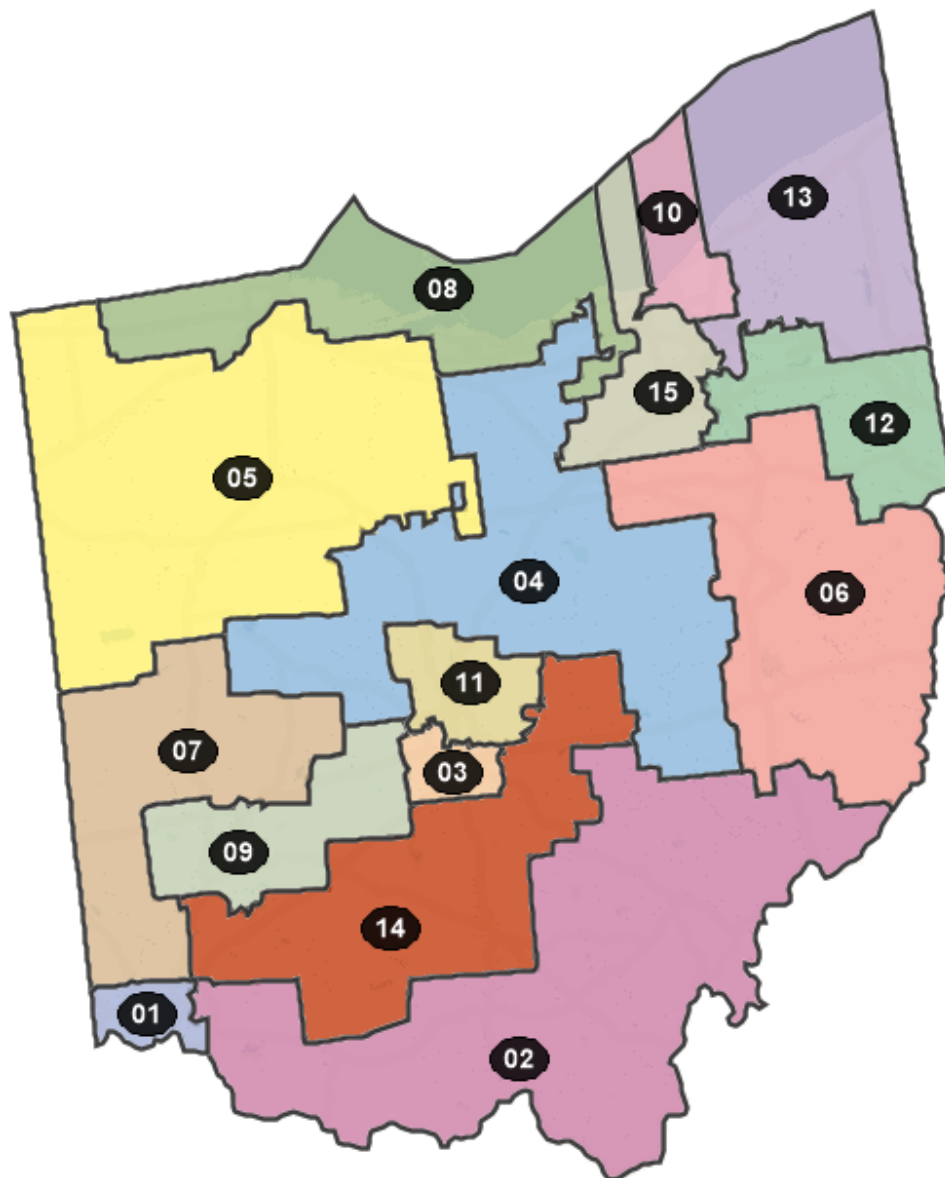


Proposed Ohio Congressional Map

Principle of Focus: Proportional Representation

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I. Introduction

To promote partisan fairness and a congressional delegation that reflects the political landscape of the state, this proposed congressional district map for the state of Ohio prioritizes proportional representation and competitiveness as its core guiding principles. With seven safe Republican seats, four safe Democratic seats, and four competitive seats, this plan complies with the state constitutional prohibition against undue partisan gerrymandering. A state that has lost U.S. House seats after each of the last six Census cycles¹, Ohio is often home to a controversial redistricting process—one which is currently subject to extensive litigation in federal and state courts. Its competitiveness and status as a swing state in recent presidential cycles has positioned it as a prime focus of the national redistricting landscape. Both the Republican and Democratic parties seek partisan advantages to gain seats in the state congressional delegation and state houses. But this desire to gain a competitive edge has come with extensive debate, fueled reforms to the state's redistricting process in 2018, and stagnated the acceptance of a redistricting plan by both parties. With the loss of a congressional seat, both parties have become more determined than ever to protect the seats they currently hold in the new 15-seat map. As of this report's publishing, the proposal passed by the Republican-controlled legislature continues to be litigated in the Ohio Supreme Court and federal court—with no apparent resolution in sight.²

Ohio is home to 88 counties, with Cuyahoga, Franklin, and Hamilton as its three largest. Due to the redistricting reforms in 2018, these three counties are required to have at least one district wholly contained with them. This proposal adhered to this requirement and prioritized respect for other political subdivisions while also promoting proportional representation and partisan fairness. In addition to complying with federal and state law, this map was formulated with the goals of including entire counties within a district as much as possible, reducing county and voting district splits, and maintaining compactness and contiguity.

In terms of population increases, Ohio saw relatively little growth from 2010 to 2020. The state saw a small increase (2.3%) in its population, with a total growth of 262,944 residents. The demographic breakdown of the state has also remained mostly unchanged—white and Black

¹ Rich Exner, *Ohio loses a congressional seat in apportionment from census 2020 results*, Cleveland.com (Apr. 26, 2021), <https://www.cleveland.com/open/2021/04/ohio-loses-a-congressional-seat-in-apportionment-from-census-2020-results.html>.

² Julie Carr Smyth, *Federal Judges in Ohio Won't Delay May 3 Primary — for Now*, Associated Press (Mar. 30, 2022), <https://www.usnews.com/news/politics/articles/2022-03-30/ohio-elections-chief-pressed-for-position-on-may-3-primary>.

Ohioans compose an overwhelming majority of the state, constituting 82% and 13% of the population, respectively.³

This slow rate of population growth was not enough for Ohio to maintain its sixteenth congressional seat, resulting in a congressional map with sizeable shifting of district lines. This proposed plan makes adjustments to reflect the population change in the state, but prioritizes the creation of districts that best reflect the political composition of its citizenry.

II. State of Congressional Redistricting in Ohio

The constitutional requirements and processes of Ohio's redistricting system changed dramatically in 2018. Ohio Issue 1, the Congressional Redistricting Procedures Amendment, was a state constitutional amendment placed on the ballot and passed by voters in May of that year.⁴ This amendment to the Ohio Constitution was designed to limit partisanship in the redistricting process and achieve consensus among both parties in the legislature when devising maps. Its stated purpose in its text was to “[e]nd the partisan process for drawing congressional districts, and replace it with a process with the goals of promoting bipartisanship, keeping local communities together, and having district boundaries that are more compact.”⁵ The proposals were supported by members of both parties at the time of passage. Republican Bob Taft and Democrat Ted Strickland, both former governors of Ohio, supported Ohio Issue 1, writing that the amendment “creates strong incentives for the parties to compromise and it guards against unchecked, one-sided partisan gerrymandering. And in doing so, it will fix one of the biggest problems plaguing our politics.”⁶ Under these new reforms, the task of drawing Ohio's congressional districts first falls on the state legislature which requires approval by a 3/5 supermajority of state legislators. The state legislature has until the last day of September of a year “ending in the numeral one” to finalize passage of a map.⁷ If the state legislature fails to act or cannot reach an agreement, the redistricting responsibility is left to a commission. This commission is composed of the Governor, State Auditor, Secretary of State, and one

³ American Counts Staff, *Ohio Population Climbs 2.3% From 2010 to 2020*, United States Census Bureau (Aug. 25, 2021), <https://www.census.gov/library/stories/state-by-state/ohio-population-change-between-census-decade.html>.

⁴ *Ohio Issue 1, Congressional Redistricting Procedures Amendment*, Ballotpedia, [https://ballotpedia.org/Ohio_Issue_1,_Congressional_Redistricting_Procedures_Amendment_\(May_2018\)](https://ballotpedia.org/Ohio_Issue_1,_Congressional_Redistricting_Procedures_Amendment_(May_2018)) (last visited Apr. 3, 2022).

⁵ *Id.*

⁶ *Id.*

⁷ Ohio Const. art. XIX.

commissioner chosen by the majority and minority leader in each state house. For a plan to pass by commission vote, it must be supported by at least two members of each major party.⁸ If the commission fails to reach a consensus on a map, the process reverts back to the state legislature and is treated as any other statute that can be vetoed by the Ohio Governor. However, the method of passing the plan determines how long it will be utilized in subsequent election cycles. If the map is passed by supermajority or by the redistricting commission, the lines will be valid for ten years. However, if the map is only passed by a simple majority, the lines are only valid for two election cycles.⁹ This convoluted and drawn-out process for line-drawing has led to significant disputes between Ohio legislators and commission members.

The source of much of this debate stems from one component of the redistricting reforms enacted in 2018. Under these new measures, if a plan is enacted by simple majority by the state legislature, it is subject to additional constraints to prevent partisan gerrymandering and unnecessary political subdivision splits. In this scenario, the state legislature is not allowed to “pass a plan that unduly favors or disfavors a political party or its incumbents” or “unduly split governmental units, giving preference to keeping whole, in the order named, counties, then townships and municipal corporations.”¹⁰ This ban effectively bans gerrymandering by one party to achieve an undue political advantage. It is this state constitutional provision that has stalled the development of a suitable congressional plan by the state legislature.

On September 30, 2021, Ohio lawmakers did not meet the constitutionally-required deadline of drawing the congressional plan, and left the line-drawing responsibilities to the seven-member redistricting commission. The saga continued on November 1, 2021, as the commission also failed to meet their constitutionally-required deadline. The responsibility then fell back to the state legislature, who had the opportunity to pass a plan by simple majority that followed the stricter requirements laid out in the state constitution. In November of 2021, the Governor signed into law a congressional plan passed by the state legislature along party lines. As the Republican-controlled legislature has only been to muster a simple majority for their plan, the additional constraints to promote partisan fairness and political subdivision lines kicked into

⁸ *Id.*

⁹ *Ohio*, All About Redistricting, <https://redistricting.ils.edu/state/ohio/?cycle=2020&level=Congress&startdate=2022-02-19> (last visited Apr. 3, 2022).

¹⁰ Ohio Const. art. XIX.

effect. Shortly after enactment, the plan was challenged in state court for enabling a partisan gerrymander in violation of the Ohio Constitution.¹¹ On January 14, 2022, in a 4-3 decision, the Ohio Supreme Court agreed with plaintiffs in the suit and rejected the congressional map, finding that it engaged in an unconstitutional gerrymander by delivering a 12-3 seat advantage to Republicans. The court sent lawmakers and the Ohio Redistricting Commission back to develop a new map within sixty days.¹² On March 2, 2022, Republicans in the state passed a new plan and delivered it to the Ohio Supreme Court for their review. This proposed plan includes “10 safe republican seats, three safe Democratic seats, and two Democratic-leaning tossups.”¹³ The partisan lean of each district in the map currently in front of the Court is displayed in Figure 1.¹⁴ Critics argue that it is not much of an improvement from the original partisan gerrymander invalidated by the state’s high court.

¹¹ Julie Carr Smyth, *Democratic group sues over Ohio GOP’s new congressional map*, Associated Press (Nov. 23, 2021), <https://apnews.com/article/ohio-lawsuits-legislature-redistricting-mike-dewine-d19e752e41b80ccd0fa3ac74e35eabd4>.

¹² Julie Carr Smyth, *Ohio Supreme Court rejects GOP-drawn congressional map*, Associated Press (Jan. 14, 2022), <https://apnews.com/article/ohio-redistricting-gerrymandered-supreme-court-9a8db5c06897ad9c4e020ffc871f17ac>.

¹³ Julie Carr Smyth, *Ohio mapmakers OK 2nd congressional map over Dem objections*, Associated Press (Mar. 2, 2022), <https://apnews.com/article/ohio-columbus-redistricting-ohio-supreme-court-congress-f48e0ec44fb23ba483e7ea30a62858f1>.

¹⁴ Jessie Balmert, *Ohio Republicans pass a new congressional map. Will it pass Ohio Supreme Court scrutiny?*, The Columbus Dispatch (Mar. 1, 2022), <https://www.dispatch.com/story/news/politics/elections/2022/03/02/ohio-redistricting-commission-poised-pass-new-congressional-map/6983335001/>.

Partisan breakdown of new Ohio congressional map

District	Incumbent	GOP	Dem	Index
1	Chabot (R)	49.0%	51.0%	+2.1 D
2	Wenstrup (R)	69.7%	30.3%	+39.5 R
3	Beatty (D)	31.1%	68.9%	+37.8 D
4	Jordan (R)	67.9%	32.2%	+35.7 R
5	Latta (R)	61.3%	38.7%	+22.7 R
6	Johnson (R)	59.1%	40.9%	+18.1 R
7	Gibbs (R)	54.4%	45.6%	+8.8 R
8	Davidson (R)	62.7%	37.4%	+25.3 R
9	Kaptur (D)	49.8%	50.2%	+0.5 D
10	Turner (R)	53.3%	46.7%	+6.6 R
11	Brown (D)	20.2%	79.8%	+59.7 D
12	Balderson (R)	63.3%	36.7%	+26.6 R
13	Open	47.9%	52.2%	+4.3 D
14	Joyce (R)	54.8%	45.2%	+9.7 R
15	Carey (R)	54.2%	45.8%	+8.4 R

Figure 1: Partisan Breakdown of Republican-Approved Congressional Map

The litigation surrounding this congressional map continues to the day of this report’s publishing. On March 29, 2022 the Ohio Supreme Court chose to not make a decision on the constitutionality of the new map proposed by Republican legislators until after the May 3 legislative primary in the state. As a result, the current proposal will likely be utilized in upcoming congressional primaries and likely yield a significant advantage for Republicans in the state.¹⁵ Meanwhile, litigation in the U.S. District Court for the Southern District of Ohio also continues regarding the congressional and state legislative maps. A three-judge panel indicated its willingness to postpone the primary or utilize a different map if the line-drawing was not

¹⁵ Jessie Balmert, *Ohio Supreme Court won't review congressional map until after May 3 primary*, The Columbus Dispatch (Mar. 29, 2022), <https://www.dispatch.com/story/news/politics/elections/2022/03/29/ohio-redistricting-congressional-map-may-3-primary-ballot/7202348001/>

resolved by April 20.¹⁶ At this time, Ohio is one of only a handful of states that has yet to complete its new maps based on the 2020 Census.

The previously-discussed federal and state litigation has ignited debate surrounding the importance of proportional representation in congressional plans—and the extent to which state constitutions to protect against partisan gerrymandering given the U.S. Supreme Court’s unwillingness to render these claims justiciable.¹⁷ The process is ongoing and will likely result in changes to the currently-approved congressional map. Any new iterations of the map may also lead to changes to the primary date to allow time for incorporation by election officials. Nevertheless, the role of partisan fairness in Ohio’s redistricting process will remain front center in the coming weeks and months. And it is fair to say that reforms passed by voters in 2018 are playing a pivotal role in this continued discourse. Whether other states will follow their lead remains an open question.

III. Legal Compliance of Proposed Plan

A. United States Constitution

The Supreme Court has consistently held that the U.S. Constitution, and primarily the Fourteenth Amendment, requires the “one person, one-vote” principle when establishing congressional and state legislative districts. Section 2 of the Fourteenth Amendment Representatives requires that “representatives shall be apportioned among the several states according to their respective numbers.” Additionally, the Fourteenth Amendment Equal Protection Clause ensures that “[n]o State shall make or enforce any law which shall . . . deny to any person within its jurisdiction the equal protection of the laws.”¹⁸ Derived from these clauses, one person, one vote ensures that no district is disproportionately populated as compared to another, which may lead to the dilution of voting power by voters. In districts with fewer residents, each vote is worth more—however, in districts that have substantially more residents, each resident’s vote is worth less than its neighboring lower-populated district.

¹⁶ Julie Carr Smyth, *Federal Judges in Ohio Won't Delay May 3 Primary — for Now*, Associated Press (Mar., 30, 2022), <https://www.usnews.com/news/politics/articles/2022-03-30/ohio-elections-chief-pressed-for-position-on-may-3-primary>.

¹⁷ *Rucho v. Common Cause*, 139 S. Ct. 2484 (2019).

¹⁸ U.S. Const. amend. XIV, § 1, cl. 4.

In *Wesberry v. Sanders*,¹⁹ the Supreme Court found that Georgia’s system of unequally distributing population across congressional districts was unconstitutional—and held that congressional districts must have roughly equal populations. In subsequent decades, the Court indicated its desire to achieve near-perfect population equality among districts. In *Karcher v. Daggett*,²⁰ the Supreme Court clarified this requirement and stated that “absolute” population equality was the objective for congressional districts. The only way to overcome this requirement would be to demonstrate that a “legitimate state objective” required the unequal population distribution. As such, the Court rejected a less than one percent deviation in population between the largest and smallest district, arguing it violated the well-established equal population principle.

Every district in this proposed Ohio congressional plan abides by the one person, one vote requirement. Ohio’s total population, as determined by the 2020 Census, totals 11,799,448.²¹ Distributed across fifteen congressional districts, the ideal population for each district is 786,630. Each district in my plan is within one person of this ideal value, and thus satisfies the one person, one vote principle as required by the Constitution. Achieving this population equality required the splitting of a few more voting districts and counties than originally desired, but such compromise was necessary to comply with constitutional requirements as required by the Supreme Court.

In addition to the one person, one vote rule, the United States Constitution, also under the Fourteenth Amendment, establishes a prohibition on racial gerrymandering. The Supreme Court has found this prohibition to prevent line-drawers from pursuing race as a primary principle behind their districting choices and map-making. In *Shaw v. Reno*, the Court first recognized this claim under the Equal Protection Clause of the Constitution, writing that a districting plan violates the Equal Protection Clause when “though race neutral on its face, rationally cannot be understood as anything other than an effort to separate voters into different districts on the basis of race, and that the separation lacks sufficient justification.”²² In future jurisprudence, the Court found that such evidence of race as a predominant factor in a redistricting plan would trigger

¹⁹ 376 U.S. 1 (1964).

²⁰ 462 U.S. 725 (1983).

²¹ American Counts Staff, *Ohio Population Climbs 2.3% From 2010 to 2020*, United States Census Bureau (Aug. 25, 2021), <https://www.census.gov/library/stories/state-by-state/ohio-population-change-between-census-decade.html>.

²² 509 U.S. 630 (1993).

strict scrutiny, and a plan devised in such a way would only be valid if it was designed to meet a compelling governmental interest. This can be proven by the plaintiff with evidence of a disregard for traditional redistricting principles such as contiguity, compactness, respect for political subdivisions, and conformity with geographic features. However, if the government can prove that they this racial focus was a product of a compelling interest and adherence to traditional principles in some way, this may be enough to overcome the burden of proof placed upon them with respect to these claims.²³ These claims often arise from the creation of majority-minority districts in states, but the Court has found that challengers of these maps have the burden of proving the “dominant and controlling” nature of these racial considerations. In *Easley v. Cromartie*,²⁴ the Court held that political behavior and other considerations were meaningful justifications by North Carolina to establish the district they deemed necessary.

Compliance with the Voting Rights Act can sometimes serve as a compelling government interest, allowing for redistricting based on race in certain districts. In 2017, the Supreme Court issued a decision in *Cooper v. Harris*,²⁵ which found that North Carolina unconstitutionally gerrymandered two districts based on race to allegedly comply with the Voting Rights Act. Justice Kagan, the author of the majority opinion, found that there was not sufficient evidence to support that the Voting Rights Act required the racial gerrymandering perpetuated. The government needed to prove that unless they utilized race as a predominant factor, they would violate the Act. In this case, the majority believed they did not.

The recent case law on the issue of racial gerrymandering and *Shaw* claims sheds light on the interplay of racial gerrymandering and Voting Rights Act which fuel litigation to determine what is ‘appropriate’ redistricting based on race. I believe this Ohio congressional plan does not unconstitutionally gerrymander based on race, and does not run into the *Shaw*-type issues that the Supreme Court has been most troubled with in its jurisprudence. The only *Shaw* claim that could arise would be related to the majority-minority district established in Ohio’s 10th District. However, this district was modified to include the entirety of Cleveland as required by Ohio’s 2018 redistricting reforms. These new rules prevent the distorted district lines that appeared in the existing map—a necessary shape that allowed for a majority-minority district in this region at

²³ *Bush v. Vera*, 517 U.S. 952, 958-65 (1996) (holding that departing from sound principles of redistricting defeats the claim that districts are narrowly tailored to address the effects of racial discrimination).

²⁴ 532 U.S. 234 (2001).

²⁵ 137 S. Ct. 1455 (2017).

the time. The existing district's unusual lines are a result of it stretching south into Summit County. A comparison between the proposed District 10 and the existing Voting Rights Act district in the Cleveland area is depicted in Figure 2.

Given this district prioritizes other redistricting principles such as contiguity and the preservation of communities of interest, other considerations took precedence over race. The district also keeps the city of Cleveland together to better reflect the shared interests of Cleveland residents. If this district is treated as a minority opportunity district under the VRA by court, the 'compelling government interest' showing required to overcome *Shaw* claims is also satisfied given the need to comply with Section 2 of the Voting Rights Act in preserving the political power of Black Ohioans.

