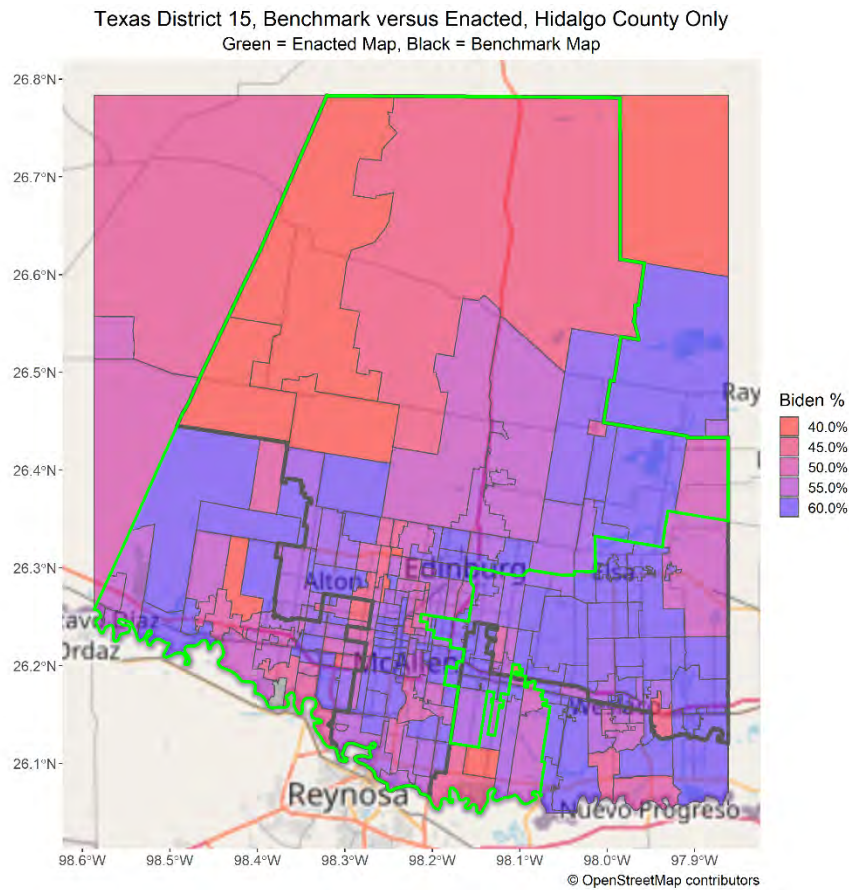
Fig. 72: Texas' 15th District, 1982 - 2004



As mentioned above, this district became increasingly Republican over the course of the 2010s. In 2020, Donald Trump lost the district by just two points, while Rep. Vincente Gonzalez won re-election by just three points in a race that flew under everyone's radar until election night.

The redrawn district is made much more hospitable for Republicans. It takes in 186,725 residents from the 28th, and 53,071 residents from the 34th. These residents voted 44.3% and 46.9% for Biden, respectively, and voted 55% for Trump overall. At the same time, the district shed 88,626 residents into the 28th, and 191,885 to the 34th. These residents going into the 28th were Republican – voting 41.2% for Biden, but the residents going into the 34th were 61.9% Biden voters. On balance, Republican performance in the district improves to 51.4% Trump.

Fig. 73



2. District 27

The 27th District has been a Corpus Christi based district since it was created in 1982, and for most of its existence it was represented by one man: Democratic Rep. Solomon Ortiz. In perhaps one of the most shocking outcomes of the 2010 elections, Ortiz lost to Blake Farenthold who was not expected to win. Although the district had voted for George W. Bush in 2004 by 10 points, the legislature opted to shift the district northward and create a new south Texas district, the 34th (see below). Farenthold resigned following a scandal, and was replaced by the current representative, Michael Cloud, a Republican.

Fig. 74: Texas' 27th District, 1982 - 2004

Texas District 27, 1982



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Texas District 27, 1984 - 1990



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Texas District 27, 1992 - 1994



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Texas District 27, 1996 - 2000



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Texas District 27, 2002



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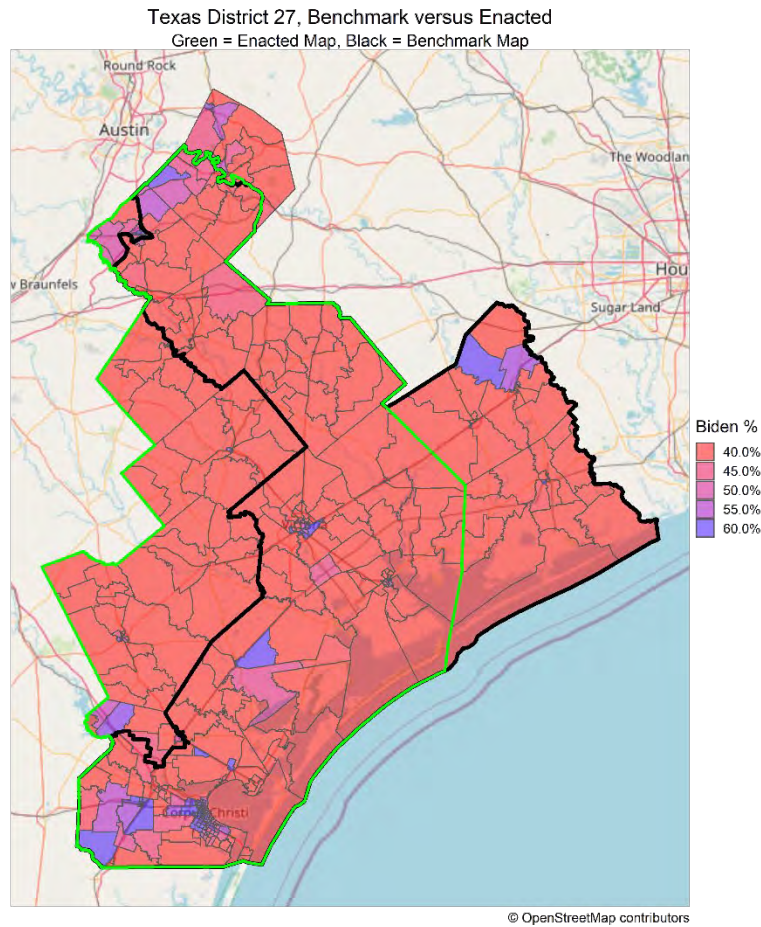
Texas District 27, 2004



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The district has been strongly Republican, with Donald Trump winning 62% of the two-party vote there in 2020. It lost population during the 2010s, and as detailed above, donated 77,825 residents to the 22nd, and thus needed additional population. It acquired 83,678 residents from the 34th (30.8% Biden), 19,173 from the 35th (54.6% Biden), and 2,264 from the 10th (see above). Overall, the district is marginally more Democratic; Trump won with 61.3% of the two-party vote.

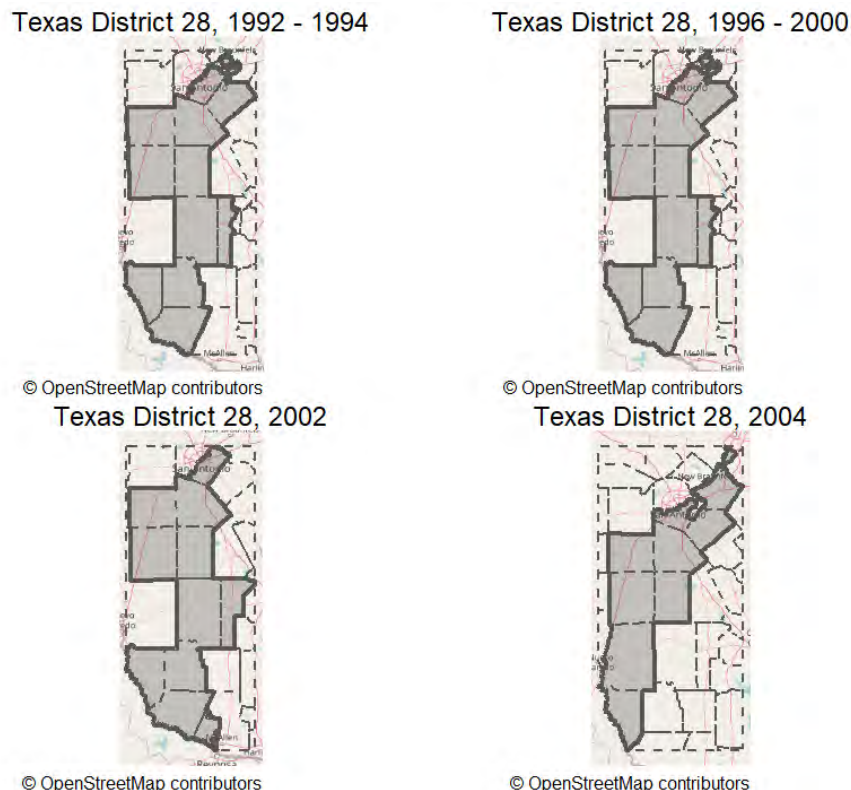
Fig. 75:



3. District 28

The 1992 redistricting saw the birth of the 28th district, which was initially represented by Frank Tejada, a relatively conservative Democrat. After his untimely passing in 1997, Ciro Rodriguez won the seat. After the 2004 mid-decade redistricting shifted the district lines significantly, Rodriguez lost the primary to Henry Cuellar who, like Tejada, is a relatively conservative Democrat.

Fig. 76: Texas' 28th District, 1992 - 2004



Like much of South Texas, this district moved toward Republicans in 2020. Biden carried it with just 52.2% of the vote, just about at his national margin. Changes to the district's lines enhance Democratic performance here somewhat; Biden won 53.5% under the new lines.

The district adds 288,796 residents. Most of these changes are described above; 30% of its new residents are found in Republican precincts pulled in from the 15th, while another 50% come from the 20th and 23rd combined; they gave Biden around 2/3 of the vote. The final half of these residents comes from the 35th District. They likewise gave Biden around 2/3 of the vote. In exchange, 300,000 residents were moved into a new district. As described above, portions of them are placed in the 15th, 21st and 23rd. About 105,436 are placed in the 34th; these portions voted 64.1% for Biden.

Fig 77 :

Texas District 28, Benchmark versus Enacted
 Green = Enacted Map, Black = Benchmark Map

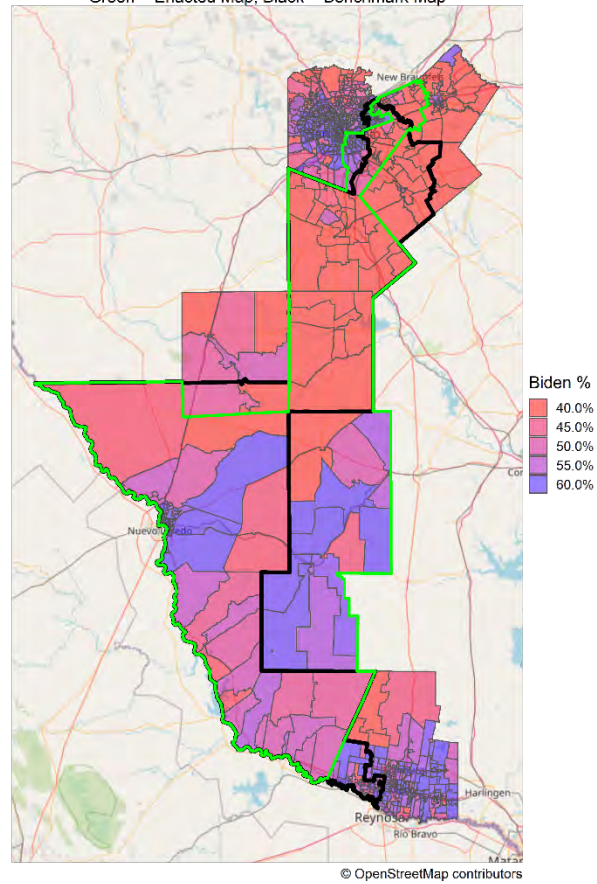
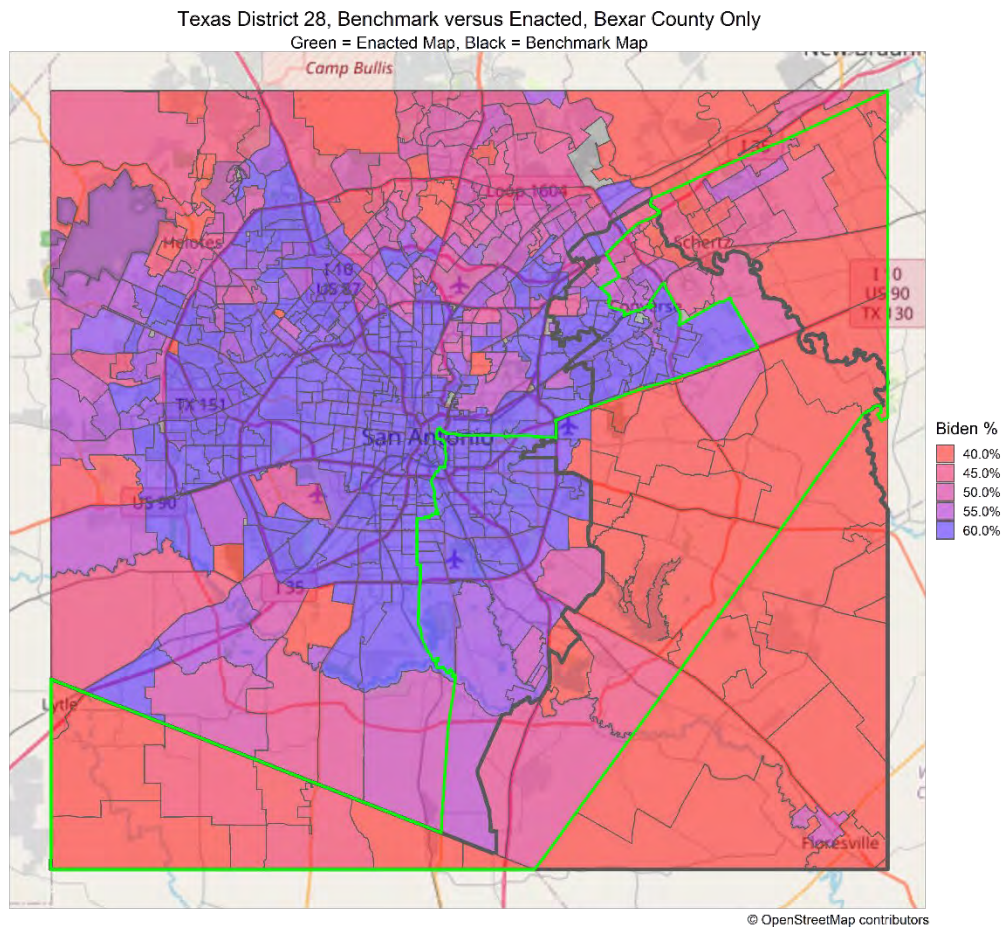


Fig. 78:



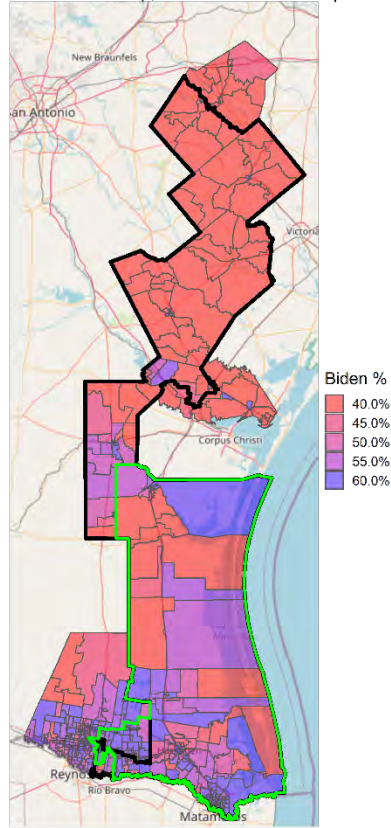
4. District 34

The 34th District was newly created in 2011 as a safely Democratic district. Like other South Texas districts, it moved toward Republicans over the decade. Donald Trump won 48% of the vote here in 2020, and a Republican actually won the seat in a 2022 special election.

The changes to the district are all detailed above, but notably Republican presidential performance in the newly drawn district drops by six points to 42% percent, forcing the newly elected Republican Congresswoman Flores to run for reelection in a much more Democratic district in 2022.

Fig. 79:

Texas District 34, Benchmark versus Enacted
 Green = Enacted Map, Black = Benchmark Map



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5. Putting it all together

Because White-majority precincts are fairly rare in South Texas, the maps and tables used in previous sections are not as helpful. In the tables, we see a less-dramatic version of what we have seen in earlier analyses. The features of the districts are mostly unchanged, although the 15th has fewer Biden precincts and, more significantly, has Biden precincts with lower vote shares for the president. Likewise, the 34th sees an increase in the number of Biden precincts, as well as an increase in the president's vote share in these precincts. The 15th and 17th see an increase in the number of Trump-won precincts, while the 34th sees a decline.

Table 10: Biden-won VTDs, by South Texas Districts

District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
10	3	3	0.27%	0.26%	-0.00%
15	182	174	16.25%	15.33%	-0.92%
17	0	—	0.00%	—	—
20	234	229	20.89%	20.18%	-0.72%
21	74	85	6.61%	7.49%	0.88%
23	66	55	5.89%	4.85%	-1.05%
27	102	121	9.11%	10.66%	1.55%
28	160	155	14.29%	13.66%	-0.63%
34	157	184	14.02%	16.21%	2.19%
35	142	129	12.68%	11.37%	-1.31%

Table 11: Biden Share in Biden-Won VTDs, South Texas Districts

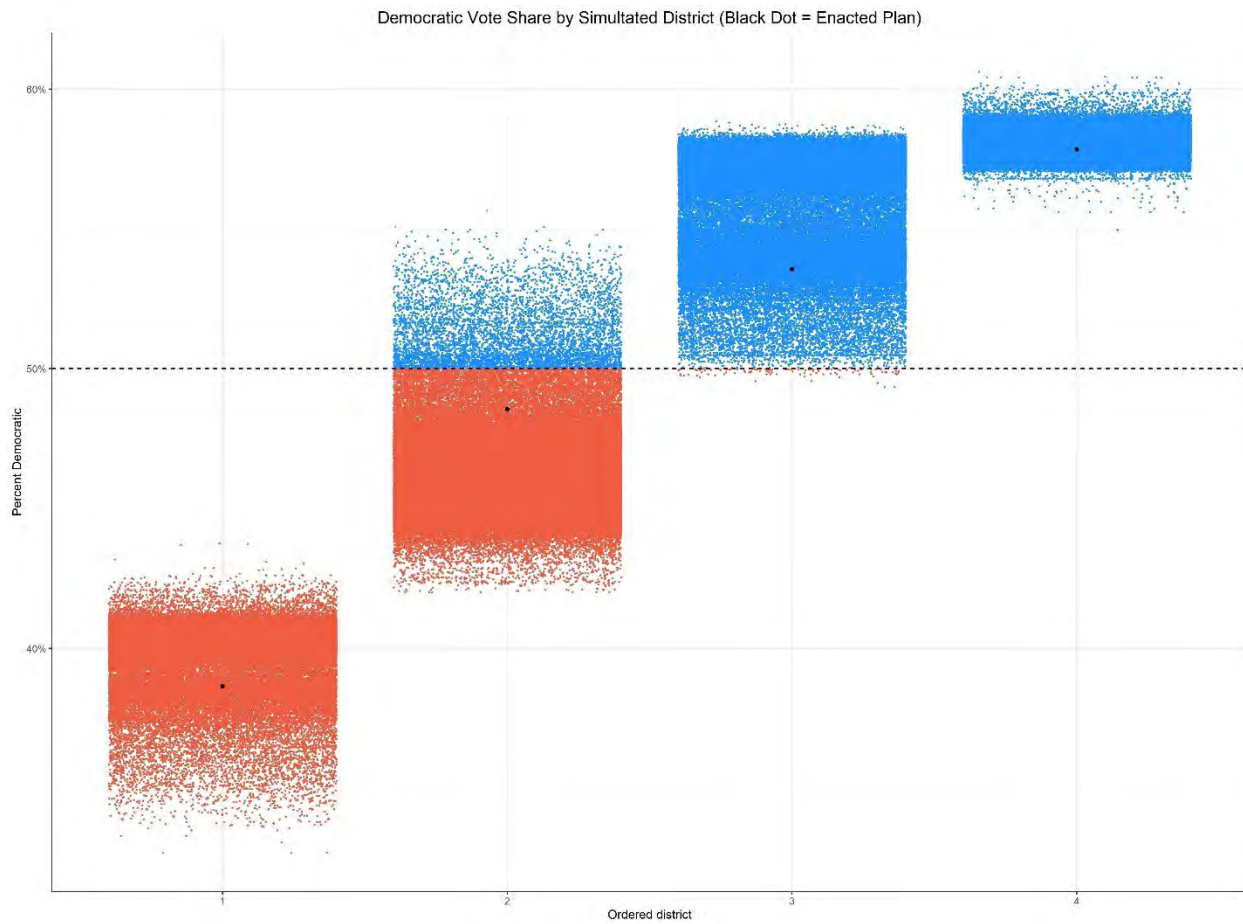
District	Biden Percent, Benchmark	Biden Percent, Enacted	Change
10	55.24%	55.26%	0.02%
15	59.76%	58.32%	-1.44%
20	65.50%	66.82%	1.31%
21	56.42%	54.64%	-1.78%
23	62.15%	56.30%	-5.85%
27	60.66%	60.04%	-0.62%
28	60.21%	63.11%	2.90%
34	59.38%	60.46%	1.08%
35	68.37%	69.83%	1.47%

Table 12: Trump-won VTDs, by South Texas-area Districts

District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
10	9	10	1.51%	1.66%	0.15%
15	105	118	17.59%	19.60%	2.01%
17	1	—	0.17%	—	—
20	15	3	2.51%	0.50%	−2.01%
21	40	42	6.70%	6.98%	0.28%
23	49	58	8.21%	9.63%	1.43%
27	178	228	29.82%	37.87%	8.06%
28	96	98	16.08%	16.28%	0.20%
34	91	40	15.24%	6.64%	−8.60%
35	13	5	2.18%	0.83%	−1.35%

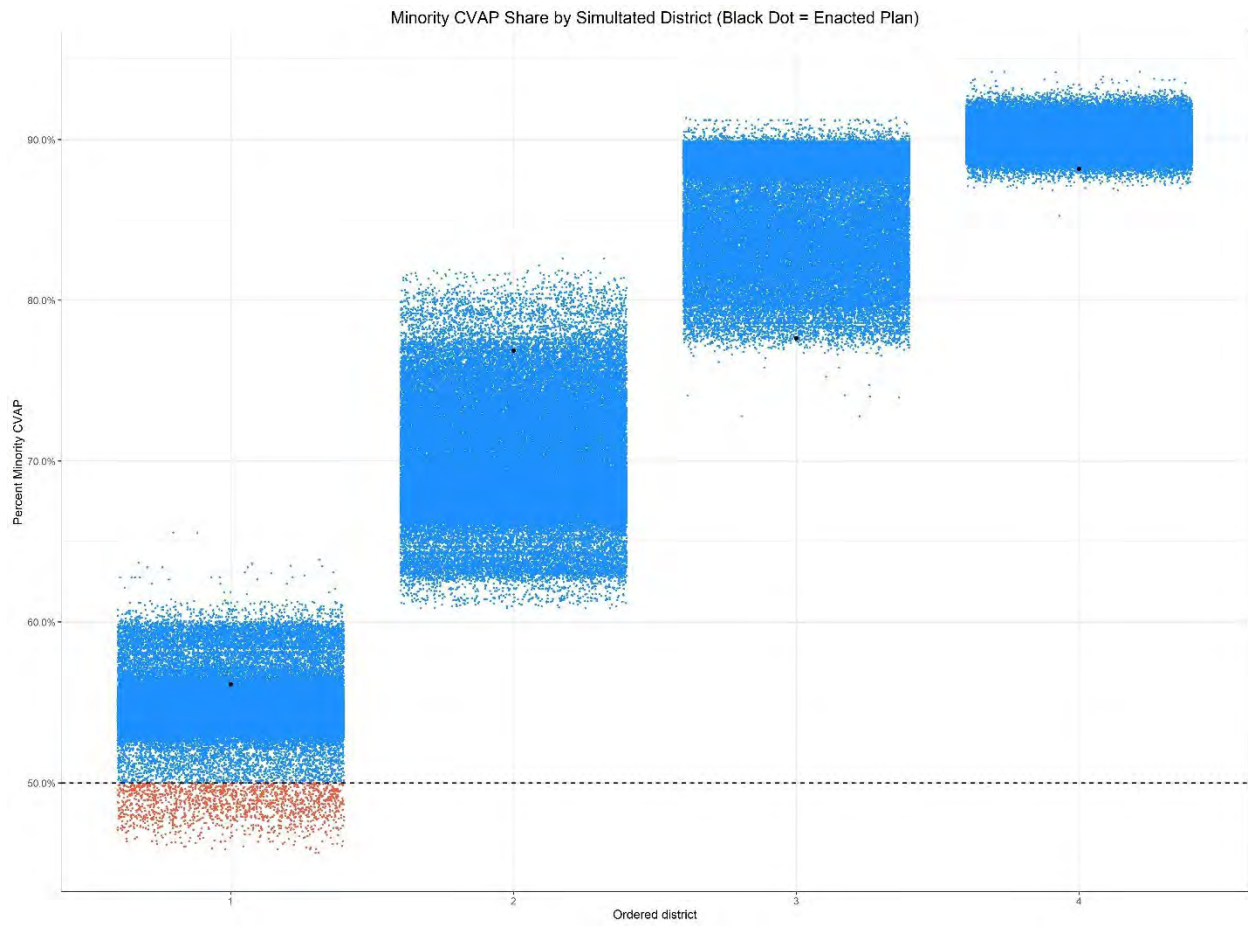
When we examine simulations in the region, not much is unexpected – one district is made slightly more Democratic than the politically neutral simulation would predict, and one is made slightly more Republican. Each of these changes are consistent with changes designed to create partisan advantages.

Fig. 80:



Likewise, the differences in the second- and third-most heavily minority districts are consistent with partisan effects. That is, they are in keeping with the politics findings discussed earlier in my report.

Fig. 81:



F. Demonstration Minority Districts

Drs. Duchin and Morales evaluate alternative maps for Dallas/Ft. Worth, Houston, and southeastern Texas. The purpose of this, to my understanding, is to satisfy *Gingles* prong 1: Demonstrating that the minority group is sufficiently numerous and compact to create a majority in a district. I consider the arguments in turn.

a. Dallas

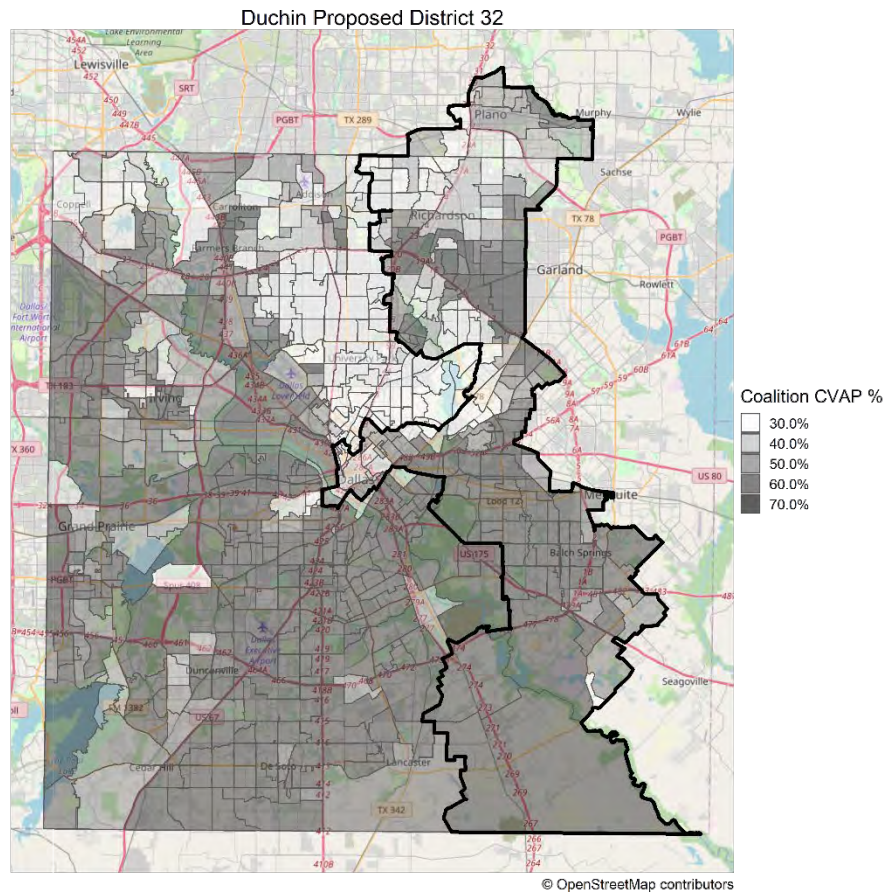
Dr. Duchin proposed a set of alternative districts in the Dallas/Ft. Worth area. There are, however, three problems with her analyses:

First, some perspective is in order. The Polsby-Popper scores for the four majority-minority district options are 0.357, 0.172, 0.101, and 0.082. The latter two districts are not particularly compact. Dr. Duchin seems to suggest that they are reasonably compact because the Enacted Plan has an average Polsby-Popper score of 0.149. A state's enacted plan, however, is not necessarily a good comparator. If a state pursues a partisan gerrymander, (and its partisan goals outweigh compactness goals), then its enacted districts may not be very compact.

But even under that standard, two of Dr. Duchin's districts – District 32 and District 33 – are less compact than even the average district in the Dallas area under the Enacted Maps. Dr. Duchin's proposed 33rd District has a lower Polsby-Popper score than thirty-two enacted congressional districts, and Dr. Duchin's proposed 32nd District has a lower Polsby-Popper score than thirty enacted congressional districts.

Second, many of these majority-minority districts exist only because disparate groups are stitched together from various portions of the metroplex. Consider Dr. Duchin's proposed 32nd district in Dallas. It stretches across Dallas County and into Plano, gathering up pockets of non-White residents as it goes and carefully avoiding majority White precincts. In the process, it takes on a shape resembling Carmen Miranda putting a cake in the oven. Yet, when broken down, it becomes clear that these groups are not geographically cohesive.

