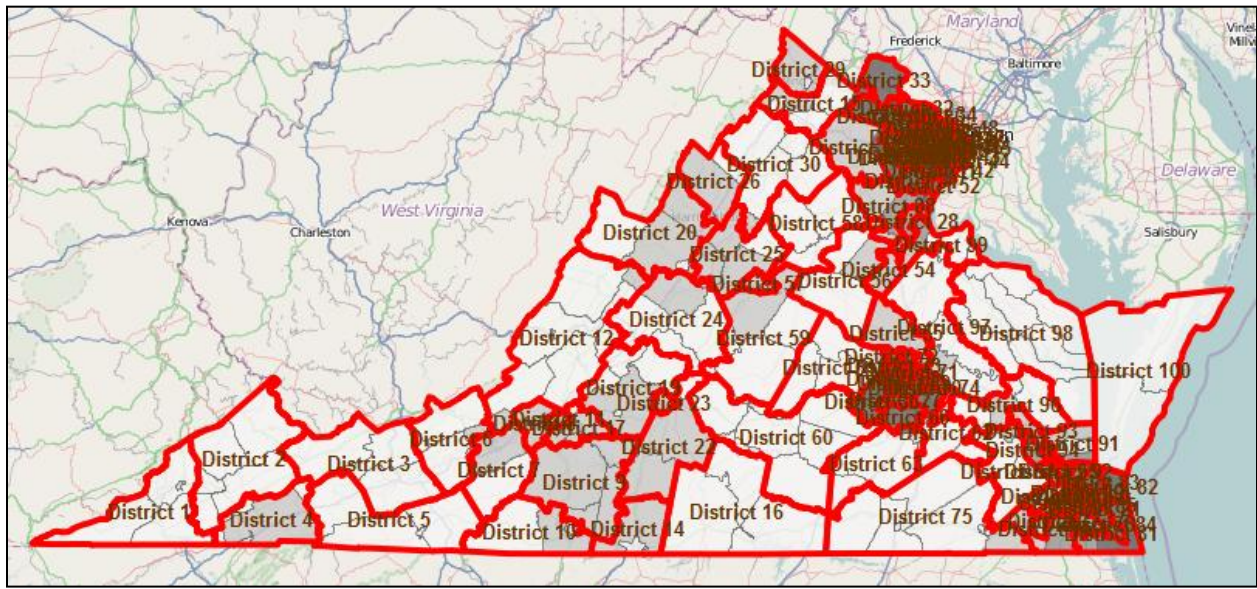


## Redistricting Competition: Virginia House of Delegates, Non-Competitive University of Virginia, Team 2

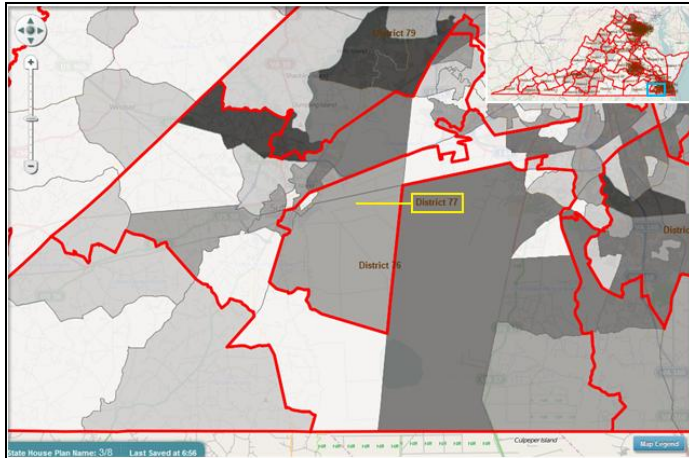


### Introduction

The purpose of this competition is to create a redistricting plan that is non-partisan and promotes the objective creation of districts. Using the 2010 census data, this team redrew the district lines while balancing several different and sometimes contradictory factors. We strove for Contiguity, Federal Voting Rights Act Non-Retrogression clause, Equi-population, respect for Communities of Interest and Compactness. In order to achieve this feat, we had to place importance on some areas over others. The federal and state laws dictate that the highest priority is placed on Contiguity, Non-Retrogression and Equity of Population; while also important, Respect for Communities of Interest and Compactness are less so compared to the legal requirements for redistricting. When required, compactness and the borders of localities were ignored in order to adhere to the laws regarding redistricting.