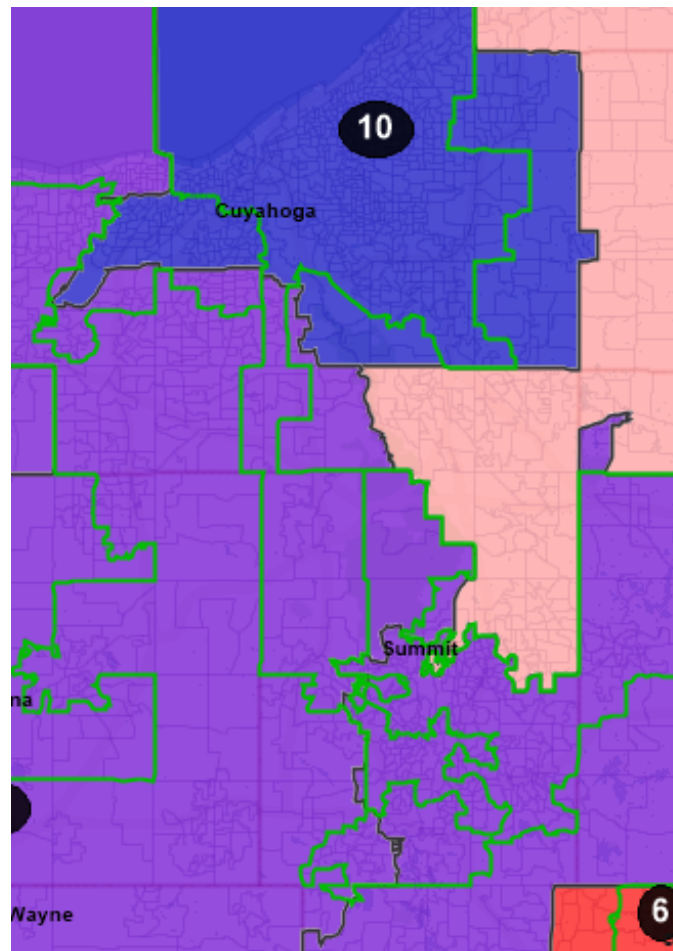


Figure 2: Comparison of Existing VRA District to Proposed Replacement District

B. Section 2 of the Voting Rights Act

Section 2 of the Voting Rights Act remains a primary vehicle for disputing the redistricting plans of a given state. Under Section 2, the establishment of a majority-minority

district may be required if it is necessary to prevent vote dilution of a specific minority group. In these districts, a minority group composes the majority of the voting population in the district and receives the opportunity to elect the candidate they prefer over the one preferred by a more cohesive majority. In *Thornburg v. Gingles*,²⁶ the Supreme Court established the criteria to evaluate a plaintiff's vote dilution claim under Section 2 of the Voting Rights Act. This three-pronged test includes the following requirements of proof by the plaintiff: (1) the minority group must be able to demonstrate that it is sufficiently large and geographically compact to constitute a majority in a single-member district; (2) the minority group must be able to show that it is politically cohesive; and (3) the minority must be able to demonstrate that the majority votes sufficiently as a bloc to enable the majority to defeat the minority group's preferred candidate absent special circumstances, such as the minority candidate running unopposed.²⁷ One of the most persuasive pieces of evidence to support these vote dilutions claim is proof that under the proposed redistricting map, the plaintiff does not have an equal opportunity to elect candidates of their choice within the political process. The Senate Report that accompanied the passage of the Voting Rights Act is utilized by the Court to determine the relevant circumstances to be considered when determining this "equal opportunity" to elect a preferred candidate.²⁸ Courts utilize these Senate Report factors to gain a better understanding of the political landscape within a state and generate a depiction of historic disillusionment of minority voters in a given district or jurisdiction.

In *Bartlett v. Strickland*,²⁹ a plurality of the Supreme Court found that a minority group needed to constitute more than 50% of the voting population in a district to satisfy the first prong of the *Gingles* analysis. This is often a difficult criteria to meet in many potential majority-

²⁶ 478 U.S. 30 (1986).

²⁷ L. Paige Whitaker, *Congressional Redistricting Law: Background and Recent Court Rulings*, Congressional Research Service (Mar. 23 2017), <https://sgp.fas.org/crs/misc/R44798.pdf>.

²⁸ The relevant Senate Report factors include: the extent of any history of official discrimination in the state or political subdivision that touched the right of the members of the minority group to register, to vote, or otherwise to participate in the democratic process; the extent to which voting in the elections of the state or political subdivisions is racially polarized; the extent to which the state or political subdivision has used unusually large election districts, majority vote requirements, anti-single shot provisions, or other voting practices or procedures that may enhance the opportunity for discrimination against the minority group; if there is a candidate slating process, whether the members of the minority group have been denied access to that process; the extent to which members of the minority group in the state or political subdivision bear the effects of discrimination in such areas as education, employment and health, which hinder their ability to participate effectively in the political process; whether political campaigns have been characterized by overt or subtle racial appeals; [and] the extent to which members of the minority group have been elected to public office in the jurisdiction.

²⁹ 556 U.S. 1, 25-26 (2009).

minority districts given the geographic distribution of minority populations and the distorted districts that may result if line-drawers attempt to incorporate them into one district. However, the establishment of a coalition district with multiple minority groups that satisfy the other *Gingles* factors have often been utilized to justify the creation of a majority-minority district. For example, if Black and Hispanic voters compose a majority of the voting population in a specific district and are politically cohesive enough to elect the same candidate of choice, they will satisfy the *Gingles* analysis.

The establishment of these majority-minority districts enable compliance with the Voting Rights Act, and have heavily influenced the decision-making behind redistricting in nearly every state, including Ohio. However, due to the redistricting reforms passed in the state in 2018, the majority-minority district that existed in the Cleveland region is difficult to repeat in the proposed map. Under the Ohio Constitution, Cleveland can no longer be split into multiple districts, and at least one district must be wholly contained in Cuyahoga County. This constraint prevents the formulation of a district that constitutes a majority-minority district with a Black population over 50%. As a result, it is unclear if Section 2 of the Voting Rights Act continues to require a minority-concentrated district in this region given the guidance by the Supreme Court in *Bartlett*. However, I argue the coalition of Black and Hispanic voters in District 10 of my proposed map is enough to overcome this concern and satisfy the other two *Gingles* prongs. This district satisfies the test established in *Gingles* as the minority groups in the district is sufficiently large and compact enough to compose a majority in the district, is politically cohesive, and operates as a bloc to defeat the minority group's preferred candidate. An extensive analysis of political cohesion would need to be conducted, but this is beyond the scope of this report. But this district is heavily centered in the city of Cleveland and the communities it includes are not only racially homogenous, but also homogenous in terms of their interests given their shared geographic ties and positioning. In terms of compactness, the Reock score for District 10 is 0.34, whereas the existing district in this area scores 0.17 on the Reock scale. This is a notable difference of compactness and reflects the major changes to the district lines in the Cleveland area. A compact district like District 10 that preserves communities of interest and safeguards against the vote dilution of minority Ohioans reflects the spirit and purpose of the Voting Rights Act.

Furthermore, as Black Ohioans comprise 13% of the population in the state, preventing them from electing their preferred candidates as members of the congressional delegation in Ohio appears to run afoul of the purpose of Section 2 of the Voting Rights Act. Political representation for minority groups runs right through districts like that of Ohio’s District 10, and the preservation of this district under this new map may be integral to Voting Rights Act compliance. It is also impossible to draw another majority-minority district anywhere else in the state due to the geographic distribution of Black voters. The only other district with a sizable minority population is District 3 of this proposed plan, but its 26% Black population does not come close to being sufficient to establish a VRA district. Given that no other districts in Ohio would be conducive to the creation of a majority-minority district, Ohio’s District 10 is that much more important.

Below is further data on the demographic distribution in District 10, the potential VRA minority coalition district in the proposed plan.

District 10 (Potential VRA Coalition District) Demographics	
Black or African American	47.9%
Hispanic Origin	7.9%
Non-Hispanic White	39.8%

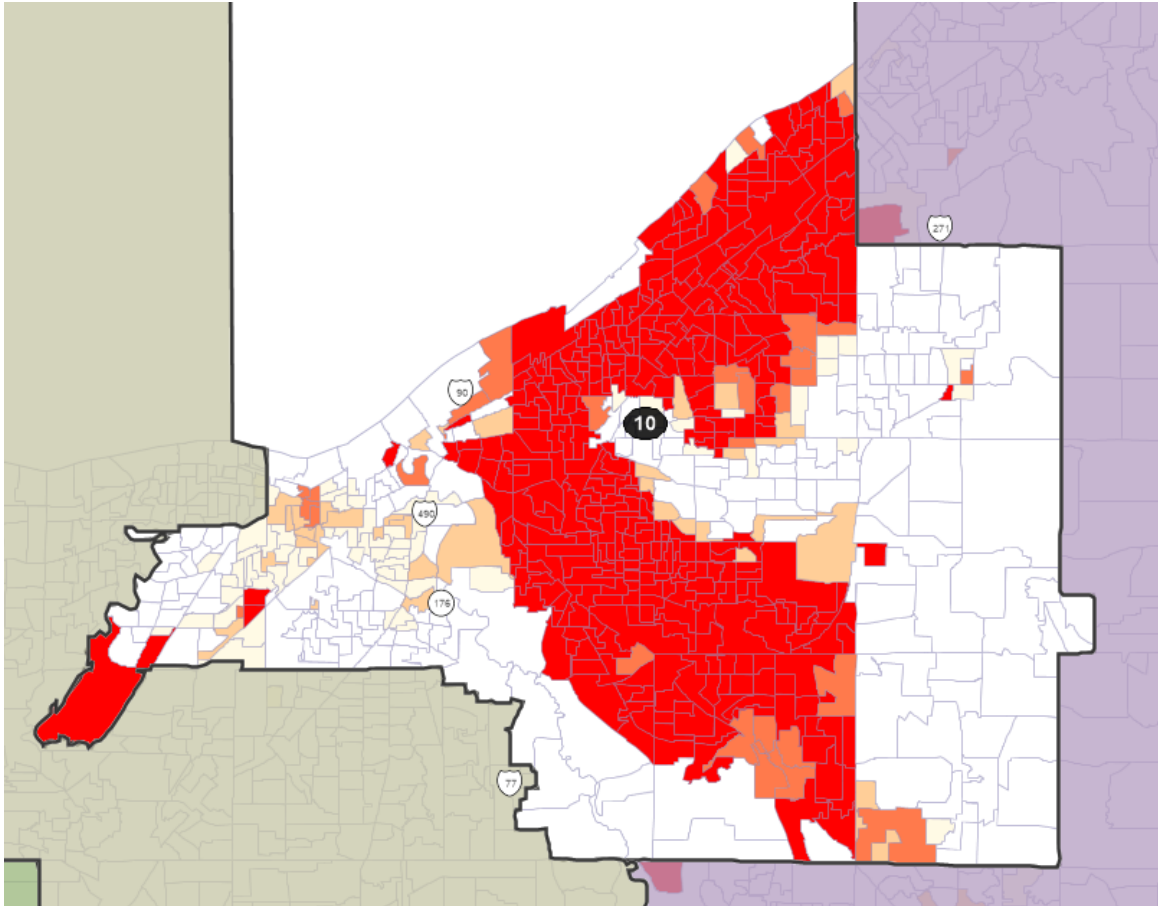


Figure 3: Population Density of Black Population in District 10 (Cleveland)

C. Partisan Gerrymandering

Given the most salient issue in the Ohio redistricting process currently is the constitutionality of partisan gerrymandering under its state constitution, it is important to explore the allowability of such gerrymanders under the United States Constitution. For many decades, this question remained unsettled by the highest court. But this changed in 2019, with the Court’s decision in *Rucho v. Common Cause*.³⁰ In a 5-4 opinion, the majority held that partisan gerrymandering claims were not justiciable in federal courts. They invoked the political question doctrine to reach this holding, arguing that partisan gerrymandering is not a case or controversy of a “judicial nature.” Instead, the majority ruled that such questions were more appropriately resolved by the legislative branch. Chief Justice John Roberts indicated the difficulty of deciding

³⁰ 139 S. Ct. 2484 (2019).

“how much” was “too much” in terms of political gerrymandering—and took issue with attempting to create a standard for such a claim.

As a result of this decision, the primary avenue for disputing partisan gerrymanders currently is through state courts like the Ohio Supreme Court. The Ohio Constitution’s provision regarding political gerrymandering has allowed the state’s courts to explore and define a standard for deciding when a gerrymander is too extreme in its partisan bias. As such, the constitutionality of my proposed map with respect to partisan gerrymandering will be evaluated through the lens of state constitutionality below.

D. Ohio State Law

As a result of the 2018 reforms to Ohio’s congressional redistricting process, there are multiple state law requirements surrounding map-making. These are often difficult to navigate, given their specificity with respect to splitting of counties and cities. In addition to traditional redistricting principles such as compactness, contiguity, and preserving communities of interest, I also adhered to these new constitutional requirements. The state also requires its congressional maps to abide by the previously-discussed requirements related to one person, one vote, racial gerrymandering, and Section 2 of the Voting Rights Act.

Under the Ohio Constitution, the congressional maps must also meet a number of constraints regarding partisanship and county and city splits. These are laid out below:

- i.** The congressional districts must be contiguous and compact
- ii.** The plan must not “unduly favor or disfavor a party or incumbent”
- iii.** If a city can contain more than one district, a significant portion of that city must exist in one district with communities of similar interests.
- iv.** If the biggest city in a county is not large enough to compose its own district, but has more than 100,000 people, it cannot be split.
- v.** The entirety of at least 65 counties must be included in their own district.
- vi.** A total of 18 counties may be split once.
- vii.** Only 5 counties can be split twice.
- viii.** No county can be split more than twice.
- ix.** Two districts cannot be spread across the same two counties, unless the population of these counties exceed 400,000 people.³¹

³¹ Ohio Const, art. XIX, § 2.

My proposed map complies with the requirements above and does not unduly favor one political party or split counties in an unconstitutional manner. As Cleveland, Cincinnati, Toledo, Akron, and Dayton are the biggest cities in their respective counties and include more than 100,000 people, I ensured that they were not split into multiple districts. 72 counties are entirely included in their own districts, and only 16 are split into more than one district. Summit County was split two ways achieve equal populations across districts. Nevertheless, these county and city splits maintained compliance with the Ohio Constitution. Additional information about the counties kept whole and split in this plan is included below.

	County Names
Counties Intact (72)	Montgomery, Lucas, Butler, Stark, Lake, Mahoning, Clermont, Delaware, Trumbull, Medina, Greene, Fairfield, Wood, Richland, Miami, Allen, Columbiana, Ashtabula, Geauga, Tuscarawas, Ross, Hancock, Scioto, Erie, Belmont, Athens, Jefferson, Marion, Knox, Washington, Lawrence, Sandusky, Huron, Pickaway, Union, Seneca, Darke, Shelby, Auglaize, Logan, Madison, Holmes, Brown, Highland, Fulton, Clinton, Mercer, Preble, Ottawa, Guernsey, Champaign, Defiance, Williams, Coshocton, Perry, Morrow, Putnam, Jackson, Hardin, Gallia, Fayette, Hocking, Van, Pike, Adams, Henry, Meigs, Paulding, Harrison, Morgan, Monroe, Vinton
Counties Split Once (15)	Ashland, Carroll, Clark, Crawford, Cuyahoga, Franklin, Hamilton, Licking, Lorain, Muskingum, Noble, Portage, Warren, Wayne, Wyandot
Counties Split Twice (1)	Summit

The guiding principle of this plan is to ensure partisan fairness and proportional representation. With seven safe Republican seats, four safe Democratic seats, and four competitive seats, this plan complies with the state constitutional prohibition against undue partisan gerrymandering. In the 2020 presidential election, Donald Trump received 53% of the statewide vote and Joe Biden received 45%.³² Given the Republican lean of the state in recent years and distribution of Democratic voter across the state, it is difficult to draw more than four

³² *Ohio 2020 Presidential Results*, CNN, <https://www.cnn.com/election/2020/results/state/ohio/president> (last visited Apr. 3, 2022).

safe Democratic seats. The best chance for proportional representation in the state rests with the competitive seats that offer multiple opportunities for Democrats to even the partisan makeup of Ohio's congressional delegation. Above all, both Democrats and Republicans will have fair opportunities to elect the candidates of their parties to compose a delegation that best reflects the partisan breakdown of the state's voting population.

Given the above discussions of compliance, this proposed map satisfies the requirements laid out by Ohio state law as it adheres to constitutional redistricting requirements and traditional redistricting principles of compactness and contiguity.

IV. Guiding Principles and Considerations of This Plan

A. Partisan Fairness and Proportional Representation

As I drafted this plan, the key consideration was proportional representation to comply with the state constitutional requirement prohibiting partisan gerrymandering. The ongoing litigation on the partisanship of the state legislature-approved map also motivated my desire to propose a map that was fairer to both sides of the aisle. In the past two presidential elections, the Democratic presidential candidate received an average of 44% of the statewide vote.³³ A proportional representation plan in a state with fifteen congressional districts would yield anywhere from six to seven seats with Democratic representation. As a result, the plan I created includes four safe Democratic seats and four districts that offer fair opportunities for the party to increase their share of the congressional seats to seven or eight in a high-turnout cycle. The proposed map will likely yield at least seven safe Republican seats. The partisan makeup of the state indicates why this isn't an outrageous or overly-partisan outcome. However, if the cycles includes a Republican incumbent in the competitive seats, Democrats may find difficulty gaining more than six seats. This is ultimately the reality of the distribution of Democrats across the state and their concentration in the urban areas of Cleveland, Cincinnati, Akron, and Dayton.

To better visualize the partisan lean of each district, the Democratic and Republican vote shares in the 2020 presidential race (in descending order from most to least Democratic) are included by district in the table below. The partisan leanings of each district are also analyzed via PlanScore, a tool that projects data about the partisan consequences of redistricting plans, and attached in the Appendix section. The PlanScore analysis affirms this analysis of the partisan

³³ *Id.*

lean of each district and expected distribution of seats across parties. The efficiency gap for the proposed plan is near ideal, with a gap of 5.6% in favor of Republicans. This measure is calculated by taking “one party’s total inefficient votes in an election, subtracting the other party’s total inefficient votes, and dividing by the total number of votes cast. It captures in a single number the extent to which district lines crack and pack one party’s voters more than the other party’s voters.”³⁴ The difficulty of lowering this efficiency gap stems from the distribution of Democratic voters across the state. Creating compact districts while creating partisan fairness across the state is no easy task.

District	2020 Democratic Presidential Vote Share	2020 Republican Presidential Vote Share
District 10	77.8%	22.2%
District 3	64.5%	35.5%
District 11	59.8%	40.2%
District 1	58.7%	41.3%
District 8	51.3%	48.7%
District 12	48.9%	51.1%
District 15	47.7%	52.3%
District 9	46.3%	53.7%
District 13	44.1%	55.9%
District 6	34.5%	65.5%
District 14	33.2%	66.8%
District 7	32.4%	67.6%
District 4	31.3%	68.7%
District 2	31%	69%
District 5	30%	70%

³⁴ PlanScore, *Efficiency Gap*, <https://planscore.campaignlegal.org/metrics/efficiencygap/> (last visited Apr. 3, 2022).

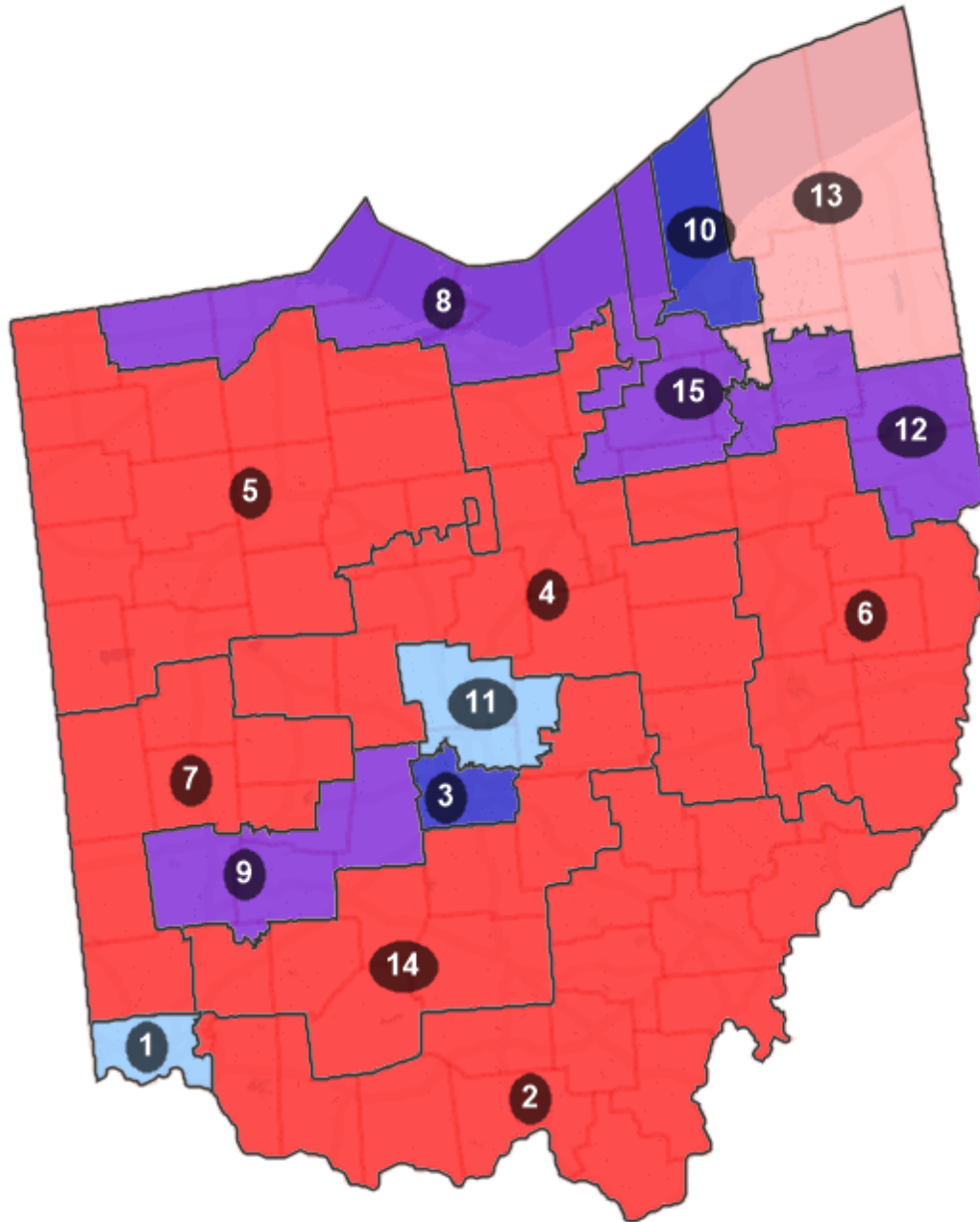


Figure 4: Partisan Lean of Proposed Districts

District 3, depicted in Figure 5, contains half of Franklin County and a sizable portion of Columbus, a heavily-Democratic area. District 11 shares a border with District 3 and includes the Democratic-leaning suburbs of Columbus to achieve a district that is friendly territory for Democrats.

