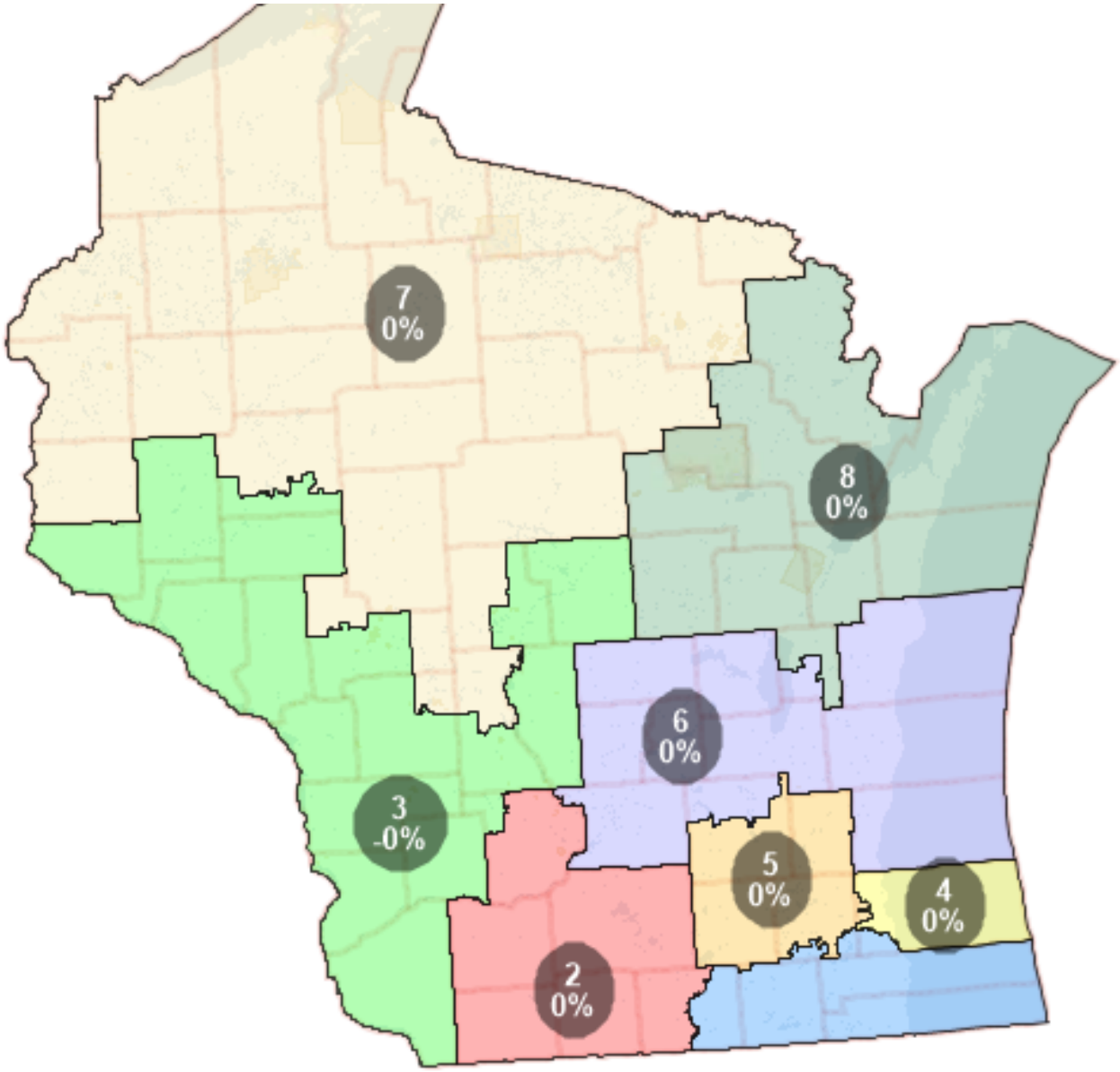


WISCONSIN

LEAST CHANGE REDISTRICTING PLAN PROPOSAL

ZAC STOOR

Introduction:

Criteria and Priorities of Plan:

This least change plan for Wisconsin was drawn with two priorities in mind. The first is compliance with all relevant federal law. This plan complies with both the one person, one vote requirement by achieving perfect population equality and with the Voting Rights Act (VRA).

Additionally, this plan is a least change plan, which means it will remain as close as possible to the district lines current map of Wisconsin districts in use from 2012-2022. Some adjustments are necessary to account for population shifts during the past decade, but since Wisconsin neither gained nor lost a district following the 2020 Census, most changes are rather minor.

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. Furthermore, beyond federal law and least change goals, no other criteria were considered in drawing this plan. While occasionally respecting county and municipal boundaries is used as a factor in deciding where to make small changes to the map, respecting these political subdivisions is not a primary objective of this plan and is more of a tiebreaker in said cases. Partisan fairness was not considered during the process and the map was originally drawn without partisan voting data at all. Lastly, the map was not drawn with the goal of respecting communities of interest. If a community of interest is split under the current map, it likely remains so under this proposal. In summary, this is strictly a least change plan, considering little else.

Tensions between Criteria and Priorities:

Since this plan has only two priorities, there are almost no tensions between them. Of course, complying with one person, one vote through perfect population equality means that I cannot follow the current district lines exactly, but this is a given. There are no required VRA districts in Wisconsin, thus there are no concerns with regard to that aspect of federal law. Besides population equality, there are no other priorities that could conflict with my least change goals.

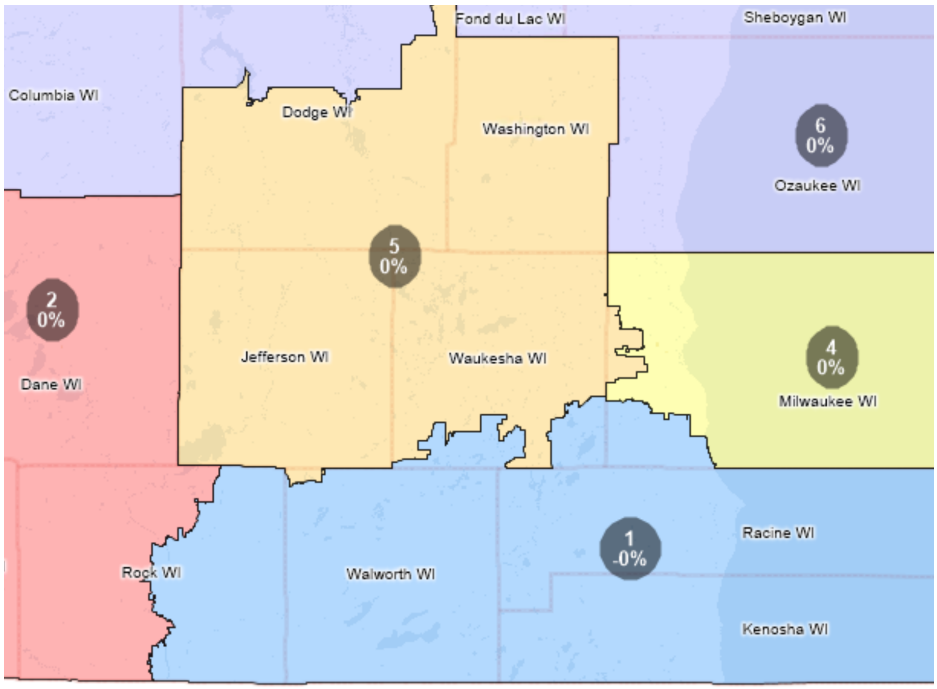
Legal Compliance and Considerations:

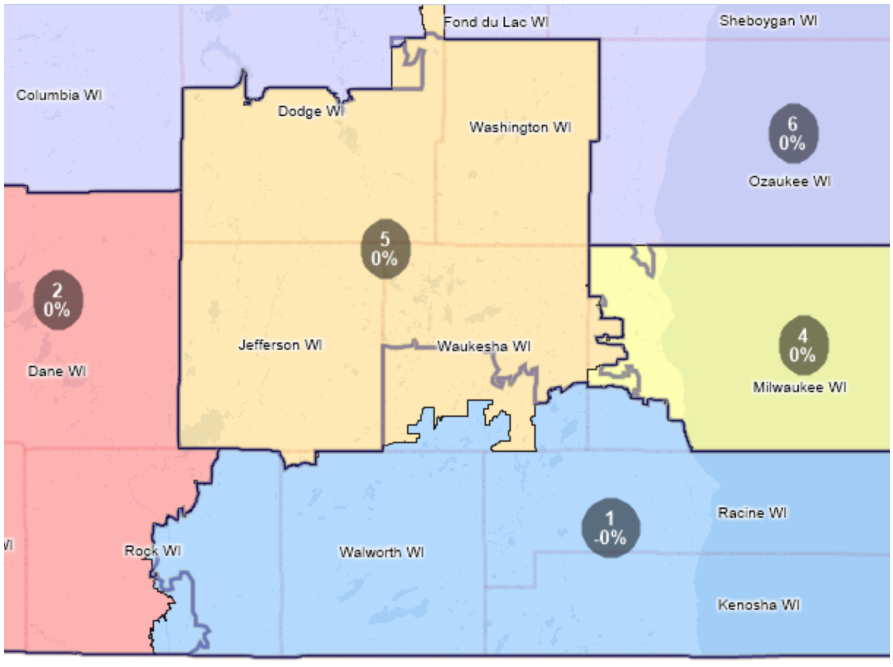
One Person, One Vote:

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 the least change

priority in drawing this map. This also helps avoid any legal challenges to the plan on the basis of population.

Milwaukee and Suburbs:





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.

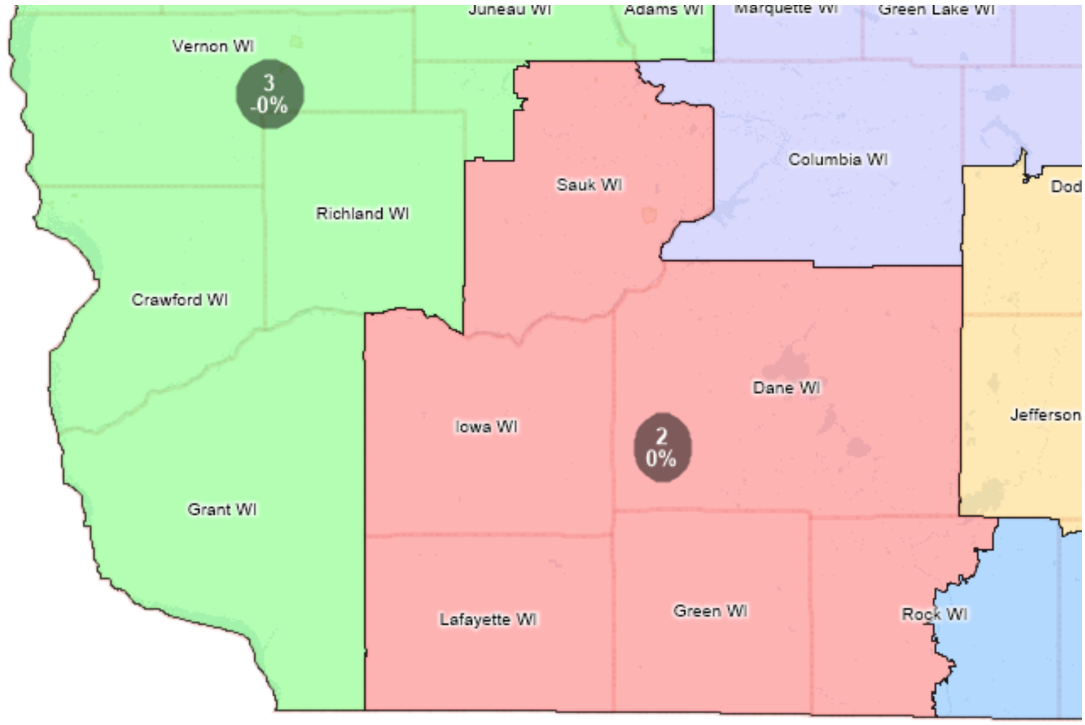
Least Change Goals:

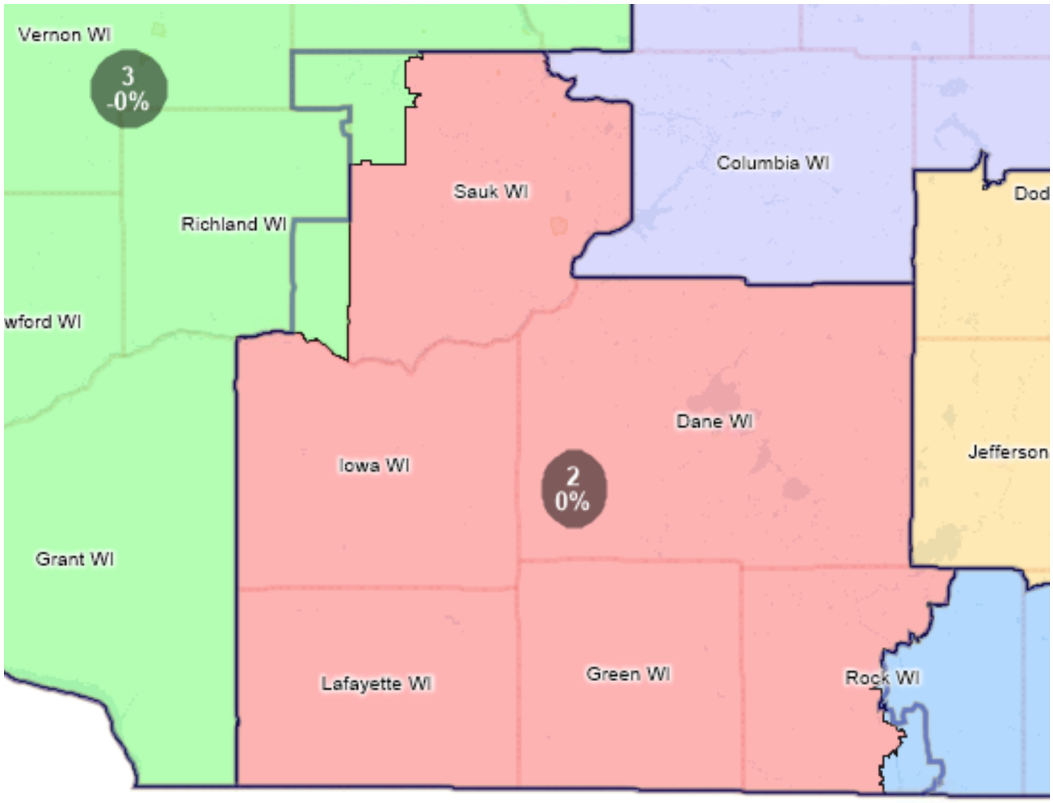
Within the Milwaukee region, the largest changes occur between Districts 1 and 5 in Waukesha County. Due to District 4 being underpopulated following the 2020 Census, it added the suburb of Greenfield and the community of River Falls, both in Milwaukee County, to reach ideal district population. It also took in a small amount of territory from the city of Wauwatosa. Due to its own underpopulation and the loss of territory to District 4, District 5 absorbed a significant amount of Waukesha County from District 1. I chose to take in more territory from Waukesha County since it had already been split significantly under the current map and it had a large population to draw from without needlessly splitting additional cities or census-designated places. Furthermore, taking from District 1's Waukesha territory allowed District 1 to take in the entire city of Beloit, helping mitigate District 2's overpopulation. District 5 also took in a small portion of rural Dodge County, which had also been split under the current map. This change will be discussed in the Central Wisconsin section.