Creating 100 Virginia State House districts that meet all criteria is a daunting task. My Virginia State House plan, however, meets all the requirements of the competition and in fact, it does better than what is required. I started with the template from the previous census in order to try to preserve minority districts that were already created. In the ten years between censuses, Northern Virginia has gained a large amount of people. This then required me to shift districts around. For example, the Northern Virginia districts decreased in area while Southwestern Virginia grew in area. Tidewater Virginia also experienced pockets of population growth that needed to be spread amongst the other districts. It was particularly difficult in the Norfolk area with 20,000 people in a very small area due to military servicemen and women abroad. I was able to balance out these populations and satisfy the most of the requirements.

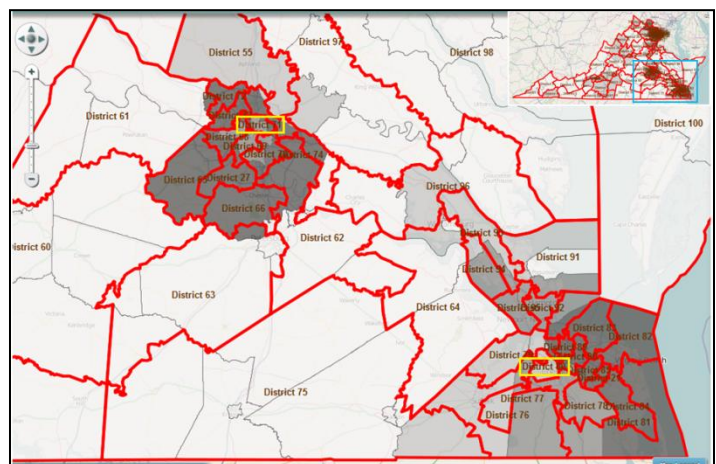
Contiguity, though the most inflexible requirement, was for that reason the easiest qualification to achieve. After all the other requirements were met, we merely had to return to the map to police up any spare bits that had been left behind when moving the lines. This was challenging, though, given that we started from the template of the existing districts. The large amount of adjustment required given the population shift sometimes meant that the district borders ended up far away from their original locations. Bits of districts were sometimes left



behind in the move, requiring careful searching throughout the map to find the small, non-contiguous portions. Maintaining the contiguity of majority-minority districts was especially challenging; when concentrated areas of minority populations were isolated from each other, and yet close enough to make a majority-minority district feasible, we often had to string them together with thin strips of land in order to make them contiguous. District 76 is one such Majority-minority district. In order to link together the high-percentage African-

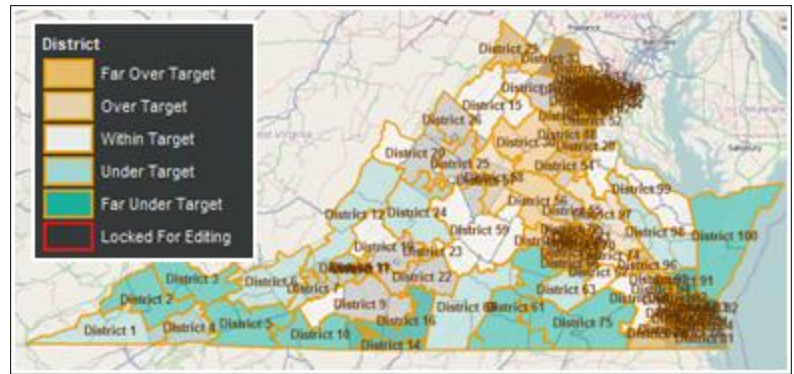
American precincts of Suffolk with the Norfolk area, we utilized Precinct ##, which has a thin, east-west oriented arm. Though this reduces the compactness score of the district, the contiguity was preserved while forming a Majority-Minority district in accordance with federal law.

The Non-Retrogression Principle of the Federal Voting Rights Act was the next most important requirement that we considered. In the existing 10 Majority-Minority districts, several had fallen below the population bar. When we began to redraw the districts, we had to include additional population while maintaining the percentage of African-American Voting Age Population. While doing so, we observed that the Black VAP of two additional districts in Richmond and Hampton Roads were in the mid 40s, substantial enough to consider making them into Majority-Minority ones. These two districts, 71 and 80, were also surrounded by districts that had well over the 50% VAP required by the Act. In bringing up all the Majority-Minority districts up to 80,000 population, we shifted the districts so that 71 and 80 included more of the densely African American neighborhoods and fewer of the less dense areas. In order to make up for the shift, discovered that there were sufficient minority populations in the Richmond and Hampton Roads regions to form a majority in two additional districts, bringing the total number of Majority-Minority districts to 12.

