Maximizing Competitiveness in Michigan and Wisconsin's Congressional Districts

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I. Introduction

This report explores how to maximize competitiveness in Michigan and Wisconsin's congressional districts. These states provide a good test case for what competitive districting can look like, particularly because the overall partisan split in these states is relatively close between Democrats and Republicans. The results show that states can provide for fair representation through competitive districting, without sacrificing more traditional districting principles. Nevertheless, the results also show the difficulty in managing tradeoffs among relevant districting criteria when prioritizing competition.

Part II discusses the principles motivating these two plans. Part III describes the resulting districts, detailing the rationale for the specific choices made and analyzing the results with objective metrics and by comparison to other proposed competitive maps. Part IV discusses compliance with federal and state law, as well as competition's unique place within election law more generally.

II. Guiding Principles

A. Why Competition?

Drawing competitive legislative districts provides certain advantages that other redistricting principles cannot. And doing so does not require sacrificing more traditional criteria such as respecting political subdivision lines and communities of interest. First, competitive districts promote political engagement, incentivizing greater participation in our elections. Because "people vote when there is reason to do so . . . and a rational person will abstain when their vote does not matter to the election outcome," competitive races increase voter turnout.[1] Second, competitive races tend to elect representatives that are both more responsive to their

[1] Michael McDonald, *The Competitive Problem of Voter Turnout*, BROOKINGS (Oct. 31 2006), https://www.brookings.edu/opinions/the-competitive-problem-of-voter-turnout/.

constituents and more likely to value bipartisanship.[2] A congressmember's bipartisanship correlates strongly with their district's competitiveness. Not surprisingly, "the most bipartisan representatives . . . sit in districts that they're more likely to lose."[3]

While other redistricting criteria may also aim at some measure of fairness, most tend not to increase either voter turnout or bipartisanship. Consider, for example, a proportional plan in which the partisan share of seats mirrors the overall partisan split of the state's voters. So, for instance, if the voters are split 60/40 between Democrats and Republicans, a proportional plan with, say, 10 districts would yield 6 safe Democrat districts and 4 safe Republican districts. While such a map may be "fair" in the sense that no party controls a disproportionate seat-share, those safe districts neither incentivize participation nor encourage bipartisanship. In fact, the outcome's rigidity may achieve the opposite. Competitive districts, on the other hand, provide essentially the same "fairness" as well as these normative advantages.

The plans in this report show how to maximize these benefits while not only complying with both federal and state law—including the Voting Rights Act and one-person one-vote—but also adhering to more traditional redistricting principles, such as respecting political subdivision lines and preserving communities of interest where possible.

B. Defining Competition and the Principles Motivating These Maps

Defining competition is necessarily subjective and no two competitive plans will look the same. Because competitiveness has no clear definition, it is helpful to consider what competitiveness measures some states already consider. Arizona's constitution, for example, requires its state redistricting commission to increase competitiveness, so long as there is no

[2] Phillip Bump, *The Key to Bipartisanship? Competitive Districts*, WASHINGTON POST (Mar. 7, 2016), https://www.washingtonpost.com/news/the-fix/wp/2016/03/07/the-key-to-bipartisanship-competitive-districts/.
[3] *Id.*

"significant detriment to other goals."[4] In the 2001 redistricting cycle, the commission analyzed three objective measures: two that looked for partisan splits of less than 7% between Republicans and Democrats based on the results of past elections, as well as voter registration records.[5] It is important to note, however, that the commission considered but did not adopt any of the plans that increased competitiveness, finding detriments to the other constitutional requirements.[6] And the Arizona Supreme Court held that the commission's methodological choices on competitiveness are "beyond the scope of judicial review."[7] Still, it is useful to consider that methodology.

Though the crucial inputs, such as partisanship data, are of course objective, any plan must subjectively weigh the costs and benefits of the specific line-drawing: both literally and figuratively. A plan can maximize competition while simultaneously accommodating other criteria. These plans simply prioritize competitiveness. Perfectly competitive districts, however, are virtually impossible to draw, mainly because a state's partisan split will almost never be perfectly equal—as in Wisconsin and Michigan. But this is a blessing, not a curse. Because no district will achieve perfect competition, flexibility exists both to preserve largely intact both political subdivision lines and communities of interest, and to comply more easily with federal and state law.

These plans first focus on competitive districts that are as contiguous and compact as possible. After prioritizing competition, these districts generally seek to maintain communities bound by some common interest. For example, the plans favor keeping together areas bordering

[4] ARIZ. CONST., art. IV, pt. 2, § 1(14).
[5] Ariz. Minority Coal. for Fair Redistricting v. Ariz. Indep. Redistricting Com'n (Minority Coalition I), 192 P.3d 409, 412 n. 14-15 (Ariz. Ct. App. 2008), vacated by 220 Ariz. 587.
[6] Ariz. Minority Coal. for Fair Redistricting v. Ariz. Indep. Redistricting Com'n (Minority Coalition II), 220 Ariz. 587, 598 (2009).
[7] *Id*. at 599.

the Great Lakes, those on the Upper Peninsula, and around metropolitan as well as rural areas, etc. After roughly sketching the general shape of these compact and contiguous competitive districts, the plans sever as few county, city, and voting-district lines as possible. And to comply with one-person one-vote, these plans next seek to equalize population. This, of course, requires splitting areas on a more granular level. Even at that point, however, the plans seek to use major thoroughfares and natural landmarks, such as rivers and lakes, as guideposts.

These plans rely on past election data, rather than on voter registration. Though both are inexact predictors of future votes, registration is not tied to past voting behavior. It is therefore a less accurate proxy for future voting. Using the 2020 Presidential election data, these plans balance the share of voters voting for the Democratic presidential candidate and those voting for the Republican presidential candidate.

To avoid challenges in meeting the secondary and tertiary goals, the districts in these plans aim for a partisan spread of no more than 10 points between Republicans and Democrats. And most fare better, at around two or three percentage points from a perfect 50-50 split; though some fair worse. Granted, these maps are not perfectly competitive, and a very few are not competitive at all, but they avoid the significant "detriments" that Arizona's commission found when aiming for a 7-point spread, discussed above, and these plans comply with the Voting Rights Act and one-person one-vote.

Similarly, these maps reflect a concerted effort to avoid the spiderweb effect that one may assume would occur when forced to split urban population centers (that are generally heavily democratic).[8] In Wisconsin, for example, though a few districts properly claim pieces of

[8] See Michael McDonald, *Redistricting and Competition*, NCSL (2010), https://www.ncsl.org/documents/redistricting/McDonaldNCSL2010.pdf (noting the common misconception that competitive districts must pull apart population centers).

the Milwaukee metropolitan area, Madison and Green Bay provided helpful secondary sources of Democratic voters. Likewise, in Michigan, Flint, Bay City, Lansing, Grand Rapids, and Ann Arbor helped prevent the otherwise inevitable circumstance of virtually each district claiming a piece of the Detroit metropolitan area. This allowed for fewer splits of these communities of interest sharing metropolitan areas.

III. The Proposed Plans

The results are below, along with the demographic data by district, which also may be found in the appendix along with a map book of each individual district.

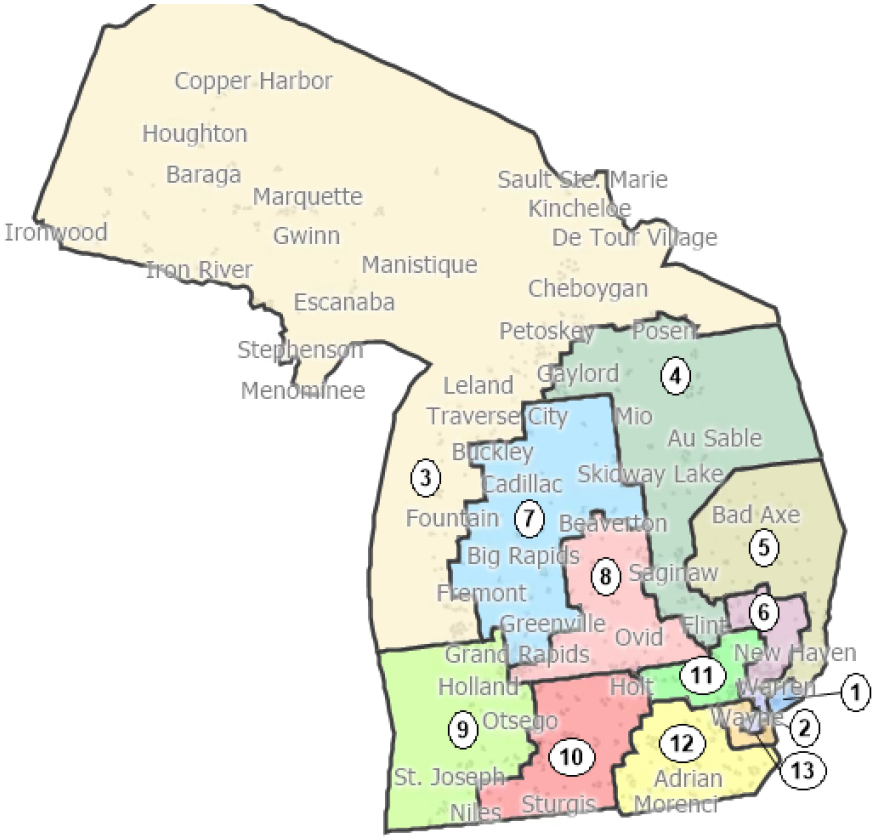

Figure 1: Michigan Map

Michigan Demographic Data by District

District	Population	Deviation	% Deviation	18+_Pop	% H18+_Pop	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% D 20_Pres	% R 20_Pres	20_Pres	% 20_Pres
1	775176	-3	-0%	592158	6.36%	50.87%	1.8%	4.15%	76.54%	23.46%	341776.49	44.09%
2	775176	-3	-0%	595460	3.25%	50.02%	1.59%	4.39%	78%	22%	376202.20	48.53%
3	775177	-2	-0%	625557	2.7%	4.34%	4.63%	0.94%	44.9%	55.1%	442826.86	57.13%
4	775181	2	0%	611644	4.17%	14.83%	2.38%	1.24%	49.29%	50.71%	420480.34	54.24%
5	775180	1	0%	625980	2.73%	7.29%	1.83%	4.07%	46.08%	53.92%	438311.77	56.54%
6	775182	3	0%	608516	4.3%	7.88%	1.48%	7.68%	46.28%	53.72%	450687.33	58.14%
7	775179	0	0%	602892	6.41%	5.82%	2.28%	1.76%	44.67%	55.33%	422512.09	54.51%
8	775182	3	0%	609070	5.4%	6.54%	2.24%	3.47%	45%	55%	400528.39	51.67%
9	775178	-1	-0%	598120	6.88%	7.1%	2.19%	2.72%	45.07%	54.93%	415541.47	53.61%
10	775179	0	0%	599971	5.54%	9.13%	2.55%	2.47%	48.39%	51.61%	404508.26	52.18%
11	775179	0	0%	608624	3.39%	3.45%	1.92%	5.2%	44.35%	55.65%	477318.06	61.58%
12	775180	1	0%	622324	4.29%	6.71%	2.14%	5.48%	53.59%	46.41%	422017.94	54.44%
13	775182	3	0%	614286	5.14%	10.76%	2.2%	5.78%	54.97%	45.03%	441183.78	56.91%

Figure 2: Michigan Demographic Data

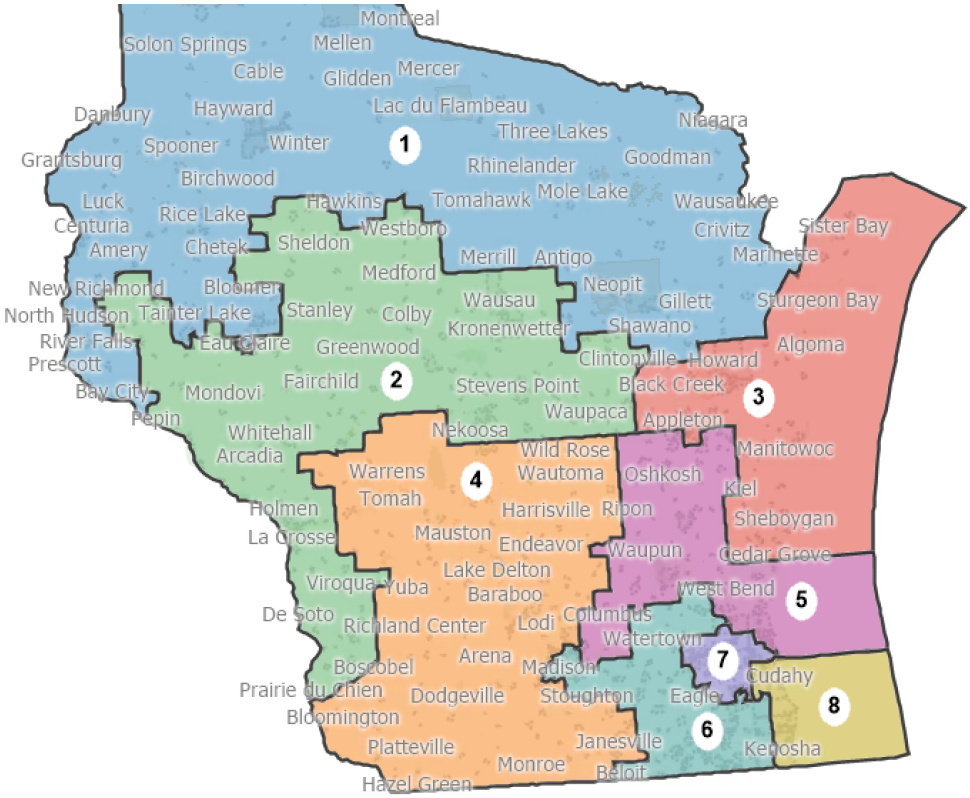

Figure 3: Wisconsin Map

Wisconsin Demographic Data by District

District	Population	Deviation	% Deviation	% D 20_Pres	% R 20_Pres	18+_Pop	% NH18+_Wht	% H18+_Pop	% 18+_AP_Blk	% 18+_AP_Asn
1	736,716	1	0%	42.4%	57.6%	588838	90.88%	1.79%	1.03%	1.34%
2	736,716	1	0%	43.1%	56.9%	574536	91.14%	2.7%	1.31%	2.66%
3	736,714	-1	-0%	44.3%	55.7%	570968	85.72%	5.52%	2.36%	3.3%
4	736,717	2	0%	53.7%	46.3%	571974	89.42%	4.07%	2.2%	2.13%
5	736,714	-1	-0%	47.9%	52.1%	575639	83.52%	4.03%	7.71%	2.88%
6	736,718	3	0%	57.6%	42.4%	592831	81.86%	6.92%	4.65%	4.56%
7	736,711	-4	-0%	57.1%	42.9%	567794	65.19%	4.97%	23.8%	4.72%
8	736,712	-3	-0%	57.1%	42.9%	569720	66.41%	19.44%	8.69%	3.87%

Figure 4: Wisconsin Demographic Data

A. The Process in Wisconsin

This plan began by creating the following heat map representing the state's partisan make-up. Each voting district (VTD) is color coded to match the percentage of the Democratic vote share in the 2020 election. The VTDs with the most concentrated Republican share are shaded red, those approaching an equal split become more purple, and those with the most concentrated share of Democrats are shaded blue. Here is the resulting heat map.

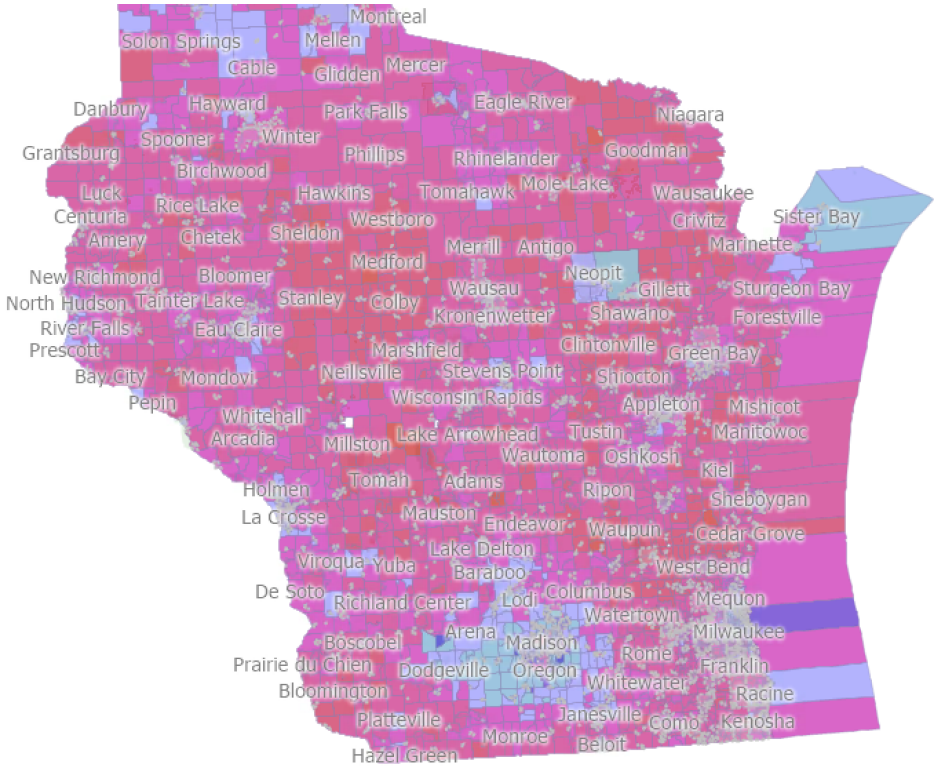

Figure 5: Wisconsin Partisan Heat Map

District 1:[9] Because the Milwaukee and Madison areas in the south contain a significant portion of the Democratic population, those areas were saved for last when drawing the first districts. This helped ensure that there would be enough of those populations to go around. As a result, this first district covers the northernmost portion of the state. It contains a significant number of purple areas, and many rural red areas too. So, to make a competitive district, it reaches down into Pierce County, capturing Bay City, Prescott, and River Falls; it also reaches Eau Claire in Eau Claire County to capture enough Democrat voters. The resulting district, however, is the least competitive of the Wisconsin districts. Its partisan split is 57%-42% Republican.

District 2: Working southward from District 1, the second district captures the rural and Republican areas in the northcentral portions of the state. To balance these Republican voters, this district reaches west to the Minnesota border and then down to LaCrosse. Also balancing the significant Republican populations are Stevens Point and some of the Eau Claire suburbs that District 1 did not capture. The resulting district's partisan split is 56%-43% Democrat. Drawing a more competitive district here would have required further sacrificing the compactness of what is already the plan's least compact district.

District 3: This district focuses on the northeast. Its goal was to maintain the eastern "thumb" as a community of interest. Though the tip of the thumb region, Sister Bay and Egg Harbor, leans blue, the thumb itself is Republican. Fortunately, capturing Green Bay and Appleton on the border of Districts 1 and 3 balanced the partisan split—as did capturing Sheboygan. The district results in a 55%-45% Republican to Democrat split. While this district

[9] *See* the appendix, *infra* at 38-45, for the Wisconsin Map Book.

may not be considered seriously competitive, it meets the 10% threshold at which this plan aims and keeps intact the state's entire thumb region.

District 4: By geographic area, District 4 is the largest of the Wisconsin Districts. It begins by capturing the rural and red VTDs in the state's central region and works down to the southwestern corner. To balance the partisan split, it takes in significant portions of Dane County, including Madison's northern, western, and southwestern suburbs. After drawing District 6 along this district's eastern border, significant VTD trades were made to equalize population for one-person one-vote compliance. The subsequent partisan split is 54% Democrat to 43% Republican, extremely close to the 10% goal.

District 5: After drawing the first four districts, it made the most sense to save the southeastern parts of the state including the Milwaukee metropolitan area and Madison proper for the end. Those areas would need to be split to maximize competition and doing so would require precision. So, District 5 captures what was left of the mid-eastern portion of the state. Though Oshkosh is a population center, that city did not have a heavily Democratic partisan split. In fact, the lean is heavily Republican. District 5 therefore captures portions of the Madison area, mainly its northeastern suburbs of Sun Prairie and Cottage Grove. It also captures most of Milwaukee's northern suburbs. This made for a particularly competitive district with a 52%-48% Democrat to Republican split. And this allowed the final 3 districts to split Milwaukee, Madison, Racine, and Kenosha.

District 6: This district worked from west to east. It picks up what Districts 4 and 5 left out of the Madison area, including Madison itself. To balance the resulting heavily Democratic bend, it captures the southeastern rural, inland portions of the state, working to the southern border as well. It also captures Beloit along the border with District 4, as that was necessary to

equalize population. The resulting District has a partisan split of 57%-42% Republican to Democrat. It was nearly impossible to make for a more competitive district without severing too much of District 4. And the requisite Democrats were in such population-dense areas, that doing so would significantly alter the equal population goal.

District 7: This district captures most of Waukesha County and the vast majority of Milwaukee County, including most of downtown Milwaukee. The Milwaukee-Wakesha county line comprises this district's eastern border. The resulting partisan split is 57%-43%, Democrat to Republican.

District 8: This district captures the leftover southeastern portion of the map, containing pieces of southern Milwaukee, Racine and Kenosha. The partisan split, as in District 7, is 57%-43% Democrat to Republican.

