

University of Virginia, Team 2: Virginia Senate Plan (competitive)

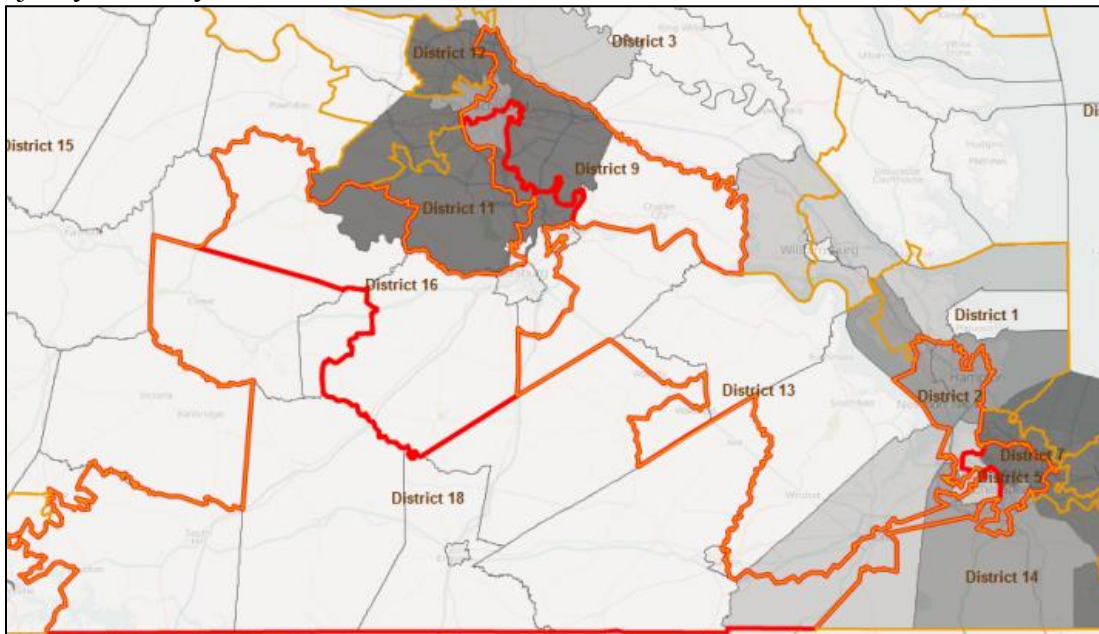
Equal Population

Our goals in redrawing the lines for the 40 Virginia Senate districts were to create districts that are as close to equally populated as possible, comply with the Federal Voting Rights Act, have all districts be contiguous, respect the existing political subdivisions such as counties and cities, draw districts that are as compact as possible, and to promote competitiveness in districts while also respecting representational fairness. Clearly, attempting to achieve all of these goals is difficult because meeting certain criteria comes at the cost of failing to perfect aspects of other criteria. For example, often the level of compactness comes as a cost to level of competitiveness in a district. This report explains how we went about redrawing these districts and how certain criteria took precedent over others in order to maximize political fairness for the people of Virginia.

We began with the template plan that has the current Senate boundaries already drawn. This made it more time efficient when drawing districts because we were not starting from scratch. In a practical sense, this may be important. It will mean many residents will still reside in their current districts and districts will not be completely new. When it is hard enough as is for citizens to know their representatives, changing their current Senate boundaries would have made it even harder for citizens to keep up with the districts in which they currently reside.

Federal Voting Rights Act, Non Retrogression Principle

In order to comply with the Federal Voting Rights Act it is mandated that we have at least five districts in which a minority group makes up the majority of the district's population. We maintained the current five minority-majority districts (districts 2, 5, 9, 16, 18), all of which are located in Southeast Virginia. African Americans are the minority group in all of these districts and their voting age population percentages are 51.79%, 50.10%, 55.63%, 51.37%, and 55.92%, respectively. This criterion was given priority over all others because it is mandatory to adhere to federal law. Using the template map made this goal easier to achieve. The districts in red are the majority-minority districts.

