MICRC INDIVIDUAL COMMISSIONERS' REDISTRICTING MAPS

IPPSR BRIEF STUDY
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This document contains an analysis of Michigan Independent Citizens Redistricting Commission maps submitted by individual commissioners and prepared for a second round of hearings in October 2021. These maps represent potential electoral districts for Michigan's U.S. Congress, state Senate and state House of Representatives elections for the next ten years.

This analysis serves as a complement to the more comprehensive analysis of the collaborative MICRC Proposed Draft maps, released by the Institute for Public Policy and Social Research on October 18, 2021, and available at https://ippsr.msu.edu/redistricting.

Please see MICRC meeting notices and materials.

In this abridged analysis, we check whether each map is a complete redistricting plan. We also study how these individual commissioners' maps perform with respect to Criterion A (equal population and the Voting Rights Act), Criterion B (contiguity), and Criterion D (partisan fairness). We use data from the redistricting application DRA 2020, from Dr. Christian Cox, and from the MICRC Compliance Sheet available at their website.

U.S. CONGRESSIONAL PLANS

10-12-21 EID V6 CD #237
Plan CD Eid is a complete map. It assigns all areas of the state.

10-13-21 v1 CD RAS #240
Plan CD Szetela is a complete map. It assigns all areas of the state.

10-11-21 CD DJC #238
Plan CD Clark is a complete map. It assigns all areas of the state.

10-13-21 v1 CD RL #243
Plan CD Lange is a complete map. It assigns all areas of the state.

*TABLE 1. *Population Equality in Individual Commissioners' Congressional Plans*

	Population Difference	**Maximum Deviation**
Plan CD Eid	0.14%	0.08%
Plan CD Szetela	0.12%	0.06%
Plan CD Clark	0.27%	0.15%
Plan CD Lange	0.17%	0.10%

TABLE 2. *Black Minority Districts of Opportunity in Commissioners' Congressional maps*			
	# > 50% VAP Black	**# >40% VAP Black**	**# >35% VAP Black**
Plan CD Eid	0	2	2
Plan CD Szetela	0	2	2
Plan CD Clark	0	2	2
Plan CD Lange	0	1	2
2011 Official Map	2	2	2
Proportional to Population.	2		

TABLE 3. *Contiguity*	
	Are all districts contiguous?
Plan CD Eid	Yes
Plan CD Szetela	Yes
Plan CD Clark	Yes
Plan CD Lange	Yes

TABLE 4. *Measures of Partisan Fairness for Commissioners' Congressional Maps*				
	Efficiency Gap	Proportionality	Median-mean	Partisan Advantage
	D2	D3	D4	D6
Plan CD Eid	+0.6%	-0.2 seats	+2.3%	-0.3 seats
Plan CD Szetela	+0.7%	-0.2 seats	+0.5%	-0.1 seats
Plan CD Clark	+0.7%	-0.2 seats	+2.2%	+0.4 seats
Plan CD Lange	+1.1%	-0.2 seats	+0.9%	-0.4 seats

The results on Table 1 and Table 2 are from DRA 2020, using the 2020 U.S. Census population data. The results on Table 3 represent IPPSR analysis, checked using QGIS via computing the number of independent polygons in the shapefile of each map (in a contiguous map, this number is equal to the number of districts). On Partisan Fairness, the measures for the Efficiency Gap, deviations from Proportionality, and the Median-Mean difference are from the MICRC Compliance Sheet, using all ten statewide elections from 2012 to 2020; and the partisan advantage is computed by Cox based upon the two presidential elections and all the elections for the same chamber as the map in question (four for the U.S. House and the Michigan state House, and two for the Michigan Senate) from 2014 to 2020.Negative numbers indicate the map favors the Democratic party. Positive numbers represent Republican Party favor. Deviations from proportionality or from the neutral jurisdictional benchmark in the partisan advantage are measured in seats; whereas, the Efficiency Gap and the Median-Mean measure differences in shares of votes.

Observe that the results are similar across the board to those of the collaborative maps: these individual plans follow a similar strategy to satisfy the VRA, and they all attain reasonable scores on partisan fairness (slightly positive or slightly negative depending on the measure in question).

MICHIGAN STATE SENATE PLANS

10-14-21 V4 SD Eid #244
Plan SD Eid is a complete map. It assigns all areas of the state.

10-13-21 v1 SD RAS #242
Plan SD Szetela is a complete map. It assigns all areas of the state.

10-14-21 SD RL #247
Plan SD Lange is a complete map. It assigns all areas of the state.