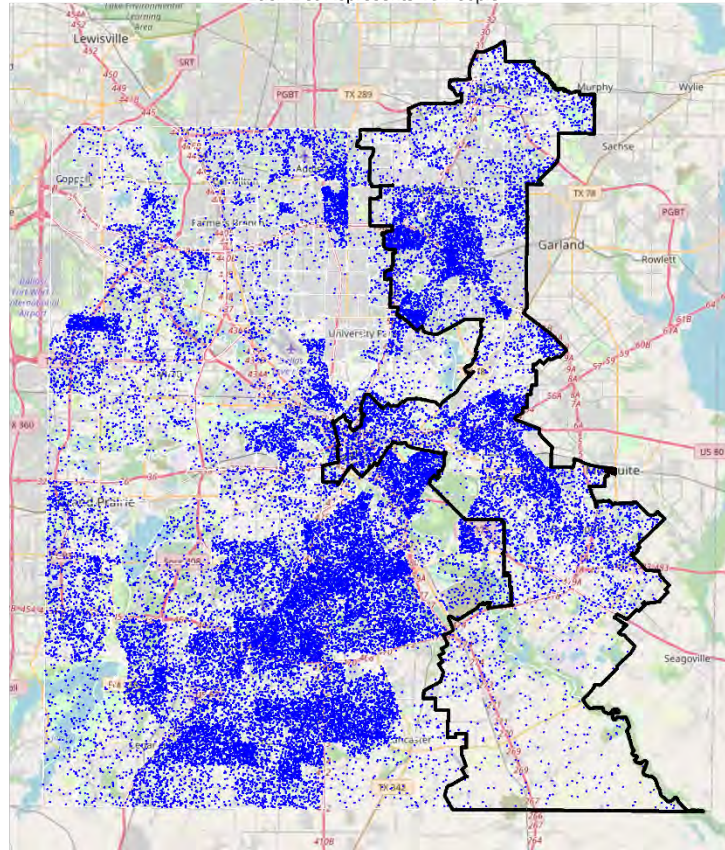
Fig. 82:



For example, consider the Black population of Dallas County, in Figure 83:

Fig. 83

Black Population of Dallas County, Proposed District 32
Each Dot Represents 10 People

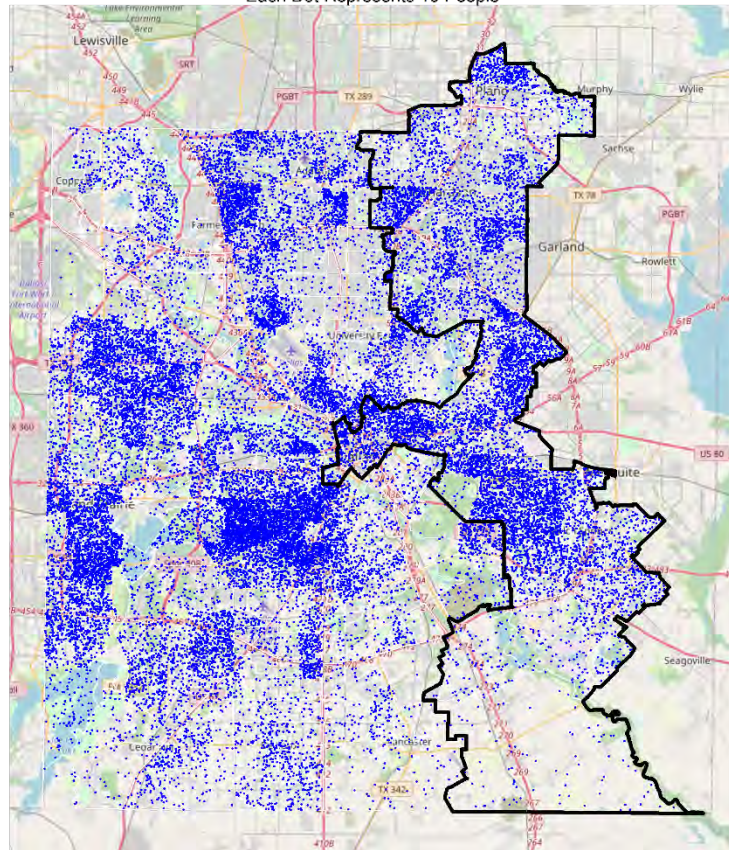


The Duchin district gathers together Black voters in Miranda's arm and back and in her face, with a tertiary concentration in the top of the hat.

The district also pulls together groups of Hispanic voters in Miranda's back and stomach, in the brim of her hat, and also at the top of her hat.

Fig. 84

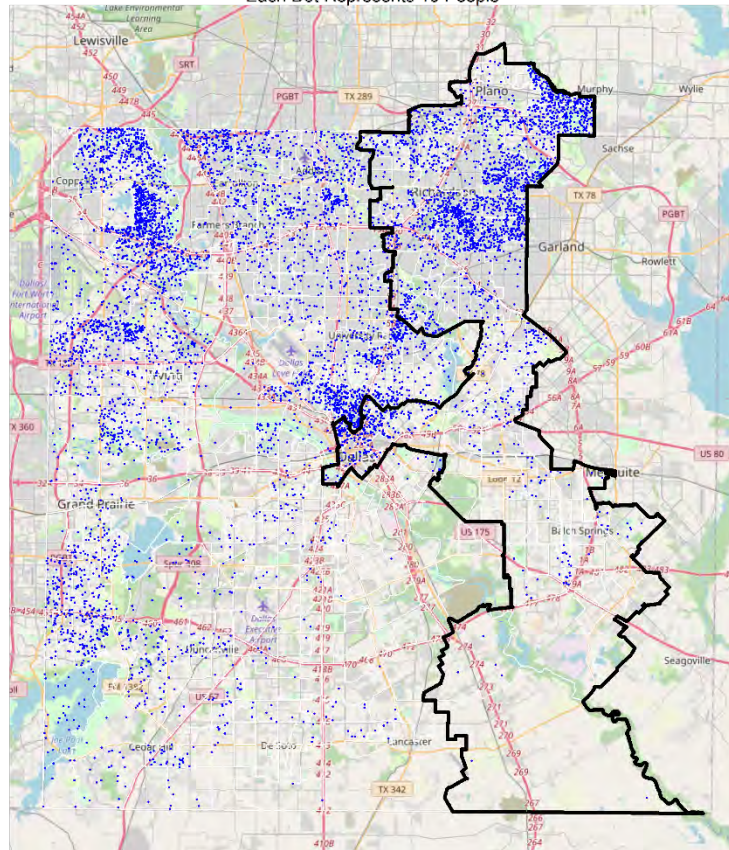
Hispanic Population of Dallas County, Proposed District 32
Each Dot Represents 10 People



Finally, unlike other groups, who are concentrated mostly in the body, face, and tip of the hat, the Asian population is drawn from a cluster in the hand, at the back of the head, and in the top of the hat.

Fig. 85

Asian Population of Dallas County, Proposed District 32
Each Dot Represents 10 People

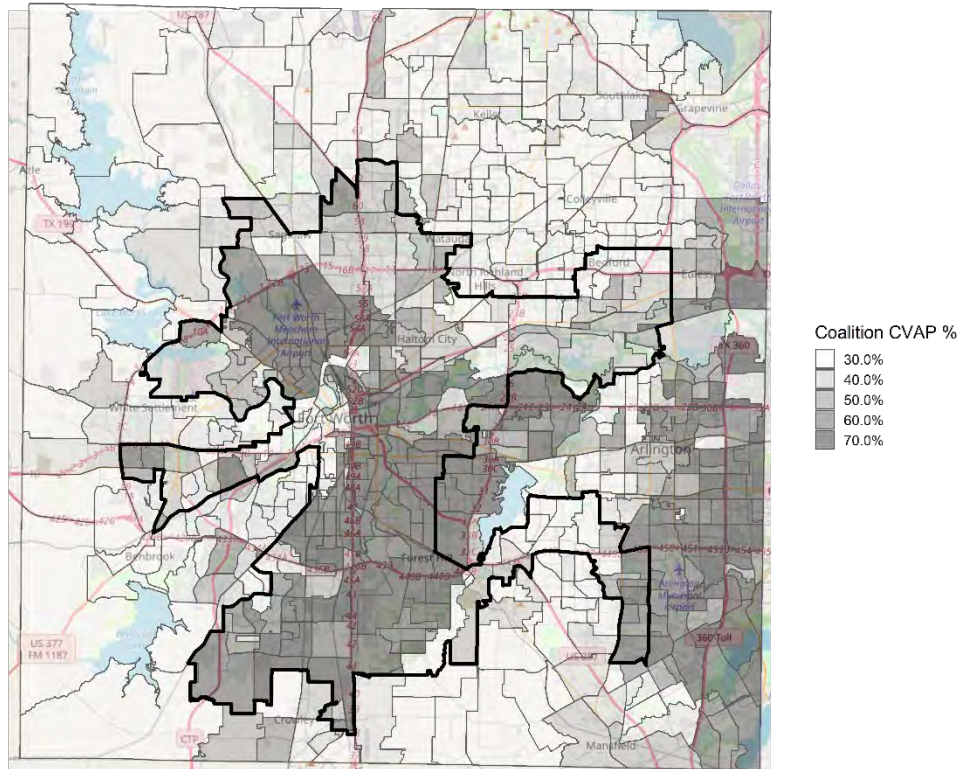


In other words, even if we accept that the district itself is compact (and it isn't), the minority groups that comprise the district are not.

Likewise, consider the 33rd District in Tarrant County. It resembles a spined creature lumbering over to attack Parker County. Different minority groups are concentrated in the arm, near the head, in the back, and in the tail, which is separated from the rest by a broad swath of White, Republican voters.

Fig. 86

Duchin Proposed District 33

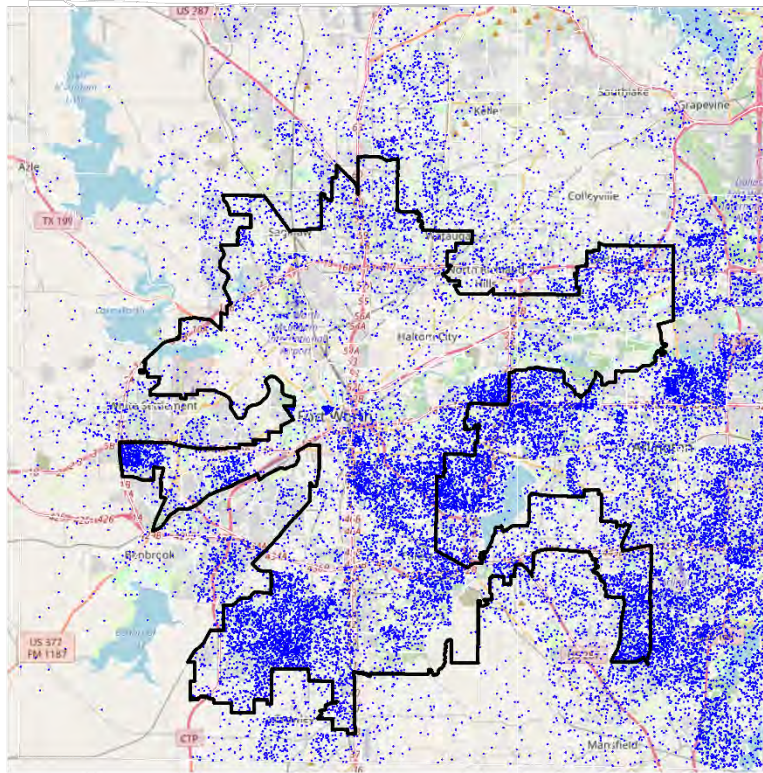


© OpenStreetMap contributors

We see this more if we look at how the groups are patched together from across the district. The Black population has distinct concentrations in the creature's back, legs, hand and protrusion out of the back. Notably, the protrusion from the tail does not seem to be needed given the heavy African-American concentration near the back; splitting that community allows the 30th district to extend over and capture heavily Black precincts, giving the 30th a Black CVAP majority.

Fig. 87

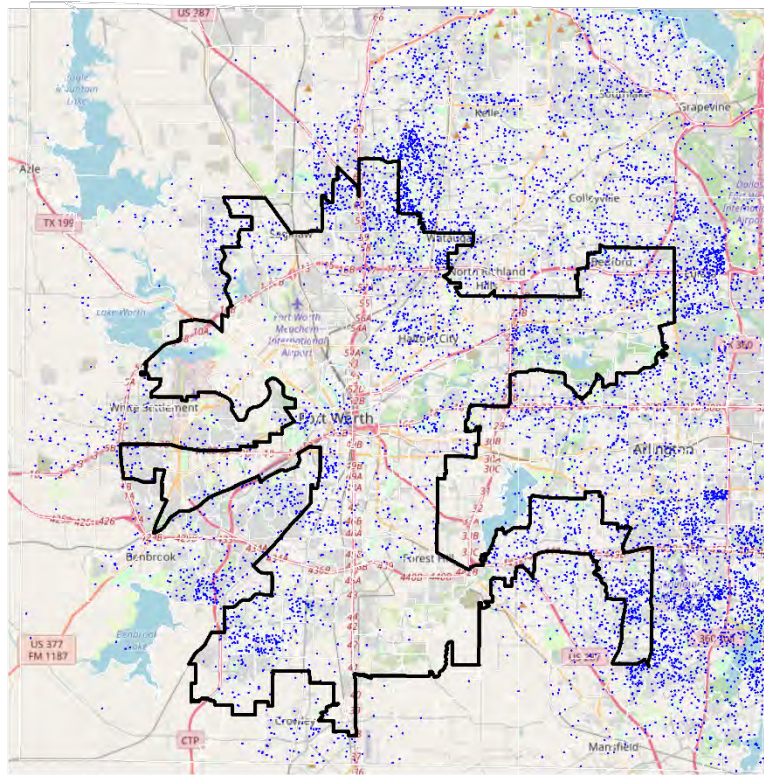
Black Population of Tarrant County, Proposed District 33
Each Dot Represents 10 People



The Asian population, by contrast, lives primarily near the spines of the creature's back, with other concentrations in the creature's tail and legs.

Fig. 88

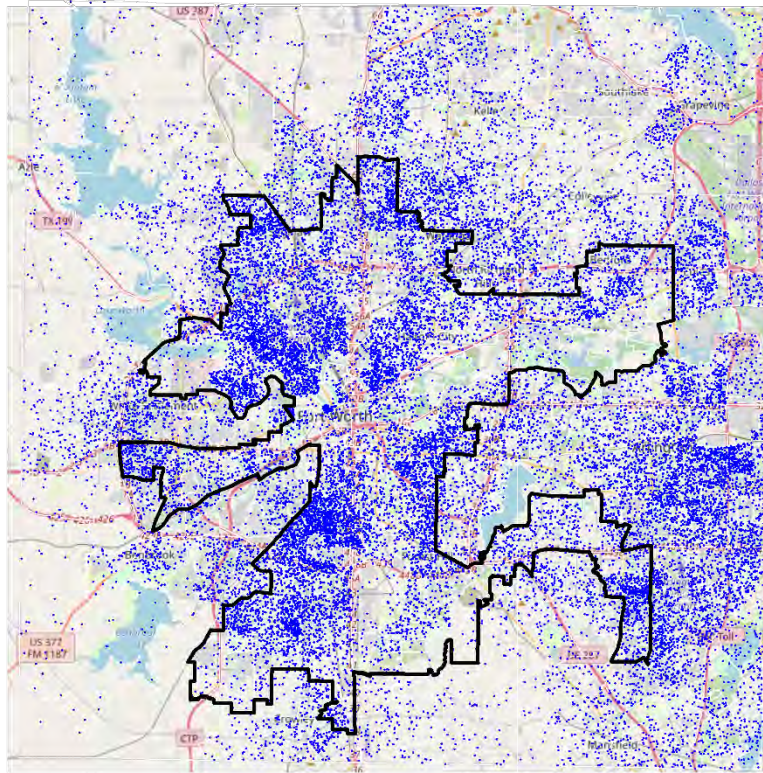
Asian Population of Tarrant County, Proposed District 33
Each Dot Represents 10 People



Finally, the Hispanic population concentrates at various different locations within the district.

Fig. 89

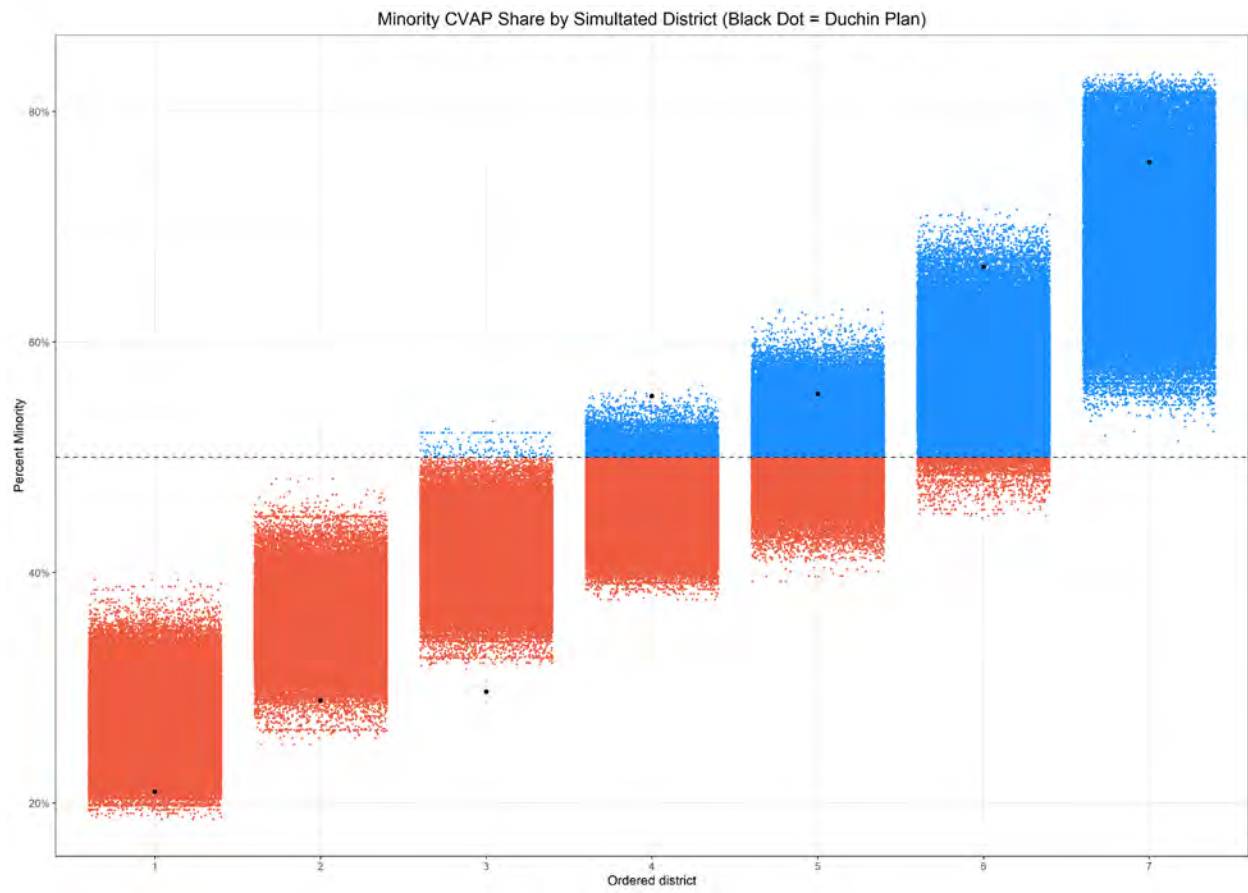
Hispanic Population of Tarrant County, Proposed District 33
Each Dot Represents 10 People



Once again, even assuming this reflects a compact district, the minority groups within it are not.

Third, these districts reflect statistical outliers that would otherwise be probative of racial gerrymandering, under the standard suggested by Dr. Duchin herself. In the following chart, I've taken the simulations, and superimposed the minority CVAPs from Dr. Duchin's proposed map over them. The third- and fourth-most heavily White districts are both outliers, with White CVAPs driven down in all of the White-majority districts.

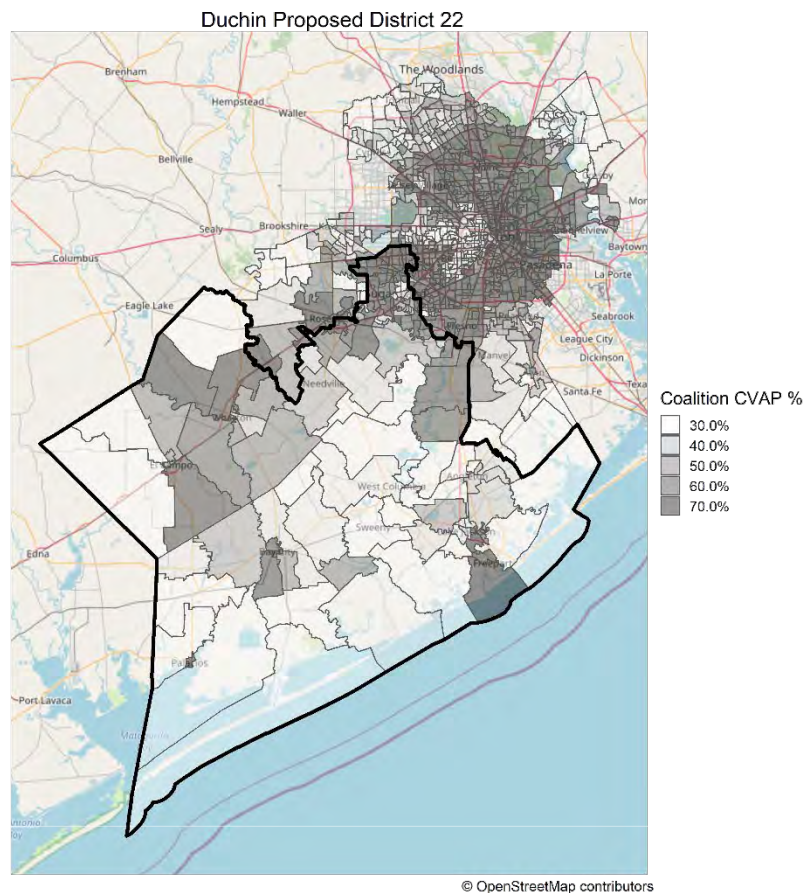
Fig. 90:



b. Houston

In Houston, the proposed districts display a different tendency. Here the Duchin map instead “pizzamanders” minority voters in the city of Houston, connecting them with White residents in the suburbs and rural areas. Consider the proposed 22nd District, which is mostly comprised of a concentration of minority residents on the Fort Bend/Harris County border, extended out into White areas to minimize the number of minority votes that are “wasted.”

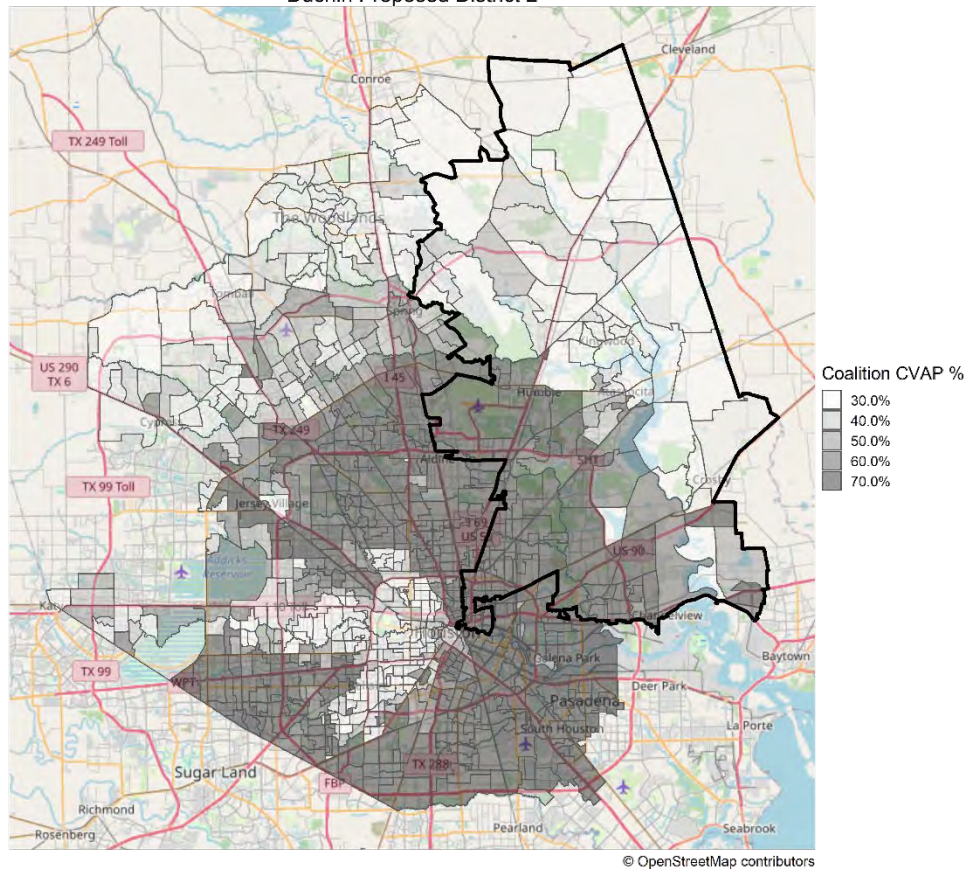
Fig. 91:



Or the proposed 2nd District, which takes a concentration of minority voters in downtown Houston and to the northeast and extends out into borderline rural portions of Montgomery County.

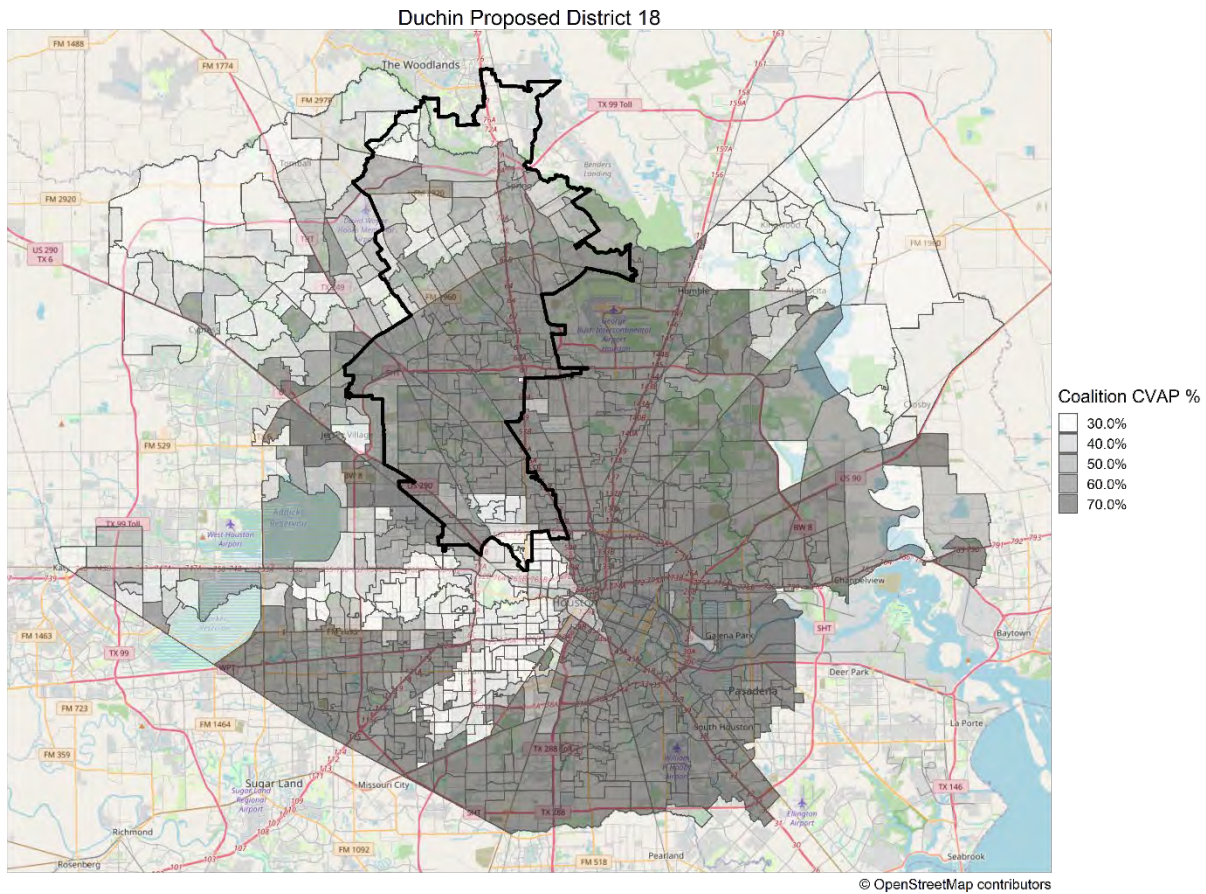
Fig. 92:

Duchin Proposed District 2



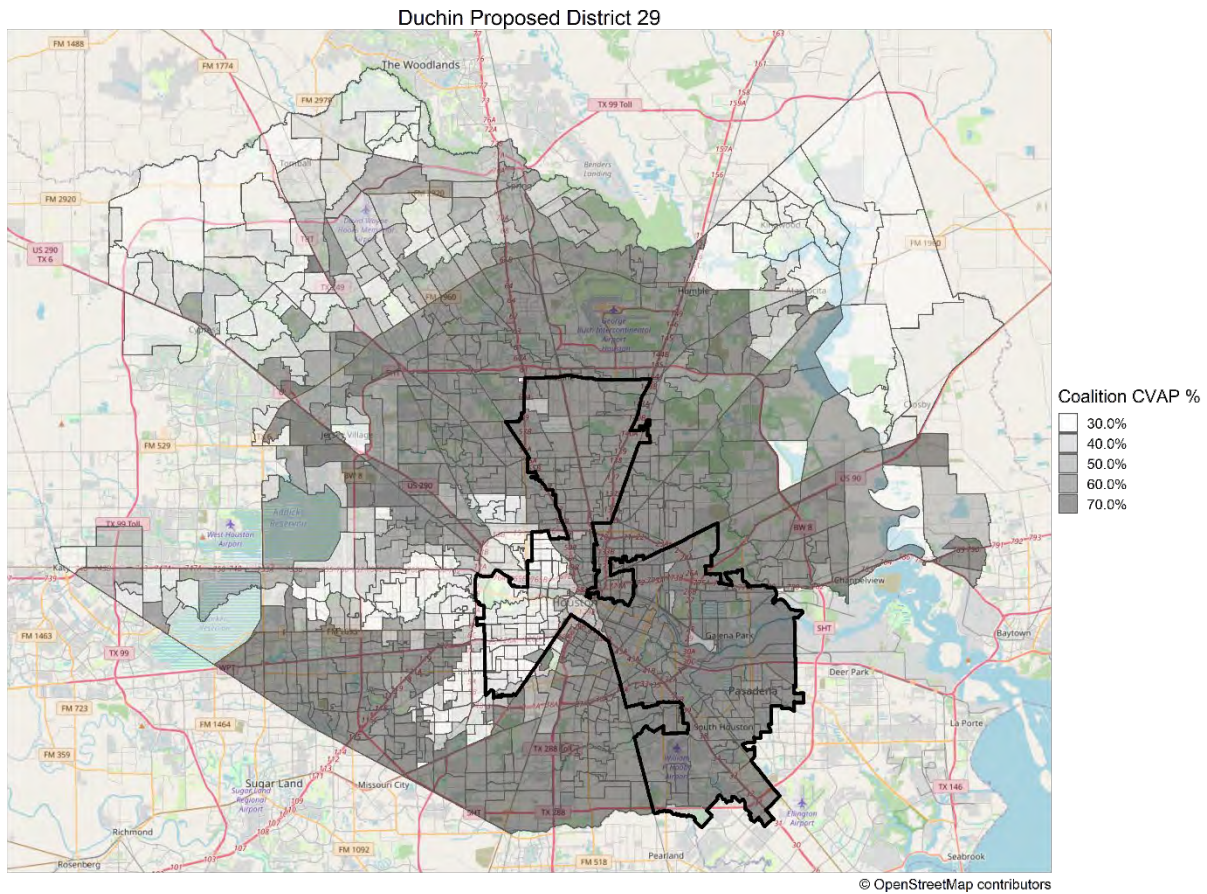
The same tendency is observable in the 18th District.

