WISCONSIN

GOOD GOVERNANCE REDISTRICTING PLAN PROPOSAL

ZAC STOOR

Introduction

Criteria and Priorities of Plan:

This good governance map was drawn based on three primary criteria. The first is compliance with all federal and state law, including the one person, one vote standard and the Voting Rights Act (VRA). Despite having some explicit priorities listed in the state constitution for state legislative maps, Wisconsin has no state law that sets requirements for congressional redistricting beyond compliance with federal law. As such, state law did not need to be considered in drawing this plan.

This plan also respects Wisconsin's diverse communities of interest. Since there is no legal definition of community of interest in Wisconsin, I used various criteria for defining communities of interest. These include areas that have economic and cultural ties, share important industries, or have similar predominant geographic characteristics (i.e. urban, suburban, rural). Although complying with one person, one vote and reaching perfect population equality does require mixing together some communities with less in common, I aimed to split as few communities of interest as possible throughout the state.

The final goal of this plan was to split as few counties and municipalities as possible. This is the "good governance" goal of the plan. Splitting as few counties and municipalities as possible helps keep the map compact and often proved to be mutually beneficial to the goal of preserving communities of interest.

Tensions between Criteria and Priorities:

There is not much tension between the different priorities of this plan. In some cases, splitting counties and municipalities is necessary to achieve perfect population equality and comply with federal law, however the supreme nature of federal law in the redistricting process means that, when necessary, population considerations always took priority over good governance ones. Population requirements did not often conflict with preserving communities of interest.

Preserving communities of interest most often conflicted with itself as a goal. Specifically, at times different communities of interest throughout the state had conflicting interests that needed to be balanced. The largest example of this in my proposal is District 6, where either the Fox Cities and the lakeshore had to be split. This example will be discussed in more detail later, but provides good insight into the tradeoffs necessary even within a single "communities of interest" priority. As stated above, good governance and communities of interest priorities more often proved complementary than in conflict.

Legal Compliance and Considerations

One Person, One Vote:

All of the districts in the plan area are perfectly population balanced, meaning there is either a deviation of 0 or 1 from the ideal district population of 736,715. Districts with non-ideal population balances open the door to legal challenges to a plan under *Karcher v. Daggett*, which ruled that districts must be of equal population unless the population difference is necessary to achieve a "legitimate state objective." Since equal population is one of the main requirements under federal law, I determined that achieving population should be above all other priorities in drawing this map. This also helps avoid any legal challenges to the plan on the basis of population.

Milwaukee:
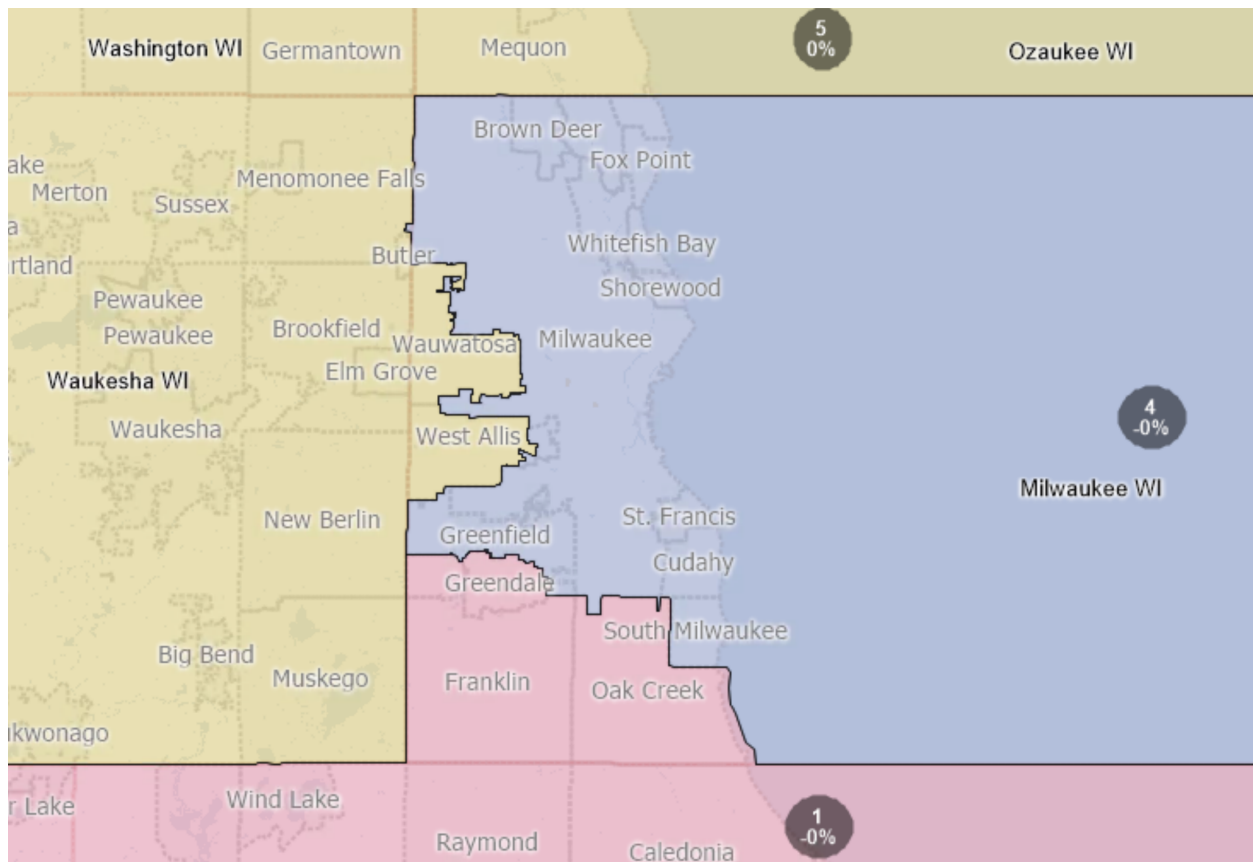
Voting Rights Act:

Milwaukee's District 4 is the only area of Wisconsin where the Voting Rights Act becomes relevant. While it is not possible to make a majority-minority district in Wisconsin, District 4 is majority-minority (40.9% white, 34.7% Black, 18.1% Hispanic, 5.9% Asian). Since District 4 does not have a cohesive, single-racial-group plurality, section 2 of the VRA would not apply per *Thornburg v. Gingles* and *Bartlett v. Strickland*. In order for the VRA to apply in District

4, one of the minority groups would need to have a large enough population to form a majority, or at least significant plurality, of the district population. Said group would need to vote cohesively for a single "candidate of choice" and the district must have enough racially polarized voting between different racial groups to justify prioritizing the minority group's representation. District 4 meets none of these requirements, and since minority coalition districts are not required under the VRA either, District 4 cannot be considered a VRA district.
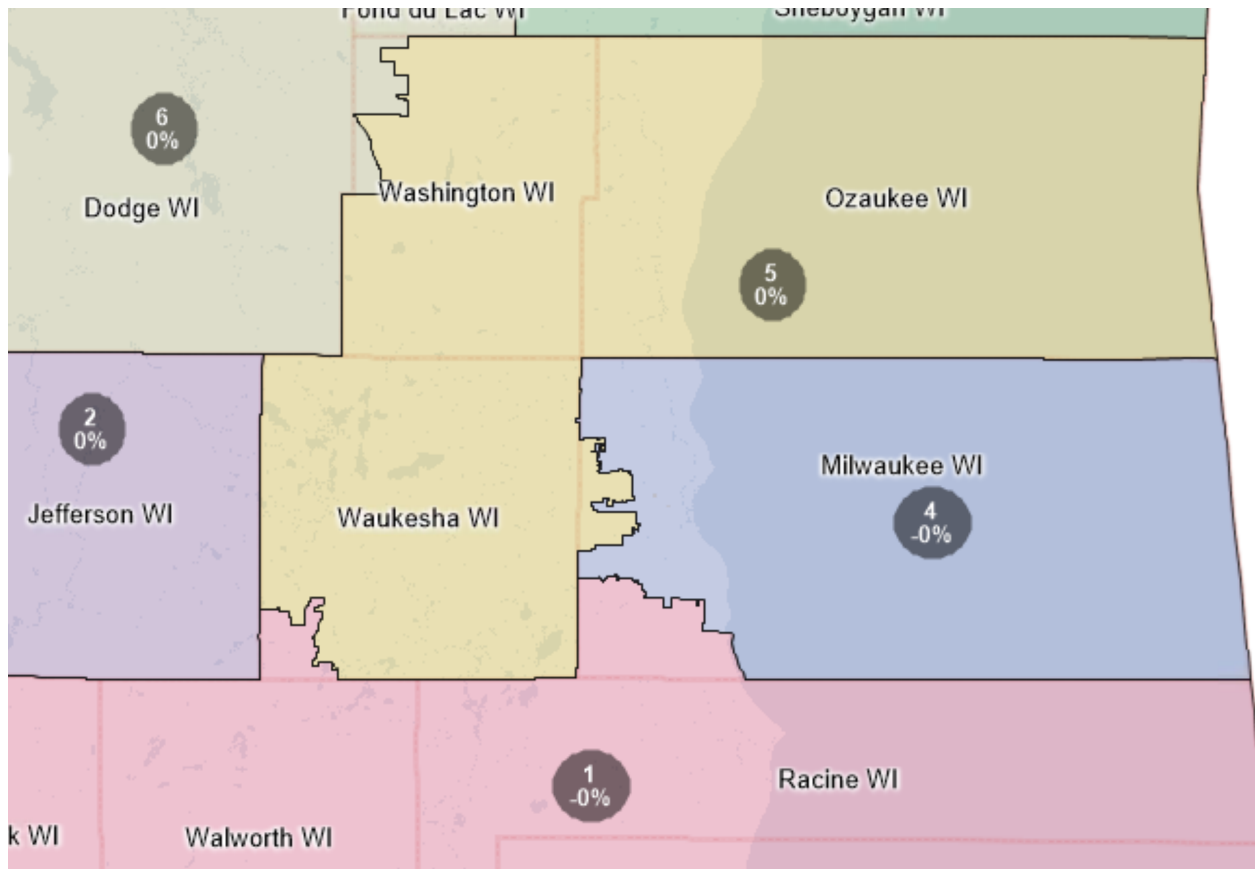
Communities of Interest:

The biggest community of interest in the Milwaukee area is, unsurprisingly, the City of Milwaukee. The city is entirely contained within District 4, along with some of the smaller surrounding suburbs within Milwaukee County. The current map unnecessarily splits the city of River Hills in northern Milwaukee County from its neighbors. In this map, I reunify them and reduce Milwaukee County to only being split three times instead of four. In order to reach perfect population equality, the city of Greenfield and a small portion of West Allis were added to District 4, both being inner ring suburbs very connected to Milwaukee proper. Although Wauwatosa and the rest of West Allis are also suburbs in Milwaukee County that directly border the city, only Greenfield was small enough population wise to fit entirely within the district without overpopulating it, so I opted to include it over the others.

County and Municipality Splits:

Milwaukee County must be split at least once, and in my map it is split 3 times. District 4 is contained entirely within the County (save for one uninhabited precinct that is part of the city of Milwaukee but crosses into Waukesha County). The southern Milwaukee County suburbs fit in well with the equally industrial small cities of Racine and Kenosha in District 1, while the wealthier suburbs of Wauwatosa and West Allis fit best with suburban District 5. Due to these community of interest considerations, I opted to split Milwaukee County three times instead of two. The current map splits Milwaukee County in the same way, except for the aforementioned changes to District 4.

The only municipality split in Milwaukee County is West Allis, which was necessary to reach perfect population equality in District 4.

WOW Counties:

Communities of Interest:

        Waukesha, Ozaukee, and Washington Counties, nicknamed the WOW counties, are predominantly white, wealthy suburbs of Milwaukee that are quite similar to one another and constitute an important community of interest due to their demographic, economic, and geographic similarities. All three counties are deeply connected to Milwaukee, but remain more distant and are all within the top 5 wealthiest counties in the state. This contrasts them heavily with their poorer, more industrial neighbors in Milwaukee and Racine and their more exurban and agricultural neighbors in Dodge and Jefferson Counties. For these reasons, I chose to group these counties together to form District 5. Additionally, Wauwatosa and West Allis from Milwaukee County also are part of the district. Both are suburban in nature, although only Wauwatosa is economically similar to District 5. Still, West Allis is too large to fit entirely within District 4 and its only other border is District 5. It still shares the suburban community of interest with the rest of the district, but I was forced to compromise the economic similarities in favor of population equality.

        Under the current map, the WOW region is split between three districts. The current District 1 contains the southern half of Waukesha County, while northern Waukesha County and all of Washington County are part of current District 5. All of Ozaukee County on the other hand is part of current District 6. My map reunifies these counties that have enormous amounts of shared interests. While technically small portions of Washington and Waukesha Counties are

split, these portions are very small compared to the large splits under the current map. My map only splits more exurban parts of the counties, rather than splitting the suburban core down the middle threeways.

Waukesha and Washington Counties are both split in this map. Waukesha is split between District 5 and District 1. I added the area around Eagle to District 1 to avoid splitting the larger incorporated cities in eastern Waukesha County. Adding Eagle and its surrounding precincts instead allowed me to avoid an additional city split. In Washington County, the more exurban northwestern corner was added to the more rural central Wisconsin based District 6 to achieve population equality there. That region of Washington County is unincorporated, making it easier to justify a split there for population purposes.

5 municipalities are split in District 5. One of these is West Allis, which has already been discussed. All four other splits are cross-county municipalities that were split to avoid additional county splits.

Southern Wisconsin and the Madison Metro:
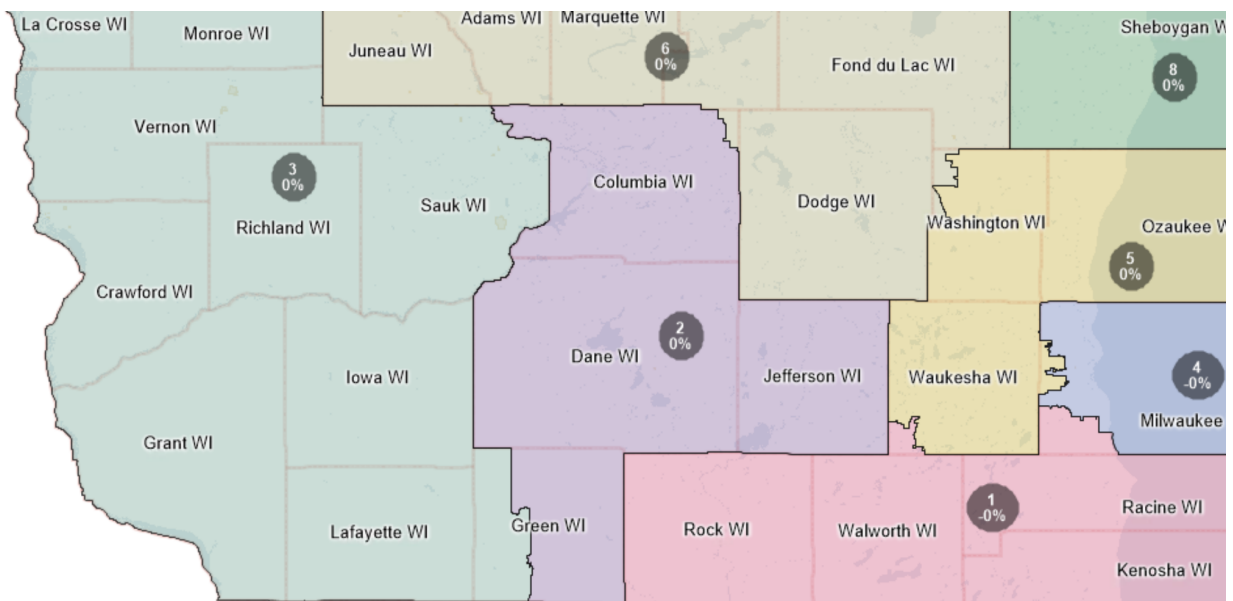
Southern Wisconsin contains multiple small metropolitan areas as well as the second largest city and metropolitan area in Wisconsin: Madison. In this region I aimed to have district lines match metropolitan areas as closely as possible to respect the region's communities of interest.

