Andrew Green

Testimony to the Ohio Redistricting Commission Regarding Congressional Redistricting

Wednesday, February 23, 2022

Co-chair Senator Sykes, co-chair Speaker Cupp, and members of the Ohio Redistricting Commission, thank you for affording me the opportunity to submit written testimony regarding congressional redistricting. Since, as of this writing, on the evening of February 22, there has been no information made public about any official congressional map under consideration by the commission, I will comment on two maps that have been submitted to the Ohio Redistricting Commission that I think you should use to begin your work in drawing new congressional districts. One of these submissions was by a group known as Fair Districts Ohio and one by myself. The former was submitted on February 3, 2022 and the latter on November 18, 2021. These two maps are quite similar to each other, and the differences between them are small enough that I personally believe that either is an equally acceptable place to start this redraw process as the other.

Certainly, I'm sure you are all thinking, "ok, Andrew, but how do we know these maps better meet the constitutional standards in Article XIX with which the court is concerned than the map that the General Assembly originally adopted and that was subsequently overturned by the Ohio Supreme Court?"

First, it is worth noting that my map, which I will refer to as my "Better Plan," has 14 county splits, the minimum number possible to ensure equal population in each district and 14[1] township and municipal corporation splits (according to my count). My Better Plan notably splits zero townships (according to my count) because, in my reading of Article XIX, I believe that the splitting of municipal corporations is preferred to the splitting of townships. However, due to the vague wording, I acknowledge that someone else could interpret that same language to mean that townships and municipal corporations should be treated equally when splits are being made. I made the decision to err on the side of caution and split only municipal corporations. While the Fair Districts Model has 15 county splits, I describe later in my testimony how one county split can be eliminated with relative ease and little impact on the overall map if the Redistricting Commission deems this singular extra split to be unnecessary and/or unjustified.

Second, neither map splits Hamilton County more than the one time required to ensure equipopulous districts, something that the Supreme Court noted as resulting in undue partisan favoritism.

Third, both maps take the court's suggestion to include Delaware County (or at least a large portion of Delaware County) in the district containing the second largest portion of Columbus.

Fourth, while both maps split Cuyahoga County twice, something that the court noted as resulting in undue partisan favoritism in SB258, they each place only about 4,500 people (less than 0.4% of Cuyahoga County's population) into the district containing the third largest portion of Cuyahoga

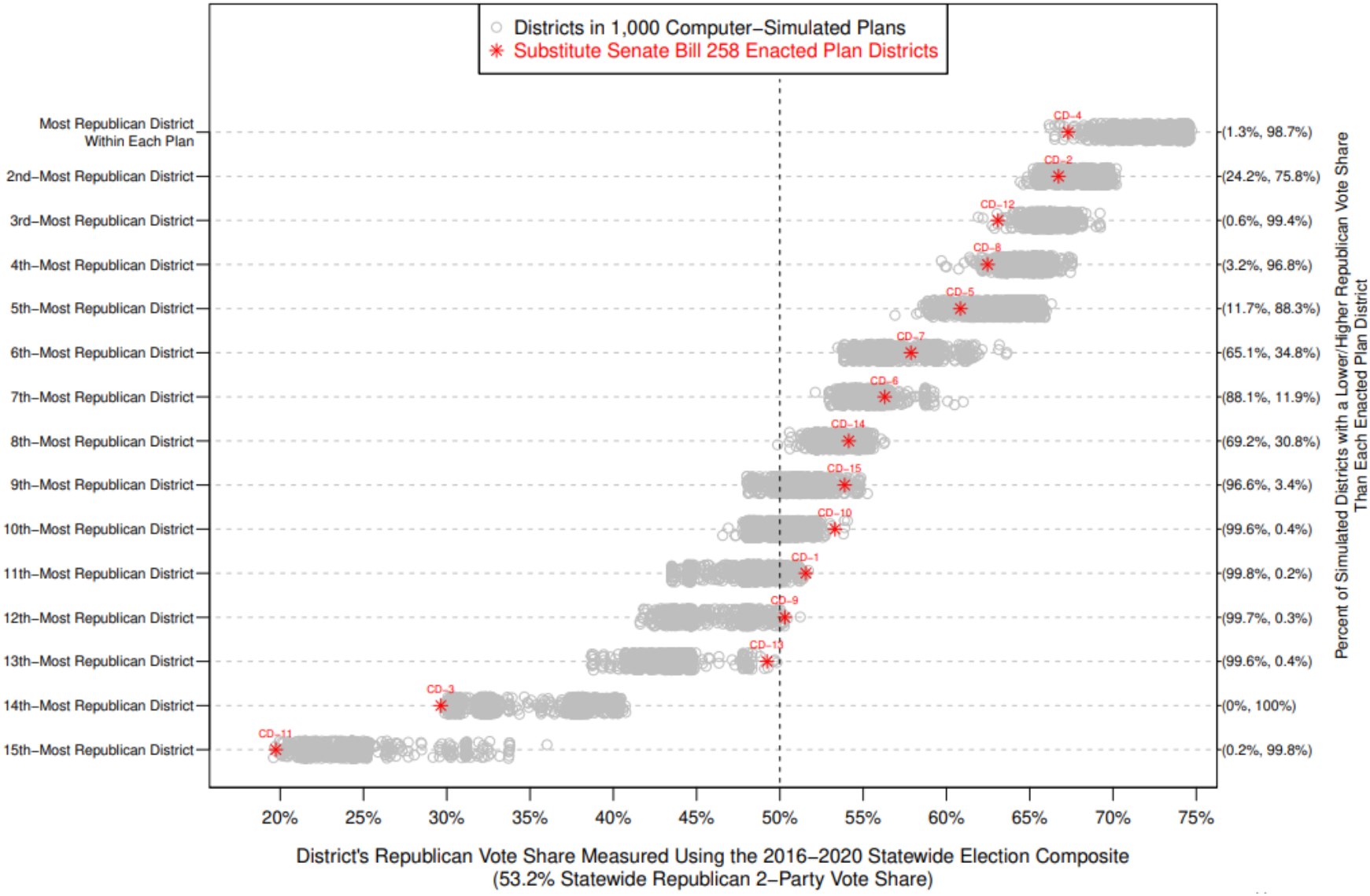
[1] By my count, my better plan has 16 split municipal corporations and zero split townships. However, two of these splits involve zero population and can be eliminated without moving a single person from one district to another. The Census Blocks that must be moved to accomplish this are detailed in Appendix A.