Fig. 93:



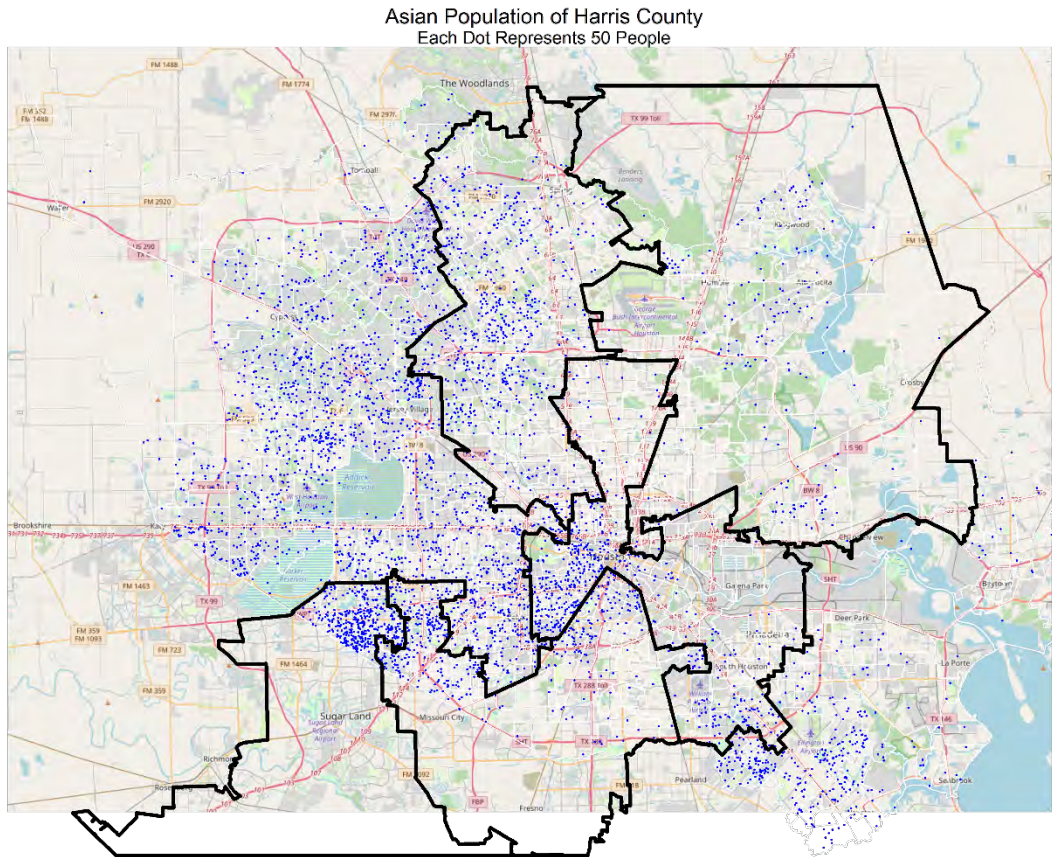
We also see it in the 29th District, which begins to resemble a dragon in flight – the body and wing creates a minority majority district, while the head ensures that the district does not have too many minority voters packed into it.

Fig. 94:



Indeed, if we look at the minority-majority districts together, we see some basic trends and how various minority groups are strategically dispersed among the districts. Looking at the Asian population, we see a concentration in the head of the dragon and spread between the two districts located on the Harris/Fort Bend County borders.

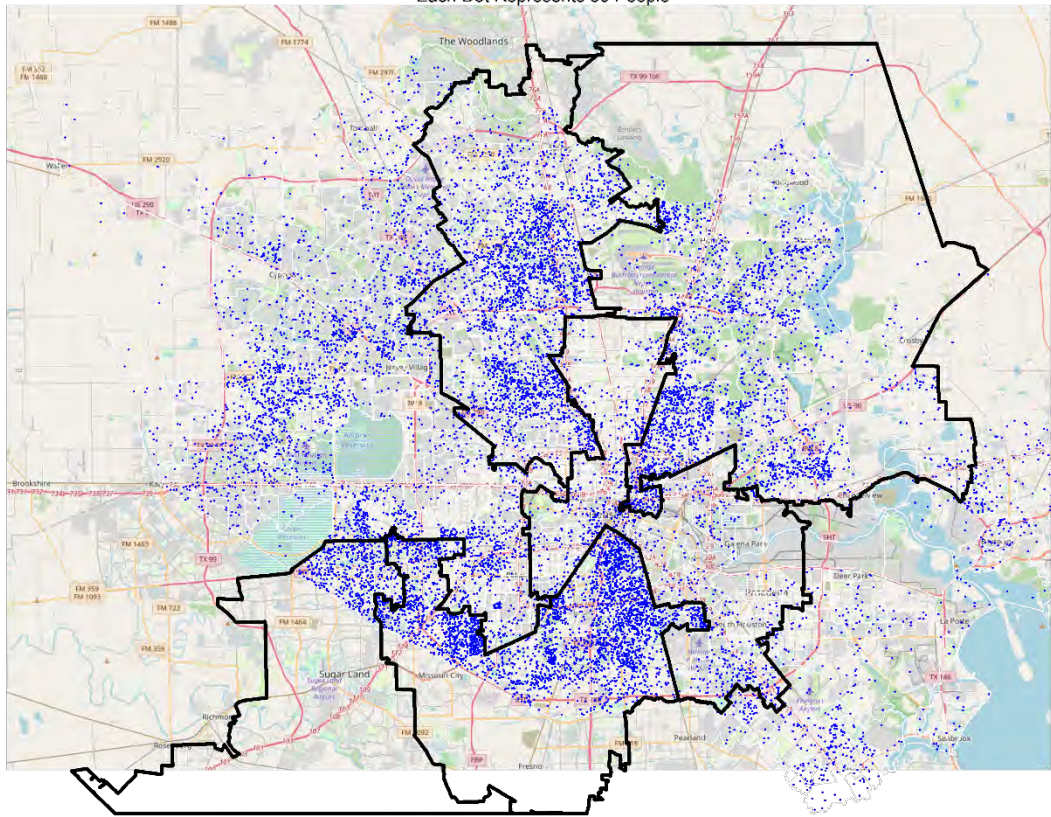
Fig. 95:



Likewise, we notice how the 29th district studiously avoids concentrations of Black residents, with a narrow neck separating Black residents in the 2nd from Black residents of the 9th.

Fig. 96:

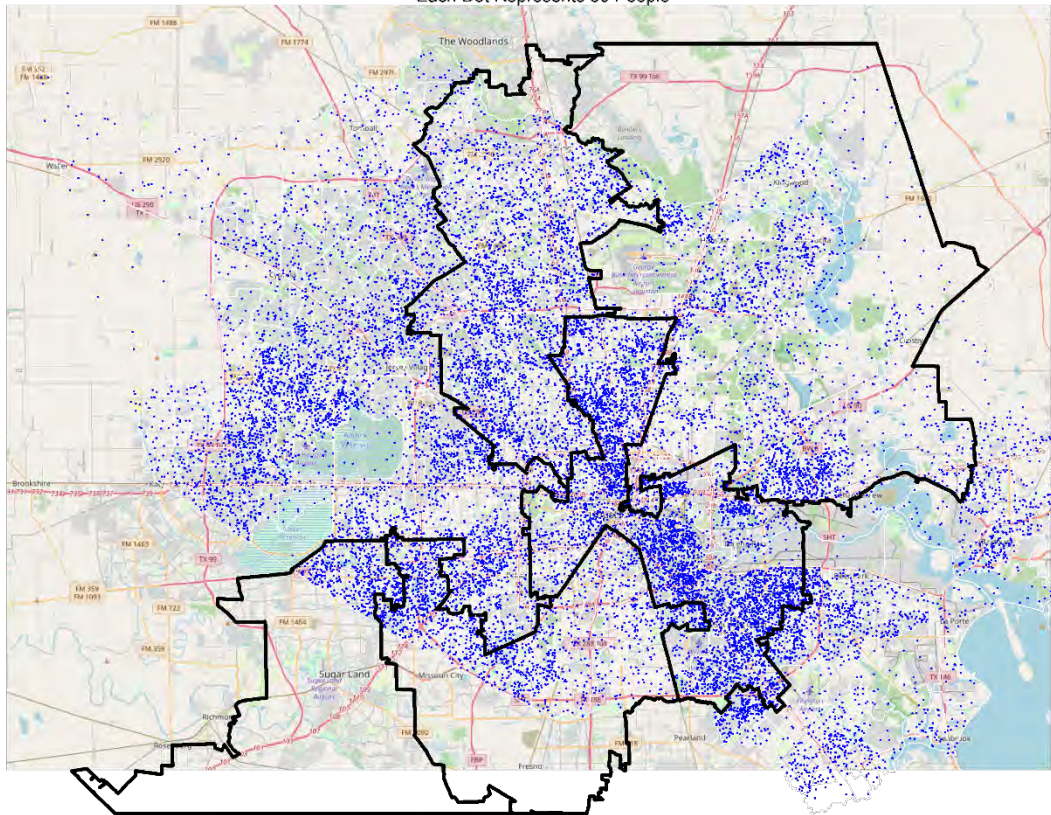
Black Population of Harris County
Each Dot Represents 50 People



Finally, the Hispanic population is spread over much of the county, but in this map, they are packed into the 29th District.

Fig. 97

Black Population of Harris County
Each Dot Represents 50 People



G. Response to Dr. Kousser

Much of the Kousser Report is dealt with generally above. There are, however, some specific sections of that report that deserve special attention. In particular, the Kousser Report discusses the historical context of the 2021 redistricting on pages 30-36 and provides a statistical analysis of the Congressional, state Senate, state House and state Board of Elections districts for much of the closing pages.

With respect to the historical context of the 2021 redistricting, Dr. Kousser is surely correct that the Republican Party suffered setbacks and close calls in 2018 and 2020. Relatedly, he implies that Texas Republicans were concerned about their receding dominance in the state and set about attempting to fix this “problem” in their redistricting plans. The party certainly “had a lot of shuffling to do in the 2021 redistricting if it was to maintain its majorities.” Kousser Report at 32. What we’ve seen is certainly congruent with those opinions. In particular, it appears from my analysis that the Enacted Map is consistent with a statewide plan to shore up vulnerable Republican incumbents, by ceding seats that they had lost to the Democrats, adding Democratic voters from neighboring swing districts into those ceded seats, and extending districts out into the heavily Republican areas. In other words, there is ample evidence, in part presented by Dr. Kousser, that Texas line drawers reconfigured the electoral districts in a way that safeguarded Texas Republicans’ future interests.

In his statistical analysis of Texas redistricting, Dr. Kousser asserts the existence of some level of racial and political correlations in some places in Texas. Where Kousser goes astray is leaping to the conclusion that, because in his view race and politics are intermixed, that they can be treated as the same quantity. *E.g.* Kousser Report at 61, 65 (“Because of such strongly racially polarized voting, racial and partisan majorities were inextricably linked.”); (“Only if they blinded themselves to both race and party could they blind themselves to race.”).

Kousser ignores the fact that there are multiple instances where district lines were drawn that have a partisan effect, but not a racial effect. We can see this in Dr. Kousser’s own analysis: In Travis County, the 37th Congressional District contains the most heavily Democratic precincts in the county, not necessarily most heavily White precincts in the county. Kousser Report at 61 n. 178. Likewise, the 6th District is good evidence of the predominance of politics in redistricting; the district now carves out the remaining purple and red areas of Dallas County, optimizing the blue precincts in Districts 30, 32, or 33. In fact, as Dr. Duchin’s own simulations demonstrate, the

Enacted Map provides as many minority-majority districts as we would expect from a race-neutral drawing of the DFW metroplex. Duchin Report at 38 (the same is true of Dr. Kousser's analysis of Senate District 10).

The same is true of Dr. Kousser's analysis of District 24. Kousser Report at 70. In fact, as shown above, a careful analysis of the division of White voters in Dallas County reveals that mapmakers did not segregate out White voters from other voters. Had Dr. Kousser provided the same sort of precinct-level heat map for District 24 as he did for District 6, it would be obvious that the White areas north of Dallas are split almost perfectly along political lines, rather than racial lines. In fact, the district lines appear indifferent as to the fate of White voters. Rather, the lines strategically differ in where White Democratic and White Republican voters were placed.

It is evident from a thorough analysis of the statewide maps that they effectively maximize Republican performance, rather than racial performance. Thus, when examining the districts in Austin and in Houston on a precinct level, we plainly see map makers making choices consistent with a political explanation. Dr. Kousser also spends little time on state Senate, state House and state Board of Elections districts, apart from some statewide charts; suffice it to say, then, that the more granular analysis below reveals that the maps are consistent with a statewide strategy very much concentrated on politics. Regardless, showing that the districts with the weakest Republican showing were almost the most heavily White, and that by increasing the Republican share one also tended to increase the White share, does not give rise to an immediate inference that race was the predominate factor.

H. Response to Dr. Korbel

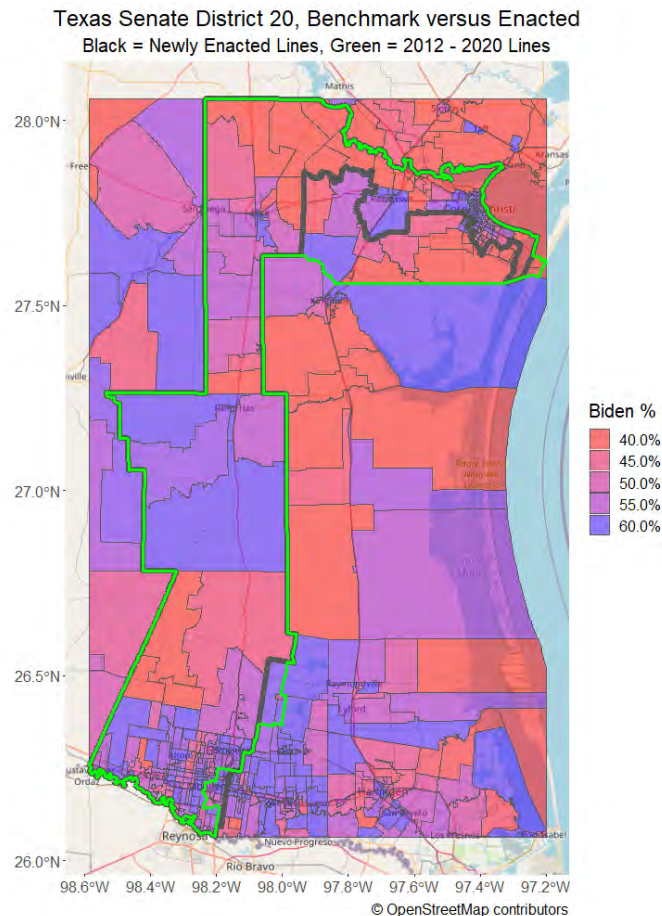
The Korbel report effectively offers up legal analysis of the standard for Section 2 VRA cases. This is something best left to the lawyers and the Court, so I will say little on the accuracy of the recitation. Korbel also offers up reports on the history of discrimination in Texas

In addition to the above analysis, there are also a handful of Powerpoint presentations, the provenance and importance of which, Korbel does not clarify. Korbel suggests that if one looks at the compactness scores for the Enacted Plans, “they do not do a very good job of describing the districts.” Korbel Report at 3. I have addressed each district in this report. The problem with Korbel’s statement is that he is describing the remedial plan. Korbel also suggests that mapmakers “look at the freeways and streets to see how difficult it would be to get from one area to another. In urban areas how many bus changes and the time to travel from one end of the district by bus is helpful.” Korbel at 3. To the extent this is important, I am unaware of any of plaintiffs’ other experts who does this.

VI. State Senate Districts

We begin with South Texas. The same forces that drove the South Texas congressional districts to support GOP candidates had a similar effect downballot. By 2020, the 20th Senate district was underpopulated by 32,504 residents. The 27th district, however, was underpopulated by a substantial amount: 108,504 residents. The map drawers first swapped precincts between the two districts: the 20th gave up a precinct in Nueces County to the 27th, while taking back population in Hidalgo County. There was, once again, a partisan aspect to these swaps. The 79,504 residents it added from the 27th voted 60.5% for Biden, while the 67,030 residents it lost voted 37.4% for Biden. The net result is to make the 20th more Democratic; Biden's performance improves from 52.8% to 54.9%.

Fig. 98:

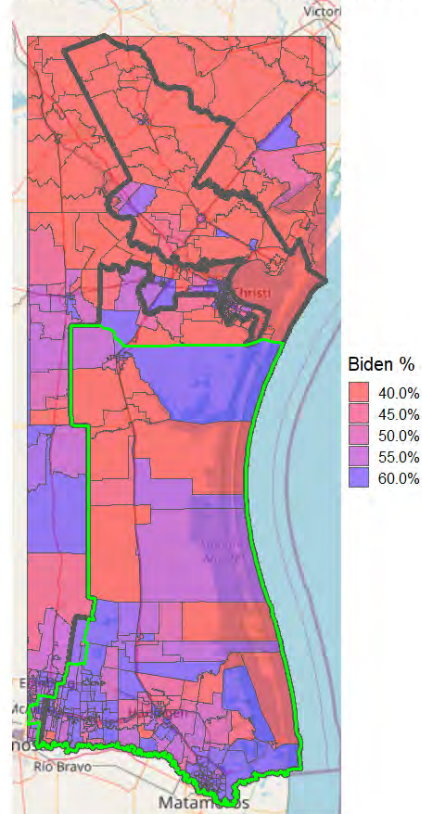


The 27th thus became more Republican. Map drawers, however, still needed to add roughly 100,000 residents to the 27th. They did so by moving residents from north of Corpus Christi into the district, which now extends into San Patricio and Bee counties. These residents, pulled in from

the 18th and 21st, voted overwhelmingly Republican in the 2020 election. Overall, they gave Biden roughly 35% of the vote. This transformed the 27th District from a 57.9% Biden district to a 52.4% Biden district.

Fig. 99

Texas Senate District 27, Benchmark versus Enacted
Black = Newly Enacted Lines, Green = 2012 - 2020 Lines



This is reflected in Tables 13 and 14. The number of Biden-won precincts contained in District 20 increases appreciably, while the number in 27 decreases somewhat. But the number of Trump-won precincts in the 20th District also decreases substantially, while the number of Trump-won precincts in the 27th District almost doubles.

Table 13: Biden-won VTDs, Southeastern Texas Senate

District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
18	0	—	0.00%	—	—
20	218	232	50.70%	53.95%	3.26%
21	8	—	1.86%	—	—
27	204	198	47.44%	46.05%	−1.40%

Table 14: Trump-won VTDs, by Southeast Texas Senate

District	# Trump Precincts, Old Lines	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
18	1	—	0.64%	—	—
20	78	63	49.68%	40.13%	−9.55%
21	34	—	21.66%	—	—
27	44	94	28.03%	59.87%	31.85%

Running our now-familiar simulations, we can see that the maps, as drawn, maintain two districts with overwhelming majorities of minority voters. However, while the 20th is more politically marginal than we might expect from a blind draw, the 27th is made less safe than it might otherwise be.

Fig. 100

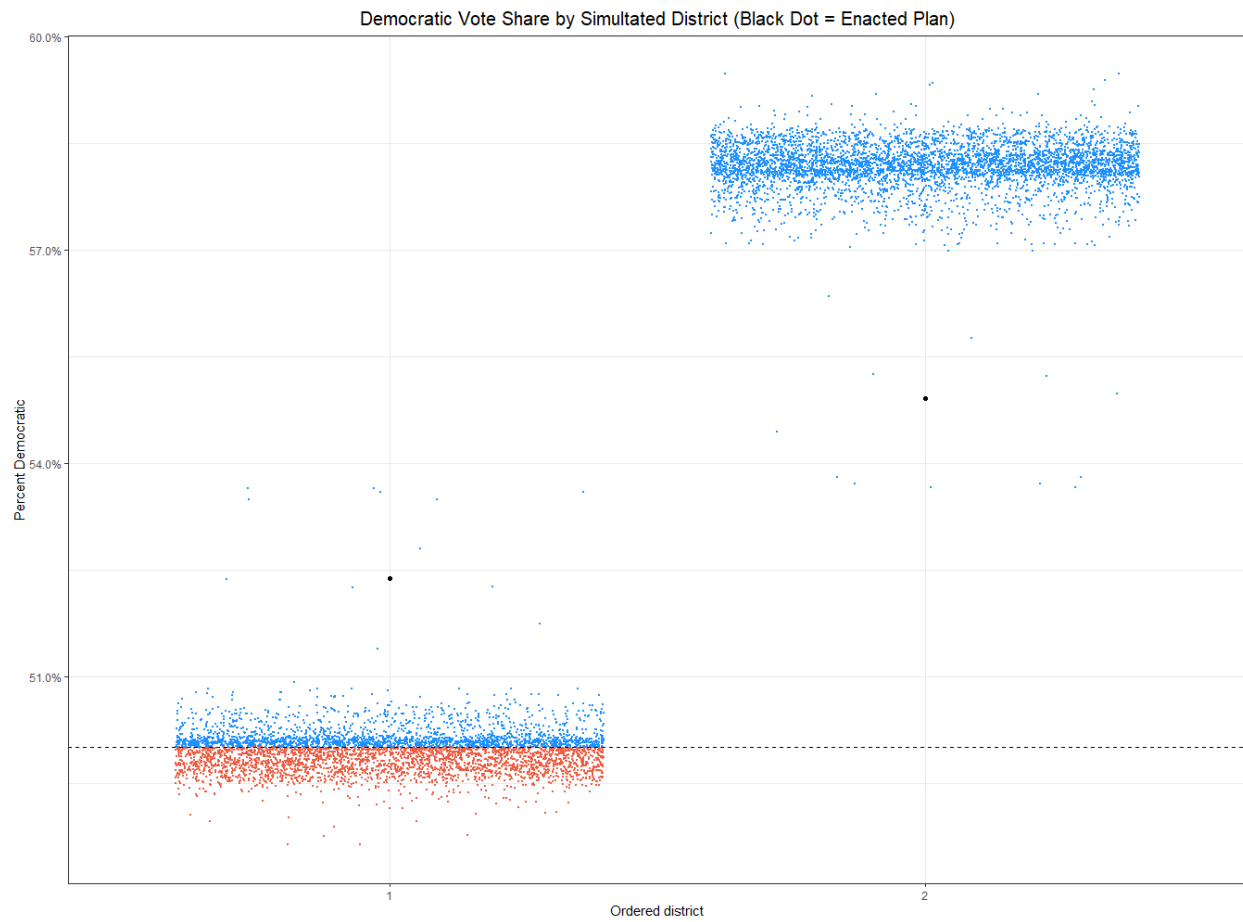
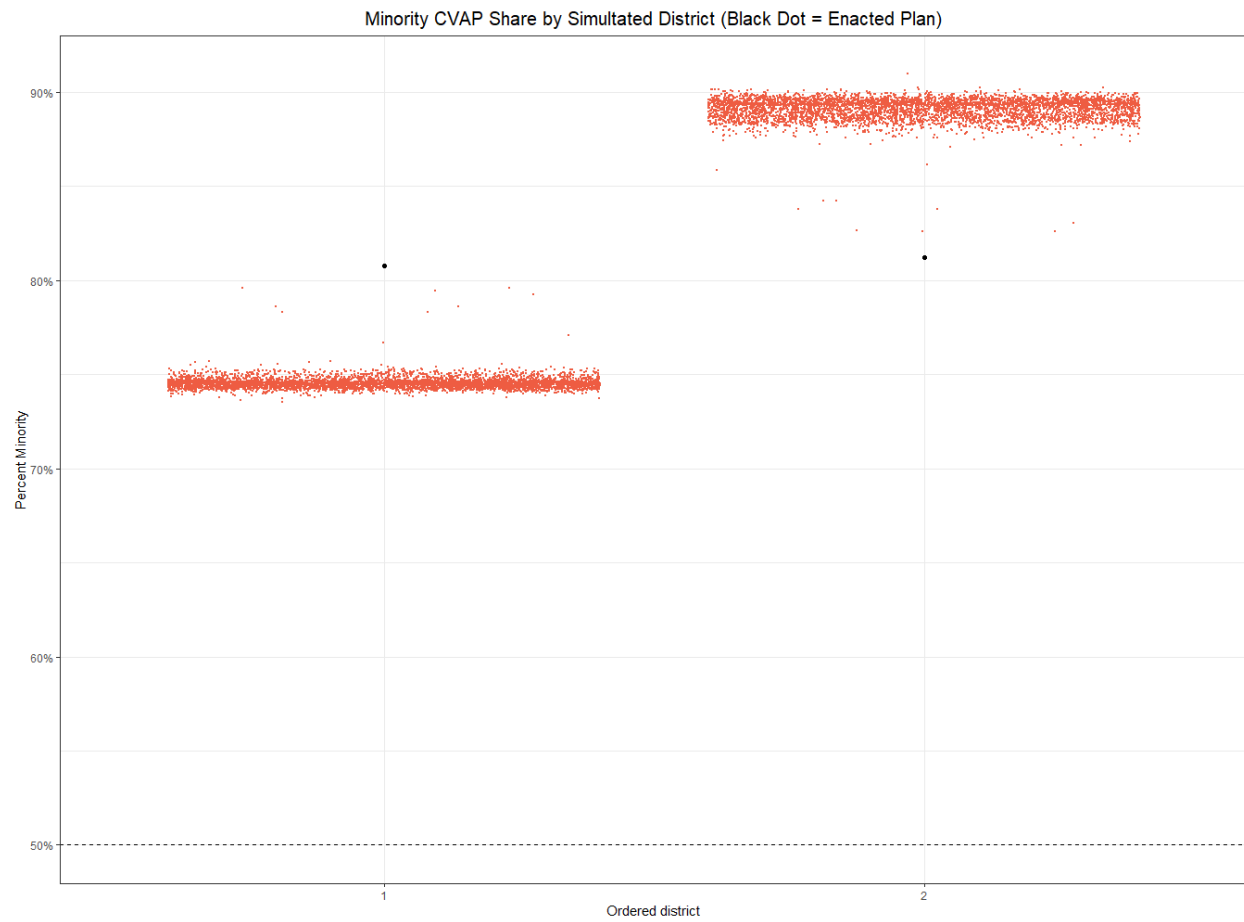


Fig. 101

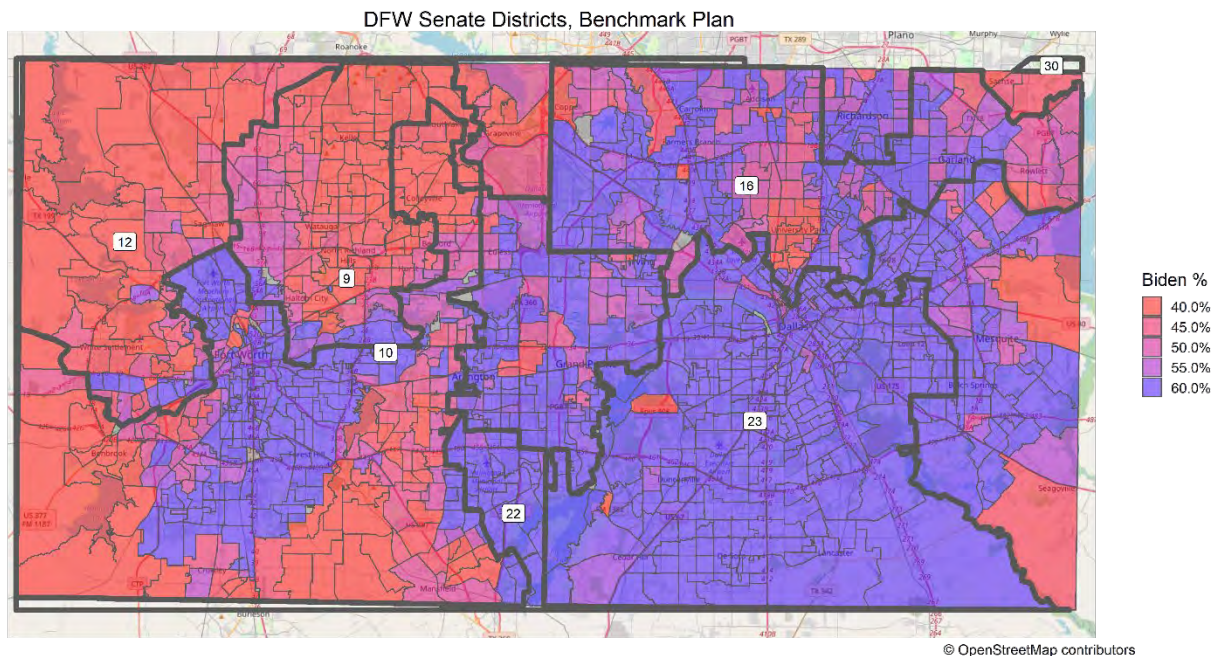


A. Dallas/Ft. Worth Districts (S.D. 9, 10, 12, 16, 22, 23, 30)

Dr. Duchin evaluates the Dallas and Tarrant county Senate districts for potential indicia of racial gerrymandering. As with the congressional districts, however, the history and outcomes are indicative of aggressive political gerrymandering. District lines do not cleave racial communities as neatly as they do political communities. And, as we've seen before, in the face of political setbacks, the Enacted Map is consistent with ceding districts to shore up others, rather than continuing to fight against the tide full bore.

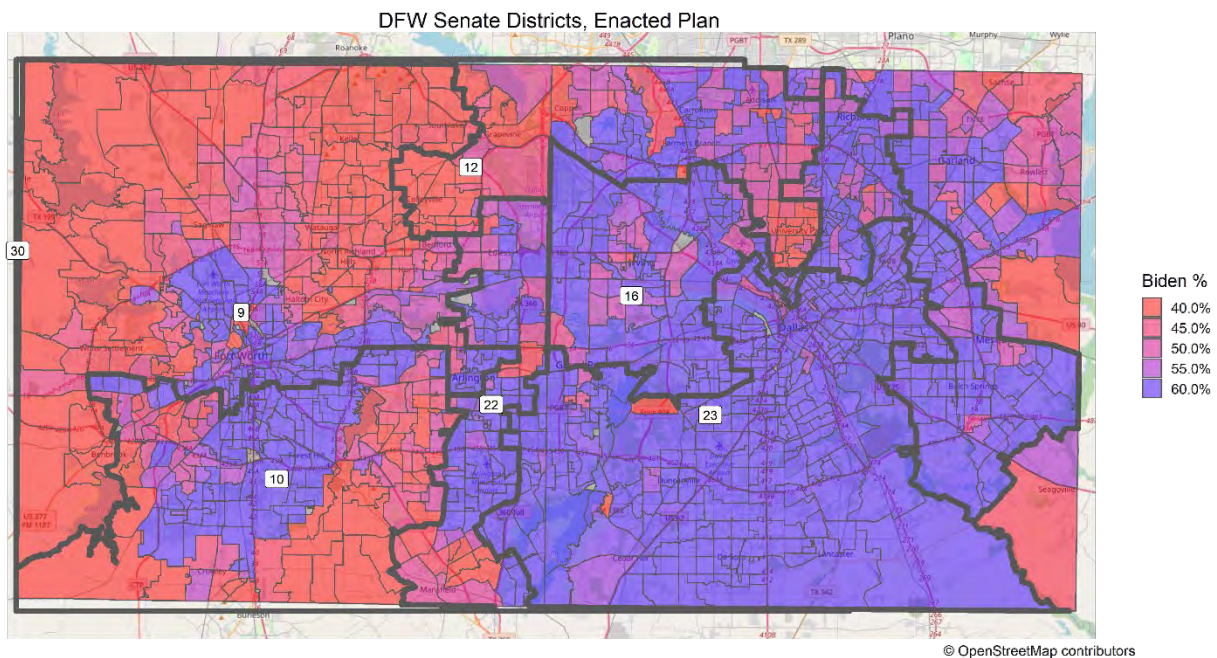
In the 2018 and 2020 elections, Republicans lost two Senate seats in the area: The 10th, in Tarrant County, and the 16th, in Dallas County. Republicans also had a close call in the 8th, where the Republican won with just 51.18% of the vote, and the 9th, where the Senator won with 54.03% of the vote. In 2020, Trump won just 47.7% of the vote in the 8th, 50.1% in the 9th, 46.1% in the 10th, and 43.1% in the 16th. With the possible exception of the 12th District, where Trump won 56% of the vote, the remaining districts were all either overwhelmingly Republican or overwhelmingly Democratic.

Fig. 102



The solution here is the same as in congressional maps. The 16th District was drawn into heavily Democratic territory in central and eastern Dallas County, wrapping below the red enclave near Highland Park, which is now placed in the 12th. The 8th District no longer goes into Richardson and Garland; those areas are either in the safely Democratic 16th or the strongly Republican 2nd. The protrusion of the 22nd district into the county is extended into Arlington and beyond, capturing blue precincts there. The 9th and 10th then bifurcate the Democratic areas of Fort Worth. The net result of this is that the 8th and 9th are both transformed into 56% Trump districts, the 12th remains a 56% Trump district, the 10th becomes a 58% Trump district, while the 16th is effectively ceded, becoming a 35% Trump district.