After assigning all the unassigned areas to districts, this map mathematically equalized population "as nearly as practicable."[10]

B. The Process in Michigan

As in Wisconsin, this plan began by creating a partisan heat map of the entire state to better visualize how to achieve partisan competitiveness. Here's the result.

[10] Wesbury v. Sanders, 376 U.S. 1, 8-9 (1964).

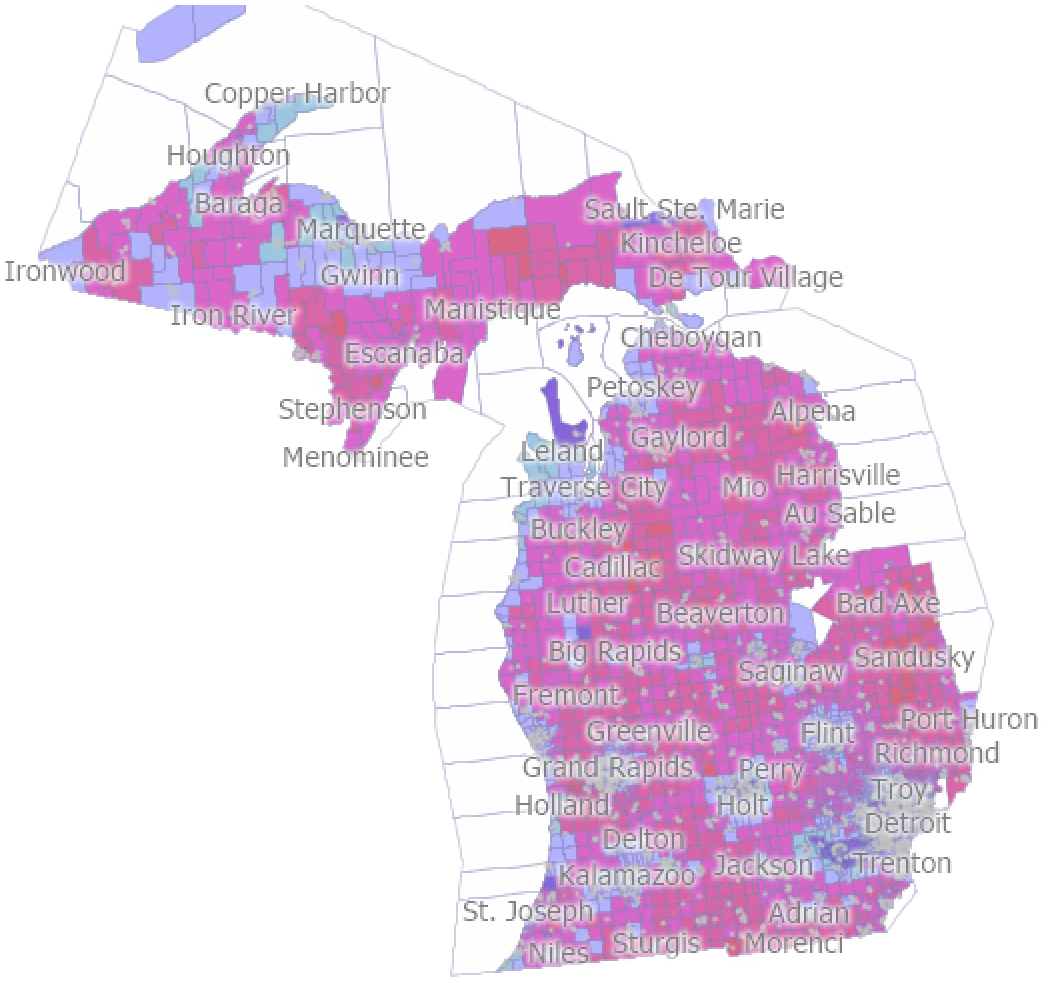

Figure 6: Michigan Partisan Heat Map

The state's heavily Democratic portions are in Detroit and Ann Arbor to the east, Lansing in the middle, and Kalamazoo, Grand Rapids, and much of the state's western shore. Balancing partisanship and drawing nicely shaped, compact districts is simpler when Democrat voters are spread in this way throughout the state rather than in one population center.

Districts 1 and 2:[11] As discussed below, the VRA entitles Detroit's Black community to two majority-Black districts, assuming racially polarized voting. That is a safe assumption considering that the Detroit districts in Michigan's current map, 13 and 14, are both majority-Black. Districts 1 and 2 in this plan comply with the VRA. Drawing these districts before the rest

[11] *See* the appendix *infra* at 46-58, for the Michigan Map Book.

allows for a more concerted focus on maximizing competitiveness down the line, without having to then worry about VRA compliance and risk disturbing the partisan balance at a later point. And, as discussed below, these districts are not very competitive.

District 3: With voters in Detroit already assigned to districts, the plan next focuses on the Upper Peninsula (UP), as it would be difficult to split that region later. Unfortunately, the UP does not contain enough people to form a district on its own. Similarly, it leans heavily Republican, so even if it had the requisite population, it would not make for a competitive district. As a result, District 3 captures some of the northern part of Michigan's eastern shore, extending pretty far down to capture enough Democrats to meet the plan's competitiveness goals. It contains Muskegon, Traverse City, and the shore in between. The resulting partisan split is 55%-45% Republican to Democrat.

District 4: Because District 3 now encompasses the northwestern portion of the state, this district captures the northeastern portion so as to balance the map geographically. To balance the heavily republican lean, this district reaches down and captures the tri-city regions of Bay City, Saginaw, and Flint along the Interstate 75 corridor. Maintaining this region as a community of interest also allowed the map to maintain Michigan's northeastern thumb as a community of interest in District 5. The resulting partisan split of this district was almost exactly equal at less than 51%-49% Republican to Democrat.

District 5: As just discussed, this District aimed to keep intact Michigan's northeastern thumb. Doing so was not easy. The thumb is very red, and so to balance the partisan split this district grabbed a significant portion of the eastern shore, including Port Huron, and even jutting into sizeable portions of the northern Detroit suburbs, including Madison Heights, Royal Oak, and Mount Clemens. The resulting partisan split was 54%-46% Republican to Democrat.

District 6: Working from where District 5 left off, District 6 continues to move toward Detroit, capturing a lot of the inland region between District 5 on the eastern shore and the northern Detroit suburbs. Flint, just beyond the western border of this district helps enclose what is one of the more compact districts in this plan. Pulling in the Troy, Bloomfield Hills, Rochester, and Sterling Heights portions of the northern Detroit metropolitan areas balances the partisan split. The resulting district is 54%-46% Republican to Democrat.

District 7: Now that most of the Detroit area was assigned to a district, District 7 returns the focus to the central part of the state. The area between Districts 3 and 4, which this district captures, is extremely rural, sparsely populated, and heavily Republican leaning. On its own, there is not enough population to constitute a single district, let alone a competitive one. To balance population and partisanship, this district extends southward taking in most of Grand Rapids, save for its southern suburbs.

District 8: Because District 7 could not capture all of the state's geographic center, this district picks up the remainder. District 4 and Flint form the eastern border, and District 7 forms the western. The southern border is formed mainly by the north portions of the Barry, Eaton, Ingham, and Livingston county lines. As with District 7, this rural-center portion of the state is very red, so District 8 extends into the Grand Rapids suburbs. It also severs the Ingham County line to capture East Lansing. The resulting partisan split is 55%-45% Republican to Democrat, right at the plan's 10% competitiveness goal.

District 9: At this point, southern Michigan was the only major geographical region left unassigned. Because Detroit and Ann Arbor are in the southeast, it made the most sense for District 9 to begin on the southwest edge and capture the towns on the state's southwestern shore. District 9 comprises Ottawa, Allegan, Van Buren, and Berrien counties. To add the

requisite population and Democrat voters, it also extends into the western suburbs of Kalamazoo. The resulting partisan split is 55%-45% Republican to Democrat, again just meeting the plan's goal.

District 10: Using District 9's eastern border as District 10's western edge, this District continues working east toward Detroit. Michigan's very southern border is rural and red, so this district needed a sizeable source of Democratic voters to balance competition, and it needed voters in general to meet its population requirements. District 10 thus encompasses most of Kalamazoo and its suburbs that District 9 omitted. Yet District 10 was still short on Democrats. To compensate, the district captures most of the Lansing area as well, save for the eastern suburbs and the portions of East Lansing assigned to District 8. The resulting partisan split is better than both Districts 8 and 9 above at 52%-48% Republican to Democrat.

District 11: This district was slightly more complicated to draw. Rather than focus on the southern region where District 12 now sits, it seemed more prudent to address the unassigned pocket in Detroit's northeast suburbs enclosed by Districts 4, 5, 6, and 8. District 11's eastern portion thus comprises a significant portion of Oakland County. On the west, it captures the eastern portions of the Lansing and East Lansing metropolitan area that Districts 8 and 10 omitted. In between these two population- and Democrat-dense ends, this district's central portion is more rural and red, balancing out the partisan split. The result meets the plan's goal at 55%-45% Republican to Democrat.

District 12: With District 11 taking care of that pocket, District 12 captures the very southeastern portion of the State. The main population center is Ann Arbor, and Washtenaw County more generally. This county leans heavily Democratic, but fortunately, using District 10 as this district's western border, the remaining counties—Jackson, Hillside, Lenawee, and

Monroe—manage to balance the partisan split. But for more precision and to respect that Ann Arbor and the Detroit metropolitan areas have distinct interests, this District's eastern border does not track perfectly onto the Washtenaw-Wayne County line. Instead, it leaves part of Washtenaw County for District 13. This better equalizes population and partisanship as the district already leaned blue. The resulting partisan split is 53%-47% Democrat to Republican.

District 13: This final district picks up what was left over of Detroit's southern metropolitan area. The region is population-dense, which would suggest a heavily Democratic tilt, yet the final district resulted in a 54%-46% Democrat to Republican split. Equalizing population was quite simple considering that District 12 had already split the Washtenaw-Wayne County line. VTD trades were made in this area to comply with one-person one-vote without disturbing the VRA districts just to the north in Detroit proper. At this point, the plan only required minimal population equalization, so the final districts' partisan splits were not meaningfully affected.

C. Analyzing the Results

It is, of course, possible to draw plans in these states that better maximize competition within districts. That is the biggest potential source of criticism. But, as discussed, these plans focus on a host of redistricting criteria, of which competitiveness receives priority. These plans do not, however, focus on competitiveness at the expense of other redistricting criteria. And these plans first comply with the law. As shown next, compared to other proposed competitive maps and by judging these plans with objective metrics, they achieve their difficult goals.

1. Dave's Redistricting App

Consider the current "Max Competitive WI Congressional Districts 2020 Map" published by Dave's Redistricting App:[12]

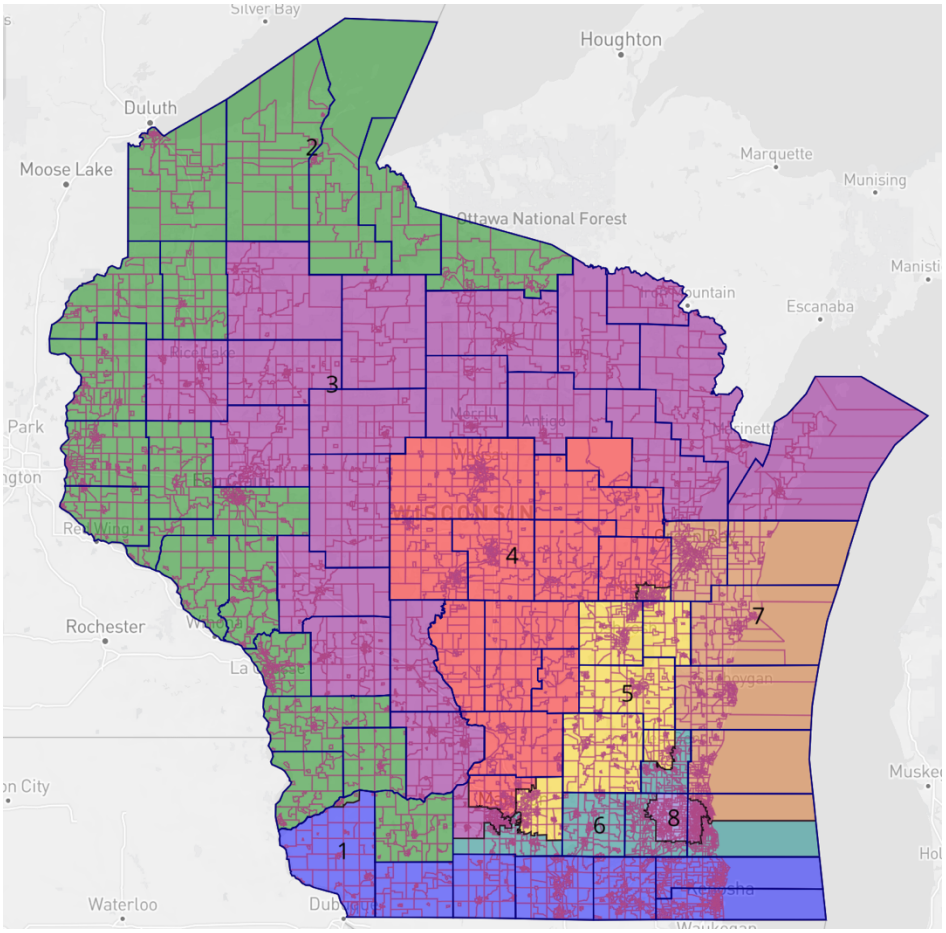

Figure 7: Dave's Wisconsin Map

Though this map performs better on maximizing competition, it performs worse on compactness and respecting communities of interest. Even a simple visual test will show that these districts are not as compact as this report's Wisconsin plan. And more importantly, it may violate one-person one-vote, as some districts vary by more than 1500 voters without a consistent pattern.

Likewise, Dave's Redistricting's Michigan max competitiveness plan seems to outperform on competitiveness. Yet this project's Michigan plan's least competitive district is

[12] *Max Competitive WI Congressional Districts 2020*, DAVE'S REDISTRICTING APP, https://davesredistricting.org/maps#viewmap::2786ff99-aead-4585-9246-ce2dbc5bcc47 (last visited Jan. 13, 2022).

more competitive than Dave's least competitive district:

	Population		Shapes		Partisan Lean			Demographics (VAP)					
ID	Total	+/-			Dem	Rep	Oth	Total	White	Minority	Hispanic	Black	Asian
Un	0				0.00%	0.00%	0.00%	0	0.00%	0.00%	0.00%	0.00%	0.00%
1	775,324	0.02%	✓	✓	48.60%	48.65%	2.75%	617,804	76.77%	23.23%	2.38%	13.44%	5.18%
2	775,906	0.09%	✓	✓	48.71%	48.58%	2.70%	611,263	69.19%	30.81%	5.21%	22.22%	1.40%
3	775,671	0.06%	✓	✓	49.94%	47.46%	2.60%	609,631	73.29%	26.71%	4.66%	13.46%	6.41%
4	774,588	-0.08%	✓	✓	48.16%	48.29%	3.55%	598,253	76.88%	23.12%	7.31%	10.67%	2.34%
5	771,958	-0.42%	✓	✓	48.00%	48.54%	3.46%	596,421	76.89%	23.11%	7.94%	9.31%	3.66%
6	776,092	0.12%	✓	✓	47.97%	48.92%	3.11%	617,140	83.24%	16.76%	4.31%	5.12%	4.55%
7	775,499	0.04%	✓	✓	48.50%	48.05%	3.45%	607,979	79.78%	20.22%	5.29%	8.88%	3.52%
8	776,827	0.21%	✓	✓	48.09%	48.75%	3.17%	617,067	77.03%	22.97%	3.55%	13.83%	1.26%
9	774,702	-0.06%	✓	✓	36.28%	60.51%	3.21%	613,147	90.29%	9.71%	3.46%	1.43%	1.16%
10	775,124	-0.01%	✓	✓	48.76%	48.31%	2.94%	610,160	81.10%	18.90%	3.90%	8.42%	3.58%
11	774,467	-0.09%	✓	✓	49.10%	48.20%	2.70%	614,682	78.69%	21.31%	3.25%	8.80%	6.67%
12	776,510	0.17%	✓	✓	56.29%	40.78%	2.93%	611,196	71.60%	28.40%	5.69%	15.33%	4.93%
13	774,652	-0.07%	✓	✓	81.75%	15.60%	2.65%	589,850	37.72%	62.28%	3.60%	52.96%	4.70%
	775,178	**0.63%**	✓	✓	**50.32%**	**46.67%**	**3.01%**	**608,815**	**74.91%**	**25.09%**	**4.65%**	**14.04%**	**3.80%**

Figure 8: Dave's Michigan Data

Notice district 8's partisan split: 60.51% Republican to 36% Democrat. Notwithstanding the Majority-Black districts used to comply with the Voting Rights (which, as discussed below, Dave's map does not address), the least competitive district in this report's Michigan map contains a 44.35% Democrat to 55.65% Republican split. Thus, this plan outperforms on compactness, and it also arguably performs slightly better on at least one competitiveness metric as well. It is true that these two plans use different partisanship data, but the same would be true even when correcting for that error.

Dave's plan also likely violates Section 2 of the Voting Rights Act as well as one-person one-vote. Dave's plan contains only one majority-Black district: District 13 in the Detroit area is 53% Black.[13] This is the precise evidence that courts use to strike down non-compliant plans: comparing a valid plan with an extra majority-minority district for a large and compact enough

[13] *Max Competitive MI Congressional Districts 2020*, DAVE'S REDISTRICTING APP https://davesredistricting.org/maps#stats::63d3e83b-7e54-4e4d-81b0-9d2160c9a1dd (last visited Jan. 13, 2022).

minority. In other words, because it was possible for this report to draw two majority-Black districts in Detroit, assuming racially polarized voting, a plan that draws only one violates the law.

2. PlanScore

The Campaign Legal Center allows the public to score a legislative map's potential partisan effects.[14] As expected for a map aiming at competitive districts, PlanScore confirmed that this report's Wisconsin map balances partisanship well. PlanScore, however, deemed this report's Michigan plan a Republican gerrymander, despite using the exact same principles as the Wisconsin plan. Even though competitiveness, as discussed, is a subjective measure, these differing scores for very similar plans illustrate the difficulty in maximizing competitiveness while simultaneously managing legal compliance and respect for more traditional redistricting principles.

PlanScore uses four metrics (1) the efficiency gap, (2) declination, (3) partisan bias, and (4) the mean median difference. Without dwelling on the intricacies of each, they are all accepted tools for judging whether a particular plan was gerrymandered. In Wisconsin, the first two metrics show very slight Republican favoring while the last two show very slight Democrat favoring. The results confirm that the plan meets its competitiveness goals.

[14] CAMPAIGN LEGAL CTR., PLANSCORE, https://planscore.campaignlegal.org/#!2020-ushouse (last visited Jan 13, 2022).

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	4.3% Pro-Republican	39%	45%	24%
Declination	0.02 Pro-Republican	53%	7%	47%
Partisan Bias	0.8% Pro-Democratic	37%	7%	49%
Mean-Median Difference	0.2% Pro-Democratic	54%	5%	49%

Figure 9: Wisconsin's PlanScore

The Michigan map, on the other hand, scored far worse. According to PlanScore, it heavily favors Republicans despite using the same underlying data and prioritizing the same principles as the Wisconsin plan. Not to mention that the Michigan map began with two majority-Black, VRA districts that are overwhelmingly Democrat leaning. In fact, that may help explain such a poor PlanScore, for these metrics are highly sensitive to both perceived "packing" and inefficient votes as would be the case in these VRA districts. And some of these metrics would not correct that packing based on the slim margin of victory in the non-packed districts. A situation, for example, where many districts favored Republicans but only by a very slim majority, say 51%-49%, and very few districts favored Democrats by a significant majority (like these VRA districts), would yield an extremely high declination score despite the map's overall competitiveness.[15] The plan score results for the Michigan plan are below.

[15] *See, e.g.*, Nicholas Stephanopoulos & Eric McGhee, *The Measure of a Metric: The Debate over Quantifying Partisan Gerrymandering*, 70 STAN. L. REV. 1503, 1557 n. 194. (2018) ("It is clear that [declination] sometimes violates the efficiency principle.").

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	14.1% Pro-Republican	5%	95%	3%
Declination	0.35 Pro-Republican	3%	84%	10%
Partisan Bias	17.0% Pro-Republican	1%	94%	6%
Mean-Median Difference	3.8% Pro-Republican	1%	57%	23%

Figure 10: Michigan's PlanScore

IV. The Law

A. Competitiveness in the Context of Redistricting Law

The law is silent toward maximizing competition within districts. The United States Constitution, as well as the Michigan and Wisconsin state constitutions, neither require nor prohibit the use of this principle. Though no Supreme Court opinion directly addresses the question, the Court has, however, blessed maps aiming for "a competitive balance among political parties."[16] In fact, in *Gaffney v. Cummings*, the Court noted that the "very essence of districting is to produce a different—a more politically fair—result than would be reached with elections at large, in which the winning party would take 100% of the legislative seats."[17] That is precisely why in that case the Court found no 14th Amendment violation where a plan "attempted to reflect the relative strength of the [two] parties."[18] Likewise, the Court upheld the drawing of a reliably-safe Democratic district in *Easley v. Cromartie*, noting that "the legislature [may] achieve[] its legitimate political objectives" through politically motivated redistricting if those political considerations are not a pretext for race.[19] So, drawing districts that reliably favor a particular party may overcome a *Shaw* race-predomination claim.