County. This is only done because the combined populations of Cuyahoga and Lorain Counties are about 4,500 people more than two times the congressional ratio of representation, meaning two districts can fit entirely within Cuyahoga and Lorain Counties with about 4,500 people left over. Because Article XIX, Section 2(B)(8) gives a strong direction to attempt to have each district either contain at least one entire county or be fully contained in just one county, splitting Lorain County (and therefore not following the directive in Section 2(B)(8) as it would pertain to District 4 in these two plans) was deemed to be unacceptable. Instead, since Article XIX has no similar strict prohibitions on splitting counties twice, the choice was made by me and the drawer of the Fair Districts Model to place a small portion of Cuyahoga County in a third Cuyahoga County District. It is critically important to note that, while the Supreme Court was unhappy with Cuyahoga County being split twice, it was unhappy because the second split *resulted in* undue partisan favoritism. In the case of both of these maps, neither one of them cause undue partisan favoritism as a result of the second Cuyahoga County split, in part, because the second split involves less than 0.4% of Cuyahoga County's population. Furthermore, as a former resident of Cuyahoga County, I can attest that the communities of both counties, especially those such Westlake, Bay Village, North Olmsted, Avon, and North Ridgeville share many interests on both sides of the county line and thus make a logical grouping to form a district. Additionally, the combination of Lorain and Cuyahoga Counties make almost exactly two congressional districts, both of which can form extremely compact shapes, as shown by both my Better Plan and the Fair Districts Model Map. Consequently, I highly suggest that the commission, regardless of their decision to adopt my Better Plan or the Fair Districts Model Map, adopt a map with a Cuyahoga/Lorain County pairing similar to both of the maps I have discussed.

Fifth, my Better Plan does not split Summit County, something that the Supreme Court determined resulted in undue partisan favoritism in SB258. While the Fair Districts plan splits Summit County, it only places a small portion (about 4,500 people) in District 7 and the rest in District 13. This split keeps the vast majority (over 99%) of Summit County in one district, meaning the split itself cannot have any significant effect on the partisanship of either of the Summit County districts. It is worth nothing that changes can be made to this map with relative ease to ensure that all of Summit County is kept whole. To do this (and eliminate one county split), move the Summit County portion of District 7 into District 13, move an equal population in Geauga County from District 13 to District 14, move an equal population in Columbiana County from District 14 to District 6, and move an equal population in Tuscarawas County from District 6 to District 7. Alternatively, move the Summit County portion of District 7 into District 13 and move an equal population in Portage County from District 13 to District 7. This alternative option will not eliminate the 15th county split.