District 1 saw the other significant change in this region, incorporating the city of Beloit in Rock County into the district. Dane County saw by far the most growth in the state over the past decade, leaving District 2 7.15% over the ideal population at the beginning of the drawing process. Only Districts 2 and 8 were overpopulating, meaning that many of the moves to shift population had to be done in two steps, first taking from one of those two districts and then adding to the target district. Unless, of course, the target district bordered one of those two districts. This is the case with District 1. Beloit is a sizable city, and adding it to District 1 in its entirety achieved equal population for Districts 1 and 5 without any additional splits and while remaining faithful to the current map's lines.

The shifts in the Milwaukee region did not change the geographic character of any district in a significant way. District 1 remains a mix of suburban Milwaukee and smaller cities across the southern border, District 5 remains suburban and exurban, and District 4 remains concentrated on Milwaukee and its immediate surroundings.

Madison and Surroundings:

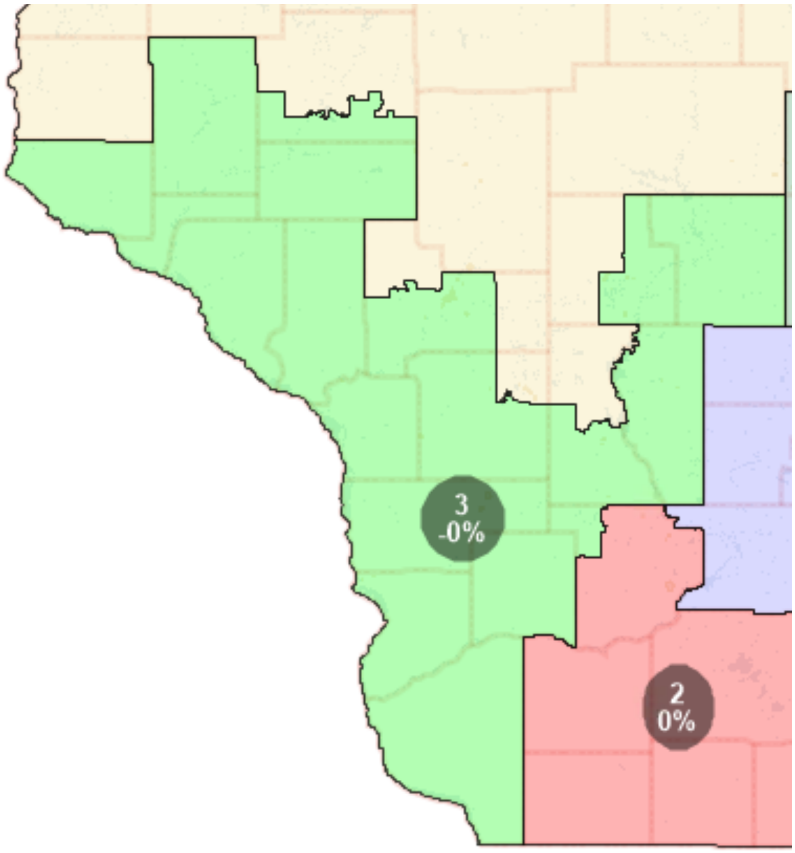


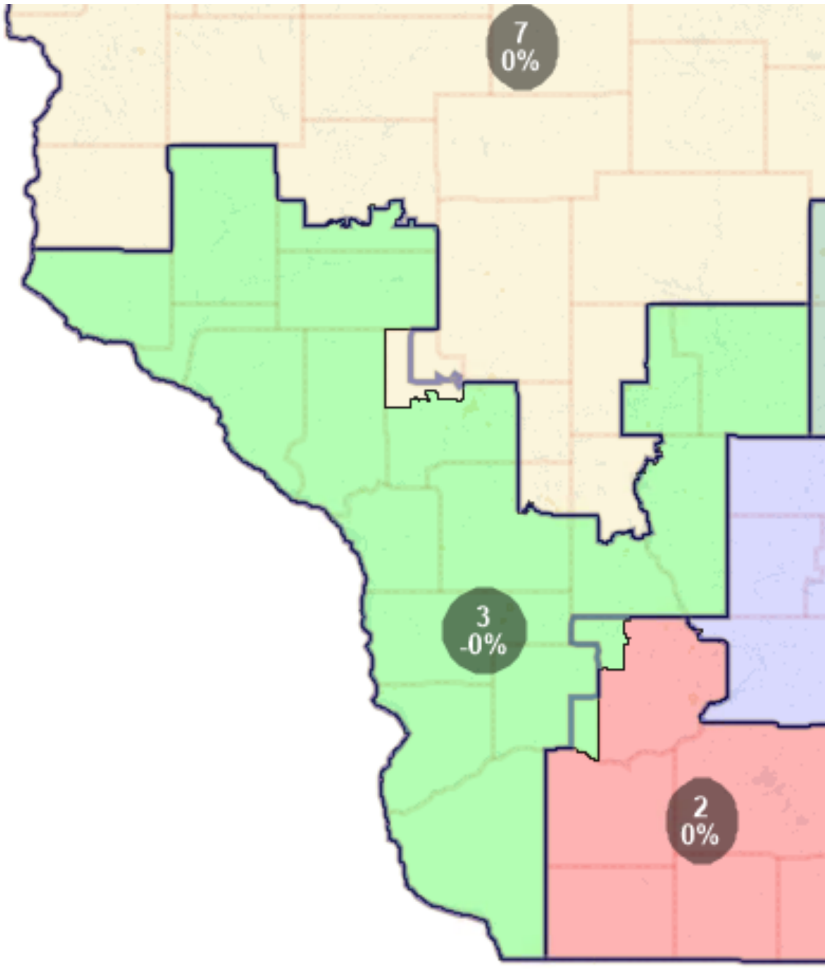


Least Change Goals:

As the source of most of Wisconsin's growth over the last decade, District 2 needed to shed territory to surrounding districts in order to again comply with one person, one vote. The bulk of this was achieved through the addition of Beloit to District 1, which balanced the Milwaukee area's population. The other slight shift in District 2 was the addition of the rest of Richland County and a small portion of Sauk County to District 3. Reuniting Richland was an obvious first step when balancing the two, but I chose Sauk to supply the remainder of the necessary population for District 3 as it is the most compact option for adding territory. Since District 3 already forms a Y-shape going towards Stephens Point, I found it best to add to that shape rather than add a single jagged edge on the southern end of the district. In short, it's the cleanest split available. Overall, District 2 remains based around Madison and changes little in shape despite losing a significant amount of population.

Driftless/Southwest Wisconsin:

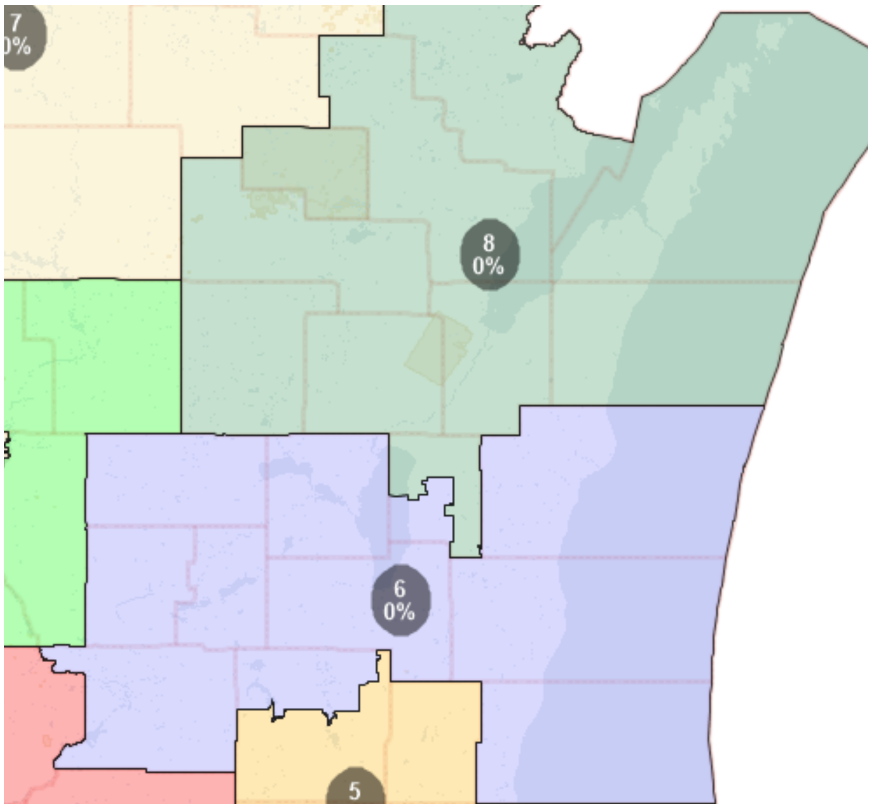


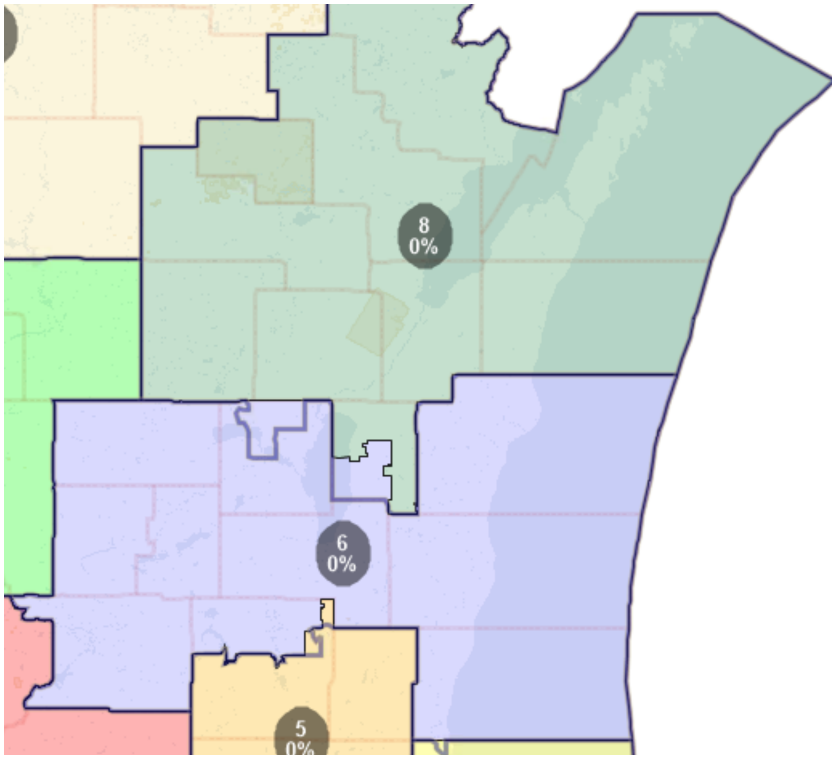


Least Change Goals:

Besides the already mentioned additions from Sauk and Richland Counties, the Driftless region only sees one change. District 7, being slightly underpopulated, takes in more of Jackson County from District 3. I chose to absorb population from Jackson County as it had a significant amount of rural territory that allowed me to absorb only a small amount of people into the district quite easily. Additionally, since Jackson is already split, it does not diverge significantly at all from the current map. Both Districts 3 and 7 follow their current shapes extremely closely and remain centered on the Driftless and Northwoods regions, respectively.

Central Wisconsin:





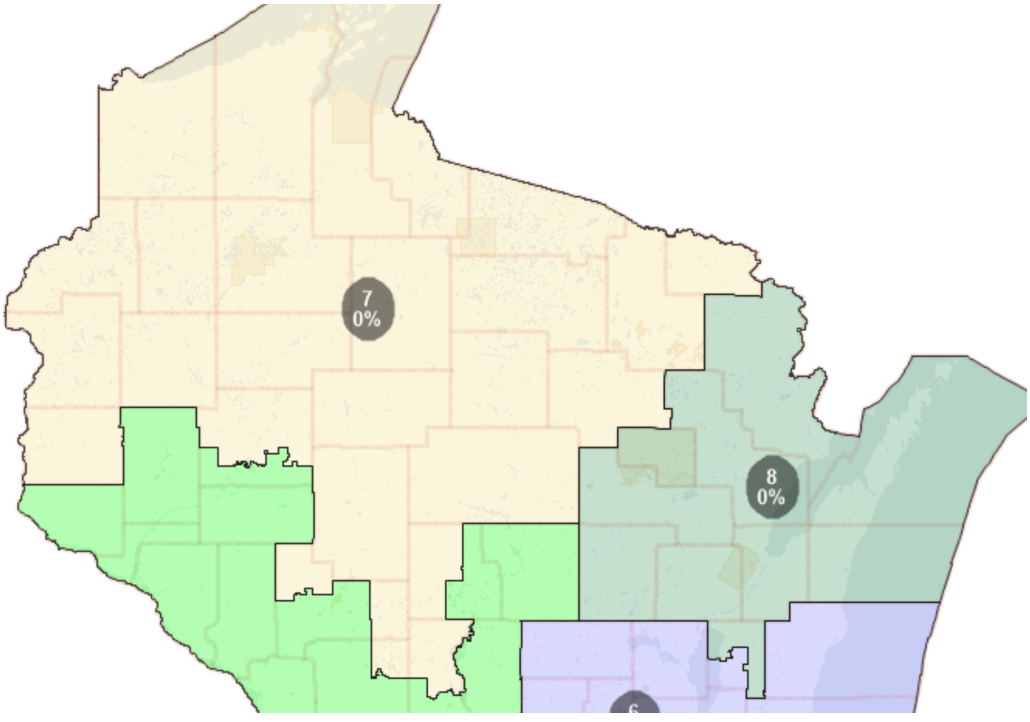
Least Change Goals:

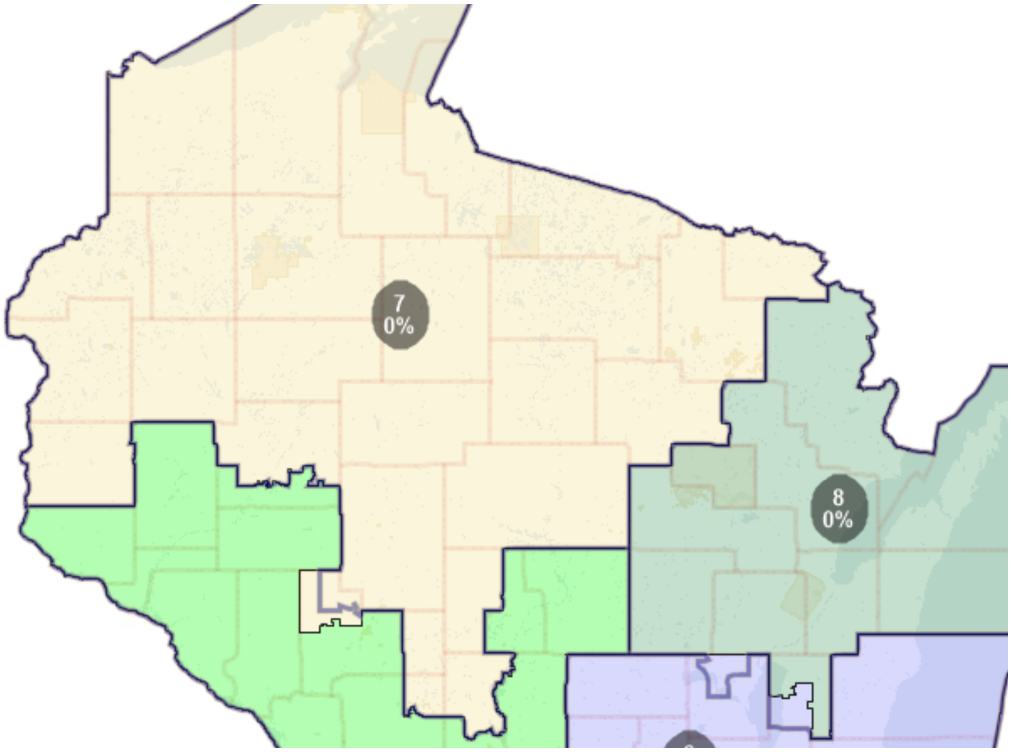
District 8 was the only other district in the state that was overpopulated following the 2020 Census, albeit by a much smaller 2%. As such, Winnebago was reunited under District 6 and a portion of Calumet County was also added. Calumet County was the most convenient place to draw from. Taking from Kewaunee County would have jeopardized the contiguity of District 8, as the county is rather small and it the only access that Door County has to the rest of the state. Adding population from Waupaca or Outagamie Counties would cause District 6 to deviate further from the current district lines by adding an unnecessary appendage to the district. Thus, Calumet County was the best option.