District 1 combines multiple smaller cities together to form one border district. The Racine, Kenosha, and Janesville metropolitan areas in Racine, Kenosha, and Rock Counties respectively are obvious choices to pair together. While all three have important links to either

Milwaukee or Madison, they are urban centers in their own right. All three cities are more industrial cities facing challenging economic conditions, especially post-Great Recession. These three cities share these economic and historical characteristics with the southern Milwaukee County suburbs, hence their inclusion in the district. Walworth County is necessary to connect the three counties, but is still economically connected to them and fits well within the district. A small, more rural portion of Waukesha County was also added to the district for population purposes. This made more sense than splitting Jefferson, Green, or Dane Counties, as all three of those neighboring counties are part of the Madison metropolitan area, which District 1 contains none of. District 1 already included part of the Milwaukee metro area in Milwaukee County. For this reason, I opted for the Waukesha split. My version of District 1 is much more coherently focused than the current configuration, which is split between suburban Waukesha and the three smaller metros. Under my map, there are no competing communities of interest within District 1 and the smaller industrial metros can more effectively be represented.

District 2 is entirely contained within the Madison metropolitan area. Although the entire metro area is too large to fit into a single district, a large majority of it is in District 2. Madison is a relatively less diverse metro area than the Milwaukee metro. Demographically, it is also more highly educated as well as quite wealthy. Keeping the metropolitan area makes sense, especially given the ability to fit a single district entirely within the metro.

County and Municipality Splits:

The Waukesha County and Milwaukee County splits in District 1 have already been discussed.

In District 2, a small portion of northern rural Columbia County is split to help District 6 reach perfect population. District 6 is a heavily rural based district in central Wisconsin, and since the area split is rather peripheral to the Madison metro, it does not compromise the community of interest. Additionally, the city of Randolph, which straddles Columbia and Dodge Counties, was already split. When attempting to balance the population of District 6, it made sense to start by reuniting this city and taking some of the surrounding unincorporated areas, which is what I did.

Also in District 2 is a split down the middle of Green County. This county is a mostly rural part of the Madison metro, which fits well with the more rural District 3. The other counties that could have been split to help balance Districts 2 and 3 were Dane, which I decided not to split as it is the core of the metro, and Columbia, where splitting would have meant additional crossings of the Wisconsin River and more municipal splits. Splitting in Green County avoids municipal splits, more river crossings, and is generally more compact.

9 municipalities are split in Districts 1 and 2, and all are from cross-county municipalities that are split to preserve county lines.

Driftless/Southwest Wisconsin:
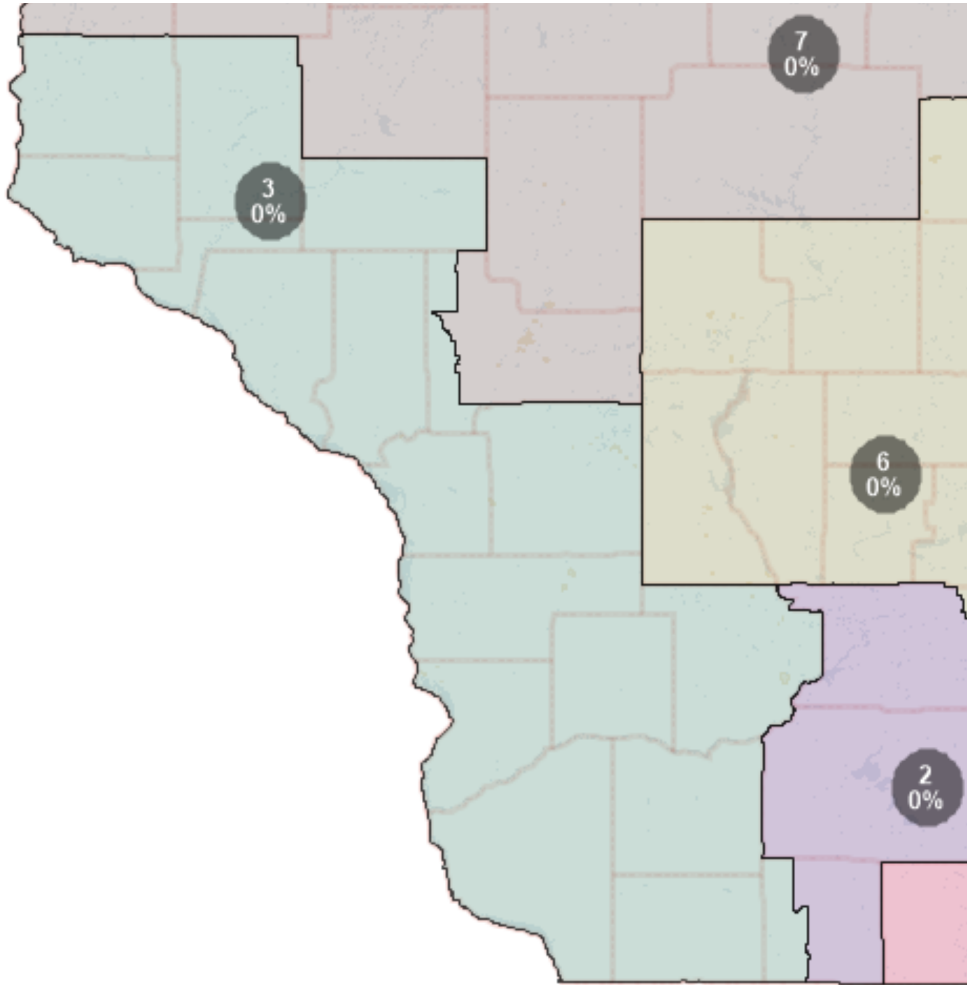
Communities of Interest:

The name "Driftless" refers to an area of Wisconsin known for its rugged topography and deep connection to the nearby rivers, including the Wisconsin and Mississippi Rivers. The Driftless region stretches into Minnesota, Iowa, and Illinois, but, in Wisconsin, it covers the region along the Mississippi River from the Illinois border in the south to Eau Claire in the north. The region is predominantly rural with two major cities: La Crosse and Eau Claire. The region shares tourism campaigns, is primarily agricultural, and is heavily dependent on the plentiful rivers of the region. The Driftless region fits nicely into a single district, with some additional population coming from the exurbs of Madison and the Wisconsin suburbs of Minneapolis-St. Paul in St. Croix and Pierce Counties in the north.

Since the region naturally fits together, both my map and the current map have Driftless-based districts. However, the current map is worse for the other communities of interest in the region in a number of ways. First, it splits St. Croix and Pierce Counties. These two counties are the only ones in Wisconsin that are part of the Minneapolis-St. Paul metropolitan area, and, as such, keeping them together is a priority under my map. The current map also

extends an arm into central Wisconsin to incorporate Stephens Point in Portage County into the district. The current District 3 was drawn to be somewhat of a Democratic gerrymander, combining the college town of Stephens Point with the at-the-time heavily Democratic Driftless area. As the Driftless region has trended Republican, the current District 3 has become more competitive. Since my map is not being drawn with partisan consideration in mind, my primary concern is not ensuring District 3 stays Democratic but instead whether it represents the communities in the area well. Stephens Point is not only distant from the Driftless area, but also shares little in the way of industry or history with the region. As such, I draw Stephens Point in with the rest of central Wisconsin in District 6 and instead combine the Driftless with the Minneapolis suburbs in the north. This serves both communities better and also is much more compact.

County and Municipality Splits:

The current District 3 splits six counties. In my proposal, this is reduced to two. The split in Green County has already been discussed. The other split county, Jackson County, was already split under the current map. I decided to keep this county split to avoid needing to split elsewhere. The only other border counties that could have been split were Eau Claire, which is one of the two main cities of the Driftless region and should not be removed from it, or St. Croix County, which as mentioned previously is part of the Minneapolis metropolitan area and should be kept together with Pierce County. Jackson County was the best choice to keep the districts compact and communities of interest intact.

Three municipalities are split in District 3 and all three are cross-county municipalities. This includes the city of Eau Claire, however 97% of the city is in District 3, and I did not think the remaining four percent justified another county split.

Central Wisconsin:
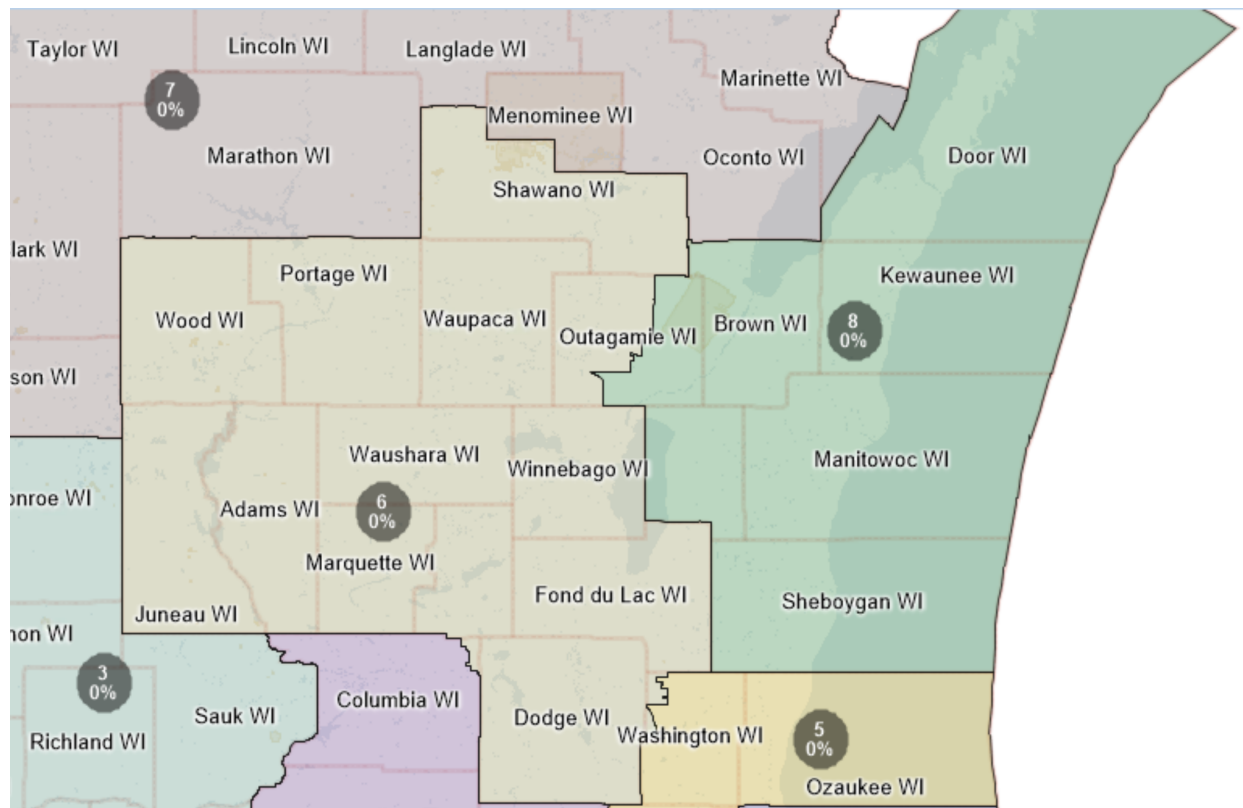
Communities of Interest:

Central Wisconsin includes two districts that cover a variety of distinct communities of interest. In District 6, a series of smaller cities and their surrounding rural areas are grouped together. These counties are less reliant on agriculture than the Driftless or southern Wisconsin regions, and instead are dotted with micropolitan areas like Beaver Dam in Dodge County, Wisconsin Rapids in Wood County, and Stevens Point in Portage County. District 6 also includes Fond du Lac and Oshkosh in Fond du Lac and Winnebago Counties. The remaining counties of this region are rural counties that, while still having large agricultural industries, are not nearly as heavily dependent on it as other regions of Wisconsin. The central Wisconsin area covered by my District 6 was previously split between the current Districts 3, 5, 6, 7, and 8. Although this region is not as strong of a community of interest as, for example, the Driftless region or the Madison metropolitan area, it still fits well together as a district due to similar economic makeup and the heavy influence of small metros. The fact that the region was split so heavily under the current map makes no sense from a community of interest standpoint. Due to this, I brought the region together again.

District 8 in my map also contains a variety of communities of interest. The most important are the Appleton and Green Bay metropolitan areas. Both are almost entirely contained within District 8. In the case of Appleton, a small portion of rural Outagamie County is instead incorporated into District 7 for population regions. However, since that area of the county is predominantly rural, it has more in common with its neighbors in Waupaca and

Shawano than with urbanized Appleton city center. This makes the split justifiable, in my view. Another community of interest split in Appleton is the separation of the Fox Cities. The Fix Cities refers to a group of cities including Appleton, Neenah, and the other cities on the northern end of Lake Winnebago. These cities share many services and economic ties due to their proximity. However, splitting Winnebago County to integrate the Fox Cities into District 8 would require both an additional county split and compromising either the Appleton metropolitan area by absorbing all or part of Calumet County or the lakeshore region, which shares little with the interior of District 6. Either path would involve compromising multiple communities of interest to conform to the interests of the Fox Cities. For these reasons, I decided that splitting the Fox Cities was the path that respected the most communities of interest.

Oconto County is also split from the Green Bay metropolitan area. While the city of Oconto is relatively integrated with Green Bay, the northern rural parts of Oconto County would be difficult to justify including with Brown County over the other areas of the Northwoods region. In order to avoid splitting an additional county or incorporating northern Oconto County into a district it shares little with, I determined it was best to split Oconto from the rest of the Green Bay metropolitan area.
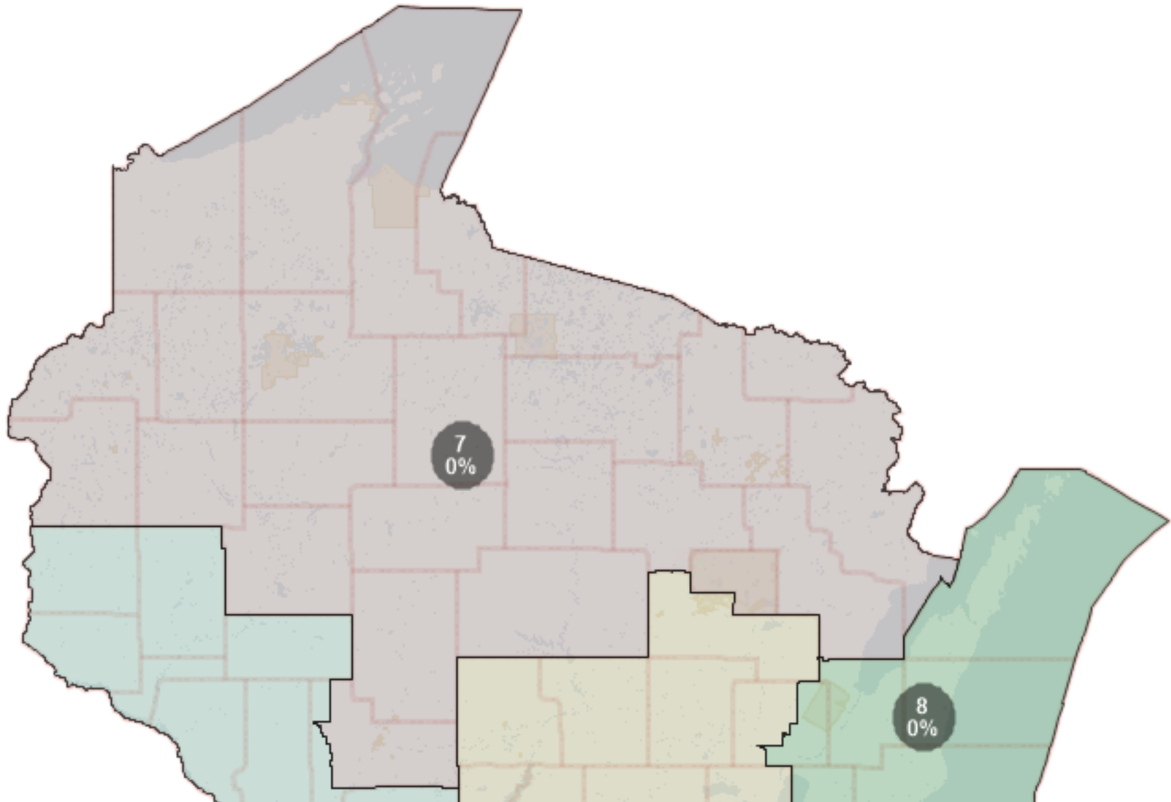
The other community of interest in this region is the lakeshore region composed of Sheboygan and Manitowoc Counties. Beyond their connection to Lake Michigan, these counties, along with Brown and Calumet, have enormous dairy industries. Not only does grouping these counties with the nearby dairy regions make sense, but it also renders the district more compact. The lakeshore is currently a part of District 6, which stretches in an H-shape from the lakeshore to rural interior central Wisconsin. As stated earlier, central Wisconsin is not as agricultural as neighboring regions and certainly does not have a connection to Lake Michigan. As such, I shifted the region into a district that better reflects its economic ties.