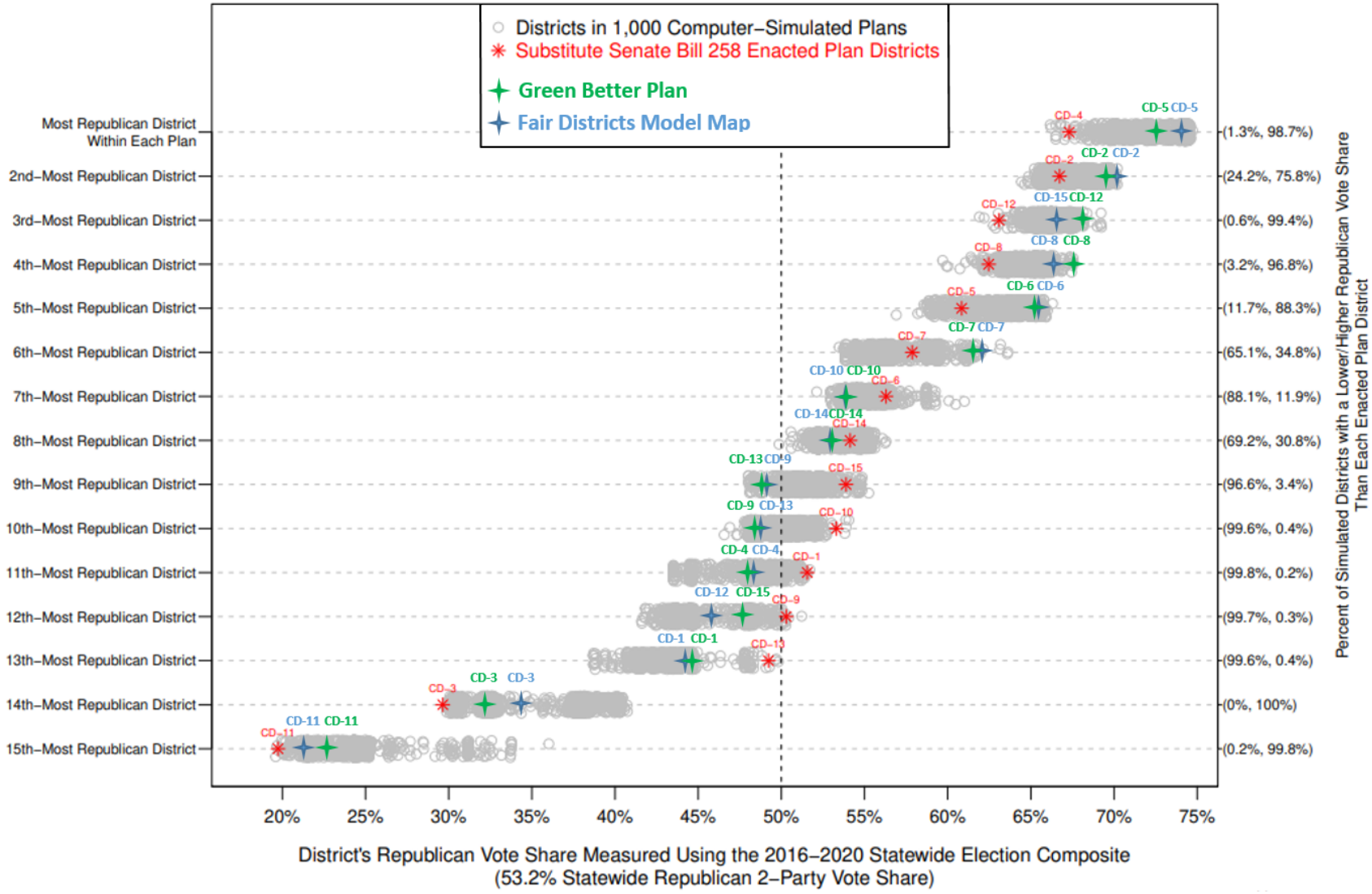
Finally, as I read through the evidence in the two cases that overturned SB258, one chart in particular stood out to me. It was Figure 2 in Dr. Jowei Chen's expert report. I think this one chart encapsulates the essence of the undue partisan favoritism in SB258 that was at the heart of the court's decision to overturn SB258. Through my recreation of Dr. Chen's chart, I will illustrate that neither of the proposed maps that I have drawn your attention to display anything close to the undue partisanship that is present in SB258. Below is a picture of the original chart from Dr. Chen's report.

