IPPSR EVALUATION OF 15 DRAFT MI HOUSE MAPS FOR COMPLIANCE WITH THE *AGEE v BENSON* ORDER

Summary

I quantitatively evaluate the 15 draft maps that the MICRC is considering as of 1/29, to measure if they look like maps drawn not on the basis of race, and if they redraw district boundaries only as "*reasonably necessary*" to comply with the Court Order in *Agee v Benson*.

I find that seven of these draft maps look entirely like maps drawn not on the basis of race. Ordering these seven draft maps from the maps that make the least to the most number of changes (of more questionable necessity) to district lines not touching any of the seven districts that must be redrawn, these seven drafts are: **Tulip** and **Trillium 3** (zero such changes); **Bergamot**, **Spirit** and **Waterlily** (3 changes); and **Rosebud** and **Sunflower** (eight such changes).

Among the other draft maps, **Daisy 2** and **Trillium** look different only in that they inherit unchanged from the 2022 map the anomalous shapes and racial distribution of districts D5 and D6. Whereas, maps drawn not on the basis of race are unlikely to look similar to PTV, Peony 2 and Peony, even though these three drafts redraw districts D5 and D6.

I also check whether the drafts are complete maps that assign all population (Marigold fails this requirement); whether they keep the population equality score as good as the 2022 map (Marigold and Daisy 2 fail this test); whether districts are contiguous (they are except for fixable technical glitches); and whether they affect the partisan balance (they do very little or not at all).

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I. MOTIVATION

In December 2021, the Michigan Independent Citizens Redistrict Commission adopted a map of electoral districts for the Michigan House of Representatives (henceforth "the 2022 House map") for the 2022-2030 elections.

In December 2023, a federal Court panel ruled that districts 1, 7, 8, 10, 11, 12, and 14 were drawn "*predominantly on the basis of race*" in violation of the Equal Protection clause in the U.S. Constitution (see *Agee v Benson*). In a subsequent scheduling order, the Court held that "*the district lines for not only for the unconstitutional districts, but also other districts as reasonably necessary, will be redrawn*."

In this study, I evaluate fourteen draft maps proposed by the Commission for quantitative evidence that is informative of the draft maps' compliance with the Court's order.

While maps must be drawn not "*predominantly on the basis of race*", some consideration of race is acceptable as long as race does not become a predominant factor and the racial consideration is for a compelling interest (such as reflecting communities of interest, or forming districts of opportunity for racial minority voters). Maps drawn with little consideration of race are likely to look similar to maps drawn with no racial considerations at all. We quantify whether these draft maps are similar to maps drawn without attention to race by comparing the draft maps to a large collection of maps drawn by a computer algorithm that lacked any information about race. If a draft map looks similar to maps drawn without any consideration of race, we conclude that race was not a predominant factor in determining the district boundary lines of the draft map.

To quantify whether the draft maps are narrowly tailored to the Court's order by redrawing only the lines of other districts only "*as reasonably necessary*", I count the number of additional districts that are redrawn, besides the seven that must be redrawn. I distinguish between changes in boundary lines of districts adjacent to an unconstitutional district, from changes in boundary lines of districts that are not adjacent to an unconstitutional one. An adjustment to the boundary line between an unconstitutional district and a district adjacent to it necessarily changes the boundary of the adjacent district; whereas, changes to boundaries of unconstitutional districts can only affect non-adjacent districts indirectly through a domino effect, or not at all, so the need to also adjust the boundaries of non-adjacent districts is less clear.

Table 1 lists the 14 collaborative draft maps the commission voted to advance on 1/25, plus an individual commissioner map uploaded on 1/29. I downloaded them all from the https://michigan.mydistricting.com.

Map	Full name
Bergamot	011724_V1_HD_Col_Bergamot
Bergamot 2	011824_V4_HD_COL_Bergamont2
Daisy2	012524_V1_HD_Col_Daisy2
Marygold	012424_V5_HD_COL_Marigold
Peony	01_25_24_Peony
Peony 2	01_25_24_Peony2
PTV	01_25_24_PromoteTheVote_RAS
Rosebud	011824_V3_hd_Col_Rosebud
Spirit	012524_V2_HD_COL-Spirit of Detroit
Sunflower	012424_V4_HD_Col_Sunflower
Trillium	012424_V1_HD_STL_Trillium
Trillium3	012424_V3_HD_COL_Trillium
Tulip	012324_v1_HD_Tulip
Waterlily	012524_V3_HD_COL_Water_Lily
Szetela	01_26_24_V1_HD_RAS

Table 1. List of draft maps under consideration.

II. PROVISION OF REMEDY: MAPS NOT BASED ON RACE.

The MGGG Redistricting Lab at Tufts University drew computationally-generated 100,000 maps of Michigan House districts, following an algorithmic code that has no information about race, and favors compact districts over non-compact ones.

In most (to be precise, in more than 95,000) of these maps, the distribution of ethnic minority voting age population in each district is such that there are:

between	and	districts in which at least ___ of voting-age residents identify as "Black" (alone).
1	3	85%
2	5	75%
3	6	65%
4	8	50%
5	9	45%

Table 2. Typical range of number of districts with large Black population in 100,000 MI House maps.