County and Municipality Splits:

The splits in District 6 in Columbia and Washington Counties have already been discussed, as has the split in Outagamie County.

11 cities are split in Districts 6 and 8, all of which are to preserve county lines.

Northern Wisconsin:

Communities of Interest:

The largest community of interest in District 7 is also entirely within it: the Northwoods. The Northwoods is the heavily forested region of northern Wisconsin that is much more rural and far less agricultural than the south. Most of the state's Indian Reservations are also within this region. The only other community of interest in northern Wisconsin is the Eau Claire metropolitan area, composed of Chippewa and Eau Claire Counties. While Eau Claire County is part of District 3 in my plan, Chippewa County is part of District 7. Chippewa County is one of the more populated counties of District 7, and removing it would necessitate splitting either the Minneapolis metro area counties or splitting up central Wisconsin. Since Chippewa County is also split from District 3 on the current map, I decided that unifying the county and keeping it within District 7 would keep the map more compact and require fewer county splits than unifying the Eau Claire metropolitan area.

County and Municipality Splits:

Only one county is split in District 7: Jackson County. This split was already discussed in the Driftless section.

Five municipalities are split in District 7, all to preserve county borders.

Partisan Fairness Measures

Although partisan fairness was not a priority in making this map, it is an important metric to examine in any redistricting plan, especially one as competitive as Wisconsin. Two ways of measuring partisan bias in a redistricting plan are mean-median gap and efficiency gap. A mean-median gap measures the difference between a party's median vote share and its mean vote share. More divergence between the two indicates a bias towards one party in the map. Partisan efficiency gap measures the amount of inefficient or "wasted" votes (votes for a losing candidate or votes over 50% for a winning candidate) for one party. It is calculated by adding up one party's total inefficient votes, subtracting the other party's inefficient votes, and dividing by the total number of votes. Higher percentages of wasted votes can indicate unfair packing or cracking of districts.

My plan has a mean-median gap of 4.1% in favor of Republicans and an efficiency gap of 14.4% in favor of Republicans. While both of these metrics are clearly quite high in favor of Republicans, it should be noted that it is nearly impossible to draw a good governance map of Wisconsin that is partisanly fair. While Wisconsin on the statewide level is a very competitive state, its political geography makes drawing fair congressional maps much more difficult. Most Democratic votes in Wisconsin are concentrated in the cities of Milwaukee and Madison and their immediate suburbs. Drawing a partisan fairness oriented map would require splitting both of these cities to make districts that more reliably lean Democratic. Since a good governance map aims to split as few counties and cities as possible, partisan fairness is not possible under a strict good governance plan. The concentration of Democratic voters in Madison and Milwaukee means that partisan fairness and preserving municipal and county boundaries will be in conflict for the foreseeable future.

Comparison with Current Map
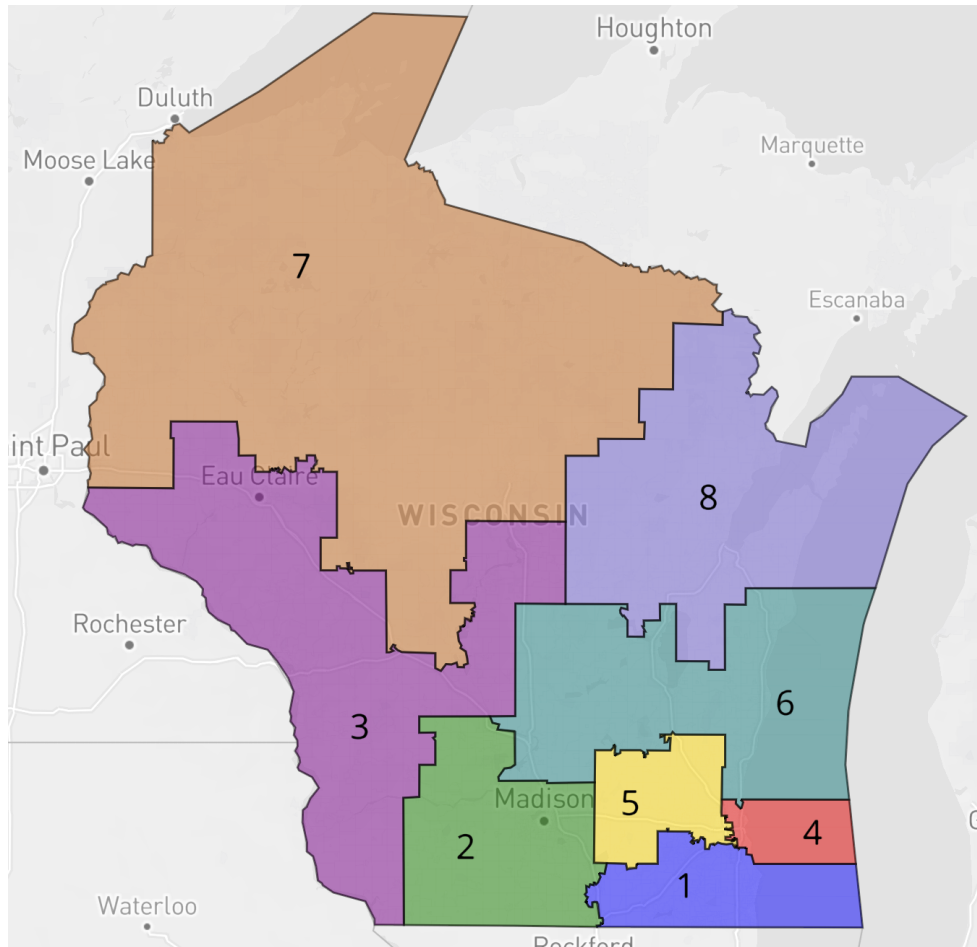
Although the partisan fairness statistics for my map show a clear bias towards Republicans, they are comparable to the current map. The current Wisconsin congressional map has a mean-median gap of 7.6% and an efficiency gap of 10.7%, both in favor of Republicans. The mean-median gap of my plan is lower, meaning that my districts are more competitive, mostly Districts 1 and 3. However, my plan's efficiency gap is also higher, meaning that Democrats are even more likely to waste their votes under my plan. Overall, both plans are significantly skewed towards Republicans and it would be difficult to draw a plan that wasn't without explicitly focusing on partisan fairness as the main criteria.

I will not discuss in detail the current map's treatment of the state's various communities of interest as these aspects have already been covered in the sections for each region.

In terms of preserving county and municipal boundaries, my map only splits 7 counties total. 21 cities or census-designated places are split under my proposal, 4 of which are no-population splits and all but one of which are made to preserve county lines. Additionally, 10 precincts are split under my plan. Under the current map, 12 counties are split, as well as 29 cities or census-designated places, 7 of which are no-population splits. 42 precincts are also split. Quite clearly, my map performs better on maintaining political subdivisions intact while also being more compact and better respecting the state's communities of interest.

Comparison with Proposed Maps

On November 18th, 2021, Governor Tony Evers vetoed the Republican legislature's proposed congressional and legislative maps for the 2022-2032 redistricting, which transferred responsibility for redistricting to the Republican controlled Wisconsin Supreme Court. On November 30th, the Court announced that it would pursue a least-change plan for their map. Both Governor Evers and the Republican legislative leaders have since sent in proposals to the Court in line with the least-change criteria. Arguments on the maps will continue throughout January and it is currently unclear when the Court will render its decision.

Governor Evers' Least Change Proposal:
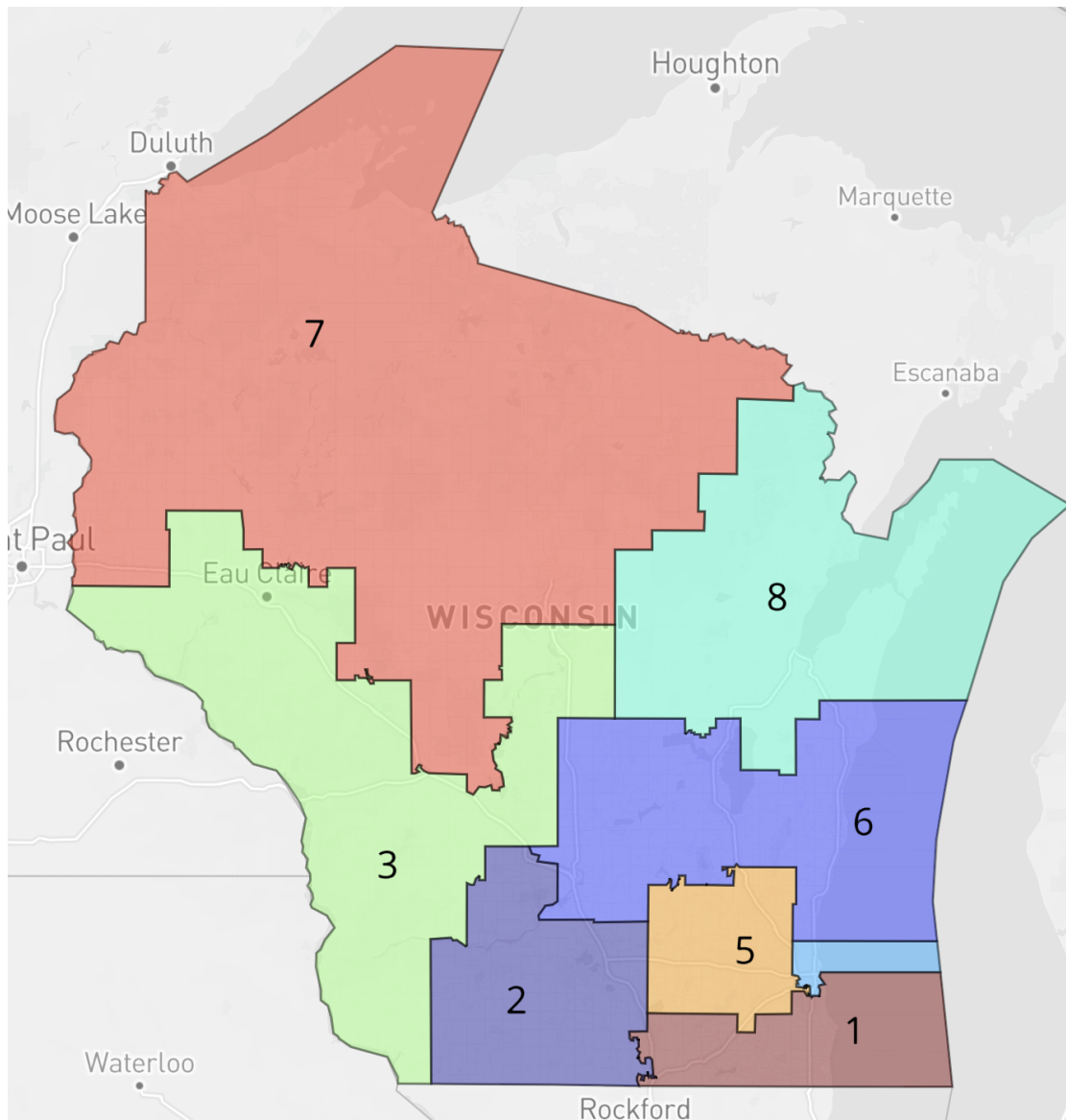
Governor Ever's proposal differs from my plan in important ways. It follows the current map quite closely, with the largest differences being in the Milwaukee and southern Wisconsin

regions. In Milwaukee, District 4 trades South Milwaukee and other southern suburbs for all of Wauwatosa and part of West Allis. District 5 also regains the rest of Waukesha County from District 1 while taking a small portion of Walworth County as well. Other changes throughout the state are relatively minor.

The effects of the shifts in Milwaukee help to make District 1 more competitive. The current District 1 voted 53.8% Trump to 44.6% Biden in 2020, whereas Evers' District 1 voted for Trump 50.1% to Biden's 48.1%. My District 1 voted 50.7% Trump to 47.6% Biden, for comparison. The other competitive district, District 3, retains the exact same vote percentages in the current map and Evers' map despite the minor shifts (51.4% Trump, 46.7% Biden). My District 3 is only marginally more competitive as well (51.0% Trump, 47.1% Biden). Governor Evers managed to make District 1 slightly more competitive than in my map and significantly more competitive than in the current map. Seeing as Governor Evers is a Democrat, it makes sense that one of his priorities, even in a least change plan, would be to increase competitiveness where possible due to Wisconsin's disproportionate Republican representation.

Being a least change map, Governor Evers' map retains the community of interest concerns outlined in earlier sections of this paper. However, this map does improve the community of interest representation in southern Wisconsin by shifting the rich Waukesha suburbs out of the more Rust Belt, mid-sized city focused District 1. The plan has a mean-median gap of 4.9% and an efficiency gap of 16.5%, both in favor of Republicans. This is comparable to my plan's 4.1% pro-Republican mean-median gap and slightly higher than my 14.4% pro-Republican efficiency gap.

In terms of county and municipal splits, Evers' map also splits 12 counties, just like the current map. It splits 26 cities, 4 of which are non-population splits. 31 precincts are split under his plan. This is either the same or better across the board compared to the current plan, albeit only slightly in terms of city splits. However, my plan still is much better at respecting county and municipal boundaries. This makes sense, given that the Governor's plan was not prioritizing good governance mapmaking.

Governor Evers' map is perfectly population balanced.

Republican Legislative Proposal:
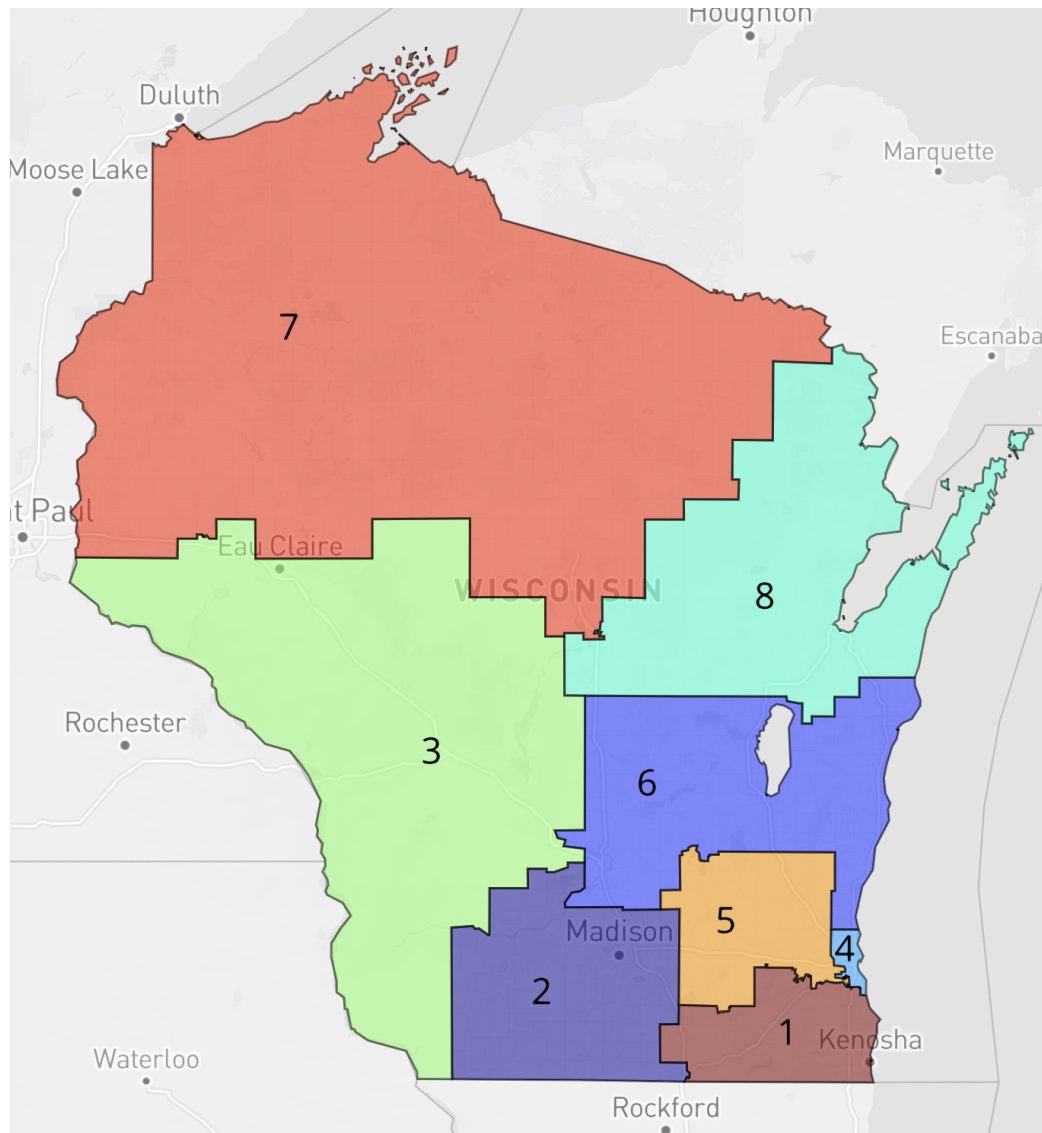
  The legislature's plan keeps the Milwaukee area's configuration largely the same while significantly changing the shape of District 3. District 3 traded Stephens Point and its portion of Chippewa County for reuniting Jackson, Wood, Juneau, and Monroe Counties, as well as the entirety of Clark County. This shifts District 3 significantly more towards central Wisconsin, but the partisanship only shifts one point more Republican by 2020 vote share (52.7% Trump - 45.4% Biden). District 6 under the Legislature's plan also takes in most of Calumet County, which splits the Appleton metro area.