Fig. 103



Our familiar tables tell a similar story. The number of Biden precincts in the 2nd, 8th, 9th, and 10th districts are all reduced, at times substantially. The number of Biden precincts in the heavily Republican and heavily Democratic districts are increased substantially.

Table 15: Biden-won VTDs, Dallas Senate Districts

District	Last R Sen. %	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
2	59.35%	108	85	8.61%	6.78%	-1.83%
8	51.18%	135	82	10.76%	6.54%	-4.22%
9	54.03%	138	120	11.00%	9.57%	-1.43%
10	48.27%	207	119	16.49%	9.49%	-7.00%
12	62.29%	73	94	5.82%	7.50%	1.68%
16	45.87%	205	259	16.33%	20.65%	4.32%
22	68.45%	82	124	6.53%	9.89%	3.35%
23	0.00%	281	308	22.39%	24.56%	2.17%
24	69.54%	0	—	0.00%	—	—
28	100.00%	0	2	0.00%	0.16%	0.16%
30	73.92%	26	61	2.07%	4.86%	2.79%

In addition, the Biden precincts that remain in the marginal districts are typically less heavily Democratic than in the Benchmark Map.

Table 16: Biden Share in Biden-Won VTDs, Dallas Senate Districts

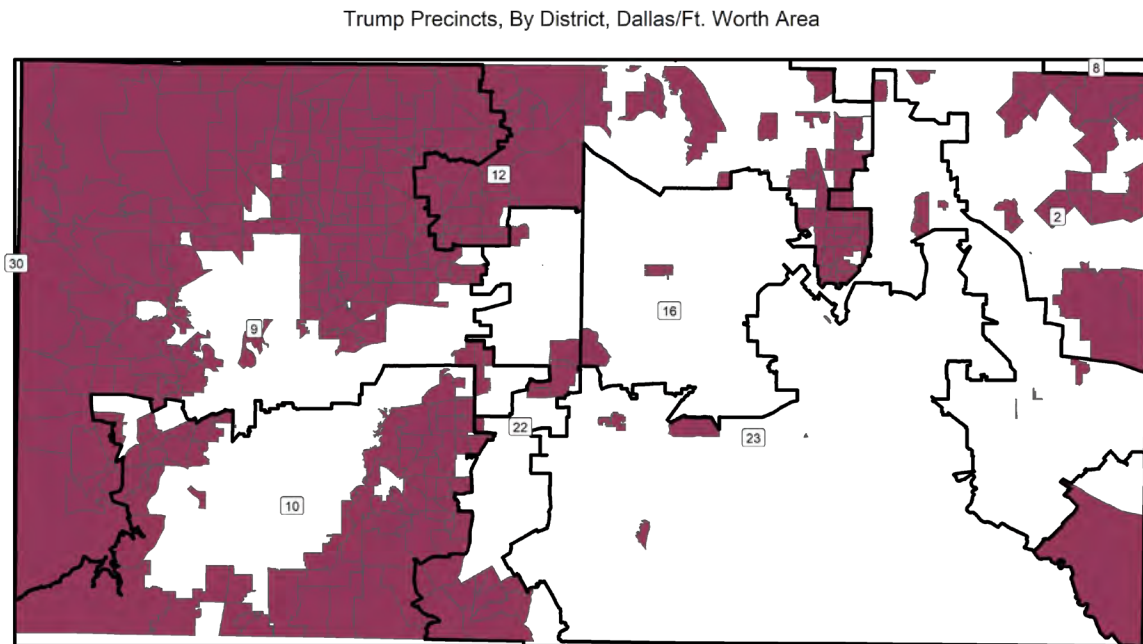
District	Last R Sen. %	Biden Percent, Benchmark	Biden Percent, Enacted	Change
2	59.35%	64.65%	58.77%	-5.88%
8	51.18%	56.92%	55.46%	-1.46%
9	54.03%	62.21%	62.35%	0.14%
10	48.27%	67.30%	69.62%	2.31%
12	62.29%	58.61%	60.12%	1.50%
16	45.87%	61.27%	66.40%	5.13%
22	68.45%	66.21%	62.95%	-3.25%
23	0.00%	81.94%	78.69%	-3.25%
28	100.00%	—	69.05%	—
30	73.92%	64.66%	58.38%	-6.27%

Finally, the Trump precincts in the area become extremely well sorted. The Democratic districts in the area: 16 and 23, have only 20 Trump-won precincts between them, as opposed to 60 in the Benchmark Plan.

Table 17: Trump-won VTDs, Dallas Senate Districts						
District	Last R Sen. %	# Trump Precincts, Old Lines	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
2	59.35%	13	78	1.06%	6.38%	5.31%
8	51.18%	70	115	5.72%	9.40%	3.68%
9	54.03%	130	200	10.63%	16.35%	5.72%
10	48.27%	124	198	10.14%	16.19%	6.05%
12	62.29%	169	159	13.82%	13.00%	-0.82%
16	45.87%	56	14	4.58%	1.14%	-3.43%
22	68.45%	218	205	17.83%	16.76%	-1.06%
23	0.00%	4	6	0.33%	0.49%	0.16%
24	69.54%	50	—	4.09%	—	—
28	100.00%	24	28	1.96%	2.29%	0.33%
30	73.92%	365	220	29.84%	17.99%	-11.86%

Our maps show this as well. The 16th and 23rd districts reflect few Trump-won precincts, while the remaining Trump-won precincts are distributed across the Republican districts in the area; most of the remaining Trump-won precincts are located in enclaves that would be hard to reach without cutting through a swath of Democratic territory.

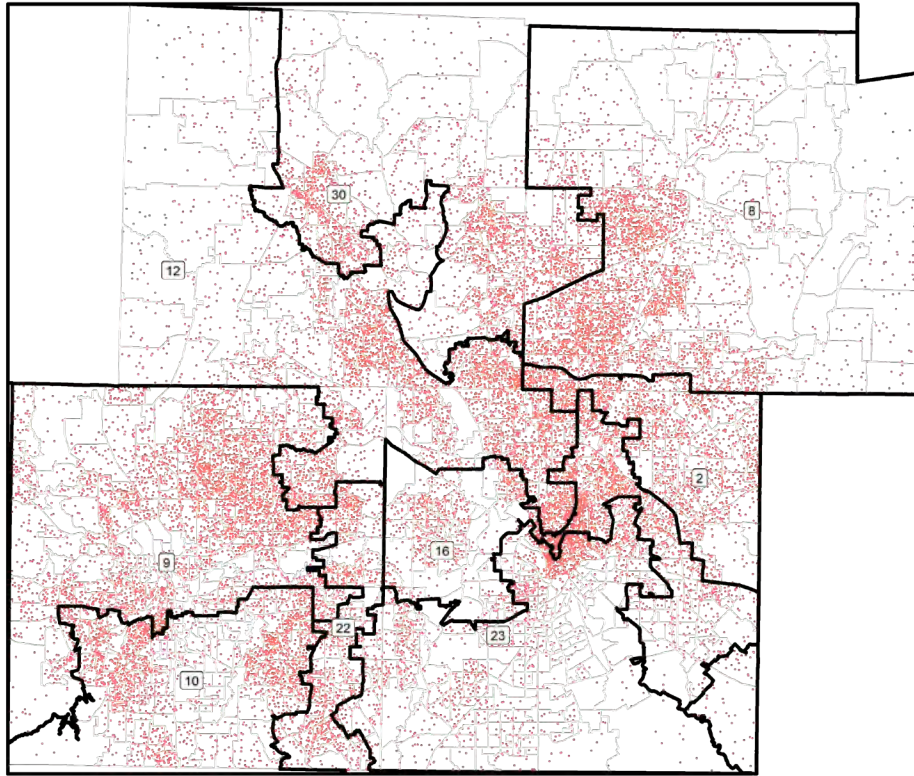
Fig. 104:



Likewise, looking at the dotplots, we again see that White populations appear to be broadly distributed. In particular, the White cluster in the center of Dallas is split between the District by party, not by race.

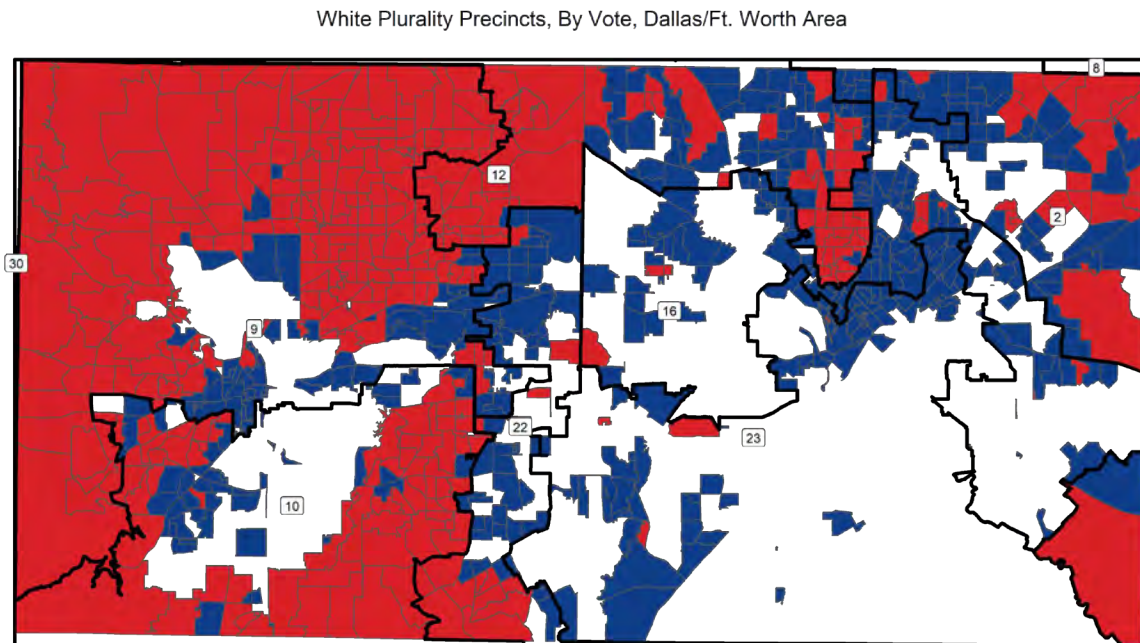
Fig. 105

White Population of Congressional Districts, Dallas/Ft. Worth Area
Each Dot = 100 Citizens



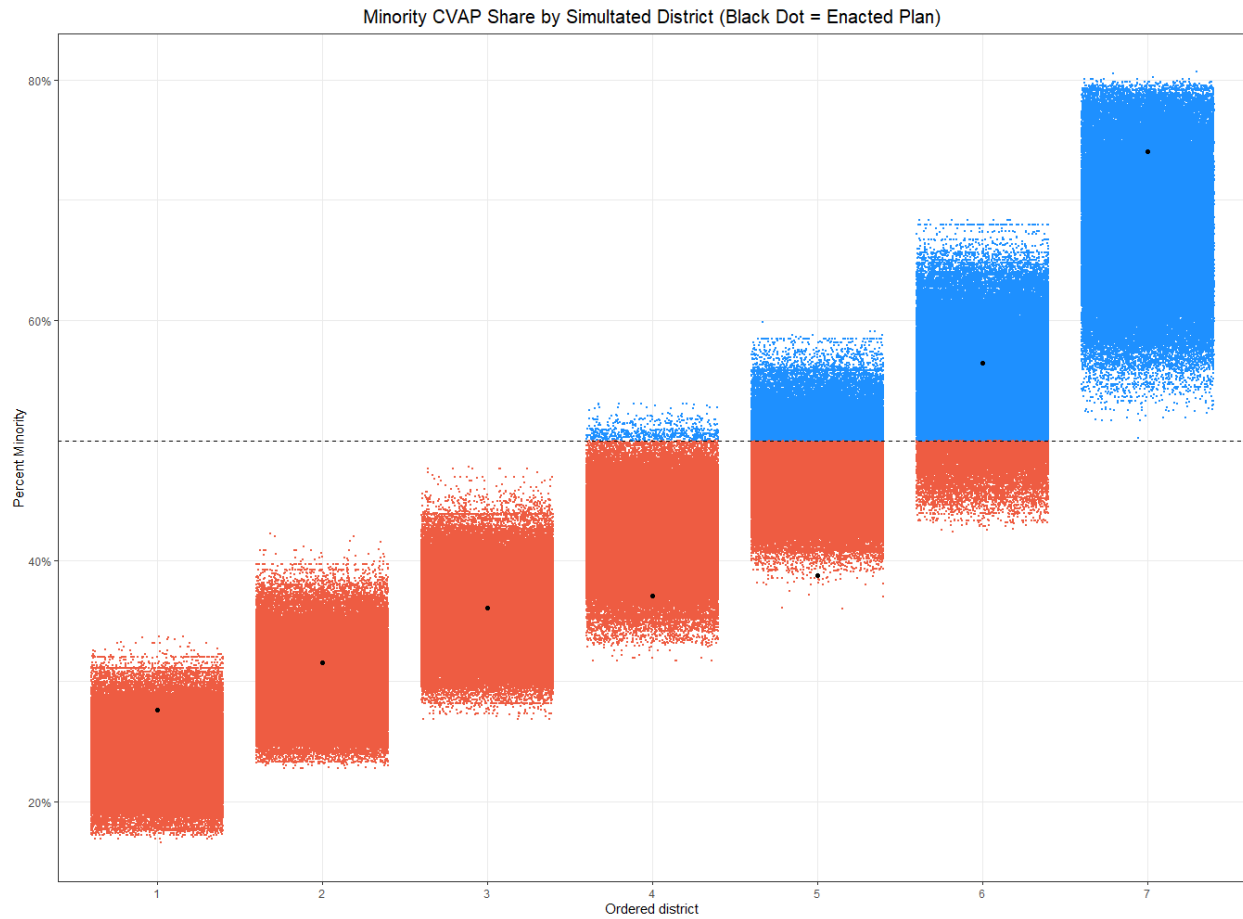
We also can look at the fate of the non-Hispanic White precincts in the area, that are shaded by vote share. As you can see, districts do not appear to be split by whether a precinct is White plurality or not. Instead, in many cases districts appear to be divided by whether a precinct voted for Trump or not. This is particularly apparent in the White cluster in central Dallas that we have discussed before. Note too that the salient of the 22nd into Tarrant County actually takes in a large number of White plurality districts that voted for Biden.

Fig. 106:



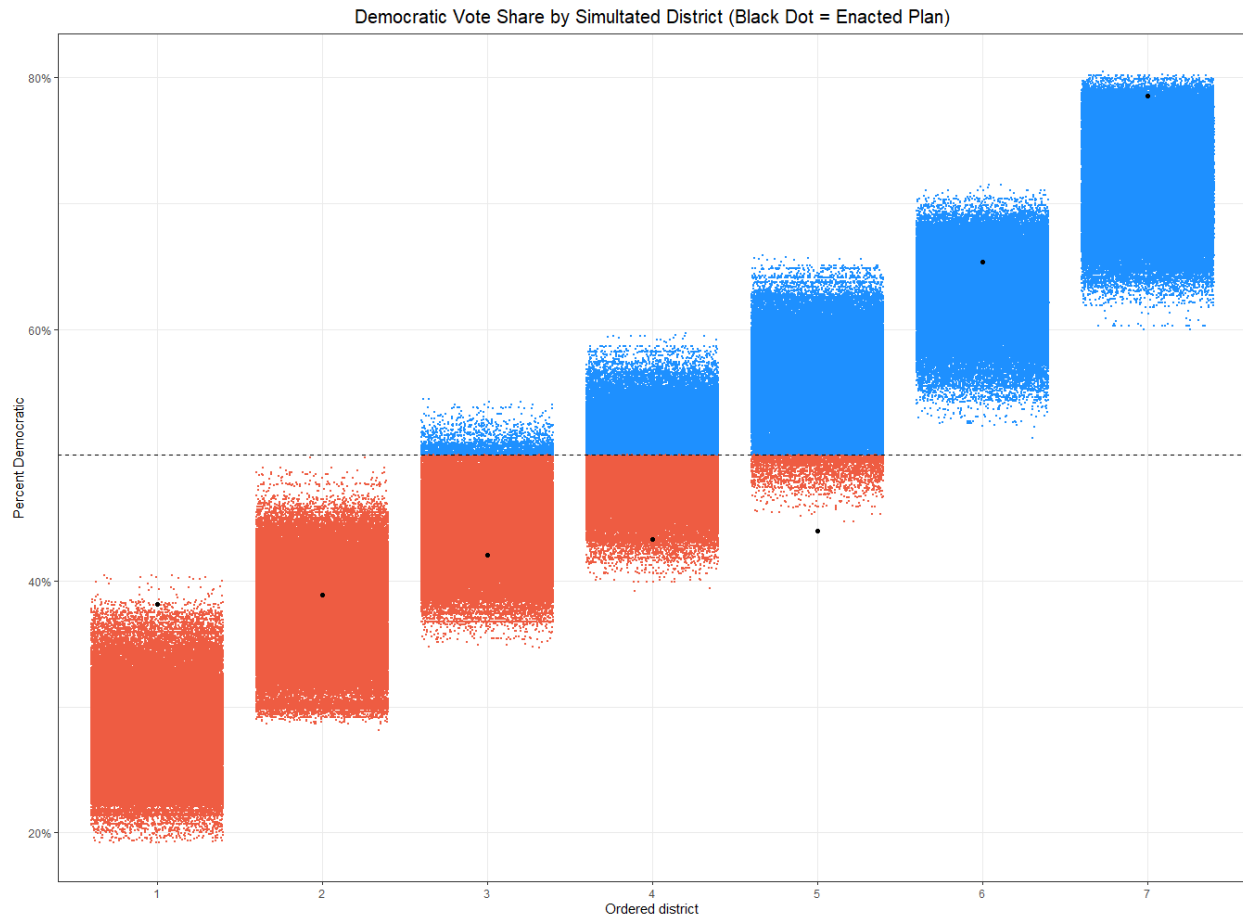
Finally, in reviewing the racial outcomes of the simulations for the area, it appears that the maps are drawn using approximately the same distribution of districts as Dr. Duchin's simulations. While the particular CVAPs in the 4th and 5th districts are different than the politically neutral ensemble would predict, there are as many minority-majority districts as politically and racially neutral ensembles would predict.

Fig. 107



When we look at politics, however, it appears two Biden-won districts that the politically neutral ensemble would expect are instead Trump-won districts that either hew to the Republican end of the ensemble or fall out of it entirely. We see the same type of “sill” that Dr. Duchin describes: the Democratic vote shares in the 4th and 5th most Republican district are less Democratic than we would expect. This is consistent with a partisan political draw.

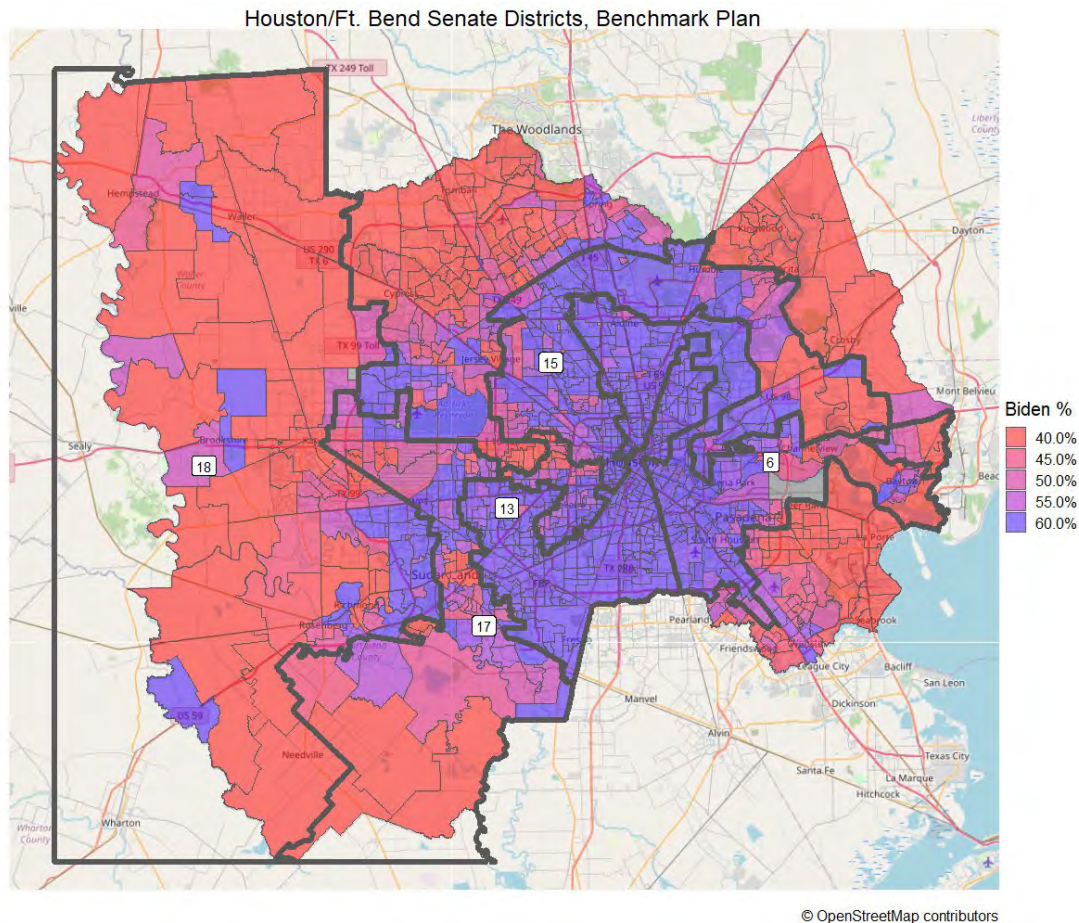
Fig. 108



B. Harris County (S.D. 6, 13, 15, 17, 18)

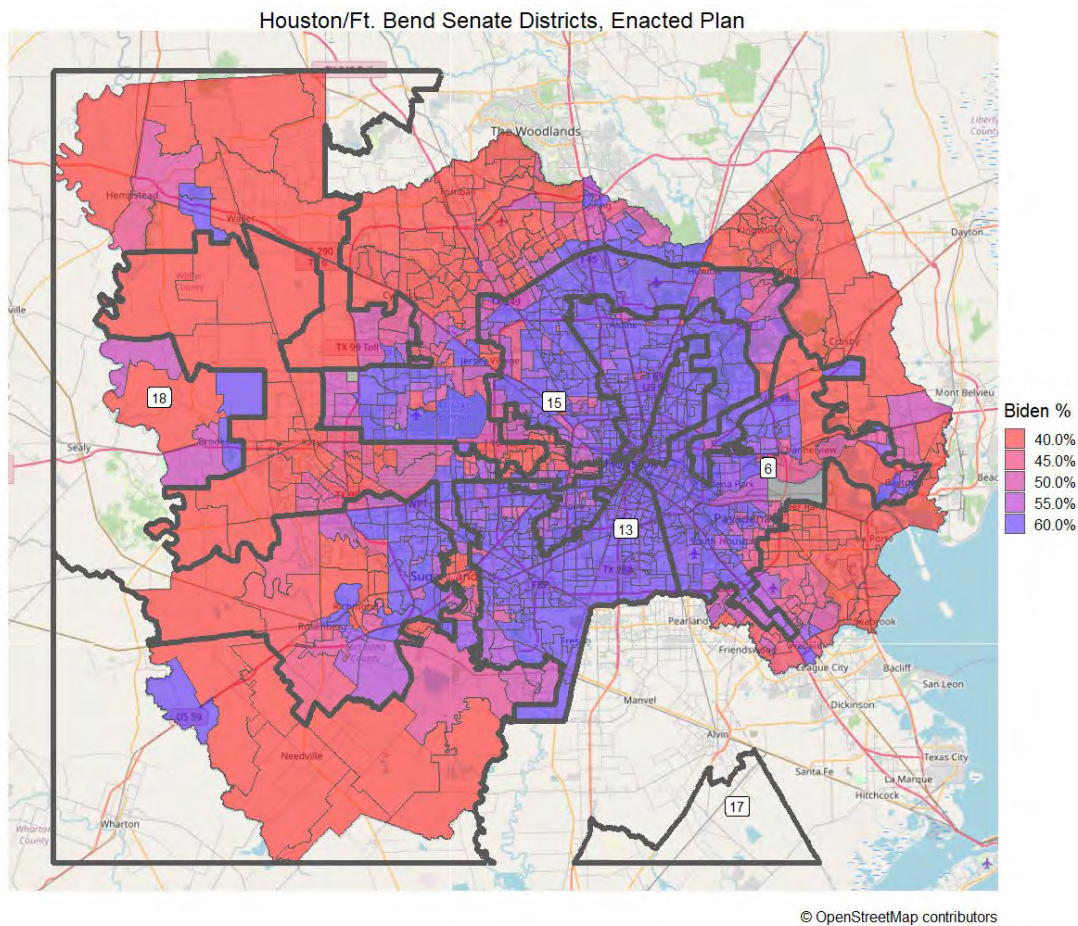
As with Dallas County, the data from Harris County also appear consistent with partisan districting. The background here is similar as well. In 2018, Republicans saw the state Senator from District 17 survive a close contest. Trump's vote share in that district fell to just 48% in 2020. The district includes much of the territory of the Benchmark Congressional 7th District (see above), and the terrain in the portions of the district around Bellaire shifted under the district's feet similarly. The Republican Senator survived, however, probably only because the district extends through a narrow neck in Fort Bend County to the outskirts of Brazoria County, and in doing so picks up additional Republican areas.

Fig. 109



The remap improves Republican performance in the 17th District to 59%. It does so by reconfiguring the 7th, ceding the areas around Rice University to the 15th, and picking up solidly red areas in western Tarrant County and Waller County. Democratic areas in the west of Sugarland remain in the 18th District, which remains overwhelmingly Republican (Trump's vote share was 59.7% here).

Fig. 110



If we take a broader view of the districts around Houston than does Dr. Duchin, we see a familiar story playing out. The only marginal districts in this area were 7 and 17. Both saw a reduction in their share of Biden precincts within their boundaries; in the case of the 17th District, significantly so.

Table 18: Biden-won VTDs, Houston/Ft. Bend Senate Districts

District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
3	0	—	0.00%	—	—
4	2	23	0.21%	2.47%	2.26%
5	1	—	0.11%	—	—
6	197	220	21.16%	23.63%	2.47%
7	59	41	6.34%	4.40%	−1.93%
11	29	26	3.11%	2.79%	−0.32%
13	216	225	23.20%	24.17%	0.97%
15	171	201	18.37%	21.59%	3.22%
17	121	40	13.00%	4.30%	−8.70%
18	53	73	5.69%	7.84%	2.15%
20	82	78	8.81%	8.38%	−0.43%
27	—	4	—	0.43%	—

The Biden precincts that remained in the 17th were less heavily Democratic:

Table 19: Biden Share in Biden-Won VTDs, Houston Senate Districts

District	Biden Percent, Benchmark	Biden Percent, Enacted	Change
4	55.55%	61.22%	5.67%
5	60.30%	—	—
6	68.42%	68.65%	0.22%
7	59.85%	59.96%	0.11%
11	61.37%	61.76%	0.39%
13	81.65%	79.46%	−2.19%
15	69.08%	67.29%	−1.80%
17	60.55%	58.49%	−2.06%
18	64.00%	62.92%	−1.08%
20	61.36%	61.36%	−0.00%
27	—	61.36%	—

Finally, the number of Trump precincts remains quite small in the Democratic districts: 6, 13 and 15. At the same time, the number of Trump-won precincts in District 17 increases substantially.

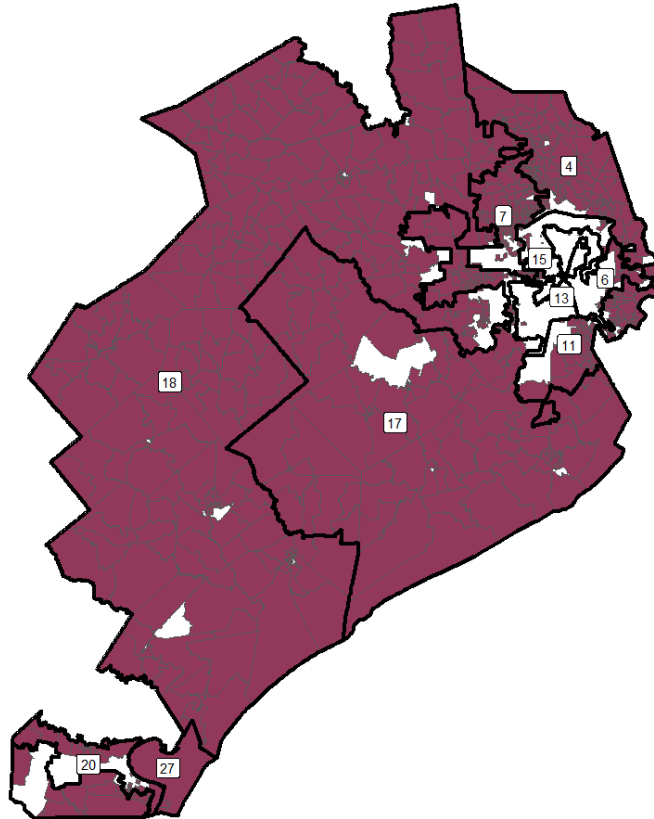
Table 20: Trump-won VTDs, Houston/Ft. Bend Senate Districts

District	# Trump Precincts, Old Lines	# Trump Precincts, Enacted	Percent, Old	Percent, Enacted	Change
3	15	—	1.87%	—	—
4	113	117	14.05%	14.55%	0.50%
5	13	—	1.62%	—	—
6	10	15	1.24%	1.87%	0.62%
7	105	107	13.06%	13.31%	0.25%
11	88	86	10.95%	10.70%	−0.25%
13	1	3	0.12%	0.37%	0.25%
15	30	15	3.73%	1.87%	−1.87%
17	73	158	9.08%	19.65%	10.57%
18	312	258	38.81%	32.09%	−6.72%
20	44	29	5.47%	3.61%	−1.87%
27	—	16	—	1.99%	—

Our familiar maps show the same trend, once again. Looking at the distribution of the Trump precincts, we see that they are well sorted out of districts 15, 13, and 6, with 17 taking on a wide swath of red rural precincts.

Fig. 111

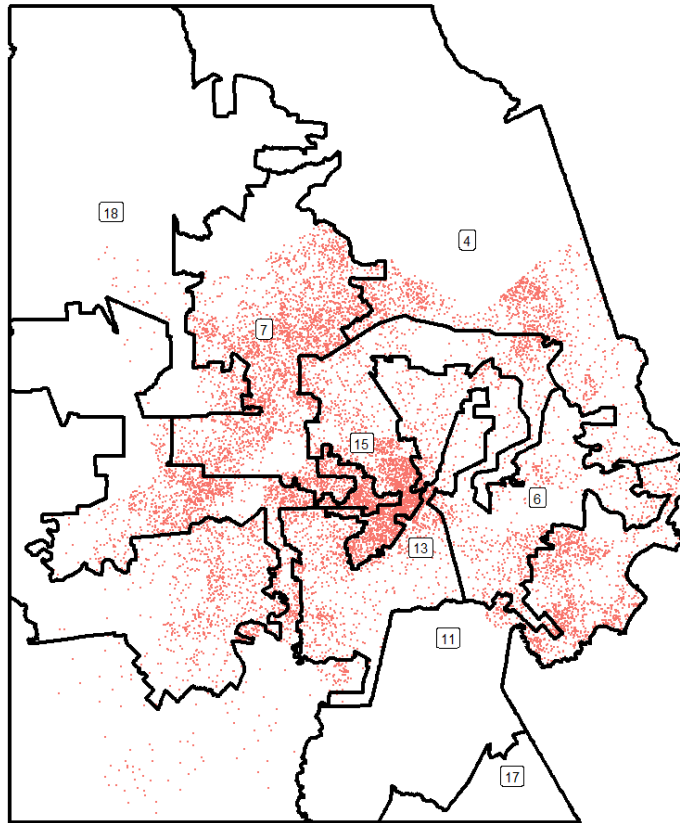
Trump Precincts, By District, Houston/Ft. Bend Area



At the same time, examining the dotplots shows that a large number of White voters are placed in the 16th District, and that there is no clear pattern of segregation of Whites in the map.

