

SENT VIA EMAIL TO [Redistricting@vacourts.gov](mailto:Redistricting@vacourts.gov)

Re: Decennial Redistricting Pursuant to the U.S. Constitution, the Constitution of Virginia, and the Code of Virginia

**December 15, 2021**

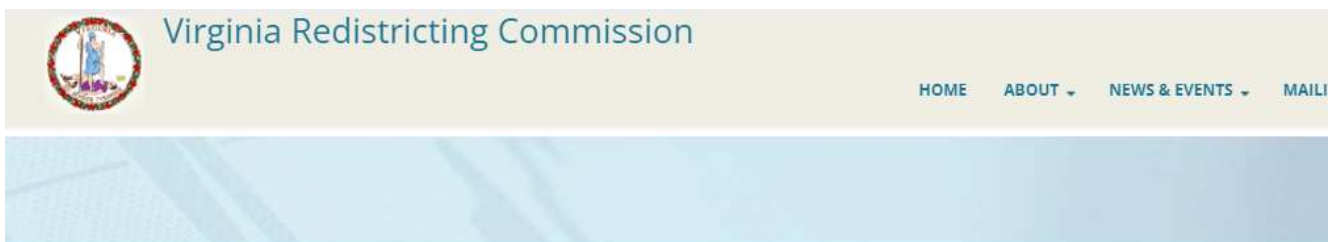
Honorable Muriel-Theresa Pitney, Clerk of Court  
 Supreme Court of Virginia  
 P.O. Box 1315  
 100 North Ninth Street  
 Richmond, VA 23219-1315

To the Clerk of Court and the Justices of the Supreme Court of Virginia,

**I write to extend several insights on the Special Masters Draft redistricting plans.**

I have no partisan affiliation or interests, nor any personal connections to a party, interest group, elected official or candidate with an interest in the Virginia redistricting process. I am a faculty member in the Department of Politics at the University of Virginia. For the past 31 years, my research, publication and teaching areas have included GIS, the U.S. Census, the history of Virginia elections, and the topics of apportionment, redistricting, and electoral administration. I regularly teach GIS-related courses at the University of Virginia, including a course on redistricting. In 2011, my UVA students won most of the awards in the Virginia university public redistricting competition, and a former UVA student of mine served as an appointed member on the 2021 Virginia Redistricting Commission. In addition, in 2011 I served as a GIS and election expert on the Charlottesville Reprecincting Committee that redrew the City's precinct boundaries to align with the requirements of the Virginia Code. Finally, between 2000 and 2007, I directed an exploratory effort involving hundreds of UVA students who helped to create the [first online historical database of Virginia elections](#), election districts and elected officials from 1776 to the present. The initial form of this historical database remains available online, but its final form and much (but not all) of the collected data is now housed and curated by the [Virginia Board of Election Historical Database](#).

**My first concern regarding the Special Masters draft plans** relates to the Special Masters assumption that the Prisoner-adjustment process required by the VA Code (§ 24.2-314) has been correctly “implemented in [the Division of] Legislative Services’ data.” The highlighted prison-adjustment datafiles from the Commission, however, contain both a serious error and a problematic omission.



## Data Downloads

[Statewide 2020 geodatabase containing Counties, VTDs, and Blocks with prison adjusted population and election results and selected primary election results \(.zip\)](#)

[Statewide 2020 GeoPackage containing Counties, VTDs, and Blocks with prison adjusted population and election results \(.zip file\)](#)

[Statewide 2020 geodatabase containing Counties, VTDs, and Blocks with prison adjusted population and election results \(.zip file\)](#)

As indicated in the screenshot below, the Redistricting Commission’s prison-adjusted data erroneously reports there are 21 Virginia Census blocks with negative (!) populations. Unlike a typographical mistake, an error like this typically indicates a systemic data-processing problem. If left uncorrected, this datafile will undermine the Court’s effort to comply with the U.S. and Virginia constitutional expectation for election district population equality.