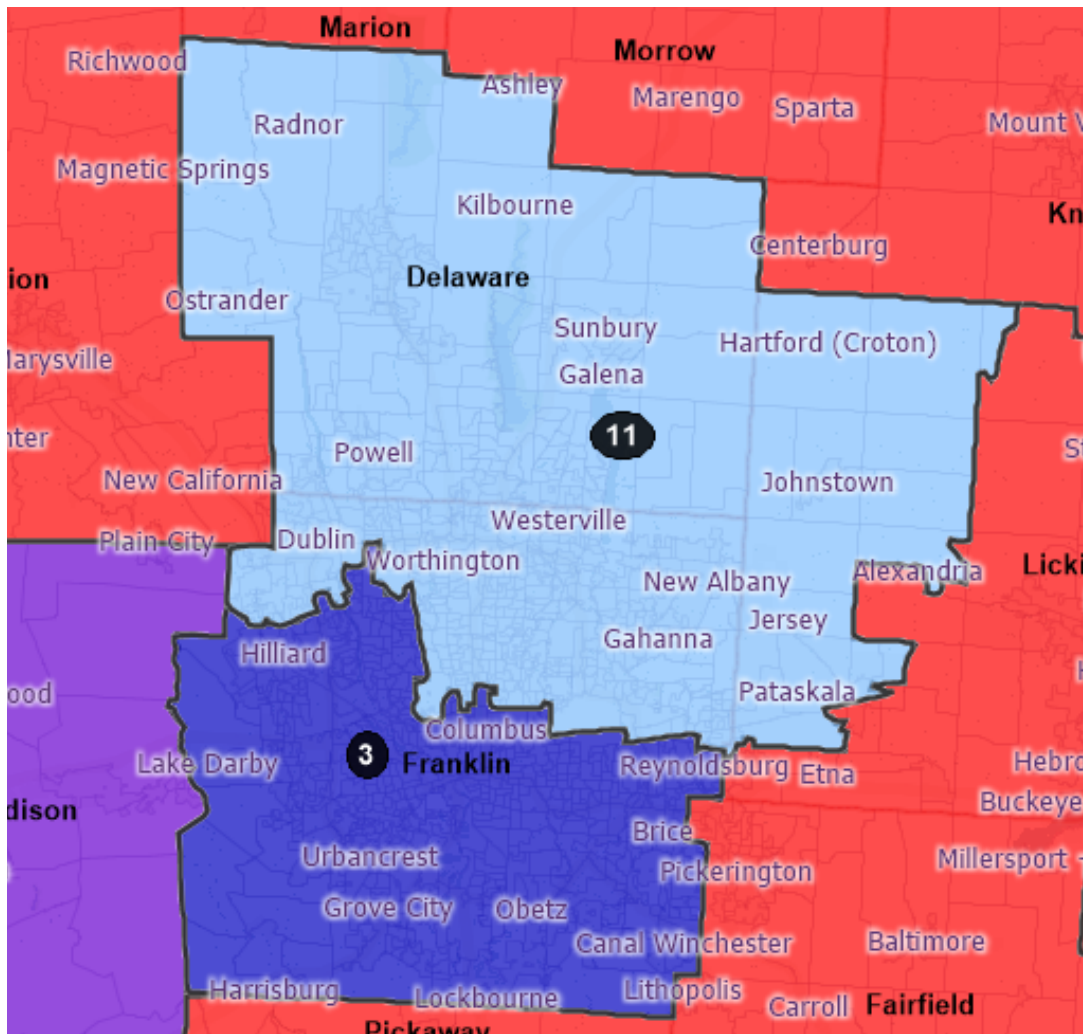


Figure 5: Democratic Districts in Columbus Region

The lines of districts 8, 10, and 12, and 15 in the northern-most part of the state result from the need to bridge Democratic voters across portions of the state to achieve more competitive districts. District 8 includes the city of Toledo, a Democratic-leaning city, and stretches from west to east to include Democratic territories across the top of the state. Cleveland forms the base of District 10, and District 15 includes the Democratic-leaning suburbs of Cleveland and more southern neighborhoods found in the counties of Medina, Wayne, and Summit. District 12 stretches across multiple counties to pick up Democratic voters in the localities of Summit County. The breakdown of these districts and their respective levels of partisanship is included in Figure 6 below.

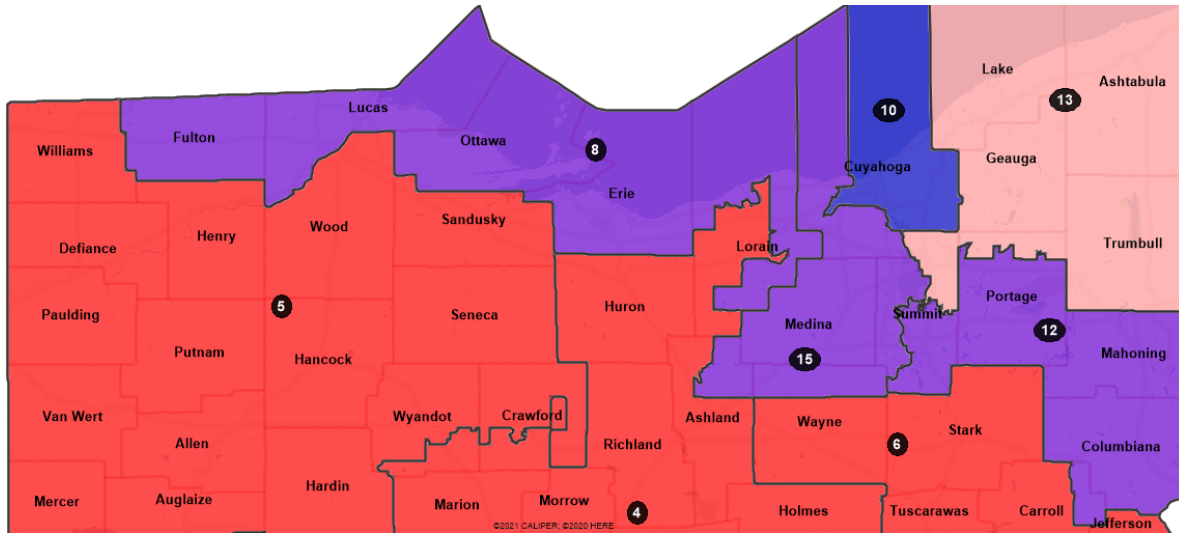


Figure 6: Districts in Northern-Most Section of State

District 1, which includes the entirety of Cincinnati, is a region that is often split multiple ways in maps proposed by Republican legislators in the state to dilute the Democratic vote in the area. Under my proposed plan, this district contains almost the entire county of Hamilton to best reflect the Democratic interests in the cities that make up the county

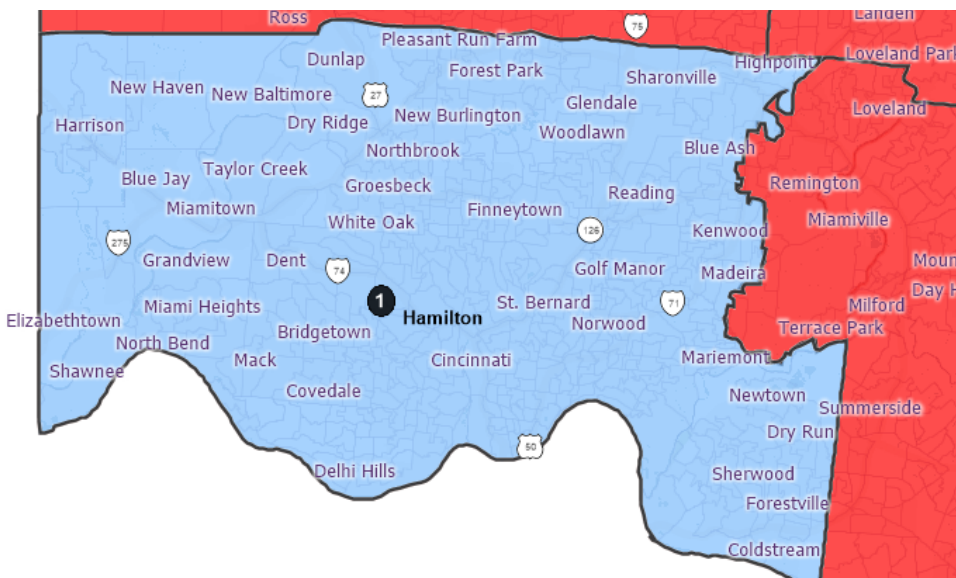


Figure 7: District 1 Communities

B. Points of Interest

Preserving the metropolitan areas within the state, primarily within the Columbus, Cleveland, Cincinnati, Dayton, Akron, and Toledo regions, were main considerations when creating this plan. These large cities in the state are primarily contained within their own districts to ensure their representatives are most responsive to the needs of their jurisdiction.

C. Respect for Political Subdivision Lines

While developing this plan, I avoided unnecessary splitting of counties and cities across the state. The splits discussed above in the compliance section were necessary to achieve the proportional representation and equal population goals of this plan. The resulting plan only splits 16 counties and 69 voting districts as compared to the existing plan which splits 23 counties and 268 voting districts. The proposed district lines means that seven more counties will have a congressional representative who reflects the needs of their entire county, and not just subsets of it. This respect for political subdivision lines was a key priority of this plan in order to create districts that kept as many counties and voting districts together as possible.

In the instances where county splits were necessary, special care was taken to ensure these splits were not unnecessarily arbitrary or unreflective of the communities of interest most affected. While drawing districts in Summit, the only county that was split twice in this plan, I focused on maintaining the entirety of cities in any given district to ensure the preservation of this political subdivision. The communities of Akron, Cuyahoga Falls, Tallmadge, Norton, Barberton, Fairlawn, and Lakemore surround this multi-district split, but their jurisdictional lines were prioritized in the spirit of good government. The Summit County split across three districts is included in Figure 8.

The formulation of districts that include entire political subdivisions allow for elected congressional representatives to better calibrate federal support based on the needs of entire counties and cities within their districts. To unnecessarily split counties, cities, and voting districts is to create a more disjointed response by federal leaders to the priorities and concerns of their constituents and relevant local governments. Additionally, unnecessary splitting of voting districts places a burden on election officials to navigate ballot creation and execution at the precinct level—contributing to additional stressors for an already-stressed set of administrators. These problems stem from multiple ballot styles and associated costs, reduction in voter confidence due to differing ballots in some neighborhoods, and a lack of voters secrecy in some

precincts with so few ballots of the same type.³⁵ By ensuring geographically proximate counties remain whole and together, this proposal eliminates some of these unnecessary hindrances related to election administration.

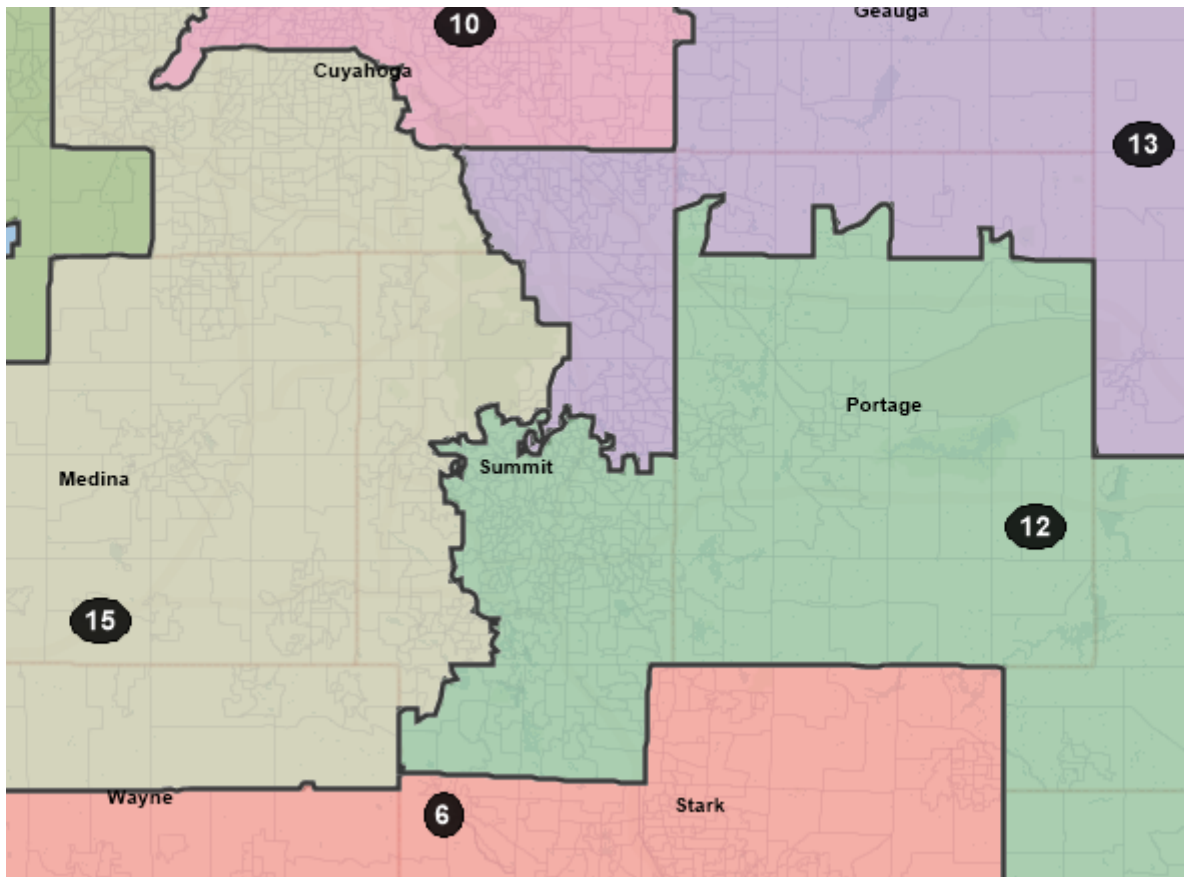


Figure 8: Summit County Split Across Districts 12, 15, and 13

D. Compactness

Compactness motivated a series of decisions in this redistricting plan, but achieving ideal compactness in many districts was difficult due to the constraints of achieving proportional representation. As such, the districts in the northern most part of the state are not the most compact, but said district shapes were necessary to create safer Democratic seats and enable broader partisan fairness across the state. Nevertheless, I prioritized the creation of districts with

³⁵ *After Redistricting is Done: Election Processes and Implementation*, National Conference of State Legislatures (Jan. 28, 2022), <https://www.ncsl.org/research/elections-and-campaigns/after-redistricting-is-done-election-processes-and-implementation.aspx>.

counties geographically proximate to each other. To compensate for population decreases in certain parts of the state, some existing districts were expanded to include additional counties surrounding their borders

Every district in the proposed plan scored between a 0.2 and 0.56 on the Reock scale of compactness. This measurement ranges from 0 to 1, with 1 indicating the district is optimally compact. The value is calculated by “taking the ratio of the area of the district to the area of... the smallest circle that entirely encapsulates the district.”³⁶ The Polsby Popper score is another measurement of compactness, also ranging from 0 to 1, and is calculated by “taking the ratio of the area of the district to the area of the circle whose circumference matches the perimeter of the district.”³⁷ Every district in the proposal plan scored between 0.14 and 0.38 on this scale. These two compactness scores are listed below for each district in the proposed plan. The scores indicate differing levels of compactness in most of the eight districts—a product of the proportional representation principle.

District	Polsby Popper Score	Reock Score
District 1	0.37	0.43
District 2	0.21	0.29
District 3	0.35	0.56
District 4	0.14	0.33
District 5	0.37	0.52
District 6	0.36	0.47
District 7	0.33	0.41
District 8	0.16	0.2
District 9	0.32	0.35
District 10	0.38	0.34
District 11	0.3	0.52
District 12	0.23	0.45
District 13	0.4	0.48

³⁶ *Geographic Scores*, Princeton Gerrymandering Project, (Dec. 16, 2021), <https://gerrymander.princeton.edu/redistricting-report-card-methodology>.

³⁷ *Id.*

District 14	0.23	0.26
District 15	0.19	0.29

V. Proposed Plan v. Plan Enacted Following 2010 Census

The congressional plan utilized in the last few election cycles differs substantially from my proposed plan due to population changes, the loss of a congressional district, and the desire to achieve partisan fairness. Despite these population changes, the proposed plan prioritizes good government more than the existing plan as it splits only 16 of the counties and 69 of the voting districts in Ohio. The existing plan splits 23 counties and 268 voting districts.

Beginning with the southern-most portion of the state, my proposed plan expands District 2 to include most of southeastern Ohio. This was the region where I compensated for the loss of a congressional seat. District 2 begins in Clermont County and stretches across the bottom part of the state and around to the counties of Noble and Morgan. District 14 includes eight counties in the state, and incorporates Warren County which is included in the Hamilton County seat in the existing plan. This change was made to resolve the gerrymandering of Democratic voters in Hamilton County under the existing plan. The existing lines cut Hamilton County in half and dilute the Democratic vote by incorporating Warren County, a Republican-leaning county. My proposed plan keeps Hamilton County nearly whole and does not dilute the Democratic vote in the interest of partisan fairness and the Ohio Constitution.

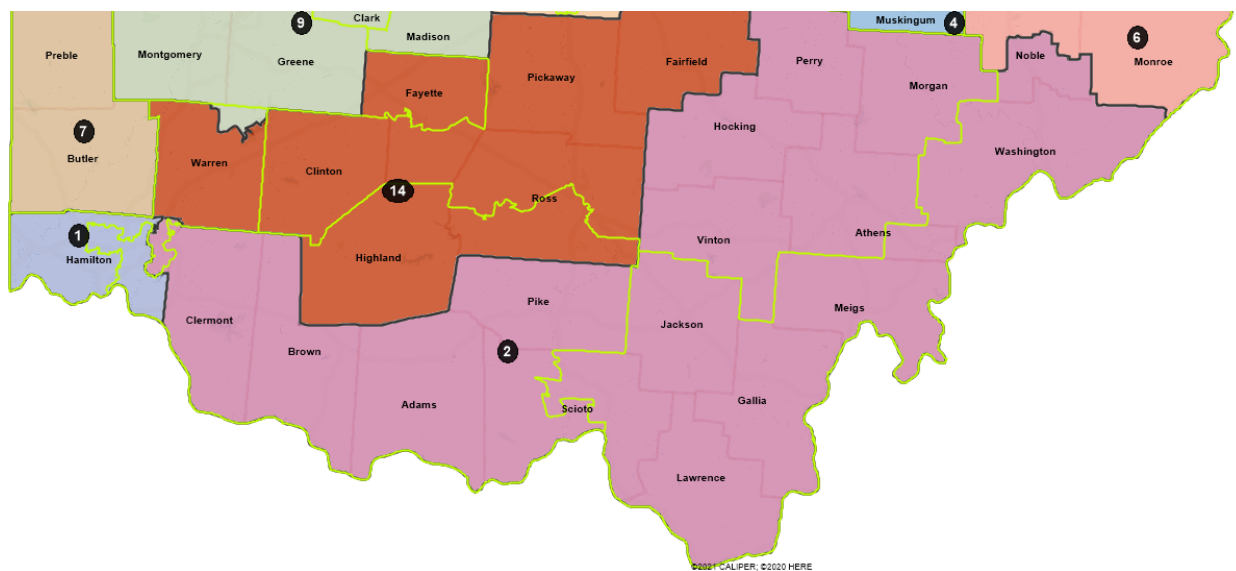


Figure 9: Overlay of Existing Districts in Southern Ohio

The Cincinnati region in Hamilton County is deemed by some as the target of some of the worst gerrymandering in the state.³⁸ The overlay of existing districts in this region in Figure 9 demonstrates why this is the case. In the existing plan, Cincinnati is divided into separate parts of the southwest of the state—a move that isn't necessarily justified by any other reason other than partisan gerrymandering. To alleviate this unnecessary splitting of a major metropolitan area, District 1 in my proposed plan keeps Cincinnati whole and incorporates nearly the entire county of Hamilton. This is not only beneficial to all residents of Cincinnati, but particularly for the minority communities in the region who were cracked into separate districts by the existing plan.