Fig. 112

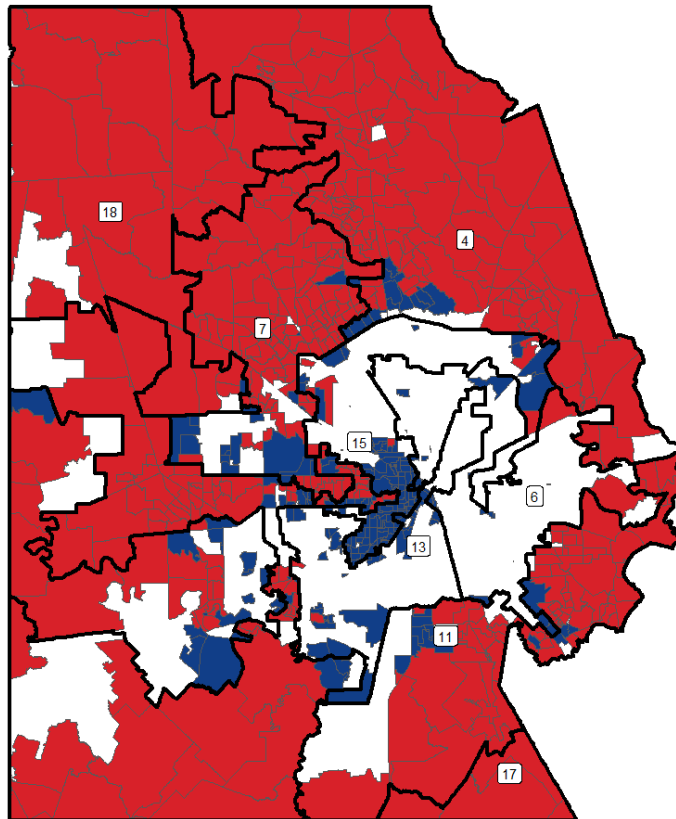
White Population of Congressional Districts, Harris/Ft. Bend Area



Putting the maps together once again, we see that the white plurality precincts are not pushed into one district or the other. Instead, in a pattern repeated in the Sugarland area and in the area around University Place and Bellaire, heavily White precincts that voted for Biden are placed in the Democratic districts, while heavily White precincts that voted for Trump are placed in the Republican districts. This is consistent with the suggestion that politics, rather than race, drove how precincts were placed.

Fig. 113

White Plurality Precincts, By Vote, Houston/Ft. Bend Area



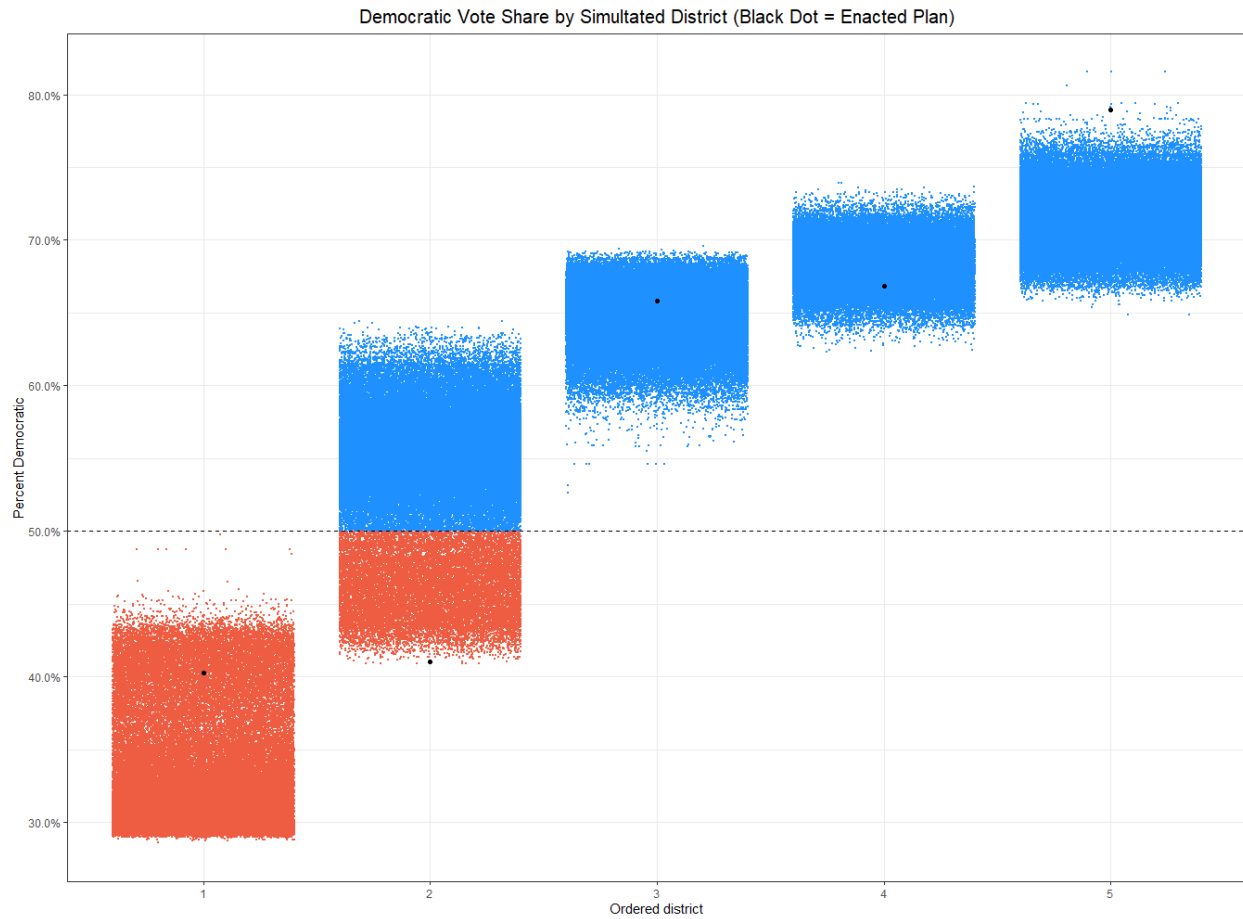
Finally, examining the simulations we see the same thing that we have seen in other instances. The simulation algorithm that I employ produces similar results to Dr. Duchin, with respect to race, suggesting that we are, in fact, drawing from similar distributions of maps.

Fig. 114



Once again, though, we see the same type of pattern emerge with respect to politics, with a district that we would expect to provide about 55% of the vote to Biden driven downward to a district where Biden won around 42% of the vote and almost entirely outside the range of the ensembles. In other words, the simulations reveal that the map is consistent with a partisan intent in drawing.

Fig. 115



C. Demonstration Majority-Minority Districts

a. Dallas/Ft. Worth

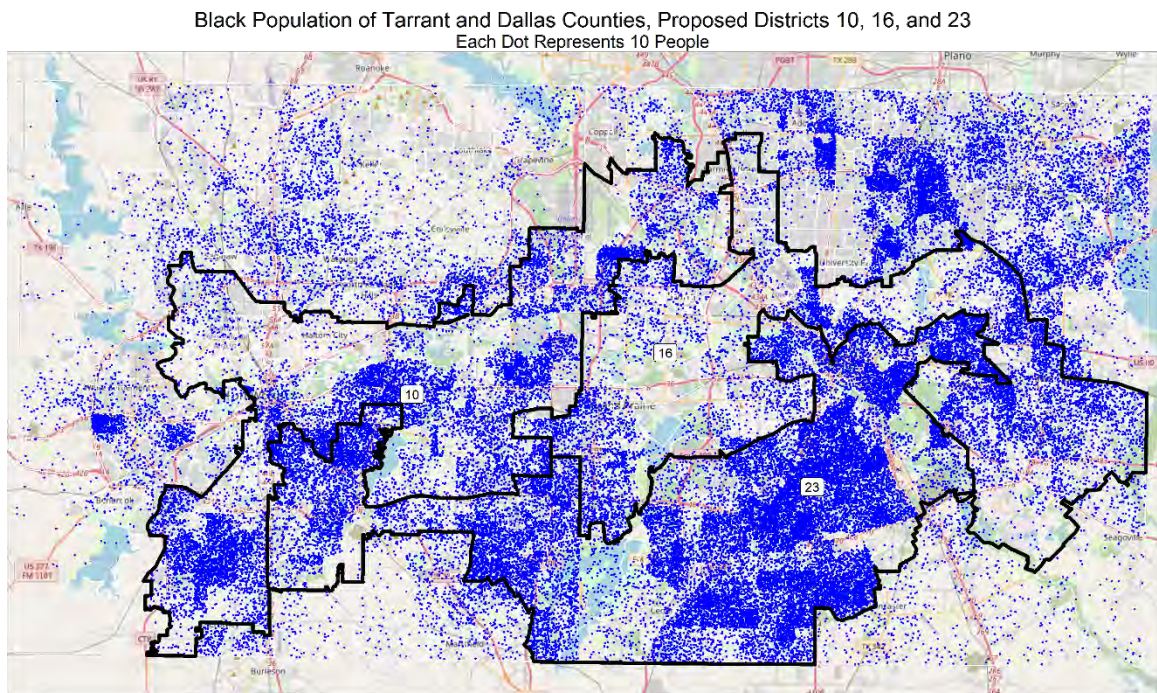
As before, Dr. Duchin offers an alternative map for the Dallas/Ft. Worth Senate districts. As with the Congressional districts, it is unclear that the districts here could reasonably be understood to be compact. Dr. Duchin compares the compactness of her demonstration districts to the compactness of the enacted districts (using Polsby-Popper), but as explained above, that is not necessarily an appropriate comparison.

More importantly, that aggregation would not tell the whole story. The aggregate compactness is achieved by improving compactness in the *majority-White* districts. That is, District 30 has a minority-CVAP of 26.34 in the Enacted Plan, and 24.71 in Dr. Duchin's plan. But her District 30 has a helpful effect on overall compactness, as Proposed District 30 has a Polsby-Popper of 0.244, while the Enacted District 30 has a Polsby-Popper of just 0.14.

If we look at the three Proposed majority minority-CVAP districts, they have Polsby-Popper scores of 0.082, 0.093 and 0.109. Only one district in the Dallas Enacted Map has a lower Polsby-Popper. In fact, were they included in the Senate plan, they would represent the fourth, fifth and eighth least-compact districts (technically the ranks would be one lower, since they would replace the existing 16th).

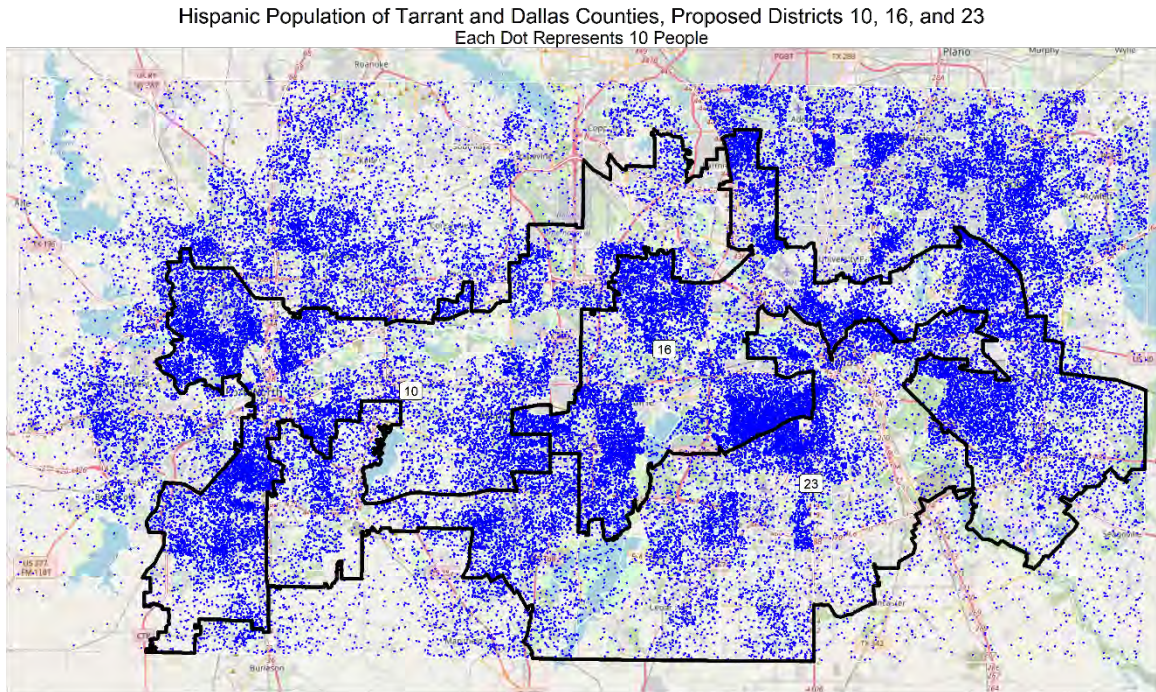
Moreover, even if the districts are compact, the minority groups within them are not. Consider the Black population of Dallas and Tarrant counties. First, note that these demonstration district boundaries are so distorted that they defy even a clever shape description (perhaps 23 resembles the Loch Ness Monster?). Regardless, all three districts sprawl across the Dallas metroplex. District 10 takes in clusters of Black citizens in Irving, splits the Black population in eastern Ft. Worth, and then takes in a Black cluster southwest of downtown Fort Worth. The 23rd includes most of the Black population of Dallas, before crossing over Hispanic areas of Grand Prairie and into Arlington, before finally arriving in eastern Fort Worth as well. The 16th connects Black citizens in eastern Dallas County with citizens in Grand Prairie and Arlington.

Fig. 116



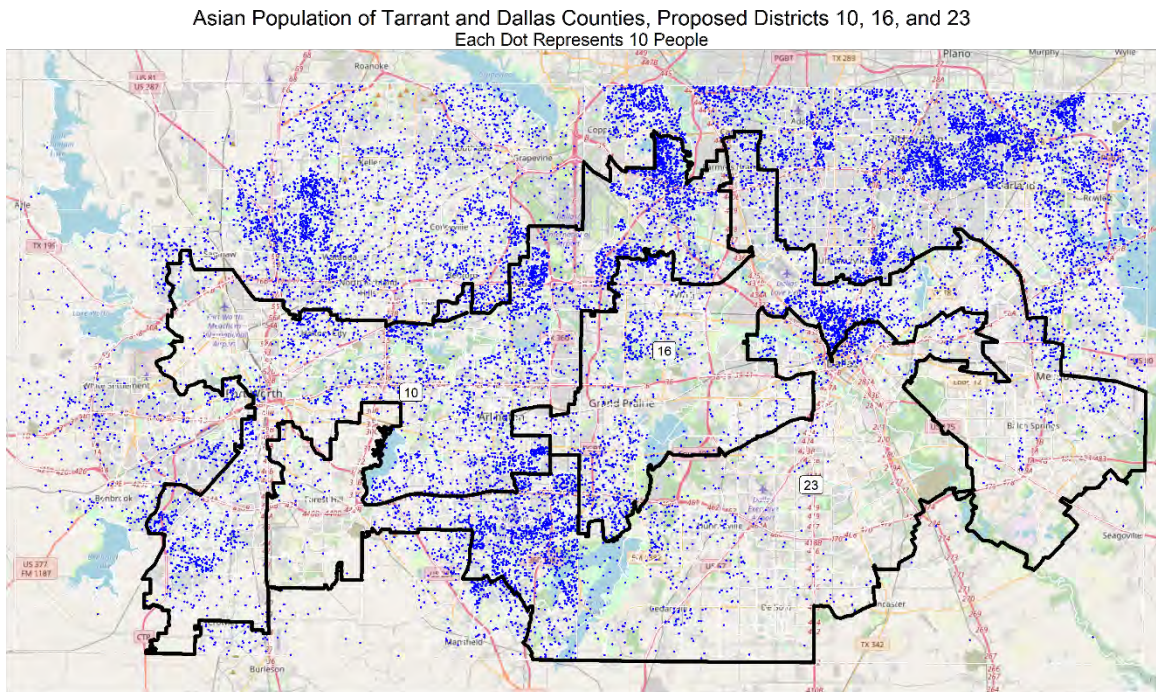
While Hispanic citizens are less dispersed in the proposed districts, the 16th district does take in three distinct clusters in western Dallas County, while an arm reaches up to Hispanic voters in Carrollton and Farmer's Branch. The district then swings over to capture yet another cluster in Mesquite, Garland, and southeastern Dallas.

Fig. 117



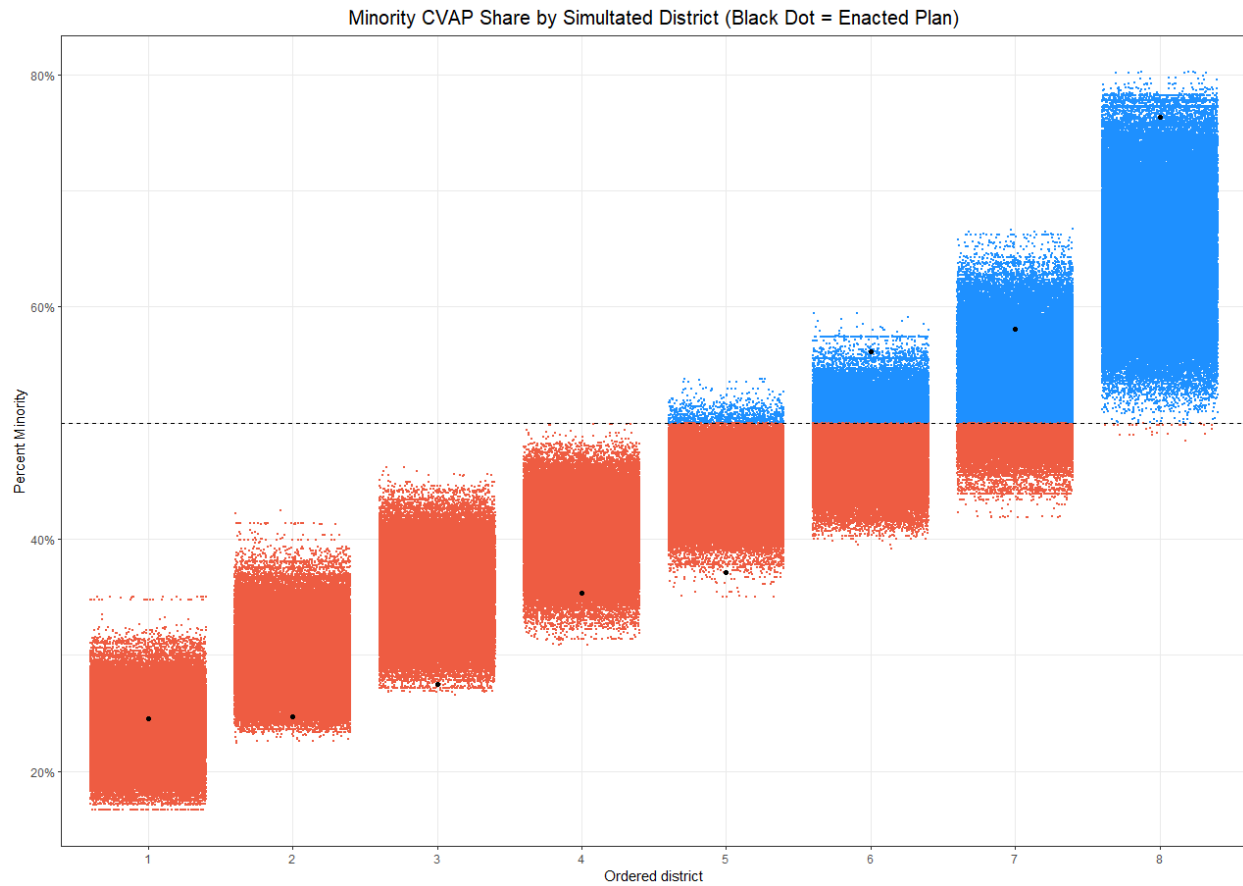
Finally, Asian citizens are likewise brought in with arms jutting into various portions of the districts, across which those citizens are generally spread out.

Fig. 118



Finally, we can once again compare the proposed plans to the ensemble and note that the proposed maps show the same pattern of sills that Dr. Duchin describes in her section on racial gerrymandering.

Fig. 119



VII. State House Districts

The complaints about the state House suffer from the same weaknesses, as explored below. Based on my review, it is my view that the districting choices made in the State House map appear to be consistent with a political explanation. Because much of this ground has been covered, and due to the large number of districts challenged, I will be brief in my discussion here. In addition, because I am confident at this point that the redist software is producing simulation results similar to those produced by Dr. Duchin's algorithm, I am reducing the number of simulations to 10,000, which is more comparable to what Dr. Imai and I have typically utilized in previous litigation employing this technique.

A. Tarrant House (H.D.s 90-99, 101).

In 2018 and 2020, Tarrant County Republican incumbents had relatively close calls in districts 92, 93, 94, 96 and 97. The Enacted Map is consistent with Republicans ceding district 92, and improving Republican performance in the remaining districts. As Table 21 demonstrates, Trump's vote share in district 92 plummets to 37.86%, while the number of Biden-won VTDs in the remaining districts are reduced significantly, while Trump's vote share increases.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
90	D	25.96%	29.93%	69	83	20.47%	24.13%	3.65%
91	R	60.57%	60.16%	1	3	0.30%	0.87%	0.58%
92	R	50.07%	37.86%	23	47	6.82%	13.66%	6.84%
93	R	51.98%	57.30%	33	8	9.79%	2.33%	-7.47%
94	R	50.88%	54.76%	21	19	6.23%	5.52%	-0.71%
95	D	24.01%	23.57%	72	73	21.36%	21.22%	-0.14%
96	R	49.27%	54.89%	23	13	6.82%	3.78%	-3.05%
97	R	50.92%	54.89%	32	18	9.50%	5.23%	-4.26%
98	R	63.05%	61.55%	0	6	0.00%	1.74%	1.74%
99	R	61.32%	58.55%	16	24	4.75%	6.98%	2.23%
101	D	31.50%	32.32%	47	50	13.95%	14.53%	0.59%

Likewise, in the Biden-won precincts that remain, Biden’s vote share declines in the “close call” districts.

Table 22: Biden Share in Biden-Won VTDs, Tarrant House Districts

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	Percent, Benchmark	Percent, Enacted	Change
90	D	25.96%	29.93%	74.26%	70.09%	-4.17%
91	R	60.57%	60.16%	65.61%	51.12%	-14.49%
92	R	50.07%	37.86%	58.32%	64.00%	5.68%
93	R	51.98%	57.30%	58.22%	52.84%	-5.37%
94	R	50.88%	54.76%	61.41%	54.84%	-6.57%
95	D	24.01%	23.57%	76.11%	76.44%	0.33%
96	R	49.27%	54.89%	64.67%	60.87%	-3.80%
97	R	50.92%	54.89%	59.71%	56.37%	-3.35%
98	R	63.05%	61.55%	—	56.51%	—
99	R	61.32%	58.55%	56.26%	61.49%	5.23%
101	D	31.50%	32.32%	68.50%	67.68%	-0.82%

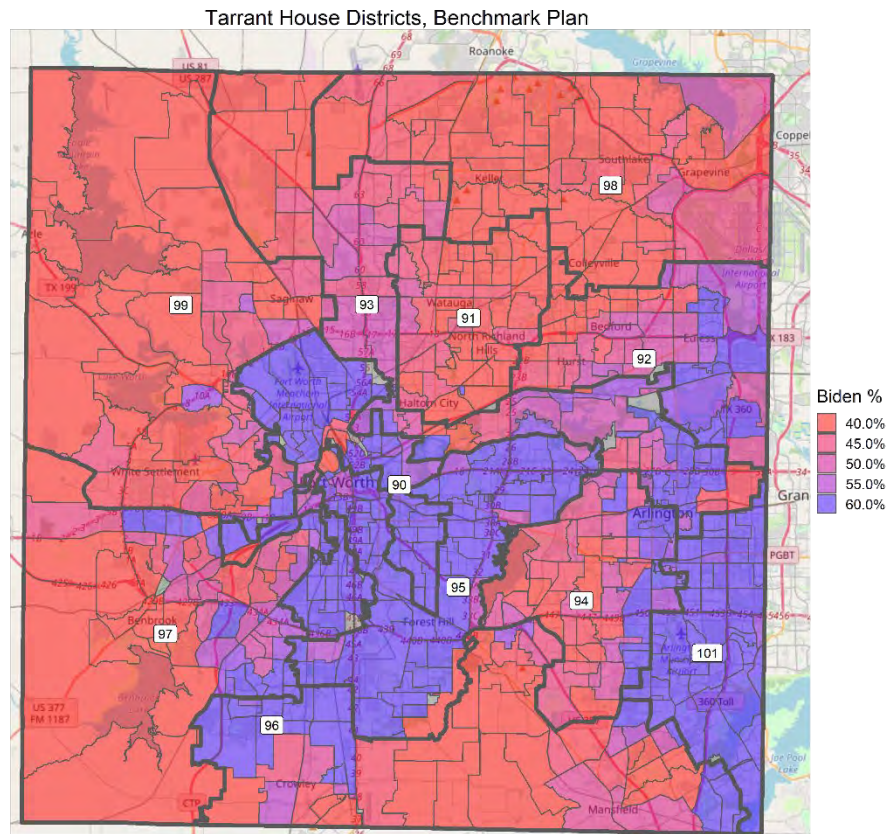
Finally, the Trump-won VTDs are almost completely removed from the four Biden districts, with just 10 VTDs between them, down from 36.

Table 23: Trump-won VTDs, Tarrant House Districts

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
90	D	25.96%	29.93%	6	3	1.86%	0.92%	-0.93%
91	R	60.57%	60.16%	48	52	14.86%	16.00%	1.14%
92	R	50.07%	37.86%	27	6	8.36%	1.85%	-6.51%
93	R	51.98%	57.30%	33	32	10.22%	9.85%	-0.37%
94	R	50.88%	54.76%	35	50	10.84%	15.38%	4.55%
95	D	24.01%	23.57%	3	1	0.93%	0.31%	-0.62%
96	R	49.27%	54.89%	30	43	9.29%	13.23%	3.94%
97	R	50.92%	54.89%	30	39	9.29%	12.00%	2.71%
98	R	63.05%	61.55%	58	51	17.96%	15.69%	-2.26%
99	R	61.32%	58.55%	53	48	16.41%	14.77%	-1.64%
101	D	31.50%	32.32%	0	0	0.00%	0.00%	0.00%

Examining the map of the Benchmark Plan, we can see that District 92 appears to be based in a heavily Democratic cluster near Euless and Grand Prairie. District 93 is in purpling suburban precincts in northern Ft. Worth, while District 94 has a strip of heavily blue precincts in the east. District 96 takes in the heavily blue southern tier of Fort Worth, while District 97 appears to have an arm that juts into blue segments of Fort Worth south of Downtown.

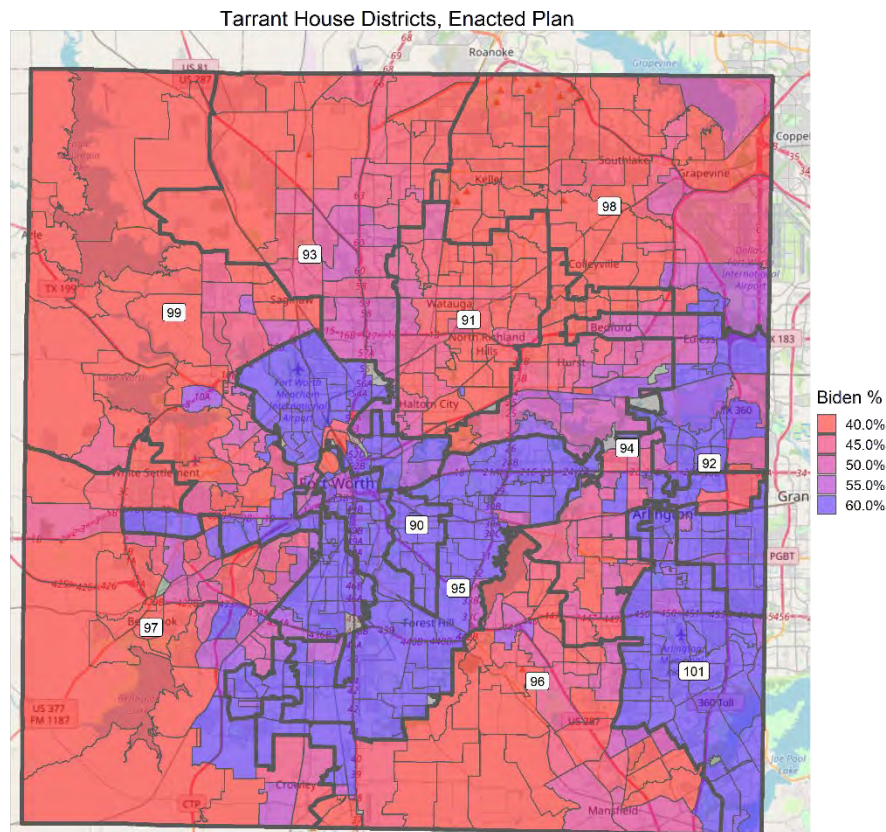
Fig. 120:



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The Enacted Plan eschews all of those features. The 92nd is shifted further downward, such that it now includes almost all of the blue precincts in northeastern Tarrant. The 101st shifts up into Arlington, and now cleanly divides the red shaded precincts from purple. The 95th swings outward, and once again appears to divide red from purple neatly. The 93rd appears to be pushed out into the outskirts of Tarrant County, while the 96th is then removed from blue areas almost entirely.

Fig. 121

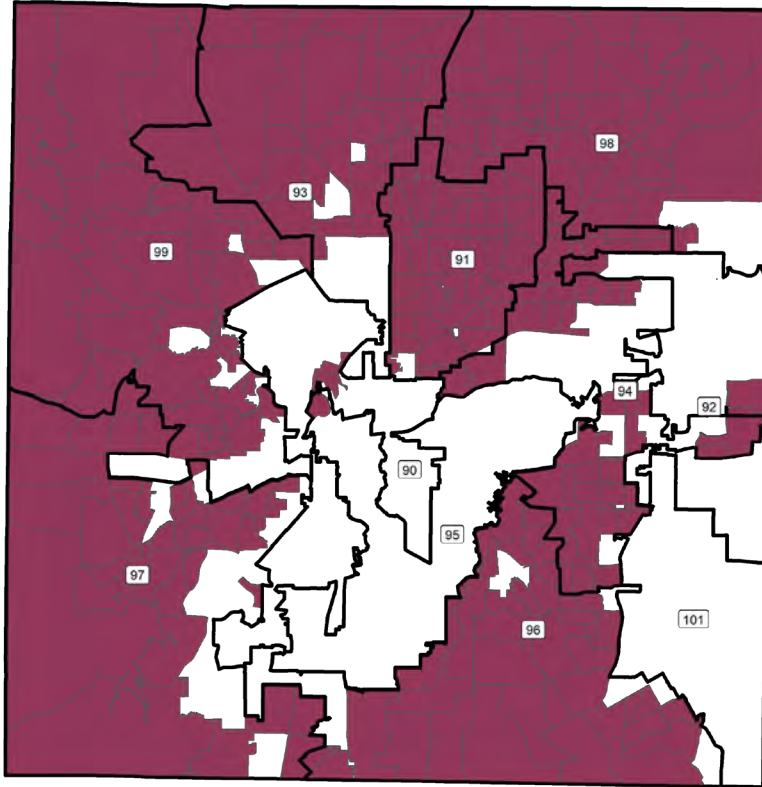


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We can see this better by once again looking only at Trump-won precincts in Tarrant County. District 95 in particular is drawn almost perfectly along the “Trump-Biden” divider, while District 101 neatly attaches to the boundary as well.