Figure 2: Comparisons of Enacted Plan Districts to 1,000 Computer–Simulated Plans' Districts



In his report, Dr. Chen went on to explain how Figure 2 shows that 8 of the 15 districts in SB258 are statistical outliers compared to the districts that he simulated. I strove to look at where my map and the Fair Districts Model stacked up among Dr. Chen's simulations. To do so, I simply calculated the two-party vote shares in each of the 15 districts in my Better Plan and the Fair Districts Model and plotted them accordingly on a copy of Dr. Chen's Figure 2. A picture of that chart can be seen below.

Figure 2: Comparisons of Enacted Plan Districts to 1,000 Computer–Simulated Plans' Districts



It is clearly evident in my recreation of Dr. Chen's Figure 2 that far fewer districts are statistical partisan outliers in *either* my Better Plan or the Fair Districts Model when compared to SB258. In fact, the only districts that *might* be characterized as statistical outliers are Districts 7 and 2 in the Fair Districts Model and Districts 7 and 8 in my Better Plan. It is important to note that I simply plotted these points by hand, and I cannot be certain that they fall exactly in the correct spot, but they are certainly very close. For your use in verifying the points that I have plotted, I have included the chart below that details the two-party vote shares in each of the 15 districts in both the Fair Districts Model and my Better Plan in order from most heavily-Republican to most heavily-Democratic.

Fair Districts Model			AG-Better Plan		
District	**Dem %**	**Rep %**	**District**	**Dem %**	**Rep %**
5	25.74%	74.26%	5	27.11%	72.89%
2	29.54%	70.46%	2	30.48%	69.52%
15	33.49%	66.51%	12	31.81%	68.19%
8	33.64%	66.36%	8	32.16%	67.84%
6	34.23%	65.77%	6	34.65%	65.35%
7	38.00%	62.00%	7	38.31%	61.69%
10	46.47%	53.53%	10	46.46%	53.54%
14	47.19%	52.81%	14	47.16%	52.84%
9	51.37%	48.63%	13	51.57%	48.43%
13	51.55%	48.45%	9	51.69%	48.31%
4	51.70%	48.30%	4	52.11%	47.89%
12	54.16%	45.84%	15	52.39%	47.61%
1	55.42%	44.58%	1	55.12%	44.88%
3	65.54%	34.46%	3	67.47%	32.53%
11	78.16%	21.84%	11	77.61%	22.39%

It is critically important to note, however, that the data set I used in calculating partisanship is the one publically available and readily accessible in Dave's Redistricting App (DRA). That dataset is similar (though not identical) to the dataset used by Dr. Chen in his analysis. Dr. Chen used election results of Ohio's 2016, 2018, and 2020 statewide election contests. The dataset in DRA uses election results of Ohio's statewide elections from the same three years, but does not include all of them. Out of the nine statewide elections between 2016 and 2020, the DRA dataset omits the 2018 elections of Secretary of State, State Auditor, and State Treasurer. The statewide Republican share of the two-party vote in these three omitted elections range from 51.7% to 53.3%, slightly below 53.6%, the statewide Republican vote share in the average of the other six 2016-2020 elections that are used in DRA. This suggests that if I were to have included these three additional elections in my analysis (to have a true apples-to-apples comparison to Dr. Chen's analysis), each district would turn out to be *slightly* more Democratic-leaning than I actually calculated. This tends to indicate that the districts that I mentioned above that *may* be partisan statistical outliers in the Fair Districts model or my Better Plan would actually fall more in line with Dr. Chen's simulations and are likely not actually outliers.

Thank you, again, to the co-chairs and members of the commission for allowing me to submit written testimony in support of these two plans. I am available via email or phone (which are both provided in my witness slip) if anyone on the commission has any questions about my plan or the analysis I conducted on either of these two plans.

Appendix A: Political Subdivision Splits

Table 1: List of county splits in my Better Plan, including how many people is in each of the districts that covers each county that is split. This map has a total 13 counties split a total of 14 times.