In Dodge County, District 5 absorbed a small amount of rural territory from District 6. This was to help balance for population, as District 6 had to absorb all of District 8's surplus, rendering it overpopulated. Dodge County was the only county split between Districts 5 and 6 in the current map, and was therefore the obvious choice for population balancing. That particular corner of Dodge County was chosen as the other portions of the county that border District 5 are mostly larger towns that would need to be split. By taking land in the rural corner of the county instead, I avoided needing to split the larger towns like Beaver Dam.

Overall, both districts retain their original shapes and characteristics well.

Northern Wisconsin:





Least Change Goals:

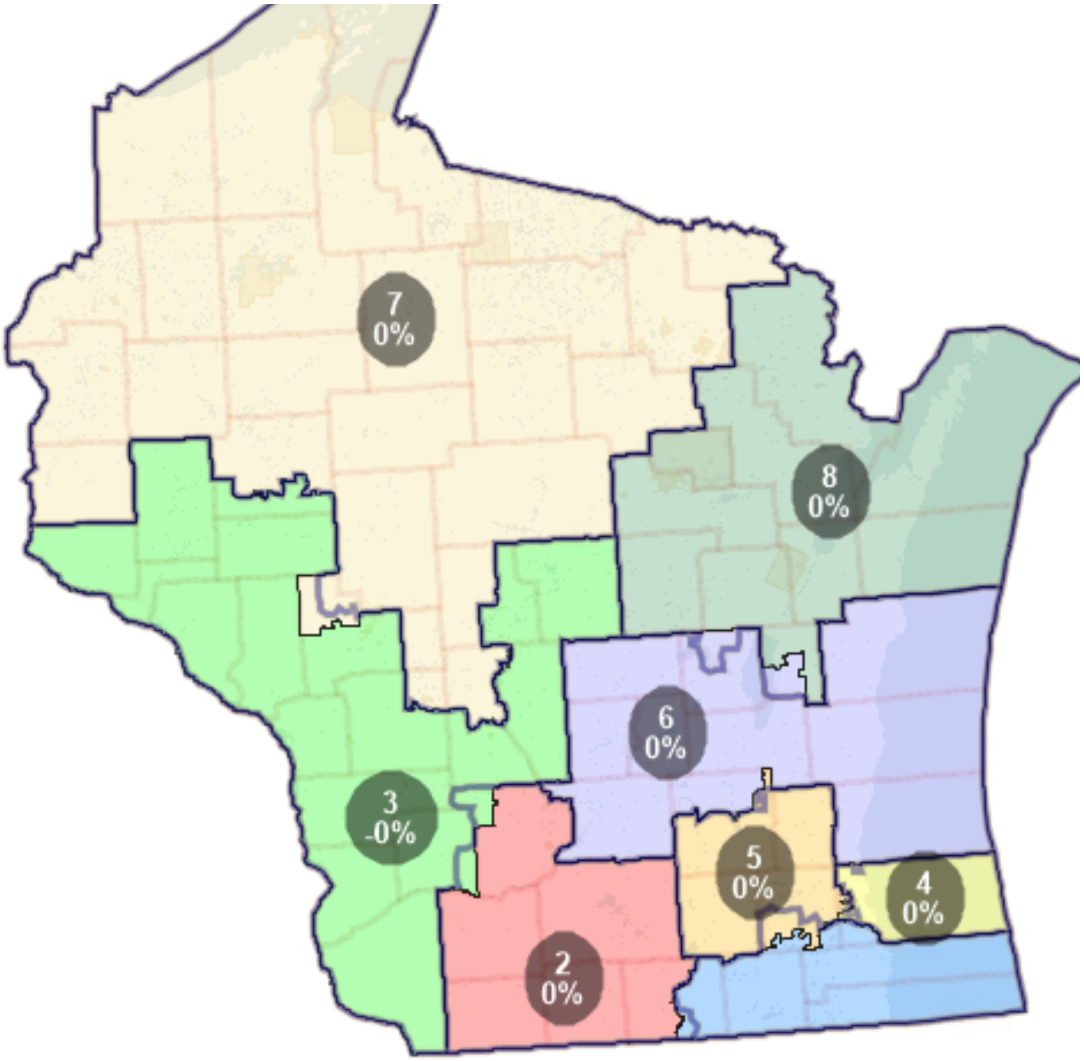
The slight shift in Jackson County has already been discussed. There are no other changes in the region.

Partisan Fairness Statistics:

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 4.6% and an efficiency gap of 15.0%, both in favor of Republicans. Since this least change map is based on a map that already had heavy partisan bias in favor of the Republicans, it is only natural that this map would also be biased against Democrats. It is impossible to draw a partisanly fair least change map in Wisconsin, due to the Democratic voters being packed into Districts 2 and 4. This is a side effect of Wisconsin's political geography, where Democrats are extremely concentrated in Madison and Milwaukee.

Statewide Comparison with Current Map:



Least Change Goals:

All in all, my plan follows the current map's district lines incredibly closely. The largest divergences are in Districts 5 and 8, but these changes are still rather small and do not fundamentally change the natures of the districts they affect. Every district is based around the same region/city in the current map and my own. Since the only other concern in my plan besides least change principles is federal law, I was able to focus exclusively on balancing the population of each district.

Partisan Statistics:

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. This is a notably higher mean-median gap compared to my map's 4.6% in favor of Republicans, however my plan's efficiency gap is more

than 4% higher at 15%. Since partisan fairness is not a focus of this plan, it doesn't not necessarily matter which plan performs better on these metrics, but it is still an important comparative tool. From these statistics, we can conclude that my plan is marginally more competitive. My District 1 voted 52.3% Trump to 46.0% Biden in 2020, while the current District 1 voted 53.8% Trump to 44.6% Biden in 2020. Both the current and my District 3 have the same 2020 margin: 51.4% Trump to 46.7% Biden. These are the only two competitive districts in either plan.

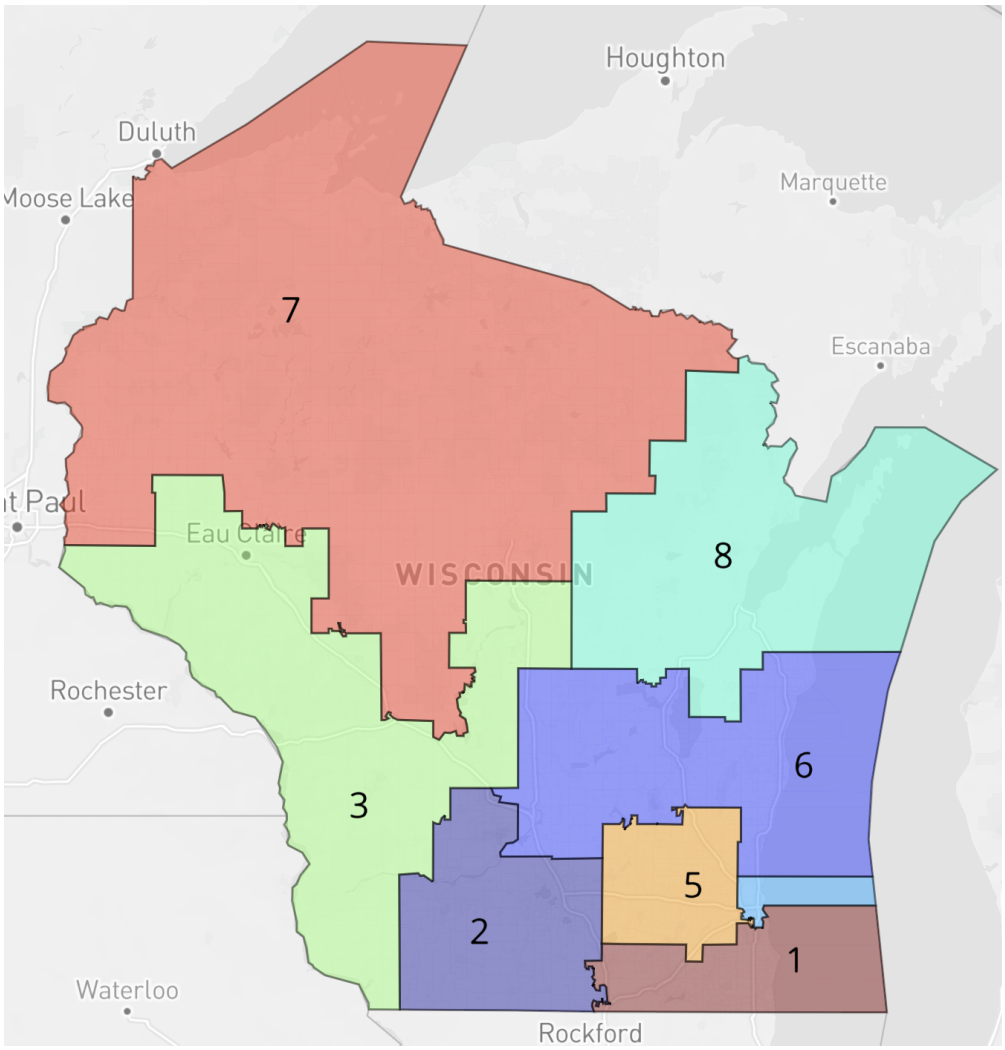
County and Municipal Splits:

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. My map, on the other hand, splits 12 counties, 24 cities or census-designated places, of which 4 are no-population splits, as well as 26 precincts. My plan does split fewer cities and precincts than the current map, despite this not being a primary criteria in drawing my plan.

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. Since the Court is pursuing a least change plan, it is important to compare the proposals made to the Court with my own plan.

Governor Evers' Least Change Proposal:



There are two major differences between Governor Evers' proposal and my own. The first is in the Milwaukee metropolitan area in Districts 1, 4, and 5. 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. District 1 still takes in Beloit from District 2, as well. District 1 absorbs so much territory to make up for the significant amount of population given to District 5, which is also now more compact.

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%. For comparison, my District 1 voted 52.3% Trump to 46.0% Biden in 2020, making evers more competitive than both the current map and my proposal. The other competitive district, District 3, retains the exact same vote percentages in the current map, my map, and Evers' map despite the minor shifts (51.4% Trump, 46.7% 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.

The other major difference between this map and my own is on the border of Districts 6 and 8. Instead of all of Winnebago and some of Calumet Counties as I do, the Evers plan opts to take a portion of both, leaving both counties split but making the border a bit smoother. The implications of this are mostly limited to the aesthetics of following the old district lines' two splits more closely.

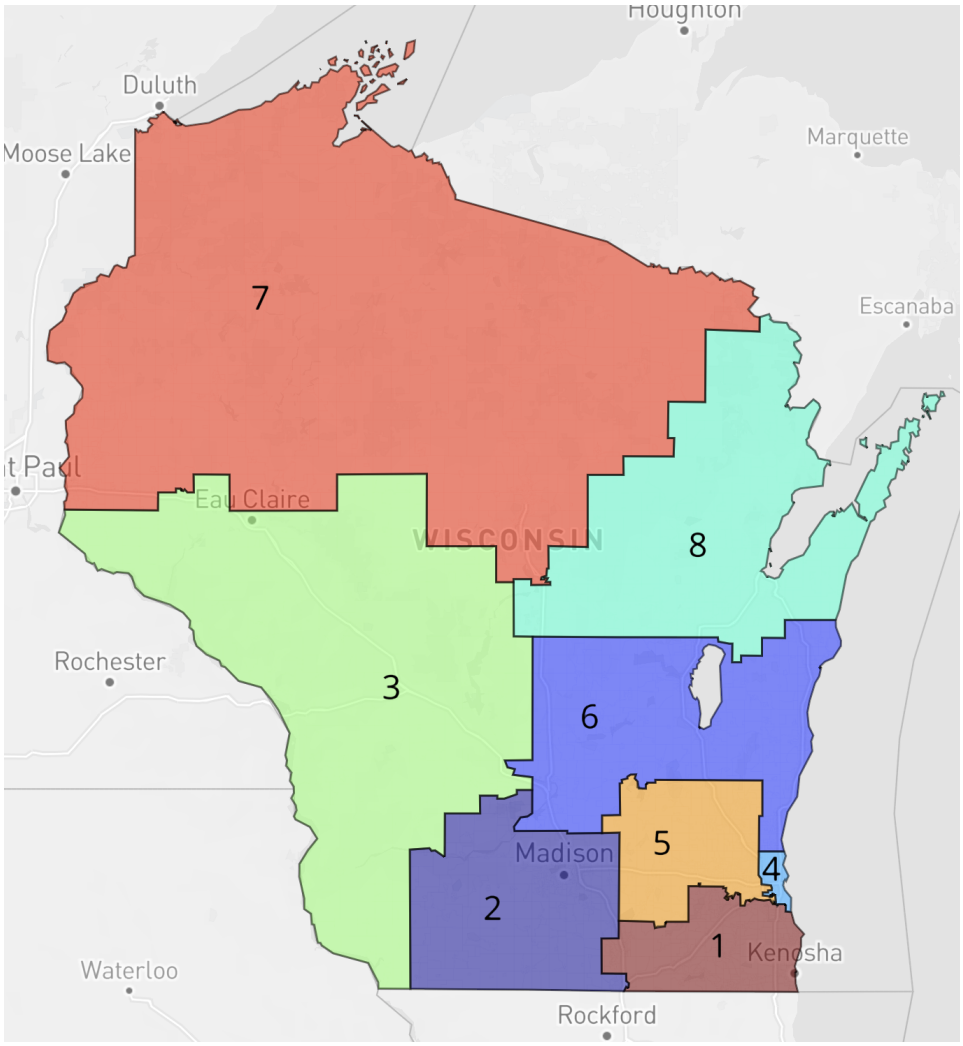
The other changes throughout the state are relatively minor, with only a few precincts' difference with my plan.

Evers' plan has a mean-median gap of 4.9% and an efficiency gap of 16.5%, both in favor of Republicans. This is very comparable to my map's 4.6% mean-median gap and 15.0% efficiency gap, also both in favor of Republicans.

In terms of county and municipal splits, Evers' map also splits 12 counties, just like the current map and my map. It splits 26 cities, 4 of which are non-population splits. 31 precincts are split under his plan. My map splits 12 counties, 24 cities or census-designated places, of which 4 are no-population splits, as well as 26 precincts. Our maps are extremely similar in terms of political subdivision splits as well.

In all, my map and Governor Evers' map are quite similar in statistical terms with slight mapping differences in central Wisconsin and significant differences in the Milwaukee suburbs, likely motivated by an aim on Governor Evers' part to make District 1 as competitive as possible while still respecting least change priorities.

Republican Legislative Proposal:



While the legislature's plan keeps the Milwaukee area's configuration largely the same, the largest difference between it and my plan is that the Legislature's plan significantly changes 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). This leaves District 3 in a notably different configuration than in the current map and under Governor Evers' and my proposals. District 3's original Y-shape is no longer present in this proposal, however it does more closely resemble the current map in the Milwaukee area than in my map or Evers' map.

All other changes are relatively minor.

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.

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.

In sum, the Legislature's proposed map does not follow the current map's district shapes as closely as either my proposal or Evers' proposal, especially with regard to district 3. It is less competitive than either of the other proposals while respecting political subdivision boundaries far less.