Fig. 122

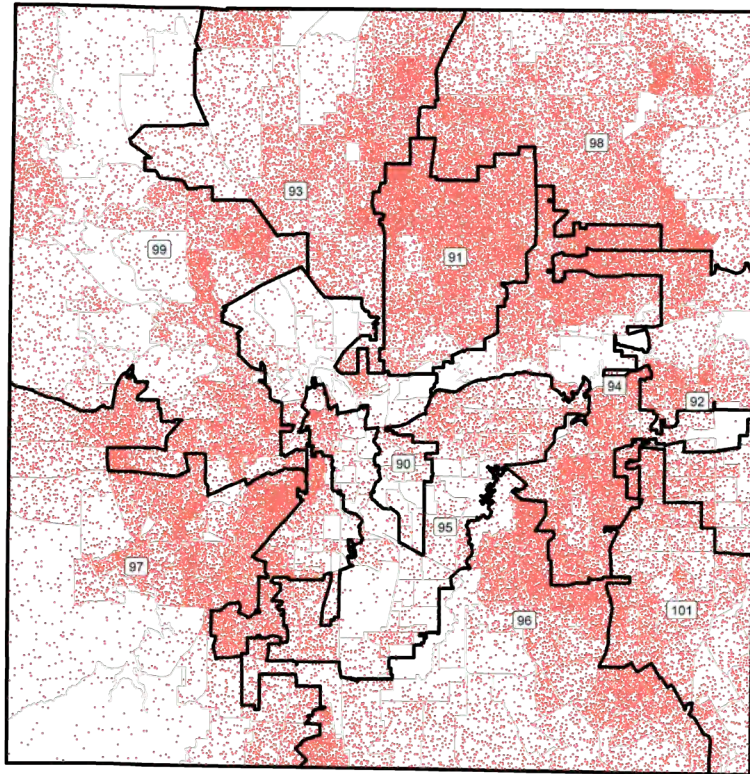
Trump Precincts, By District, Fort Worth Area, House



But once again, looking at our dotplot, we can see that the district lines do not follow racial divisions nearly as closely. In fact, District 92 has a high density cluster of White voters within it, as does District 95.

Fig. 123

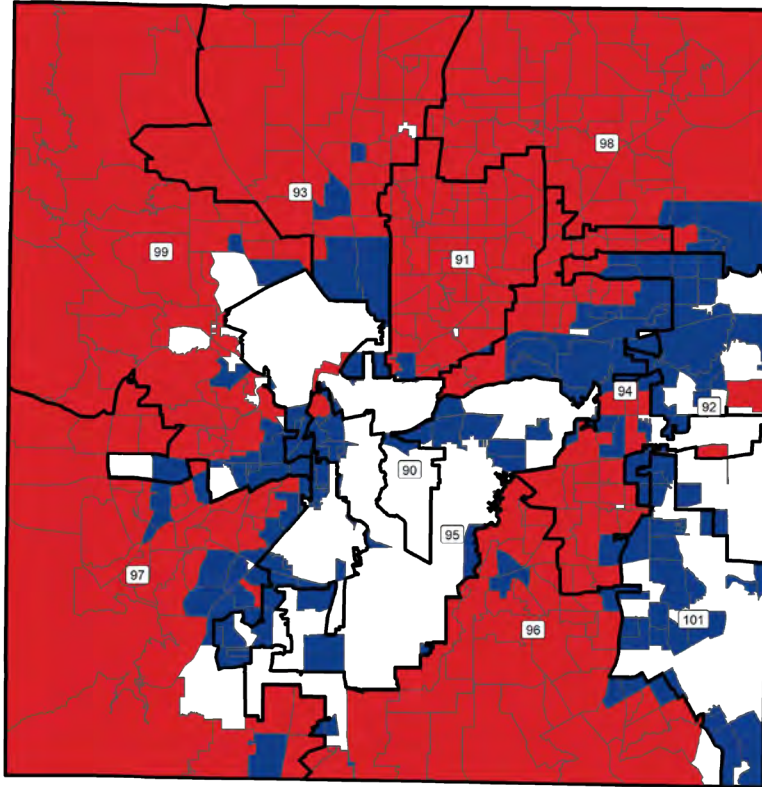
White Population of Congressional Districts, Tarrant County
1 dot = 100 citizens



Putting it together, we can see that the non-Hispanic White precincts do not neatly divide between the districts on the basis of their race. Instead, Biden precincts are placed into districts 90, 92, 95 and 101, regardless of the numerically dominant race within the precinct.

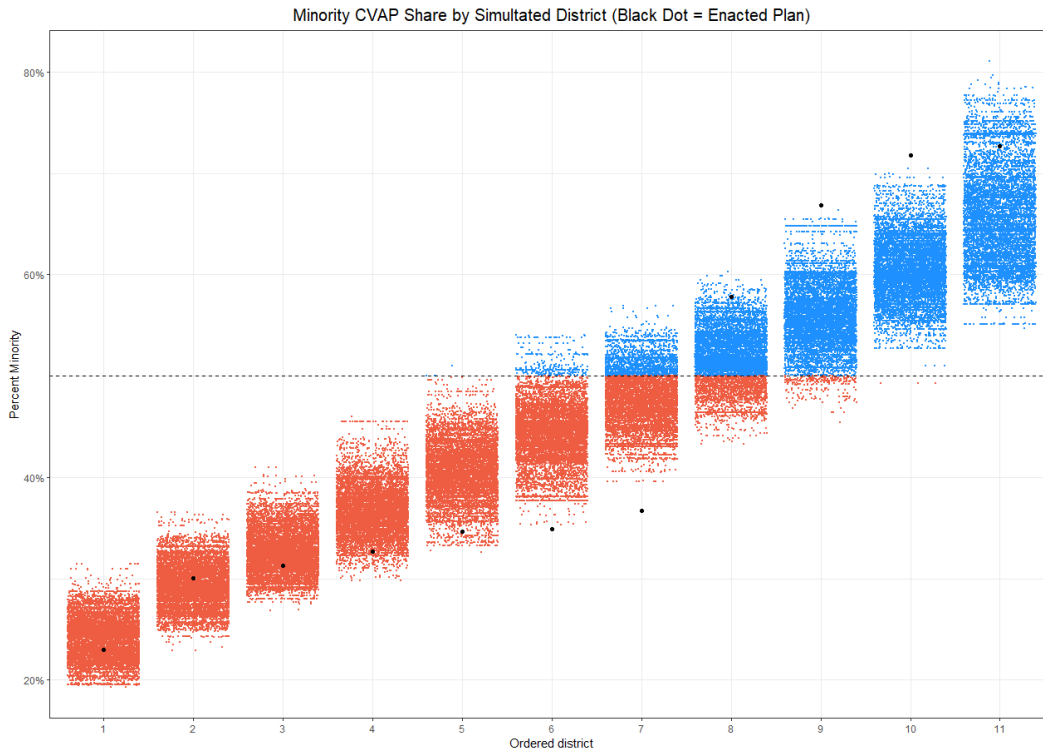
Fig. 124

White Plurality Precincts, By Vote, Fort Worth Area, House



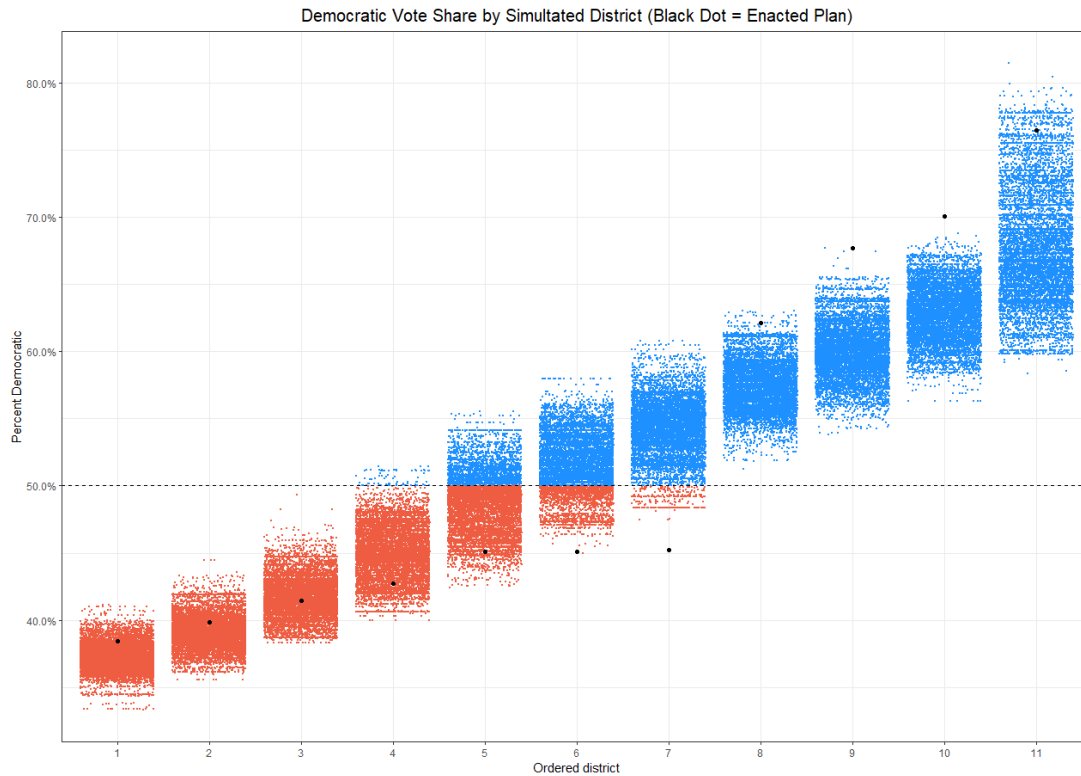
Turning once again to the simulations, the SMC approach produces the same effect that Dr. Duchin produces. However, it does not appear that the map makers eliminated a minority-majority district that that we would expect to be naturally occurring (even accepting all of Dr. Duchin's premises).

Fig. 125



As with other areas, however, when we examine politics, it becomes appears that the legislature changed the partisan makeup of multiple districts that we would expect Joe Biden to have won in a neutral draw, while almost half of the districts present as political outliers. Once again, this appears to be consistent with improving Republican performance in these districts.

Fig. 126:



B. Dallas (H.D. 100, 102-105, 108-115)

In the past two election cycles, the Republican Party of Dallas experienced significant electoral defeats. Republicans sent 7 members to the state House from Dallas County after the 2012 election. By the end of the decade, the only districts in Dallas County that still elected Republicans were districts 108 and 112. Even these districts were marginal; both incumbents had low-single digit wins in 2018 and 2020 (the margin in District 112 was just over 200 votes).

The changes in the area are consistent with attempting to remedy this state of affairs. We begin with our tables. As we can see, the 108th and 112th Districts push Trump's vote share up (barely) above 50%. The number of Biden precincts in those districts is reduced.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
100	D	20.29%	15.13%	70	73	10.32%	10.27%	-0.06%
102	D	39.87%	34.25%	41	43	6.05%	6.05%	0.00%
103	D	23.78%	26.45%	64	75	9.44%	10.55%	1.11%
104	D	23.67%	30.11%	52	57	7.67%	8.02%	0.35%
105	D	41.51%	38.79%	47	47	6.93%	6.61%	-0.32%
107	D	40.43%	35.69%	43	48	6.34%	6.75%	0.41%
108	R	42.92%	50.35%	47	41	6.93%	5.77%	-1.17%
109	D	16.31%	20.14%	61	49	9.00%	6.89%	-2.11%
110	D	14.55%	13.87%	50	67	7.37%	9.42%	2.05%
111	D	19.85%	20.08%	54	55	7.96%	7.74%	-0.23%
112	R	45.50%	50.23%	27	23	3.98%	3.23%	-0.75%
113	D	44.47%	40.05%	28	35	4.13%	4.92%	0.79%
114	D	40.64%	30.72%	53	62	7.82%	8.72%	0.90%
115	D	40.92%	40.40%	41	36	6.05%	5.06%	-0.98%

Likewise, the Biden vote share in the Biden VTDs drops in both the 108th and 112th. In other words, there are fewer Biden-won VTDs, and those that there are become more purple than blue.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	Percent, Benchmark	Percent, Enacted	Change
100	D	20.29%	15.13%	79.72%	84.87%	5.15%
102	D	39.87%	34.25%	61.88%	65.75%	3.87%
103	D	23.78%	26.45%	76.22%	73.57%	-2.65%
104	D	23.67%	30.11%	76.33%	71.84%	-4.50%
105	D	41.51%	38.79%	59.66%	61.71%	2.05%
107	D	40.43%	35.69%	60.33%	65.18%	4.85%
108	R	42.92%	50.35%	65.32%	56.78%	-8.54%
109	D	16.31%	20.14%	83.69%	80.69%	-3.00%
110	D	14.55%	13.87%	85.49%	86.18%	0.70%
111	D	19.85%	20.08%	80.21%	79.92%	-0.29%
112	R	45.50%	50.23%	59.62%	56.02%	-3.60%
113	D	44.47%	40.05%	61.85%	60.92%	-0.93%
114	D	40.64%	30.72%	63.38%	69.28%	5.90%
115	D	40.92%	40.40%	61.00%	61.60%	0.60%

Finally, we see the number of Trump-won VTDs in the 108th and the 112th is increased significantly, such that these two districts now have over 60% of the Trump-won VTDs in all of Dallas County contained within their boundaries.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
100	D	20.29%	15.13%	0	0	0.00%	0.00%	0.00%
102	D	39.87%	34.25%	5	0	5.88%	0.00%	-5.88%
103	D	23.78%	26.45%	1	2	1.18%	2.33%	1.15%
104	D	23.67%	30.11%	0	4	0.00%	4.65%	4.65%
105	D	41.51%	38.79%	7	4	8.24%	4.65%	-3.58%
107	D	40.43%	35.69%	6	3	7.06%	3.49%	-3.57%
108	R	42.92%	50.35%	17	33	20.00%	38.37%	18.37%
109	D	16.31%	20.14%	0	2	0.00%	2.33%	2.33%
110	D	14.55%	13.87%	2	3	2.35%	3.49%	1.14%
111	D	19.85%	20.08%	3	1	3.53%	1.16%	-2.37%
112	R	45.50%	50.23%	8	19	9.41%	22.09%	12.68%
113	D	44.47%	40.05%	11	4	12.94%	4.65%	-8.29%
114	D	40.64%	30.72%	15	0	17.65%	0.00%	-17.65%
115	D	40.92%	40.40%	10	11	11.76%	12.79%	1.03%

Figures 127 and 128 show how this was accomplished. In the Benchmark Plan, the 108th stretched into downtown Dallas and Deep Ellum, freeing up reddish purple precincts to the north for the 114th. The 112th extended into Garland, which was then (as noted above) a Republican suburb of Dallas. In the new version, the 108th loses most of its downtown area, extending northward to take in the aforementioned reddish purple precincts. For its part, the 12th District now comes out of Garland and is pushed further to the outskirts of Dallas County, gathering up the remaining red precincts on the perimeter.

Fig. 127

Dallas House Districts, Benchmark Plan

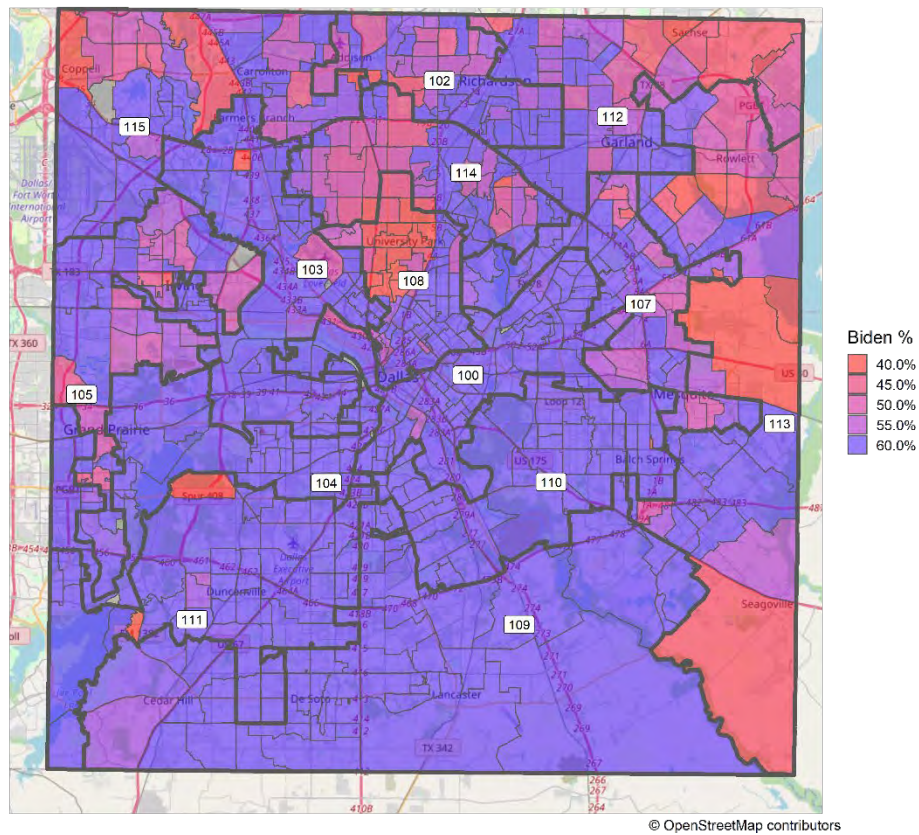
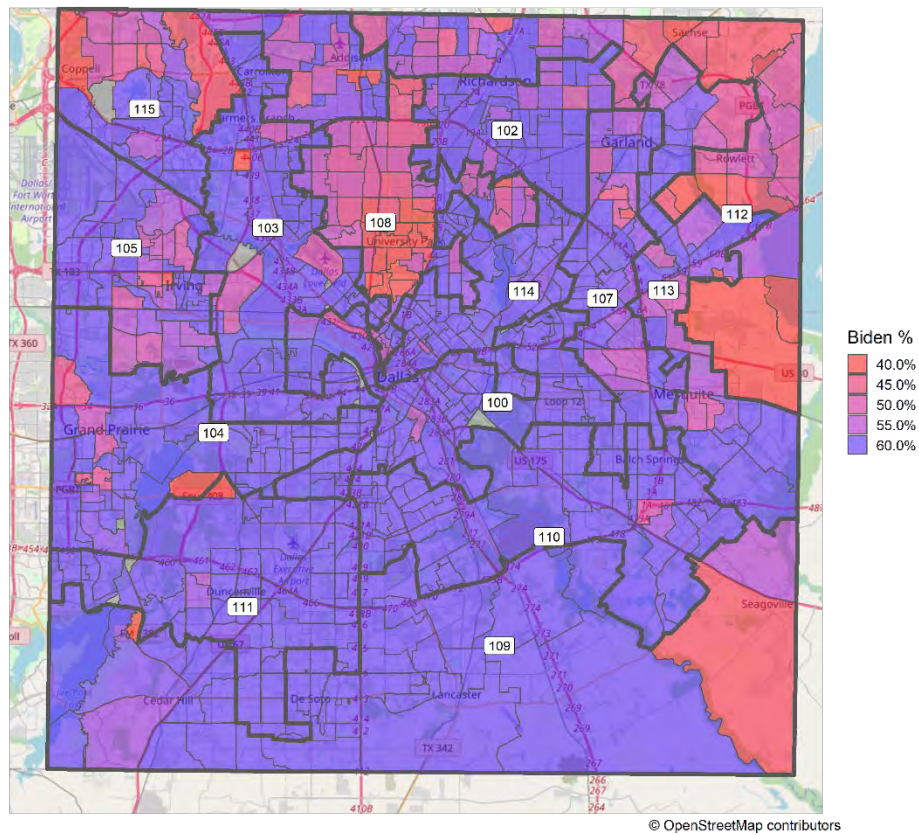


Fig. 128

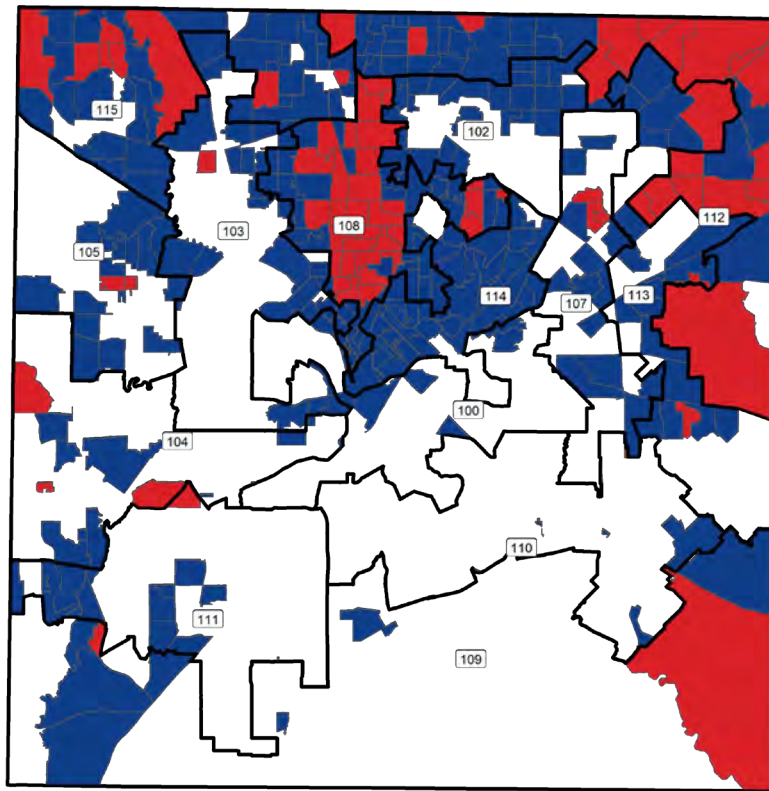
Dallas House Districts, Enacted Plan



We can examine the locations of the precincts in Dallas County that contain a White plurality. Here, they are depicted in once again in “Trump Red” and “Biden Blue.” They appear to be spread across multiple districts, including broad clusters in some districts. As a result, the Dallas County districts do not appear to contain patterns consistent with sorting by race. They do, however, contain patterns of sorting White voters by partisanship and, in particular, with Trump-won precincts.

Fig. 128:

White Plurality Precincts, By Vote, Dallas County, House

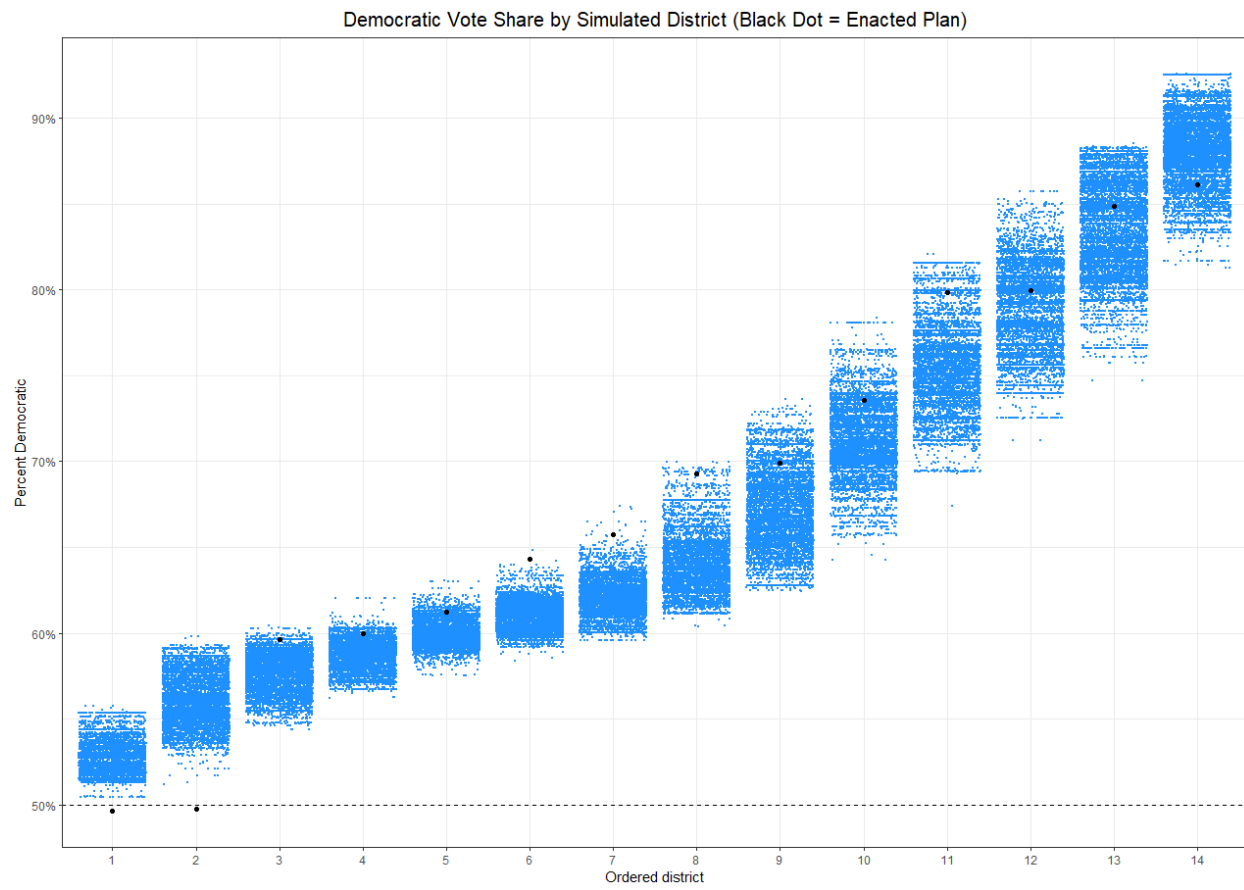


With respect to Dr. Duchin’s findings, once again, the simulations I employ replicate her findings with respect to race. Notably, though, the Enacted Map does not decrease the number of minority-majority districts. In fact, the Enacted Map increases it by one over what the neutral simulation would predict. Moreover, the substantial outliers that Dr. Duchin identifies occur in places that are already either overwhelmingly White or already overwhelmingly minority-majority.

Regardless, when we re-examine the simulations to see if the Enacted Map produces partisan results that depart from what the politically neutral simulations would predict, we see that

the maps produce substantial political outliers. In particular, the two least Democratic districts are made substantially more Republican than expected, and in consequential ways: They are pulled toward 50-50 status when the neutral simulation would expect districts to be drawn to be more safely Democratic.

Fig. 129



C. Denton/Wise (H.D. 57, 63, 64, 65, and 106)

In the previous map, four districts were contained entirely in Denton County. In 2018, the Republican incumbent in District 65, which hugs the southern end of the district lost. In 2020 the Democrat won by a narrow margin.

As we have seen elsewhere, the redraw is consistent with an attempt to remedy this for Republicans. Tables 27, 28 and 29 show a variation on a familiar pattern: Here, Trump's vote share is smoothed out across the board. Note that District 57 – which combined Wise County with western Denton County, was not present in this area under the Benchmark Plan. The Benchmark districts in the area featured two districts where Trump's share of the two-party vote fell below 52%; the enacted version contains none.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
57	—	—	56.73%	—	14	—	16.47%	—
63	R	62.34%	52.67%	6	20	8.57%	23.53%	14.96%
64	R	51.80%	61.17%	21	19	30.00%	22.35%	-7.65%
65	D	44.62%	54.22%	25	20	35.71%	23.53%	-12.18%
106	R	54.51%	56.89%	18	12	25.71%	14.12%	-11.60%

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	Percent, Benchmark	Percent, Enacted	Change
57	—	—	56.73%	—	54.98%	—
63	R	62.34%	52.67%	55.77%	58.95%	3.18%
64	R	51.80%	61.17%	67.46%	68.54%	1.08%
65	D	44.62%	54.22%	60.41%	60.42%	0.01%
106	R	54.51%	56.89%	54.55%	52.62%	-1.93%

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
57	—	—	56.73%	—	32	—	20.25%	—
63	R	62.34%	52.67%	38	26	34.55%	16.46%	-18.09%
64	R	51.80%	61.17%	26	38	23.64%	24.05%	0.41%
65	D	44.62%	54.22%	11	29	10.00%	18.35%	8.35%
106	R	54.51%	56.89%	35	33	31.82%	20.89%	-10.93%

Our familiar maps show how this was accomplished. Figure 130 shows that Districts 64 and 65 hold concentrations of Democratic voting precincts; Table 27 above demonstrates that almost 2/3 of the Biden-won precincts are contained within these districts. But as Figure 131 shows, those precincts are spread out, by pushing District 65 westward and pulling District 63 eastward, and splitting the old cluster in the 65th between it and 63.