  The Legislature's map makes District 3 marginally more Republican while leaving District 1 with the same 2020 results as in the current map. Overall, it is even less competitive than the current map and both mine and Governor Evers' maps. The mean-median gap of this map is 5.0% pro-Republican and the efficiency gap is 16.1% pro-Republican. This map's mean-median gap is significantly better than the current map's, but slightly worse than my and Governor

Evers' maps. The efficiency gap is worse than my map's and the current map's and only slightly better than Governor Evers' map.

In terms of communities of interest, this map again shares many of the same issues as the current map. It does, however, add a new community of interest concern while not resolving the current map's problems in this area. The legislature's map splits the city of Appleton from most of the rest of its metropolitan area and splits the city of Appleton itself. The territory taken in to compensate, which is rural Portage County, does not have a coherent shared interest with the rest of District 8, leaving the Legislature's plan even worse off with regard to communities of interest than the current plan.

The Legislature's plan splits 10 counties, 55 cities or census-designated places, and 221 precincts. While it reduces county splits, it is clearly the worst of all four maps examined in this report with regard to respecting city and precinct boundaries.

The Legislature's plan achieves perfectly equal population balance.

Conclusions

My good governance and communities of interest focused plan achieves its goal of drawing compact districts while still respecting political subdivisions and maximizing representation for the state's communities of interest. In doing so, it complies with all federal laws including the one person, one vote principle by achieving equal population in all districts. Since Wisconsin has no VRA districts, this was not a concern. While at times balancing the representation of competing communities of interest created difficult decisions, by considering the overall effect on all communities of interest throughout the state I was able to find ways to resolve the issue while still respecting communities of interest as much as possible. Examples of this include the decisions I made in splitting the Fox Cities and the Eau Claire metro to preserve multiple communities of interest in other parts of the state.

Since the Wisconsin Supreme Court has decided that they will pursue a least-change plan this redistricting cycle, my map could not be adopted even though it complies with all relevant law. Comparing my map to the least change plans proposed by Governor Evers and the Legislature shows that my map achieves very low levels of political subdivision splitting while being similarly competitive to Governor Evers' proposal. Nevertheless, my plan is still significantly biased in favor of Republicans due to the nature of Wisconsin's political geography and my decision to not take partisan fairness into account when drawing my plan.

Appendices
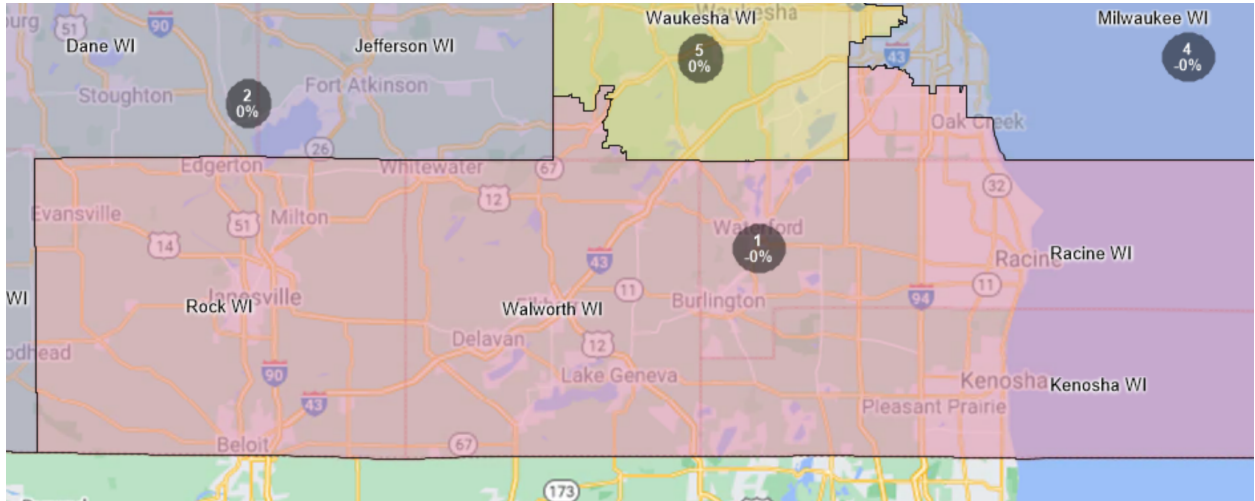
Figure 1: Detailed Map of District 1

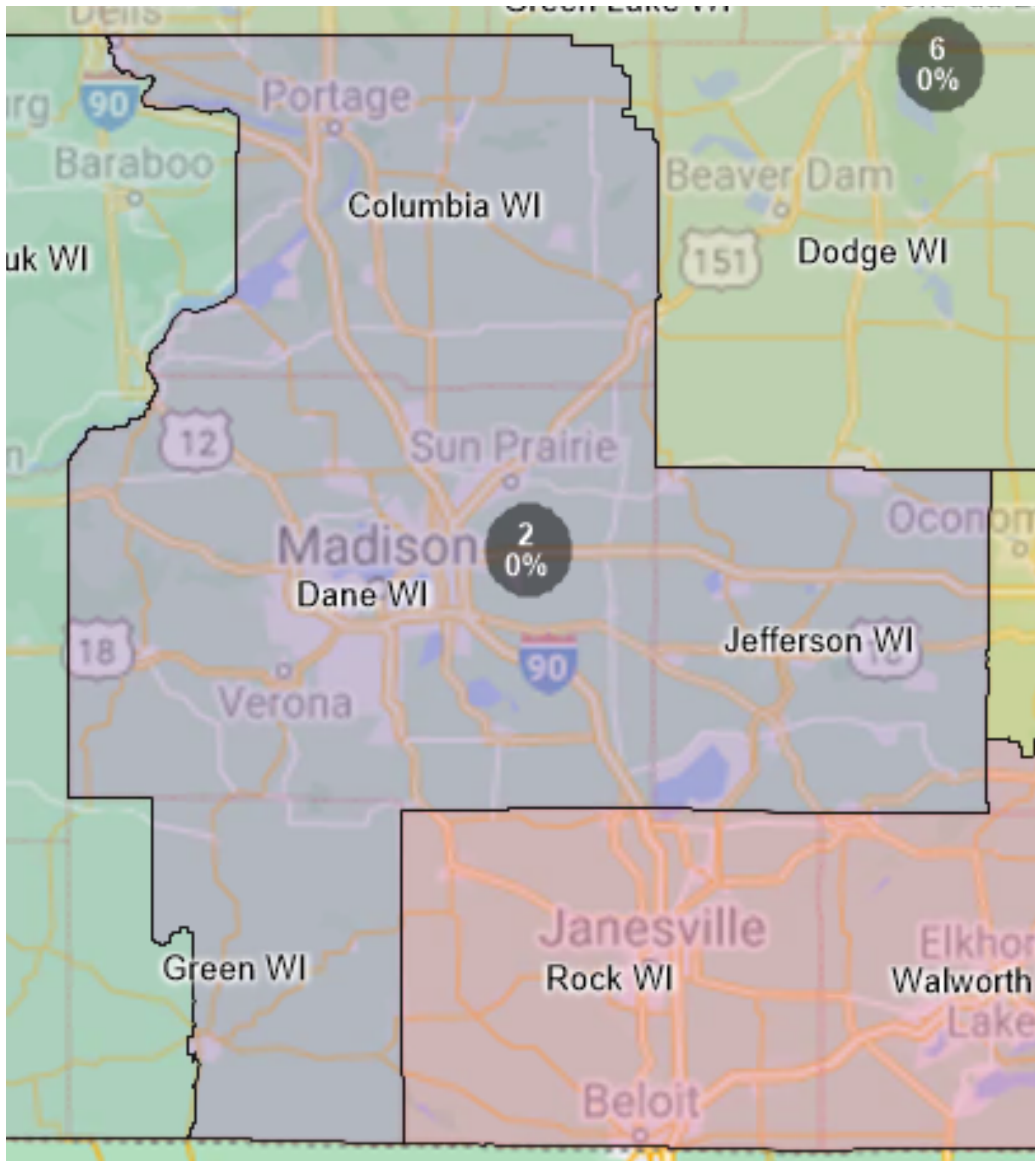Figure 2: Detailed Map of District 2
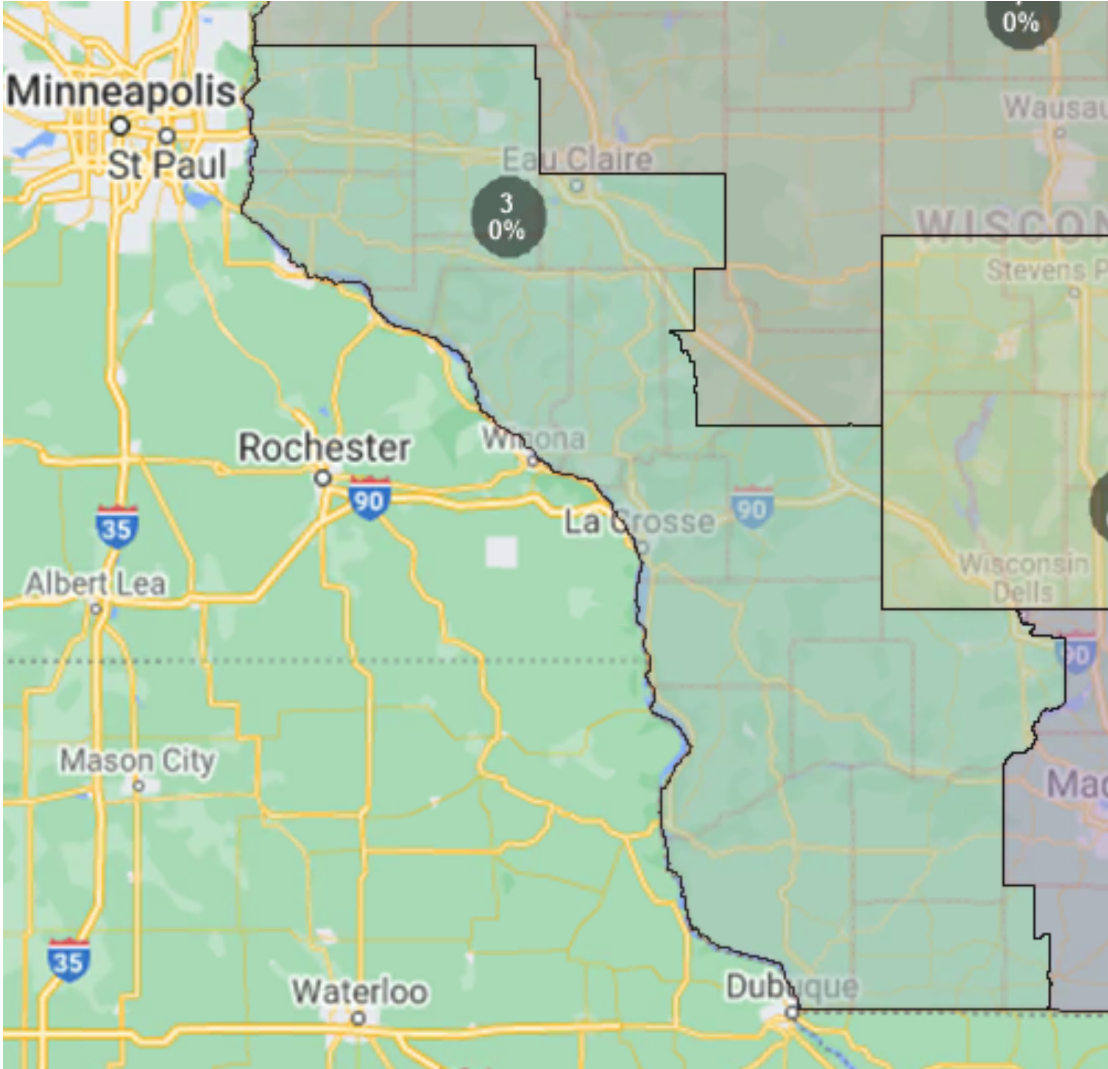
Figure 3: Detailed Map of District 3
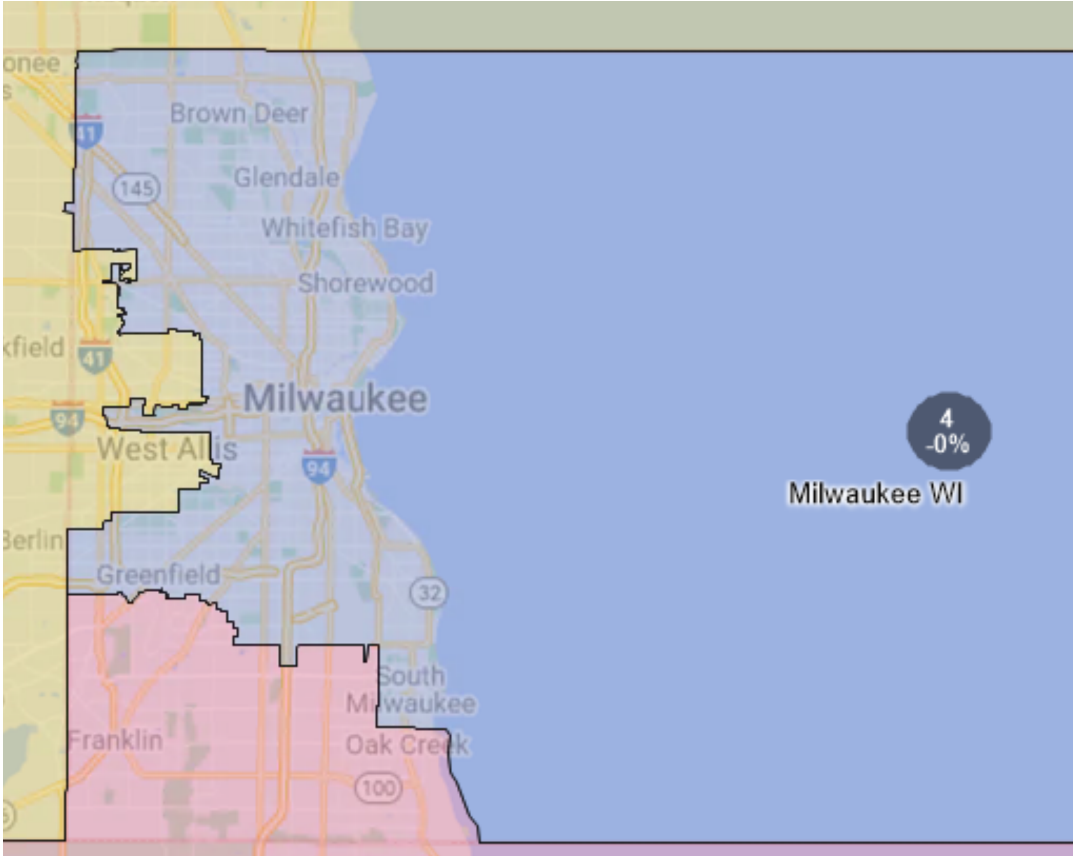
Figure 4: Detailed Map of District 4
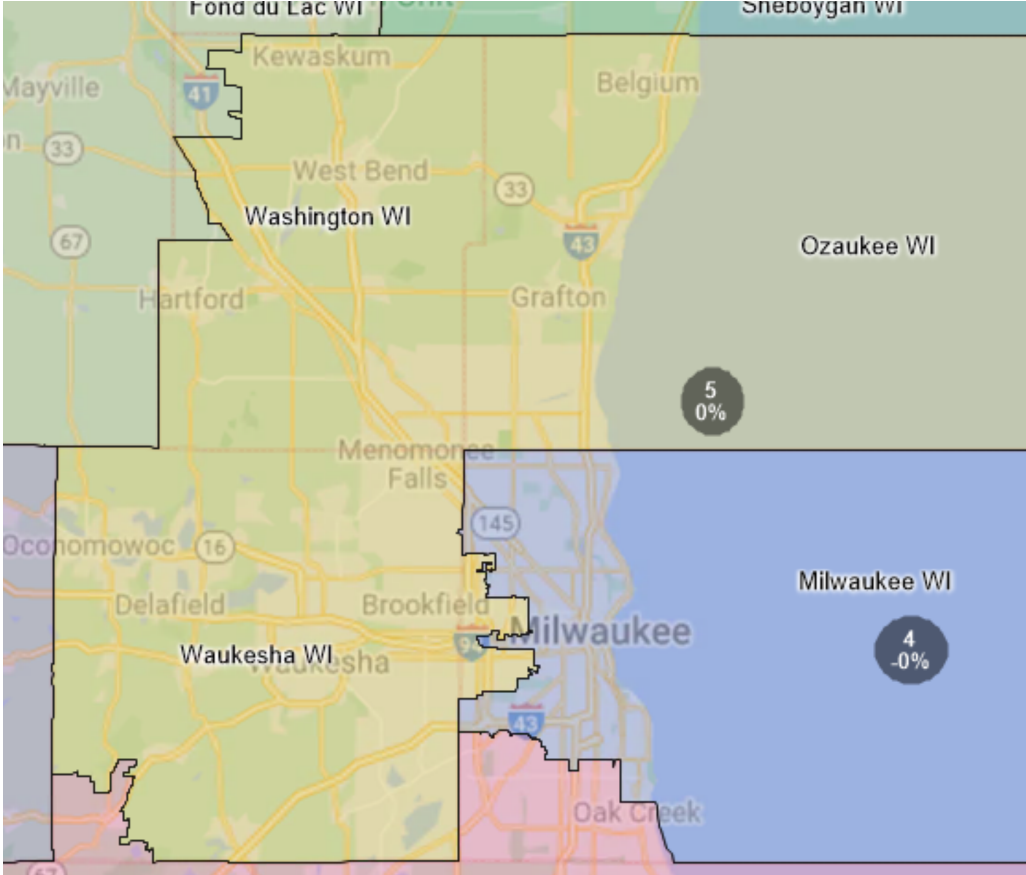
Figure 5: Detailed Map of District 5