[16] Harris v. Ariz. Indep. Redistricting Com'n, 578 U.S. 253, 258 (2016) (citing Gaffney v. Cummings, 412 U.S. 735, 752-54 (1973)).
[17] Gaffney, 412 U.S. at 752-54.
[18] *Id.*
[19] Easley v. Cromartie, 532 U.S. 234, 258 (2001).

Put more simply, the law allows for balanced partisan maps and even maps that favor incumbency in certain circumstances. Competitive districts similarly aim for a "competitive balance among political parties" and arguably do so better than the proportional plan approved in *Gaffney*. And because competitive districts do not favor incumbency, or use politics as a pretext, plans that strive for competitive races do not violate *Easley*.

To avoid any possible ambiguity, Arizona amended its constitution, affirmatively requiring the state's redistricting commission to consider maximizing competition where possible. Michigan and Wisconsin may wish to do the same, but likely do not need to. The Arizona Supreme Court ruled that the commission's chosen methodology for maximizing competition is "beyond the scope of judicial review."[20] But, as noted in the federal cases discussed above, the chosen methodology may not be used as a pretext to further an impermissible goal.[21]

B. One-Person One-Vote Compliance

The Constitution apportions congressional representatives "among the several states . . . according to their respective numbers."[22] And because "legislators represent people, not trees or acres,"[23] the law is well-settled that each district must have "equal representation for equal numbers of people."[24] Failing that command would favor some votes based solely on geography. "To say that a vote is worth more in one district . . . [runs] counter to our fundamental ideas of democratic government."[25] Courts therefore give virtually no leeway on this Constitutional principle, requiring equal population in congressional districts "as nearly as practicable."[26]

[20] Minority Coalition II, 220 Ariz 587, 599 n. 14 (2009).
[21] *Id*.
[22] U.S. CONST, art. 1, § 2.
[23] Reynolds v. Sims, 377 U.S. 533, 562 (1964).
[24] Wesbury v. Sanders, 376 U.S. 1, 18 (1964).
[25] *Id*. at 8-9.
[26] *Id*.

Deviations need justification. And the state bears the burden of "proving that each significant variance between districts [is] necessary to achieve some legitimate goal."[27] These plans satisfy the Court's rigorous standard.

The Michigan and Wisconsin plans deviate by, at most, 4 people per district.[28] The Court further explained in *Tennant v. Jefferson County Commission*, 567 U.S. 758, 759 (2012), "that the 'as nearly as practicable standard' does not require that congressional districts be drawn with 'precise mathematical equality,' but instead that the State justify population differences between districts that could have been avoided by a 'good faith effort to achieve absolute equality.'"[29]

First, these deviations could not have been avoided: they were the result of a "good faith effort" to achieve "precise mathematical equality." In other words, the deviations approach mathematical equality "as nearly as practicable." This fairs better than the Court's already demanding test. Even if a court were to find these variations significant, it would be virtually impossible to draw maps with fewer. Dividing the total population of Michigan and Wisconsin by their 13 and 8 respective districts leaves a remainder. Michigan's total population according to the 2020 census is 10,077,331; Wisconsin's is 5,893,718. This means districts with 775,179.308 people in Michigan and 736,714.75 in Wisconsin. Mathematical equality is therefore impossible. Yet, it is worth noting, for example, that the Court upheld the plan in *Tennant* despite a deviation of .79%. The deviation here is 0% across the board.[30]

Second, "legitimate goals" would save these negligible population differences, even if a challenger *could* satisfy the first part of *Karcher*'s test. Maximizing competitiveness itself is a

[27] Karcher v. Daggett, 462 U.S. 725, 731 (1983) (citing Kirkpatrick v. Preisler, 394 U.S. 526, 532 (1969)).
[28] *See* the appendix *infra* at 36-37 for the demographic data by district.
[29] 567 U.S. 758, 759 (2012) (quoting Karcher, *supra* n.7, at 730).
[30] *See* the appendix *infa* at 36-37 for the demographic data by district.

legitimate criterion in the one-person one-vote context.[31] Likewise, drawing a maximally competitive district does not mean sacrificing other legitimate redistricting criteria. Rather, it assigns that objective priority. To a large extent, these plans respect political subdivision lines and communities of interest where possible. Equalizing population by single individuals would require trading whole census blocks and further dividing political subdivision lines and communities of interest. The negligible difference does not outweigh that cost. Indeed, the Court in *Tennant* approved a district that deviated by more than 1,000 times more people than any district in these plans.[32] In short, these districts comply with one-person-one-vote.

C. Voting Rights Act (VRA) Compliance

Non-statutory redistricting principles provide states some flexibility to craft their own special blend of criteria. Some may favor, maintaining communities of interest, respecting political subdivision lines, or making the least number of changes from a previous plan, among others. And most will combine a host of these measures, weighing each differently. But states must comply with the Voting Rights Act. Before maximizing competitiveness, then, these plans first comply with the VRA.

Section 2 of the Voting Rights Act (VRA) prohibits states from denying or abridging the right to vote based on race.[33] States violate the law by drawing districts where members of a racial minority "have less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice."[34] *Thornburg v. Gingles*, 478 U.S.

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[31] Harris v. Ariz. Indep. Redistricting Comm'n, 993 F. Supp. 2d 1042, 1079 (D. Ariz. 2014), aff'd, 578 U.S. 253, 136 (2016) ("We do not doubt that the creation of competitive districts is a rational, legitimate state interest. But to justify population deviations, legitimate state criteria must be "nondiscriminatory" and "consistently applied.") (quoting Karcher, supra n. 13, 462 U.S. at 740)).
[32] *Id*. at 762 (noting the .79% variance amounted to 4,871 people).
[33] Voting Rights Act of 1965 §2, 52 U.S.C. § 10301 ("No voting qualification or prerequisite to voting or standard, practice, or procedure shall be imposed or applied by any State or political subdivision in a manner which results in a denial or abridgement of the right of any citizen of the United States to vote on account of race or color.").
[34] *Id*.

30 (1986) explains the Court's three-part threshold analysis for determining whether a minority group is entitled to a majority-minority district: (1) whether the minority community is sufficiently large and compact to "constitute a majority in a single member district," (2) whether the minority community is "politically cohesive," and (3) whether the white majority votes as a bloc.[35] Courts also consider the factors the Senate discussed in the VRA's legislative history.[36] The test examines the "totality of the circumstances."[37] Those circumstances require no majority-minority districts in Wisconsin and two majority-Black districts in Michigan.

1. The VRA Requires No Majority-Minority Districts in Wisconsin

Wisconsin fails the first *Gingles* factor. No minority community is "large and compact" enough to constitute a majority in a single-member district. The Black population represents 7.7% of the State's total population.[38] True, that would entitle Wisconsin's Black community to roughly 62% of a single district, based on raw Voting Age Population (VAP). And it is also true that under *Bartlett v. Strickland*, 556 U.S. 1 (2009), the minority community need only show that it would constitute greater than 50% of the total population. Here, however, no single Black community can do so. It is thus not possible to draw such a district with the requisite compactness. First, doing so would require pulling from disparate Black communities in Milwaukee, Racine, Kenosha, and perhaps Madison as well. The Court, however, reaffirmed in

[35] Gingles, 478 U.S. at 50-51.
[36] *Id*. at 44-45 ("the history of voting-related discrimination in the State or political subdivision; the extent to which voting in the elections of the State or political subdivision is racially polarized; the extent to which the State or political subdivision has used voting practices or procedures that tend to enhance the opportunity for discrimination against the minority group, such as unusually large election districts, majority vote requirements, and prohibitions against bullet voting; the exclusion of members of the minority group from candidate slating processes; the extent to which minority group members bear the effects of past discrimination in areas such as education, employment, and health, which hinder their ability to participate effectively in the political process; the use of overt or subtle racial appeals in political campaigns; and the extent to which members of the minority group have been elected to public office in the jurisdiction.").
[37] *Id*. at 46.
[38] U.S. CENSUS BUREAU, WISCONSIN: 2020 CENSUS (Aug. 25, 2021) https://www.census.gov/library/stories/state-by-state/wisconsin-population-change-between-census-decade.html.

LULAC v. Perry, 548 U.S. 399, 431 (2006), that a minority community is not entitled to a VRA district if it is not compact.[39] And even if it were possible to move from census block to census block and find enough highly concentrated black populations, doing so would capture too many white voters. Second, because the VRA does not entitle these Black communities to a majority-minority district, drawing one would violate the 14th Amendment, falling outside of the safe harbor for VRA compliance which the Court recognized in the *Shaw* cases.[40]

A. *LULAC* explains why this sort of districting runs afoul of VRA caselaw. The VRA's purpose is to give discrete minority communities an opportunity to elect a candidate of their choice; providing a racial group *statewide* proportional opportunity serves a different objective. The threshold question from *Gingles* is about whether a *specific* minority community in a *specific* location is entitled to a district. In short, "there is no basis to believe a district that combines two farflung segments of a racial group with disparate interests provides the opportunity that Section 2 requires or that the first *Gingles* condition contemplates."[41]

The law is clear: One cannot assume that disparate communities, even of the same race, would vote to elect the same candidate. Nor can a single minority community claim entitlement to a VRA district and then meet the size requirement *afterward*. A minority group "must constitute a numerical majority of the voting population in the area under consideration *before* Section 2" entitles it to a district.[42] And still, that is not practically possible in Wisconsin.

While compactness has no "precise rule . . . the inquiry should take into account 'traditional districting principles such as maintaining communities of interest and traditional

[39] League of United Latin Am. Citizens (LULAC) v. Perry, 548 U.S. 399, 431 (2006).
[40] Shaw v. Hunt (Shaw II), 517 U.S. 899, 902 (noting that such a district is "not narrowly tailored to the State's asserted interest in complying with § 2 of the Voting Rights Act."). *See also* Shaw v. Reno (Shaw I), 509 U.S. 630, 653-54 (1993) ("The States certainly have a very strong interest in complying with federal antidiscrimination laws that are constitutionally valid as interpreted and as applied.").
[41] LULAC, 548 U.S. at 431.
[42] Bartlett v. Strickland, 556 U.S. 1, 9 (2009) (emphasis added).

boundaries.'"[43] One cannot draw a majority-Black district in Wisconsin that reasonably respects these principles. Consider this heat map representing the voting districts with a highly concentrated Black VAP in the southeastern part of the state:

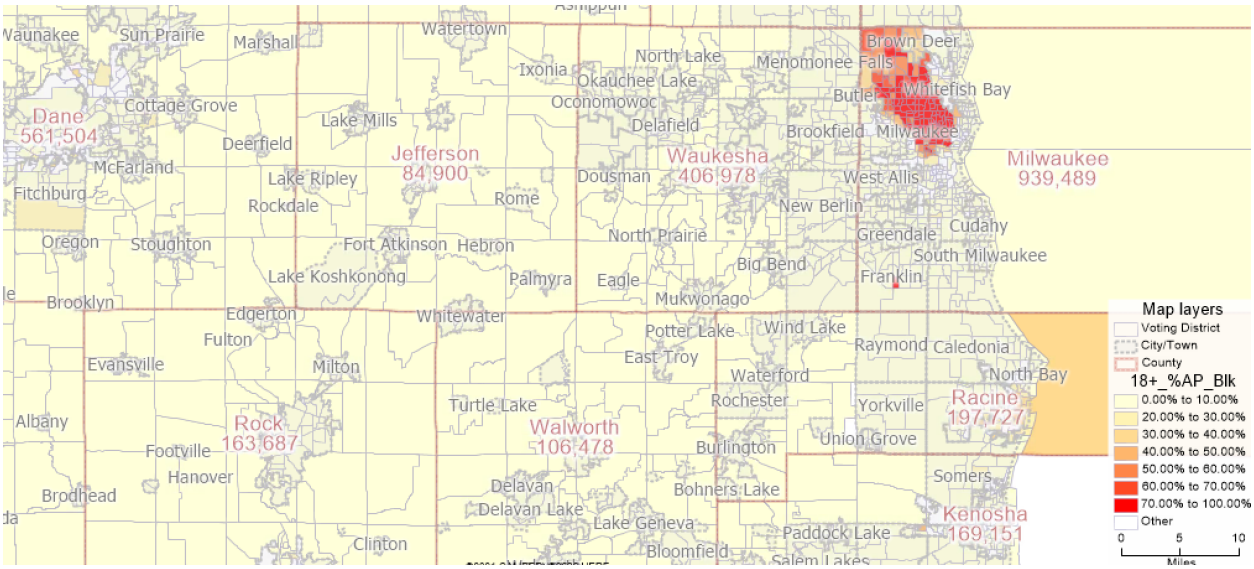

Figure 11

While Milwaukee contains the overwhelming share of the Black population, that area alone does not make for a large and compact enough majority-Black district. To add enough Black voters would require disrupting political subdivision lines by pulling from Racine, Kenosha, and Madison. Even encircling just that heavily red portion of the map yields a district that is only

[43] LULAC, 548 U.S. at 433 (quoting Abrams v. Johnson, 521 U.S. 74, 92 (1997)).

48% black, and still underpopulated by 41%, or 304,000 people (see below).

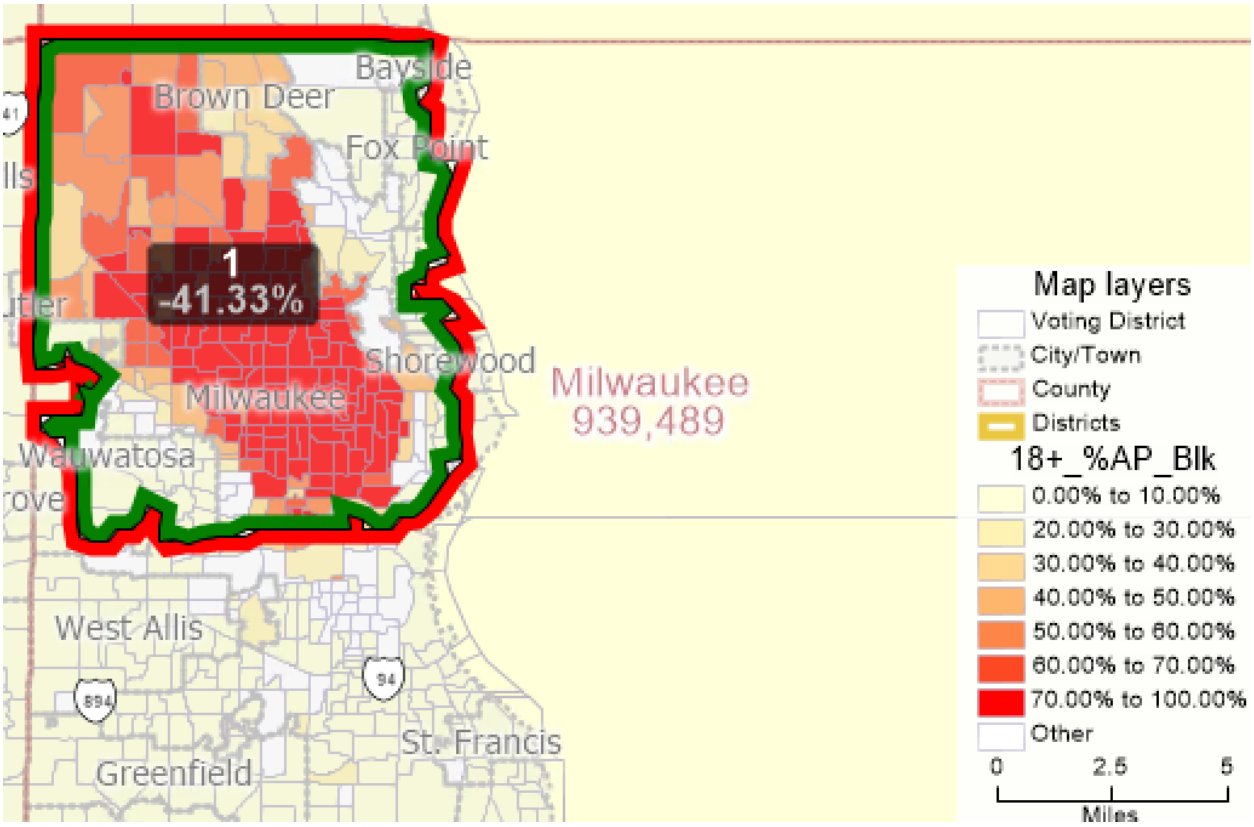

Figure 12

District	Population	Deviation	% Deviation	Reock	18+_Pop	% 18+_Pop	18+_AP_Blk	% 18+_AP_Blk
	5461519	4,724,804	641.33%	0.54	4286888	78.49%	139888	3.26%
1	432199	-304,516	-41.33%	0.65	325412	75.29%	156425	48.07%

Figure 13

It would not be possible to add the requisite 304,000 people to comply with one-person one-vote and create a majority black district. In other words, increasing the size would capture too many White voters.

B. Even if it were possible to draw a majority-Black district in Wisconsin, doing so would violate *Shaw v. Reno* (Shaw I). Citizens have a "constitutional right to participate in a 'color-blind' electoral process."[44] Court's must, therefore, strictly scrutinize the use of race in

[44] Shaw I, 509 U.S. at 642 (prohibiting the use "race[] for purposes of voting, without regard for traditional districting principles and without sufficiently compelling justification.").

redistricting, even when favoring historically disadvantaged racial groups.[45] *Shaw* prohibits the excessive use of race without compelling justification and narrow tailoring.[46] And narrowly tailored compliance with the VRA is the only compelling justification.[47] But, because the VRA does not require a majority-Black district in Wisconsin, drawing one violates the equal protection clause of the 14th Amendment, falling outside of *Shaw*'s safe harbor.

Shaw's narrow tailoring demands that "courts must bear in mind the difference between what the law permits and what it requires."[48] Put simply, a state cannot narrowly tailor compliance with the VRA by drawing a majority-minority district where the VRA does not require a district. In other words, the VRA does not require a district when the minority community does not meet the threshold compactness requirement as expressed in *Gingles*. Further, Shaw II, 517 U.S. 899, 902 (1995), holds that a non-compact majority-minority district is "not narrowly tailored to the State's asserted interest in complying with § 2 of the Voting Rights Act."[49] Without narrow tailoring such a district would be unconstitutional.

2. The VRA Requires Two Majority-Minority Districts in Michigan

On the other hand, the VRA entitles Detroit's Black community to two majority-Black districts, assuming racially polarized voting. Though not dispositive, proportionality offers a good starting place when calculating how many majority-minority districts the VRA requires. In fact, the Court has noted that, "whether the number of districts in which the minority group form an effective majority is roughly proportional to its share of the population" is a "relevant consideration."[50] Proportionality, therefore, helps determine "whether members of a minority

[45] *Id*.
[46] *Id*.
[47] *Id*. at 653-54 ("The States certainly have a very strong interest in complying with federal antidiscrimination laws that are constitutionally valid as interpreted and as applied.").
[48] *Id*.
[49] Shaw II, 517 U.S. at 902.
[50] LULAC, 548 U.S. at 426.

group have 'less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice.'"[51] The overall Black VAP in Michigan roughly equates to a proportional share of 1.8 of the state's 13 congressional districts. To calculate the total number of districts that satisfy the *Gingles* threshold factors, it helps to round up.

Here, it is possible to draw two majority black districts, both over *Bartlett's* greater than 50% VAP requirement.[52] This heat map represents the highly concentrated Black areas in the Detroit metropolitan area:

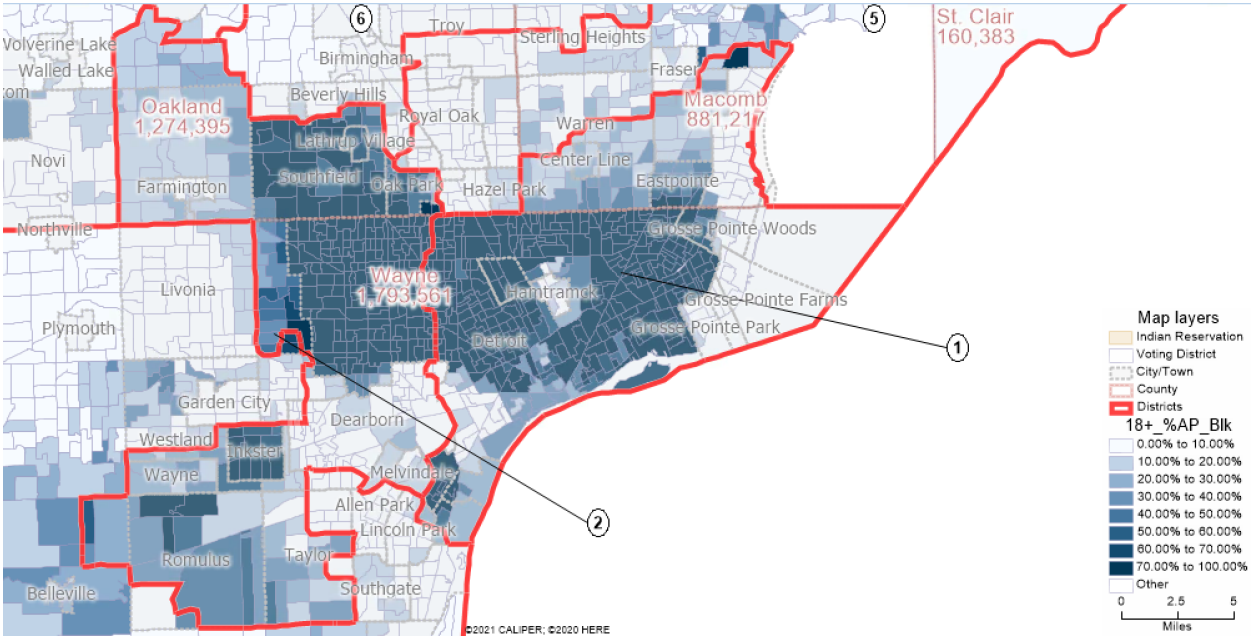

Figure 14

Districts 1 and 2 take the large and compact Black population in the Detroit metro-center area and the immediately surrounding Black communities as well. The following data show that

[51] Johnson v. De Grandy, 512 U.S. 997, 1000 (1994) (quoting the Voting Rights Act).
[52] Bartlett, 556 U.S. at 9.

precise Black VAP of each of these districts respectively.