R	PRES12L	PRES12C	PRES12G	PRES12TOTV	PRADJPOPD	ADJPOP
0	0	0	0	0	-700	-700
2	0	0	0	4	-694	-675
16	10	6	5	270	-1051	-422
39	2	4	1	266	-1179	-371
0	0	0	0	0	-351	-351
0	0	0	0	2	-345	-341
0	0	0	0	0	-284	-284
0	0	0	0	0	-268	-268
12	4	3	1	148	-531	-202
1	0	0	0	2	-181	-176
2	0	0	0	43	-214	-144
39	3	2	0	156	-436	-114
22	0	0	0	44	-254	-93
24	1	0	0	58	-207	-62
33	1	4	0	97	-320	-50
38	8	4	3	358	-840	-44
19	0	0	0	33	-104	-43
19	0	0	0	41	-132	-32
27	1	0	0	85	-339	-30
18	0	1	0	49	-126	-19
23	1	0	0	43	-100	-2
0	0	0	0	0	0	0

**My second concern** relates to the apparent fact that the Redistricting Commission’s datafiles do not readjust Virginia’s 2020 Census block populations to reflect “the race and ethnicity” of Virginia’s incarcerated persons in the population count of the locality in which he is deemed to reside” (§ 24.2-314 D.). According to the Virginia Redistricting Commission data, 41,855 incarcerated persons in 103 Census blocks were reassigned to 24,035 home residency Census blocks and yet the race/ethnicity of these individuals was not adjusted in either the original or new home residency Census blocks. Before authorizing any new Virginia redistricting plans, the Virginia Supreme Court needs to inquire if the Redistricting Commission prison-adjusted data is in compliance with the expectations of the Voting Rights Act.

**My third concern** is that in the wake of the Virginia Redistricting Commission’s wholesale failure the Special Masters draft plans will be accepted without a clear or public demonstration that they best satisfy the constitutional and statutory criteria governing the creation of election districts in Virginia. **To test the possibility that the Special Masters plans are not providential or optimal, I offer 6 alternative U.S. House District plans, which I assess and compare against the Special Masters plan.** Four constitutional and statutory criteria highlighted by the Special Masters are adopted as the benchmarks by which each plan is assessed. These four benchmarks are:

- 1) *District population equality,*
- 2) *Protection and promotions of voting rights,*
- 3) *District Compactness, and*
- 4) *Minimization of Locality Splits.*

As the tables below reveal, the Special Masters Congressional District Plan clearly are suboptimal in three benchmark categories (1,3,4), with one category (2) open to interpretation by the Court and others.

DistrictBuilder URL	6 Alternative U.S. House District Plans
<p><b>UVA-1</b> U.S. Districts_8 Splits_32% Compactness</p> <p><a href="https://app.districtbuilder.org/projects/81194c4b-da35-4f10-b2c4-47c65c877a14">https://app.districtbuilder.org/projects/81194c4b-da35-4f10-b2c4-47c65c877a14</a></p>	
<p><b>UVA-2</b> U.S. Districts_10 Splits_31% Compactness</p> <p><a href="https://app.districtbuilder.org/projects/8e412a6c-a0cf-4461-beca-7d5cb5fec101">https://app.districtbuilder.org/projects/8e412a6c-a0cf-4461-beca-7d5cb5fec101</a></p>	
<p><b>UVA-3</b> U.S. Districts_10 Splits_32% Compactness</p> <p><a href="https://app.districtbuilder.org/projects/d9a0e0b6-399c-4e88-a468-adaa451cad2d">https://app.districtbuilder.org/projects/d9a0e0b6-399c-4e88-a468-adaa451cad2d</a></p>	
<p><b>UVA-4</b> U.S. Districts_10 Splits_35% Compactness</p> <p><a href="https://app.districtbuilder.org/projects/8422d4d8-6e34-47b1-af54-11541489fb6f">https://app.districtbuilder.org/projects/8422d4d8-6e34-47b1-af54-11541489fb6f</a></p>	
<p><b>UVA-5</b> U.S. Districts_11 Splits_35% Compactness</p> <p><a href="https://app.districtbuilder.org/projects/d045fee5-ca41-4f4f-a6a6-fab7eb3c3ffc">https://app.districtbuilder.org/projects/d045fee5-ca41-4f4f-a6a6-fab7eb3c3ffc</a></p>	
<p><b>UVA-6</b> U.S. Districts_12 Splits_36% Compactness</p> <p><a href="https://app.districtbuilder.org/projects/5ef335a0-f9a1-434c-8de9-ebf74272f9f1">https://app.districtbuilder.org/projects/5ef335a0-f9a1-434c-8de9-ebf74272f9f1</a></p>	

### 1) District Population Equality

In *Karcher v. Daggett* (1983), the U.S. Supreme Court interpreted the “as nearly as practicable” population equality standard for Congressional districts as requiring a good faith effort to achieve the smallest possible district population deviations. The Special Masters Congressional Plan clearly fails to meet this standard. As Table 1 reveals, each of the 6 alternative plans more closely satisfies the *Karcher* minimalist standard at both the individual district levels and at the level of a plan’s average deviation.