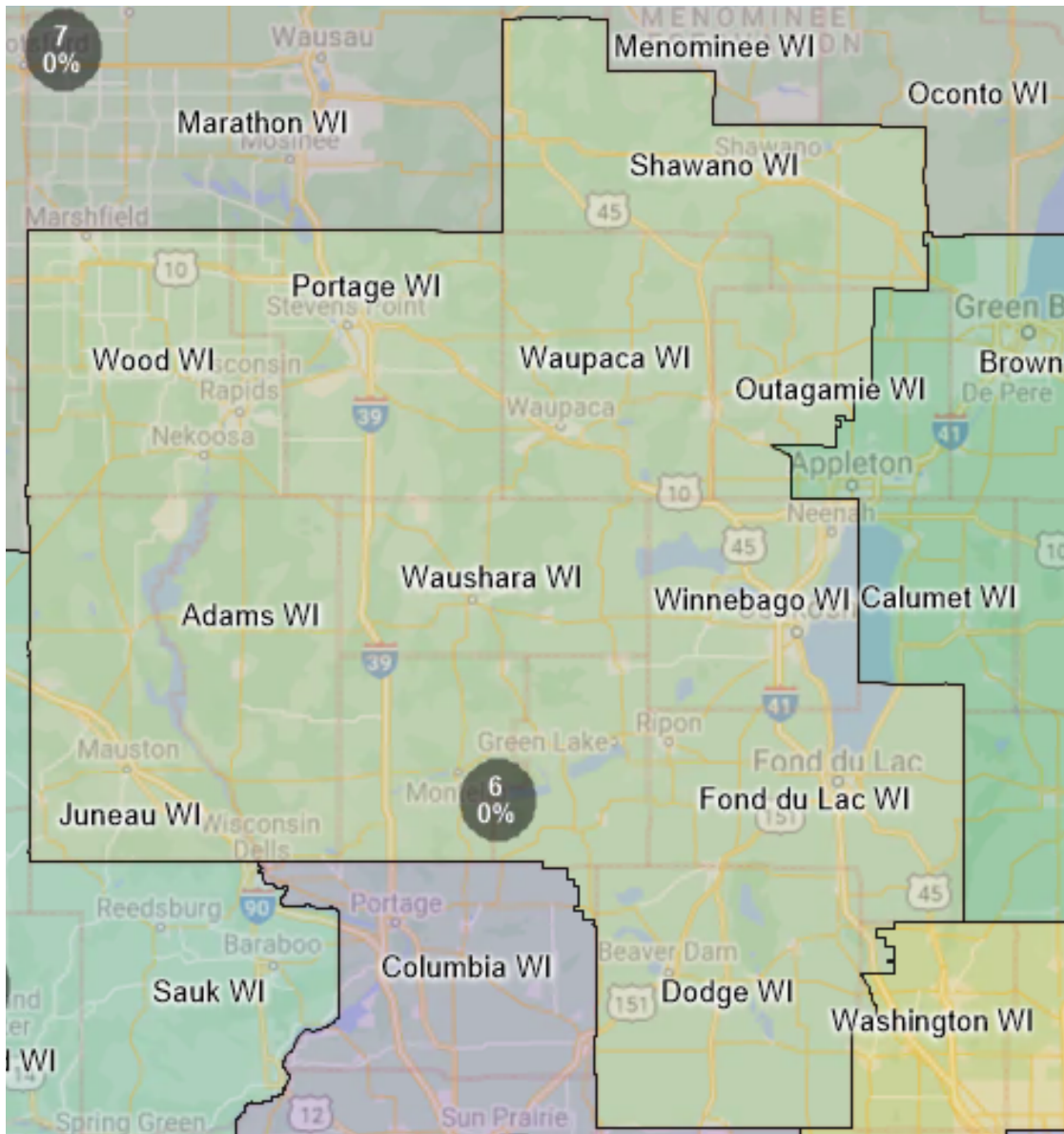Figure 6: Detailed Map of District 6
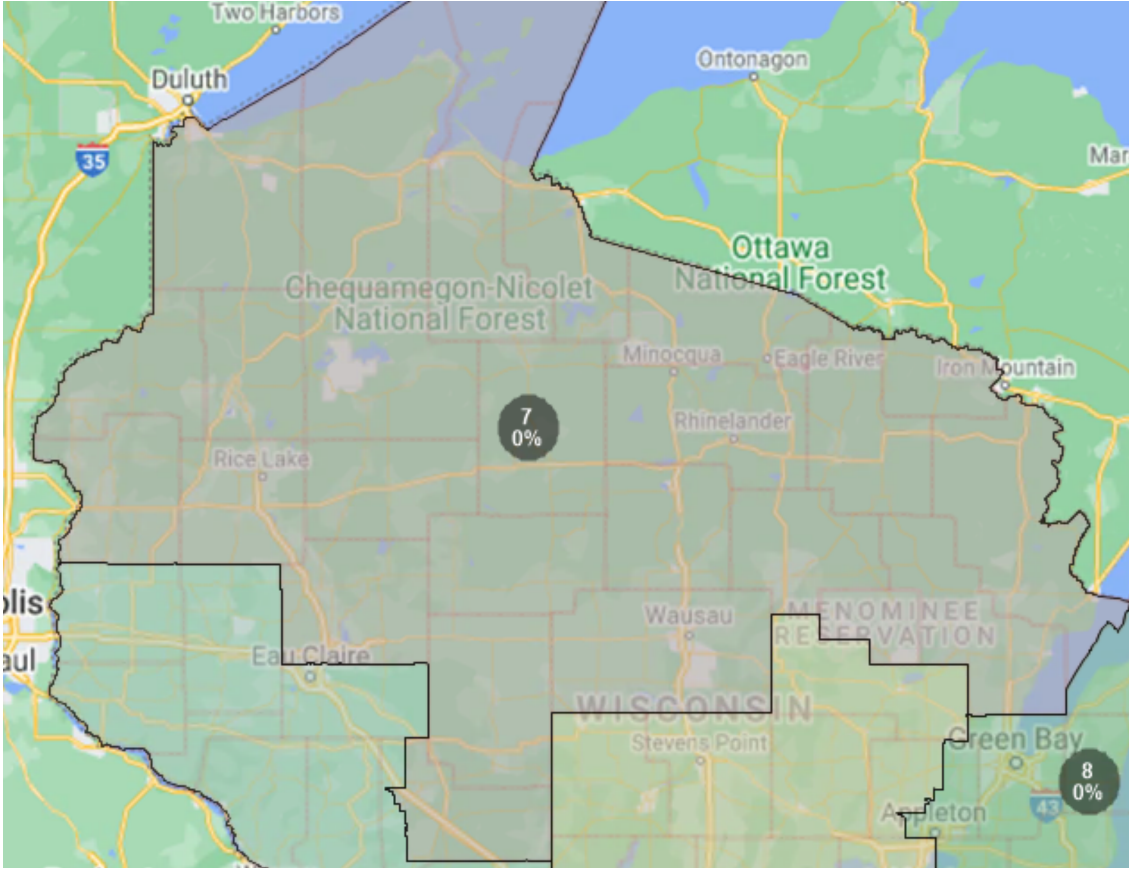
Figure 7: Detailed Map of District 7
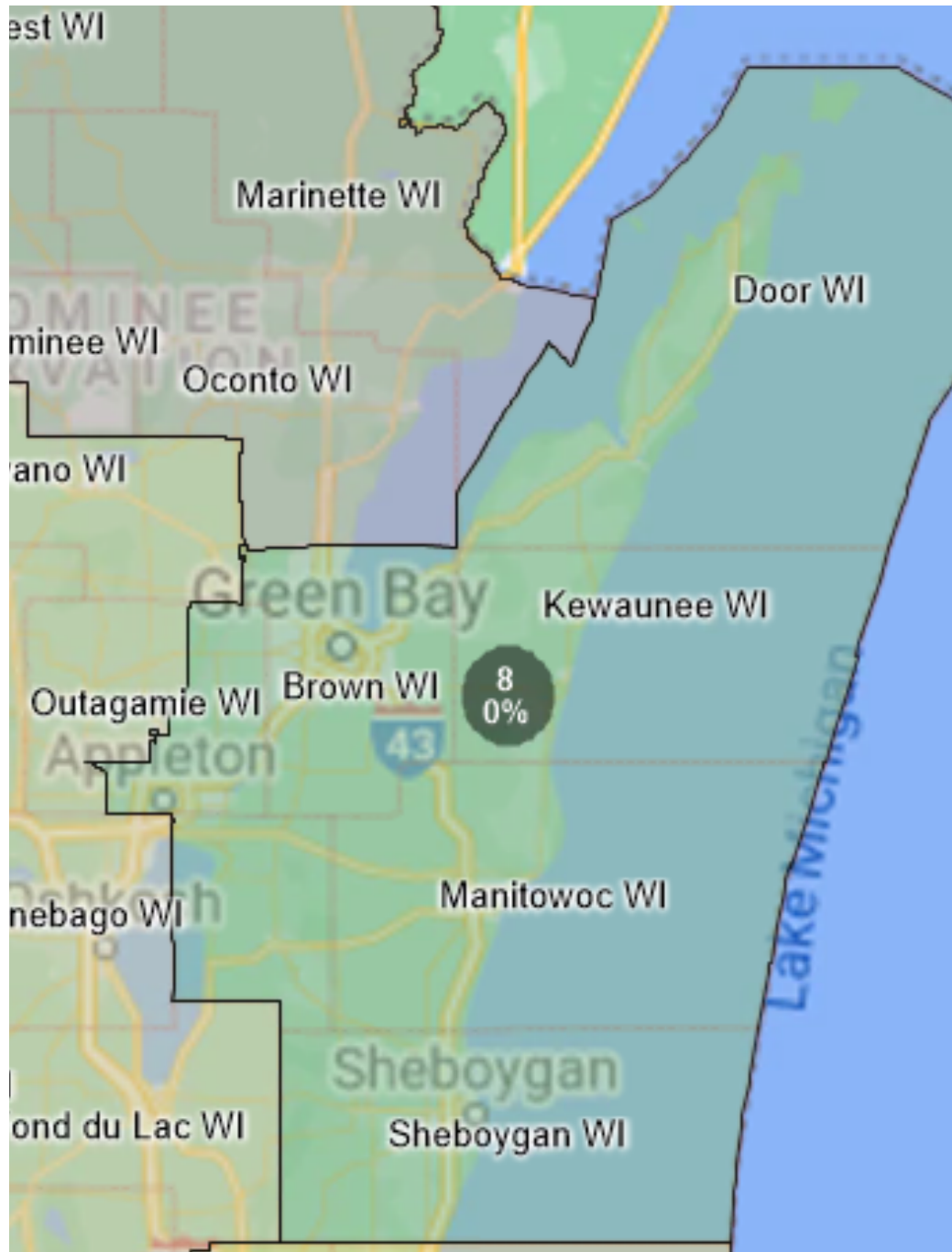
Figure 8: Detailed Map of District 8

Figure 9: Statewide Partisan Map (2020 Election)

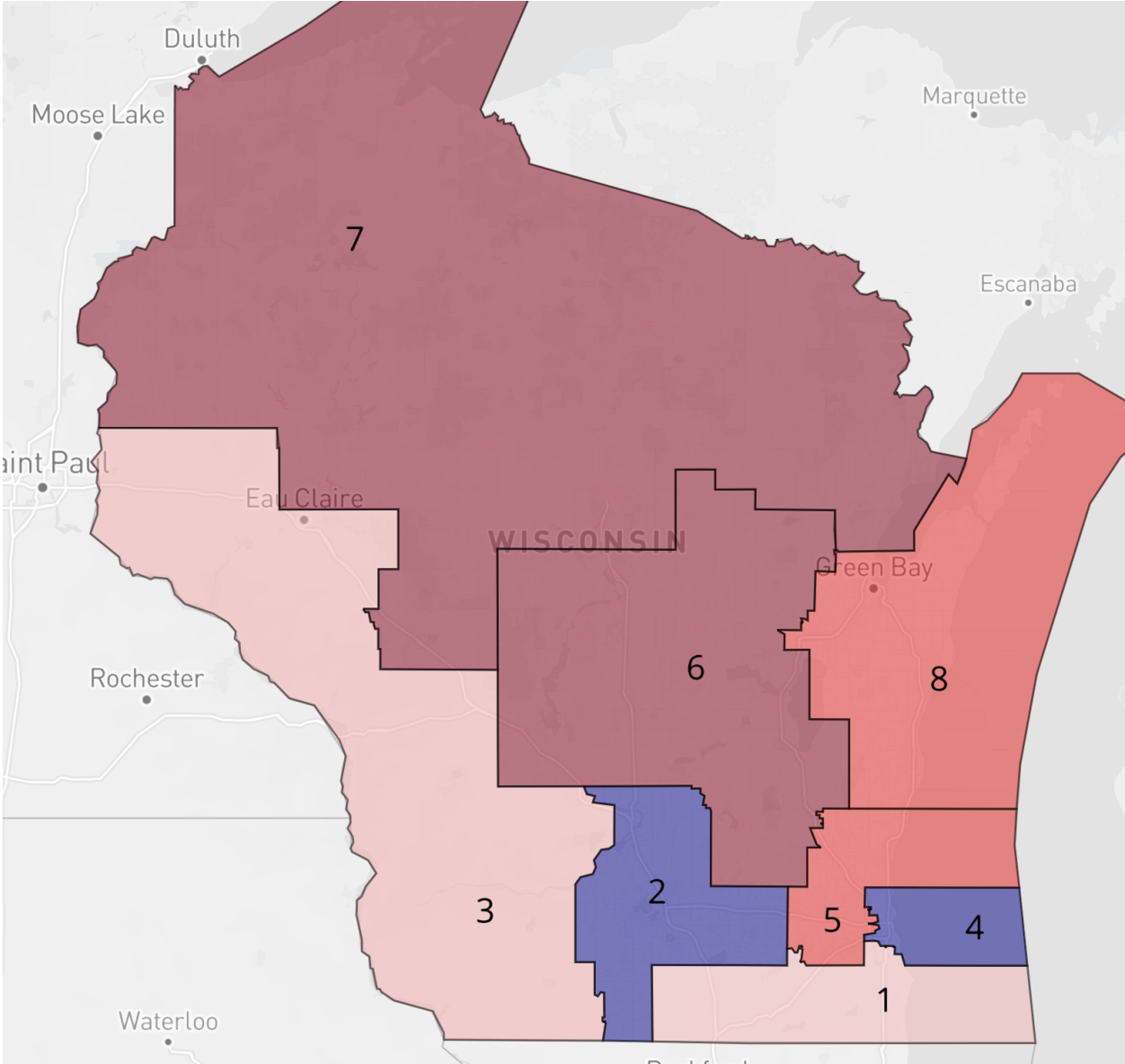## Figure 10: District Total Population Demographic Statistics