Table 2 is meant to be read by row. For instance, the first row says that in most maps (precisely, in 38 out of every 40) drawn without information about race, there are between one (1) and three (3) districts in which at least 85% of voting-age residents identify by race as "Black" exclusively 2020 U.S. Census. If the number of districts with such shares of residents who identify by race exclusively as "Black" (including those who identify as "Black" exclusively by race and as "Hispanic" by ethnicity in the 2020 Census) departs much from these values, such departure is statistical evidence indicative that the drawing of district boundaries was probably influenced by race. After all, without information about race, there is only less than a 2.5% probability (less than one in forty) that you end up drawing a map with a number outside that range of between one and three.

I compare the 2022 House map, and the current draft maps, against these ranges that we expect from maps not drawn on the basis of race. I order draft maps by column according to the number of districts they share in common with the 2022 House map, indicating in parenthesis the number of additional districts with new boundaries, besides the seven ones that were ruled unconstitutional.

A technical caveat: The definition of the set of voters who identify as "Black" in the 2020 Census varies by depending on whether one includes or excludes those who also identify with another race besides "Black", and/or those who identify as "Hispanic" by ethnicity. The range for the computationally generated maps is for "Black" exclusively by race, regardless of "Hispanic" ethnicity. If the number of districts for the draft maps depends on which definition we use, I indicate the number with the most restrictive definition ("Black" only, with no other racial or ethnic identification) and the number with most inclusive definition ("Black" as one of possibly many racial or ethnic identifications). The number of districts in

which at least a certain share of voting-age residents identifies as "Black" in the draft maps is then as follows.

Identify as "Black"	Range w.o. race info	2022 map	Daisy2 (0)	Trillium (3)	Tulip (3)	Trillium3 (4)	PTV (7)	Peony2 (7)	Bergmt. (8)	Bergmt.2 (8)
>85%	1 to 3	0	0	1-2	2	0-1	0	0	2	2
>75%	2 to 5	0	1-2	2	2	2-3	0	0	4	4
>65%	3 to 6	0	2	2	3	3	1	1	5	4-5
>55%	4 to 8	2-4	4-6	5-7	5-8	5-7	8	8	6-7	6-7
>50%	5 to 9	7	9	9-10	10	9-10	10	10	9	9
>45%	6 to 10	7-9	9	10	10	10	10-11	10-11	9	9

Table 3a. Number of districts with large Black population in draft maps.

Identify as "Black"	Range w.o. race info	2022 map	Spirit (8)	Water lily (8)	Peony (9)	Marigold (13)	Rosebud (13)	Sunflower (13)	Szetela (17)
>85%	1 to 3	0	1	3	1	2	2	2	1
>75%	2 to 5	0	3	4	1	5	5	5	5
>65%	3 to 6	0	6	5	2	7	6-7	6-7	5-6
>55%	4 to 8	2-4	8	7	6-8	8	8	8	7
>50%	5 to 9	7	10	9	10	9	9	9	10
>45%	6 to 10	7-9	10	9	10-11	9	9	9	10

Table 3b. Number of districts with large Black population in draft maps.

According to this quantitative evidence, we can conclude that it is implausible (extremely unlikely) that a map drawn without attention to race could inadvertently feature a distribution of districts similar to the ones in the PTV or Peony2 maps, or, to a lesser extent, Peony.

On the other hand, seven maps have a distribution of minority districts entirely within the range expected from maps drawn without any consideration of race: Tulip, Trillium3, Bergamot, Spirit, Waterlily, Rosebud, and Sunflower. Further, Daisy 2 and Trillium are missing the one heavily Black district that would emerge from most re-drawings of districts D5, and D6, which these two draft maps inherit unchanged from the 2022 House map.

III. MINIMAL REMEDY: ONLY "REASONABLY NECESSARY" CHANGES

A principle of minimal intervention to remedy the 2022 House map as ordered by the Court determines a preference for maps that alter the boundaries of as few as possible of the 103 districts in the 2022 MI map that are not directly affected by the *Agee v Benson* ruling.

Changes to other districts impose administrative costs on the Secretary of State and local election officials; arguably disfavor incumbents who in 2022 decided to run in a district under the reasonable expectation that this district would remain fixed until 2030 and have since invested resources accordingly in developing a bond with their district as drawn in 2022; and add information costs to voters in keeping track of their district. These costs can be weighed against the benefits of redrawing other districts as articulated in Commission's deliberations, such as fixing districts that also need fixing (Kellom), eliminating strip district shapes (Andrade), or eliminating districts that were drawn according to the same overall strategy that the Court ruled invalid and thus, while not challenged in this case, could potentially be challenged in future cases (Szetela), among other benefits.

The Commission's current mandate to redraw the boundaries of additional districts is limited to the Court's Order to redraw additional districts "*as reasonably necessary*" to provide the remedy of redrawing districts D1, D7, D8, D10, D11, D12 and D14.