Table 1

11 Congressional Districts	Special Master	UVA-6 12 Splits- 36% Compactness	UVA-5 11 Splits- 35% Compactness	UVA-4 10 Splits- 35% Compactness	UVA-3 10 Splits- 32% Compactness	UVA-2 10 Splits- 31% Compactness	UVA-1 8 Splits- 32% Compactness
Average Deviation	896 0.11%	376 0.05%	428 0.05%	462 0.06%	307 0.04%	290 0.04%	351 0.04%
District with least deviation	-219 -0.03%	124 0.02%	124 0.02%	132 -0.02%	16 0.00%	16 0.00%	16 0.00%
	-306	132	132	-158	92	88	-83
	-319	-158	-158	-240	102	102	102
	-531	225	-240	307	204	-164	160
	716	-240	348	348	-256	204	204
	-1059	-307	512	512	352	352	352
	1068	348	549	549	-413	402	-413
	-1236	549	-576	-576	-424	-413	433
	-1259	-576	-594	692	433	-424	-595
	1349	692	692	-777	490	433	662
District with most deviation	1797 0.23%	-788 -0.10%	-788 -0.10%	-788 -0.10%	-595 -0.08%	-595 -0.08%	-837 -0.11%

### 2) Protection and promotions of voting rights

The federal Voting Rights Act prohibits discriminatory voting practices against racial/ethnic minorities, including election districts that create an “ineffective minority” or an “excessive majority.” When required remedially and where possible spatially, the VRA affirmatively promotes state creation of election districts that afford underrepresented minority voters the “opportunity to elect candidates of their choice.” Virginia State law extends these protections and opportunities by recognizing minority “Coalition” opportunity districts in which the “white” population is less than 50% (Va. Code Ann. §24.2-304.04(4)).

Although federal and state courts are the final arbiters of how a redistricting plan best advances the protection of voting rights, this should not preclude a clear and public assessment and comparison of the Special Masters draft plans relative to other alternative plans. Table 2 affords this opportunity for the Court and others to review. What seems evident is that none of the 7 evaluated plans yields a conventionally-understood VRA “majority minority” district, and the Special Masters plan creates two “coalition opportunity” districts whereas the other plans create 4-5 similar districts.

Table 2

11 Congressional Districts	Special Masters	UVA #6-12 Splits-36% Compactness	UVA #5 11 Splits-35% Compactness	UVA #4 10 Splits-35% Compactness	UVA #3 10 Splits-32% Compactness	UVA #2 10 Splits-31% Compactness	UVA #1 8 Splits-32% Compactness
# of VRA Majority Minority Districts	0	0	0	0	0	0	0
# "Coalition" Majority Districts	2	5	5	5	4	5	5
District-1	<b>Total: 54.0%</b> Black (45.3%) Hispanic (3.5%) Asian (2.0%)	<b>Total: 59%</b> Black (47%) Hispanic (8%) Asian (4%)			<b>Total: 61%</b> Black (48%) Hispanic (8%) Asian (5%)	<b>Total: 61%</b> Black (48%) Hispanic (8%) Asian (5%)	<b>Total: 61%</b> Black (48%) Hispanic (8%) Asian (5%)
District-2	<b>Total 54.01%</b> Black (44.5%) Hispanic (5.2%) Asian (2.9%)	<b>Total 50%</b> Black (33%) Hispanic (10%) Asian (7%)			<b>Total 47%</b> Black (30%) Hispanic (10%) Asian (7%)	<b>Total 54%</b> Black (39%) Hispanic (10%) Asian (5%)	<b>Total 54%</b> Black (35%) Hispanic (10%) Asian (7%)
District-3		<b>Total 59%</b> Black (18%) Hispanic (23%) Asian (18%)			<b>Total 57%</b> Black (21%) Hispanic (23%) Asian (13%)	<b>Total 57%</b> Black (21%) Hispanic (23%) Asian (13%)	<b>Total 57%</b> Black (21%) Hispanic (23%) Asian (13%)
District-4		<b>Total 52%</b> Black (16%) Hispanic (21%) Asian (15%)			<b>Total 50%</b> Black (16%) Hispanic (19%) Asian (15%)	<b>Total 50%</b> Black (16%) Hispanic (19%) Asian (15%)	<b>Total 50%</b> Black (16%) Hispanic (19%) Asian (15%)
District-5		<b>Total 50%</b> Black (9%) Hispanic (14%) Asian (27%)			<b>Total 50%</b> Black (8%) Hispanic 15% Asian (26%)	<b>Total 50%</b> Black (8%) Hispanic 15% Asian (26%)	<b>Total 50%</b> Black (8%) Hispanic 15% Asian (26%)