District	Population	NH_Wht	AP_Blk	AP_Ind	AP_Asn	AP_Hwn	AP_Oth	Hispanic Origin
1	736714	553745	62028	15106	19529	919	69057	88596
2	736715	582100	43651	12003	45095	1003	46389	52542
3	736715	660808	13669	12984	18657	997	25926	26345
4	736714	301612	255548	17202	43305	1091	103001	133400
5	736715	627968	24099	11207	29198	838	35055	41540
6	736715	646257	19953	18224	15339	770	29111	34239
7	736715	655087	10279	33482	15154	953	19164	18342
8	736715	606441	23516	24364	30068	899	44544	52286

Figure 11: District Voting Age Population Demographic Statistics

District	18+_Pop	NH18+_Wht	18+_AP_Blk	18+_AP_Ind	18+_AP_Asn	18+_AP_Hwn	18+_AP_Oth	H18+_Pop
1	574179	453806	39609	10729	13458	618	46045	55886
2	585656	478827	27759	8775	33892	701	31489	34262
3	573302	524079	7935	8996	12185	642	17134	16389
4	560000	263993	174063	12029	29237	805	70056	87366
5	577817	507124	14684	7713	19503	540	23014	25837
6	586068	525812	12886	12791	10354	516	19371	21464
7	583872	531013	5899	22528	9240	571	12953	11021
8	571406	489572	13478	16190	18771	603	28591	31844

Figure 12: District Total Population Demographic Percentages

District	% NH_Wht	% AP_Blk	% AP_Ind	% AP_Asn	% AP_Hwn	% AP_Oth	% Hispanic Origin
1	0.751642	0.084195	0.020505	0.026508	0.001247	0.093737	0.120258
2	0.790129	0.059251	0.016293	0.061211	0.001361	0.062967	0.071319
3	0.896966	0.018554	0.017624	0.025325	0.001353	0.035191	0.03576
4	0.409402	0.346875	0.02335	0.058781	0.001481	0.139811	0.181074
5	0.852389	0.032711	0.015212	0.039633	0.001137	0.047583	0.056385
6	0.877214	0.027084	0.024737	0.020821	0.001045	0.039515	0.046475
7	0.8892	0.013952	0.045448	0.02057	0.001294	0.026013	0.024897
8	0.823169	0.03192	0.033071	0.040814	0.00122	0.060463	0.070972

Figure 13: District Voting Age Population Demographic Percentages

% NH18+_Wht	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% 18+_AP_Hwn	% 18+_AP_Oth	% H18+_Pop
0.790356	0.068984	0.018686	0.023439	0.001076	0.080193	0.097332
0.817591	0.047398	0.014983	0.05787	0.001197	0.053767	0.058502
0.914141	0.013841	0.015692	0.021254	0.00112	0.029887	0.028587
0.471416	0.310827	0.02148	0.052209	0.001437	0.1251	0.156011
0.877655	0.025413	0.013349	0.033753	0.000935	0.039829	0.044715
0.897186	0.021987	0.021825	0.017667	0.00088	0.033052	0.036624
0.909468	0.010103	0.038584	0.015825	0.000978	0.022185	0.018876
0.856785	0.023587	0.028334	0.032851	0.001055	0.050036	0.055729

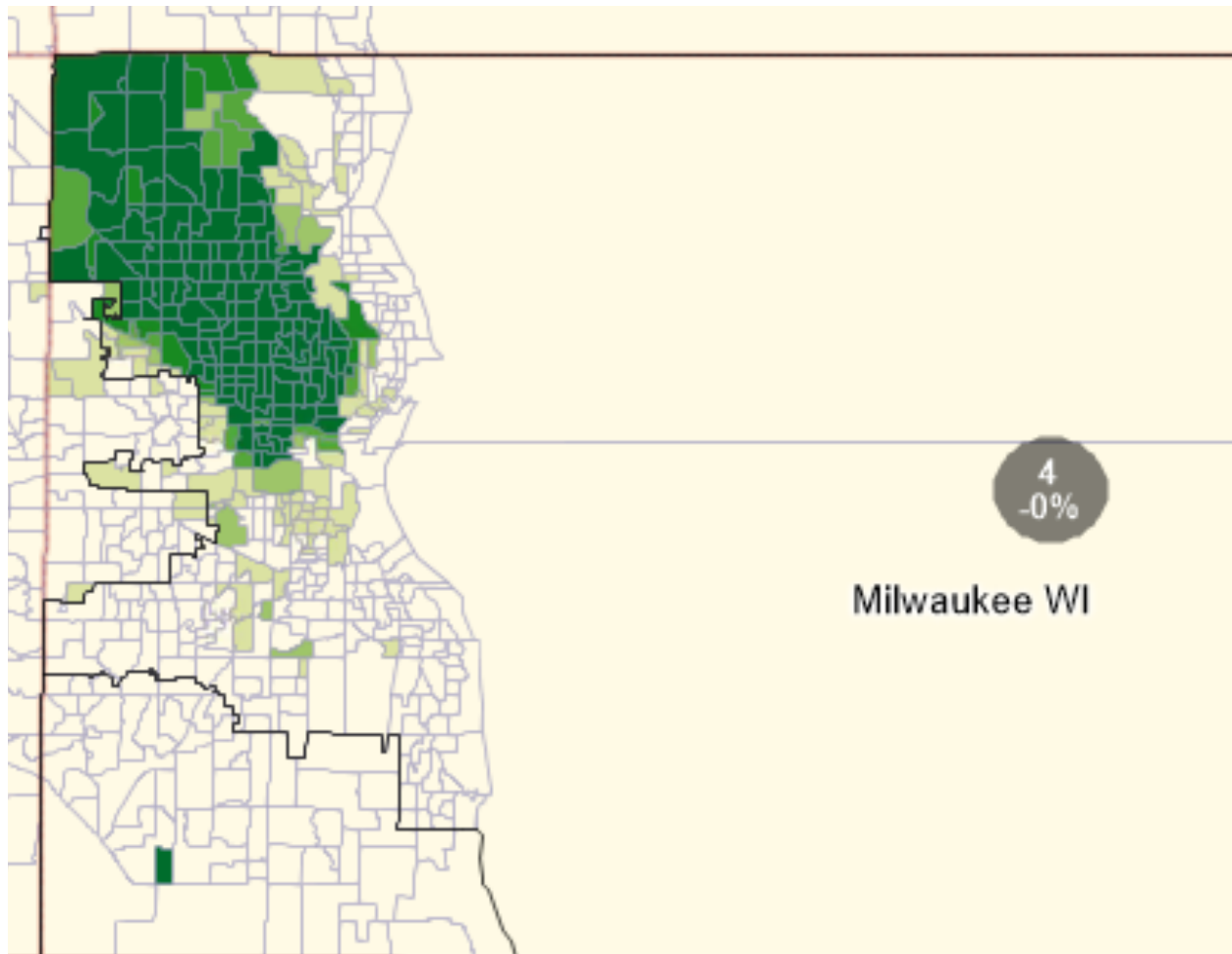## Figure 14: Milwaukee Black Voting Age Population Map

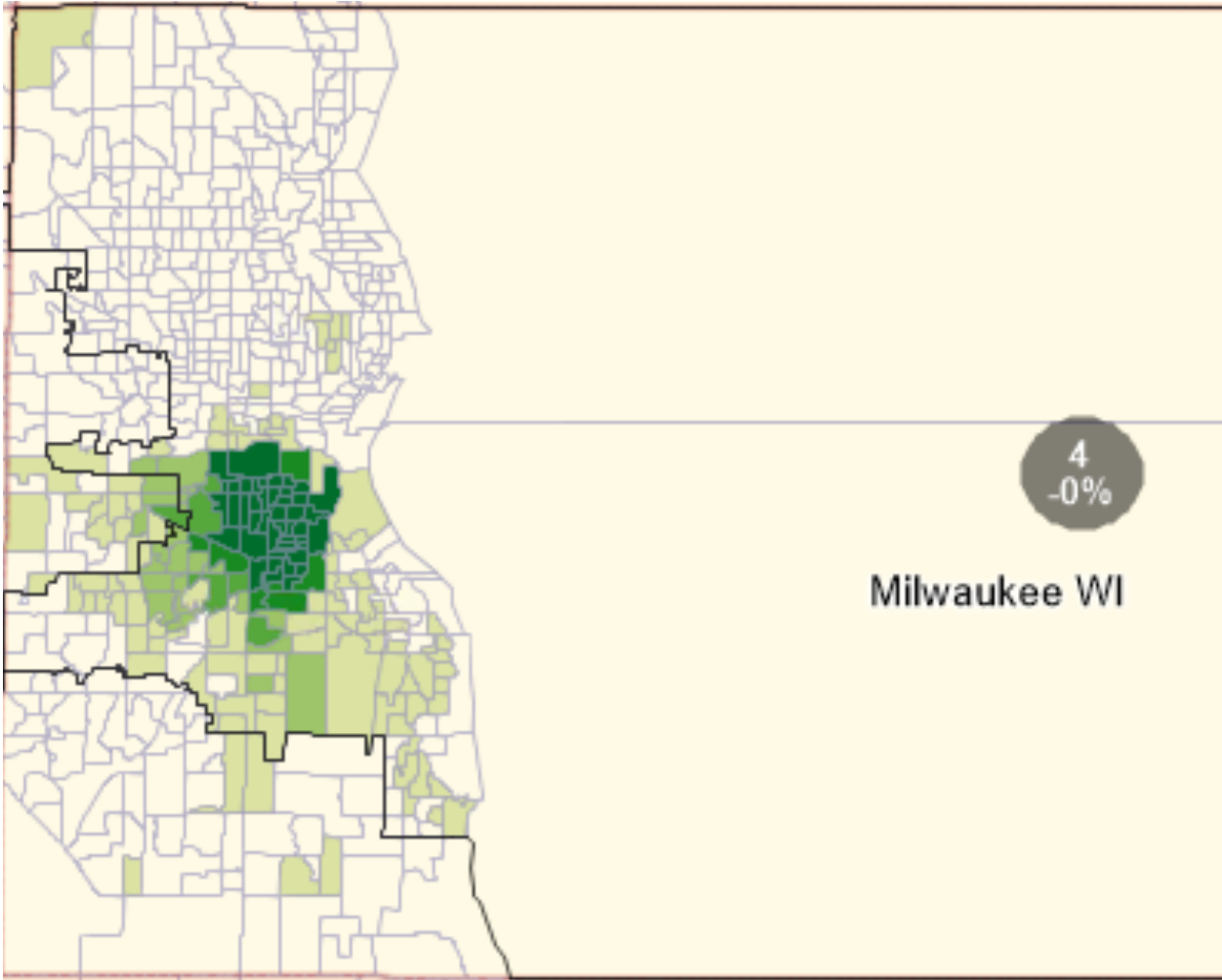Figure 15: Milwaukee Hispanic Voting Age Population Map

Figure 16: Compactness Measures

	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	3,822.89	N/A
Min	0.25	1.41	1.44	0.30	0.48	0.69	0.31	0.17	N/A	13.01
Max	0.56	1.78	1.83	0.48	0.87	0.95	0.69	0.46	N/A	87.58
Mean	0.41	1.60	1.64	0.38	0.75	0.79	0.46	0.34	N/A	32.13
Std. Dev.	0.11	0.12	0.14	0.07	0.14	0.09	0.17	0.10	N/A	24.53

District	Reock	Schwartzberg	Alternate Schwartzberg	Polsby-Popper	Population Polygon	Area/Convex Hull	Population Circle	Ehrenburg	Perimeter	Length-Width
1	0.25	1.60	1.68	0.36	0.87	0.88	0.31	0.17	322.13	87.58
2	0.49	1.58	1.61	0.39	0.80	0.73	0.69	0.39	311.92	13.01
3	0.25	1.78	1.83	0.30	0.85	0.69	0.36	0.28	704.56	26.48
4	0.45	1.47	1.50	0.45	0.83	0.95	0.62	0.42	175.12	26.54
5	0.39	1.71	1.74	0.33	0.48	0.76	0.38	0.22	283.30	23.45
6	0.56	1.54	1.55	0.42	0.66	0.79	0.36	0.46	517.99	19.34
7	0.50	1.67	1.80	0.31	0.64	0.73	0.32	0.36	1,066.91	45.51
8	0.42	1.41	1.44	0.48	0.87	0.80	0.67	0.42	440.96	15.10

Figure 17: County Splits

Split Counts

County
    Cases where an area is split among 2 Districts: 5
    Cases where an area is split among 3 Districts: 2
Voting District
    Cases where an area is split among 2 Districts: 10

County	District	Population
Split Counties:		
Columbia WI	2	57,659
Columbia WI	6	831
Green WI	2	32,652
Green WI	3	4,441
Jackson WI	3	4,771
Jackson WI	7	16,374
Milwaukee WI	1	95,887
Milwaukee WI	4	736,714
Milwaukee WI	5	106,888
Outagamie WI	6	25,194
Outagamie WI	8	165,511
Washington WI	5	135,130
Washington WI	6	1,631
Waukesha WI	1	3,784
Waukesha WI	4	0
Waukesha WI	5	403,194

Figure 18: City and Census-Designated Place Splits

City/Town	District	Population	%
Appleton WI	6	1,441	1.9
Appleton WI	8	74,203	98.1
Bayside WI	4	4,378	97.7
Bayside WI	5	104	2.3
Birnamwood WI	6	716	98.1
Birnamwood WI	7	14	1.9
Brodhead WI	1	85	2.6
Brodhead WI	2	3,189	97.4
Columbus WI	2	5,540	100.0
Columbus WI	6	0	0.0
Eau Claire WI	3	67,238	96.9
Eau Claire WI	7	2,183	3.1
Edgerton WI	1	5,799	97.5
Edgerton WI	2	146	2.5
Hartford WI	5	15,617	99.9
Hartford WI	6	9	0.1
Kewaskum WI	5	4,309	100.0
Kewaskum WI	6	0	0.0
Lac La Belle WI	2	2	0.7
Lac La Belle WI	5	279	99.3
Lake Wisconsin WI	2	4,525	98.0