I count the number of additional districts, besides these seven, redrawn in each draft plan. I distinguish between two cases of edits to additional changes. The first is case is a change to the boundary line shared between one of these seven districts and an adjacent one; such a change is necessary to redraw the unconstitutional district in this manner, so if drawing the district in this manner is reasonable, then the change is reasonably necessary.

The second case is a change to a boundary line of a district that is not adjacent to one of the seven unconstitutional one. Such a change is not necessary to redraw the unconstitutional districts as in the draft (the change could be accommodated with a different redrawing of the districts adjacent to the unconstitutional ones), so arguing for the necessity of this change requires arguing that the adjacent district needs to be redrawn in a way –and no other— that also indirectly requires drawing the affected non-adjacent district as in the draft map. Changes to the boundaries of districts that are not only not adjacent to an unconstitutional district but are not even adjacent to a district that is adjacent to an unconstitutional (so they are twice removed from the area that must be redrawn) are of particularly questionable necessity. I list them as a separate column in Table 4.

Map	Total Adjacent	Total Non-Adjacent	Adjacent districts redrawn							Non-Adjacent districts redrawn				
			9	13	4	3	2	56	58	5	6	16	15	17-19,22,+
Daisy 2	0	0												
Trillium	3	0	x	x	x									
Tulip	3	0	x	x	x									
Trillium 3	4	0	x	x	x		x							
PTV	5	2	x	x	x	x				x	x	x		
Peony 2	4	3	x	x	x	x				x	x	x		
Bergamot	5	3	x	x	x	x	x			x	x	x		
Bergamot2	5	3	x	x	x	x	x			x	x	x		
Spirit	5	3	x	x	x	x	x			x	x	x		
Waterlily	5	3	x	x	x	x	x			x	x	x		
Peony	5	4	x	x	x	x	x			x	x	x	x	
Marigold	5	8	x	x	x	x	x			x	x	x	x	x
Rosebud	5	8	x	x	x	x	x			x	x	x	x	x
Sunflower	5	8	x	x	x	x	x			x	x	x	x	x
Szetela	7	10	x	x	x	x	x	x	x	x	x	x	x	x, 25,26

Table 4. Number of additional districts with boundaries redrawn.

IV. TECHNICAL CHECKS: POPULATION AND CONTIGUITY

In this section I list any draft that suffers from any of the two following technical failures:

1. Positive population unassigned to any district. Technically, such a draft is not a complete map, and needs redress before further consideration.
2. Violations of contiguity.

Further, I check whether the draft worsens the population equality criterion, by creating a district with a difference in population from the ideal size (91,612 residents) greater than 2,276 residents, which is the difference in district D59, whose boundaries are inherited unchanged from the 2022 House map.

1. **Unassigned population**: Draft Marigold leaves three precincts with a total population of 131 residents, unassigned to any district. As one of these precincts lies at the boundary of two districts, the assignment is not trivial, and should be determined by the commission (nor merely cleaned up as minor technical glitch by consultants), to turn Marigold into a complete draft prior to further consideration.
2. **Contiguity.** The following maps fail contiguity, with the non-contiguous districts in parentheses:
   -Promote the Vote PTV, Peony, and Peony2 (D3);
   -Tulip (D9);
   -Marigold, Rosebud, and Sunflower (D3).
3. **Population Equality**. The draft map Tulip worsens the score on population equality, as District D7 is underpopulated by 3,067 inhabitants. The incomplete draft Marigold worsens the score on population equality, as District D10 is underpopulated by 2,541 inhabitants. Daisy 2 worsens the score on population equality, as District D12 is underpopulated by 2,302 inhabitants.

IV. PARTISAN BALANCE

Averaging across the 2016 and 2020 Presidential elections, the 2018 and 2020 MI Senate elections, and the 2018 MI Governor election, the Democratic party won 56.2 of the 2022 House districts, and the GOP won the remaining 53.8 districts. In *LWV v ICRC* (2022), the MI Supreme Court dismissed a case that this map is unfair to parties. We thus assume that this partisan outcome –and presumably any other close enough to it— is fair, and that any map that approximately respects the partisan balance of the 2022 MI House map is fair as well.

All thirteen draft maps I have analyzed approximately respect the partisan balance of the 2022 MI House map. The exact results for each draft map, with the same election data from these five elections, are as follows.

Map	Dem. seats	GOP gain
Peony	56.2	0
Peony 2	56.2	0
PTV	56.2	0
Trillium	56.2	0
Bergamot 2	56	+0.2 seats
Daisy 2	56	+0.2 seats
Rosebud	56	+0.2 seats
Spirit	56	+0.2 seats
Sunflower	56	+0.2 seats
Tulip	56	+0.2 seats
Szetela	56	+0.2 seats
Bergamot	55.8	+0.4 seats
Marigold	55.8	+0.4 seats
Trillium 3	55.8	+0.4 seats
Waterlily	55.8	+0.4 seats

Table 5. Effect on Partisan Balance.

Creating a shore district with St Clair Shores and the Grosse Pointes, and without Eastville or Harper Woods, gives the GOP a new chance to win that district in elections in which it does well statewide. District configurations that do not create such a district preserve the exact partisan balance of the 2022 MI House map.