Conclusions:

This least change plan achieves its goals of complying with federal law while remaining as faithful as possible to the current district lines. The main concern of this proposal with regard to federal law was respecting one person, one vote, which was accomplished through reaching ideal population in every district. The plan closely follows the current map, with all districts remaining based in the same communities and having the same general shape, with only slight changes to district boundaries. It is still partisanly biased, although slightly less so than the Legislature's proposal, and does not consider communities of interest arguments.

My plan respects the current map's boundaries more than either of the current proposals before the Wisconsin Supreme Court. Governor Evers' map makes more substantial changes in the Milwaukee area than I do in my map, while the Legislature's map does the same with the Driftless region. For these reasons, when only considering least change criteria as the state Supreme Court is, my map is the best suited of the three.

Appendices:

Figure 1: Detailed Map of District 1

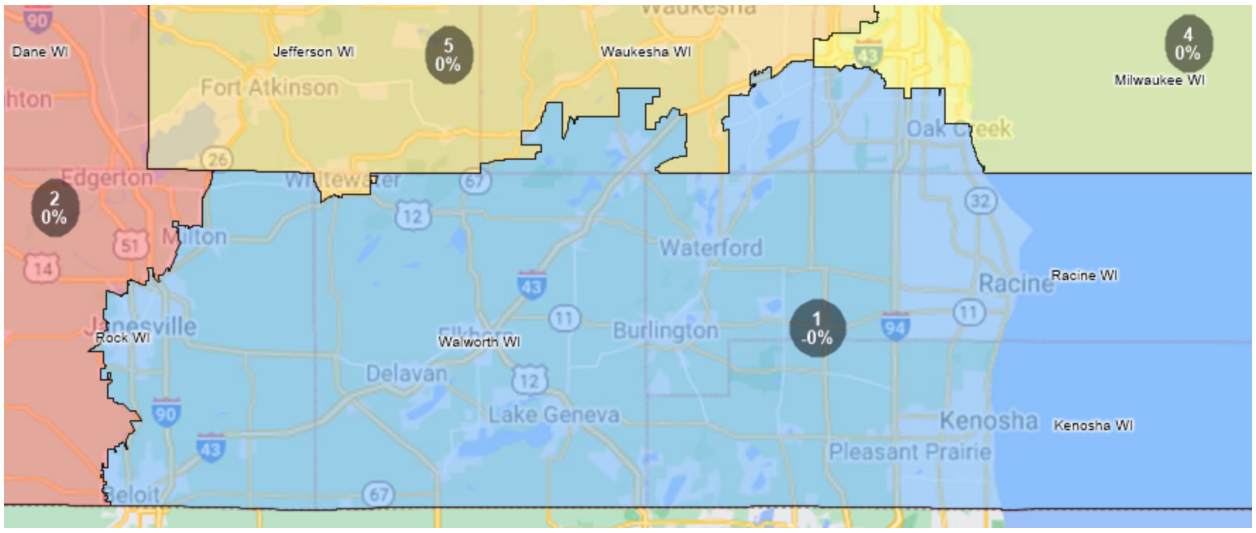


Figure 2: Detailed Map of District 2

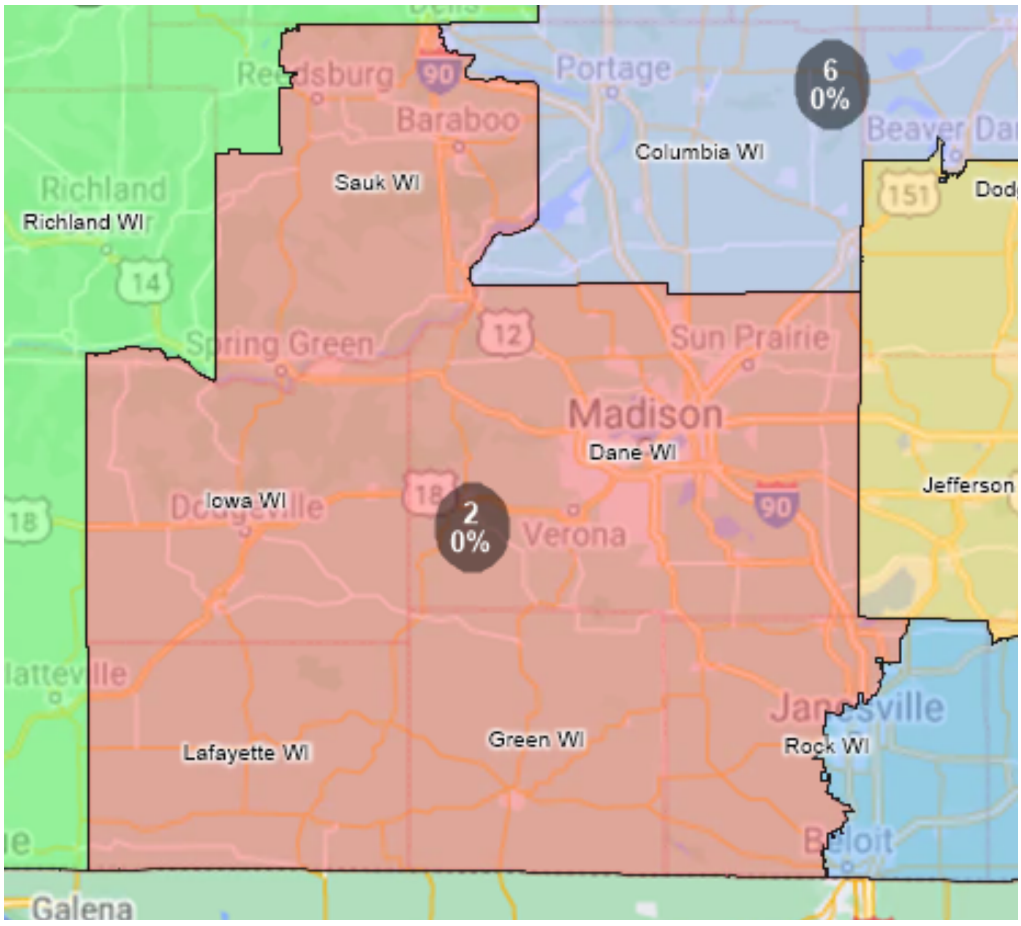