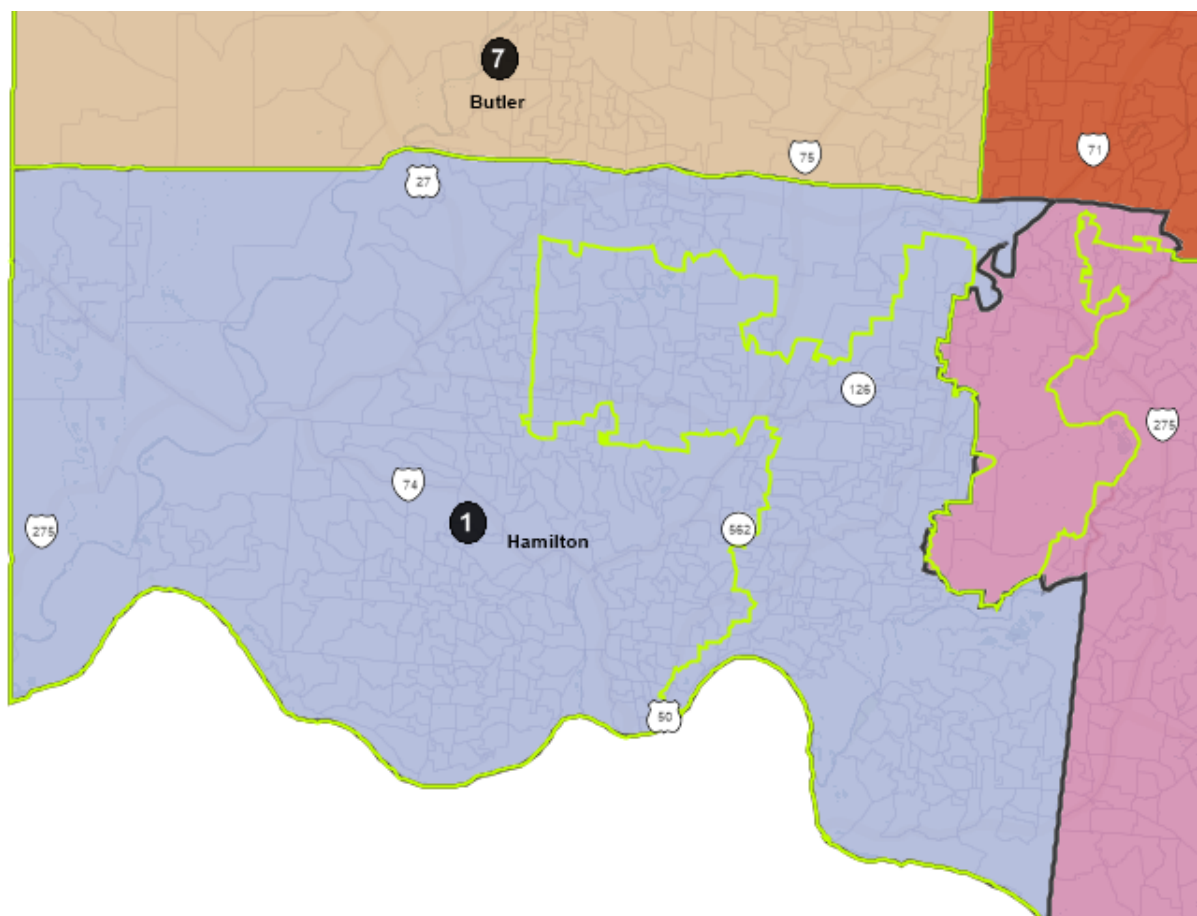


Figure 9: Overlay of Existing Districts in Hamilton County

Franklin County is another region that was divided oddly by the existing plan. The Columbus region is another heavily-Democratic area of the state, and the existing plan curves

³⁸ Howard Wilkinson, *Commentary: The Ohio GOP congressional map is bad - really bad. But there is a chance it won't stick*, WVXU News (Nov. 17, 2021), <https://www.wvxu.org/politics/2021-11-17/commentary-ohio-gop-congressional-map-gerrymandering>.

around portions of the city to include subsets of it with other surrounding counties. To mitigate this distorted shape in this area, I prioritized the compactness of the districts that comprise the region. I also followed voting district and other political subdivision lines within the county to avoid any arbitrary decision-making. My proposed districts in the Columbus region not only reflect this compactness priority, but also maintain its Democratic communities to allow for a fair chance at electing their candidate of choice.

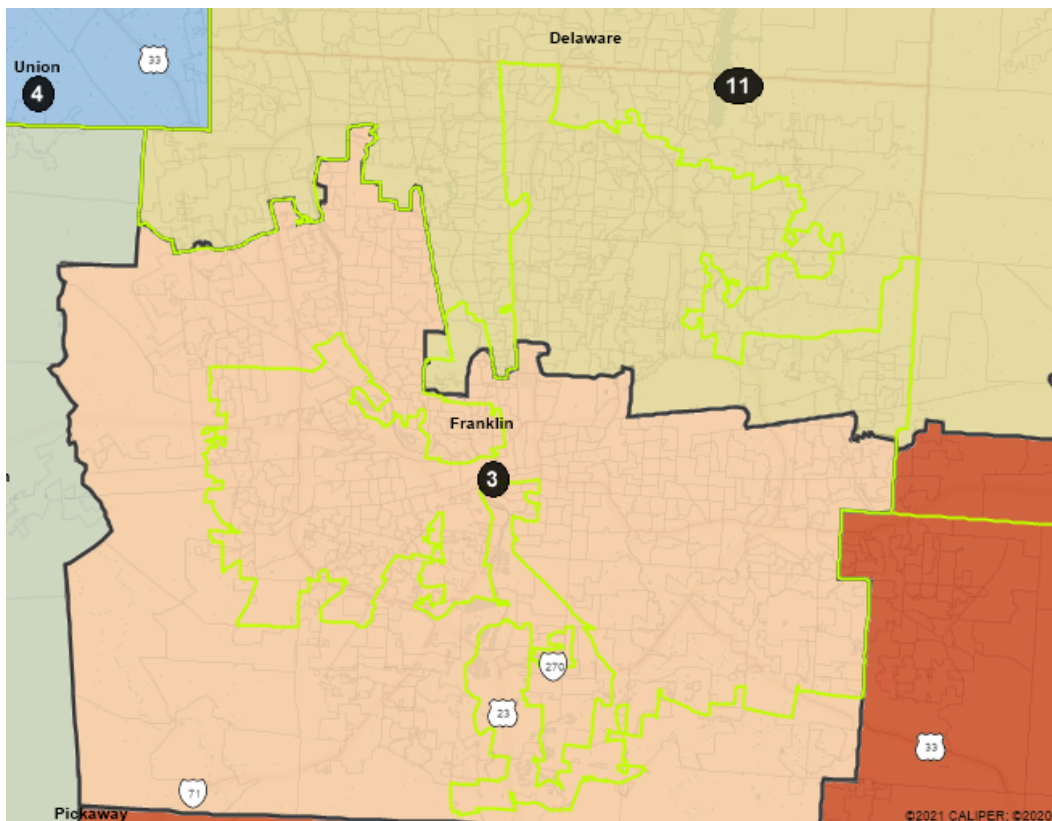


Figure 10: Columbus Region Overlay of Existing Districts on Proposed Districts

The northern part of the state in the existing plan also has its fair share of distorted districts that sprawl across multiple counties. My proposed plan prioritizes compactness as much as possible to avoid districts that stretch and curve around political subdivisions unnecessarily. Districts 10, 13, and 15 reflect this desire and avoid the odd line-drawing exercises that characterize the existing plan.

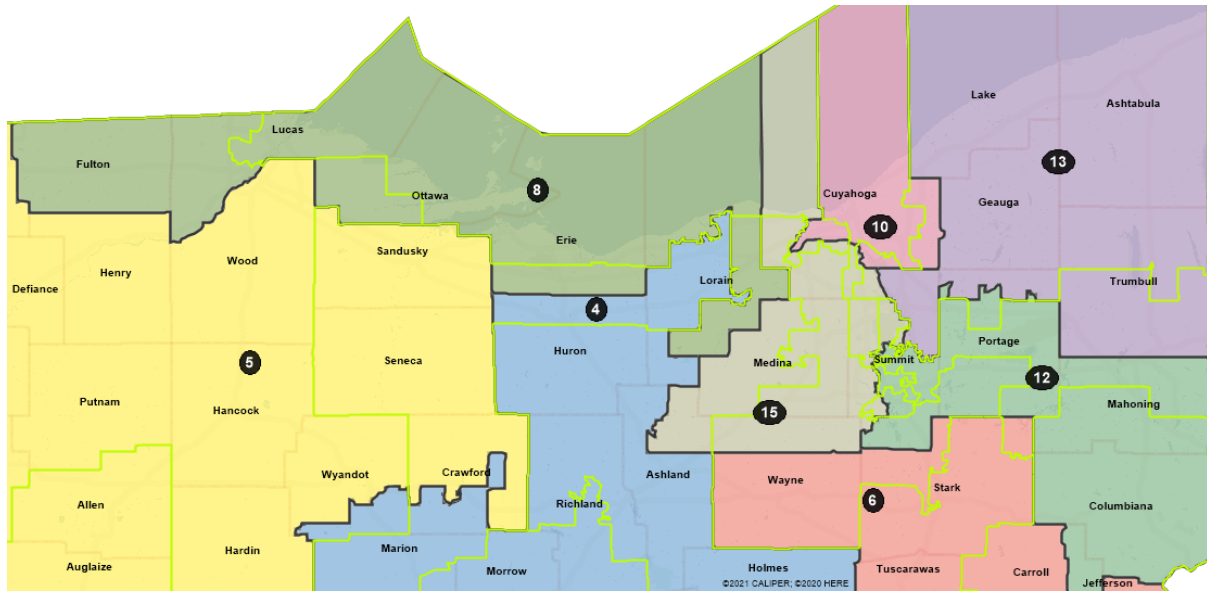


Figure 10: Overlay of Existing Districts in Northern Ohio

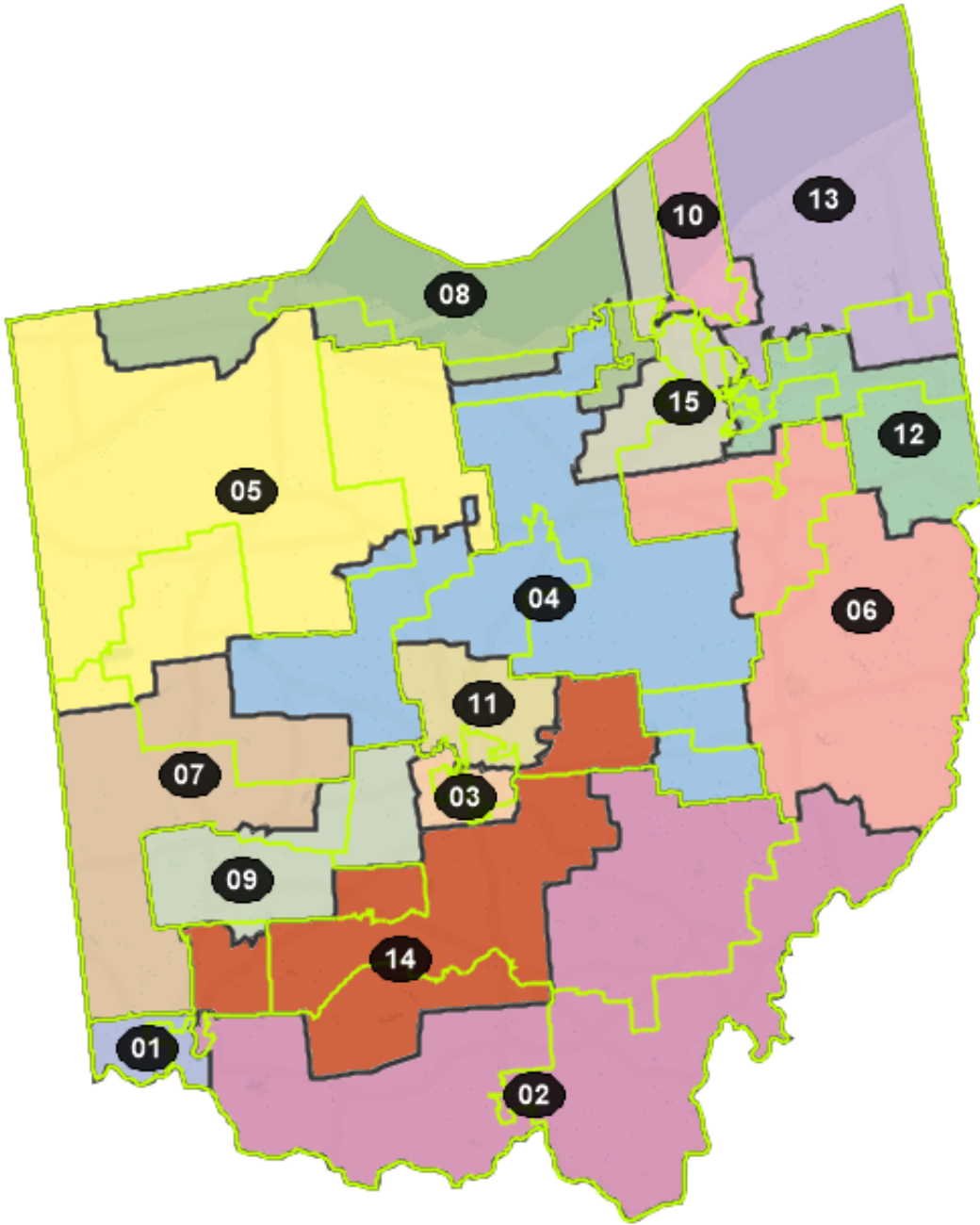


Figure 11: Statewide Overlay of Existing Districts on Proposed Districts

VI. Proposed Plan v. Legislature-Approved Plan Awaiting OH Supreme Court Review



Figure 12: Legislature-Approved Plan (March 2022)³⁹

³⁹ U.S. Congressional Districts 2022-2026, Ohio Secretary of State, https://www.ohiosos.gov/globalassets/publications/maps/2022-2026/congressional_2022-2026_adopted_2022-03-02.pdf (last visited Apr. 3, 2022).

There is currently one legislature-approved plan awaiting judicial review by the Ohio Supreme Court. However, this plan, included in Figure 12 above, will likely be in effect for the congressional primary unless a federal court intervenes due to the timing of the OH Supreme Court hearing. This proposed plan includes “10 safe Republican seats, three safe Democratic seats, and two Democratic-leaning tossups.”⁴⁰ Critics argue that it is not much of an improvement from the original partisan gerrymander invalidated by the state’s high court. The most substantial difference between my plan and the legislature-approved plan is with respect to proportional representation and partisan fairness. My plan includes three fewer safe Republican seats, an additional safe Democratic seat, and a total of four competitive seats. This gives Democrats in the state multiple additional opportunities to elect the candidate of their choice and achieve proportional representation in the congressional delegation.

The legislature-approved plan follows the pattern of the existing plan as it splits Hamilton County in half and includes it with counties to the north of it. This appears to be an attempt to dilute Democratic vote in that portion of the state. My plan focuses on keeping Hamilton County whole and enables a prime opportunity for Democrats to elect their preferred candidate. The approved plan also breaks up Hamilton County to include it with counties to the west. This differs from my plan as it I prioritized the compactness of districts in the Franklin County and Columbus region. This allowed for the drawing of two Democratic seats in the area.

Additionally, I attempted to make District 5 and District 6 in my plan more compact and avoid stretching the district lines across the state as found in the legislature-approved plan. My District 4, on the other hand, is much different than the approved plan as it surrounds Districts 14 and 11 to achieve proportional representation goals. This guiding principle of my plan are responsible for most of the differences between my map and the legislature-approved plan.

VII. Conclusion

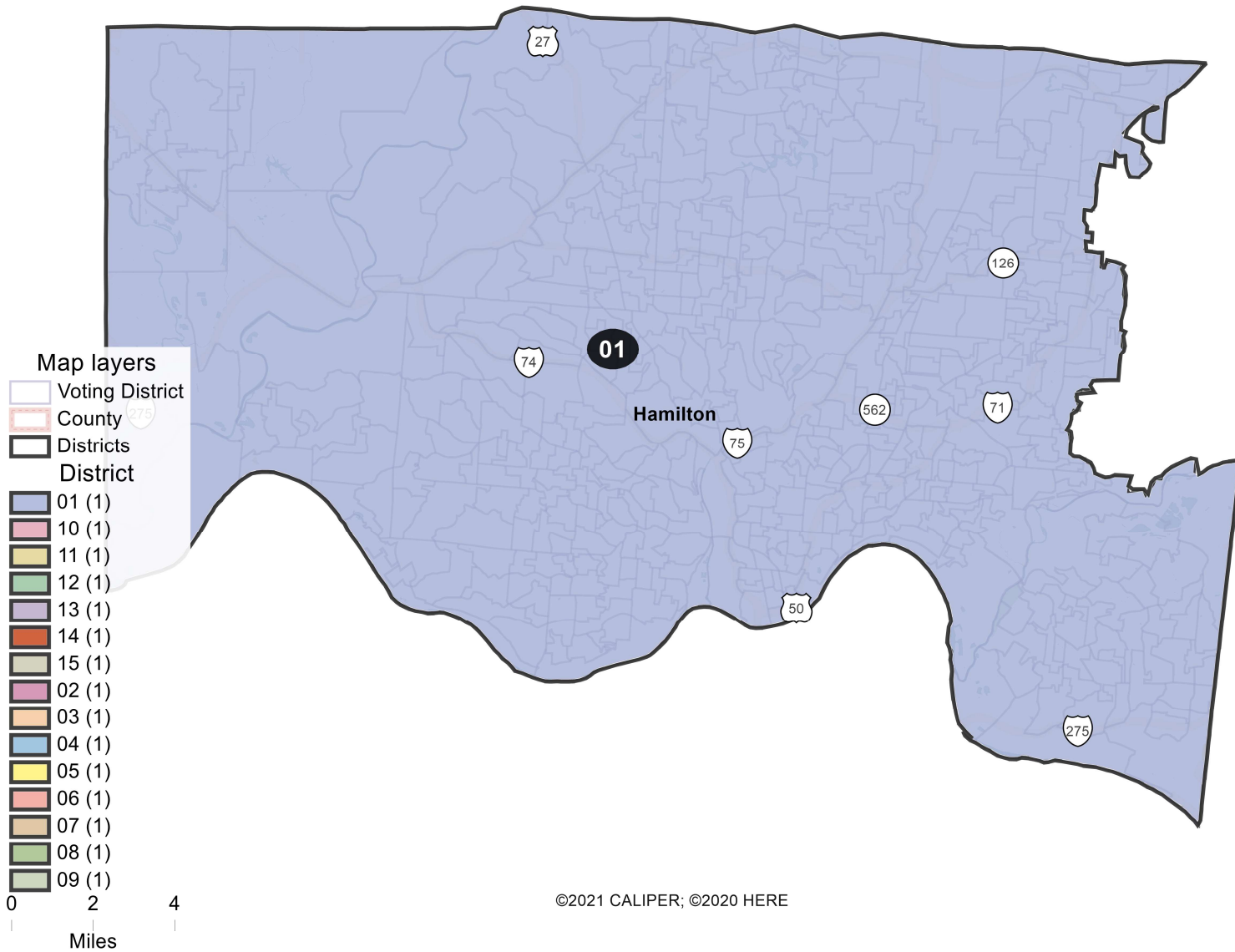
Ohio’s congressional plan has been the subject of intense litigation and other controversy in recent redistricting cycles because of its competitive political environment and population distribution across urban and rural areas. Its urban centers in Cleveland, Cincinnati, and

⁴⁰ Julie Carr Smyth, *Ohio mapmakers OK 2nd congressional map over Dem objections*, Associated Press (Mar. 2, 2022), <https://apnews.com/article/ohio-columbus-redistricting-ohio-supreme-court-congress-f48e0ec44fb23ba483e7ea30a62858f1>.

Columbus, all heavily Democratic areas, are often the subject of division in enacted and proposed congressional maps. However, with the redistricting reforms passed by voters in 2018, the legislature is limited in the number of counties and cities they split. Additionally, the state's redistricting process now includes a prohibition against unnecessary partisan gerrymandering and the favoring of one political party over the other. These constraints have not limited the debate in the redistricting realm, but have instead fueled additional litigation and debate on the subject. As of this report's publishing, the fate of Ohio's congressional plan remains uncertain because of its current review by the Ohio Supreme Court and federal courts. The effectiveness of the reforms instituted after 2018 remains an open question—and will likely remain one for the foreseeable future.