Michigan Demographic Data by District

District	Population	Deviation	% Deviation	18+_Pop	% H18+_Pop	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% D 20_Pres	% R 20_Pres	20_Pres	% 20_Pres
1	775176	-3	-0%	592158	6.36%	50.87%	1.8%	4.15%	76.54%	23.46%	341776.49	44.09%
2	775176	-3	-0%	595460	3.25%	50.02%	1.59%	4.39%	78%	22%	376202.20	48.53%
3	775177	-2	-0%	625557	2.7%	4.34%	4.63%	0.94%	44.9%	55.1%	442826.86	57.13%
4	775181	2	0%	611644	4.17%	14.83%	2.38%	1.24%	49.29%	50.71%	420480.34	54.24%
5	775180	1	0%	625980	2.73%	7.29%	1.83%	4.07%	46.08%	53.92%	438311.77	56.54%
6	775182	3	0%	608516	4.3%	7.88%	1.48%	7.68%	46.28%	53.72%	450687.33	58.14%
7	775179	0	0%	602892	6.41%	5.82%	2.28%	1.76%	44.67%	55.33%	422512.09	54.51%
8	775182	3	0%	609070	5.4%	6.54%	2.24%	3.47%	45%	55%	400528.39	51.67%
9	775178	-1	-0%	598120	6.88%	7.1%	2.19%	2.72%	45.07%	54.93%	415541.47	53.61%
10	775179	0	0%	599971	5.54%	9.13%	2.55%	2.47%	48.39%	51.61%	404508.26	52.18%
11	775179	0	0%	608624	3.39%	3.45%	1.92%	5.2%	44.35%	55.65%	477318.06	61.58%
12	775180	1	0%	622324	4.29%	6.71%	2.14%	5.48%	53.59%	46.41%	422017.94	54.44%
13	775182	3	0%	614286	5.14%	10.76%	2.2%	5.78%	54.97%	45.03%	441183.78	56.91%

Figure 15

District 1's Black VAP is 50.87 percent, and District 2's is 50.02%. Because it was possible to draw large and compact districts for Detroit's Black community, this is strong evidence that the VRA required them.

Beyond proportionality, these data likewise show that the VRA does not require more than two districts. The Black VAP does not reach the requisite size in districts 3-13. The next most populous district by Black VAP is District 4 at 14%, still significantly below the requisite 50% requirement.[53] The following heat map of Michigan as a whole, shows that there are no

[53] *Id.*

large and compact enough Black communities beyond the two in Detroit.

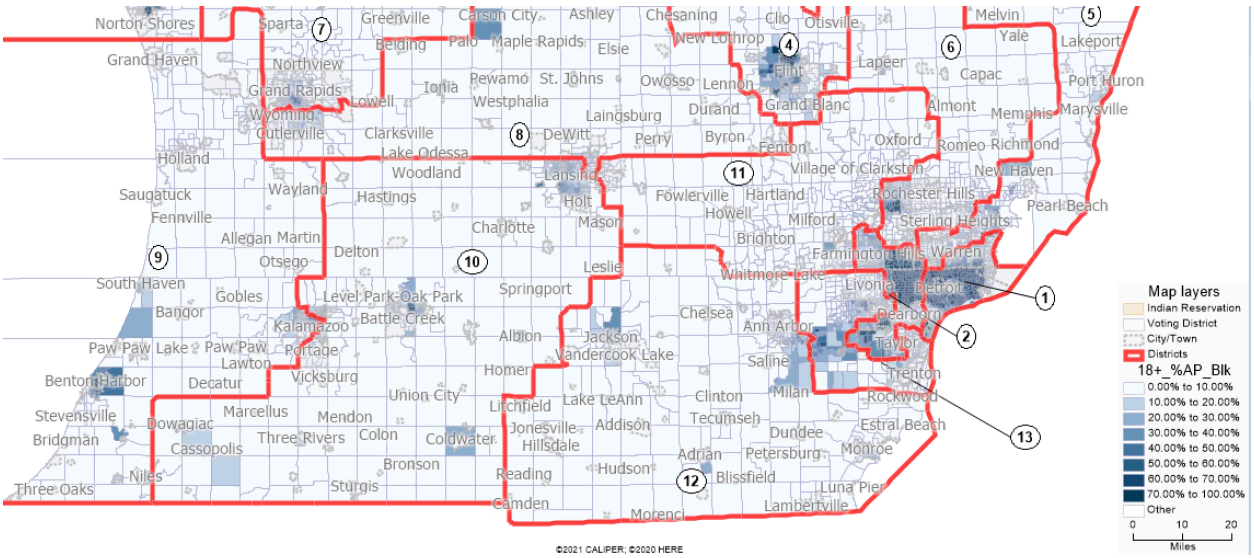

Figure 16

Flint, in the top part of this map, Lansing in the center and Ann Arbor just southwest of Detroit contain the next largest Black communities in the state. Yet none is large enough on its own to constitute a majority in a single member district; this does not satisfy *Gingles*.[54] Nor would it be possible to draw a legally compliant district that combines these communities without violating the Court's compactness requirement. *LULAC* and *Shaw II* prohibit joining "farflung" minority communities to claim entitlement to a VRA district.[55] In short, Michigan needs two, but not more than two, majority-Black districts.

D. VRA Compliance and Maximizing Competition

It is worth noting the potential difficulties of drawing VRA districts while aiming to maximize competition. The majority-Black districts in the Detroit area are overwhelmingly Democratic. The two in this plan, for example, show a partisan split of about 75% to 25%,

[54] Gingles, 478 U.S. at 50 ("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.").
[55] LULAC, 548 U.S. at 431 (2006); Shaw II, 517 U.S. at 902.

Democrat to Republican. Because the surrounding white communities lean Democratic as well, as is true in many urban centers, it is difficult to make these districts more competitive.

Michigan Demographic Data by District

District	Population	Deviation	% Deviation	18+_Pop	% H18+_Pop	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% D 20_Pres	% R 20_Pres	20_Pres	% 20_Pres
1	775176	-3	-0%	592158	6.36%	50.87%	1.8%	4.15%	76.54%	23.46%	341776.49	44.09%
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7	775179	0	0%	602892	6.41%	5.82%	2.28%	1.76%	44.67%	55.33%	422512.09	54.51%
8	775182	3	0%	609070	5.4%	6.54%	2.24%	3.47%	45%	55%	400528.39	51.67%
9	775178	-1	-0%	598120	6.88%	7.1%	2.19%	2.72%	45.07%	54.93%	415541.47	53.61%
10	775179	0	0%	599971	5.54%	9.13%	2.55%	2.47%	48.39%	51.61%	404508.26	52.18%
11	775179	0	0%	608624	3.39%	3.45%	1.92%	5.2%	44.35%	55.65%	477318.06	61.58%
12	775180	1	0%	622324	4.29%	6.71%	2.14%	5.48%	53.59%	46.41%	422017.94	54.44%
13	775182	3	0%	614286	5.14%	10.76%	2.2%	5.78%	54.97%	45.03%	441183.78	56.91%

Figure 17

Bartlett's greater than 50% command only applies to VRA entitlement, not to the required minority population in the resulting district. But pulling more Republican voters into these two districts, thereby diluting the Black population to under 50%, will not make a significant difference in the resulting competitiveness and would undermine the partisan balance in the other districts.

E. Competitiveness in Michigan and Wisconsin Law

Though competitiveness may be a valid redistricting principle under Federal law, the constitutional and statutory law in some states prohibit the use of partisan data during redistricting. That would pose a significant problem for drawing maximally competitive districts. Fortunately for this project, both Wisconsin and Michigan allow the use of partisanship data.

1. Wisconsin Law

Redistricting in Wisconsin falls under the purview of the state's legislature. The state's constitution outlines a few basic commands regarding apportioning state legislative districts.[56]

[56] WIS. CONST. art. IV, §§ 3-5.

Without explicit constitutional or statutory prohibitions on using partisan data, the legislature is free to redistrict with an eye toward maximizing competitiveness.

Governor La Follette created an advisory committee tasked with making recommendations to the state legislature, though the legislature remains free to make its own independent choices.[57] Wherever possible, the committee is to propose maps that are "free from partisan bias and partisan advantage; avoid diluting or diminishing minority votes . . . ; be compact and contiguous; avoid splitting wards and municipalities; retain the core population in each district; maintain traditional communities of interest; and prevent voter disenfranchisement."[58] The order of these criteria is significant, and the partisanship clause comes first. While not binding on the legislature, this executive order at least confirms that preventing partisan advantage in redistricting is a priority for the Governor. Maximizing competitiveness achieves the same goal as not advantaging individual parties. Likewise, drawing a map that is "free from partisan bias and partisan advantage" requires considering partisanship data to some extent. Considering that data for this project then falls within the bounds of state policy.

2. Michigan Law

Michigan's process is more complicated. But the state's constitution contemplates using partisanship data in redistricting, making compliance with state law easier for a project which relies on partisanship data. An independent redistricting commission draws Michigan's legislative districts.[59] Of the 13 members on the commission, 4 must be affiliated with the Democratic Party and 4 with the Republican; the remaining 5 must be independent.[60] The

[57] Executive Order #66, "Relating to the People's Maps Commission" (2020).
[58] *Id*.
[59] MICH. CONST. art. IV, § 6.
[60] *Id*. at § 6(2)(d)(2).

relevant provision states: "Districts shall not provide a disproportionate advantage to any political party. A disproportionate advantage to a political party shall be determined using accepted measures of partisan fairness."[61]

The procedural safeguards for the selection of commissioners and the substantive prohibition on advantaging political parties work together to effectuate this the state's level playing field policy. Maximally competitive districts achieve this same goal. Likewise, there is no practical or constitutional problem with using partisanship data when the constitution requires the commission itself to "use[] . . . measures of partisan fairness."[62] As in Wisconsin, maximally competitive redistricting complies with state law.

V. Conclusion

As with most efforts aimed at improving our democratic institutions, drawing fair legislative districts by maximizing competition is easier said than done. This task proved difficult even in states where the overall partisan split is relatively equal and where partisanship is relatively dispersed geographically. But it was not impossible. These plans managed legal compliance and other important "non-partisan" redistricting criteria, all while prioritizing competitive congressional races. While improvements in these plans on any given metric are possible, such improvements would expense of other required considerations. In short, these competitive plans will provide unique and durable benefits to Michigan and Wisconsin's voters.

[61] *Id*. at § 6(13)(d).
[62] *Id*.

Appendix

Demographic Data by District

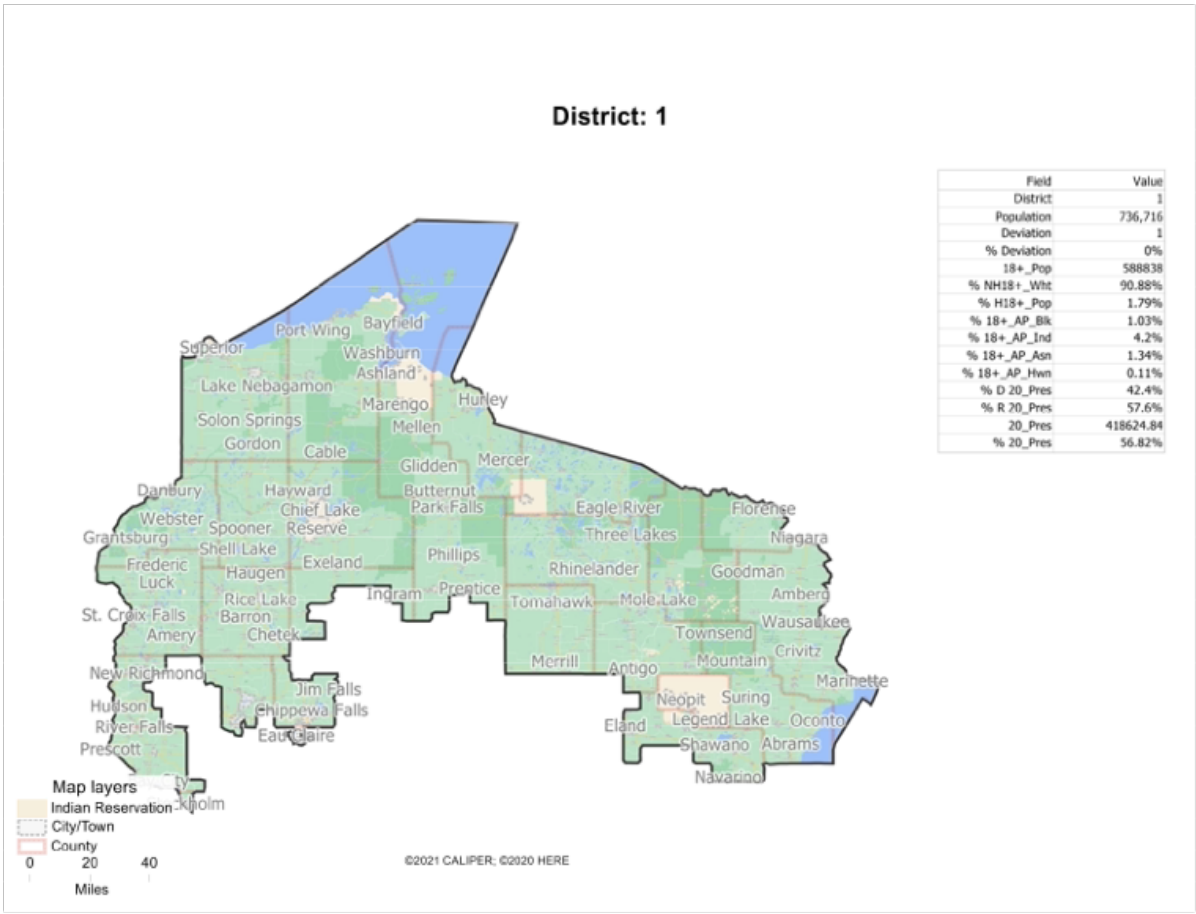
Michigan Demographic Data by District

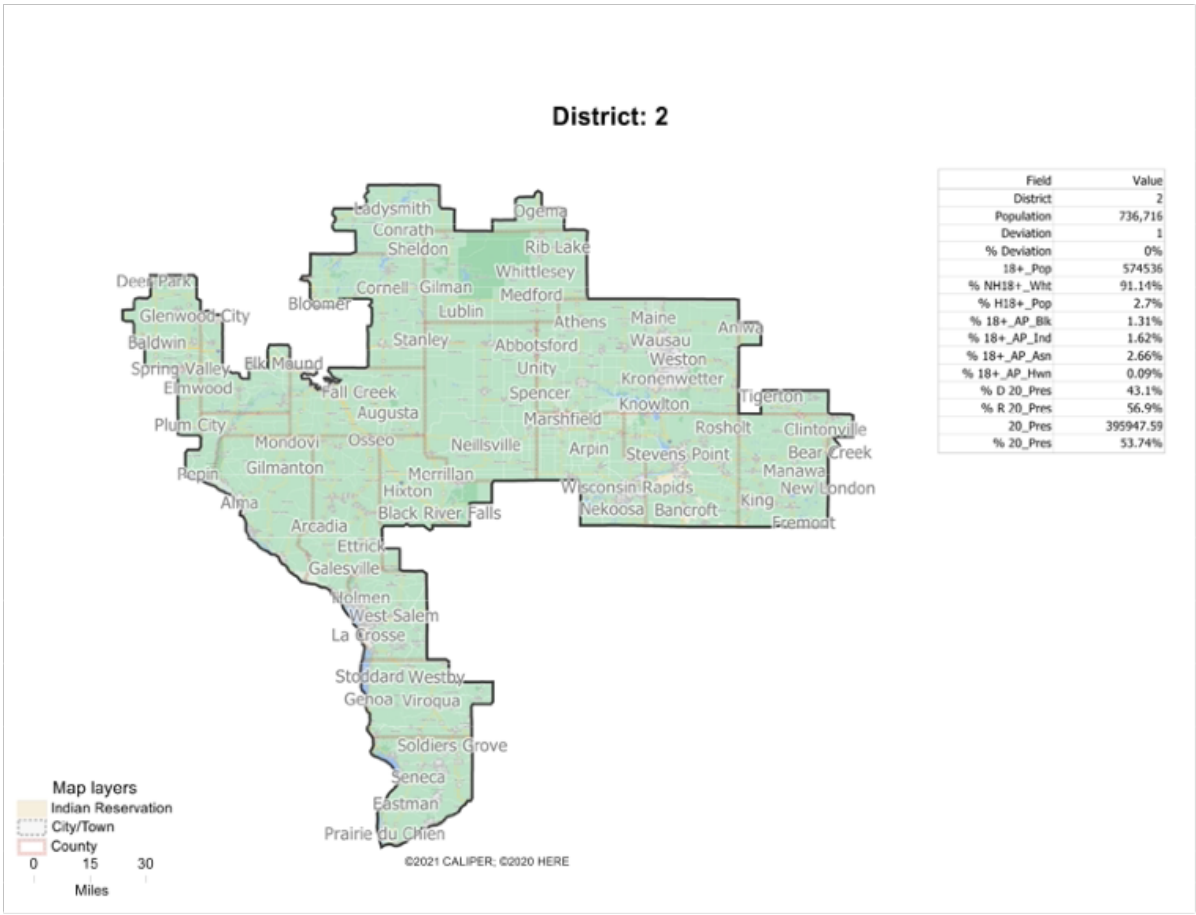
District	Population	Deviation	% Deviation	18+_Pop	% H18+_Pop	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% D 20_Pres	% R 20_Pres	20_Pres	% 20_Pres
1	775176	-3	-0%	592158	6.36%	50.87%	1.8%	4.15%	76.54%	23.46%	341776.49	44.09%
2	775176	-3	-0%	595460	3.25%	50.02%	1.59%	4.39%	78%	22%	376202.20	48.53%
3	775177	-2	-0%	625557	2.7%	4.34%	4.63%	0.94%	44.9%	55.1%	442826.86	57.13%
4	775181	2	0%	611644	4.17%	14.83%	2.38%	1.24%	49.29%	50.71%	420480.34	54.24%
5	775180	1	0%	625980	2.73%	7.29%	1.83%	4.07%	46.08%	53.92%	438311.77	56.54%
6	775182	3	0%	608516	4.3%	7.88%	1.48%	7.68%	46.28%	53.72%	450687.33	58.14%
7	775179	0	0%	602892	6.41%	5.82%	2.28%	1.76%	44.67%	55.33%	422512.09	54.51%
8	775182	3	0%	609070	5.4%	6.54%	2.24%	3.47%	45%	55%	400528.39	51.67%
9	775178	-1	-0%	598120	6.88%	7.1%	2.19%	2.72%	45.07%	54.93%	415541.47	53.61%
10	775179	0	0%	599971	5.54%	9.13%	2.55%	2.47%	48.39%	51.61%	404508.26	52.18%
11	775179	0	0%	608624	3.39%	3.45%	1.92%	5.2%	44.35%	55.65%	477318.06	61.58%
12	775180	1	0%	622324	4.29%	6.71%	2.14%	5.48%	53.59%	46.41%	422017.94	54.44%
13	775182	3	0%	614286	5.14%	10.76%	2.2%	5.78%	54.97%	45.03%	441183.78	56.91%

Wisconsin Demographic Data by District

District	Population	Deviation	% Deviation	% D 20_Pres	% R 20_Pres	18+_Pop	% NH18+_Wht	% H18+_Pop	% 18+_AP_Blk	% 18+_AP_Asn
1	736,716	1	0%	42.4%	57.6%	588838	90.88%	1.79%	1.03%	1.34%
2	736,716	1	0%	43.1%	56.9%	574536	91.14%	2.7%	1.31%	2.66%
3	736,714	-1	-0%	44.3%	55.7%	570968	85.72%	5.52%	2.36%	3.3%
4	736,717	2	0%	53.7%	46.3%	571974	89.42%	4.07%	2.2%	2.13%
5	736,714	-1	-0%	47.9%	52.1%	575639	83.52%	4.03%	7.71%	2.88%
6	736,718	3	0%	57.6%	42.4%	592831	81.86%	6.92%	4.65%	4.56%
7	736,711	-4	-0%	57.1%	42.9%	567794	65.19%	4.97%	23.8%	4.72%
8	736,712	-3	-0%	57.1%	42.9%	569720	66.41%	19.44%	8.69%	3.87%