Lake Wisconsin WI	3	91	2.0
Marshfield WI	6	18,119	95.7
Marshfield WI	7	810	4.3
Menasha WI	6	15,261	83.5
Menasha WI	8	3,007	16.5
Middle Village WI	6	261	90.0
Middle Village WI	7	29	10.0
Milwaukee WI	4	577,222	100.0
Milwaukee WI	5	0	0.0
Mukwonago WI	1	222	2.7
Mukwonago WI	5	8,040	97.3
Pulaski WI	6	220	5.7
Pulaski WI	7	0	0.0
Pulaski WI	8	3,650	94.3
Watertown WI	2	14,674	64.0
Watertown WI	6	8,252	36.0
West Allis WI	4	1,824	3.0
West Allis WI	5	58,501	97.0
Whitewater WI	1	11,721	78.7
Whitewater WI	2	3,168	21.3
Wisconsin Dells WI	2	2,449	83.2
Wisconsin Dells WI	3	384	13.1
Wisconsin Dells WI	6	109	3.7

Summary Statistics

Number of City/Town not split	775
Number of City/Town split	25
Number of City/Town split in 2	23
Number of City/Town split in 3	2
Total number of splits	52

Figure 19: Precinct Splits

Voting District

    Cases where an area is split among 2 Districts: 10

Split VTDs:

Columbia WI	2	389
Columbia WI	6	373
Green WI	2	722
Green WI	3	120
Jackson WI	3	140
Jackson WI	7	161
Milwaukee WI	4	1,673
Milwaukee WI	5	0
Milwaukee WI	1	2,235
Milwaukee WI	4	0
Milwaukee WI	4	1,824
Milwaukee WI	5	377
Outagamie WI	6	29
Outagamie WI	8	454
Washington WI	5	166
Washington WI	6	641
Waukesha WI	1	619
Waukesha WI	5	246
Waukesha WI	1	1,094
Waukesha WI	5	0

Figure 20: Dave's Redistricting App Evaluation

Ratings: WI GG

- Competitiveness: 39
- Proportionality: 40
- Splitting: 81
- Compactness: 56
- Minority: 50
- Requirements: Met

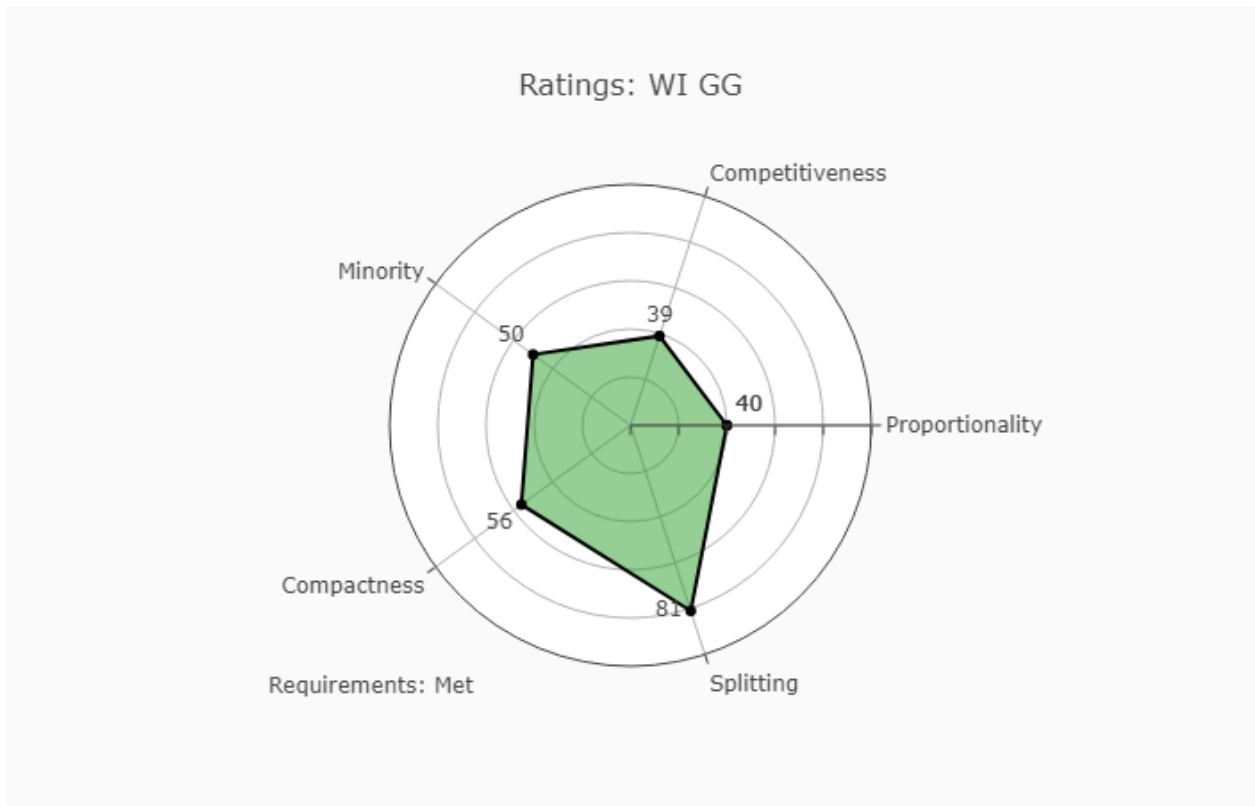## Figure 21: Planscore Statistics

Efficiency Gap: 14.4%

This Plan

+25% D   Balanced   +25% R
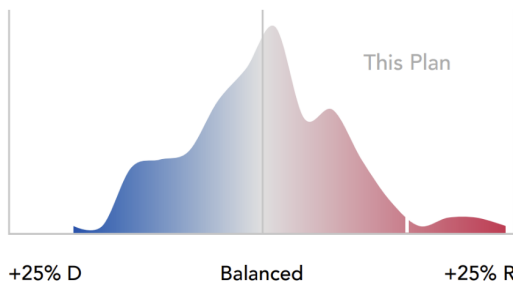
Votes for Republican candidates are expected to be inefficient at a rate 14.4% lower than votes for Democratic candidates, favoring Republicans in 94% of predicted scenarios.* Learn more ❯

Sensitivity Testing

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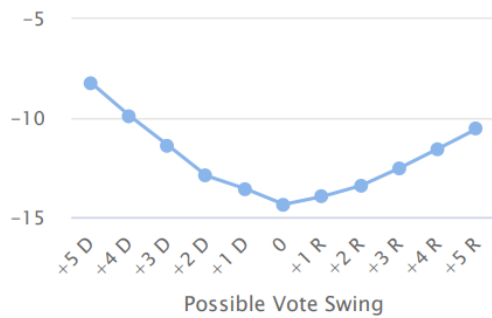
Sensitivity testing shows us a plan's expected efficiency gap given a range of possible vote swings. It lets us evaluate the durability of a plan's skew.

Declination: 0.33

+0.81 D   Balanced   +0.81 R
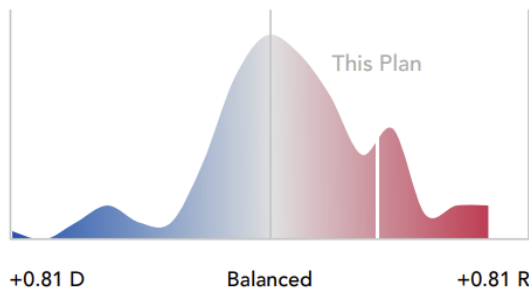
The mean Democratic vote share in Democratic districts is expected to be 9.5% higher than the mean Republican vote share in Republican districts. Along with the relative fraction of seats won by each party, this leads to a declination that favors Republicans in 96% of predicted scenarios.* Learn more ❯

Partisan Bias: 16.6%

+25% D   Balanced   +25% R
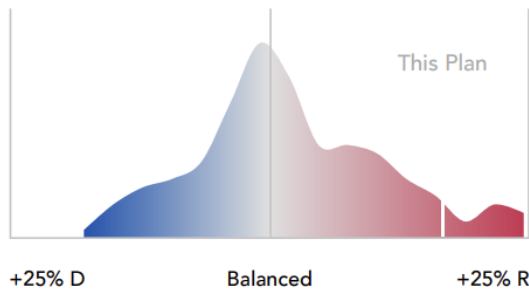
Republicans would be expected to win 16.6% extra seats in a hypothetical, perfectly tied election, favoring Republicans in 97% of predicted scenarios.* Learn more ❯

Mean-Median Difference: 4.1%

+12% D   Balanced   +12% R
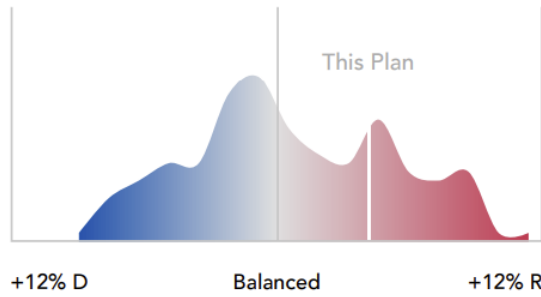
The median Republican vote share is expected to be 4.1% higher than the mean Republican vote share, favoring Republicans in 97% of predicted scenarios.* Learn more ›

Figure 22: Current Map District Statistics

ID	Total Pop	Devation	Dem	Rep	Oth	Total VAP	White	Minority	Hispanic	Black	Asian	Native	Pacific
1	727452	-0.0126	0.4457	0.5376	0.0167	567036	0.8066	0.1934	0.0891	0.061	0.0236	0.0177	0.001
2	789393	0.0715	0.6917	0.2915	0.0169	624507	0.8132	0.1868	0.0615	0.0508	0.055	0.0162	0.0012
3	733584	-0.0042	0.467	0.5135	0.0195	577889	0.9093	0.0907	0.0266	0.0165	0.0241	0.0176	0.0011
4	695395	-0.0561	0.7585	0.2249	0.0166	526150	0.4529	0.5471	0.1588	0.3274	0.0518	0.0215	0.0014
5	735571	-0.0016	0.4164	0.5669	0.0167	579865	0.864	0.136	0.056	0.0279	0.0336	0.0143	0.001
6	727774	-0.0121	0.4151	0.5667	0.0182	575819	0.884	0.116	0.0429	0.0259	0.0263	0.0162	0.0009
7	732582	-0.0056	0.3921	0.591	0.0169	577166	0.9142	0.0858	0.0195	0.01	0.0167	0.0324	0.001
8	751967	0.0207	0.4122	0.5709	0.0169	583868	0.8693	0.1307	0.0477	0.0194	0.0231	0.0373	0.001
Summary	736715	0.1276	0.4945	0.4882	0.0173	576538	0.8183	0.1817	0.0616	0.0642	0.0318	0.0216	0.0011

Figure 23: Current Map Statewide Partisan Map (2020 Election)
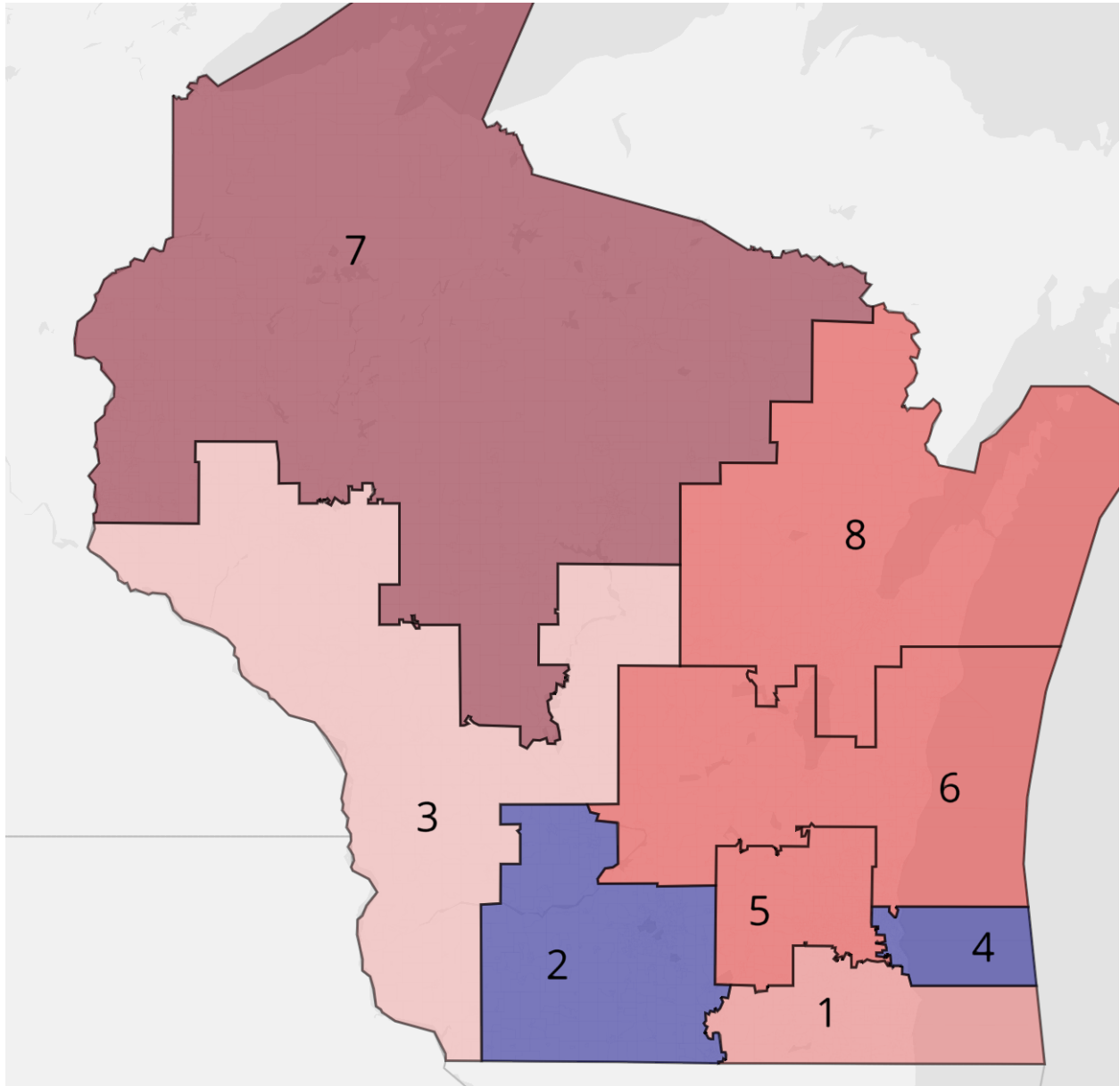
Figure 24: Evers Plan District Statistics

ID	Total Pop	Deviation	Dem	Rep	Oth	Total VAP	White	Minority	Hispanic	Black	Asian	Native	Pacific
1	736715	0	0.4814	0.5014	0.0173	575451	0.7824	0.2176	0.1024	0.0709	0.0243	0.0193	0.0011
2	736715	0	0.6998	0.2835	0.0168	584519	0.82	0.18	0.0567	0.0466	0.0576	0.0156	0.0012
3	736716	0	0.4669	0.5136	0.0195	580338	0.9095	0.0905	0.0266	0.0165	0.024	0.0175	0.0011
4	736714	0	0.7555	0.2274	0.017	558133	0.4705	0.5295	0.1535	0.3146	0.0519	0.0213	0.0014
5	736715	0	0.3778	0.6062	0.016	578845	0.8836	0.1164	0.0472	0.0194	0.031	0.0132	0.0009
6	736714	0	0.4128	0.569	0.0182	582819	0.8853	0.1147	0.0424	0.0254	0.0258	0.0162	0.0009
7	736715	0	0.3919	0.5912	0.0169	580264	0.9144	0.0856	0.0194	0.01	0.0166	0.0324	0.001
8	736714	0	0.4142	0.5689	0.0169	571931	0.8677	0.1323	0.0483	0.0197	0.0234	0.0378	0.001
Summary	736715	0	0.4945	0.4882	0.0173	576538	0.8183	0.1817	0.0616	0.0642	0.0318	0.0216	0.0011

