

## Timeline for Submission and Approval of Redistricting Maps (§§ 30-397 and 30-398 of the Code of Virginia)

Deadline	Date of Census Data Receipt					
	August 12		August 26		September 30	
	House / Senate	Congressional	House / Senate	Congressional	House / Senate	Congressional
<b>45 days</b> for Commission to submit House and Senate maps and <b>60 days</b> to submit Congressional maps after receipt of census data	September 26	October 11	October 10	October 25	November 14	November 29
<b>15 days</b> for General Assembly to approve maps	October 11	October 26	October 25	November 9	November 29	December 14
	POSSIBLE TIMELINE FOR MAP ADOPTION					
If Commission fails to meet initial deadline for map submission, Commission has <b>14 additional days</b> to submit maps	October 10	October 25	October 24	November 8	November 28	December 13
	COURT ESTABLISHES MAPS IF COMMISSION DOES NOT MEET THIS DEADLINE					
<b>7 days</b> for GA approval of maps submitted under extended deadline	October 17	November 1	October 31	November 15	December 5	December 20
	DEADLINE FOR GENERAL ASSEMBLY TO ADOPT MAPS SUBMITTED LATE; COURT ESTABLISHES MAPS IF NONE ADOPTED BY GENERAL ASSEMBLY					
If Commission submits initial maps on time but GA does not approve, Commission has <b>14 days</b> to submit new maps	October 25	November 9	November 8	November 23	December 13	December 28
<b>7 days</b> for GA approval of second map submission	November 1	November 16	November 15	November 30	December 20	January 4
	DEADLINE FOR GENERAL ASSEMBLY TO ADOPT SECOND MAP SUBMISSION; COURT ESTABLISHES MAPS IF NONE ADOPTED BY GENERAL ASSEMBLY					

## 2021 PROPOSED REDISTRICTING GUIDELINES AND CRITERIA

Plans drawn for the Commission must comply with the following guidelines and criteria **in order of the priority listed in the “Commission Guidance” sections below.**

### 1. Population Equality

- a. U.S. Constitution: “The House of Representatives shall be composed of Members chosen every second Year by the People of the several States . . .” U.S. Const. Art. I, § 2; *see also Reynolds v. Sims*, 377 U.S. 533 (1964).
- b. Virginia Constitution: “Every electoral district shall be . . . constituted as to give, as nearly as is practicable, representation in proportion to the population of the district.” Va. Const. Art. II, § 6.
- c. Virginia Code: “Districts shall be so constituted as to give, as nearly as is practicable, representation in proportion to the population of the district. A deviation of no more than five percent shall be permitted for state legislative districts.” Va. Code Ann. § 24.2-304.04(1).
- d. Commission guidance:
  - i. Each legislative district should be drawn to be as equal as practicable, with total population variances minimized as far as possible while considering the other principles listed below.
  - ii. Each congressional district shall be drawn with a total population of plus or minus one person from the ideal district size.

### 2. Voting Rights and Political Participation

- a. U.S. Constitution: “No State shall ... deny to any person within its jurisdiction the equal protection of the laws.” U.S. Const., Amend. XIV, § 1.
- b. Virginia Constitution: “Every electoral district shall be drawn in accordance with the requirements of federal and state laws that address racial and ethnic fairness, including the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States and provisions of the Voting Rights Act of 1965, as amended,

and judicial decisions interpreting such laws. Districts shall provide, where practicable, opportunities for racial and ethnic communities to elect candidates of their choice.” Va. Const. Art. II, § 6.

- c. Voting Rights Act, § 2: “No voting qualification or prerequisite to voting or standard, practice, or procedure shall be imposed or applied by any State or political subdivision in a manner which results in a denial or abridgement of the right of any citizen of the United States to vote on account of race or color . . .” 52 U.S.C. § 10301.
  
- d. Virginia Code:
  - i. “Districts shall be drawn in accordance with the requirements of the Constitution of the United States, including the Equal Protection Clause of the Fourteenth Amendment, and the Constitution of Virginia; federal and state laws, including the federal Voting Rights Act of 1965, as amended; and relevant judicial decisions relating to racial and ethnic fairness.” Va. Code Ann. § 24.2-304.04(2).
  