Wisconsin Map Book

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Ogema
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Whittlesey
Deer Park
Cornell
Gilman
Medford
Bloomer
Lublin
Glenwood City
Athens
Maine
Baldwin
Stanley
Abbotsford
Wausau
Spring Valley
Elk Mound
Unity
Weston
Elmwood
Fall Creek
Spencer
Kronenwetter
Augusta
Knowlton
Tigerton
Plum City
Marshfield
Rosholt
Clintonville
Mondovi
Osseo
Neillsville
Arpin
Stevens Point
Bear Creek
Pepin
Gilmanton
Merrillan
Manawa
Hixton
Wisconsin Rapids
New London
Alma
Black River Falls
Nekoosa
Bancroft
King
Arcadia
Fremont
Ettrick
Galesville
Holmen
West Salem
La Crosse
Stoddard
Westby
Genoa
Viroqua
Soldiers Grove
Seneca
Eastman
Prairie du Chien
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Map layers
Indian Reservation
City/Town
County
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15
30
Miles
Field
Value
District
2
Population
736,716
Deviation
1
% Deviation
0%
18+_Pop
574536
% NH18+_Wht
91.14%
% H18+_Pop
2.7%
% 18+_AP_Blk
1.31%
% 18+_AP_Ind
1.62%
% 18+_AP_Asn
2.66%
% 18+_AP_Hwn
0.09%
% D 20_Pres
43.1%
% R 20_Pres
56.9%
20_Pres
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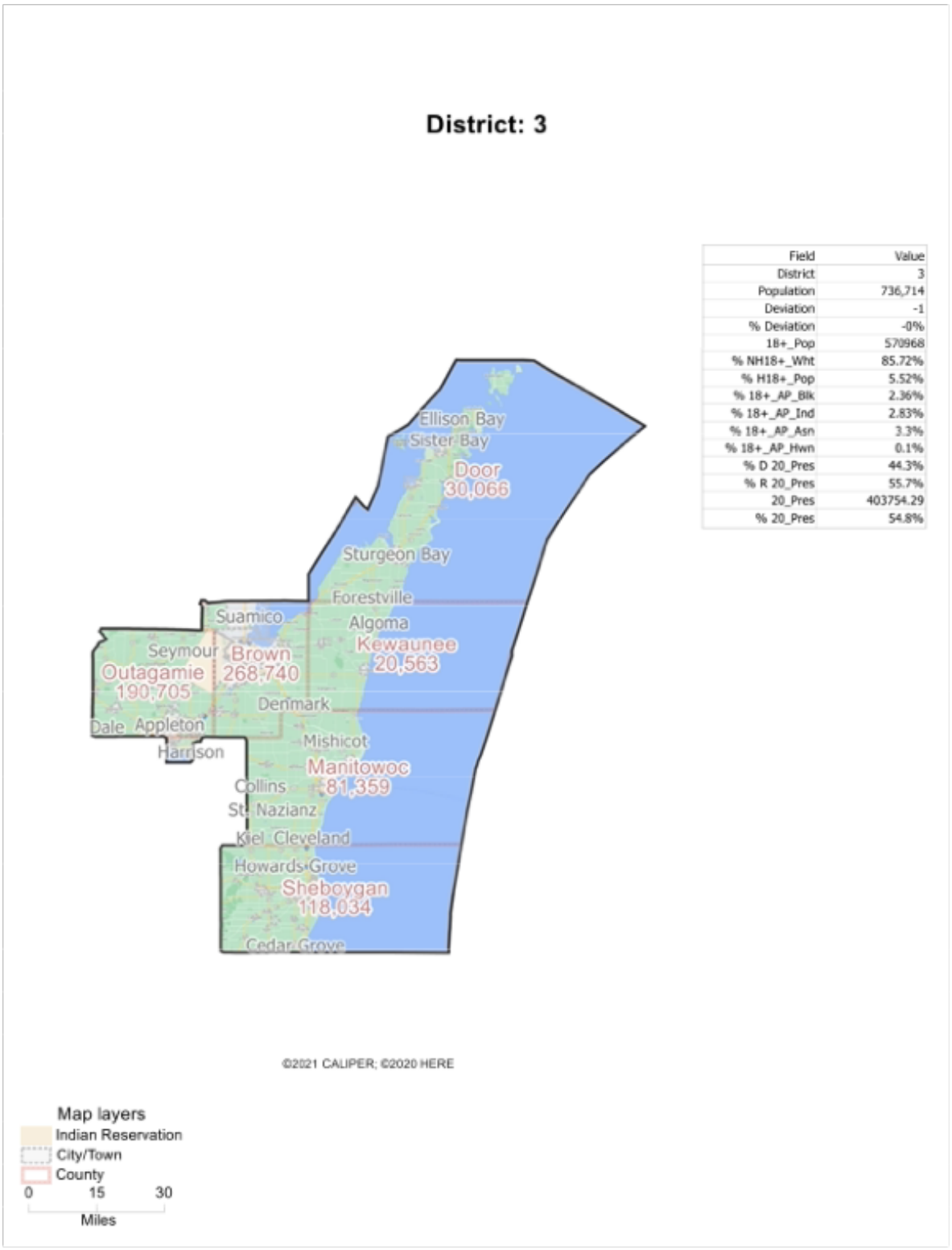
% 20_Pres
53.74%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Field Value
District 3
Population 736,714
Deviation -1
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18+_Pop 570968
% NH18+_Wht 85.72%
% H18+_Pop 5.52%
% 18+_AP_Blk 2.36%
% 18+_AP_Ind 2.83%
% 18+_AP_Asn 3.3%
% 18+_AP_Hwn 0.1%
% D 20_Pres 44.3%
% R 20_Pres 55.7%
20_Pres 403754.29
% 20_Pres 54.8%
Ellison Bay
Sister Bay
Door
30,066
Sturgeon Bay
Forestville
Suamico
Algoma
Kewaunee
20,563
Seymour
Brown
268,740
Outagamie
190,705
Denmark
Dale
Appleton
Harrison
Mishicot
Manitowoc
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Collins
St. Nazianz
Kiel
Cleveland
Howards Grove
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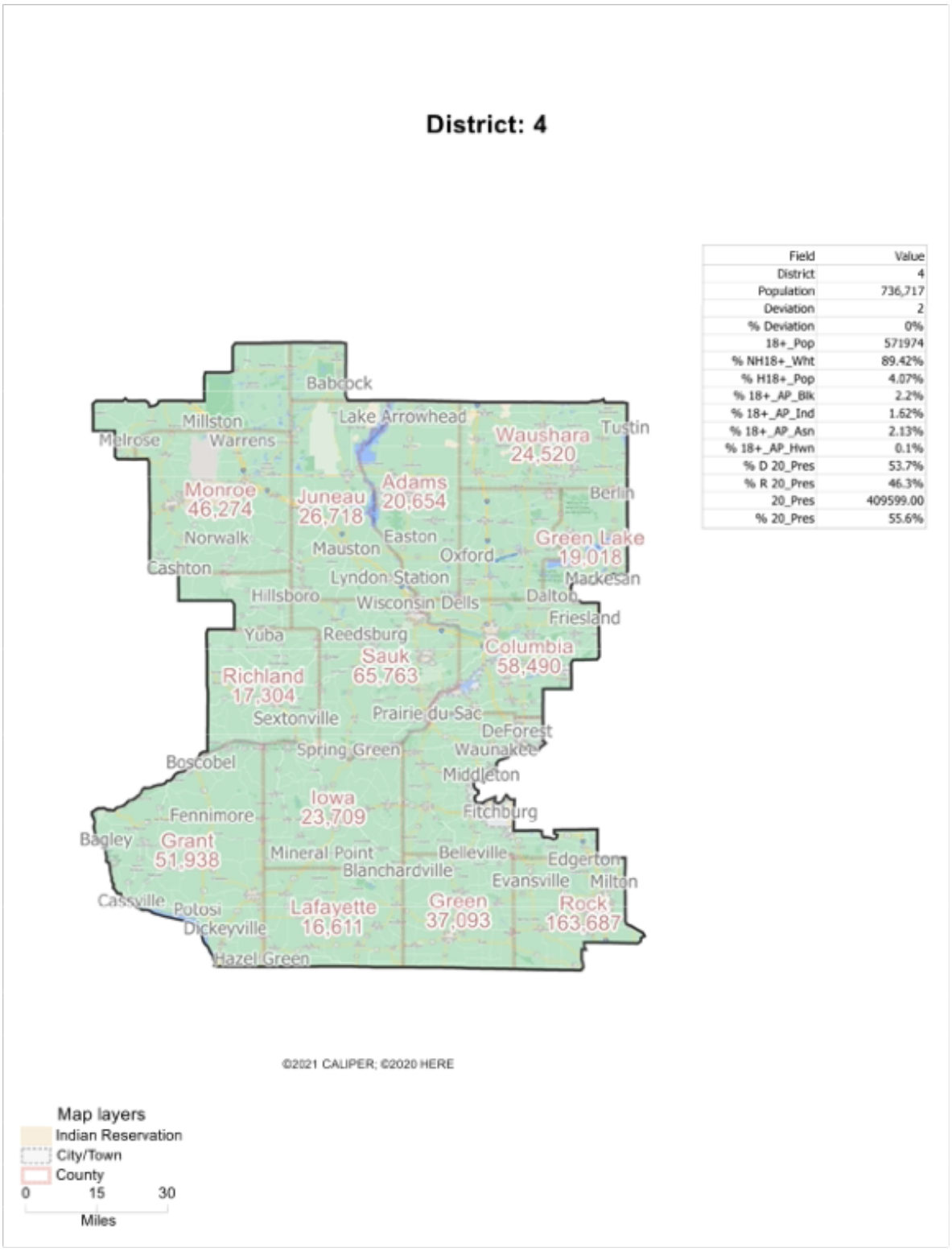
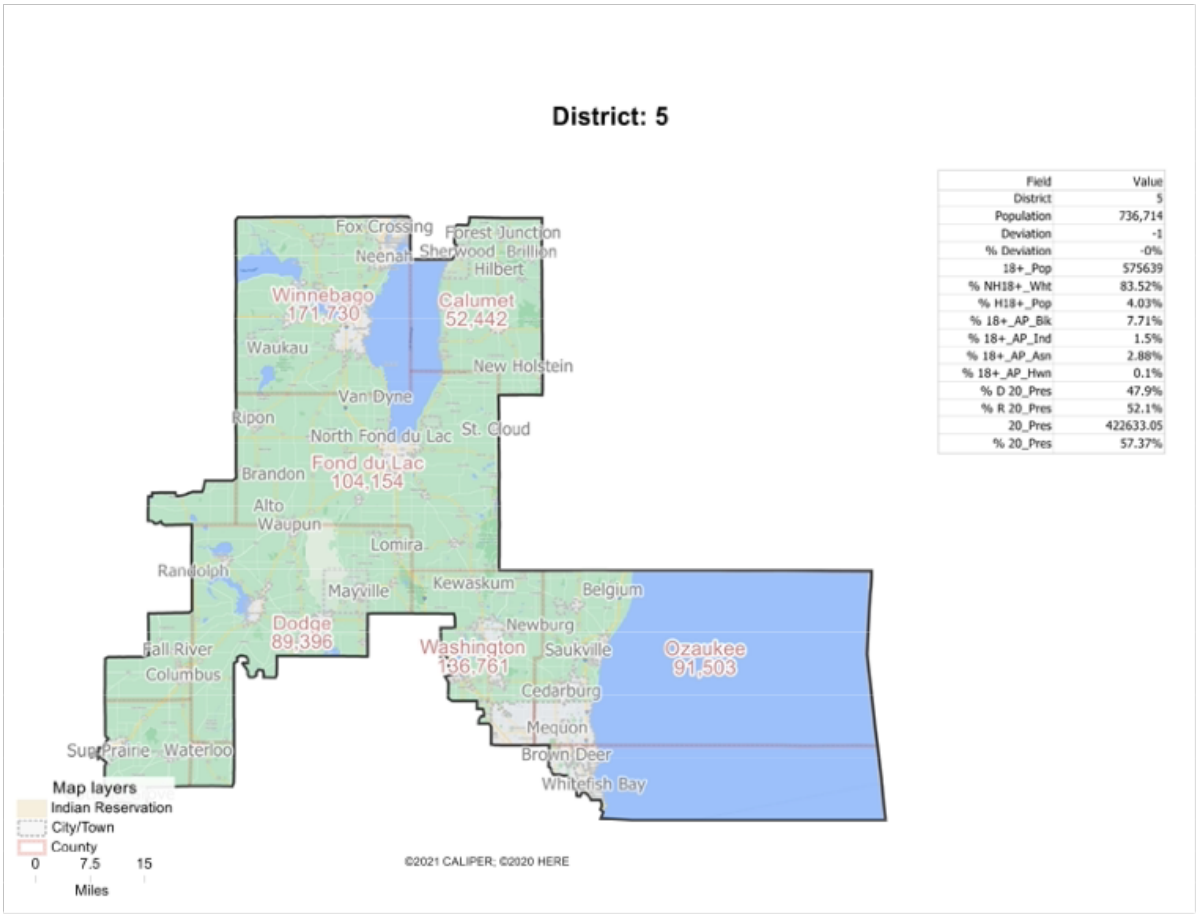


Field	Value
District	4
Population	736,717
Deviation	2
% Deviation	0%
18+_Pop	571974
% NH18+_Wht	89.42%
% H18+_Pop	4.07%
% 18+_AP_Blk	2.2%
% 18+_AP_Ind	1.62%
% 18+_AP_Asn	2.13%
% 18+_AP_Hwn	0.1%
% D 20_Pres	53.7%
% R 20_Pres	46.3%
20_Pres	409599.00
% 20_Pres	55.6%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Field Value
District 5
Population 736,714
Deviation -1
% Deviation -0%
18+_Pop 575639
% NH18+_Wht 83.52%
% H18+_Pop 4.03%
% 18+_AP_Blk 7.71%
% 18+_AP_Ind 1.5%
% 18+_AP_Asn 2.88%
% 18+_AP_Hwn 0.1%
% D 20_Pres 47.9%
% R 20_Pres 52.1%
20_Pres 422633.05
% 20_Pres 57.37%
Fox Crossing
Forest Junction
Neenah
Sherwood
Brillion
Hilbert
Winnebago
171,730
Calumet
52,442
Waukau
New Holstein
Van Dyne
Ripon
North Fond du Lac
St. Cloud
Fond du Lac
104,154
Brandon
Alto
Waupun
Lomira
Randolph
Mayville
Kewaskum
Belgium
Dodge
89,396
Newburg
Fall River
Columbus
Washington
136,761
Saukville
Ozaukee
91,503
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Whitefish Bay
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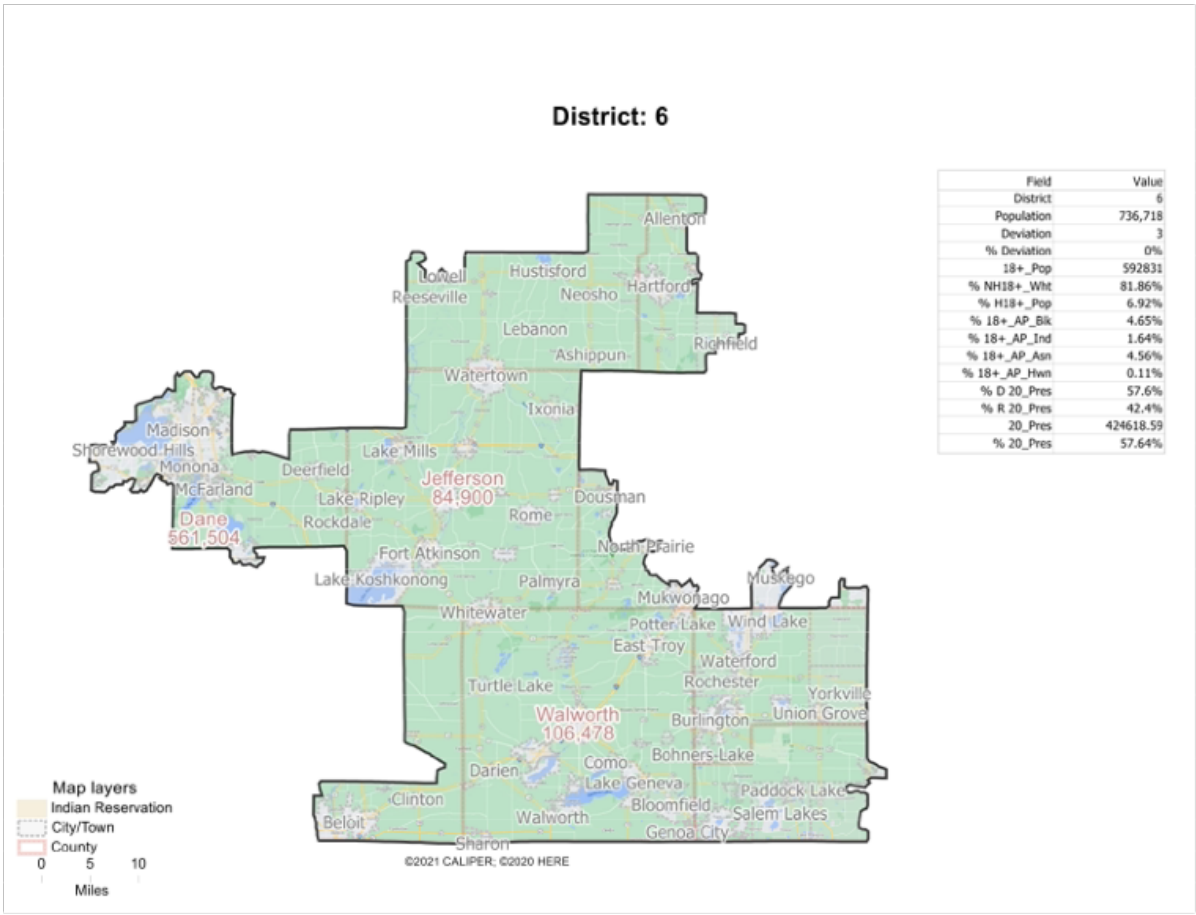
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Hustisford
Lowell
Reeseville
Neosho
Hartford
Lebanon
Richfield
Ashippun
Watertown
Ixonia
Madison
Shorewood Hills
Monona
Deerfield
Lake Mills
McFarland
Jefferson
84,900
Lake Ripley
Dousman
Rockdale
Rome
Dane
561,504
Fort Atkinson
North Prairie
Lake Koshkonong
Palmyra
Muskego
Mukwonago
Whitewater
Potter Lake
Wind Lake
East Troy
Waterford
Rochester
Turtle Lake
Yorkville
Walworth
106,478
Burlington
Union Grove
Bohners Lake
Como
Darien
Lake Geneva
Paddock Lake
Clinton
Bloomfield
Salem Lakes
Beloit
Walworth
Genoa City
Sharon
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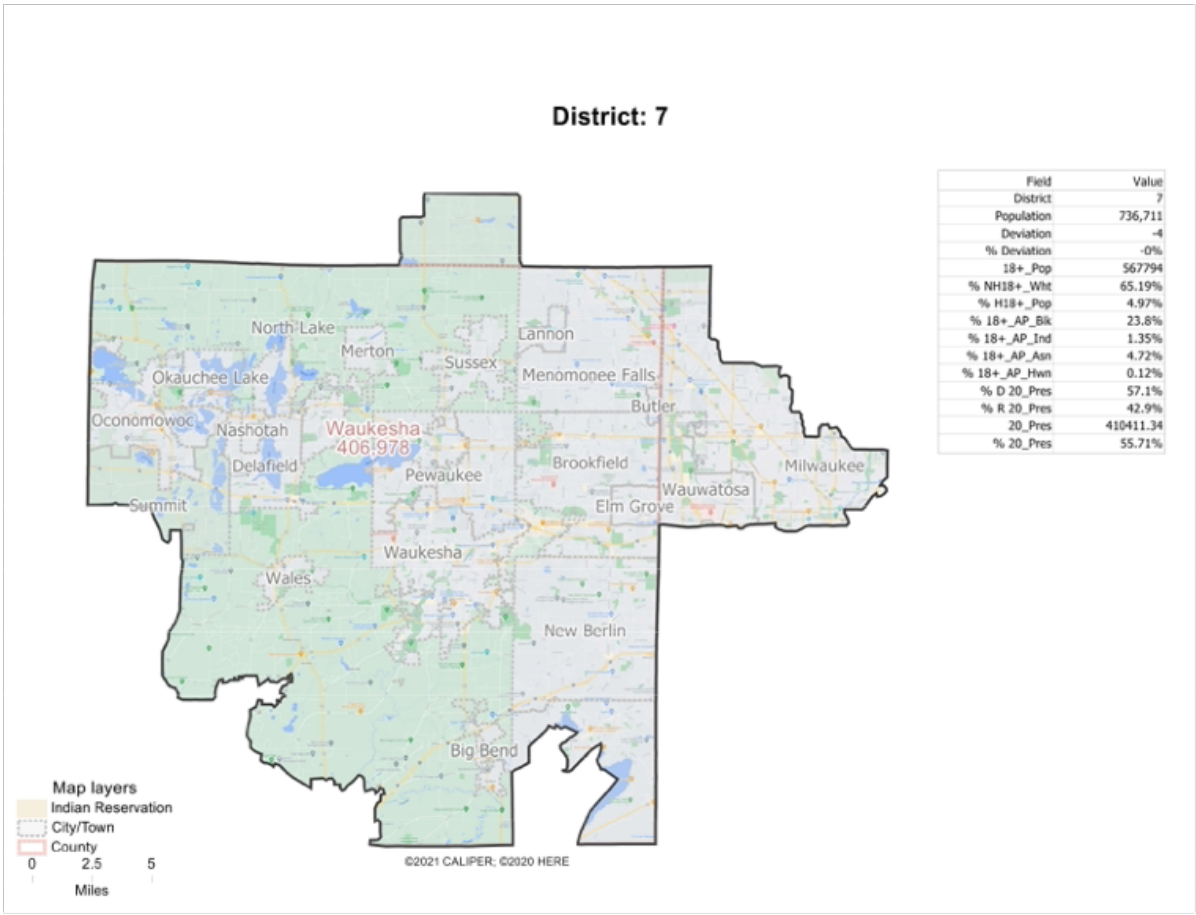
Map layers
Indian Reservation
City/Town
County
0 5 10
Miles
Field Value
District 6
Population 736,718
Deviation 3
% Deviation 0%
18+_Pop 592831
% NH18+_Wht 81.86%
% H18+_Pop 6.92%
% 18+_AP_Blk 4.65%
% 18+_AP_Ind 1.64%
% 18+_AP_Asn 4.56%
% 18+_AP_Hwn 0.11%
% D 20_Pres 57.6%
% R 20_Pres 42.4%
20_Pres 424618.59
% 20_Pres 57.64%