Better Plan County Splits									
County	**District w/ Majority of Pop.**	**District w/ Minority of Pop.**	**District w/ Minority of Pop.**	**Population in District w/ Maj. Of Pop.**	**Population in District w/ Min. Of Pop.**	**Population in District w/ Min. Of Pop.**	**% of Pop. in District w/ Maj. of Pop.**	**% of Pop. in District w/ Min. of Pop.**	**% of Pop. in District w/ Min. of Pop.**
Clark	10	8	#N/A	81,355	54,646	0	59.82%	40.18%	#N/A
Crawford	5	12	#N/A	25,199	16,826	0	59.96%	40.04%	#N/A
Cuyahoga	11	4	7	786,630	473,665	4,522	62.19%	37.45%	0.36%
Fairfield	2	12	#N/A	105,161	53,760	0	66.17%	33.83%	#N/A
Franklin	3	15	#N/A	786,630	537,177	0	59.42%	40.58%	#N/A
Geauga	13	14	#N/A	69,535	25,862	0	72.89%	27.11%	#N/A
Hamilton	1	8	#N/A	786,629	44,010	0	94.70%	5.30%	#N/A
Huron	9	12	#N/A	48,221	10,344	0	82.34%	17.66%	#N/A
Madison	8	2	#N/A	29,794	14,030	0	67.99%	32.01%	#N/A
Stark	7	13	#N/A	359,977	14,876	0	96.03%	3.97%	#N/A
Tuscarawas	12	6	#N/A	79,051	14,212	0	84.76%	15.24%	#N/A
Union	8	15	#N/A	35,329	27,455	0	56.27%	43.73%	#N/A
Wayne	7	12	#N/A	111,063	5,831	0	95.01%	4.99%	#N/A

Table 2: List of township and municipal corporation splits in my Better Plan, including how many people is in each of the districts that covers each subdivision that is split. This map has a total 16 county subdivisions split a total of 16 times. (Note: The villages of Carroll and Gnadenhutten have zero-population splits, meaning the village boundary is split between two districts, but the portion of the village in one of those districts has a population of zero. I discuss at the end of this appendix the Census Blocks that must be moved to eliminate these zero-population splits without moving a single person from one district to another.)

Better Plan County Subdivision Splits								
County	**County Subdivision**	**Subdivision Type**	**District w/ Majority of Pop.**	**District w/ Minority of Pop.**	**Population in District w/ Maj. Of Pop.**	**Population in District w/ Min. Of Pop.**	**% of Pop. in District w/ Maj. of Pop.**	**% of Pop. in District w/ Min. of Pop.**
Clark	Springfield	City	10	8	57,948	714	98.78%	1.22%
Crawford	Galion	City	12	5	9,971	482	95.39%	4.61%
Cuyahoga	Strongsville	City	4	7	41,969	4,522	90.27%	9.73%
Cuyahoga	Brook Park	City	11	4	17,950	645	96.53%	3.47%
Fairfield	Lancaster	City	2	12	24,947	15,605	61.52%	38.48%
Fairfield	Carroll*	Village	2	12	501	0	100.00%	0.00%
Franklin	Columbus	City	3	15	595,131	285,198	67.60%	32.40%
Geauga	Chardon	City	13	14	3,462	1,680	67.33%	32.67%
Hamilton	Springdale	City	1	8	7,896	3,111	71.74%	28.26%
Huron	Willard	City	12	9	4,408	1,789	71.13%	28.87%
Madison	London	City	8	2	9,515	764	92.57%	7.43%
Stark	Alliance	City	7	13	11,671	9,951	53.98%	46.02%
Tuscarawas	Dennison	Village	12	6	2,121	476	81.67%	18.33%
Tuscarawas	Gnadenhutten*	Village	6	12	1,240	0	100.00%	0.00%
Union	Marysville	City	8	15	20,925	4,646	81.83%	18.17%
Wayne	Wooster	City	7	12	25,636	1,596	94.14%	5.86%

Table 3: List of county splits in the Fair Districts Model Map, including how many people is in each of the districts that covers each county that is split. This map has a total 14 counties split a total of 15 times.