  - ii. “No district shall be drawn that results in a denial or abridgement of the right of any citizen to vote on account of race or color or membership in a language minority group. No district shall be drawn that results in a denial or abridgement of the rights of any racial or language minority group to participate in the political process and to elect representatives of their choice.” Va. Code Ann. § 24.2-304.04(3).<sup>1</sup>
  
  - iii. “Districts shall be drawn to give racial and language minorities an equal opportunity to participate in the political process and shall not dilute or diminish their ability to elect candidate of choice alone or in coalition with others.” Va. Code Ann. § 24.2-304.04(4).

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<sup>1</sup> “A violation of this subdivision is established if, on the basis of the totality of the circumstances, it is shown that districts were drawn in such a way that members of a racial or language minority group are dispersed into districts in which they constitute an ineffective minority of voters or are concentrated into districts where they constitute an excessive majority. The extent to which members of a racial or language minority group have been elected to office in the state or the political subdivision is one circumstance that may be considered. Nothing in this subdivision shall establish a right to have members of a racial or language minority group elected in numbers equal to their proportion in the population” Va. Code Ann. § 24.2-304.04(3).

- e. Commission Guidance:
  - i. All plans proposed by the Commission will comply with federal law, including the Voting Rights Act of 1965, as amended; the Virginia Constitution; and other Commonwealth law on minority voting rights. This includes consideration of the racially polarized voting analysis conducted on behalf of the Commission and reconstituted election returns.

### **3. Communities of Interest**

- a. Virginia Constitution: “Every electoral district shall be composed of contiguous and compact territory ....” Va. Const. Art. II, § 6.
- b. Virginia Code:
  - i. “Districts shall be drawn to preserve communities of interest.” Va. Code Ann. § 24.2-304.04(5).<sup>2</sup>
  - ii. “Districts shall be composed of contiguous territory, with no district contiguous only by connections by water running downstream or upriver, and political boundaries may be considered.” Va. Code Ann. § 24.2-304.04(6).
  - iii. “Districts shall be composed of compact territory and shall be drawn employing one or more standard numerical measures of individual and average district compactness, both statewide and district by district.” Va. Code Ann. § 24.2-304.04(7).
- c. Commission Guidance:
  - i. To maintain the communities of interest in the Commonwealth as required by Virginia law, the Commission shall consider the following requirements, in order of priority:

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<sup>2</sup> “For purposes of this subdivision, a ‘community of interest’ means a neighborhood or any geographically defined group of people living in an area who share similar social, cultural, and economic interests. A ‘community of interest’ does not include a community based upon political affiliation or relationship with a political party, elected official, or candidate for office.” Va. Code Ann. § 24.2-304.04(5).

- (a) Every electoral district shall be composed of contiguous and compact territory and shall be so constituted as to give, as nearly as is practicable, representation in proportion to the population of the district.
- (b) The integrity and priority of existing political subdivisions should be preserved to the extent possible by avoiding unnecessary divisions of those subdivisions.
- (c) Districts shall have clearly defined and clearly discernable boundaries.
- (d) Districts shall be reasonably compact as compared with existing political subdivisions.
- (e) Neighborhoods or any geographically defined group of people living in an area who share similar social, cultural, and economic interests shall be maintained to the extent possible.

#### **4. Political Neutrality**

- a. Virginia Code: “A map of districts shall not, when considered on a statewide basis, unduly favor or disfavor any political party.” Va. Code Ann. § 24.2-304.04(8).
- b. Commission Guidance: Maps shall not favor or disfavor any political party. [The Commission may review political data after the drafting of a plan is complete to ensure compliance with this political neutrality provision and will/will not consider incumbent addresses as part of the drafting process.]

#### **5. Other Principles and Factors**

The enumeration of the foregoing guidelines and criteria is not intended to limit the Commission’s consideration of any other appropriate principles or factors.

**Note on Communities of Interest:** Communities of interest are extremely important to the Commission, and the interest in preserving these communities is reflected in these guidelines.