Figure 3: Detailed Map of District 3

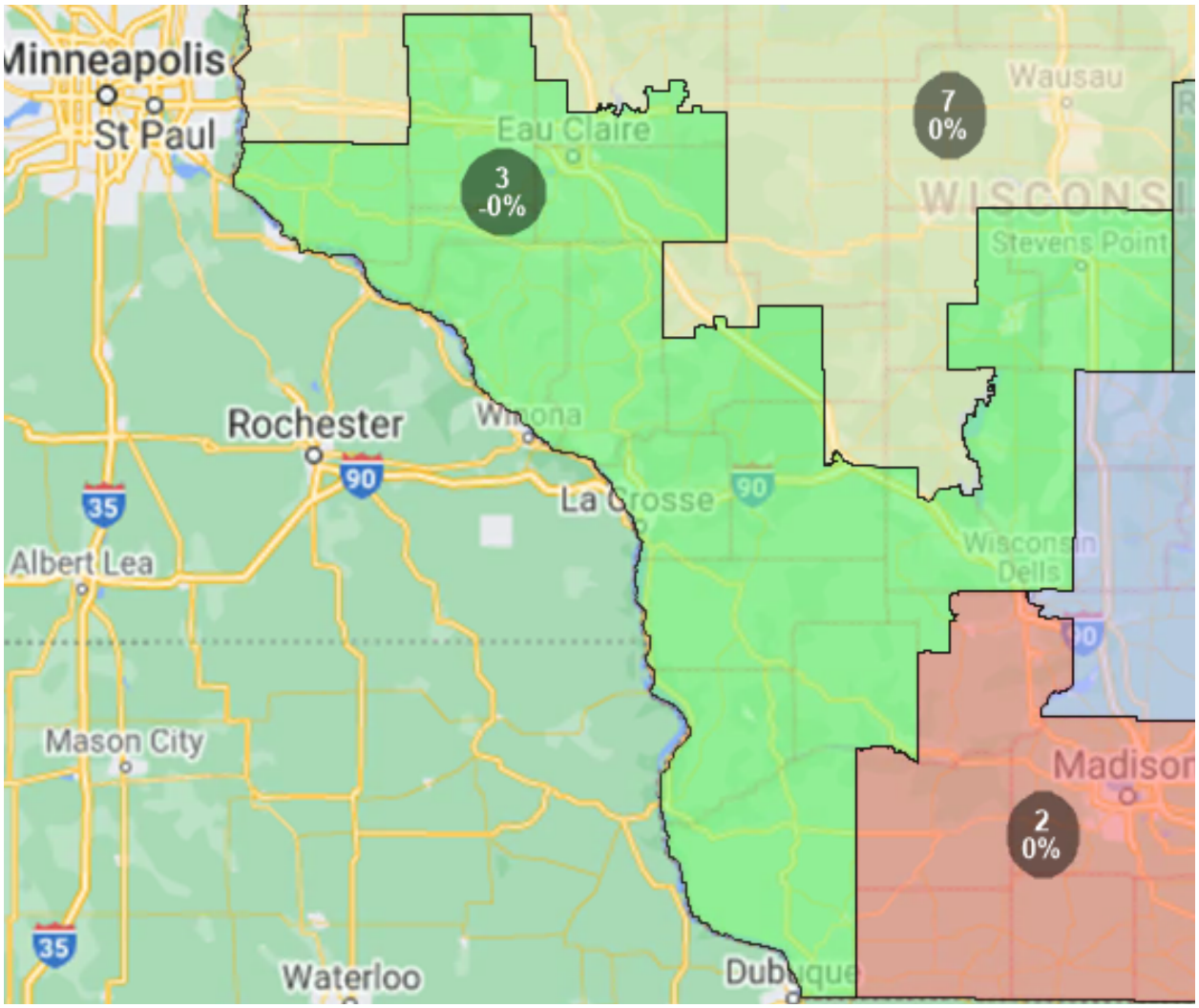


Figure 4: Detailed Map of District 4

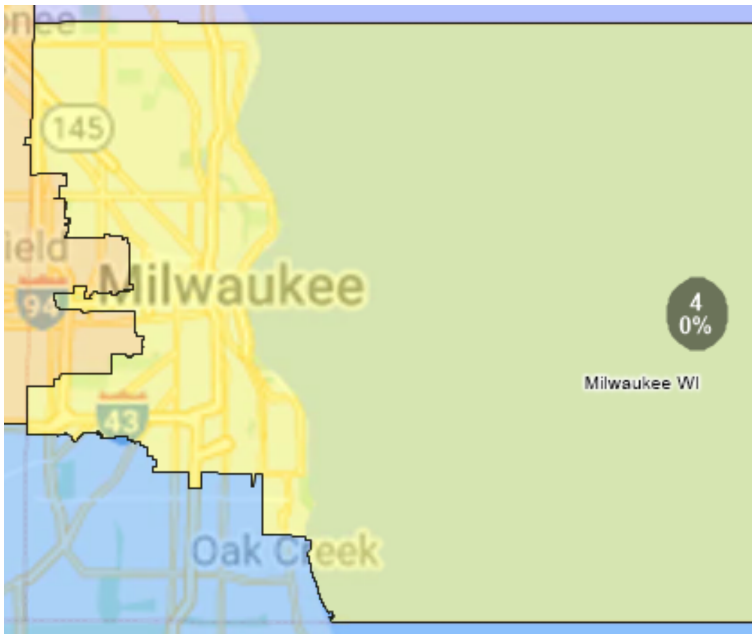


Figure 5: Detailed Map of District 5

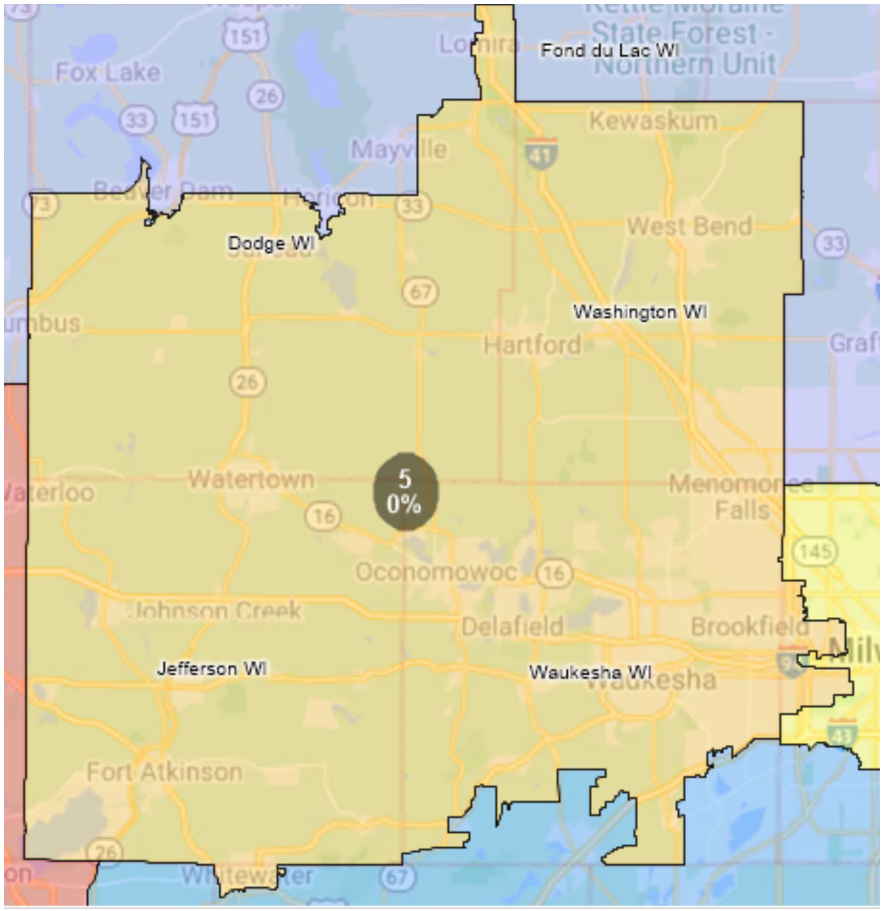


Figure 6: Detailed Map of District 6

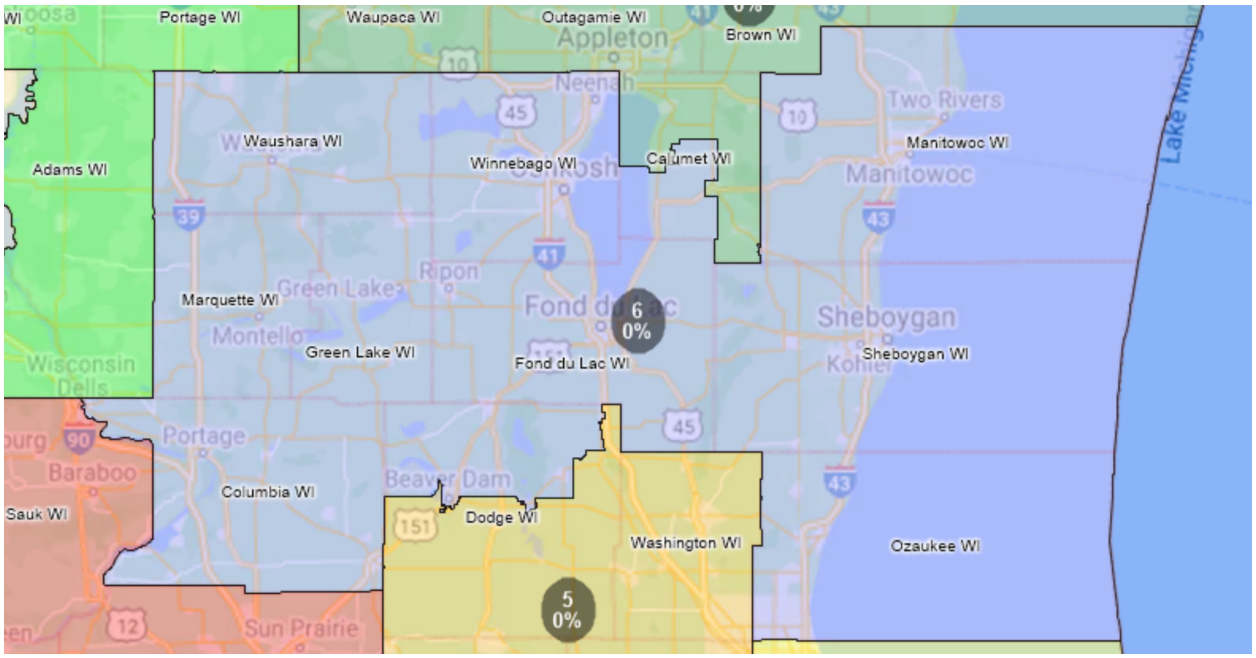


Figure 7: Detailed Map of District 7

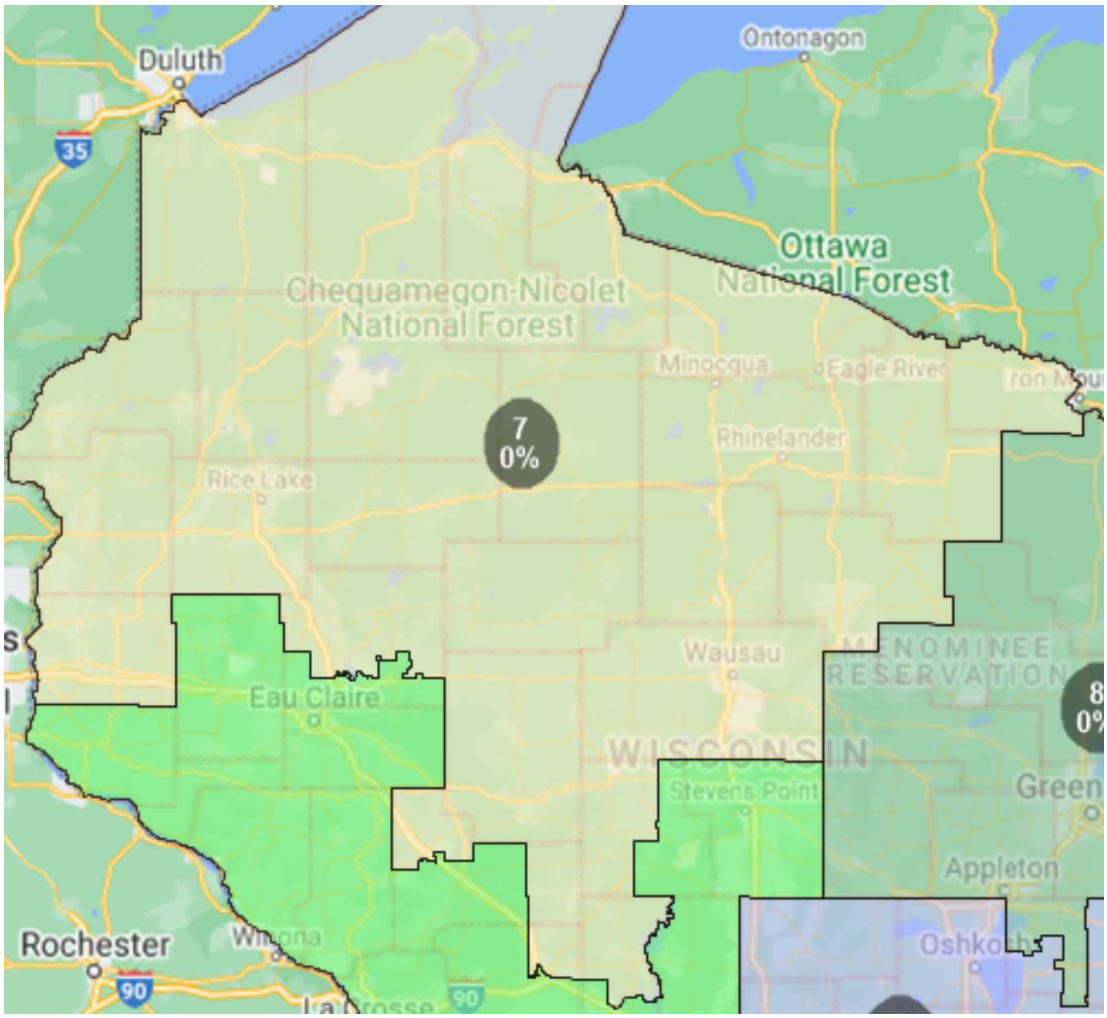


Figure 8: Detailed Map of District 8

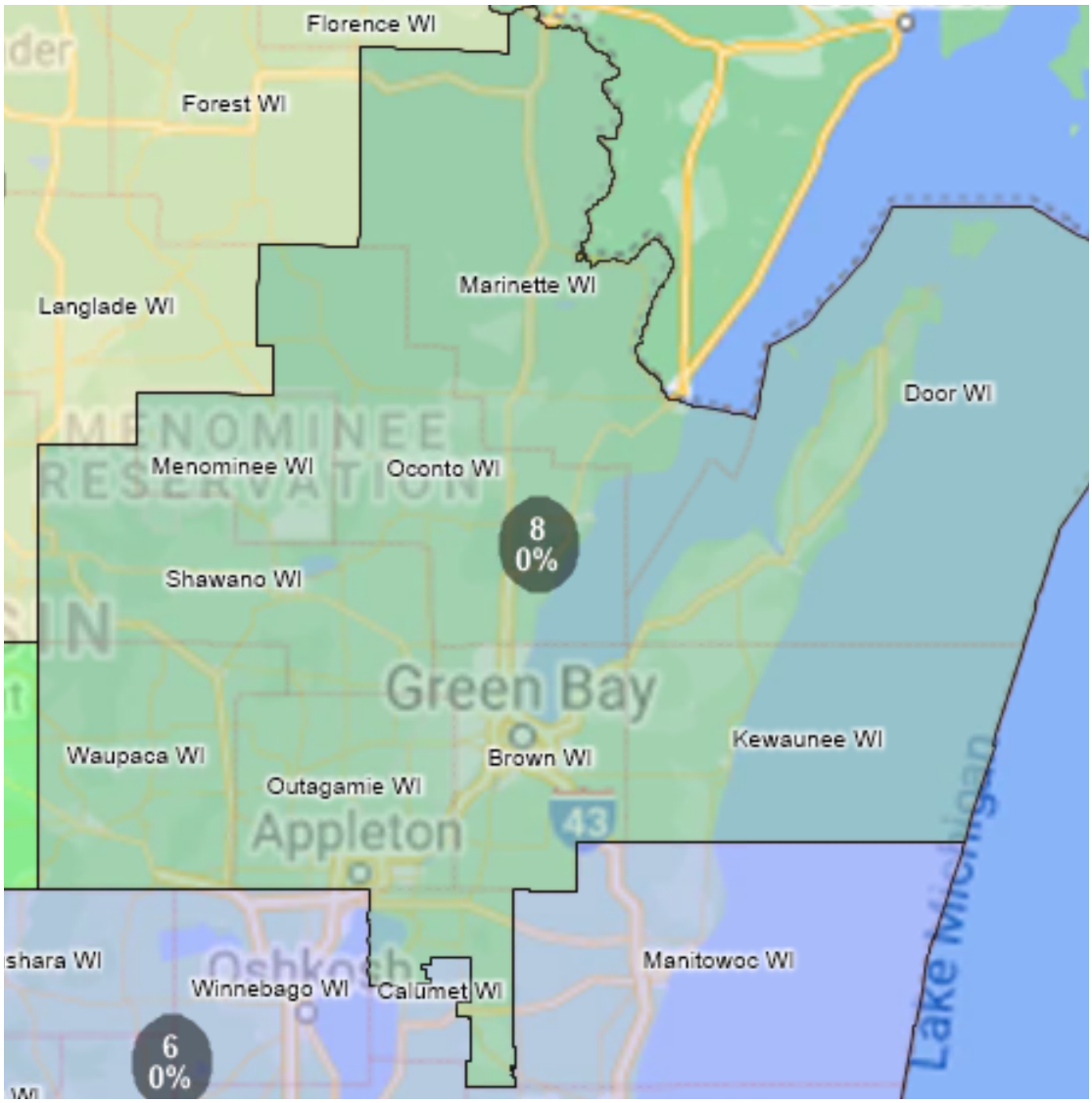


Figure 9: Statewide Partisan Map (2020 Election)

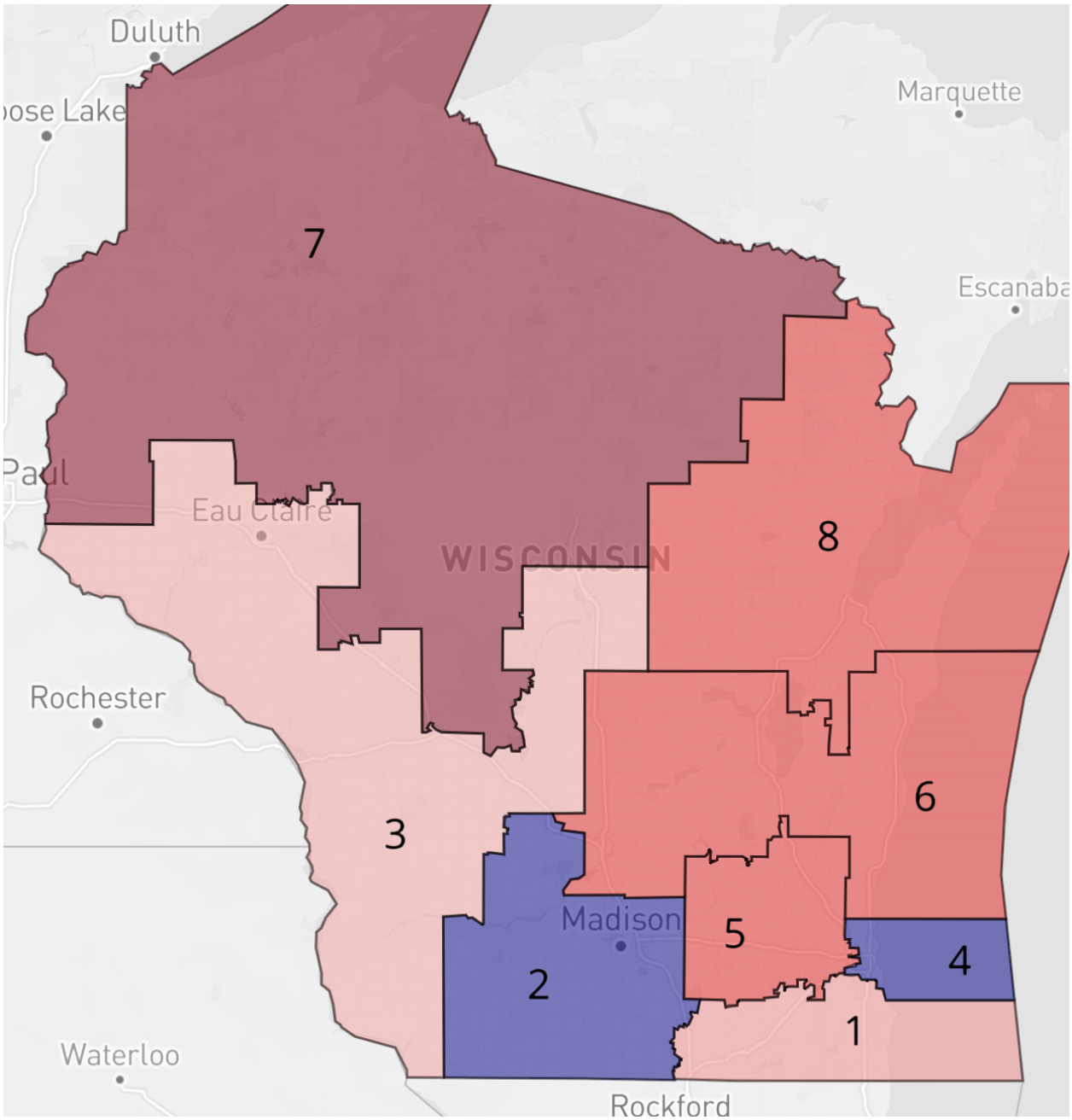


Figure 10: Current Districts Statewide Partisan Map (2020 Election)

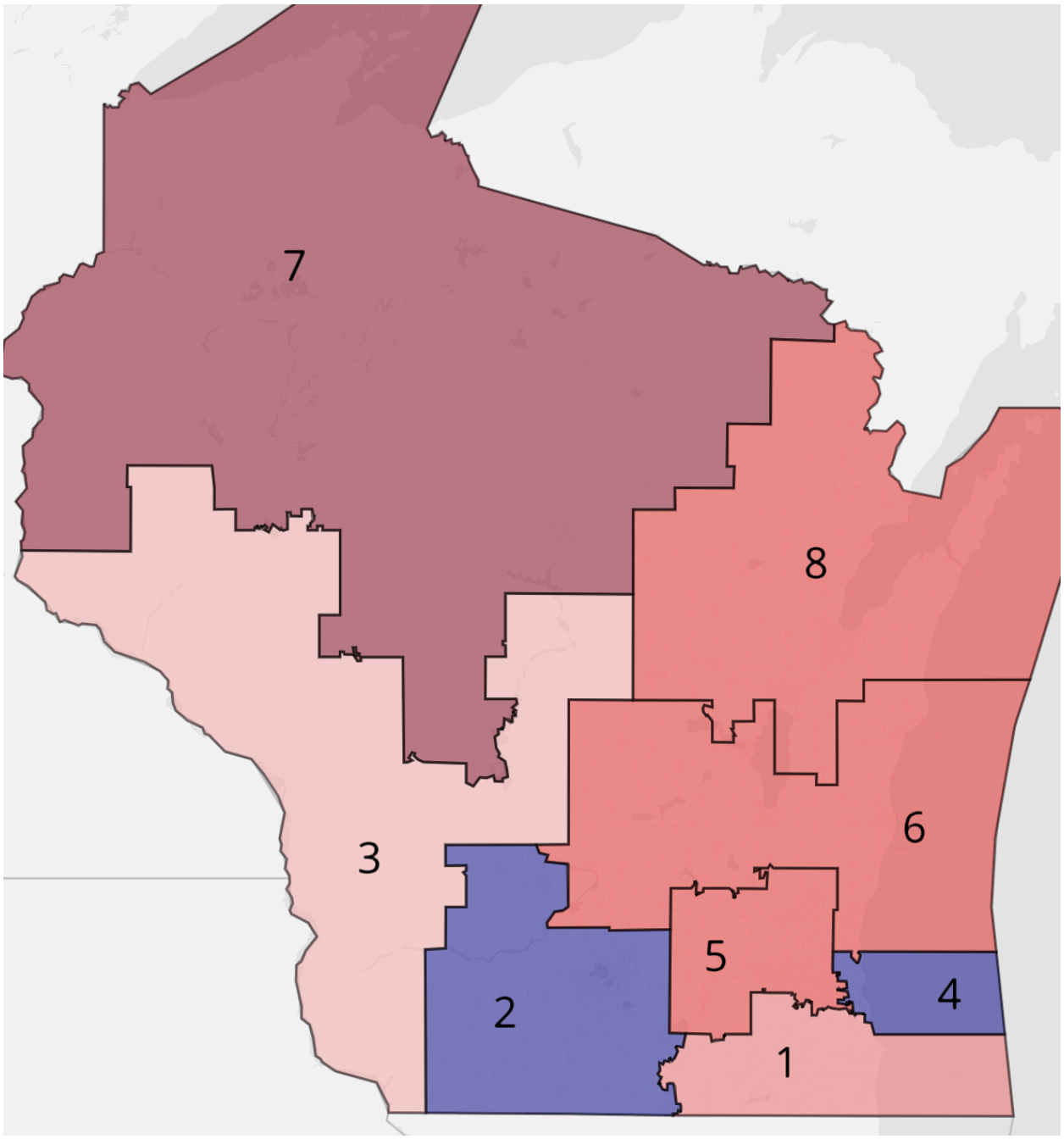


Figure 11: District Total Population Demographic Statistics

District	Population	NH_Wht	AP_Blk	AP_Ind	AP_Asn	AP_Hwn	AP_Oth	Hispanic Origin
1	736714	554683	61428	15043	20043	918	68378	87689
2	736715	585068	42733	12536	44789	998	45274	50257
3	736714	656899	15495	14575	21363	967	23329	24536
4	736715	301704	255820	17146	43337	1090	102782	133007
5	736715	624663	23785	11602	26669	835	39534	47601
6	736715	634427	23249	13250	23329	824	33372	39763
7	736715	659409	10351	27773	15613	1011	19806	18993
8	736715	617165	19882	32647	21202	827	39772	45444