### **3) District Compactness**

The third evaluative benchmark is “District compactness.” There are many different mathematical ways of measuring the property of “compactness” and all offer only partially adequate measurements of the highly irregular spatial boundary properties of U.S. states, localities, and the hierarchical scale of U.S. Census block geographies. The Special Masters employ the two most conventional methods for measuring district compactness. Table 3 reports the Polsby-Popper Compactness scores for the 7 evaluated plans, clearly revealing that the Special Masters Plan is not the most compact plan possible.

Table 3

11 Congressional Districts	Special Masters	UVA #6-12 Splits-36% Compactness	UVA #5 11 Splits-35% Compactness	UVA #4 10 Splits-35% Compactness	UVA #3 10 Splits 32% Compactness	UVA #2 10 Splits-31% Compactness	UVA #1 8 Splits-32% Compactness
<b>Average Compactness</b>	<b>29%</b>	<b>36%</b>	<b>35%</b>	<b>35%</b>	<b>32%</b>	<b>31%</b>	<b>32%</b>
Least Compact	20%	22%	22%	21%	22%	23%	20%
	21%	26%	24%	22%	24%	24%	24%
	22%	27%	27%	24%	25%	25%	25%
	25%	34%	34%	34%	25%	25%	25%
	26%	36%	36%	36%	30%	25%	30%
	30%	36%	36%	36%	32%	28%	33%
	31%	42%	38%	38%	33%	30%	33%
	34%	42%	42%	42%	34%	33%	34%
	34%	42%	42%	42%	36%	34%	37%
	40%	43%	42%	42%	41%	41%	41%
Most Compact	40%	44%	43%	43%	51%	51%	51%

### **4) Minimization of Locality Splits**

The fourth evaluative benchmark is “Minimization of Locality splits.” The Special Masters should be commended for their efforts to protect the integrity of the 133 local political communities that are legally recognized in the state of Virginia. Residents of a state may or may not decide to participate in or to self-identify with other super or sub-local “communities of interest,” but every resident is directly affected by the shared interests, institutions and decisions of their local governments. Locality-first redistricting offers a rationality that corrects many of the worse self-interested abuses of redistricting processes controlled by political elites, parties and incumbents. As the Special Masters mention several times in their narrative, their draft plan is a great improvement over the existing set of Congressional districts. How much of an improvement is not reported, nor it seems is the final number of locality splits specified in their draft plan narrative: is it 10 or 11? As reported in Table 4, the 6 alternative plans demonstrate that compact, population equal, VRA-compliant Congressional districts can be formed in Virginia without dividing more than 12 of Virginia’s localities. Table 4 also indicates that this multi-dimensional goal can be achieved with as few as 8 locality divisions.

**Table 4**

	<b>2011 Adopted Plans</b>	<b>Special Masters</b>	<b>UVA #6 12 Splits- 36%</b>	<b>UVA #5 11 Splits- 35%</b>	<b>UVA #4 10 Splits- 35%</b>	<b>UVA #3 10 Splits- 32%</b>	<b>UVA #2 10 Splits- 31%</b>	<b>UVA #1 8 Splits- 31%</b>
<b>U.S. House</b>	37	?	12	11	10	10	10	8
<b>Virginia Senate</b>	124	?						
<b>Virginia House</b>	197	?						

In closing, I hope this brief assessment deepens the capacities of the Virginia Supreme Court to evaluate the Special Masters draft plans and the set of possibilities available for the selection of Congressional and General Assembly districts that will best serve the residents of Virginia until the next decennial Census in 2030. As important, I want to encourage the Court to see their role in 2021 as a first important contribution to fixing the broken and dysfunctional partisan-based redistricting process that led to this highly unusual moment in which a set of unelected judges are required to create and to impose a new set of election district boundaries for the residents and voters of the state.

Sincerely,  
 Charles A. Kromkowski, Ph.D.  
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