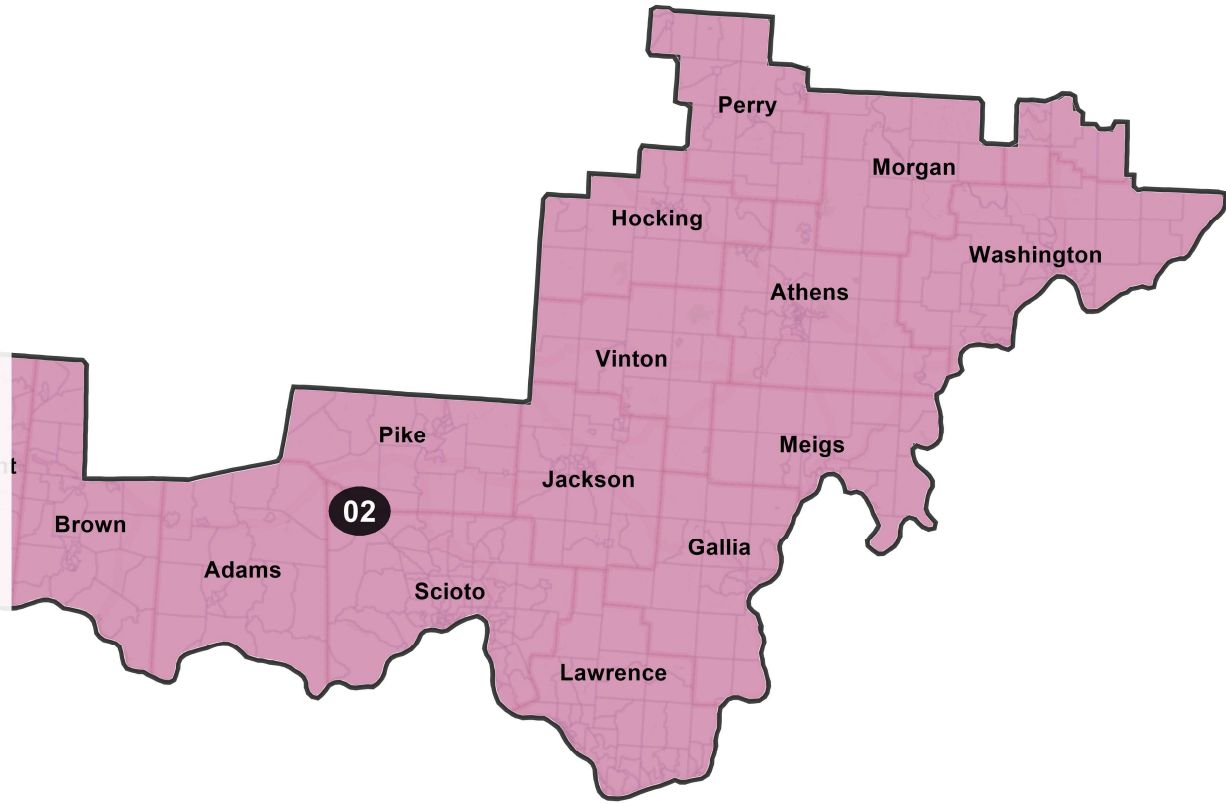
The plan discussed throughout this report is a reasonable solution for Ohioans who desire a fair map that does not unduly favor one political party. Ohio's swing state status in recent presidential elections only furthers the need for a congressional map that reflects the partisan breakdown of the state. This proposed plan delivers district lines that prioritize proportional representation, respect for political subdivisions, compactness, and the state's diverse communities. Some of these traditional redistricting principles were second to the guiding principle of a fair partisan map, but remained at the forefront of my decision-making throughout the line-drawing process. The implications of this plan position it as a common-sense alternative to the legislature-approved plan and better reflects the state Constitution's mandate to create maps with partisan fairness at their core.

District: 01



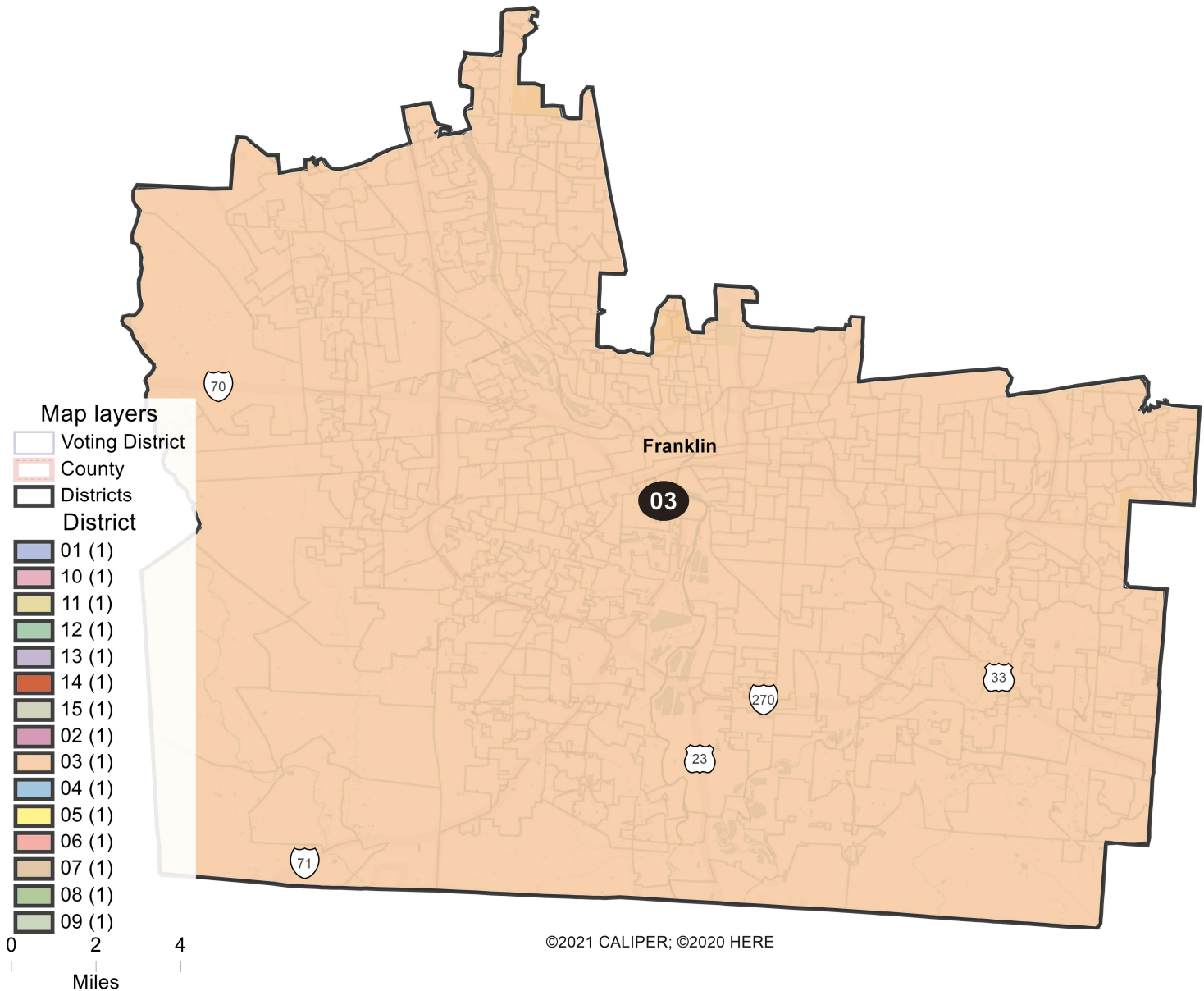
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Population	786629
Deviation	-1
% Deviation	-0%
Alternate Schwartzberg	1.65
Polsby Popper	0.37
Perimeter	113.55
Reock	0.43
% NH_Wht	61.48%
% Hispanic Origin	4.42%
% NH18+_Wht	65.06%
% 18+_AP_BlK	26.14%
% 18+_AP_Ind	1.67%
% 18+_AP_Asn	3.49%
% 18+_AP_Hwn	0.15%
% 18+_AP_Oth	3.71%
% H18+_Pop	3.58%
Ideal Value	786,630
% D 20_Pres	58.65%
% R 20_Pres	41.35%
% 20_Pres	50.4%
% Total CVAP 19	72.85%
% NH CVAP 19	98.37%
% NH White CVAP 19	69.5%
% NH Black CVAP 19	26.27%
% NH Asian CVAP 19	1.64%
% H CVAP 19	1.63%

District: 02



Field	Value
District	02
Population	786629
Deviation	-1
% Deviation	-0%
Alternate Schwartzberg	2.18
Polsby Popper	0.21
Perimeter	663.97
Reock	0.29
% NH_Wht	91.25%
% Hispanic Origin	1.62%
% NH18+_Wht	92.1%
% 18+_AP_BlK	2.5%
% 18+_AP_Ind	2.18%
% 18+_AP_Asn	1.35%
% 18+_AP_Hwn	0.07%
% 18+_AP_Oth	1.68%
% H18+_Pop	1.34%
Ideal Value	786,630
% D 20_Pres	30.95%
% R 20_Pres	69.05%
% 20_Pres	48.63%
% Total CVAP 19	77.89%
% NH CVAP 19	98.99%
% NH White CVAP 19	95%
% NH Black CVAP 19	2.22%
% NH Asian CVAP 19	0.81%
% H CVAP 19	1.01%

District: 03

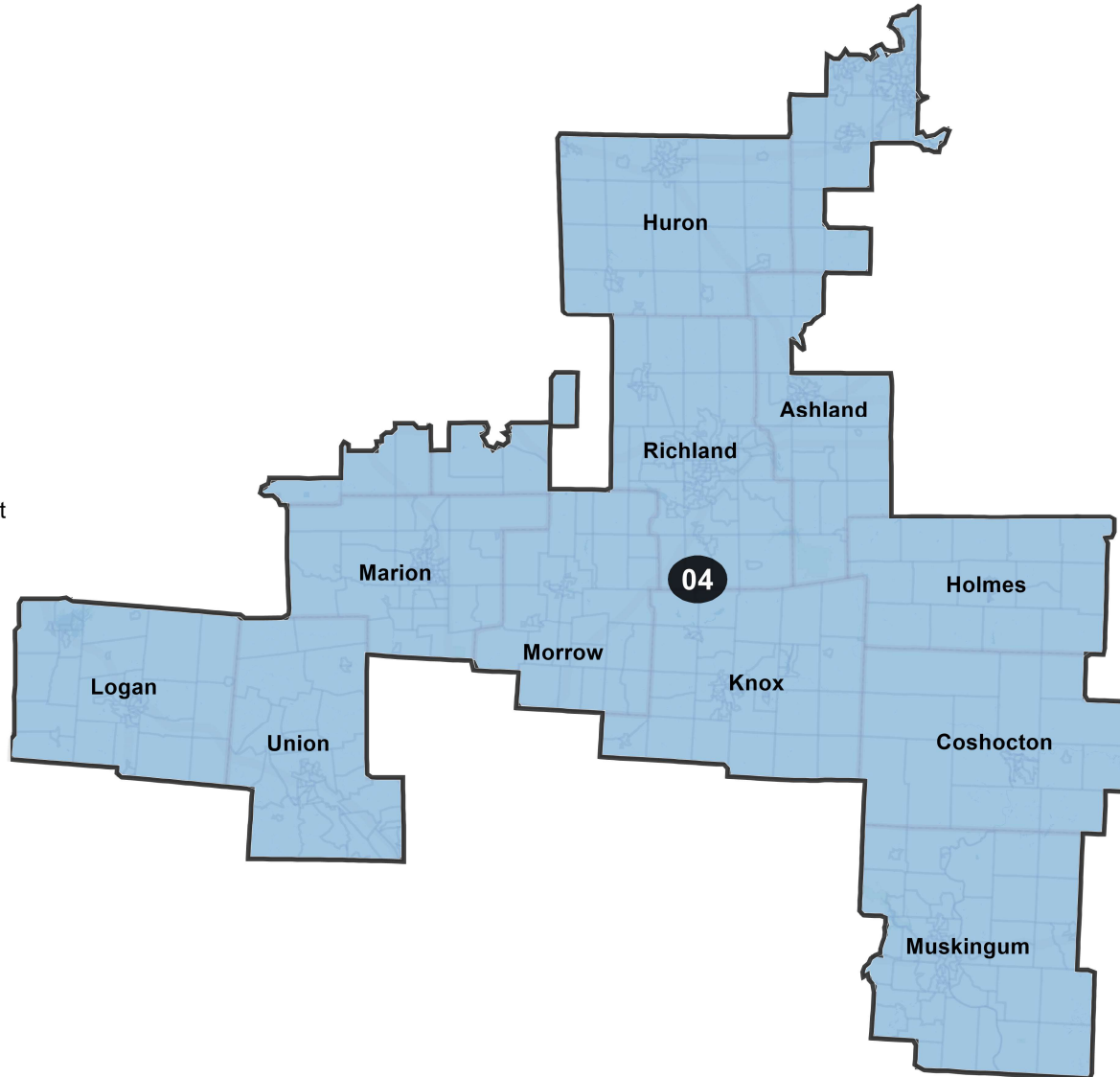


Field	Value
District	03
Population	786628
Deviation	-2
% Deviation	-0%
Alternate Schwartzberg	1.7
Polsby Popper	0.35
Perimeter	114.54
Reock	0.56
% NH_Wht	60.34%
% Hispanic Origin	7.44%
% NH18+_Wht	64.59%
% 18+_AP_Bl	22.6%
% 18+_AP_Ind	2.01%
% 18+_AP_Asn	4.9%
% 18+_AP_Hwn	0.15%
% 18+_AP_Oth	5.89%
% H18+_Pop	6.23%
Ideal Value	786,630
% D 20_Pres	64.47%
% R 20_Pres	35.53%
% 20_Pres	44.99%
% Total CVAP 19	70.71%
% NH CVAP 19	97.2%
% NH White CVAP 19	71.28%
% NH Black CVAP 19	21.82%
% NH Asian CVAP 19	2.83%
% H CVAP 19	2.8%

District: 04

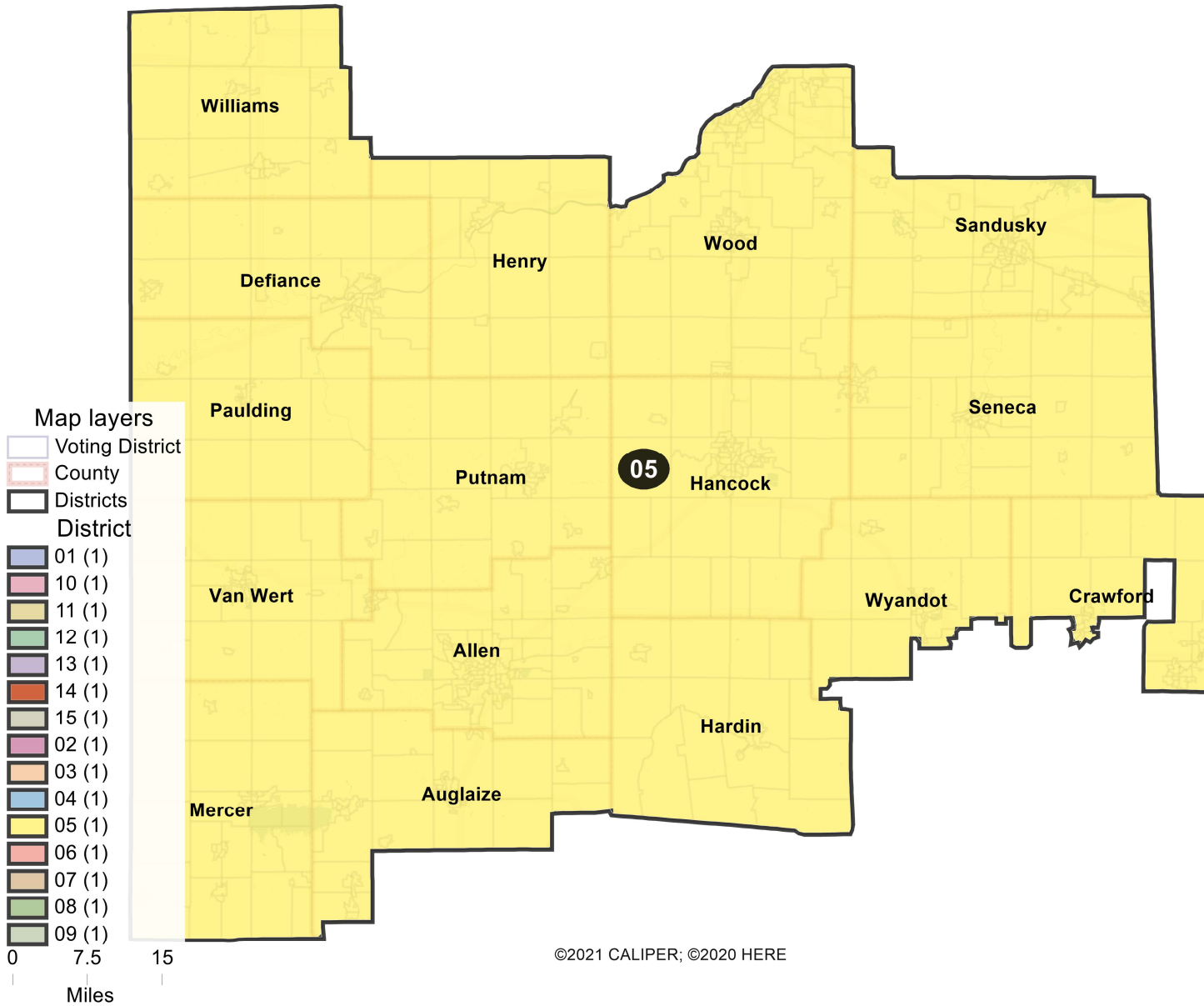
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-  County
-  Districts
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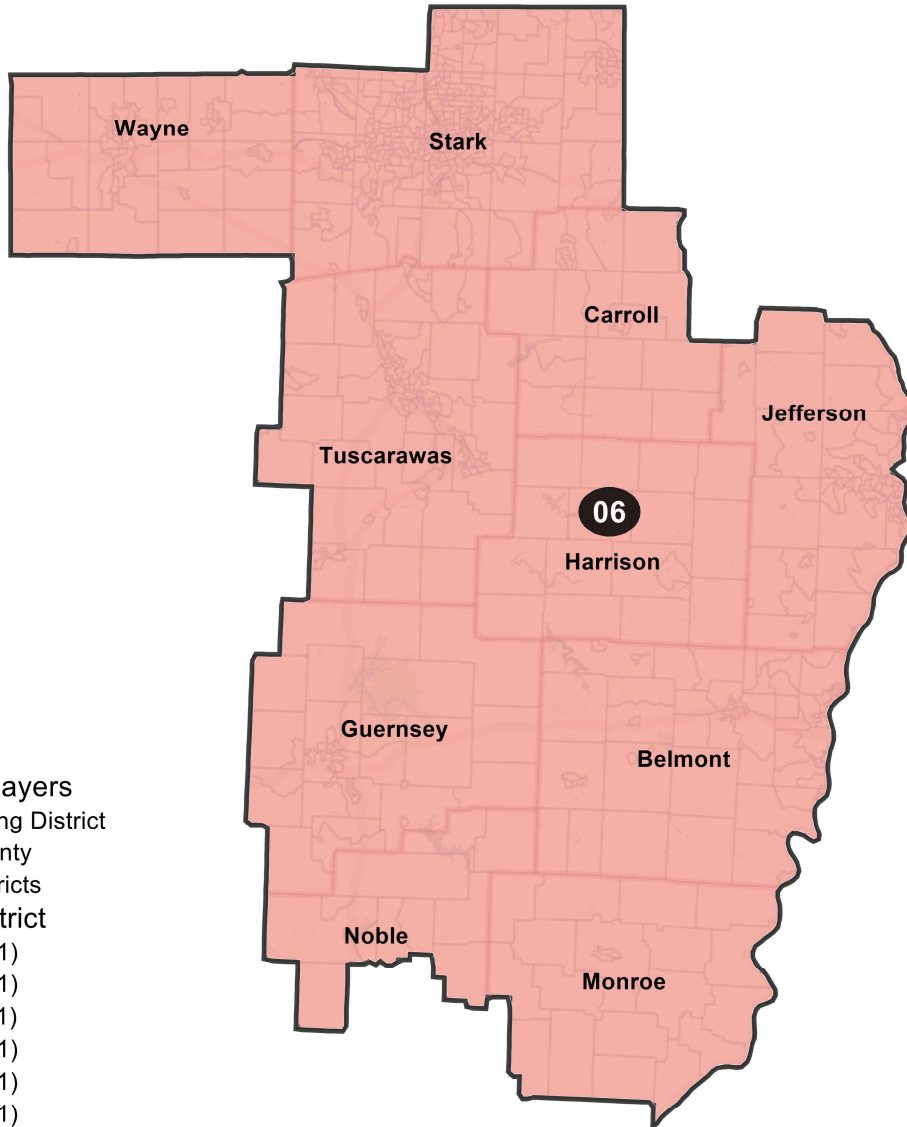
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District	04
Population	786628
Deviation	-2
% Deviation	-0%
Alternate Schwartzberg	2.64
Polsby Popper	0.14
Perimeter	704.1
Reock	0.33
% NH_Wht	87.11%
% Hispanic Origin	3.06%
% NH18+_Wht	88.54%
% 18+_AP_BlK	5.34%
% 18+_AP_Ind	1.96%
% 18+_AP_Asn	1.27%
% 18+_AP_Hwn	0.1%
% 18+_AP_Oth	2.44%
% H18+_Pop	2.47%
Ideal Value	786,630
% D 20_Pres	31.27%
% R 20_Pres	68.73%
% 20_Pres	46.75%
% Total CVAP 19	75.51%
% NH CVAP 19	97.96%
% NH White CVAP 19	91.18%
% NH Black CVAP 19	5.18%
% NH Asian CVAP 19	0.7%
% H CVAP 19	2.05%