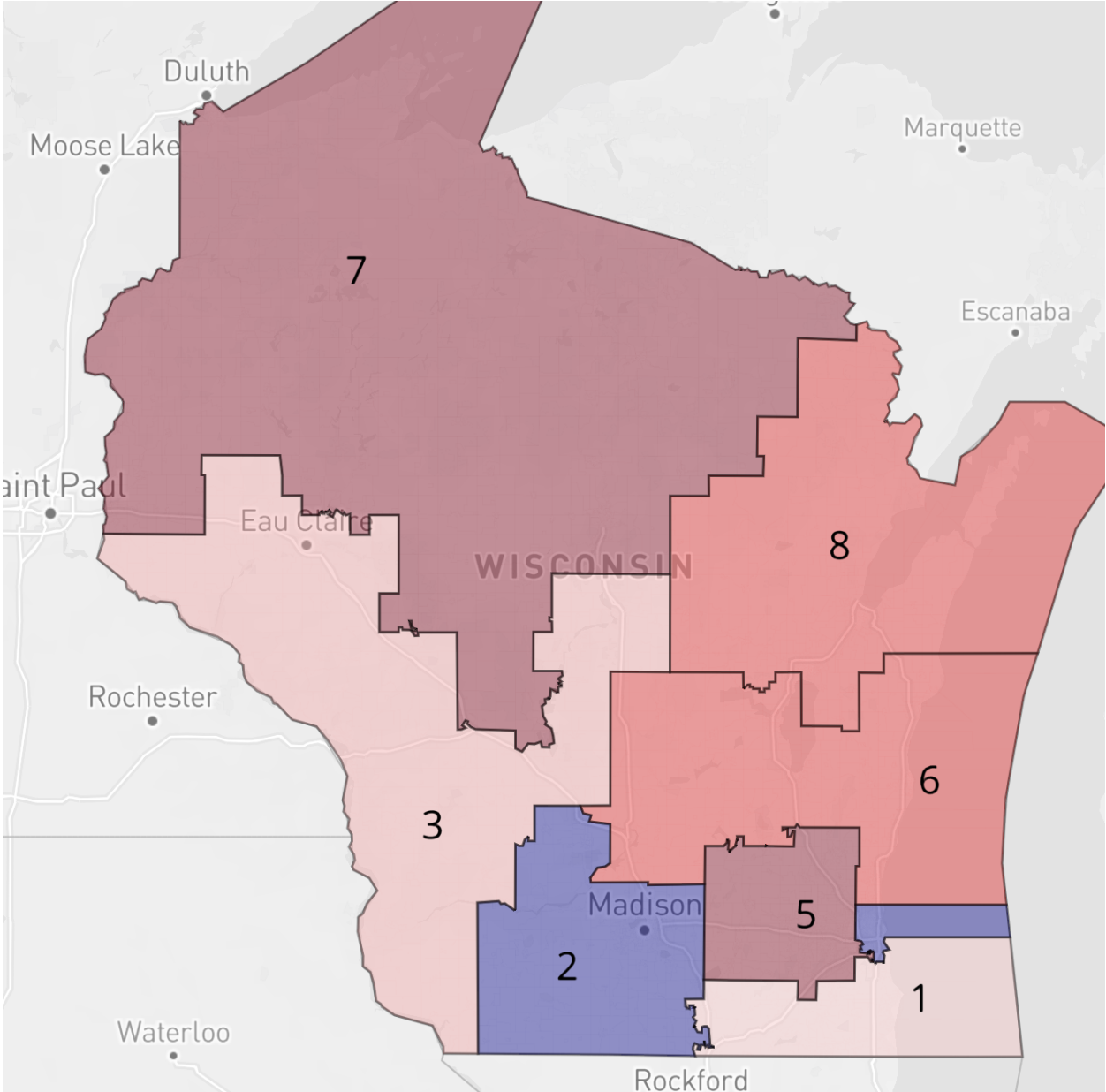Figure 25: Evers Plan Statewide Partisan Map (2020 Election)
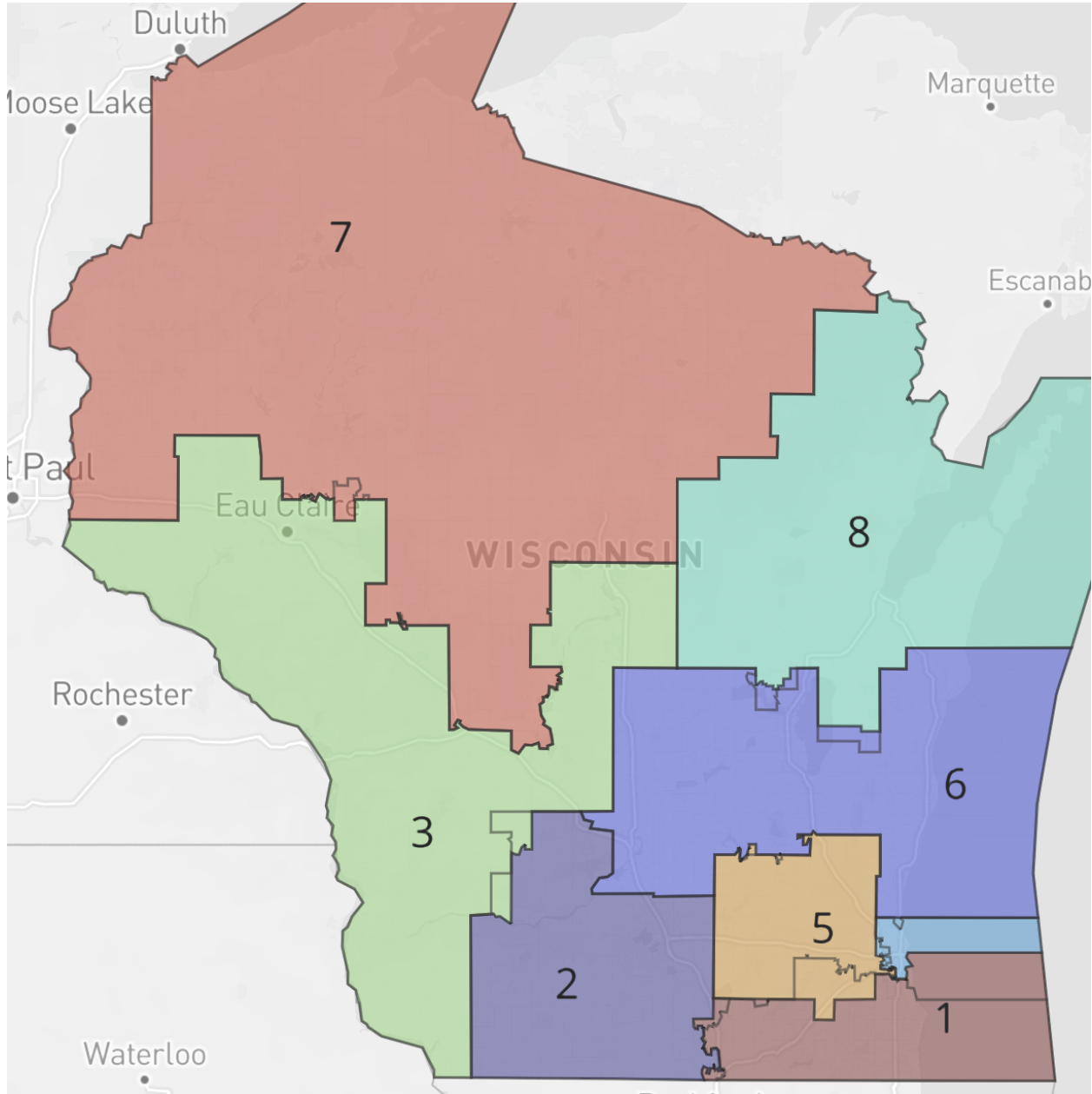
Figure 26: Evers Plan Comparison with Current Districts

Figure 27: Legislature Plan District Statistics

ID	Total Pop	Devation	Dem	Rep	Oth	Total VAP	White	Minority	Hispanic	Black	Asian	Native	Pacific
1	736714	0	0.4463	0.5369	0.0168	574426	0.8082	0.1918	0.0884	0.0603	0.0234	0.0177	0.001
2	736715	0	0.7063	0.2769	0.0168	583522	0.8071	0.1929	0.0625	0.0535	0.0582	0.0157	0.0012
3	736715	0	0.4535	0.5274	0.019	576882	0.9099	0.0901	0.029	0.0158	0.0215	0.0181	0.0011
4	736714	0	0.7516	0.2315	0.0169	558798	0.4755	0.5245	0.1516	0.3121	0.0513	0.021	0.0014
5	736715	0	0.4017	0.5819	0.0164	580519	0.867	0.133	0.0573	0.0251	0.0318	0.0144	0.001
6	736715	0	0.4117	0.5701	0.0182	582050	0.8851	0.1149	0.0416	0.0254	0.0269	0.0162	0.001
7	736715	0	0.4061	0.5767	0.0172	583428	0.912	0.088	0.0183	0.011	0.0186	0.0325	0.0011
8	736715	0	0.416	0.5669	0.0171	572675	0.8692	0.1308	0.0475	0.0194	0.0231	0.0376	0.0009
Summary	736715	0	0.4945	0.4882	0.0173	576538	0.8183	0.1817	0.0616	0.0642	0.0318	0.0216	0.0011

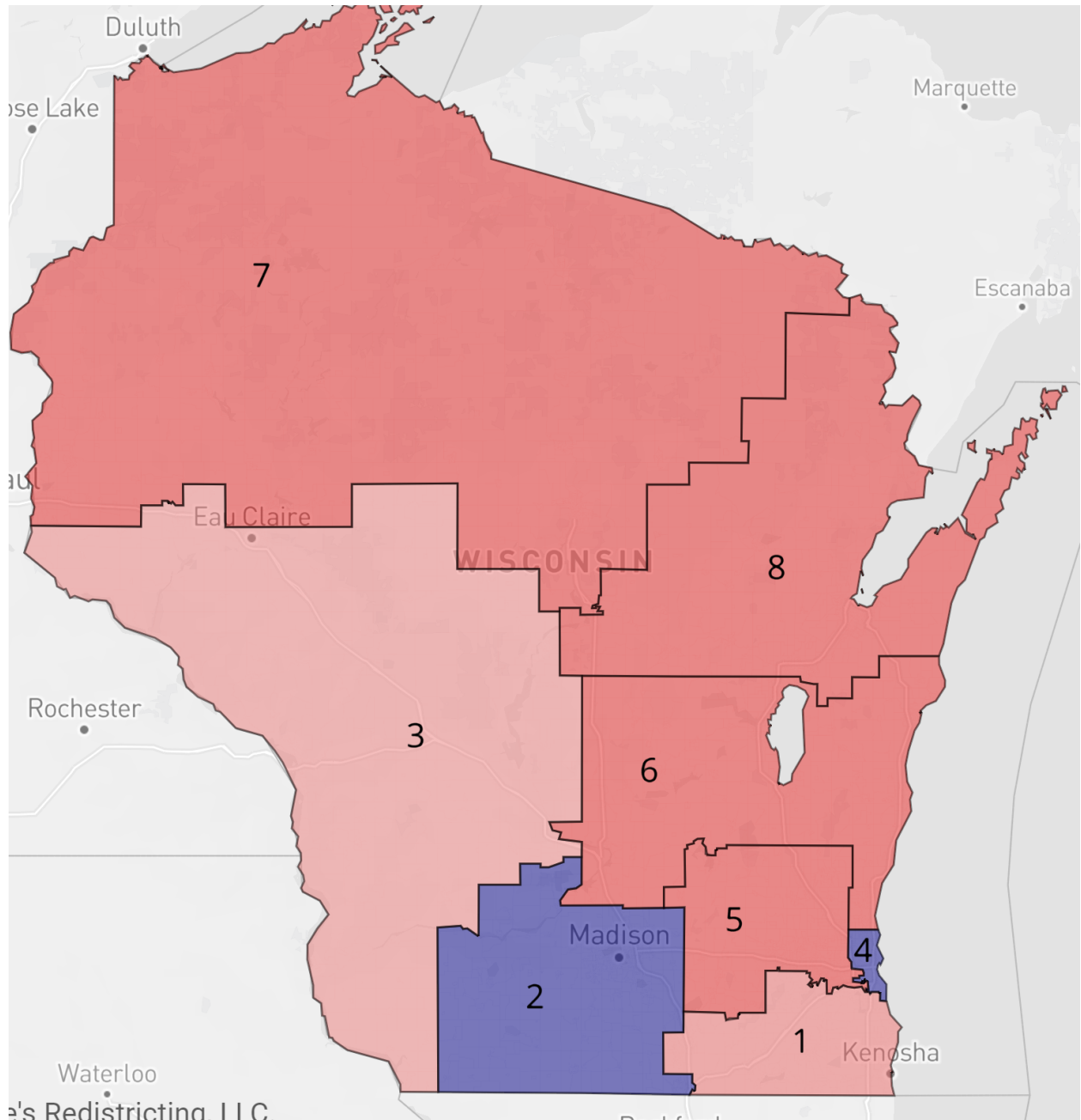Figure 28: Legislature Plan Statewide Partisan Map (2020 Election)

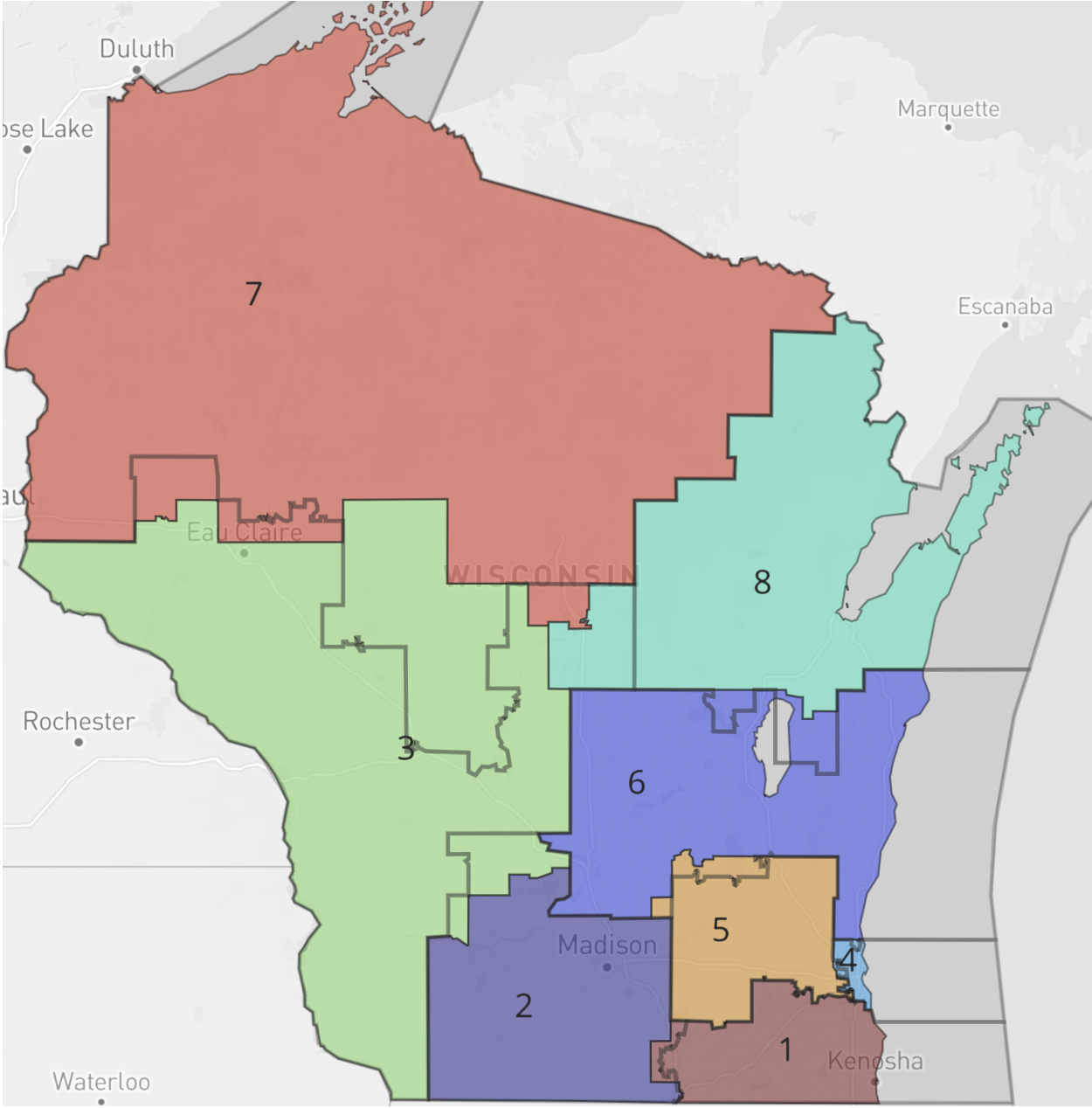Figure 29: Legislature Plan Comparison with Current Districts

Figure 30: Good Governance Proposal Comparison with Current Map