Fair Districts Model County Splits									
County	**District w/ Majority of Pop.**	**District w/ Minority of Pop.**	**District w/ Minority of Pop.**	**Population in District w/ Maj. Of Pop.**	**Population in District w/ Min. Of Pop.**	**Population in District w/ Min. Of Pop.**	**% of Pop. in District w/ Maj. of Pop.**	**% of Pop. in District w/ Min. of Pop.**	**% of Pop. in District w/ Min. of Pop.**
Clark	10	5	#N/A	81,355	54,646	0	59.82%	40.18%	#N/A
Clermont	2	8	#N/A	139,674	38,927	0	78.20%	21.80%	#N/A
Columbiana	6	14	#N/A	87,001	14,876	0	85.40%	14.60%	#N/A
Cuyahoga	11	4	13	786,630	473,666	4,521	62.19%	37.45%	0.95%
Delaware	12	15	#N/A	186,669	27,455	0	87.18%	12.82%	#N/A
Fairfield	2	15	#N/A	82,057	76,864	0	51.63%	48.37%	#N/A
Franklin	3	12	#N/A	786,630	537,177	0	59.42%	40.58%	#N/A
Geauga	13	14	#N/A	84,411	10,986	0	88.48%	11.52%	#N/A
Hamilton	1	8	#N/A	786,629	44,010	0	94.70%	5.30%	#N/A
Hancock	5	15	#N/A	61,841	13,079	0	82.54%	17.46%	#N/A
Perry	2	6	#N/A	25,404	10,004	0	71.75%	28.25%	#N/A
Seneca	15	9	#N/A	49,561	5,508	0	90.00%	10.00%	#N/A
Summit	13	7	#N/A	535,907	4,521	0	99.16%	0.84%	#N/A
Tuscarawas	6	7	#N/A	82,041	11,222	0	87.97%	12.03%	#N/A

Table 2: List of township and municipal corporation splits in the Fair Districts Model Map, including how many people is in each of the districts that covers each subdivision that is split. This map has a total 18 county subdivisions split a total of 18 times. (Note: The city of Chardon has a zero-population split, meaning the city boundary is split between two districts, but the portion of the city in one of those districts is zero. I discuss at the end of this appendix the Census Block that must be moved to eliminate this zero-population split without moving a single person from one district to another. Additionally, Columbiana and Hamilton Counties have more subdivision splits than are mathematically necessary to ensure equal population. Since both split subdivision in each of those two counties are split between the same two districts, it is rather trivial to move equal numbers of people between the two districts in the two appropriate subdivisions to reduce the total number of subdivision splits.)

Fair Districts Model County Subdivision Splits								
County	**County Subdivision**	**Subdivision Type**	**District w/ Majority of Pop.**	**District w/ Minority of Pop.**	**Population in District w/ Maj. Of Pop.**	**Population in District w/ Min. Of Pop.**	**% of Pop. in District w/ Maj. of Pop.**	**% of Pop. in District w/ Min. of Pop.**
Clark	Mad River	Township	10	5	5,091	3,444	59.65%	40.35%
Clermont	Miami	Township	8	2	43,747	196	99.55%	0.45%
Columbiana	Perry	Township	14	6	2936	1456	66.85%	33.15%
Columbiana	Salem	Township	6	14	3409	14	99.59%	0.41%
Cuyahoga	Moreland Hills	Village	11	13	3262	204	94.11%	5.89%
Cuyahoga	Parma	City	4	11	80,646	500	99.38%	0.62%
Delaware	Genoa	Township	12	15	24,196	508	97.94%	2.06%
Fairfield	Bloom	Township	2	15	4,407	3,153	58.29%	41.71%
Franklin	Columbus	City	3	12	548,336	331,993	62.29%	37.71%
Geauga	Chardon*	City	13	14	5,242	0	100.00%	0.00%
Geauga	Chardon	Township	13	14	2,266	2,228	50.42%	49.58%
Hamilton	Silverton	Village	1	8	4,853	55	98.88%	1.12%
Hamilton	Sycamore	Township	1	8	12,666	644	95.16%	4.84%
Hancock	Jackson	Township	15	5	612	419	59.36%	40.64%
Perry	Clayton	Township	6	2	1,196	369	76.42%	23.58%
Seneca	Liberty	Township	9	15	769	665	53.63%	46.37%
Summit	New Franklin	City	13	7	10,553	3,319	76.07%	23.93%
Tuscarawas	Sandy	Township	6	7	1,788	506	77.94%	22.06%

In order to remedy the zero-population splits in my Better Plan, move the following Census Blocks accordingly:

- 391570219001037 in Gnadenhutten from District 12 to District 6
- 391570219001036 in Gnadenhutten from District 12 to District 6
- 391570219001032 in Gnadenhutten from District 12 to District 6
- 391570219002007 in Gnadenhutten from District 12 to District 6
- 390450308001026 in Carroll from District 2 to District 12
- 390450308001027 in Carroll from District 2 to District 12
- 390450308001028 in Carroll from District 2 to District 12
- 390450308001029 in Carroll from District 2 to District 12
- 390450308001041 in Carroll from District 2 to District 12
- 390450308001042 in Carroll from District 2 to District 12
- 190450308001038 in Carroll from District 2 to District 12
- 390450308001039 in Carroll from District 2 to District 12
- 390450308001040 in Carroll from District 2 to District 12
- 390450308001066 in Carroll from District 2 to District 12