**Note on Legal Compliance:** The Commission must always comply with federal law, including the U.S. Constitution. The Commission must comply with the Virginia Constitution unless doing so would violate federal law, and must comply with the Virginia Code unless doing so would violate federal law or the Virginia Constitution.

## Map Drawers' Responses to Questions

### **-Could you describe your level of familiarity with Virginia's geography?**

Our team has worked in Virginia for several higher education institutions, state agencies and private businesses for over 20 years. We have researched and published on many topics of Virginia's geography for a wide variety of audiences. The team is highly familiar with the physical aspects of Virginia including waterways, land use, geology, air quality and agricultural zones. We have also analyzed historic real estate practices (Redlining), historic cemeteries, changing demographics, Metropolitan Statistical Areas (MSAs), and all things census related. In short, we have a team who are all experts in managing and analyzing Virginia spatial data, and are all currently teaching at the University of Richmond using such data.

### **-Describe your familiarity with Virginia's population centers, how they are dispersed throughout the state, and how they relate to one another, if at all.**

Our team has worked with Demographic research group [Weldon Cooper Center for Public Service](#) at UVA and the [Unpacking the Census Project](#) at University of Richmond. This has made us very aware of the nuances of different population centers throughout the state of Virginia. We also have experience analyzing the historical demographic changes in Virginia and the impacts that has had on the size and location of population centers.

Most recently, the Spatial Analysis Lab created a COVID-19 Dashboard using data from VDH and John Hopkins. COVID-19 has laid bare the intricacies of communities throughout the state. Analyzing positivity trends and vaccination rates have shown to highlight vulnerable communities. This mapping project also added the location of prisons, universities, and long-term care facilities to help put COVID-19 rates into geographic context since the population density often mismatched the high infection rate. This is just one of many lessons that mapping COVID-19 taught us about populated places throughout Virginia.

### **-Do you have experience working for numerous stakeholders, often with competing interests, to produce a statewide map product that adheres to multiple, possibly contradictory, requirements?**

Our team comes from diverse backgrounds and routinely explains complex concepts to highly diverse audiences, ranging from experts to the general public. We have experience holding public perception town halls, distributing infographics, charts and maps, in both print and digital format, to inform the public about the topic at hand. We also have given public and legislative information sessions, and have answered contentious questions from the audience.

This project presents at least four distinct stakeholder groups including Legislators, Courts, Voting advocacy groups and the general public. Our team approaches data analysis from an objective point of view and will be impartial with the technical expertise that we provide to the commission.

### **-Describe your understanding of the criteria for legislative redistricting in Virginia.**

We understand the history of redistricting from the academic perspective but are also fully aware of the contentious issues that might rise during the redistricting process in practice. The [Commissioner's Guide](#), authored by the Princeton Gerrymandering Project, provides documentation of the current and historic problems to be addressed by this commission. We are committed to conduct a transparent

process that will produce maps and reports to the commission based on the recommendations from the legislative standards and criteria set forth in the [Code of Virginia Section 24.2-304.04](#).

Additionally, we have reviewed the criteria and are aware that several online mapping tools seek to incorporate these metrics to produce new and more equitable district plans. For example, the Tufts University's MGGGroup has created the [DistrictR](#) tool, which uses metrics like Voting Age Population (VAP), partisan composition and demographics data to ensure that districts are drawn with equal population distribution, fair minority representation and political competitiveness. This same group published an [article in 2019](#) that evaluated districting criteria and produced many map scenarios to illustrate the affects these criteria have on congressional district plans. We will rely on the advice from the Commission to ensure that this redistricting process adheres to federal and VA State standards and criteria for establishing new district plans for 11 Congressional Districts, the 40 State Senate Districts (Upper House) and for the 100 State Delegate Districts (Lower House).