District: 7
North Lake
Merton
Lannon
Sussex
Okauchee Lake
Menomonee Falls
Butler
Oconomowoc
Nashotah
Waukesha
406978
Delafield
Pewaukee
Brookfield
Milwaukee
Wauwatosa
Summit
Elm Grove
Waukesha
Wales
New Berlin
Big Bend
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Miles
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Field
Value
District
7
Population
736,711
Deviation
-4
% Deviation
-0%
18+_Pop
567794
% NH18+_Wht
65.19%
% H18+_Pop
4.97%
% 18+_AP_Blk
23.8%
% 18+_AP_Ind
1.35%
% 18+_AP_Asn
4.72%
% 18+_AP_Hwn
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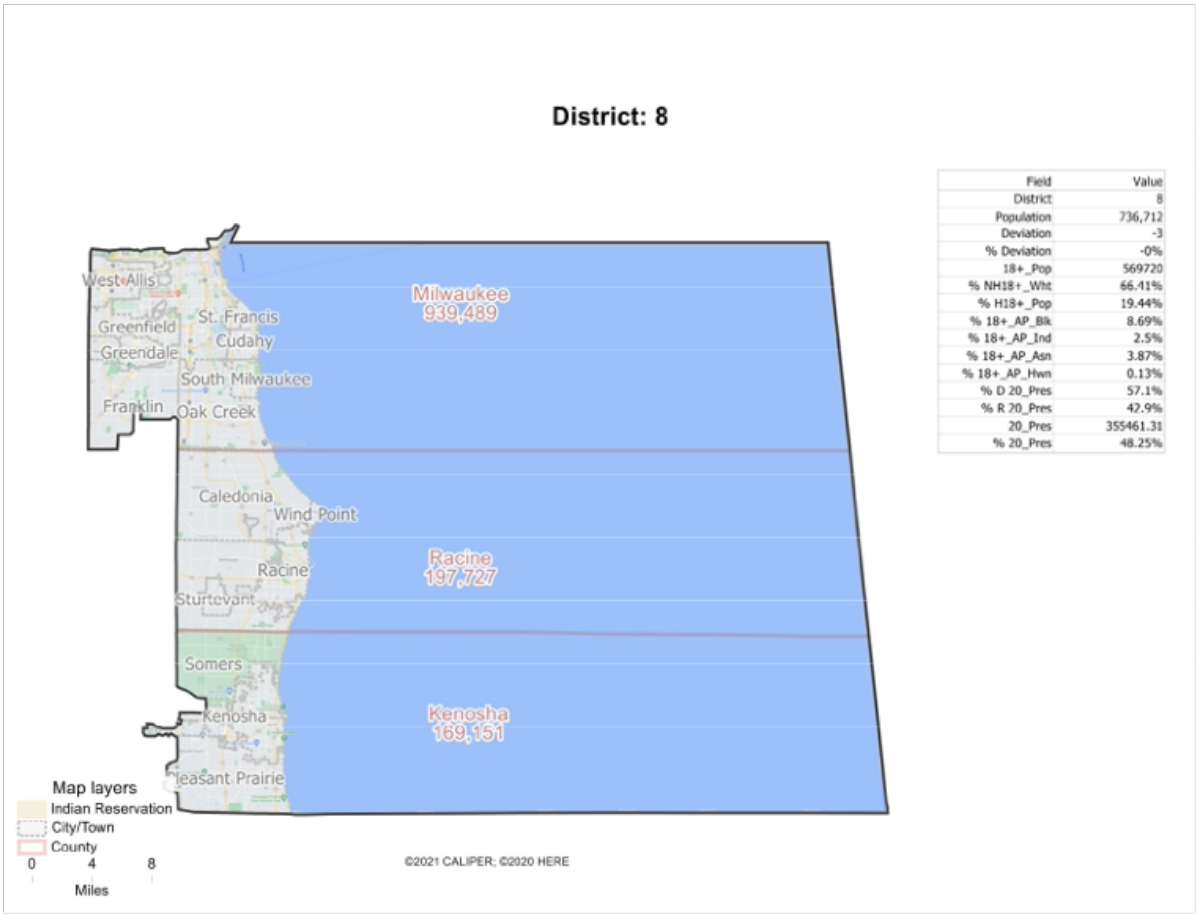
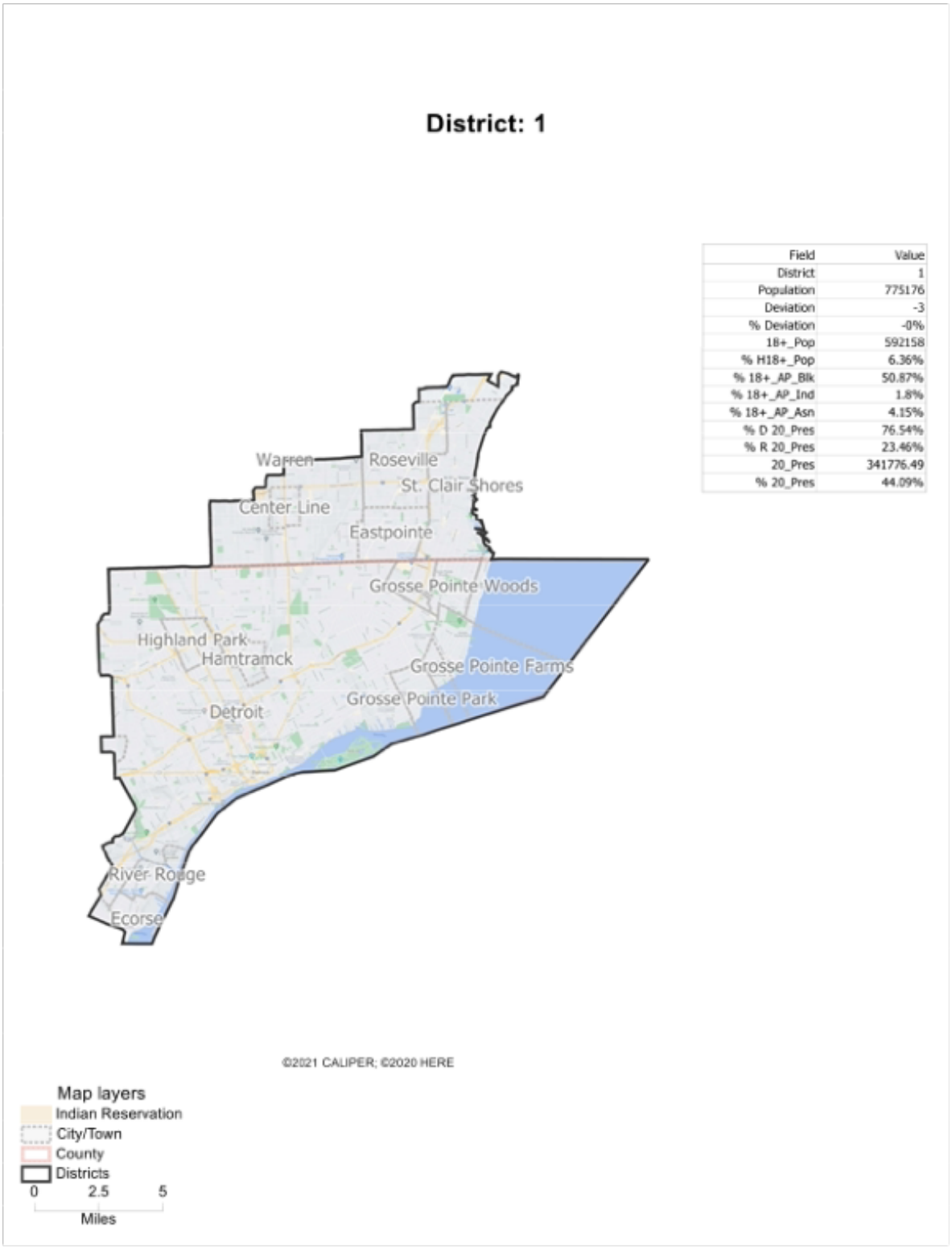
% D 20_Pres
57.1%
% R 20_Pres
42.9%
20_Pres
410411.34
% 20_Pres
55.71%

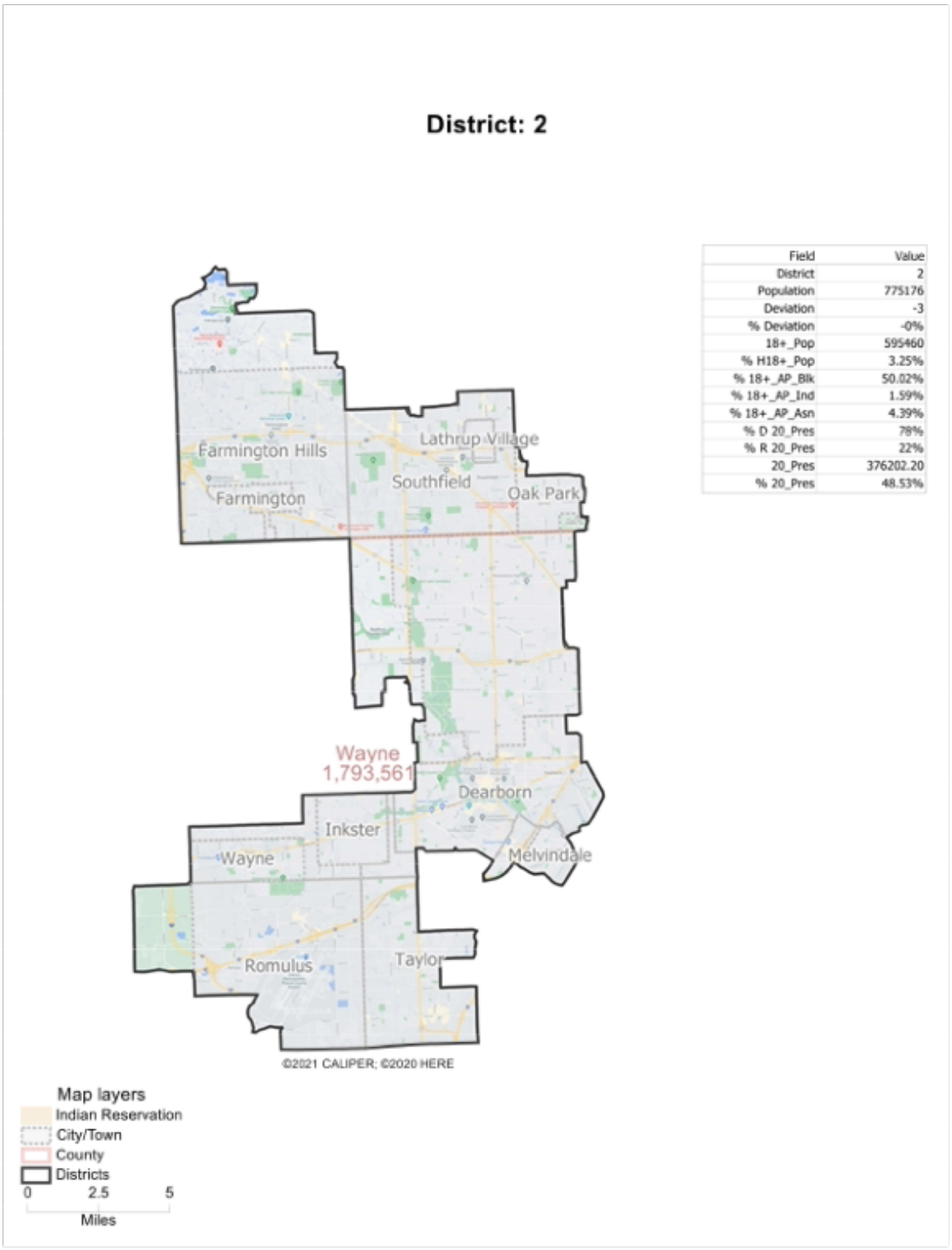


Field	Value
District	8
Population	736,712
Deviation	-3
% Deviation	-0%
18+_Pop	569720
% NH18+_Wht	66.41%
% H18+_Pop	19.44%
% 18+_AP_Blk	8.69%
% 18+_AP_Ind	2.5%
% 18+_AP_Asn	3.87%
% 18+_AP_Hwn	0.13%
% D 20_Pres	57.1%
% R 20_Pres	42.9%
20_Pres	355461.31
% 20_Pres	48.25%

Michigan Map Book



Field	Value
District	1
Population	775176
Deviation	-3
% Deviation	-0%
18+_Pop	592158
% H18+_Pop	6.36%
% 18+_AP_Blk	50.87%
% 18+_AP_Ind	1.8%
% 18+_AP_Asn	4.15%
% D 20_Pres	76.54%
% R 20_Pres	23.46%
20_Pres	341776.49
% 20_Pres	44.09%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Field Value
District 2
Population 775176
Deviation -3
% Deviation -0%
18+_Pop 595460
% H18+_Pop 3.25%
% 18+_AP_Blk 50.02%
% 18+_AP_Ind 1.59%
% 18+_AP_Asn 4.39%
% D 20_Pres 78%
% R 20_Pres 22%
20_Pres 376202.20
% 20_Pres 48.53%
Farmington Hills
Farmington
Lathrup Village
Southfield
Oak Park
Wayne
1,793,561
Dearborn
Inkster
Wayne
Melvindale
Romulus
Taylor
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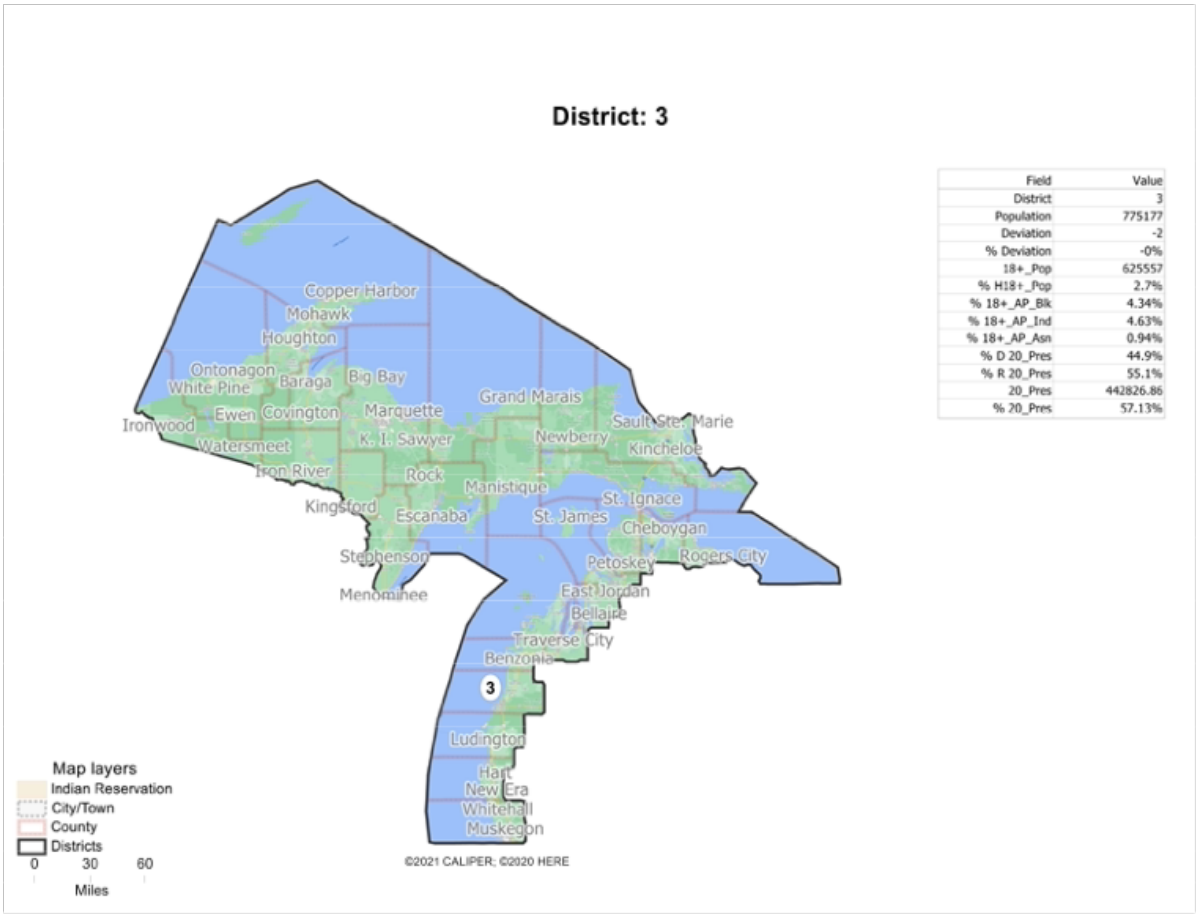
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Houghton
Ontonagon
White Pine
Baraga
Big Bay
Ironwood
Ewen
Covington
Marquette
Grand Marais
Sault Ste. Marie
Watersmeet
K. I. Sawyer
Newberry
Kincheloe
Iron River
Rock
Manistique
St. Ignace
Kingsford
Escanaba
St. James
Cheboygan
Stephenson
Petoskey
Rogers City
Menominee
East Jordan
Bellaire
Traverse City
Benzonia
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Ludington
Hart
New Era
Whitehall
Muskegon
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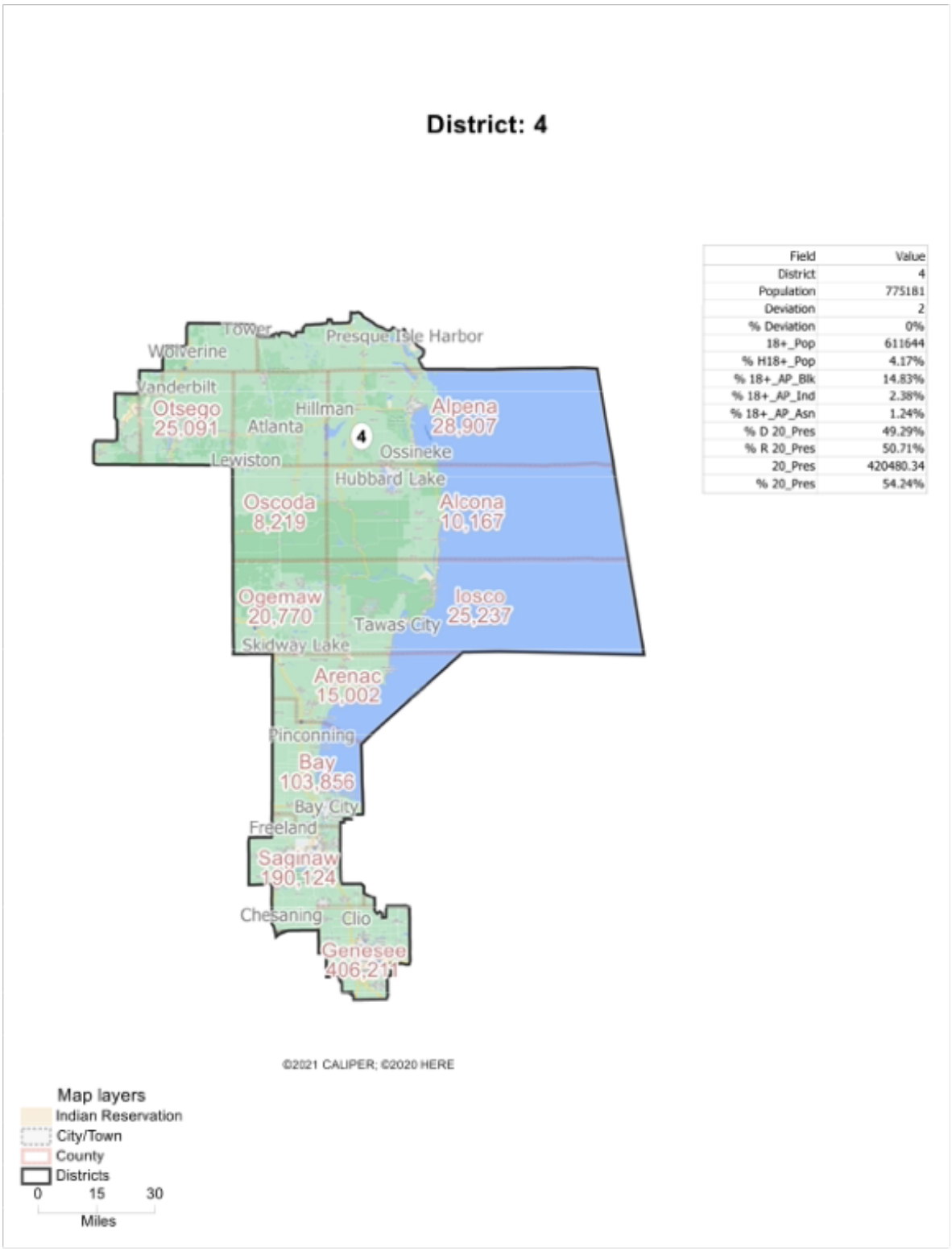
Field
Value
District
3
Population
775177
Deviation
-2
% Deviation
-0%
18+_Pop
625557
% H18+_Pop
2.7%
% 18+_AP_Blk
4.34%
% 18+_AP_Ind
4.63%
% 18+_AP_Asn
0.94%
% D 20_Pres
44.9%
% R 20_Pres
55.1%
20_Pres
442826.86
% 20_Pres
57.13%