In order to remedy the zero-population splits in the Fair Districts Model map, move the following Census Block accordingly:

- 390553122011015 in Chardon from District 14 to District 13

Appendix B: Map Images

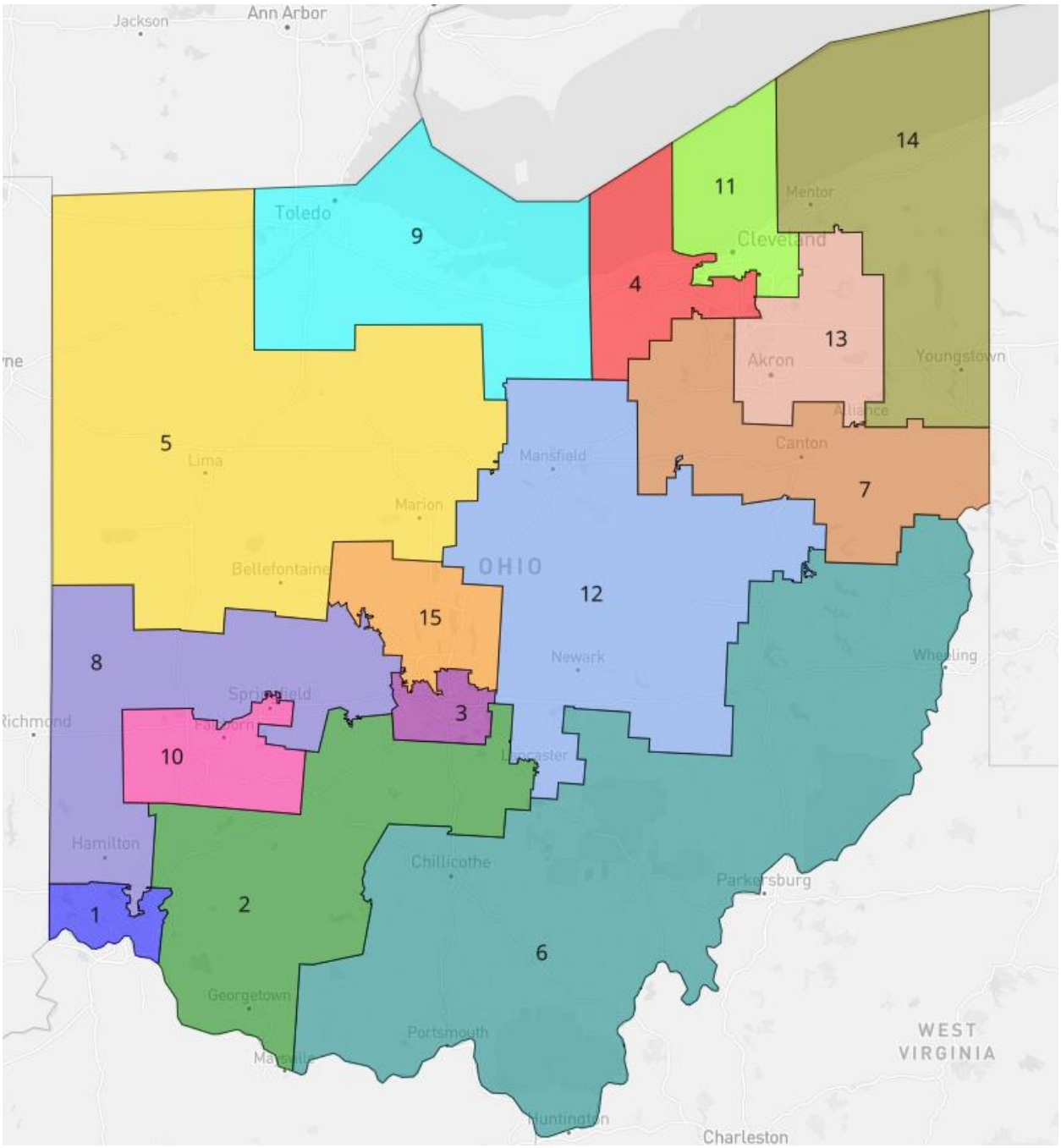


Figure 1: Map of My Better Plan. A block assignment file was uploaded to the Ohio Redistricting Commission's website on November 18, 2021 at https://redistricting.ohio.gov/assets/district-maps/district-map-473.zip. Additionally, this map can be accessed in Dave's Redistricting App at https://davesredistricting.org/join/d403e19e-c56a-47bc-8ea5-863b8d9bd3b8