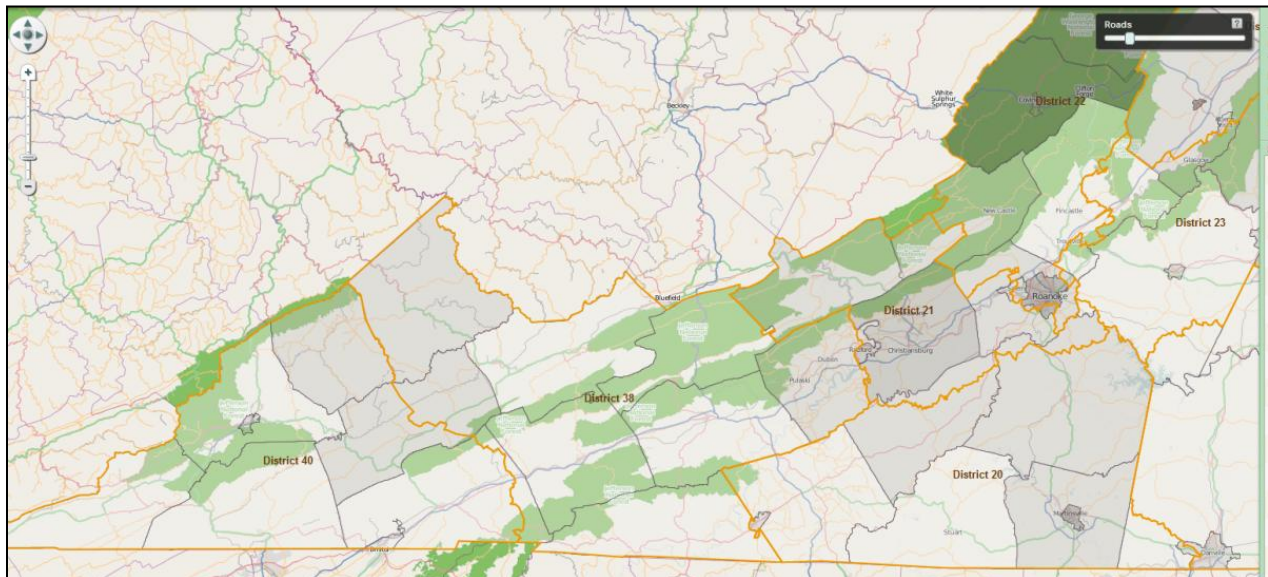


5 VA Senate Majority-Minority Districts, outlined in red

No discontinuous districts or unassigned blocks are permitted by the Virginia General Assembly so this criterion was also given priority over all others. All 40 of our districts are contiguous and there are no unassigned blocks. This was not a difficult criterion to satisfy since all current districts are contiguous and it is not a percentage that is held as a threshold. A district either is, or is not, contiguous.

All districts within a plan must have nearly equal populations. We found this to be a relatively difficult criterion to satisfy. While making sure there are 5 majority-minority districts, and competitive districts, checking population was difficult. The target was 200,026 people per each district. All 40 of our districts have populations within the $\pm 2\%$ deviation that was the standard for the 2000 districts. However, our districts have $\pm 1\%$ population deviation. The range of populations was 198,044 (district 39) to 201,996 (district 12). The mean population among districts was 200,026. This criterion was given precedent over most others because it is required under common law.

One of our goals was to draw a map that minimizes the division of counties and cities between districts. This criterion took lower precedent than the previous three but it was still a major priority because achieving this goal was possible while still adhering to those criteria. Wherever possible we avoided drawing district lines that split cities, counties, or precincts. Of course some of the heavier populated counties and cities had to be split up but we sought to avoid this whenever at all possible. For example, Northern Virginia and Virginia Beach had to be split up because the population density there is too high to be contained in a single district. Other areas, for example South West Virginia contained whole counties. We tried to keep precincts in tact unless we needed to change population numbers or increase a district's competitiveness. We took into account the financial and logistical burdens that splitting precincts causes localities.