District: 4
Field Value
District 4
Population 775181
Deviation 2
% Deviation 0%
18+_Pop 611644
% H18+_Pop 4.17%
% 18+_AP_Blk 14.83%
% 18+_AP_Ind 2.38%
% 18+_AP_Asn 1.24%
% D 20_Pres 49.29%
% R 20_Pres 50.71%
20_Pres 420480.34
% 20_Pres 54.24%
Tower
Presque Isle Harbor
Wolverine
Vanderbilt
Otsego
25,091
Hillman
Atlanta
4
Alpena
28,907
Ossineke
Lewiston
Hubbard Lake
Oscoda
8,219
Alcona
10,167
Ogemaw
20,770
Iosco
25,237
Tawas City
Skidway Lake
Arenac
15,002
Pinconning
Bay
103,856
Bay City
Freeland
Saginaw
190,124
Chesaning
Clio
Genesee
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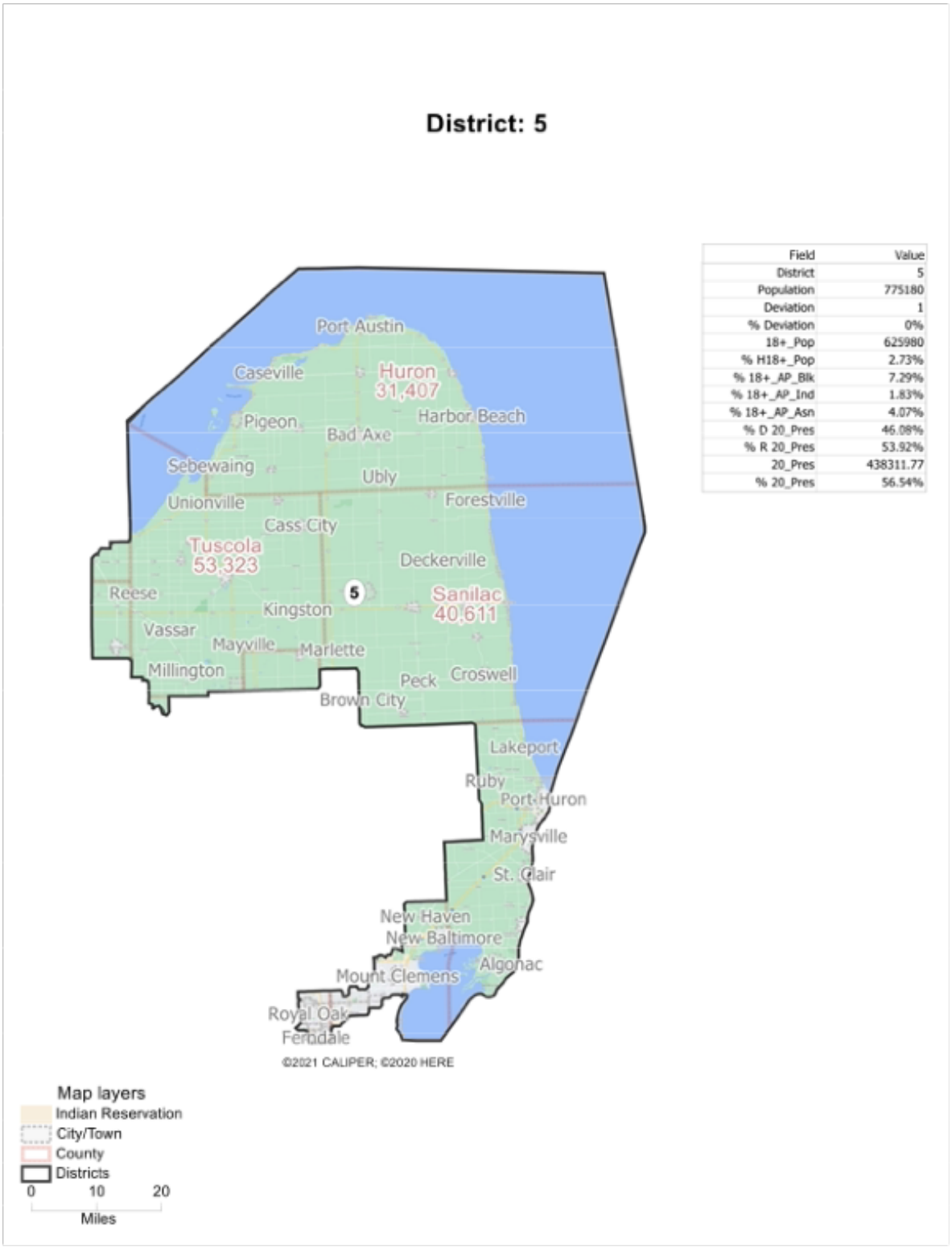
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Field Value
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Deviation 1
% Deviation 0%
18+_Pop 625980
% H18+_Pop 2.73%
% 18+_AP_Blk 7.29%
% 18+_AP_Ind 1.83%
% 18+_AP_Asn 4.07%
% D 20_Pres 46.08%
% R 20_Pres 53.92%
20_Pres 438311.77
% 20_Pres 56.54%
Port Austin
Caseville
Huron 31,407
Harbor Beach
Pigeon
Bad Axe
Sebewaing
Ubly
Unionville
Forestville
Cass City
Tuscola 53,323
Deckerville
Reese
5
Sanilac 40,611
Kingston
Vassar
Mayville
Marlette
Millington
Peck
Croswell
Brown City
Lakeport
Ruby
Port Huron
Marysville
St. Clair
New Haven
New Baltimore
Algonac
Mount Clemens
Royal Oak
Ferndale
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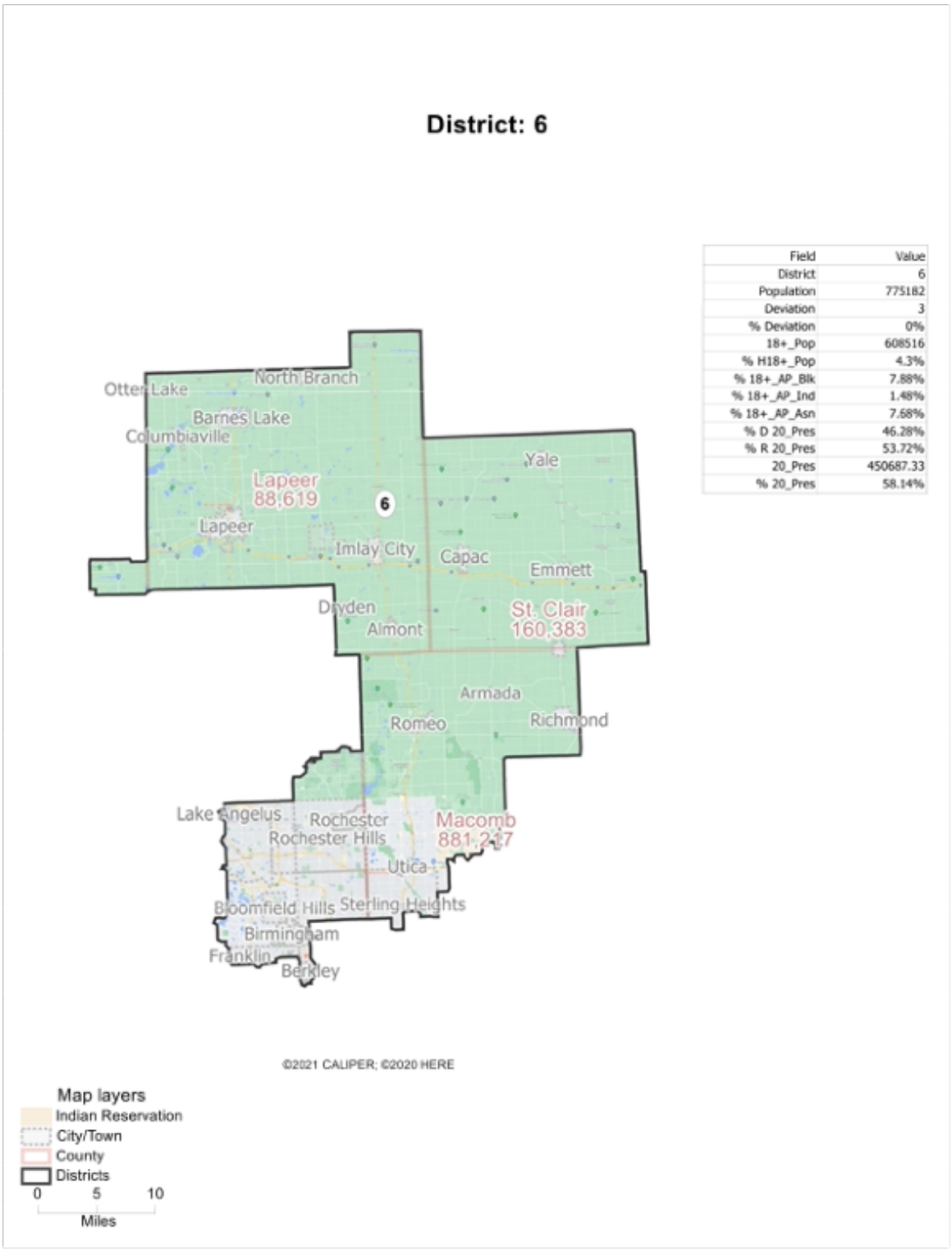
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Field
Value
District
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Population
775182
Deviation
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% Deviation
0%
18+_Pop
608516
% H18+_Pop
4.3%
% 18+_AP_Blk
7.88%
% 18+_AP_Ind
1.48%
% 18+_AP_Asn
7.68%
% D 20_Pres
46.28%
% R 20_Pres
53.72%
20_Pres
450687.33
% 20_Pres
58.14%
Otter Lake
North Branch
Barnes Lake
Columbiaville
Lapeer
88,619
6
Lapeer
Yale
Imlay City
Capac
Emmett
Dryden
Almont
St. Clair
160,383
Armada
Romeo
Richmond
Lake Angelus
Rochester
Rochester Hills
Macomb
881,217
Utica
Bloomfield Hills
Sterling Heights
Birmingham
Franklin
Berkley
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Indian Reservation
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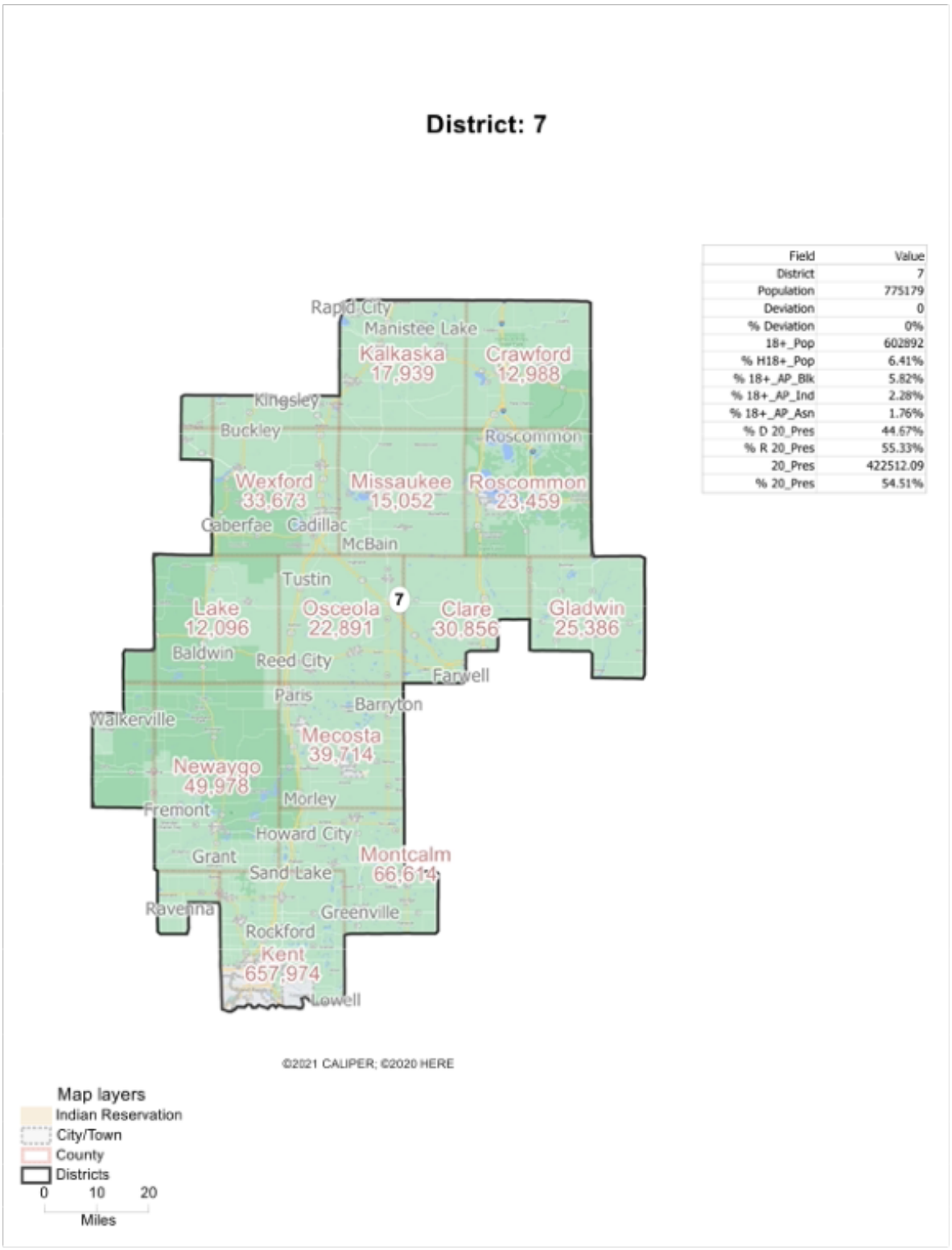
10
Miles


District: 7
Field Value
District 7
Population 775179
Deviation 0
% Deviation 0%
18+_Pop 602892
% H18+_Pop 6.41%
% 18+_AP_Blk 5.82%
% 18+_AP_Ind 2.28%
% 18+_AP_Asn 1.76%
% D 20_Pres 44.67%
% R 20_Pres 55.33%
20_Pres 422512.09
% 20_Pres 54.51%
Rapid City
Manistee Lake
Kalkaska 17,939
Crawford 12,988
Kingsley
Buckley
Roscommon
Wexford 33,673
Missaukee 15,052
Roscommon 23,459
Gaberfae
Cadillac
McBain
Tustin
7
Lake 12,096
Osceola 22,891
Clare 30,856
Gladwin 25,386
Baldwin
Reed City
Farwell
Paris
Barryton
Walkerville
Mecosta 39,714
Newaygo 49,978
Morley
Fremont
Howard City
Grant
Sand Lake
Montcalm 66,614
Ravenna
Greenville
Rockford
Kent 657,974
Lowell
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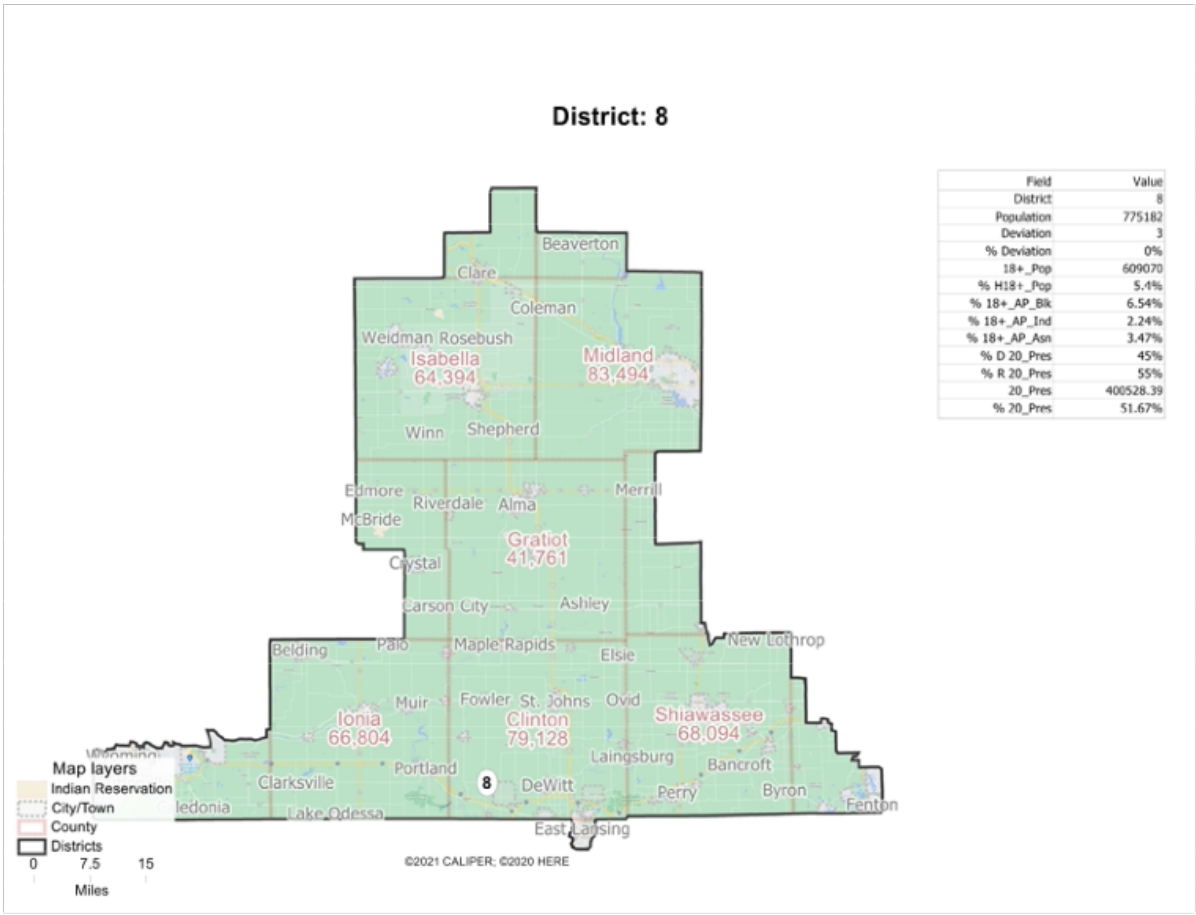
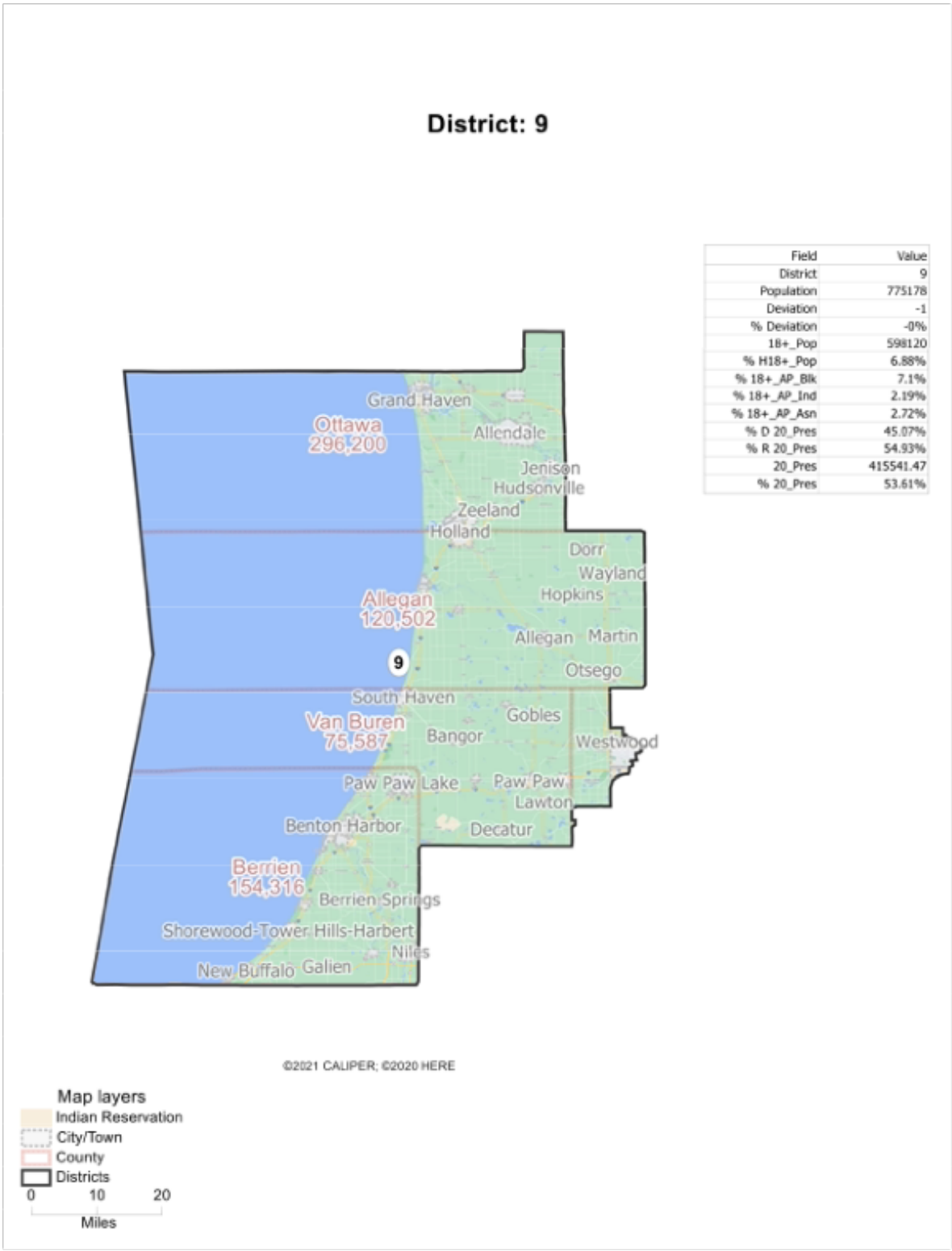
Map layers
Indian Reservation
City/Town
County
Districts
0 10 20
Miles