TABLE 8. *Population Equality in Individual Commissioners' Senate Plans*

	Population Difference	**Maximum Deviation**
Plan SD Eid	8.37%	4.27%
Plan SD Szetela	4.72%	2.46%
Plan SD Lange	2.53%	1.53%

TABLE 9. *Black Minority Districts of Opportunity in Commissioners' Senate Maps*

	# >50% VAP Black	**# >40% VAP Black**	**# >35% VAP Black**
Plan SD Eid	0	4	6
Plan SD Szetela	0	4	6
Plan SD Lange	0	3	7
2011 Official Map	2	5	6
Proportional to Population	5		

TABLE 10. *Contiguity in Individual Commissioners' Senate Maps*

	Are all districts contiguous?
Plan SD Eid	No (part of 15 in 4)
Plan SD Szetela	Yes
Plan SD Lange	Yes

TABLE 11. *Measures of Partisan Fairness for Commissioners' Senate Maps*

	Efficiency Gap	Proportionality	Median-Mean	Advantage
	D2	D3	D4	D6
Plan SD Eid	+1.0%	-1.1 seats	+1.7%	-2.6 seats
Plan SD Szetela	+0.7%	-1.1 seats	+0.6%	-2.8 seats
Plan SD Lange	+6.1%	+0.9 seats	+4.4%	+0.4 seats

The SD Plan Lange performs better than its peers on population equality. All of these plans follow a similar strategy toward compliance with the VRA as the collaborative maps. This strategy, rooted in the advice received by the MICRC from its consultants, consists of avoiding drawing any district with a majority of Voting Age Population that identifies as "Black."

The three maps offer a small difference on partisan fairness: SD Plan Eid and SD Plan Szetela minimize the deviation on Efficiency Gap and Median-Mean at the cost of deviations from Proportionality or from a neutral benchmark (D6); whereas, SD Plan Lange comes close to minimizing the deviation on the latter two measures at the cost of more deviation according to the Efficiency gap and Median-Mean. In any case, none of the deviations is large (they are all within normal ranges), and some deviation on one or the other set of measures is inevitable.

MICHIGAN STATE HOUSE PLANS

10-13-21 V1 HD RAS #241
Plan HD Szetela is a complete map. It assigns all areas of the state.

10-9-21 v1 HD DJC #232
Plan HD Clark is a complete map. It assigns all areas of the state.

10-13-21 v1 HD CSO fixed #248
Plan HD Orton is a complete map. It assigns all areas of the state.

TABLE 15. *Population Equality in individual commissioners' House Plans*

	Population difference	**Maximum Deviation**
Plan HD Szetela	5.09%	2.51%
Plan HD Clark	7.21%	3.50%
Plan HD Orton	7.21%	3.50%

TABLE 16. *Black Minority Districts of Opportunity in Commissioners' House Maps*

	# > 50% VAP Black	**# >40% VAP Black**	**# >35% VAP Black**
Plan HD Szetela	2	17	21
Plan HD Clark	2	17	21
Plan HD Orton	2	17	21
2011 Official map	11	12	14
Proportional to Population	15		

TABLE 17. *Contiguity in Individual Commissioners' House Maps*

	Are all districts contiguous?
Plan HD Szetela	Yes
Plan HD Clark	Yes
Plan HD Orton	Yes

TABLE 18. *Measures of Partisan Fairness for Commissioners House Maps*

	Efficiency Gap	Proportionality	Median-Mean	Advantage
	D1	D3	D4	D6
Plan HD Szetela	+4.7%	+0.5 seats	+2.7%	-1.92 seats
Plan HD Clark	+6.7%	+2.5 seats	+3.4%	-1.09 seats
Plan HD Orton	+5.7%	+1.5 seats	+3.0%	-0.92 seats

These plans are similar to each other, and they obtain similar results, and similar to the results of the collaborative maps. Their pursuit of the strategy of minimizing the number of districts with a Black majority of Voting Age Population is less strict than in the collaborative maps (two such districts appear here). On Partisan Fairness, they all score close to the proportionality (D3) or neutral (D6) ideal, which comes at the cost of higher but moderate deviation according to measures D1 and D4.

Just as with the collaborative maps, and for the same reasons, their approach toward compliance with the VRA consists of splitting apart geographically compact majority-Black communities in the city of Detroit, to minimize the number of districts with a Black majority of voting age population. During the first of the second round of public hearings in the City of Detroit, members of the public expressed a desire that the Black community in Detroit be kept together in districts in which this community is a majority of the voting age population.

*Please note that table numbers, for ease of comparison, reflect those in IPPSR Redistricting Draft Map Analysis and Report, V1.1.