District: 05



Field	Value
District	05
Population	786630
Deviation	0
% Deviation	0%
Alternate Schwartzberg	1.64
Polsby Popper	0.37
Perimeter	489.08
Reock	0.52
% NH_Wht	87.11%
% Hispanic Origin	5.17%
% NH18+_Wht	88.95%
% 18+_AP_BlK	3.51%
% 18+_AP_Ind	1.7%
% 18+_AP_Asn	1.18%
% 18+_AP_Hwn	0.14%
% 18+_AP_Oth	3.51%
% H18+_Pop	4.25%
Ideal Value	786,630
% D 20_Pres	29.95%
% R 20_Pres	70.05%
% 20_Pres	49.85%
% Total CVAP 19	75.81%
% NH CVAP 19	96.33%
% NH White CVAP 19	91.83%
% NH Black CVAP 19	3.24%
% NH Asian CVAP 19	0.61%
% H CVAP 19	3.67%

District: 06

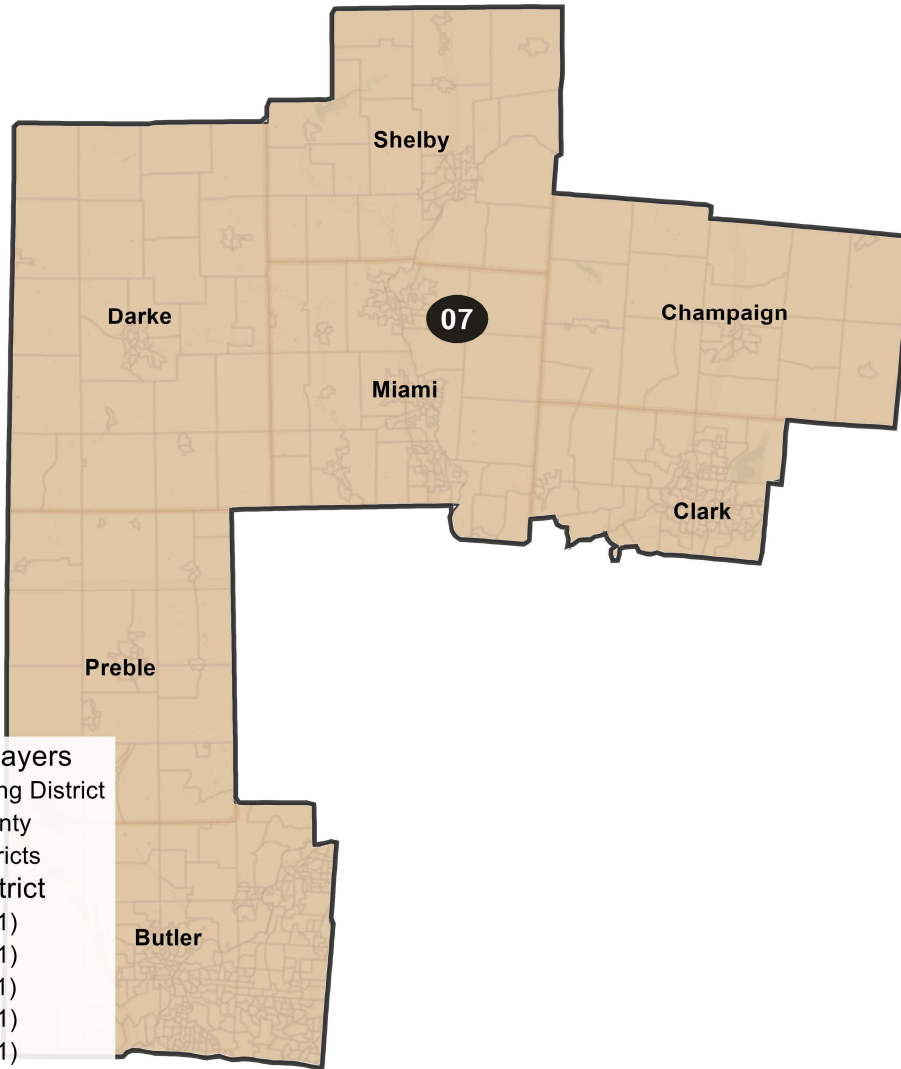


Field	Value
District	06
Population	786629
Deviation	-1
% Deviation	-0%
Alternate Schwartzberg	1.67
Polsby Popper	0.36
Perimeter	397.54
Reock	0.47
% NH_Wht	87.12%
% Hispanic Origin	2.51%
% NH18+_Wht	89%
% 18+_AP_Blk	5.47%
% 18+_AP_Ind	2.03%
% 18+_AP_Asn	0.94%
% 18+_AP_Hwn	0.08%
% 18+_AP_Oth	2.35%
% H18+_Pop	1.97%
Ideal Value	786,630
% D 20_Pres	34.45%
% R 20_Pres	65.55%
% 20_Pres	48.88%
% Total CVAP 19	77.63%
% NH CVAP 19	98.86%
% NH White CVAP 19	92.3%
% NH Black CVAP 19	5.13%
% NH Asian CVAP 19	0.66%
% H CVAP 19	1.13%



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District: 07



Field	Value
District	07
Population	786630
Deviation	0
% Deviation	0%
Alternate Schwartzberg	1.74
Polsby Popper	0.33
Perimeter	334.54
Reock	0.41
% NH_Wht	81.74%
% Hispanic Origin	4.38%
% NH18+_Wht	84.16%
% 18+_AP_Blk	7.09%
% 18+_AP_Ind	2.07%
% 18+_AP_Asn	2.86%
% 18+_AP_Hwn	0.14%
% 18+_AP_Oth	3.48%
% H18+_Pop	3.49%
Ideal Value	786,630
% D 20_Pres	32.43%
% R 20_Pres	67.57%
% 20_Pres	48.56%
% Total CVAP 19	73.3%
% NH CVAP 19	98.28%
% NH White CVAP 19	89.66%
% NH Black CVAP 19	6.23%
% NH Asian CVAP 19	1.52%
% H CVAP 19	1.7%

Map layers

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- County
- Districts

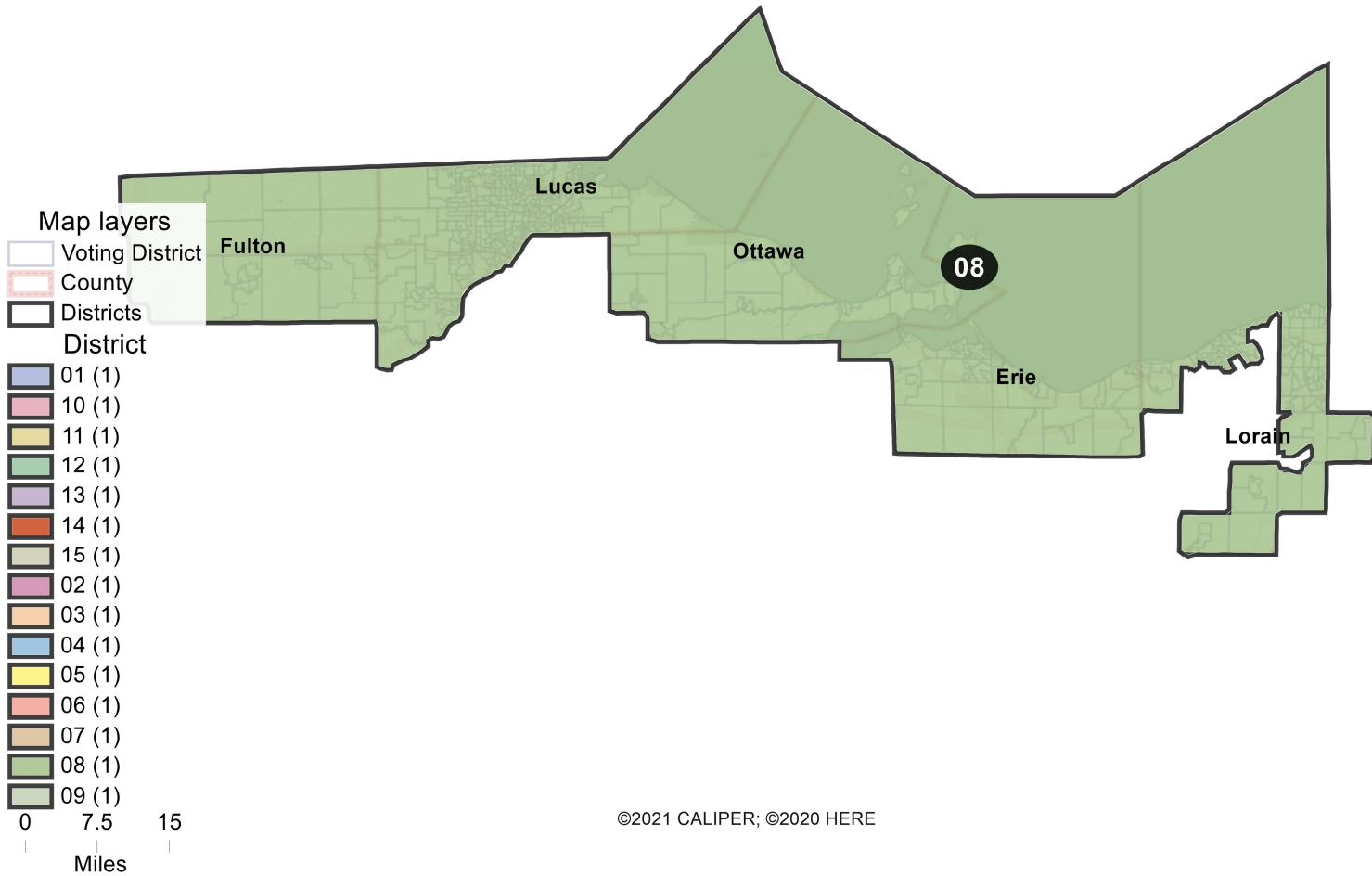
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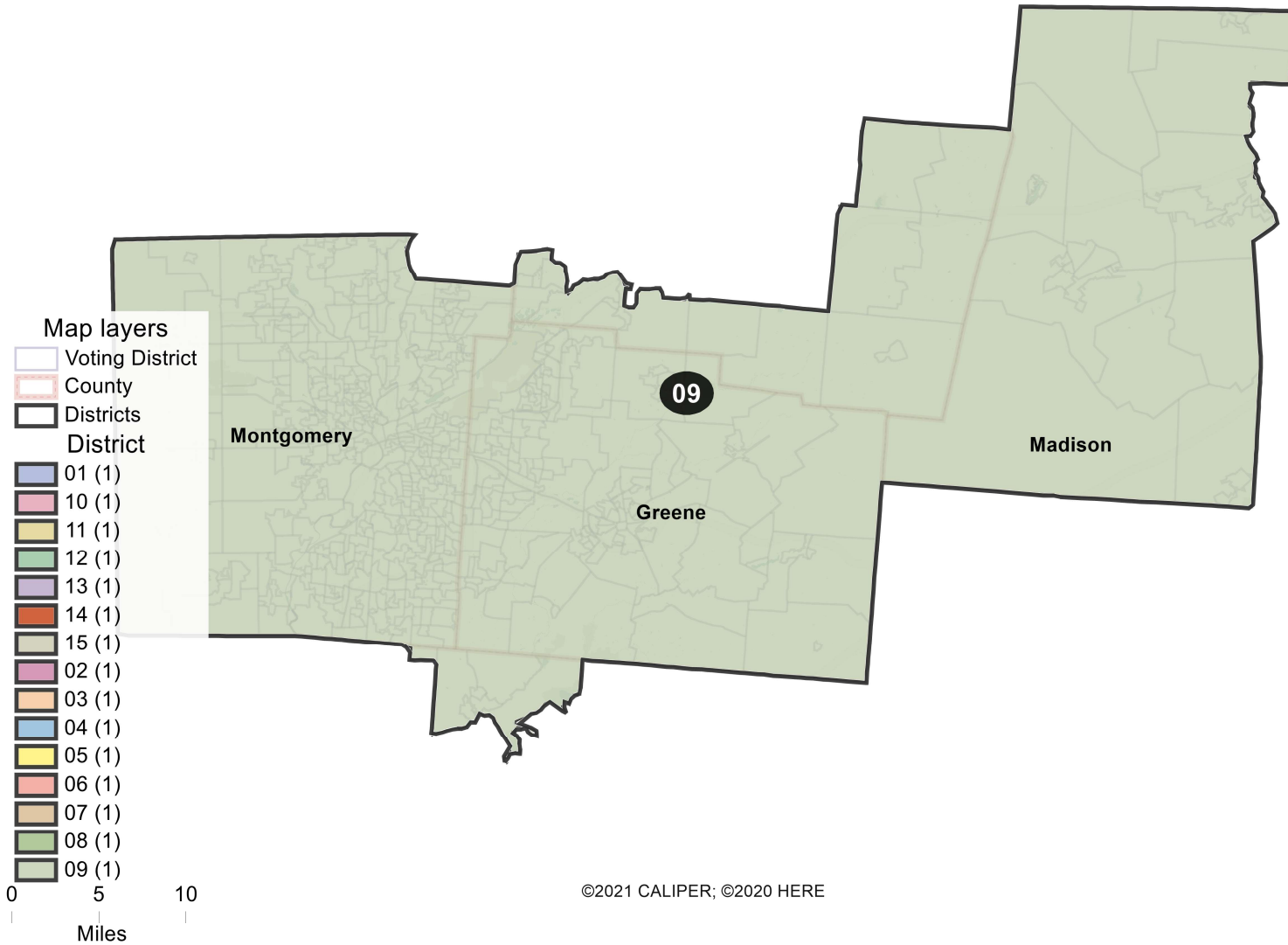
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District: 08



Field	Value
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Population	786629
Deviation	-1
% Deviation	-0%
Alternate Schwartzberg	2.47
Polsby Popper	0.16
Perimeter	469.8
Reock	0.2
% NH_Wht	72.17%
% Hispanic Origin	8.36%
% NH18+_Wht	75.61%
% 18+_AP_BlK	13.83%
% 18+_AP_Ind	1.99%
% 18+_AP_Asn	1.76%
% 18+_AP_Hwn	0.08%
% 18+_AP_Oth	5.34%
% H18+_Pop	6.9%
Ideal Value	786,630
% D 20_Pres	51.32%
% R 20_Pres	48.68%
% 20_Pres	48.54%
% Total CVAP 19	75.1%
% NH CVAP 19	93.6%
% NH White CVAP 19	78.73%
% NH Black CVAP 19	13.04%
% NH Asian CVAP 19	0.97%
% H CVAP 19	6.4%

District: 09



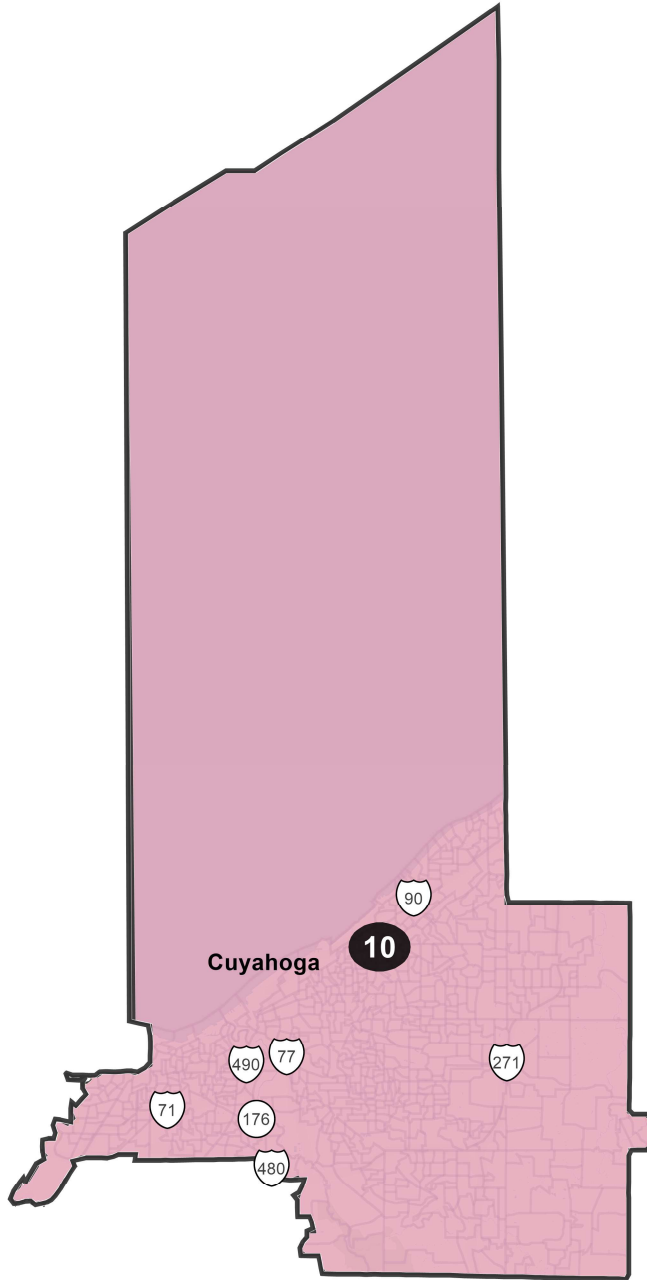
Field	Value
District	09
Population	786629
Deviation	-1
% Deviation	-0%
Alternate Schwartzberg	1.78
Polsby Popper	0.32
Perimeter	250.39
Reock	0.35
% NH_Wht	72.15%
% Hispanic Origin	3.67%
% NH18+_Wht	74.66%
% 18+_AP_BlK	16.88%
% 18+_AP_Ind	2.14%
% 18+_AP_Asn	3.11%
% 18+_AP_Hwn	0.15%
% 18+_AP_Oth	3.11%
% H18+_Pop	3.05%
Ideal Value	786,630
% D 20_Pres	46.35%
% R 20_Pres	53.65%
% 20_Pres	49.69%
% Total CVAP 19	75.54%
% NH CVAP 19	98.22%
% NH White CVAP 19	79.33%
% NH Black CVAP 19	16.13%
% NH Asian CVAP 19	1.67%
% H CVAP 19	1.78%

District: 10

Field	Value
District	10
Population	786632
Deviation	2
% Deviation	0%
Alternate Schwartzberg	1.63
Polsby Popper	0.38
Perimeter	160.53
Reock	0.34
% NH_Wht	39.77%
% Hispanic Origin	7.89%
% NH18+_Wht	43.43%
% 18+_AP_Blk	45.04%
% 18+_AP_Ind	1.48%
% 18+_AP_Asn	4.04%
% 18+_AP_Hwn	0.12%
% 18+_AP_Oth	6.02%
% H18+_Pop	6.91%
Ideal Value	786,630
% D 20_Pres	77.75%
% R 20_Pres	22.25%
% 20_Pres	45.26%
% Total CVAP 19	75.28%
% NH CVAP 19	94.15%
% NH White CVAP 19	46.59%
% NH Black CVAP 19	44.75%
% NH Asian CVAP 19	1.97%
% H CVAP 19	5.83%

Map layers

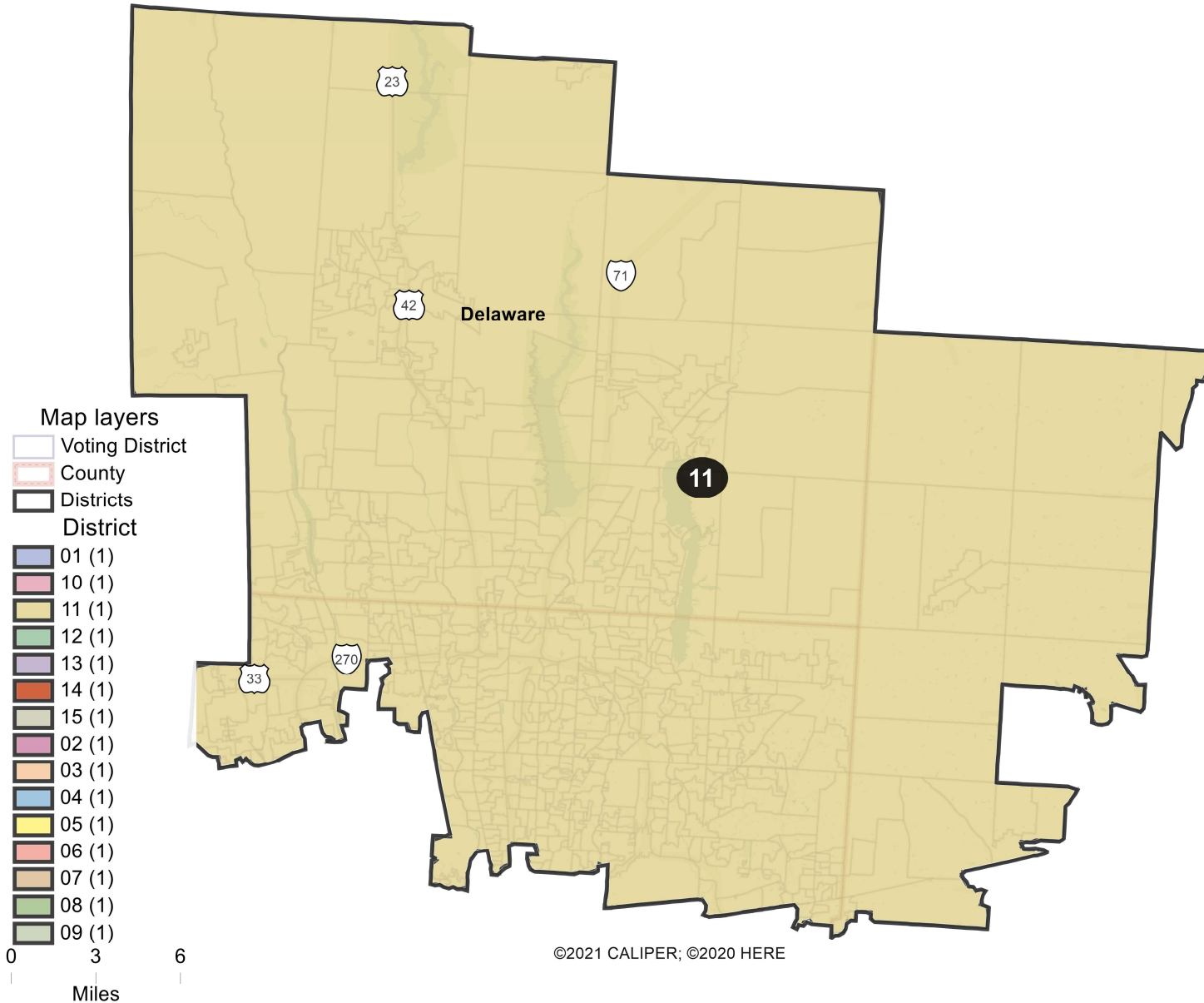
- Voting District
- County
- Districts
- District**
- 01 (1)
- 10 (1)
- 11 (1)
- 12 (1)
- 13 (1)
- 14 (1)
- 15 (1)
- 02 (1)
- 03 (1)
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- 07 (1)
- 08 (1)
- 09 (1)