District: 8
Beaverton
Clare
Coleman
Weidman
Rosebush
Isabella
64,394
Midland
83,494
Winn
Shepherd
Edmore
Riverdale
Alma
Merrill
McBride
Gratiot
41,761
Crystal
Carson City
Ashley
Belding
Palo
Maple Rapids
Elsie
New Lothrop
Muir
Fowler
St. Johns
Ovid
Ionia
66,804
Clinton
79,128
Shiawassee
68,094
Laingsburg
Bancroft
Portland
Clarksville
8
DeWitt
Perry
Byron
Fenton
Lake Odessa
East Lansing
Map layers
Indian Reservation
City/Town
County
Districts
0
7.5
15
Miles
©2021 CALIPER; ©2020 HERE
Field
Value
District
8
Population
775182
Deviation
3
% Deviation
0%
18+_Pop
609070
% H18+_Pop
5.4%
% 18+_AP_Blk
6.54%
% 18+_AP_Ind
2.24%
% 18+_AP_Asn
3.47%
% D 20_Pres
45%
% R 20_Pres
55%
20_Pres
400528.39
% 20_Pres
51.67%


District: 9
Field Value
District 9
Population 775178
Deviation -1
% Deviation -0%
18+_Pop 598120
% H18+_Pop 6.88%
% 18+_AP_Blk 7.1%
% 18+_AP_Ind 2.19%
% 18+_AP_Asn 2.72%
% D 20_Pres 45.07%
% R 20_Pres 54.93%
20_Pres 415541.47
% 20_Pres 53.61%
Grand Haven
Ottawa
296,200
Allendale
Jenison
Hudsonville
Zeeland
Holland
Dorr
Wayland
Hopkins
Allegan
120,502
Allegan
Martin
9
Otsego
South Haven
Van Buren
75,587
Gobles
Bangor
Westwood
Paw Paw Lake
Paw Paw
Lawton
Benton Harbor
Decatur
Berrien
154,316
Berrien Springs
Shorewood-Tower Hills-Harbert
Niles
New Buffalo
Galien
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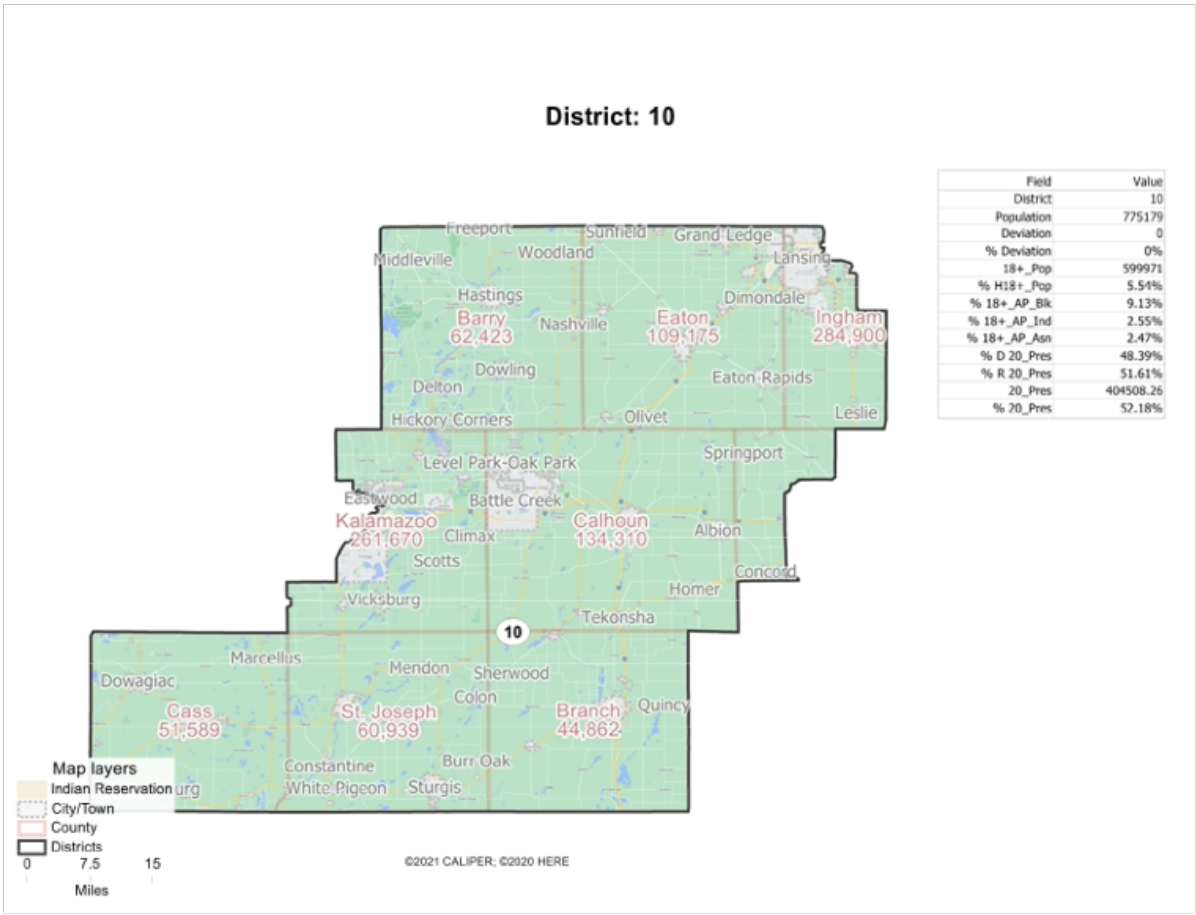
Map layers
Indian Reservation
City/Town
County
Districts
0
10
20
Miles


District: 10
Field Value
District 10
Population 775179
Deviation 0
% Deviation 0%
18+_Pop 599971
% H18+_Pop 5.54%
% 18+_AP_Blk 9.13%
% 18+_AP_Ind 2.55%
% 18+_AP_Asn 2.47%
% D 20_Pres 48.39%
% R 20_Pres 51.61%
20_Pres 404508.26
% 20_Pres 52.18%
Freeport
Sunfield
Grand Ledge
Middleville
Woodland
Lansing
Hastings
Dimondale
Barry 62,423
Nashville
Eaton 109,175
Ingham 284,900
Dowling
Eaton Rapids
Delton
Hickory Corners
Olivet
Leslie
Springport
Level Park-Oak Park
Battle Creek
Eastwood
Kalamazoo 261,670
Climax
Calhoun 134,310
Albion
Scotts
Concord
Homer
Vicksburg
Tekonsha
10
Marcellus
Mendon
Sherwood
Dowagiac
Colon
Quincy
Cass 51,589
St. Joseph 60,939
Branch 44,862
Constantine
Burr Oak
White Pigeon
Sturgis
Map layers
Indian Reservation
City/Town
County
Districts
0 7.5 15
Miles
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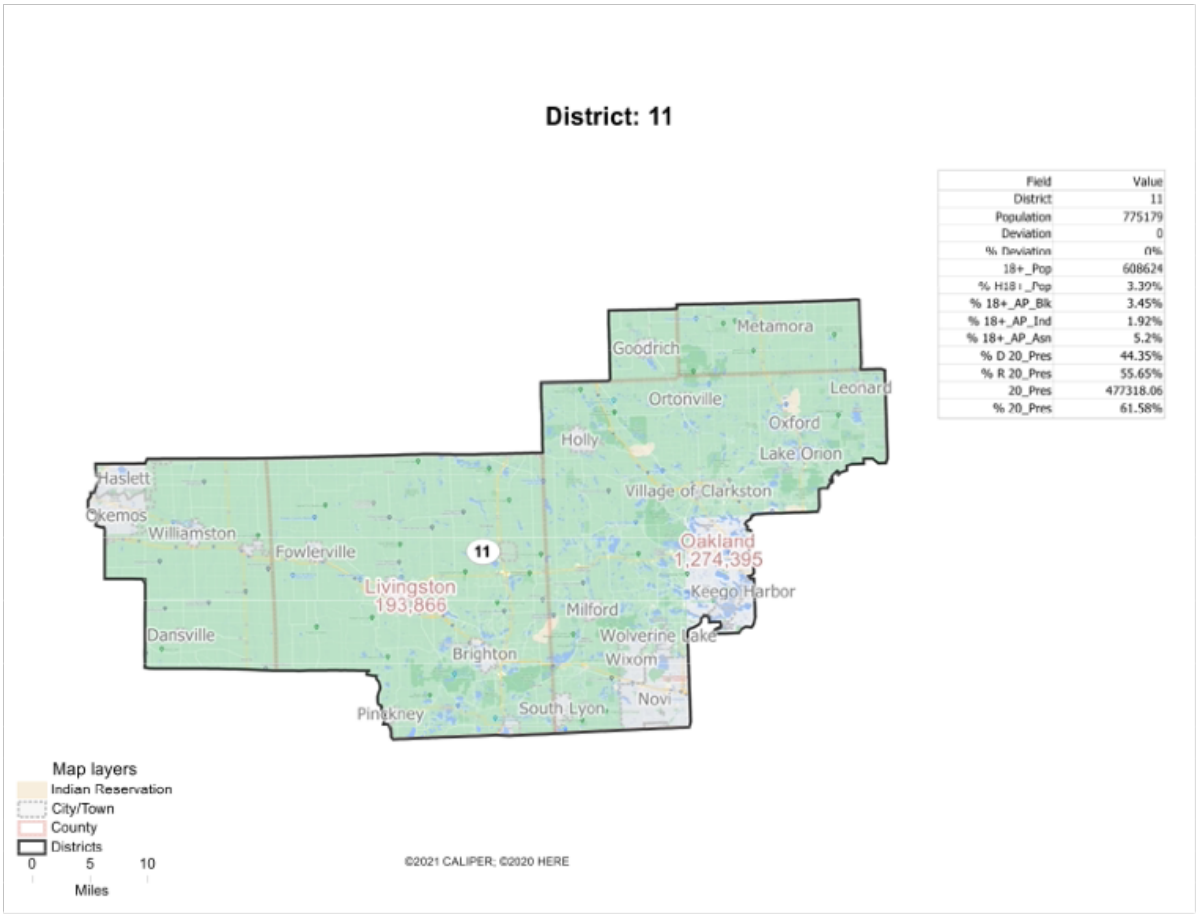
District: 11
Field Value
District 11
Population 775179
Deviation 0
% Deviation 0%
18+_Pop 608624
% H18+_Pop 3.39%
% 18+_AP_Blk 3.45%
% 18+_AP_Ind 1.92%
% 18+_AP_Asn 5.2%
% D 20_Pres 44.35%
% R 20_Pres 55.65%
20_Pres 477318.06
% 20_Pres 61.58%
Metamora
Goodrich
Leonard
Ortonville
Oxford
Holly
Lake Orion
Haslett
Village of Clarkston
Okemos
Williamston
Fowlerville
11
Oakland
1,274,395
Keego Harbor
Livingston
193,866
Milford
Dansville
Wolverine Lake
Brighton
Wixom
Novi
Pinckney
South Lyon
Map layers
Indian Reservation
City/Town
County
Districts
0 5 10
Miles
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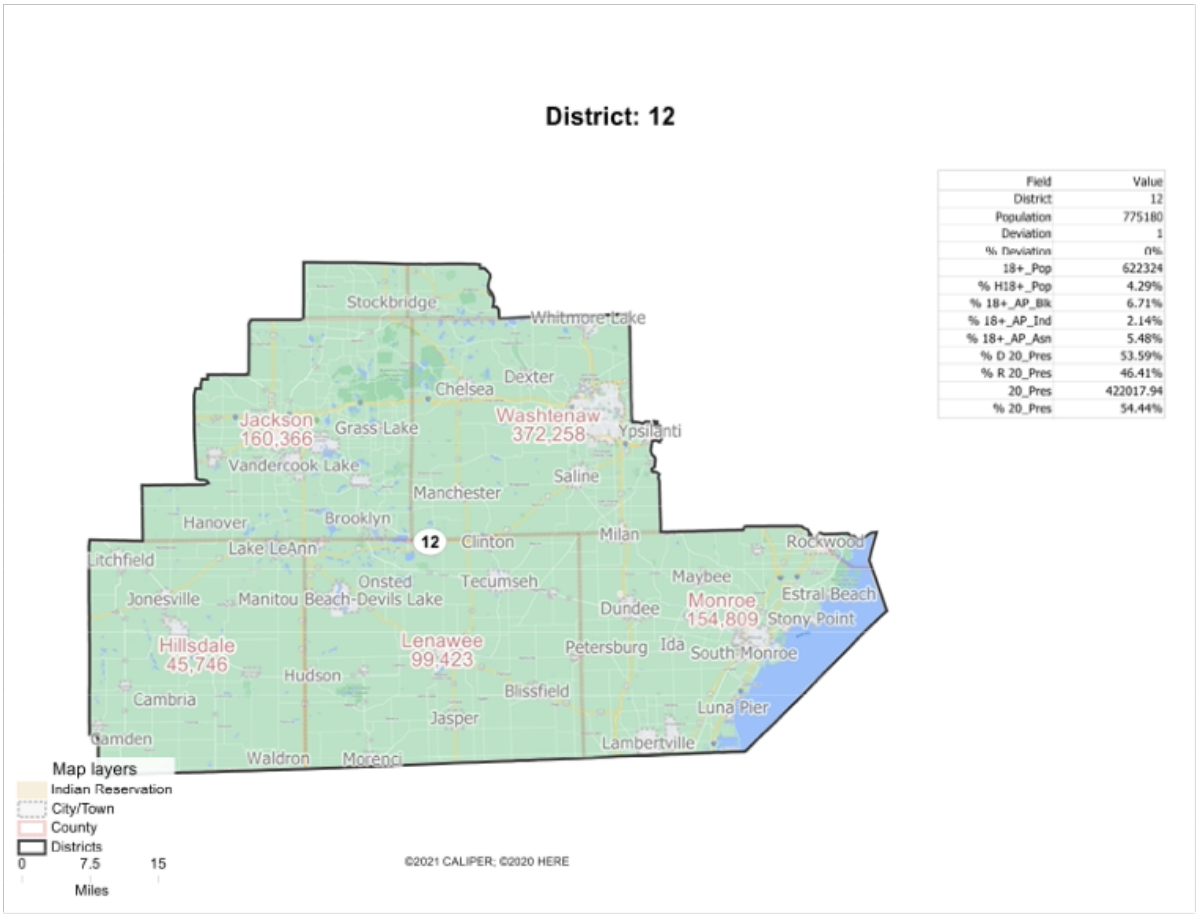
District: 12
Field Value
District 12
Population 775180
Deviation 1
% Deviation 0%
18+_Pop 622324
% H18+_Pop 4.29%
% 18+_AP_Blk 6.71%
% 18+_AP_Ind 2.14%
% 18+_AP_Asn 5.48%
% D 20_Pres 53.59%
% R 20_Pres 46.41%
20_Pres 422017.94
% 20_Pres 54.44%
Stockbridge
Whitmore Lake
Dexter
Chelsea
Jackson 160,366
Grass Lake
Washtenaw 372,258
Ypsilanti
Vandercook Lake
Saline
Manchester
Hanover
Brooklyn
12
Clinton
Milan
Rockwood
Litchfield
Lake LeAnn
Onsted
Tecumseh
Maybee
Estral Beach
Jonesville
Manitou Beach-Devils Lake
Dundee
Monroe 154,809
Stony Point
Hillsdale 45,746
Lenawee 99,423
Petersburg
Ida
South Monroe
Hudson
Blissfield
Cambria
Luna Pier
Jasper
Camden
Lambertville
Waldron
Morenci
Map layers
Indian Reservation
City/Town
County
Districts
0 7.5 15
Miles
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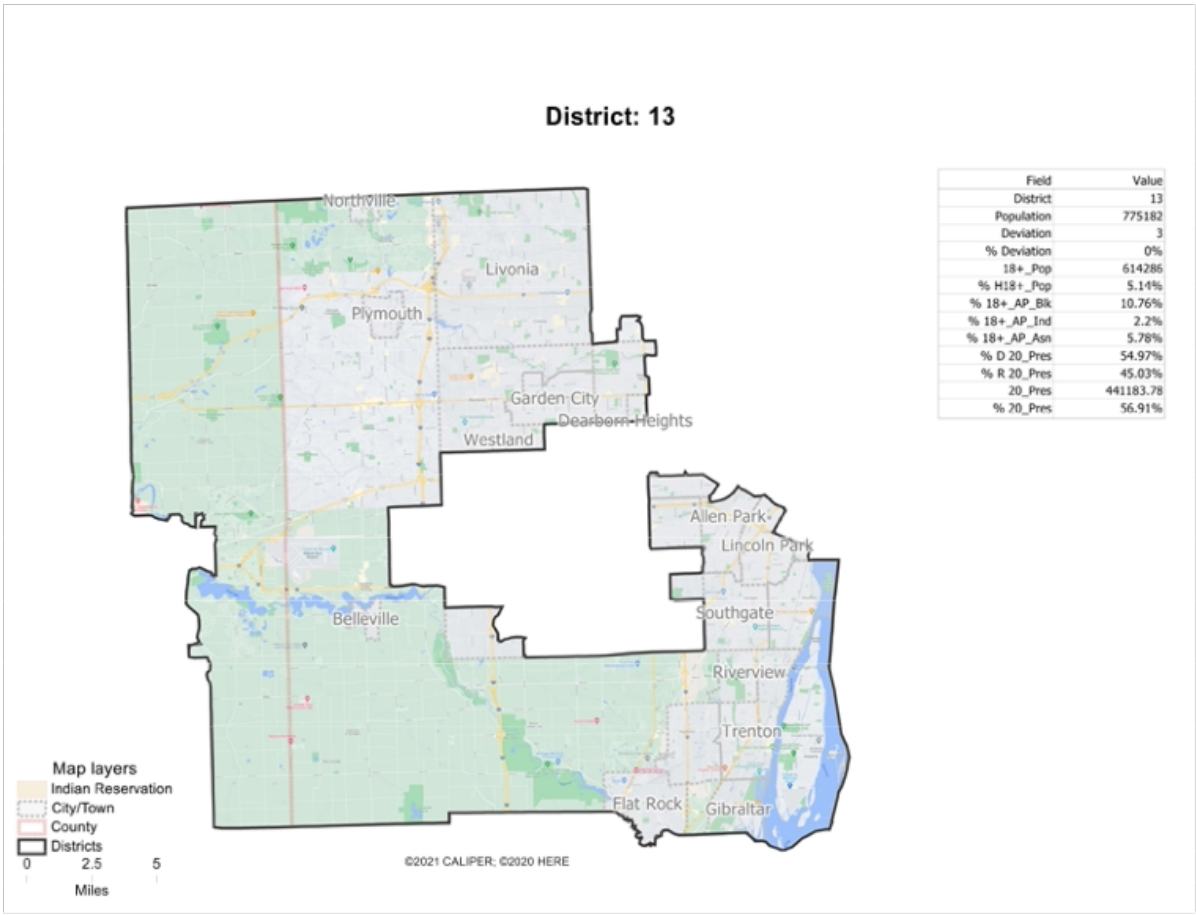

Field	Value
District	13
Population	775182
Deviation	3
% Deviation	0%
18+_Pop	614286
% H18+_Pop	5.14%
% 18+_AP_Blk	10.76%
% 18+_AP_Ind	2.2%
% 18+_AP_Asn	5.78%
% D 20_Pres	54.97%
% R 20_Pres	45.03%
20_Pres	441183.78
% 20_Pres	56.91%