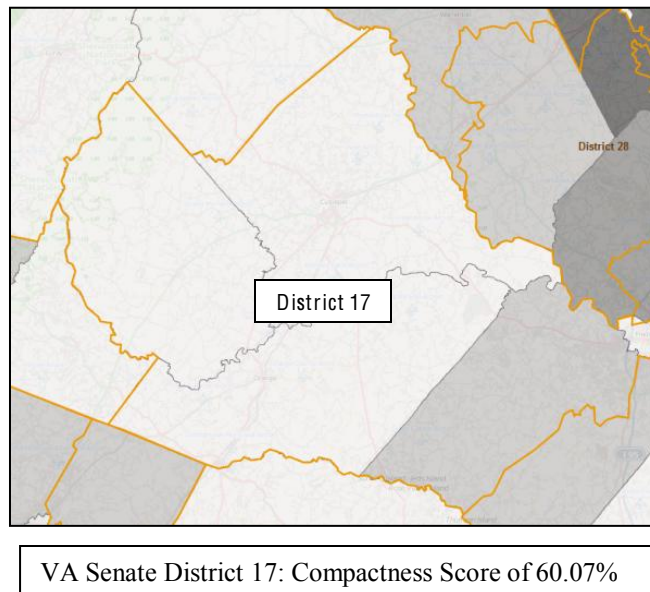
VA Senate Districts in Southwestern VA, High Level of Respect for Communities of Interest

Competitiveness

We sought to draw maps that contained as many districts as possible that were “heavily” or “generally” competitive. We found that increased competitiveness often resulted in decreased compactness and maintenance of communities of interest. We drew a total of 15 generally competitive districts (districts 1, 4, 6, 7, 11, 13, 15, 21, 22, 25, 28, 29, 33, 37, 39), two of which are heavily competitive (districts 21, 28). We understand that democracy thrives when competitiveness is high so we gave much attention to creating these 11 districts. However, competitiveness does not take precedent over the first three criteria and was usually given a little less priority than preserving communities of interest. Before the 2008 Presidential competitive data was added, our district 18 was both a majority minority district and a competitive district. With the added data, this is no longer possible.

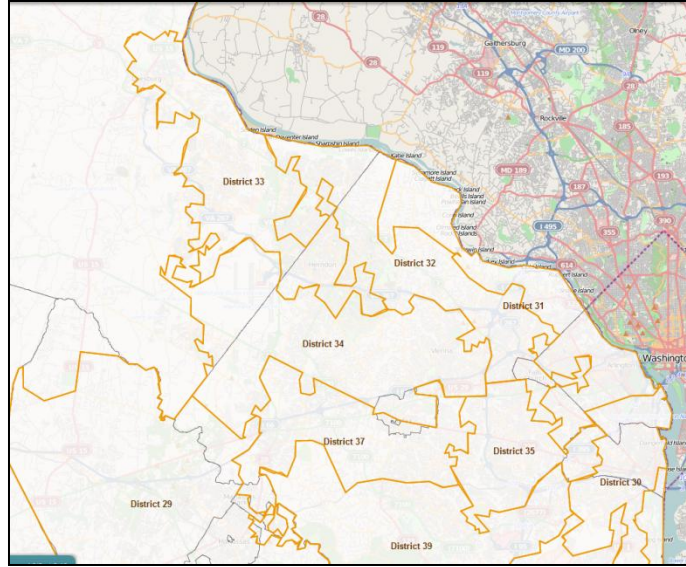
Compactness

In drawing this map we attempted to create districts that appear as compact as possible; in other words minimize oddly-shaped districts and create smooth edges. This proved to be relatively easy in some areas but rather difficult in others because we had to form somewhat oddly-shaped districts in order to create minority-majority districts, promote competitiveness, or maintain equally populated districts. Our “compactness scores ranged from 28.16 (district 32) to 60.07% (district 17). The mean score was a 43.80%. This criterion was definitely a focus of ours but not a main priority.



Competitiveness and Representational Fairness

While trying to promote competitiveness within districts, we also wanted to assure fairness by not unfairly biasing one party over another in other districts. In as many districts as possible we attempted to have a reasonable balance between parties. However, it was difficult to achieve this in many areas of the state due to the ideological similarities among citizens in the same region. Because of this, we gave priority to all other criteria but we still tried to achieve the goal of maintaining political fairness for Virginia citizens.



Greatest Number of Competitive Districts were Located in Northern VA

Conclusion

To conclude, our map has managed to create 15 competitive districts and followed all current norms and legal restraints. We attempted to maintain localities' boundaries when possible. We tried to maintain a respectable level of compactness, but our task of creating competitive districts cost some of the compactness that we would have liked. Finally we equalized our population as much as possible so the variation is +/- 1% per district.