Fig. 130

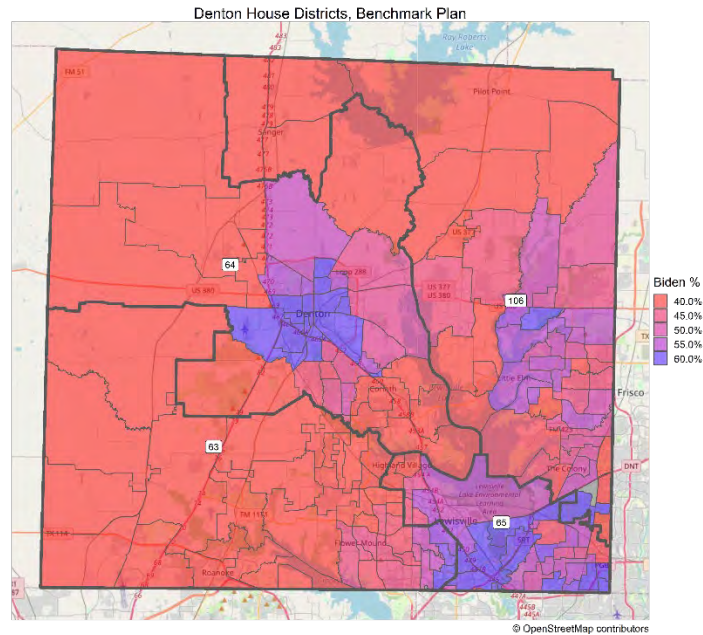
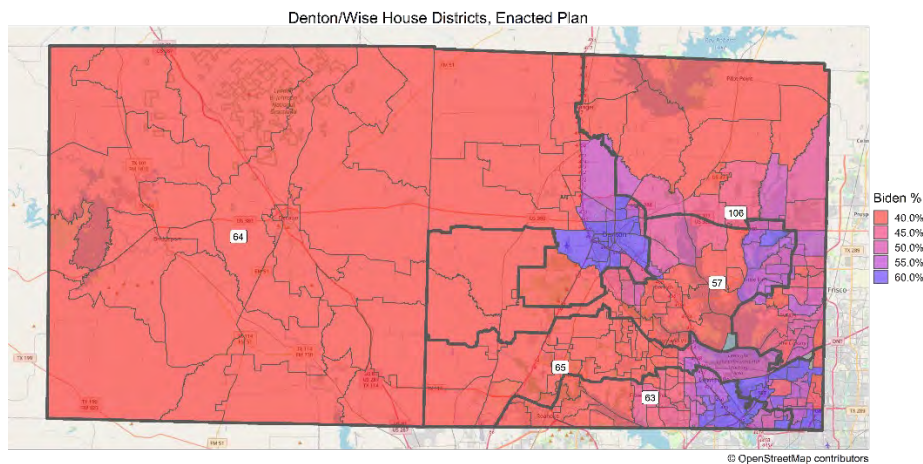
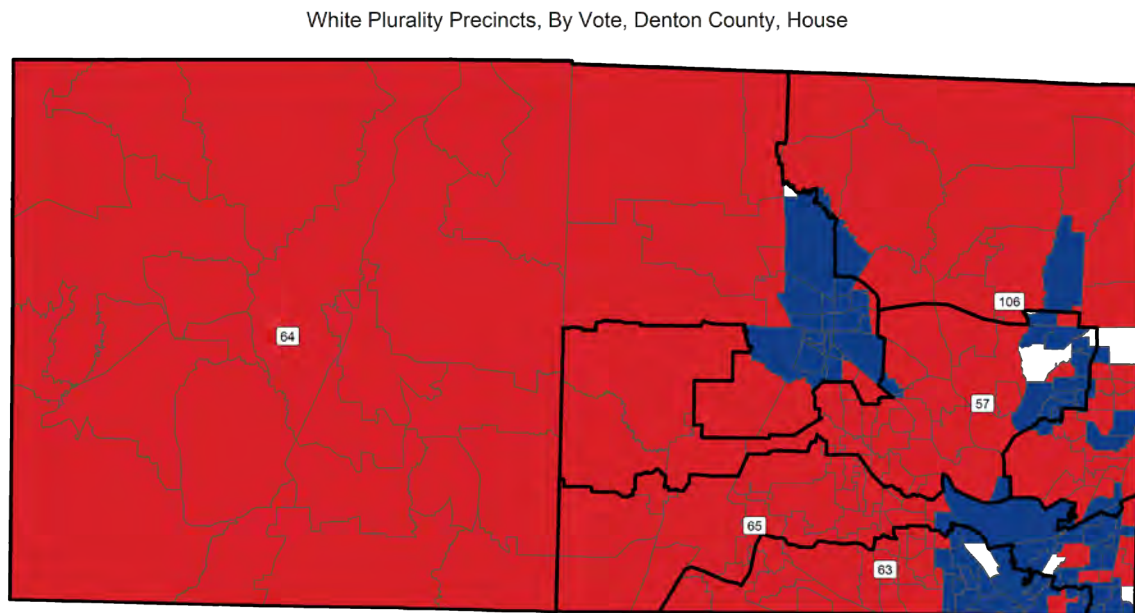


Fig. 131



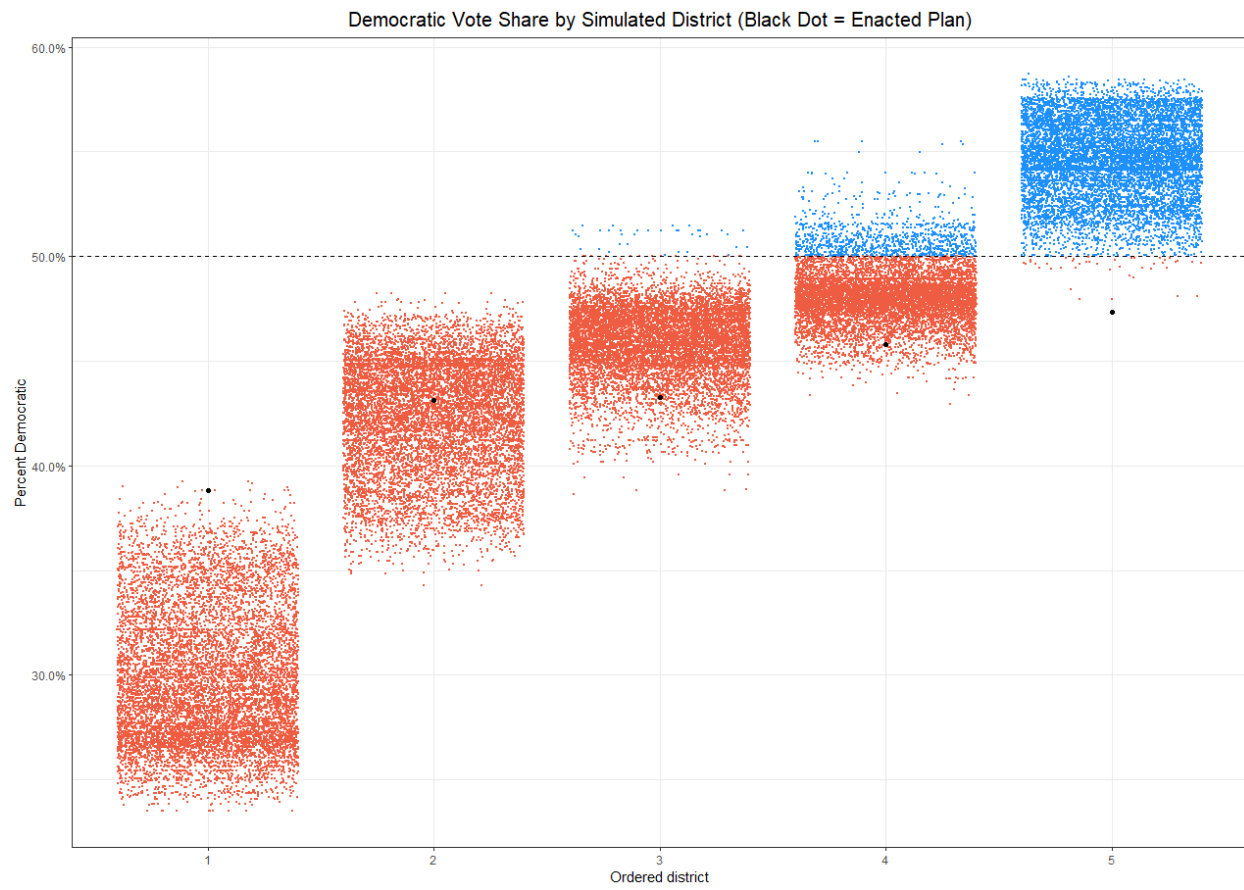
Finally, when examining white-plurality precincts, we note that almost every precinct in Denton is white-plurality. The map reflects that Biden-won white plurality precincts were either split across the districts, or attached to heavily Republican rural areas where there would be almost no chance of electing a Democrat.

Fig. 132



As a final observation, note that in Dr. Duchin's simulations, none of the 500,000 districts she draws produce a minority-majority district. Simulations do, however, produce Democratic districts and politically marginal districts. As we see in Figure 133, this is consistent with the map drawers attempting to avoid drawing Democratic districts, rather than trying to racially gerrymander or to dilute minority voting strength.

Fig. 133



D. Brazoria (H.D. 25 and 29)

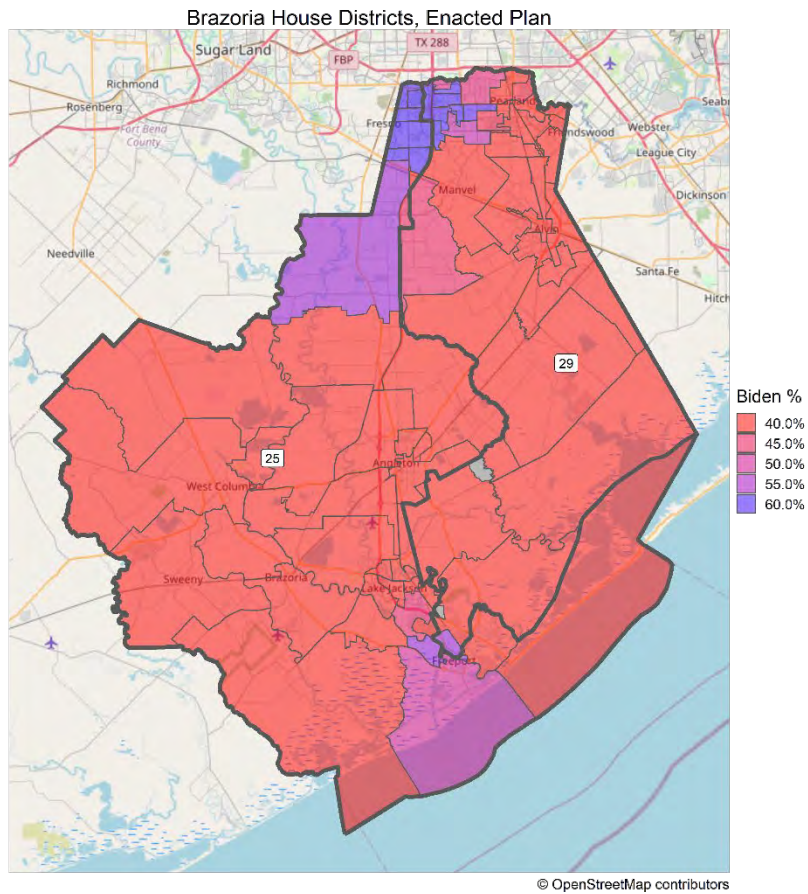
Dr. Duchin notes that the 25th and 29th districts split a concentration of coalition voters in the northern reaches of Brazoria County. But as our usual set of tables show, the map also splits a concentration of Biden voters. The increasingly marginal 29th District is shored up, with the Biden-won precincts and Trump-won precincts now split almost perfectly with the 25th District.

Table 30: Biden-won VTDs, Brazoria House Districts								
District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
25	R	70.93%	59.78%	3	8	17.65%	47.06%	29.41%
29	R	52.84%	58.75%	14	9	82.35%	52.94%	-29.41%

Table 31: Biden Share in Biden-Won VTDs, Brazoria House Districts						
District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	Percent, Benchmark	Percent, Enacted	Change
25	R	70.93%	59.78%	57.86%	67.97%	10.11%
29	R	52.84%	58.75%	65.61%	61.07%	-4.55%

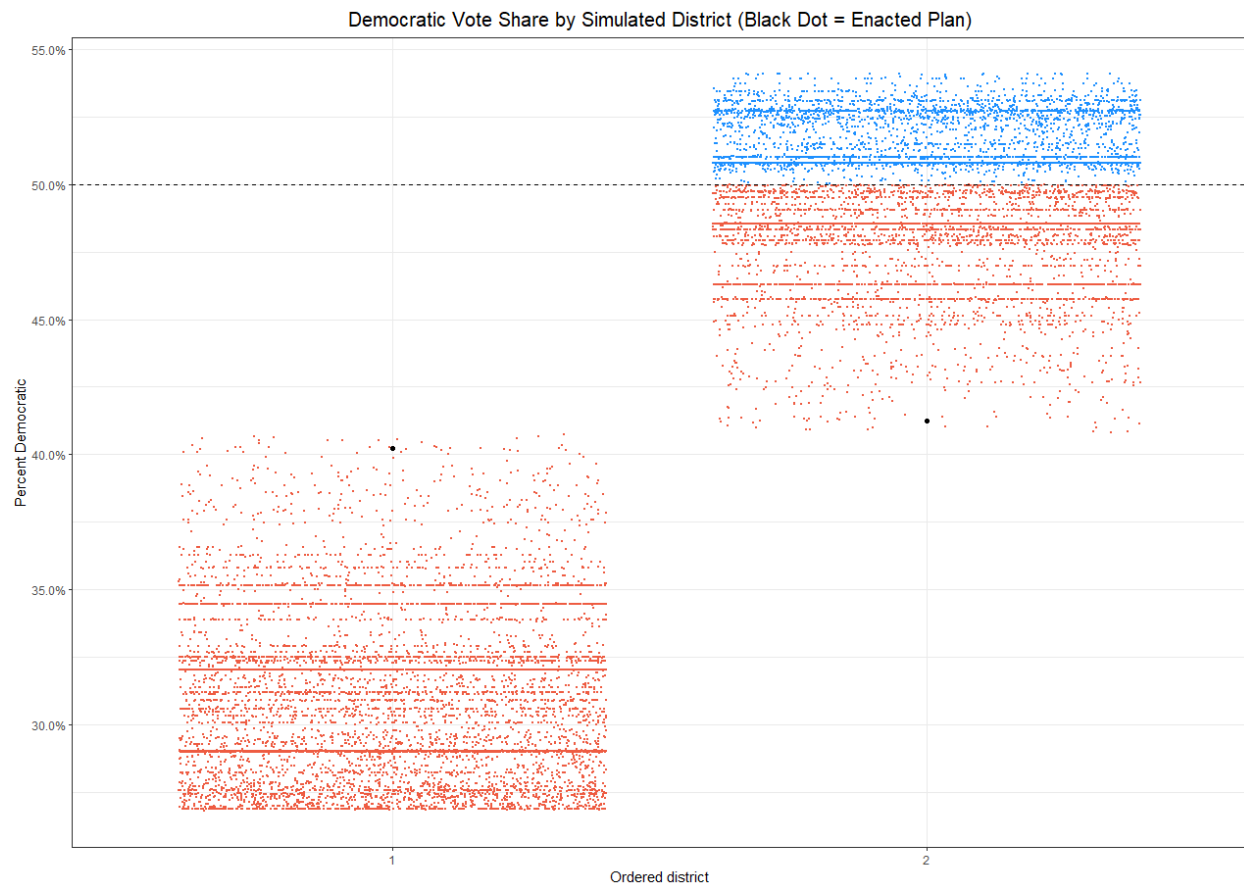
Table 32: Trump-won VTDs, Denton House Districts								
District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
25	R	70.93%	59.78%	45	29	66.18%	51.79%	-14.39%
29	R	52.84%	58.75%	23	27	33.82%	48.21%	14.39%

Fig. 134:



Finally, we see from the simulations that the map also produces outliers with respect to politics – indeed it is unclear whether it is possible to create larger outliers with respect to politics (otherwise the positions of the two districts would flip).

Fig. 135:



E. El Paso/Panhandle (53, 74, 75, 77-79, 81-84, 86-88)

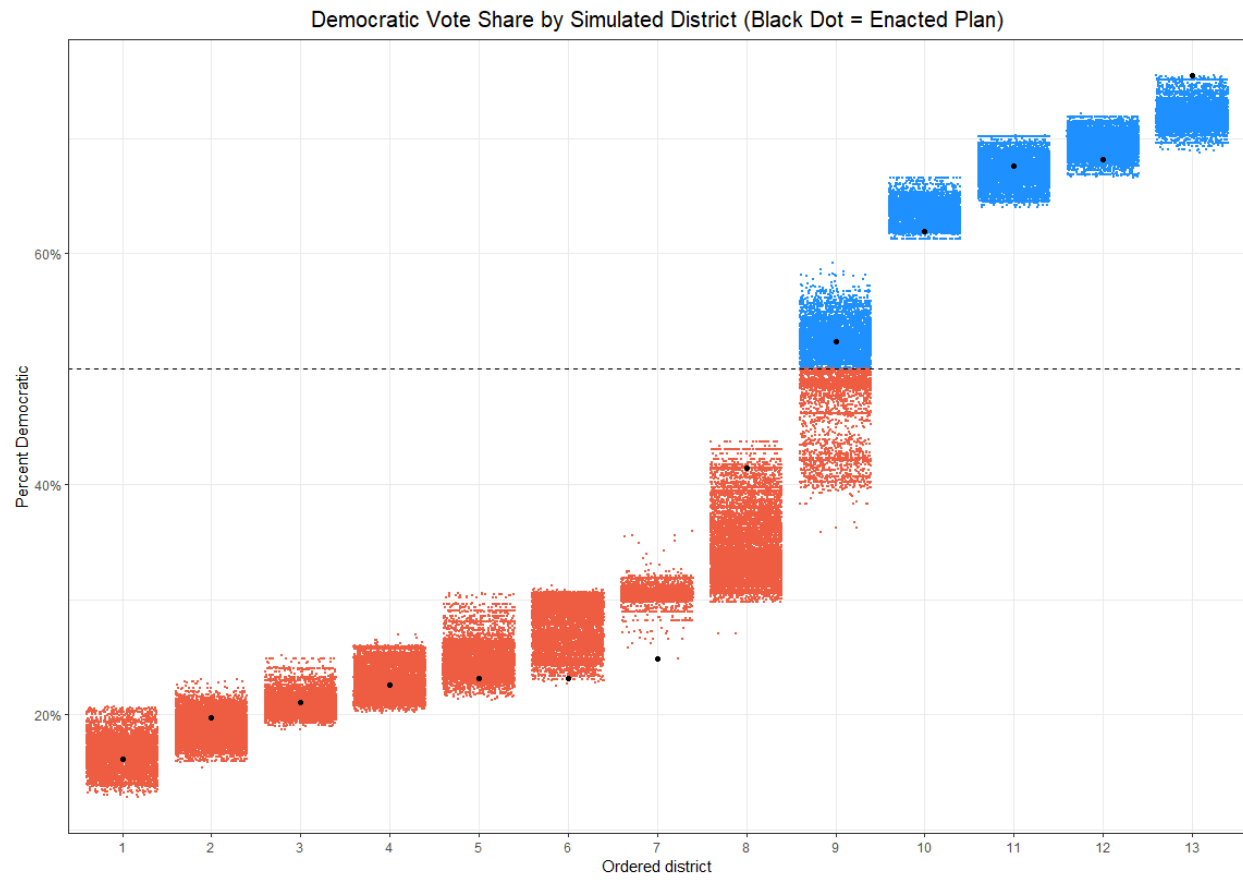
In the El Paso/Panhandle area, we see more of the same. District 76 is moved to Fort Bend. The resulting precincts are dispersed among the neighboring areas, shoring up a majority-minority district that had voted for Donald Trump in the previous election by making it more Democratic. The rest of the districts are largely unchanged on the metrics shown below.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
53	R	76.61%	76.86%	1	1	0.45%	0.36%	-0.08%
74	D	53.80%	47.62%	32	44	14.29%	15.94%	1.66%
75	D	32.41%	32.43%	37	38	16.52%	13.77%	-2.75%
77	D	30.74%	24.52%	43	62	19.20%	22.46%	3.27%
78	D	38.24%	38.07%	40	48	17.86%	17.39%	-0.47%
79	D	31.32%	31.82%	38	50	16.96%	18.12%	1.15%
81	R	76.17%	75.14%	3	3	1.34%	1.09%	-0.25%
82	R	79.25%	78.98%	3	3	1.34%	1.09%	-0.25%
83	R	77.36%	76.85%	2	0	0.89%	0.00%	-0.89%
84	R	58.13%	58.63%	18	20	8.04%	7.25%	-0.79%
86	R	80.08%	80.27%	0	0	0.00%	0.00%	0.00%
87	R	75.75%	77.44%	6	6	2.68%	2.17%	-0.50%
88	R	83.39%	83.85%	1	1	0.45%	0.36%	-0.08%

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
53	R	76.61%	76.86%	91	119	13.79%	16.44%	2.65%
74	D	53.80%	47.62%	61	49	9.24%	6.77%	-2.47%
75	D	32.41%	32.43%	0	0	0.00%	0.00%	0.00%
77	D	30.74%	24.52%	1	1	0.15%	0.14%	-0.01%
78	D	38.24%	38.07%	3	3	0.45%	0.41%	-0.04%
79	D	31.32%	31.82%	1	1	0.15%	0.14%	-0.01%
81	R	76.17%	75.14%	54	54	8.18%	7.46%	-0.72%
82	R	79.25%	78.98%	68	58	10.30%	8.01%	-2.29%
83	R	77.36%	76.85%	99	111	15.00%	15.33%	0.33%
84	R	58.13%	58.63%	33	39	5.00%	5.39%	0.39%
86	R	80.08%	80.27%	57	65	8.64%	8.98%	0.34%
87	R	75.75%	77.44%	48	67	7.27%	9.25%	1.98%
88	R	83.39%	83.85%	144	157	21.82%	21.69%	-0.13%

Finally, we run our simulations; here we add a constraint to keep counties whole. This actually confirms that there is, if anything, one more district carried by Joe Biden than we might expect from a neutral map.

Fig. 136:



F. Harris (126 – 135, 137 - 150)

Dr. Duchin briefly mentions districts 126 and 132. But we can see with a more complete examination that the map once again functions to improve Republican advantages in the area. Republicans in Harris County now hold just nine districts in the county: 126 – 130, 132 – 133, 138 and 150. A number of these had become politically marginal, with Trump either losing or narrowly carrying the district. As we can see from our two familiar tables, Republicans improved their performance in eight of the nine districts. Post-redistricting, Democrats represent districts containing just 12% of the Trump precincts in the area, while the Republican districts have around 15% of the Biden precincts.

Table 35: Biden-won VTDs, Harris House Districts

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
126	R	51.76%	58.63%	17	6	2.40%	0.81%	-1.59%
127	R	58.46%	58.28%	9	9	1.27%	1.22%	-0.05%
128	R	67.87%	68.01%	4	4	0.57%	0.54%	-0.02%
129	R	54.89%	57.14%	16	12	2.26%	1.63%	-0.63%
130	R	65.86%	66.43%	2	0	0.28%	0.00%	-0.28%
131	D	18.65%	19.70%	38	39	5.37%	5.29%	-0.08%
132	R	49.23%	56.43%	14	3	1.98%	0.41%	-1.57%
133	R	52.06%	50.86%	13	15	1.84%	2.04%	0.20%
134	D	38.54%	36.63%	53	52	7.50%	7.06%	-0.44%
135	D	47.66%	39.21%	17	23	2.40%	3.12%	0.72%
137	D	31.58%	33.68%	23	28	3.25%	3.80%	0.55%
138	R	47.84%	52.85%	20	19	2.83%	2.58%	-0.25%
139	D	25.05%	25.42%	43	49	6.08%	6.65%	0.57%
140	D	31.03%	30.93%	41	43	5.80%	5.83%	0.04%
141	D	16.81%	17.46%	50	52	7.07%	7.06%	-0.02%
142	D	24.74%	25.16%	59	51	8.35%	6.92%	-1.43%
143	D	34.38%	35.35%	37	44	5.23%	5.97%	0.74%
144	D	45.67%	43.78%	28	35	3.96%	4.75%	0.79%
145	D	35.01%	28.72%	35	66	4.95%	8.96%	4.00%
146	D	19.34%	19.36%	50	60	7.07%	8.14%	1.07%
147	D	20.42%	21.22%	60	61	8.49%	8.28%	-0.21%
148	D	33.19%	41.06%	46	34	6.51%	4.61%	-1.89%
149	D	40.52%	37.64%	19	22	2.69%	2.99%	0.30%
150	R	56.25%	57.22%	13	10	1.84%	1.36%	-0.48%

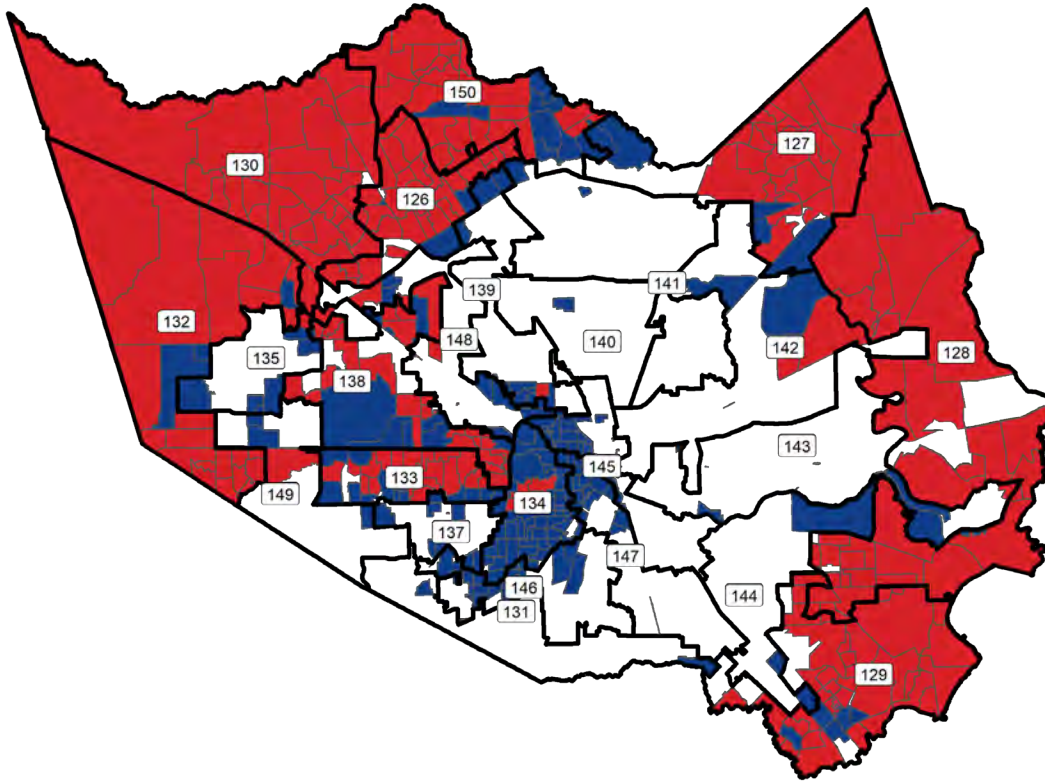
Table 36: Trump-won VTDs, Harris House Districts

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
126	R	51.76%	58.63%	18	30	6.67%	10.53%	3.86%
127	R	58.46%	58.28%	23	23	8.52%	8.07%	-0.45%
128	R	67.87%	68.01%	31	35	11.48%	12.28%	0.80%
129	R	54.89%	57.14%	33	41	12.22%	14.39%	2.16%
130	R	65.86%	66.43%	36	28	13.33%	9.82%	-3.51%
131	D	18.65%	19.70%	0	0	0.00%	0.00%	0.00%
132	R	49.23%	56.43%	16	24	5.93%	8.42%	2.50%
133	R	52.06%	50.86%	23	18	8.52%	6.32%	-2.20%
134	D	38.54%	36.63%	7	4	2.59%	1.40%	-1.19%
135	D	47.66%	39.21%	13	2	4.81%	0.70%	-4.11%
137	D	31.58%	33.68%	0	0	0.00%	0.00%	0.00%
138	R	47.84%	52.85%	15	31	5.56%	10.88%	5.32%
139	D	25.05%	25.42%	3	3	1.11%	1.05%	-0.06%
140	D	31.03%	30.93%	0	0	0.00%	0.00%	0.00%
141	D	16.81%	17.46%	2	2	0.74%	0.70%	-0.04%
142	D	24.74%	25.16%	3	3	1.11%	1.05%	-0.06%
143	D	34.38%	35.35%	3	6	1.11%	2.11%	0.99%
144	D	45.67%	43.78%	9	6	3.33%	2.11%	-1.23%
145	D	35.01%	28.72%	4	1	1.48%	0.35%	-1.13%
146	D	19.34%	19.36%	0	0	0.00%	0.00%	0.00%
147	D	20.42%	21.22%	0	0	0.00%	0.00%	0.00%
148	D	33.19%	41.06%	3	6	1.11%	2.11%	0.99%
149	D	40.52%	37.64%	4	2	1.48%	0.70%	-0.78%
150	R	56.25%	57.22%	24	20	8.89%	7.02%	-1.87%

As we can see from Figure 137, racial sorting does not appear to be a good explanation for placement of White majority precincts. Rather, it appears that politics best explains whether a White plurality district goes into a Republican district or a Democratic district.

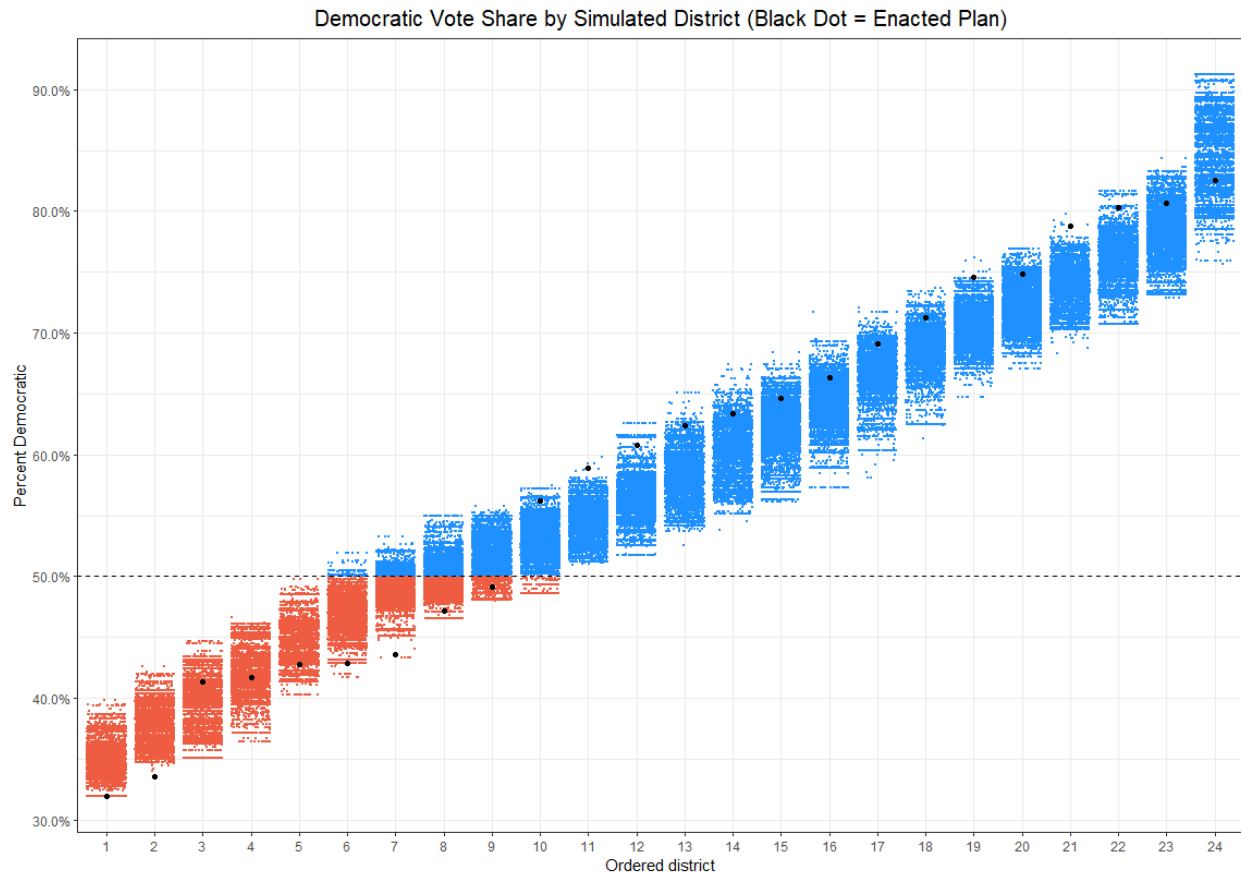
Fig. 137

White Plurality Precincts, By Vote, Bexar County, House



Finally, if we examine our simulations, we once again see the hallmark of politics-conscious redistricting. The 5th through 9th most Republican districts are all made more Republican than the politically neutral simulations would predict, while the next several Democratic districts are all more heavily Democratic than the politically neutral simulations would predict. In other words, the map improves Republican performance over what we might expect from a politics-neutral redistricting.

Fig. 138



G. Bexar (116-125)

Dr. Duchin conducts a cursory examination of districts 121 and 123. However, a more thorough examination of the area suggests that once again, districts appear to have been drawn in a way that improved Republican voting strength in the area.

Over the course of the decade, Republicans lost several House seats in Bexar County, as part of the general movement of suburban areas away from the GOP. After the 2020 elections, Republican held just two seats (121 and 122), both of which saw narrow Republican wins. In a 2021 special election, Republicans picked up District 118.