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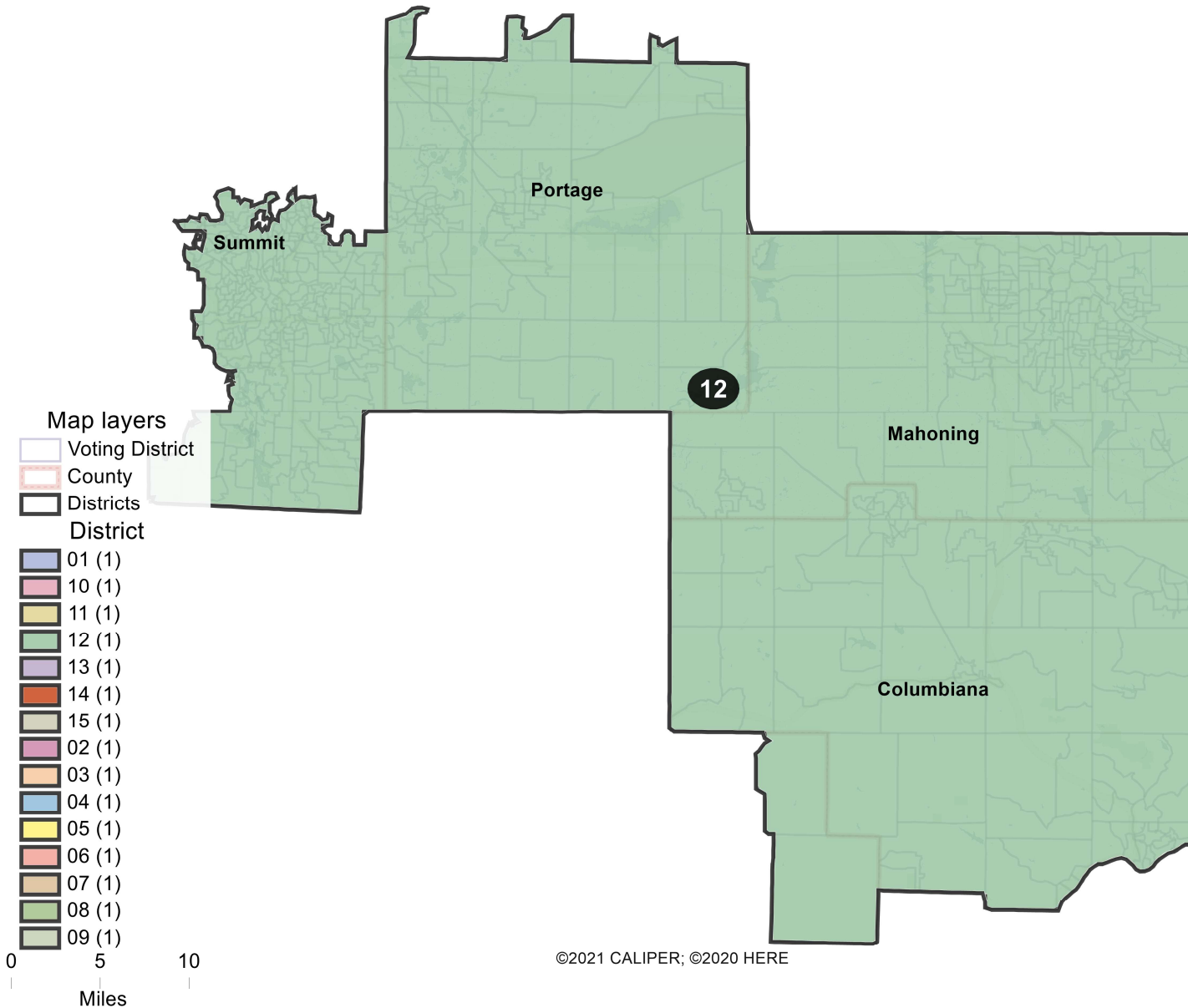


District: 11



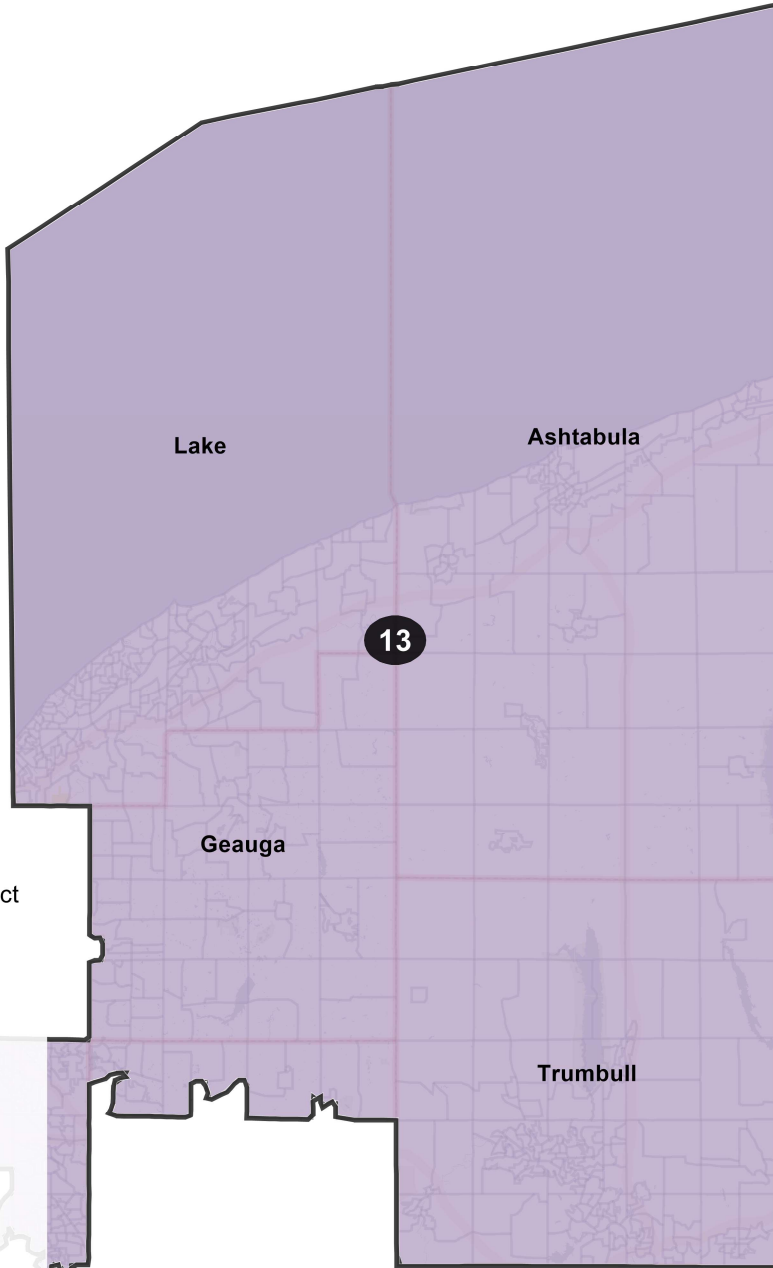
Field	Value
District	11
Population	786630
Deviation	0
% Deviation	0%
Alternate Schwartzberg	1.83
Polsby Popper	0.3
Perimeter	185.2
Reock	0.52
% NH_Wht	65.29%
% Hispanic Origin	5.17%
% NH18+_Wht	68.71%
% 18+_AP_BlK	16.65%
% 18+_AP_Ind	1.66%
% 18+_AP_Asn	8.49%
% 18+_AP_Hwn	0.12%
% 18+_AP_Oth	4.37%
% H18+_Pop	4.4%
Ideal Value	786,630
% D_20_Pres	59.81%
% R_20_Pres	40.19%
% 20_Pres	52.21%
% Total CVAP 19	67.57%
% NH CVAP 19	97.27%
% NH White CVAP 19	76.58%
% NH Black CVAP 19	15.53%
% NH Asian CVAP 19	4.17%
% H CVAP 19	2.73%

District: 12

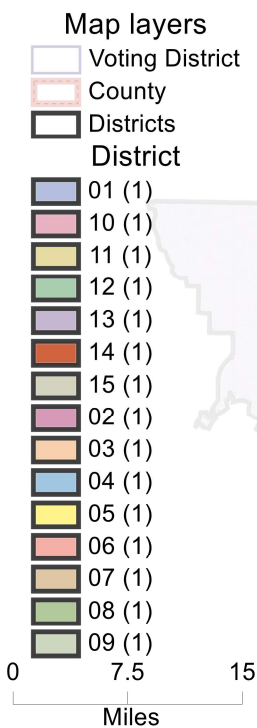


Field	Value
District	12
Population	786632
Deviation	2
% Deviation	0%
Alternate Schwartzberg	2.07
Polsby Popper	0.23
Perimeter	293.17
Reock	0.45
% NH_Wht	75.6%
% Hispanic Origin	3.48%
% NH18+_Wht	78.51%
% 18+_AP_BlK	13.83%
% 18+_AP_Ind	1.93%
% 18+_AP_Asn	2.56%
% 18+_AP_Hwn	0.09%
% 18+_AP_Oth	2.91%
% H18+_Pop	2.85%
Ideal Value	786,630
% D 20_Pres	48.86%
% R 20_Pres	51.14%
% 20_Pres	48.43%
% Total CVAP 19	78.91%
% NH CVAP 19	97.54%
% NH White CVAP 19	82.45%
% NH Black CVAP 19	13.14%
% NH Asian CVAP 19	1.11%
% H CVAP 19	2.46%

District: 13





















Field	Value
District	13
Population	786632
Deviation	2
% Deviation	0%
Alternate Schwartzberg	1.57
Polsby Popper	0.4
Perimeter	333.91
Reock	0.48
% NH_Wht	85.3%
% Hispanic Origin	3.19%
% NH18+_Wht	87.29%
% 18+_AP_Blk	6.02%
% 18+_AP_Ind	1.62%
% 18+_AP_Asn	1.9%
% 18+_AP_Hwn	0.07%
% 18+_AP_Oth	2.86%
% H18+_Pop	2.49%
Ideal Value	786,630
% D 20_Pres	44.12%
% R 20_Pres	55.88%
% 20_Pres	53.75%
% Total CVAP 19	76.67%
% NH CVAP 19	98.17%
% NH White CVAP 19	90.89%
% NH Black CVAP 19	5.54%
% NH Asian CVAP 19	1.12%
% H CVAP 19	1.84%



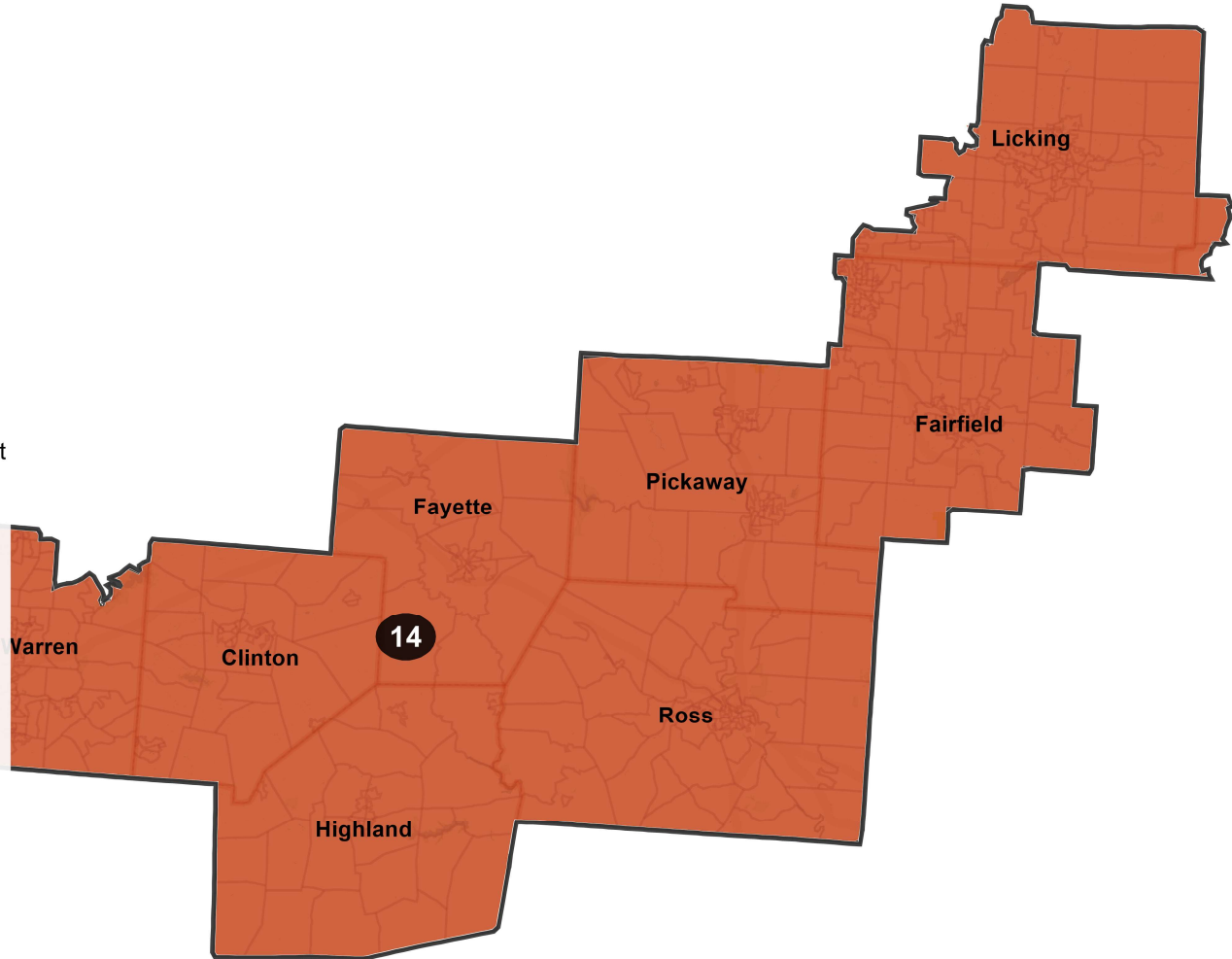
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District: 14

Map layers

-  Voting District
-  County
-  Districts
- District**
-  01 (1)
-  10 (1)
-  11 (1)
-  12 (1)
-  13 (1)
-  14 (1)
-  15 (1)
-  02 (1)
-  03 (1)
-  04 (1)
-  05 (1)
-  06 (1)
-  07 (1)
-  08 (1)
-  09 (1)

0 7.5 15
Miles



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Field	Value
District	14
Population	786630
Deviation	0
% Deviation	0%
Alternate Schwartzberg	2.08
Polsby Popper	0.23
Perimeter	464.97
Reock	0.29
% NH_Wht	85.29%
% Hispanic Origin	2.34%
% NH18+_Wht	87.05%
% 18+_AP_BlK	5.16%
% 18+_AP_Ind	2.08%
% 18+_AP_Asn	3.3%
% 18+_AP_Hwn	0.1%
% 18+_AP_Oth	2.18%
% H18+_Pop	1.88%
Ideal Value	786,630
% D 20_Pres	33.16%
% R 20_Pres	66.84%
% 20_Pres	50.43%
% Total CVAP 19	72.93%
% NH CVAP 19	98.62%
% NH White CVAP 19	91.39%
% NH Black CVAP 19	4.68%
% NH Asian CVAP 19	1.65%
% H CVAP 19	1.38%

District: 15

Field	Value
District	15
Population	786631
Deviation	1
% Deviation	0%
Alternate Schwartzberg	2.29
Polsby Popper	0.19
Perimeter	289.62
Reock	0.26
% NH_Wht	86.56%
% Hispanic Origin	3.59%
% NH18+_Wht	88.28%
% 18+_AP_Blk	3.52%
% 18+_AP_Ind	1.45%
% 18+_AP_Asn	3.19%
% 18+_AP_Hwn	0.08%
% 18+_AP_Oth	3.09%
% H18+_Pop	2.98%
Ideal Value	786,630
% D 20_Pres	47.72%
% R 20_Pres	52.28%
% 20_Pres	55.27%
% Total CVAP 19	75.62%
% NH CVAP 19	97.65%
% NH White CVAP 19	91.78%
% NH Black CVAP 19	3.3%
% NH Asian CVAP 19	2.04%
% H CVAP 19	2.33%

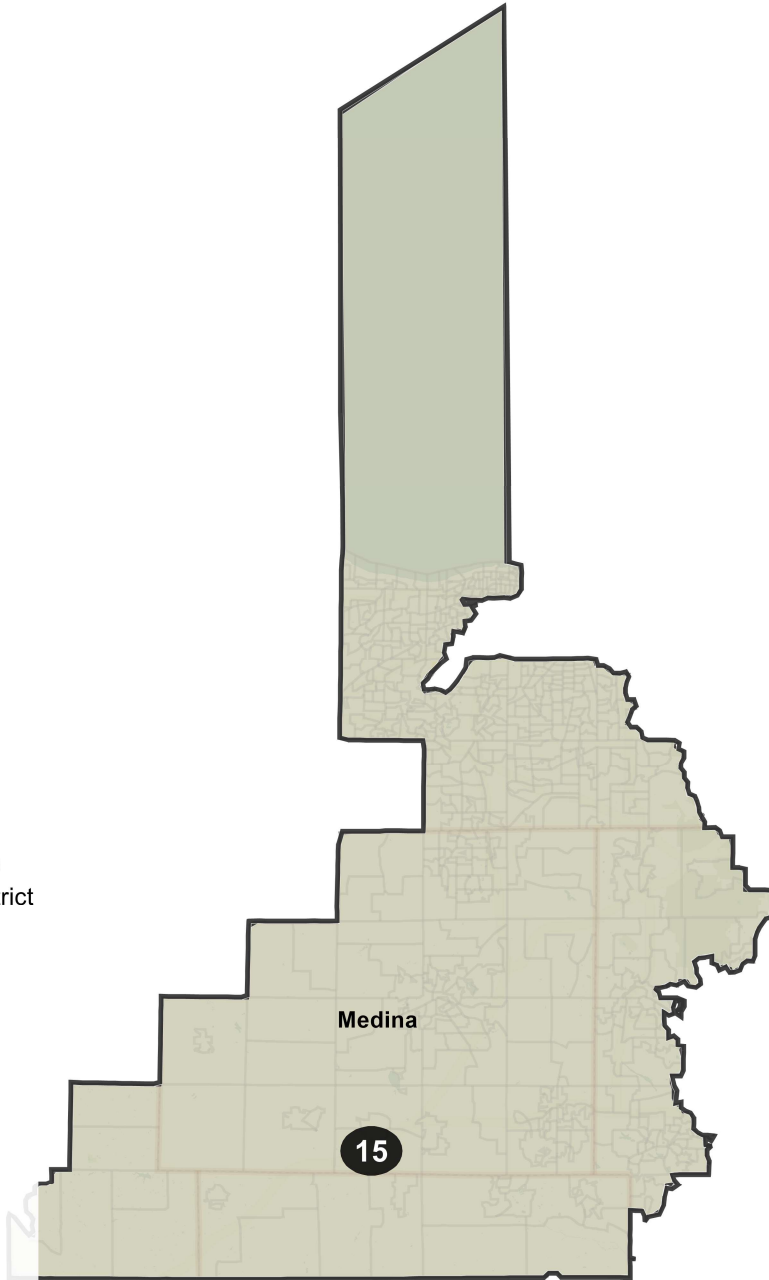
Map layers

-  Voting District
-  County
-  Districts

District

-  01 (1)
-  10 (1)
-  11 (1)
-  12 (1)
-  13 (1)
-  14 (1)
-  15 (1)
-  02 (1)
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-  06 (1)
-  07 (1)
-  08 (1)
-  09 (1)