Figure 12: 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	572743	453262	39135	10647	13749	616	45508	55188
2	584514	479735	27062	9054	33655	695	30776	32932
3	580269	527827	9563	10122	13944	632	15504	15361
4	560033	264051	174253	11991	29268	804	69914	87116
5	579617	506592	14459	8055	17922	548	26079	29791
6	582902	516047	14803	9434	15072	554	22031	24702
7	580335	530552	5777	18813	9651	601	13268	11331
8	571887	496160	11261	21635	13379	546	25573	27648

Figure 13: District Total Population Demographic Percentages

District	% NH_Wht	% AP_Blk	% AP_Ind	% AP_Asn	% AP_Hwn	% AP_Oth	% Hispanic Origin
1	0.752915	0.083381	0.020419	0.027206	0.001246	0.092815	0.119027
2	0.794158	0.058005	0.017016	0.060796	0.001355	0.061454	0.068218
3	0.891661	0.021033	0.019784	0.028998	0.001313	0.031666	0.033305
4	0.409526	0.347244	0.023274	0.058825	0.00148	0.139514	0.180541
5	0.847903	0.032285	0.015748	0.0362	0.001133	0.053663	0.064613
6	0.861157	0.031558	0.017985	0.031666	0.001118	0.045298	0.053973
7	0.895067	0.01405	0.037698	0.021193	0.001372	0.026884	0.025781
8	0.837726	0.026987	0.044314	0.028779	0.001123	0.053986	0.061685

Figure 14: District Voting Age Population Demographic Percentages

District	% NH18+_Wht	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% 18+_AP_Hwn	% 18+_AP_Oth	% H18+_Pop
1	0.791388	0.068329	0.018589	0.024006	0.001076	0.079456	0.096357
2	0.820742	0.046298	0.01549	0.057578	0.001189	0.052652	0.056341
3	0.909625	0.01648	0.017444	0.02403	0.001089	0.026719	0.026472
4	0.471492	0.311148	0.021411	0.052261	0.001436	0.124839	0.155555
5	0.874012	0.024946	0.013897	0.03092	0.000945	0.044994	0.051398
6	0.885307	0.025395	0.016185	0.025857	0.00095	0.037795	0.042378
7	0.914217	0.009955	0.032417	0.01663	0.001036	0.022863	0.019525
8	0.867584	0.019691	0.037831	0.023394	0.000955	0.044717	0.048345

Figure 15: Current Districts Total Population Demographic Statistics

District	Population	NH_Wht	AP_Blk	AP_Ind	AP_Asn	AP_Hwn	AP_Oth	Hispanic Origin
1	727452	560603	54271	14152	19631	877	62396	80131
2	789393	619372	50213	14024	45791	1061	52666	59157
3	733584	653803	15487	14618	21340	962	23277	24536
4	695395	272002	252988	16250	40496	1028	98856	127644
5	735571	615465	26133	11898	28785	881	42024	51486
6	727774	625609	23342	13125	23363	814	33259	39738
7	732582	655656	10317	27637	15593	1008	19635	18840
8	751967	631508	19992	32868	21346	839	40134	45758

Figure 16: Current Districts 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	567036	457392	34604	10023	13386	587	41631	50544
2	624507	507858	31749	10097	34375	734	35589	38400
3	577889	525477	9559	10147	13935	628	15458	15356
4	526150	238300	172266	11334	27241	757	67177	83564
5	579865	500994	16164	8290	19476	589	27894	32456
6	575819	509019	14899	9341	15127	545	21934	24681
7	577166	527620	5766	18724	9637	600	13156	11238
8	583868	507566	11306	21795	13463	556	25814	27830

Figure 17: Current Districts Total Population Demographic Percentages

District	% NH_Wht	% AP_Blk	% AP_Ind	% AP_Asn	% AP_Hwn	% AP_Oth	% Hispanic Origin
1	0.770639	0.074604	0.019454	0.026986	0.001206	0.085773	0.110153
2	0.784618	0.06361	0.017766	0.058008	0.001344	0.066717	0.07494
3	0.891245	0.021111	0.019927	0.02909	0.001311	0.031731	0.033447
4	0.391147	0.363805	0.023368	0.058235	0.001478	0.142158	0.183556
5	0.836717	0.035528	0.016175	0.039133	0.001198	0.057131	0.069995
6	0.85962	0.032073	0.018034	0.032102	0.001118	0.0457	0.054602
7	0.894993	0.014083	0.037725	0.021285	0.001376	0.026802	0.025717
8	0.839808	0.026586	0.043709	0.028387	0.001116	0.053372	0.060851

Figure 18: Current Districts Voting Age Population Demographic Percentages

District	% NH18+_Wht	% 18+_AP_Blk	% 18+_AP_Ind	% 18+_AP_Asn	% 18+_AP_Hwn	% 18+_AP_Oth	% H18+_Pop
1	0.806637	0.061026	0.017676	0.023607	0.001035	0.073419	0.089137
2	0.813214	0.050839	0.016168	0.055043	0.001175	0.056987	0.061489
3	0.909304	0.016541	0.017559	0.024114	0.001087	0.026749	0.026573
4	0.452913	0.327409	0.021541	0.051774	0.001439	0.127677	0.158822
5	0.863984	0.027875	0.014296	0.033587	0.001016	0.048104	0.055972
6	0.883991	0.025874	0.016222	0.02627	0.000946	0.038092	0.042862
7	0.914156	0.00999	0.032441	0.016697	0.00104	0.022794	0.019471
8	0.869316	0.019364	0.037329	0.023058	0.000952	0.044212	0.047665

Figure 19: Milwaukee Black Voting Age Population Map

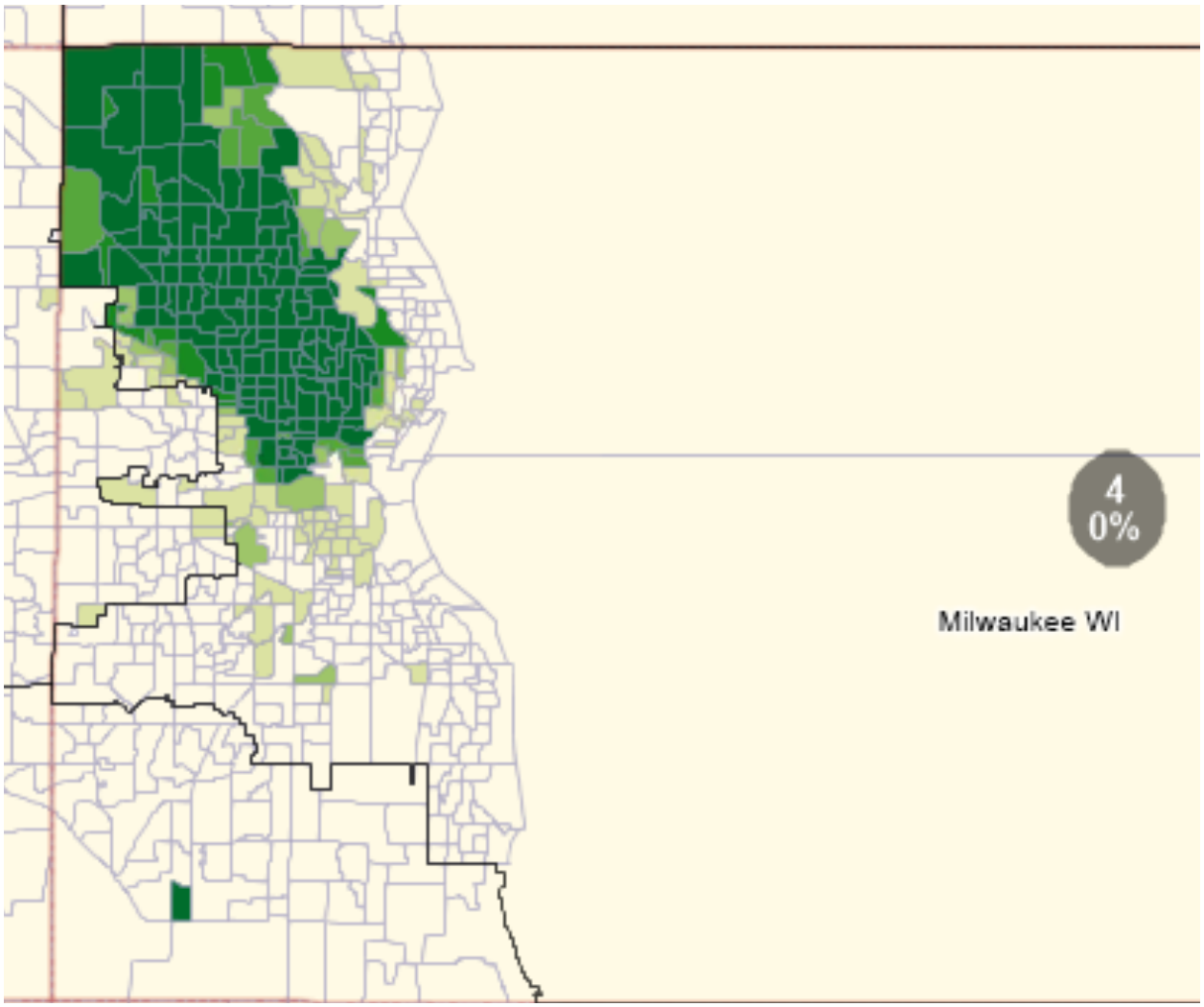


Figure 20: Milwaukee Hispanic Voting Age Population Map

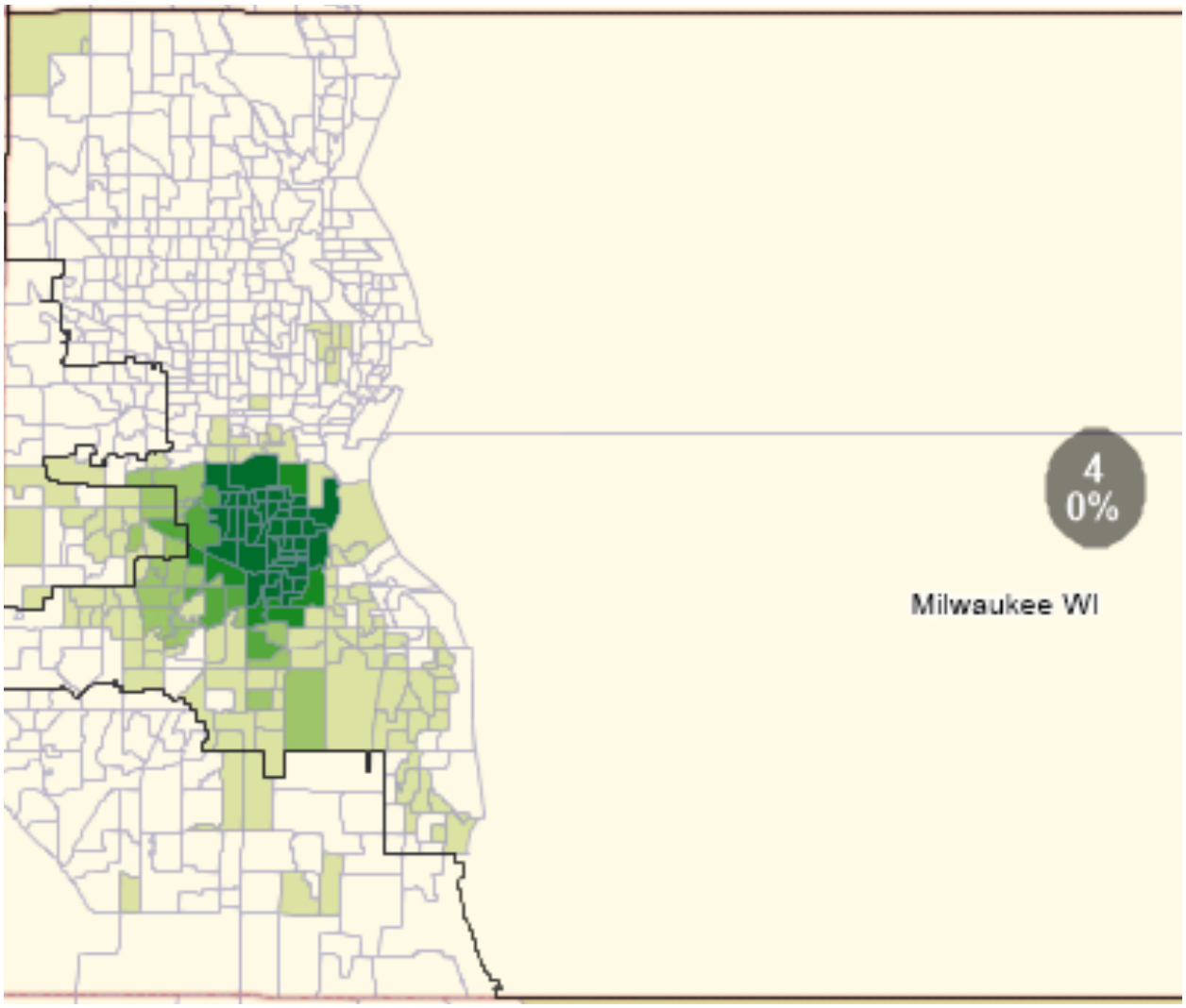


Figure 21: Compactness Measures

	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	4,413.73	N/A
Min	0.29	1.44	1.47	0.16	0.65	0.59	0.20	0.20	N/A	2.28
Max	0.61	2.37	2.48	0.46	0.91	0.95	0.75	0.57	N/A	73.56
Mean	0.46	1.75	1.83	0.32	0.78	0.80	0.50	0.36	N/A	24.49
Std. Dev.	0.12	0.29	0.32	0.10	0.09	0.12	0.17	0.14	N/A	28.78

District	Reock	Schwartzberg	Alternate Schwartzberg	Polsby-Popper	Population Polygon	Area/Convex Hull	Population Circle	Ehrenburg	Perimeter	Length-Width
1	0.29	1.71	1.85	0.29	0.91	0.90	0.34	0.22	333.28	73.56
2	0.61	1.45	1.50	0.45	0.88	0.88	0.75	0.57	350.82	2.58
3	0.33	2.37	2.48	0.16	0.77	0.59	0.46	0.20	939.22	7.48
4	0.45	1.44	1.47	0.46	0.82	0.95	0.62	0.42	172.06	26.54
5	0.57	1.69	1.77	0.32	0.74	0.84	0.43	0.54	289.03	4.17
6	0.41	1.82	1.86	0.29	0.66	0.79	0.20	0.28	587.18	64.66
7	0.57	1.83	1.98	0.25	0.65	0.72	0.56	0.36	1,134.44	2.28
8	0.47	1.67	1.74	0.33	0.78	0.75	0.60	0.32	607.70	14.67