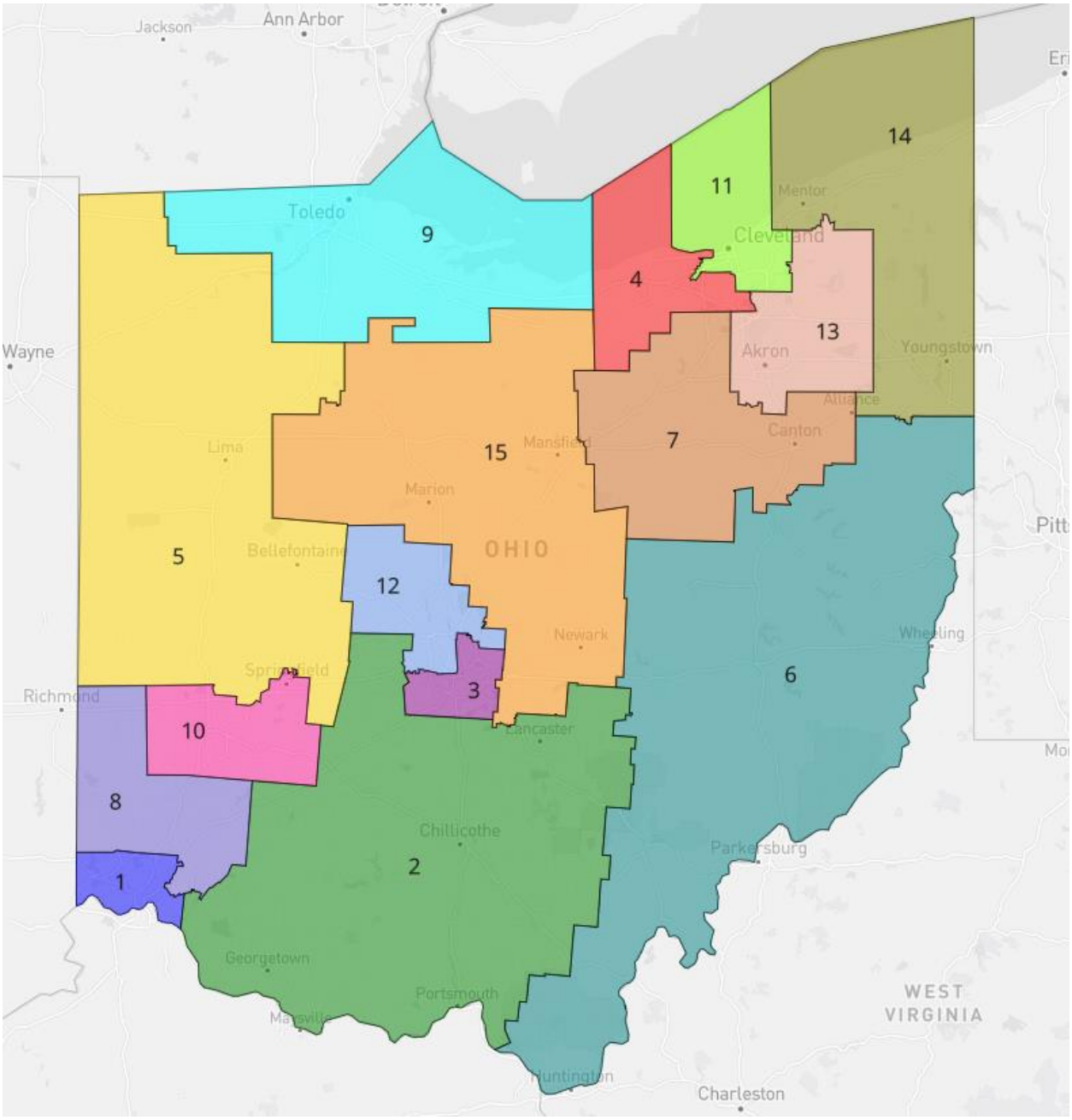


Figure 2: Map of Fair Districts Ohio Model Map. A block assignment file was uploaded to the Ohio Redistricting Commission's website on February 3, 2022 at https://redistricting.ohio.gov/assets/district-maps/district-map-693.zip.