**Describe your largest or most complex map drawing project. What was your process from beginning to completion?**

The Spatial Analysis Lab and the Digital Scholarship Lab at University of Richmond have been managing a project called [Unpacking the Census](#) for over 10 years. This project analyzes demographic data for the greater Richmond area and distributes products to teachers, students, non-profit groups, chambers of commerce and any other interested party. To create these products, the protocol starts with downloading the American Community Survey data, released annually by the US Census Bureau. Substantial data manipulation and analysis is required and performed in software platforms like Microsoft Access and Excel. ESRI's ArcGIS Pro is used to convert these tabular datasets into thematic map layers showing demographic information like population density, median household income, education attainment and distribution of racial minorities. The mapping environment is used to analyze the annual change from the last decennial census. These final products are used to produce PowerPoint presentations and then uploaded to the University of Richmond's Scholarship Repository. They are also published as online resources like [StoryMaps](#) and Web Maps. The Unpacking the Census project then presents the findings in public meetings and facilitates training workshops for non-profits organizations, like The Virginia Center for Inclusive Communities and Initiative of Change USA.

This project is just one of many large scope and sensitive-in-nature projects that our team has been involved with. Another example is the recently published book [Southern Journey: The Migrations of the American South, 1790–2020](#) written by Edward L. Ayers, maps created by Justin Madron and Nate Ayers of the Digital Scholarship Lab. The DSL used advanced geospatial methodologies to analyze 220 years of census data to show how populations moved across changing boundaries. Please see this [document](#) for further technical discussion of the methods used in this study. Additionally, Dr. Guoping Huang worked on the [Human Development Report 2009](#), published by the United Nations Development Programme (UNDP), which involved complex data analysis and visualization of many socio-economic indicators for global leaders and international policy-makers.

**What statewide redistricting software applications do you have experience with? How much time have you spent using each application?**

Our team has 10 years of experience using the ESRI Districting for ArcGIS Desktop tool. The rise of plugin tools for desktop programs as well as online mapping tools has been tremendous. Spurred by the 2010 census data release and 2013 federal changes to Section 5 of the Voting Rights Act, many algorithm-based redistricting tools were created. Some of these tools, like the aforementioned DistrictR, are publicly available through a web browser. These tools rely on preloaded models and data. These tools can provide quick maps for purposes of discussion and comparison. However, this endeavor requires the use of [2020 Census \(P.L. 94-171\) Redistricting Data Summary Files](#) released August 12, 2021, and a sturdy desktop application capable of large data manipulation. The ESRI Districting tool for ArcGIS Desktop and Citygate autoBound EDGE enterprise system are two examples.

The team also has experience with the more recent ESRI Redistricting Online product, which offers web access to similar tools via subscription. If a subscription to this tool was available, we could easily produce web maps of draft plans to the commission for efficient map markup.

We have also been tracking the online collection of communities of interest (COI) data, including by this commission, engineered by Citygate GIS. The [MyDistricting Virginia tool](#) provides the public an easy way to draw their COI and fill out a simple form. The record is displayed in tabular form and will be incorporated into the district plan. A similar tool by the Princeton Gerrymandering Team, [Representable](#), has many public records of COI and can easily be downloaded in GeoJSON and CSV format.

In addition to this specialty districting software, we are all experts with Geographic Information Science (GIS), data science, cartography and various US Census Data products. The team also has capability of developing custom web-based analytical tools and mapping apps if such new technologies could help with this project.

**In your opinion, should the Commission open this process with a map using one of the following starting points:**

The team is familiar with the different models and the algorithms behind these plans presented as starting points. In fact, we could use many available tools or customize our own tools to create possible plans. We feel the best approach is to work with the commission to examine these products and point out the complexities related to a brand new starter map, because it is important to discuss the criteria and variables prioritized in these pre-generated plans before we adopt them in Virginia.

We believe reviewing the fairness report cards produced by the Princeton Gerrymandering Project when they become available for our state is a good starting point. If these fairness report cards for Virginia are not available soon enough, we could develop similar products. This process will ensure transparency and allow the commission to point out problematic boundaries that need to be addressed. We believe this approach will be more efficient than the open-ended starter map approach.

We believe one important technological piece in this project is a collection of GIS tools that can automatically process many variables associated with different plan scenarios, then generate charts and reports for assessment and comparison by the commission and stakeholders. This team is fully capable of developing such tools so that we can be ready for analyzing large quantity of potential plans from

different tools and advocacy groups. If adequate computing resources are made available by the commission, we could also deploy such tools on the web for easier access.