Figure 22: County Splits

Split Counts

County

Cases where an area is split among 2 Districts: 10

Cases where an area is split among 3 Districts: 2

Voting District

Cases where an area is split among 2 Districts: 26

County	District	Population
Split Counties:		
Calumet WI	6	3,586
Calumet WI	8	48,856
Chippewa WI	3	39,158
Chippewa WI	7	27,139
Dodge WI	5	40,667
Dodge WI	6	48,729
Jackson WI	3	15,041
Jackson WI	7	6,104
Juneau WI	3	20,806
Juneau WI	7	5,912
Milwaukee WI	1	95,887
Milwaukee WI	4	736,715
Milwaukee WI	5	106,887
Monroe WI	3	41,589
Monroe WI	7	4,685
Rock WI	1	127,993
Rock WI	2	35,694
Sauk WI	2	62,104
Sauk WI	3	3,659
Walworth WI	1	94,662
Walworth WI	5	11,816
Waukesha WI	1	51,294
Waukesha WI	4	0
Waukesha WI	5	355,684
Wood WI	3	43,820
Wood WI	7	30,387

Figure 23: 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	6	104	2.3
Birnamwood WI	7	14	1.9
Birnamwood WI	8	716	98.1
Cambridge WI	2	1,539	94.0
Cambridge WI	5	99	6.0
Cuba City WI	2	248	11.6
Cuba City WI	3	1,890	88.4
Hazel Green WI	2	22	1.9
Hazel Green WI	3	1,151	98.1
Horicon WI	5	0	0.0
Horicon WI	6	3,767	100.0
Janesville WI	1	65,607	100.0
Janesville WI	2	8	0.0
Kewaskum WI	5	4,309	100.0
Kewaskum WI	6	0	0.0
Kiel WI	6	3,931	100.0
Kiel WI	8	1	0.0
Lake Wisconsin WI	2	91	2.0

Lake Wisconsin WI	6	4,525	98.0
Livingston WI	2	12	1.9
Livingston WI	3	625	98.1
Menasha WI	6	15,261	83.5
Menasha WI	8	3,007	16.5
Milwaukee WI	4	577,222	100.0
Milwaukee WI	5	0	0.0
Montfort WI	2	72	10.2
Montfort WI	3	633	89.8
Muscoda WI	2	62	4.7
Muscoda WI	3	1,245	95.3
New Berlin WI	1	6,828	16.9
New Berlin WI	5	33,623	83.1
Newburg WI	5	1,049	91.9
Newburg WI	6	93	8.1
River Falls WI	3	12,546	77.5
River Falls WI	7	3,636	22.5
Spring Valley WI	3	1,390	99.2
Spring Valley WI	7	11	0.8
Tomah WI	3	9,509	99.4
Tomah WI	7	61	0.6

Wauwatosa WI	4	1,825	3.8
Wauwatosa WI	5	46,562	96.2
West Allis WI	4	0	0.0
West Allis WI	5	60,325	100.0
Wisconsin Dells WI	2	384	13.1
Wisconsin Dells WI	3	109	3.7
Wisconsin Dells WI	6	2,449	83.2

Summary Statistics

Number of City/Town not split	772
Number of City/Town split	28
Number of City/Town split in 2	27
Number of City/Town split in 3	1
Total number of splits	57

Figure 24: Precinct Splits

Voting District

Cases where an area is split among 2 Districts: 26

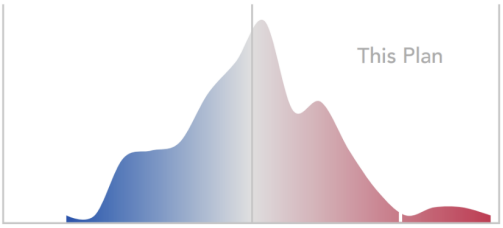
Split VTDs:		
Calumet WI	6	103
Calumet WI	8	600
Chippewa WI	3	2,445
Chippewa WI	7	0
Chippewa WI	3	0
Chippewa WI	7	254
Chippewa WI	3	8
Chippewa WI	7	18
Dodge WI	5	881
Dodge WI	6	0
Dodge WI	5	0
Dodge WI	6	0
Dodge WI	5	249
Dodge WI	6	2
Dodge WI	5	0
Dodge WI	6	810
Dodge WI	5	622
Dodge WI	6	38
Jackson WI	3	345
Jackson WI	7	132
Jackson WI	3	0
Jackson WI	7	303
Milwaukee WI	4	1,673
Milwaukee WI	5	0
Milwaukee WI	1	2,235
Milwaukee WI	4	0
Milwaukee WI	4	68
Milwaukee WI	5	2,261
Monroe WI	3	2
Monroe WI	7	810
Monroe WI	3	82
Monroe WI	7	0
Monroe WI	3	0
Monroe WI	7	358
Monroe WI	3	515
Monroe WI	7	0
Monroe WI	3	673
Monroe WI	7	0
Monroe WI	3	870
Monroe WI	7	61
Monroe WI	3	520
Monroe WI	7	0
Rock WI	1	2,797
Rock WI	2	5

Rock WI	1	71
Rock WI	2	200
Sauk WI	2	412
Sauk WI	3	56
Walworth WI	1	582
Walworth WI	5	5
Waukesha WI	1	0
Waukesha WI	5	230

Figure 25: Dave's Redistricting App Evaluation

Figure 26: Planscore Statistics

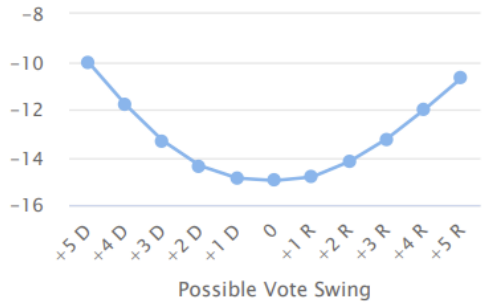
Efficiency Gap: 15.0%



+25% D Balanced +25% R

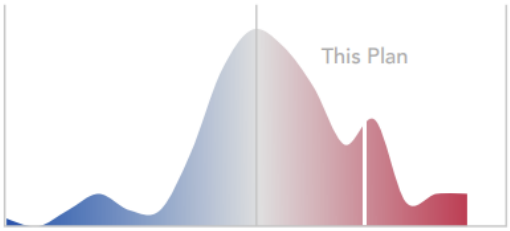
Votes for Republican candidates are expected to be inefficient at a rate 15.0% lower than votes for Democratic candidates, favoring Republicans in 95% of predicted scenarios.* Learn more ›

Sensitivity Testing



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

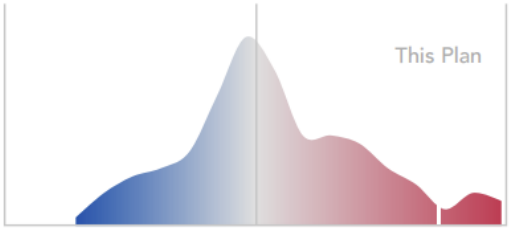
Declination: 0.35



+0.81 D Balanced +0.81 R

The mean Democratic vote share in Democratic districts is expected to be 9.9% 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 ›

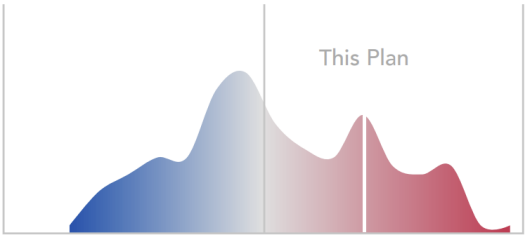
Partisan Bias: 18.2%



+25% D Balanced +25% R

Republicans would be expected to win 18.2% extra seats in a hypothetical, perfectly tied election, favoring Republicans in 97% of predicted scenarios.* Learn more ›

Mean-Median Difference: 4.6%



+12% D Balanced +12% R

The median Republican vote share is expected to be 4.6% higher than the mean Republican vote share, favoring Republicans in 99% of predicted scenarios.* Learn more ›

Figure 27: Current Map Statewide Partisan Map (2020 Election)

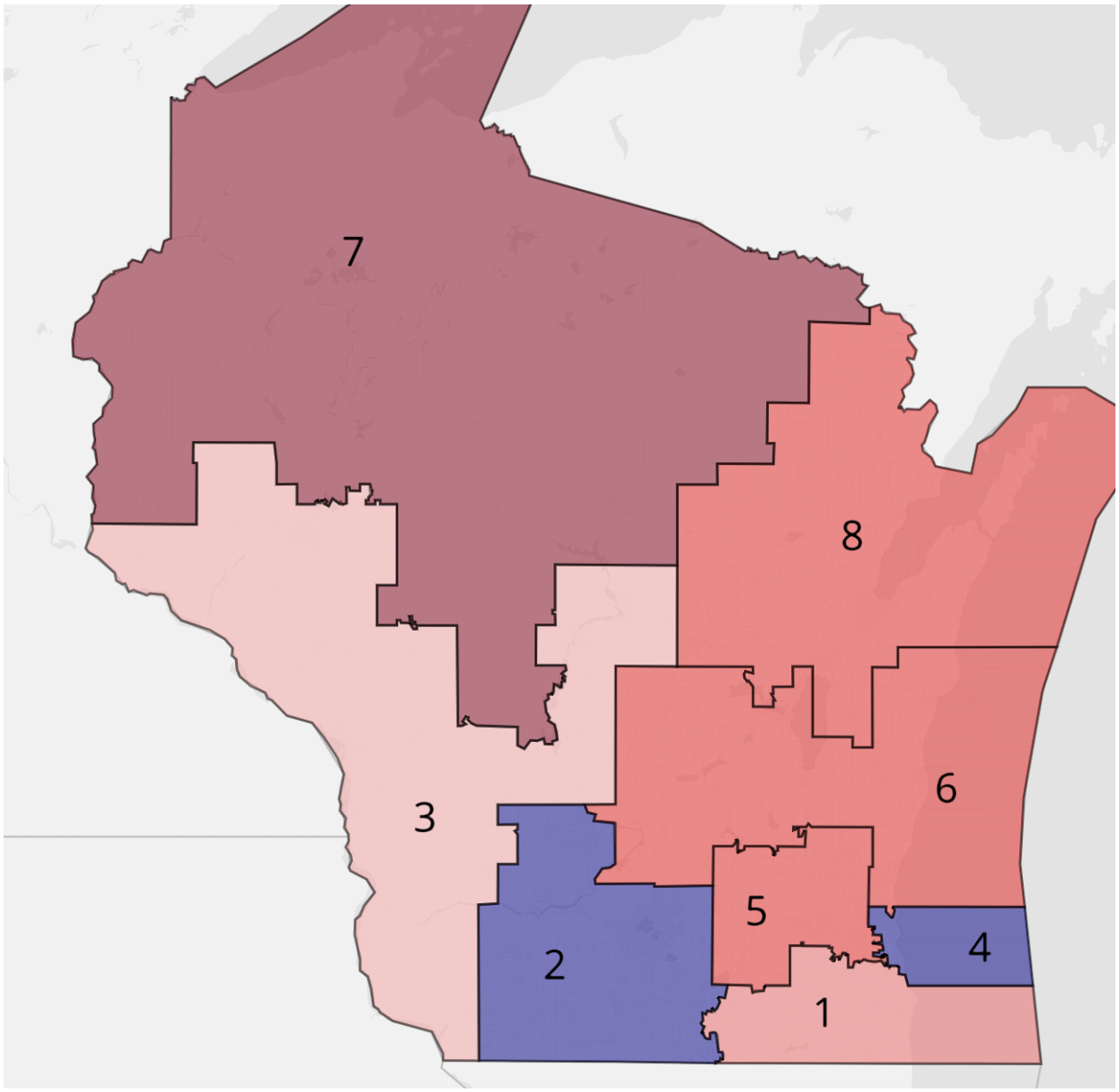


Figure 28: Evers Plan District Statistics

ID	Total Pop	Devation	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 29: Evers Plan Statewide Partisan Map (2020 Election)