As Table 33 demonstrates, Republican performance in districts 118, 121 and 122 are improved significantly in those three districts. District 121 in particular sees a marked decrease in the number of Biden-won precincts. And, as we've seen before, the Democratic districts see improvements in Democratic performance generally, and an increase in the number of Biden-won precincts.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
116	D	31.18%	31.21%	60	68	10.83%	12.10%	1.27%
117	D	42.25%	37.33%	54	46	9.75%	8.19%	-1.56%
118	R	43.07%	48.61%	44	44	7.94%	7.83%	-0.11%
119	D	37.25%	34.77%	55	69	9.93%	12.28%	2.35%
120	D	32.52%	31.83%	74	79	13.36%	14.06%	0.70%
121	R	48.66%	51.20%	52	34	9.39%	6.05%	-3.34%
122	R	54.26%	54.48%	25	21	4.51%	3.74%	-0.78%
123	D	31.13%	33.16%	84	94	15.16%	16.73%	1.56%
124	D	34.36%	31.84%	49	48	8.84%	8.54%	-0.30%
125	D	34.98%	37.78%	57	59	10.29%	10.50%	0.21%

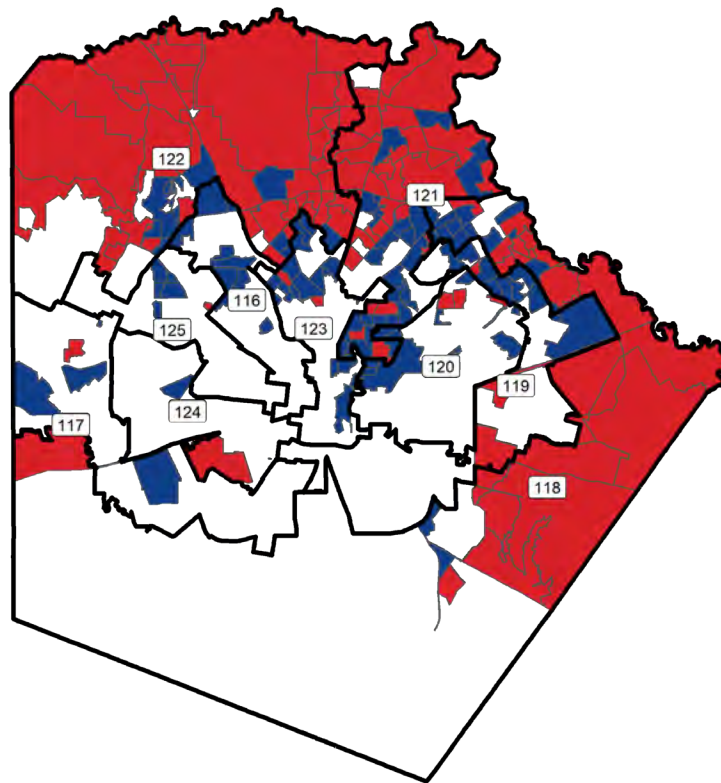
At the same time, the two R-held districts that were not carried by Trump, see increases in the number of Trump precincts.

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
116	D	31.18%	31.21%	0	0	0.00%	0.00%	0.00%
117	D	42.25%	37.33%	15	3	10.34%	2.04%	-8.30%
118	R	43.07%	48.61%	23	40	15.86%	27.21%	11.35%
119	D	37.25%	34.77%	21	7	14.48%	4.76%	-9.72%
120	D	32.52%	31.83%	6	5	4.14%	3.40%	-0.74%
121	R	48.66%	51.20%	23	35	15.86%	23.81%	7.95%
122	R	54.26%	54.48%	53	52	36.55%	35.37%	-1.18%
123	D	31.13%	33.16%	2	2	1.38%	1.36%	-0.02%
124	D	34.36%	31.84%	1	2	0.69%	1.36%	0.67%
125	D	34.98%	37.78%	1	1	0.69%	0.68%	-0.01%

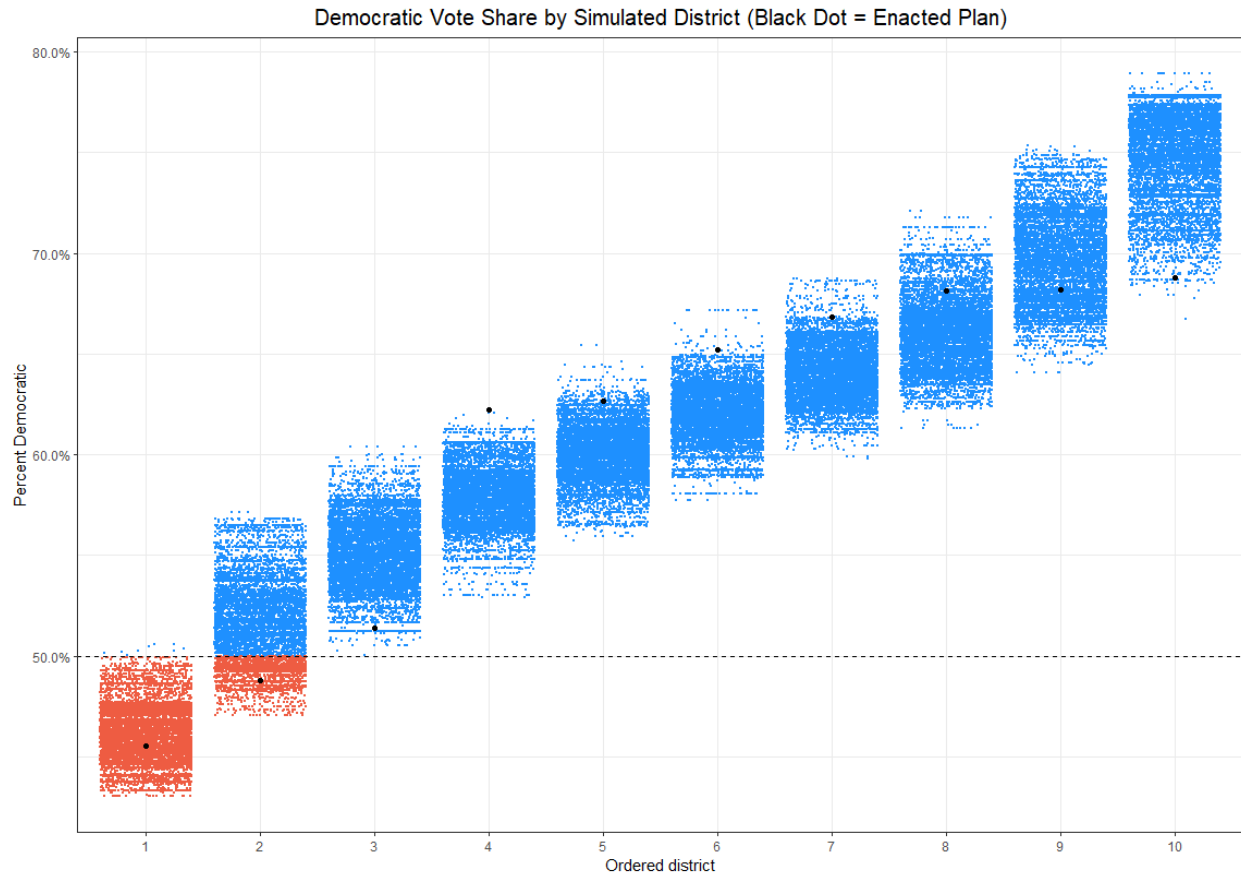
Maps confirm this; the dividing line between where an otherwise-accessible precinct goes is not the plurality race of the precinct, but rather the politics behind it.

Fig. 138

White Plurality Precincts, By Vote, Bexar County, House



Finally, the simulations in Bexar County confirm that the most Republican three districts are far more Republican than the politically neutral simulations would predict, with the next few districts more Democratic than the simulations predict. This is consistent with a map that seeks to improve Republican performance by placing Democrats in a few otherwise-marginal districts, improving the efficiency of Republican precincts.



H. RGV (35-41)

Finally, in the Rio Grande Valley, districts 35 through 41 again are drawn in a way to improve Republican performance, particularly in District 37. Almost all of the precincts here are Biden precincts, but we can see Trump-won precincts that go into the district as well.

Table 39: Biden-won VTDs, RGV House Districts

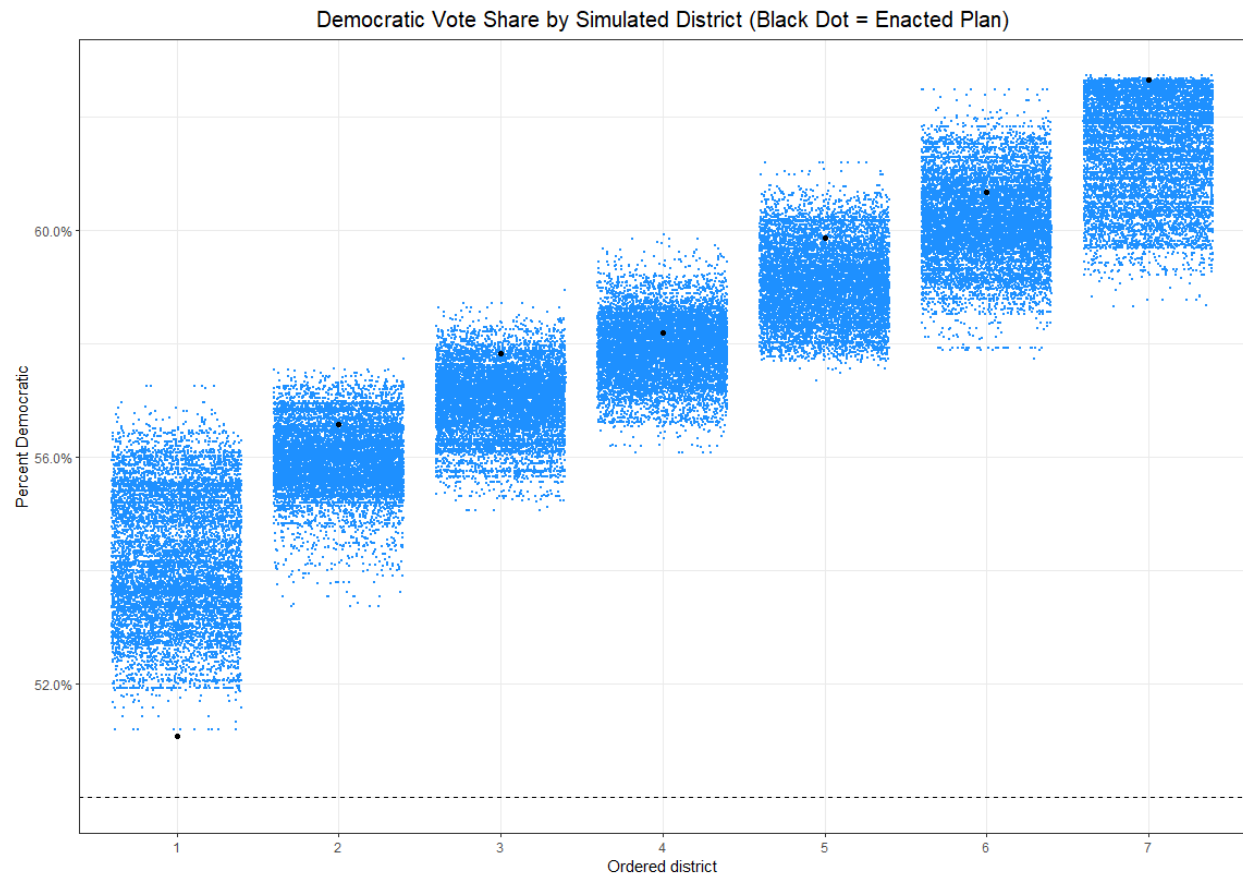
District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Biden Precincts, Benchmark	# Biden Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
35	D	45.71%	42.17%	47	46	15.56%	14.47%	-1.10%
36	D	40.61%	41.80%	41	45	13.58%	14.15%	0.57%
37	D	41.32%	48.92%	39	38	12.91%	11.95%	-0.96%
38	D	42.57%	37.35%	34	44	11.26%	13.84%	2.58%
39	D	39.86%	40.13%	57	60	18.87%	18.87%	-0.01%
40	D	39.62%	39.32%	34	31	11.26%	9.75%	-1.51%
41	D	44.05%	43.41%	50	54	16.56%	16.98%	0.42%

Table 40: Trump-won VTDs, RGV House Districts

District	Winner, 2020 Election	Trump Share, Old District	Trump Share, New District	# Trump Precincts, Benchmark	# Trump Precincts, Enacted	Percent, Benchmark	Percent, Enacted	Change
35	D	45.71%	42.17%	19	16	35.19%	24.62%	-10.57%
36	D	40.61%	41.80%	3	4	5.56%	6.15%	0.60%
37	D	41.32%	48.92%	6	24	11.11%	36.92%	25.81%
38	D	42.57%	37.35%	7	0	12.96%	0.00%	-12.96%
39	D	39.86%	40.13%	6	7	11.11%	10.77%	-0.34%
40	D	39.62%	39.32%	2	1	3.70%	1.54%	-2.17%
41	D	44.05%	43.41%	11	13	20.37%	20.00%	-0.37%

All seven districts still are, however, Biden-won. There are only a handful of plurality-White precincts in the area; so no useful analysis regarding that metric can be conducted here. Yet, here too, our simulations are consistent with a map that seeks to improve Republican performance by making the most-Republican district in the area more Republican than it otherwise would be.

Fig. 139



I. Miscellany

Dr. Duchin also mentions districts 26, 54, 66 and 67. A brief examination of the political boundaries in those districts demonstrates that the maps move concentrations of Democratic voters out of Republican districts or splits them between districts in a way consistent with improving Republican performance.

Fig. 140

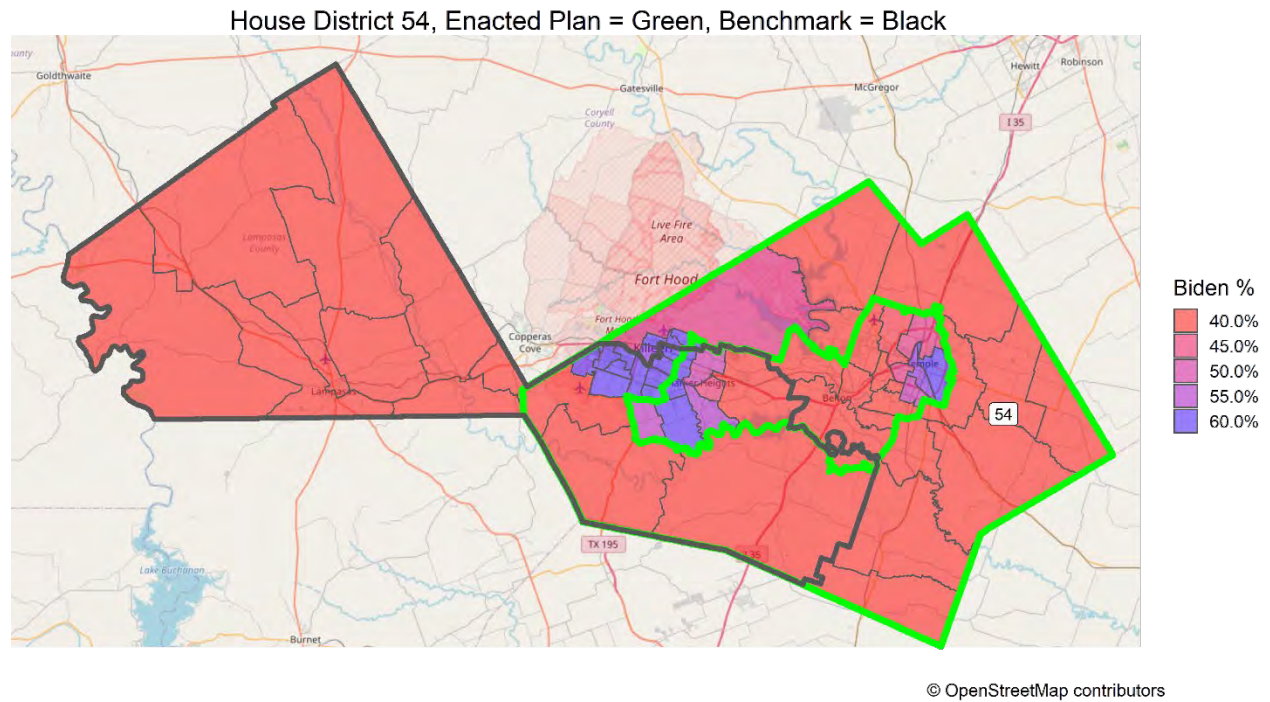
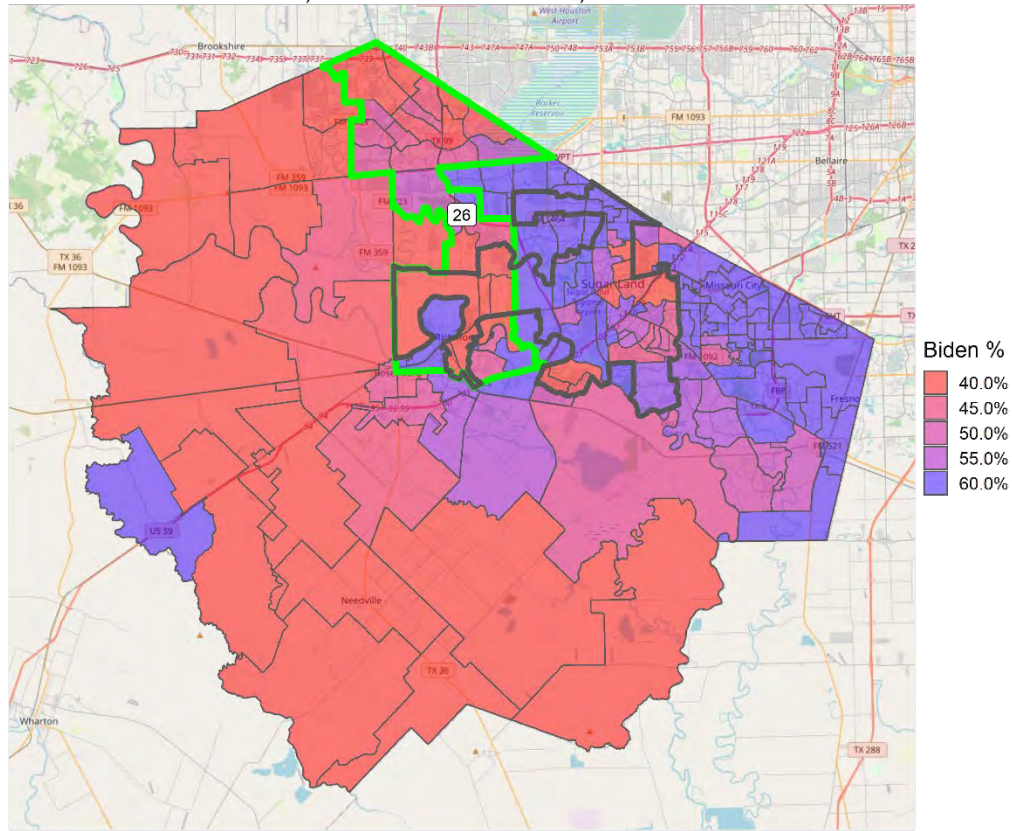
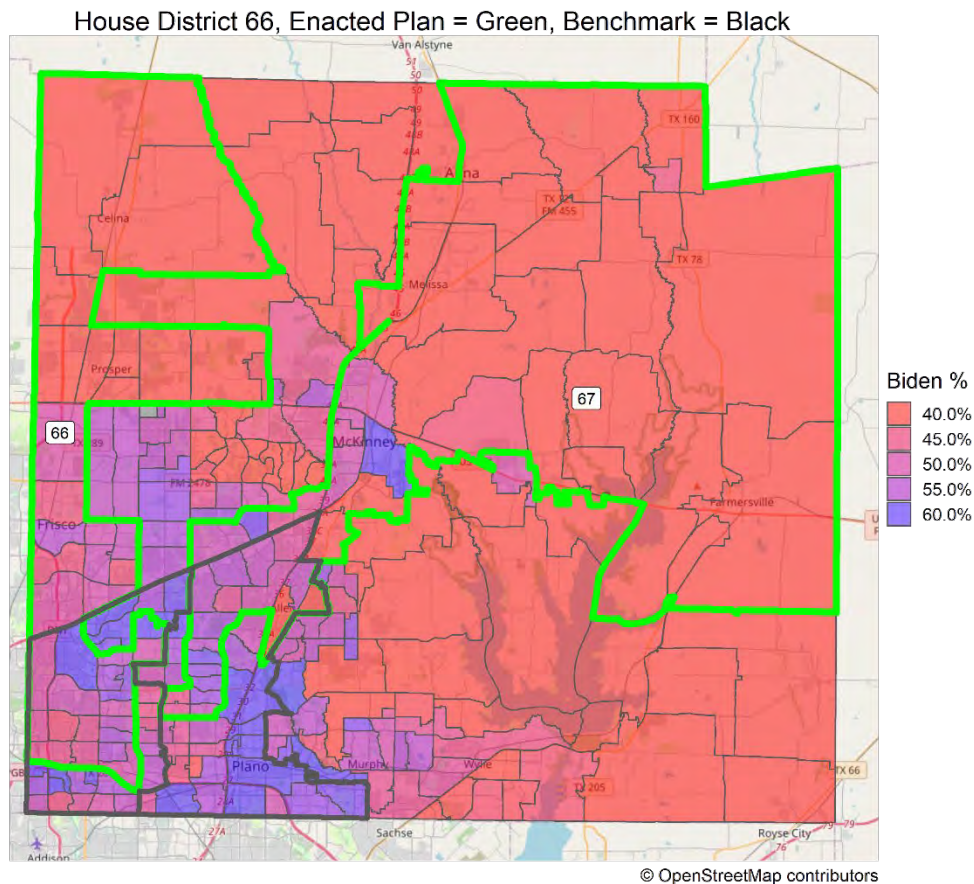


Fig. 141
House District 26, Enacted Plan = Green, Benchmark = Black



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Fig. 142



J. Minority-majority Demonstration Districts

Dr. Duchin describes minority-majority districts in Denton/Wise and Brazoria counties (I do not examine her district in Harris County). I note, however, that the district in Denton/Wise only barely crosses the 50.21% threshold using a collection of minority groups where no minority group constitutes more than 20.1% of the CVAP. Also, recall that neither Dr. Duchin's nor my simulations create a district that is 50% + 1 minority CVAP.

In Lubbock, she has produced a 52% minority CVAP district that also appears to be based upon multiple minority groups. Interestingly, Joe Biden won only 33.5% of the two-party vote in this district. I am aware of only a handful of districts in the country, at the congressional, state senate, or state house level, where Joe Biden won less than a third of the vote and yet a Democrat is elected to Congress. Dr. Duchin has not demonstrated that this district would elect Democratic candidates.

Finally, in Brazoria County, Dr. Duchin's proposed district is less compact than any other district in the area (though, as noted above, this is not necessarily a relevant consideration).

Moreover, Joe Biden's performance in the district was just 53.5%. Dr. Duchin has not demonstrated that this district would consistently elect Democratic candidates. Finally, the district created is not based upon a compact minority group – it is two majority-minority CVAP islands, one of which supported Donald Trump for president, separated by a strait of Trump-voting majority-White precincts.

Fig. 143

Proposed Brazoria County Districts, with Majority Coalition CVAP Precincts

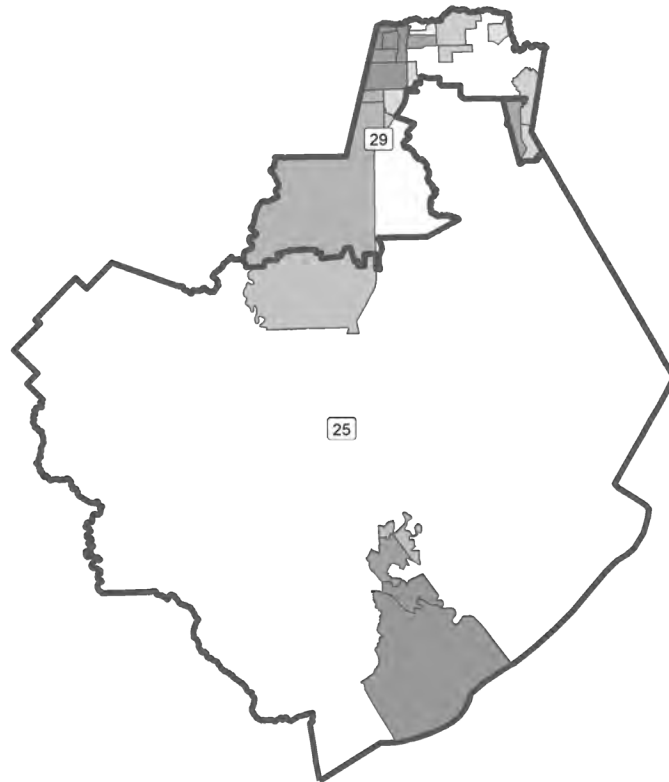
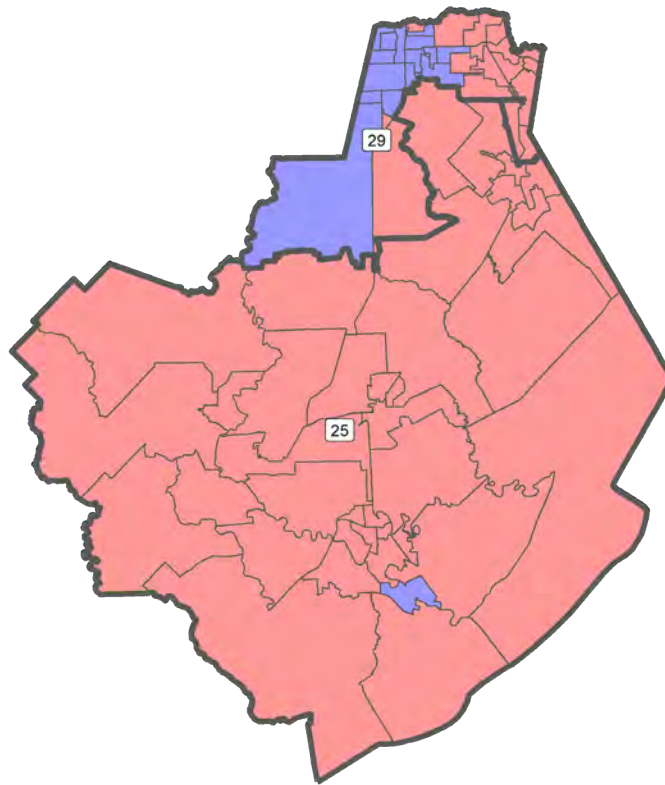


Fig. 144

Proposed Brazoria County Districts, by Presidential Winner



VIII. Recent Polling Data

In addition to the above, in her report, Dr. Duchin produced ecological inference estimates. I did not analyze those numbers and did not perform an ecological inference analysis of my own, and I understand the State of Texas has retained other experts to address those issues.

I will, however, provide my thoughts on recent voting trends and academic literature that address those changes in voting trends. Specifically, one one of the most remarked-upon aspects of the 2022 election was the sharp shift of Hispanic voters toward the Republican Party. This occurred nationally, and throughout the state of Texas, although as described above it was particularly prominent in the Rio Grande Valley. *See* Weiyi Cai and Ford Fessenden, “Immigrant Neighborhoods Shifted Red as the Country Chose Blue,” *The New York Times* (Dec. 20, 2020) (“In Houston’s 245 precincts with the largest share of Latinos, turnout was up sharply from 2016, and Mr. Trump won nearly two-thirds of the additional votes.”) (“As in most other big cities examined, Houston’s Republican areas as well as predominantly white ones tended to shift in Mr. Biden’s direction. Over all, Mr. Trump’s margin in precincts he won in 2016 fell by 8 percentage points.”) (“Across Texas, the red shifts were most pronounced in precincts with the highest proportion of Latinos. The Democratic margin in 80 percent Latino precincts dropped an average of 17 percentage points.”), at <https://www.nytimes.com/interactive/2020/12/20/us/politics/election-hispanics-asians-voting.html>. As noted above, the Rio Grande Valley almost elected a Latina Republican in 2020, and did so in a 2022 special election.

But more importantly, it is also inconsistent with findings of high quality opinion surveys. Four academics collected a variety of surveys of post-electoral behavior in 2020 and 2016 in a working paper. *See* Kuriwaki, Shiro, Stephen Ansolabehere, Angelo Dagonel, and Soichiro Yamauchi. 2021. “The Geography of Racially Polarized Voting: Calibrating Surveys at the District Level.” OSF Preprints. December 4. doi:10.31219/osf.io/mk9e6. According to the paper, the 2016 exit polls show Trump’s performance among Hispanics at 36% in 2016 and 41% in 2020. *Id.* A16. Even Latino Decisions, which typically shows much lower estimates of Republican voting among Hispanics, showed Texas Hispanics giving Trump 30% of the vote in 2020. The exits and Latino decisions also showed Trump’s vote share among Whites lower, with both pegging his Texas support at around 66%. *Id.*

Moreover, the paper conducted its own estimates. It estimates that Trump received 43% of the Hispanic vote in 2020 and 66% of the White vote. *Id.* Finally, the paper provides its own estimates of racial voting patterns in Texas' districts in 2016.

It finds that in 2016:

- In TX-01, Whites and Hispanics voted for the same party.
- In TX-02, Whites and Hispanics almost voted for the same party (Hispanic support for Trump is estimated at 45%).
- In TX-04, Whites and Hispanics voted for the same party.
- In TX-05, Whites and Hispanics voted for the same party.
- In TX-06, Whites and Hispanics almost voted for the same party (Hispanic support for Trump is estimated at 47%).
- In TX-08, Whites and Hispanics voted for the same party.
- In TX-09, Whites and Hispanics voted for the same party.
- In TX-11, Whites and Hispanics voted for the same party.
- In TX-12, Whites and Hispanics almost voted for the same party (Hispanic support for Trump is estimated at 48%).
- In TX-13, Whites and Hispanics voted for the same party.
- In TX-14, Whites and Hispanics almost voted for the same party (Hispanic support for Trump is estimated at 49%).
- In TX-16, Whites and Hispanics almost voted for the same party (White support for Trump is estimated at 50%).
- In TX-18, Whites and Hispanics voted for the same party.
- In TX-19, Whites and Hispanics voted for the same party.
- In TX-20, Whites and Hispanics almost voted for the same party (White support for Trump is estimated at 50%).
- In TX-22, Whites and Hispanics almost voted for the same party (Hispanic support for Trump is estimated at 45%).
- In TX-27, Whites and Hispanics voted for the same party.
- In TX-29, Whites and Hispanics voted for the same party.
- In TX-30, Whites and Hispanics voted for the same party.

- In TX-33, Whites and Hispanics voted for the same party.
- In TX-35, Whites and Hispanics voted for the same party.
- In TX-36, Whites and Hispanics voted for the same party.

Id. at A33 – A34.

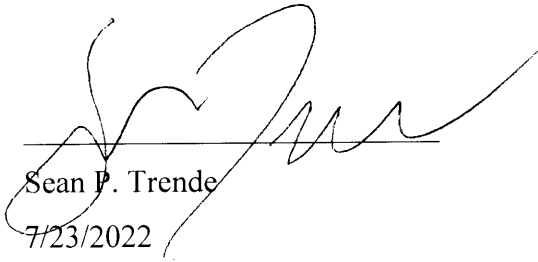
Finally, the paper explains why ecological inference analysis may produce less accurate results in Texas than in other places. First, the paper notes, citing to peer reviewed literature from Ansolabehere and Rivers, that ecological inference estimates tend to be pulled toward homogenous precincts. *Id.* at 16. What this means is that overwhelmingly White, rural Texas precincts provide disproportionate information on the White vote; in sub-county levels, exurban counties are going to provide disproportionate information on the White vote. But experience and the description of shifts here suggest that urban and inner-suburban Whites are quite different in their voting styles.

Second, the paper notes that unbiased ecological inference assumes that racial voting patterns are independent of racial homogeneity. *Id.* Again, this is likely not the case in Texas, where rural, heavily White precincts vote quite differently from heavily White precincts in less rural areas. Indeed, a portion of this paper suggests that this assumption is not warranted. For example, Urban White and Hispanic voters are substantially more Democratic than rural White and Hispanic voters. *Id.* at A16-A18.

This isn't to say that the ecological inference estimates should be outright ignored. Rather, they should be treated skeptically, and in conjunction with other available data.

IX. Conclusion

The Enacted Plans are drawn in such a way that they shore up Republican performance in districts that had wavered by the end of the decade. Moreover, the proposed remedial districts are almost all problematic.



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