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Miles



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District	Population	Deviation	Polsby Popper	Perimeter	Reock	% NH_Wht	% Hispanic Origin	% NH18+_Wht	% 18+_AP_Bl
01	786629	-1	0.365588	113.54618	0.43497	0.614811	0.044233	0.650559	0.26139
02	786629	-1	0.210204	663.96841	0.28694	0.912503	0.016198	0.920984	0.024956
03	786628	-2	0.347122	114.54071	0.55813	0.603393	0.07436	0.645922	0.226026
04	786628	-2	0.14361	704.10149	0.33165	0.871137	0.030582	0.885405	0.053425
05	786630	0	0.370155	489.08135	0.51933	0.871115	0.051661	0.889465	0.035069
06	786629	-1	0.358332	397.53746	0.46982	0.871243	0.025094	0.890005	0.054749
07	786630	0	0.330382	334.54324	0.41144	0.817379	0.043779	0.841636	0.070913
08	786629	-1	0.164183	469.80405	0.20474	0.72169	0.083558	0.756105	0.138277
09	786629	-1	0.317283	250.38958	0.34545	0.721507	0.036719	0.746593	0.168786
10	786632	2	0.375355	160.5287	0.3384	0.397683	0.078907	0.434268	0.450358
11	786630	0	0.299792	185.20246	0.52494	0.652897	0.051721	0.687086	0.166497
12	786632	2	0.234179	293.17088	0.44941	0.756046	0.034776	0.78507	0.138298
13	786632	2	0.404045	333.90754	0.47915	0.853033	0.031902	0.872865	0.060158
14	786630	0	0.23146	464.96907	0.28802	0.852855	0.023355	0.870526	0.051644
15	786631	1	0.191475	289.62046	0.26047	0.865618	0.035864	0.882753	0.035196

% 18+_AP_Ind	% 18+_AP_Asn	% 18+_AP_Hwn	% 18+_AP_Oth	% H18+_Pop	Ideal Value	% D 20_Pres	% R 20_Pres	% 20_Pres
0.016725	0.034898	0.001511	0.037113	0.035841	786630	0.586466	0.413534	0.503967
0.021833	0.013468	0.000741	0.016817	0.013437	786630	0.309541	0.690459	0.486339
0.020119	0.048955	0.00145	0.058944	0.062292	786630	0.644659	0.355341	0.449867
0.019632	0.012734	0.000976	0.024368	0.024665	786630	0.312732	0.687268	0.467503
0.016963	0.011788	0.001396	0.035115	0.042518	786630	0.299513	0.700487	0.498486
0.020301	0.00938	0.00076	0.023462	0.019709	786630	0.34449	0.65551	0.488785
0.020699	0.028596	0.001418	0.03481	0.034913	786630	0.324266	0.675734	0.485625
0.019869	0.017596	0.000771	0.053373	0.068956	786630	0.513221	0.486779	0.485382
0.021407	0.031144	0.00149	0.031087	0.030464	786630	0.463502	0.536498	0.496883
0.014784	0.040393	0.001249	0.060207	0.06907	786630	0.777455	0.222545	0.452632
0.016606	0.084929	0.00119	0.043657	0.04395	786630	0.598147	0.401853	0.522107
0.01932	0.025598	0.000895	0.02912	0.028522	786630	0.488565	0.511435	0.484284
0.016173	0.018987	0.000749	0.028611	0.024916	786630	0.441233	0.558767	0.537541
0.02076	0.033017	0.001014	0.021837	0.018803	786630	0.331605	0.668395	0.504344
0.014498	0.031911	0.000825	0.030947	0.029833	786630	0.477227	0.522773	0.552701

% Total CVAP 19	% NH CVAP 19	% NH White CVAP 19	% NH Black CVAP 19	% NH Asian CVAP 19	% H CVAP 19
0.728491	0.98366	0.695029	0.262701	0.016438	0.016257
0.778935	0.989929	0.950041	0.022195	0.008146	0.010108
0.707143	0.971978	0.712812	0.218245	0.028288	0.028046
0.75513	0.979574	0.911824	0.051788	0.007011	0.02055
0.758134	0.963349	0.918303	0.03236	0.006101	0.036712
0.776341	0.988599	0.922977	0.051298	0.006636	0.011313
0.732955	0.982804	0.896575	0.062267	0.01523	0.01702
0.751013	0.936002	0.787348	0.130382	0.009677	0.063971
0.755364	0.98216	0.793327	0.161313	0.016659	0.01782
0.752755	0.941523	0.465853	0.447457	0.0197	0.05834
0.675659	0.972693	0.765752	0.15532	0.041663	0.027289
0.789119	0.975361	0.824517	0.131393	0.011091	0.024555
0.766731	0.981692	0.908902	0.05544	0.011187	0.018372
0.729256	0.98616	0.913943	0.046812	0.01647	0.01378
0.756227	0.97649	0.917838	0.032965	0.020419	0.02335

Appendix B: PlanScore Analysis of District Partisanship

District Map



District Data

District	Candidate Scenario	Pop. 2020	Hispanic CVAP 2019	Non-Hisp. Black CVAP 2019	Non-Hisp. Asian CVAP 2019	Non-Hisp. Native CVAP 2019	Chance of 1+ Flips†	Chance of Democratic Win	Predicted Vote Shares	Biden (D) 2020	Trump (R) 2020
1	Open Seat	786,629	1.6%	26.3%	1.6%	0.4%	No	90%	56% D / 44% R	232,678	164,049
2	Open Seat	786,629	1.0%	2.2%	0.8%	0.8%	No	<1%	29% D / 71% R	118,240	264,049
3	Open Seat	786,628	2.8%	21.8%	2.8%	0.6%	No	>99%	61% D / 39% R	228,309	125,824
4	Open Seat	786,628	2.1%	5.2%	0.7%	0.6%	No	<1%	29% D / 71% R	114,956	252,643
5	Open Seat	786,630	3.7%	3.2%	0.6%	0.5%	No	<1%	28% D / 72% R	117,450	274,698
6	Open Seat	786,629	1.1%	5.1%	0.7%	0.6%	No	<1%	32% D / 68% R	132,449	252,026
7	Open Seat	786,630	1.7%	6.2%	1.5%	0.6%	No	<1%	30% D / 70% R	123,856	258,108
8	Open Seat	786,629	6.4%	13.0%	1.0%	0.6%	Yes	39%	49% D / 51% R	195,996	185,909
9	Open Seat	786,629	1.8%	16.1%	1.7%	0.6%	No	10%	44% D / 56% R	181,188	209,763
10	Open Seat	786,632	5.8%	44.7%	2.0%	0.4%	No	>99%	74% D / 26% R	276,759	79,155
11	Open Seat	786,630	2.7%	15.5%	4.2%	0.5%	No	94%	57% D / 43% R	245,502	165,017
12	Open Seat	786,632	2.5%	13.1%	1.1%	0.6%	Yes	23%	47% D / 53% R	186,172	194,964
13	Open Seat	786,632	1.8%	5.5%	1.1%	0.5%	No	4%	42% D / 58% R	186,650	236,311
14	Open Seat	786,630	1.4%	4.7%	1.6%	0.6%	No	<1%	31% D / 69% R	131,520	265,048
15	Open Seat	786,631	2.3%	3.3%	2.0%	0.4%	Yes	16%	45% D / 55% R	207,434	227,275

Predicted 32% D / 68% R seat share across scenarios* vs. 44% D / 56% R vote share.

[Download raw data as tab-delimited text.](#)

Metric	Value	Favors Democrats in this % of Scenarios*	More Skewed than this % of Historical Plans†	More Pro-Democratic than this % of Historical Plans‡
Efficiency Gap	5.6% Pro-Republican	16%	59%	19%
Declination	0.19 Pro-Republican	17%	59%	26%
Partisan Bias	N/A	N/A	N/A	N/A
Mean-Median Difference	N/A	N/A	N/A	N/A

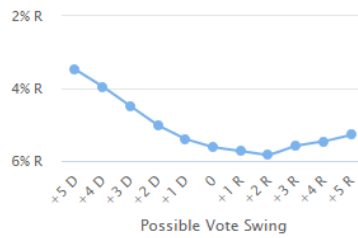
Efficiency Gap: 5.6% R



Votes for Republican candidates are expected to be inefficient at a rate 5.6% R lower than votes for Democratic candidates, favoring Republicans in 84% of predicted scenarios.*

[Learn more](#) >

Sensitivity Testing



Sensitivity testing shows us a plan's expected efficiency gap given a range of possible vote swings. It lets us evaluate the durability of a plan's skew.

Declination: 0.19 R



The difference between mean Democratic vote share in Democratic districts and mean Republican vote share in Republican districts along with the relative fraction of seats won by each party leads to a declination that favors Republicans in 83% of predicted scenarios.*

[Learn more](#) >

User:

Plan Name: 2_28_21 pr plan 1

Plan Type: Congress

Political Subdivision Splits Between Districts

Monday, April 4, 2022

2:03 AM

Number of subdivisions not split:

County 72

Number of subdivisions split into more than one district:

County 16

Number of splits involving no population:

County 0

Split Counts

County

Cases where an area is split among 2 Districts: 15

Cases where an area is split among 3 Districts: 1

Voting District

Cases where an area is split among 2 Districts: 69

County	District	Population
<i>Split Counties:</i>		
Ashland OH	04	43,553
Ashland OH	15	8,894
Carroll OH	06	24,988
Carroll OH	12	1,733
Clark OH	07	107,675
Clark OH	09	28,326
Crawford OH	04	3,648
Crawford OH	05	38,377
Cuyahoga OH	10	786,632
Cuyahoga OH	15	478,185
Franklin OH	03	786,628
Franklin OH	11	537,179
Hamilton OH	01	786,629
Hamilton OH	02	44,010
Licking OH	11	35,327
Licking OH	14	143,192
Lorain OH	04	116,313
Lorain OH	08	196,651
Muskingum OH	04	84,944
Muskingum OH	14	1,466
Noble OH	02	7,184
Noble OH	06	6,931
Portage OH	12	136,076
Portage OH	13	25,715

Political Subdivision Splits Between Districts

2_28_21 pr plan 1

County	District	Population
Summit OH	12	318,332
Summit OH	13	133,366
Summit OH	15	88,730
Warren OH	09	9,204
Warren OH	14	233,133
Wayne OH	06	88,542
Wayne OH	15	28,352
Wyandot OH	04	1,870
Wyandot OH	05	20,030
<i>Split VTDs:</i>		
Ashland OH	04	179
Ashland OH	15	574
Carroll OH	06	52
Carroll OH	12	756
Clark OH	07	19
Clark OH	09	1,451
Cuyahoga OH	10	1,436
Cuyahoga OH	15	83
Cuyahoga OH	10	1,375
Cuyahoga OH	15	33
Cuyahoga OH	10	703
Cuyahoga OH	15	701
Cuyahoga OH	10	0
Cuyahoga OH	15	0
Franklin OH	03	942
Franklin OH	11	0
Franklin OH	03	0
Franklin OH	11	2,090
Franklin OH	03	9
Franklin OH	11	887
Franklin OH	03	1,362
Franklin OH	11	366
Franklin OH	03	151
Franklin OH	11	1,743
Franklin OH	03	1,633
Franklin OH	11	621
Franklin OH	03	216
Franklin OH	11	1,875
Franklin OH	03	939
Franklin OH	11	190
Franklin OH	03	2,123
Franklin OH	11	0
Franklin OH	03	1,596
Franklin OH	11	1,397
Franklin OH	03	1,073
Franklin OH	11	479
Franklin OH	03	1,559

Political Subdivision Splits Between Districts

2_28_21 pr plan 1

County	District	Population
Franklin OH	11	81
Franklin OH	03	1,483
Franklin OH	11	9
Franklin OH	03	1,409
Franklin OH	11	0
Franklin OH	03	1,273
Franklin OH	11	8
Franklin OH	03	333
Franklin OH	11	1,238
Franklin OH	03	1,163
Franklin OH	11	0
Franklin OH	03	1,290
Franklin OH	11	0
Franklin OH	03	895
Franklin OH	11	2
Franklin OH	03	634
Franklin OH	11	1,864
Franklin OH	03	2,397
Franklin OH	11	185
Franklin OH	03	34
Franklin OH	11	1,371
Franklin OH	03	23
Franklin OH	11	1,154
Franklin OH	03	428
Franklin OH	11	136
Franklin OH	03	0
Franklin OH	11	1,292
Franklin OH	03	0
Franklin OH	11	993
Hamilton OH	01	57
Hamilton OH	02	763
Hamilton OH	01	915
Hamilton OH	02	0
Hamilton OH	01	843
Hamilton OH	02	44
Hamilton OH	01	716
Hamilton OH	02	864
Licking OH	11	161
Licking OH	14	1,048
Licking OH	11	4
Licking OH	14	2,029
Licking OH	11	1,082
Licking OH	14	41
Lorain OH	04	0
Lorain OH	08	2,062
Lorain OH	04	1,449
Lorain OH	08	0

Political Subdivision Splits Between Districts

2_28_21 pr plan 1

County	District	Population
Lorain OH	04	130
Lorain OH	08	1,366
Lorain OH	04	1,128
Lorain OH	08	6
Lorain OH	04	0
Lorain OH	08	1,909
Lorain OH	04	1,583
Lorain OH	08	0
Lorain OH	04	1,166
Lorain OH	08	1,084
Muskingum OH	04	16
Muskingum OH	14	1,013
Muskingum OH	04	1,047
Muskingum OH	14	5
Muskingum OH	04	664
Muskingum OH	14	448
Noble OH	02	31
Noble OH	06	517
Noble OH	02	3,558
Noble OH	06	5
Portage OH	12	277
Portage OH	13	973
Portage OH	12	866
Portage OH	13	548
Portage OH	12	35
Portage OH	13	1,102
Summit OH	12	1,292
Summit OH	15	5
Summit OH	12	1,729
Summit OH	15	2
Summit OH	12	1,192
Summit OH	15	5
Summit OH	12	115
Summit OH	15	1,283
Summit OH	12	0
Summit OH	15	1,231
Summit OH	12	860
Summit OH	13	327
Summit OH	12	391
Summit OH	13	1,130
Summit OH	12	521
Summit OH	13	665
Summit OH	12	1,056
Summit OH	15	45
Summit OH	12	68
Summit OH	15	898
Summit OH	12	62

Political Subdivision Splits Between Districts

2_28_21 pr plan 1

County	District	Population
Summit OH	15	1,012
Warren OH	09	29
Warren OH	14	1,166
Warren OH	09	1,256
Warren OH	14	410
Wyandot OH	04	762
Wyandot OH	05	135

User:

Plan Name: 2_28_21 pr plan 1

Plan Type: Congress

Measures of Compactness Report

Monday, April 4, 2022

2:11 AM

Number of cut edges: 6,427

	Reock	Schwartzberg	Alternate Schwartzberg	Polsby-Popper	Population Polygon	Area/Convex Hull	Population Circle	Ehrenburg	Perimeter	Length-Width
Sum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5,264.91	N/A
Min	0.20	1.46	1.57	0.14	0.34	0.56	0.16	0.19	N/A	3.84
Max	0.56	2.59	2.64	0.40	0.97	0.88	0.76	0.55	N/A	74.23
Mean	0.39	1.86	1.93	0.29	0.66	0.73	0.43	0.34	N/A	24.18
Std. Dev.	0.11	0.34	0.34	0.09	0.18	0.10	0.18	0.11	N/A	22.41

District	Reock	Schwartzberg	Alternate Schwartzberg	Polsby-Popper	Population Polygon	Area/Convex Hull	Population Circle	Ehrenburg	Perimeter	Length-Width
01	0.43	1.57	1.65	0.37	0.97	0.82	0.76	0.47	113.55	7.80
02	0.29	2.06	2.18	0.21	0.66	0.63	0.17	0.24	663.97	74.23
03	0.56	1.61	1.70	0.35	0.79	0.84	0.62	0.38	114.54	3.84
04	0.33	2.59	2.64	0.14	0.34	0.58	0.16	0.19	704.10	5.62
05	0.52	1.62	1.64	0.37	0.76	0.83	0.48	0.47	489.08	15.36
06	0.47	1.63	1.67	0.36	0.85	0.77	0.54	0.42	397.54	18.95
07	0.41	1.73	1.74	0.33	0.46	0.70	0.33	0.27	334.54	11.75
08	0.20	2.42	2.47	0.16	0.66	0.56	0.42	0.20	469.80	73.78
09	0.35	1.72	1.78	0.32	0.79	0.73	0.53	0.24	250.39	24.69
10	0.34	1.58	1.63	0.38	0.74	0.78	0.55	0.25	160.53	25.56
11	0.52	1.76	1.83	0.30	0.81	0.85	0.53	0.40	185.20	5.29

Measures of Compactness Report

Number of cut edges: 6,427

	Reock	Schwartzberg	Alternate Schwartzberg	Polsby-Popper	Population Polygon	Area/Convex Hull	Population Circle	Ehrenburg	Perimeter	Length-Width
Sum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5,264.91	N/A
Min	0.20	1.46	1.57	0.14	0.34	0.56	0.16	0.19	N/A	3.84
Max	0.56	2.59	2.64	0.40	0.97	0.88	0.76	0.55	N/A	74.23
Mean	0.39	1.86	1.93	0.29	0.66	0.73	0.43	0.34	N/A	24.18
Std. Dev.	0.11	0.34	0.34	0.09	0.18	0.10	0.18	0.11	N/A	22.41

District	Reock	Schwartzberg	Alternate Schwartzberg	Polsby-Popper	Population Polygon	Area/Convex Hull	Population Circle	Ehrenburg	Perimeter	Length-Width
12	0.45	1.99	2.07	0.23	0.62	0.69	0.50	0.43	293.17	6.50
13	0.48	1.46	1.57	0.40	0.60	0.88	0.36	0.55	333.91	27.23
14	0.29	2.04	2.08	0.23	0.35	0.64	0.19	0.27	464.97	32.89
15	0.26	2.17	2.29	0.19	0.53	0.63	0.29	0.34	289.62	29.15

Measures of Compactness Summary

Reock	The measure is always between 0 and 1, with 1 being the most compact.
Schwartzberg	The measure is usually greater than or equal to 1, with 1 being the most compact.
Alternate Schwartzberg	This measure is always greater than or equal to 1, with 1 being the most compact.
Polsby-Popper	The measure is always between 0 and 1, with 1 being the most compact.
Population Polygon	The measure is always between 0 and 1, with 1 being the most compact.
Area / Convex Hull	The measure is always between 0 and 1, with 1 being the most compact.
Population Circle	The measure is always between 0 and 1, with 1 being the most compact.
Ehrenburg	The measure is always between 0 and 1, with 1 being the most compact.
Perimeter	The Perimeter test computes one number for the whole plan. If you are comparing several plans, the plan with the smallest total perimeter is the most compact.
Length-Width	A lower number indicates better length-width compactness.
Cut Edges	A smaller number implies a more compact plan. The measure should only be used to compare plans defined on the same base layer.

User:

Plan Name: 2_28_21 pr plan 1

Plan Type: Congress

Core Constituencies

Monday, April 4, 2022

2:40 AM

From Plan: **Enacted Congress B-V-C**

Plan: 2_28_21 pr plan 1, District 01 --

786,629 Total Population

Population

Dist. 1	495,628 (63.01%)
Dist. 2	291,001 (36.99%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 02 --

786,629 Total Population

Population

Dist. 1	30,585 (3.89%)
Dist. 15	148,542 (18.88%)
Dist. 2	358,878 (45.62%)
Dist. 6	248,624 (31.61%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 03 --

786,628 Total Population

Population

Dist. 12	236 (0.03%)
Dist. 15	274,128 (34.85%)
Dist. 3	512,264 (65.12%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 04 --

786,628 Total Population

Population

Dist. 12	174,953 (22.24%)
Dist. 4	313,501 (39.85%)
Dist. 5	1,870 (0.24%)
Dist. 6	27,946 (3.55%)
Dist. 7	267,192 (33.97%)
Dist. 9	1,166 (0.15%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 05 --

786,630 Total Population

Population

Dist. 4	304,206 (38.67%)
Dist. 5	464,700 (59.07%)
Dist. 8	17,724 (2.25%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 06 --

786,629 Total Population

From Plan: **Enacted Congress B-V-C**

Population	
Dist. 13	26,604 (3.38%)
Dist. 16	198,728 (25.26%)
Dist. 6	255,209 (32.44%)
Dist. 7	306,088 (38.91%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 07 -- 786,630 Total Population

Population	
Dist. 4	86,944 (11.05%)
Dist. 8	699,686 (88.95%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 08 -- 786,629 Total Population

Population	
Dist. 4	11,526 (1.47%)
Dist. 5	264,482 (33.62%)
Dist. 7	90,566 (11.51%)
Dist. 9	420,055 (53.40%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 09 -- 786,629 Total Population

Population	
Dist. 1	9,204 (1.17%)
Dist. 10	705,275 (89.66%)
Dist. 15	43,824 (5.57%)
Dist. 8	28,326 (3.60%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 10 -- 786,632 Total Population

Population	
Dist. 11	566,774 (72.05%)
Dist. 14	89,887 (11.43%)
Dist. 9	129,971 (16.52%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 11 -- 786,630 Total Population

Population	
Dist. 12	489,097 (62.18%)
Dist. 15	48 (0.01%)
Dist. 3	297,485 (37.82%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 12 -- 786,632 Total Population

From Plan: **Enacted Congress B-V-C**

Population

Dist. 11	71,094 (9.04%)
Dist. 13	462,804 (58.83%)
Dist. 14	11,281 (1.43%)
Dist. 16	86,114 (10.95%)
Dist. 6	155,339 (19.75%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 13 -- 786,632 Total Population

Population

Dist. 13	180,166 (22.90%)
Dist. 14	606,466 (77.10%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 14 -- 786,630 Total Population

Population

Dist. 1	233,133 (29.64%)
Dist. 10	24,130 (3.07%)
Dist. 12	144,658 (18.39%)
Dist. 15	299,795 (38.11%)
Dist. 2	84,914 (10.79%)

Total and % Population

Plan: 2_28_21 pr plan 1, District 15 -- 786,631 Total Population

Population

Dist. 11	54,721 (6.96%)
Dist. 13	28,867 (3.67%)
Dist. 14	22,422 (2.85%)
Dist. 16	454,268 (57.75%)
Dist. 7	73,494 (9.34%)
Dist. 9	152,859 (19.43%)

Total and % Population