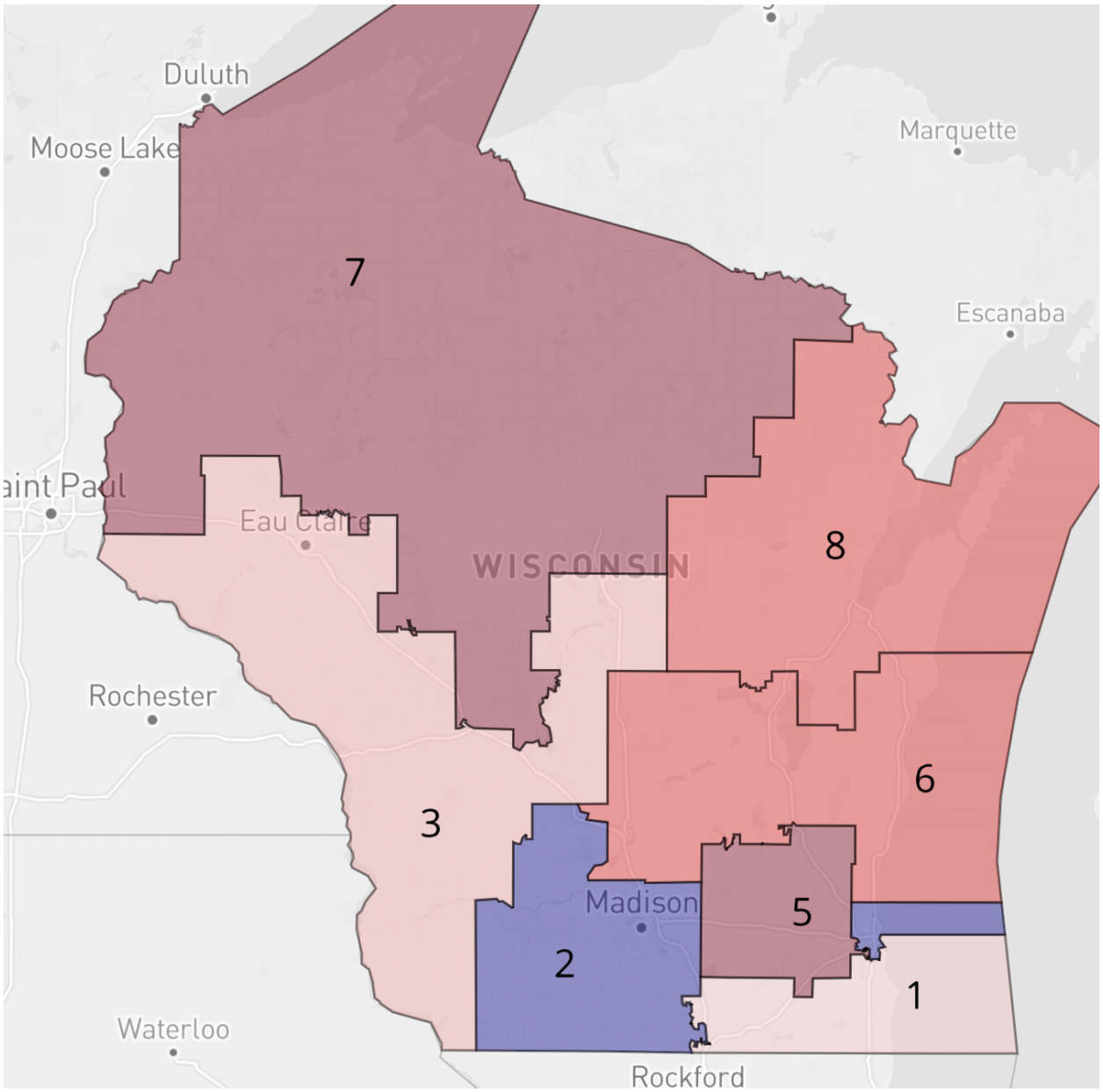


Figure 30: Evers Plan Comparison with Current Districts

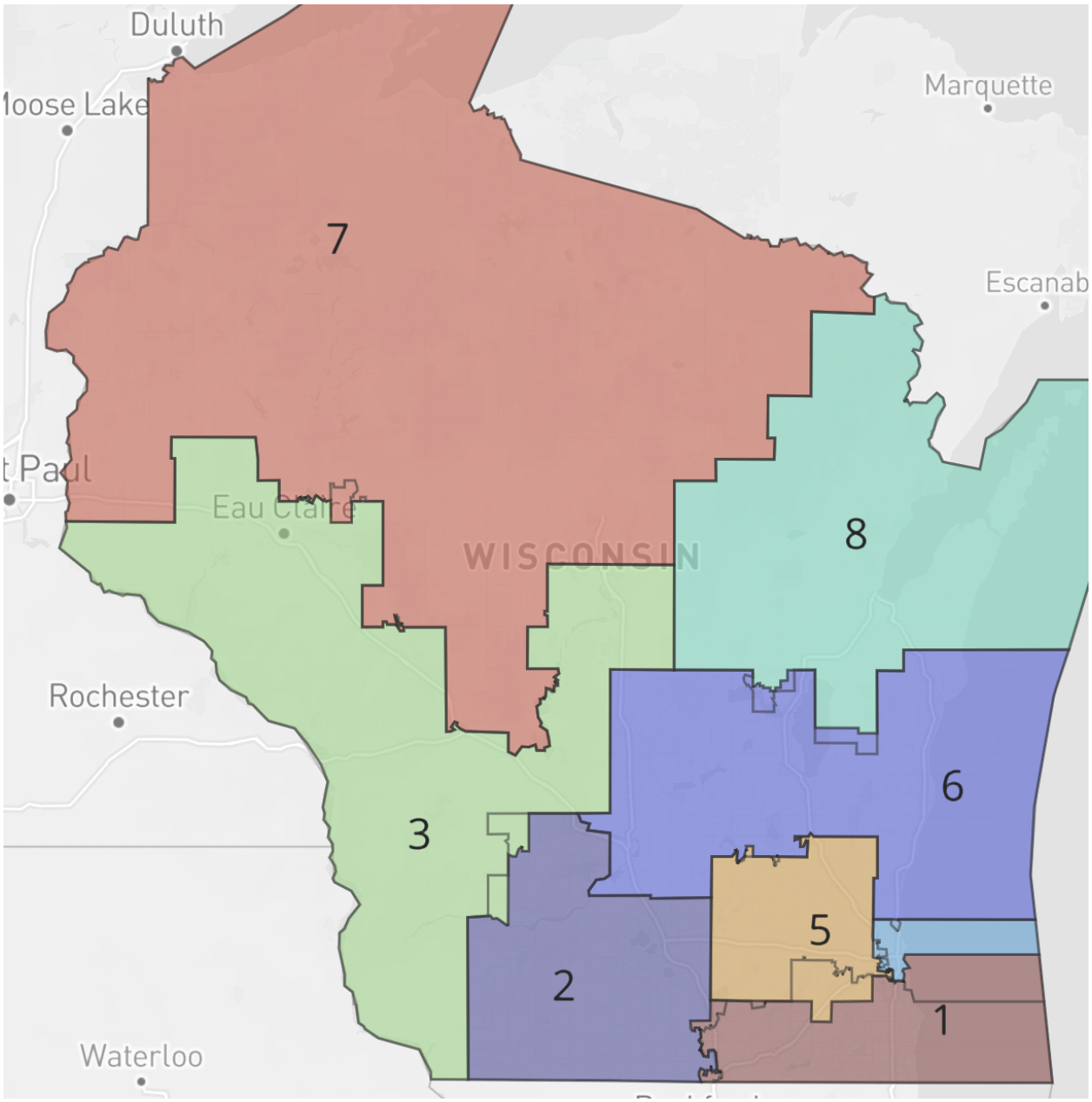


Figure 31: Evers Plan Comparison with My Proposal

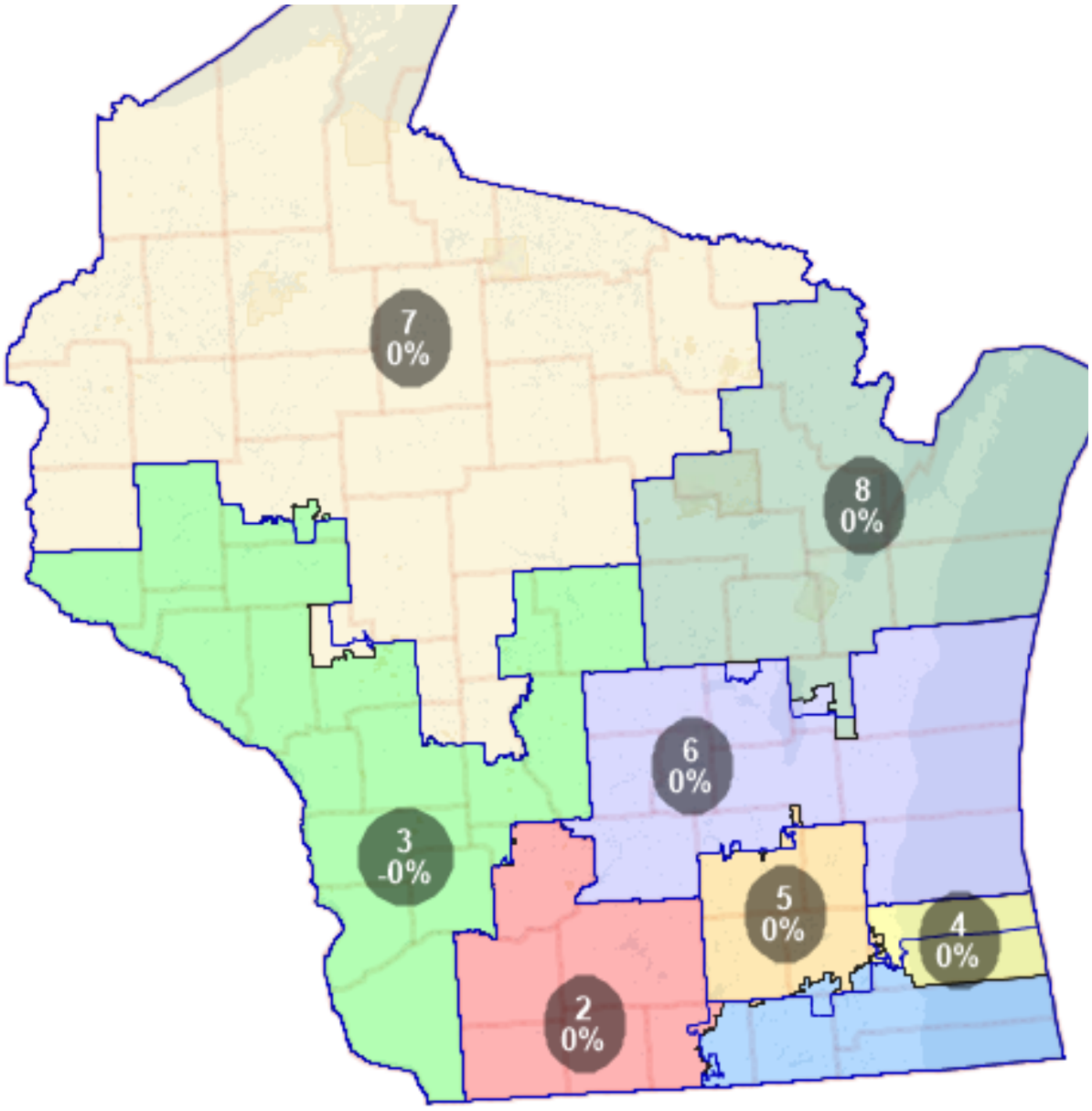


Figure 32: Legislature Plan District Statistics

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 33: Legislature Plan Statewide Partisan Map (2020 Election)

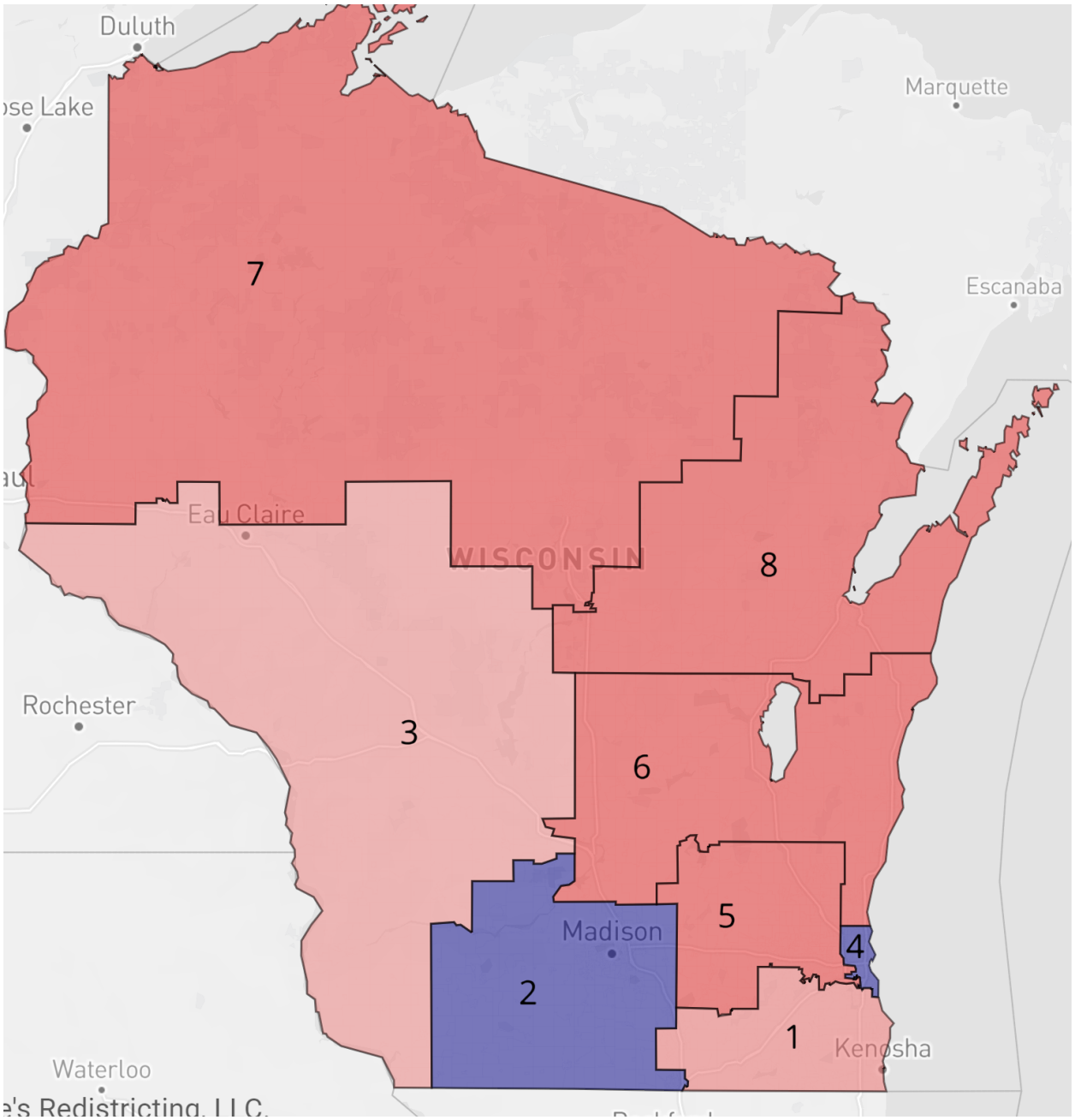


Figure 34: Legislature Plan Comparison with Current Districts

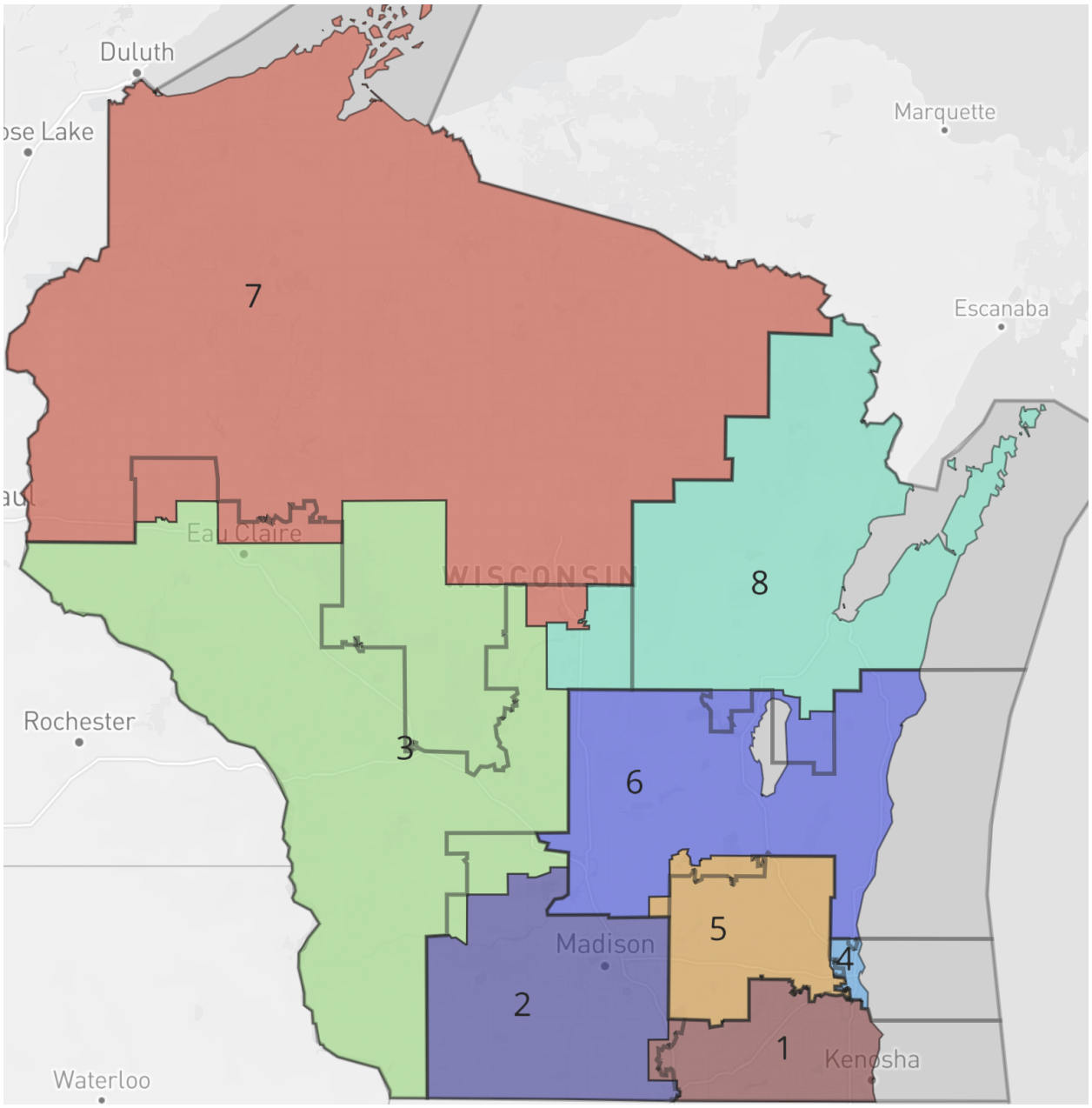


Figure 35: Legislature Plan Comparison with My Proposal