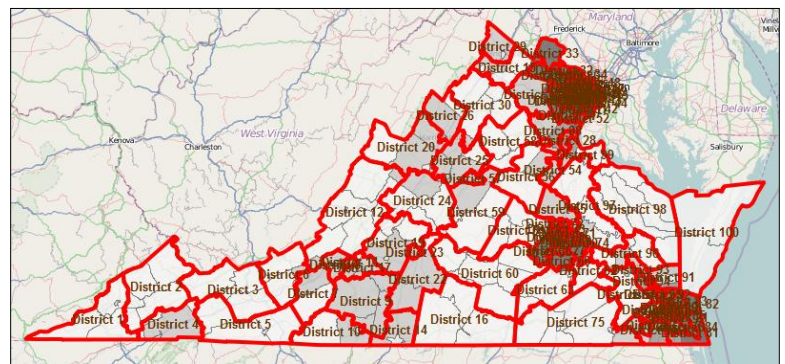




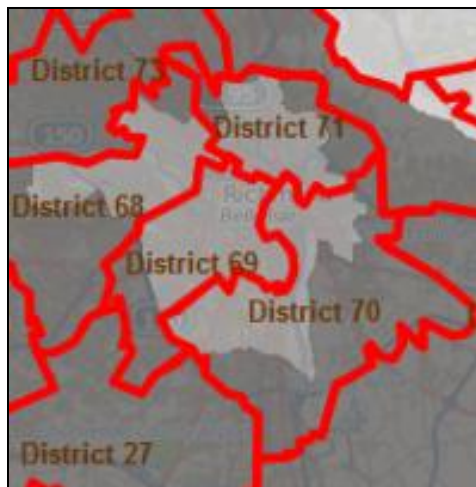
Equi-population is the third legal standard for redistricting. Virginia state law states that there can only be a deviation of  $\pm 2\%$  population in each district. With the need to accommodate 100 districts, we found that when we only had the population within  $\pm 2\%$ , this deviation caused a few districts to be too populous. In order to get every single district within the limit, we had to bring the population to within 1% or less. Northern Virginia is the problem area in this category because it is the area of highest population density and had the largest increase of population in the past 10 years. In order to ensure that all the districts were within the legal deviation, we began drawing the lines in Southwestern Virginia, then worked to the east to the Richmond metropolitan area and the Southeast coast. To bring the districts to the Southwest up to population equity, those districts were enlarged at the expense of the surrounding districts. Then, the process was repeated with the neighboring districts. By the time we had adjusted the lines for population equity in Norfolk, the numbers were about 80,000 people short. At the same time, District 13 and 31 in Northern Virginia had an excess of 80,000; by moving District 87 into Prince William County, that problem is neatly solved.



2001 VA House of Delegates Districts with 2010 Census Data



2011 VA House of Delegates with 2010 Census Data



City of Richmond: Divided into 4 Districts

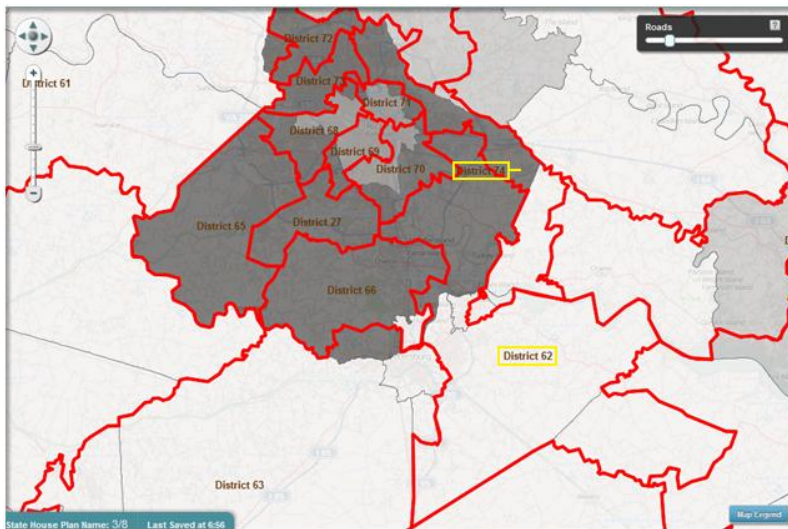
Respect for Communities of Interest is the fourth important requirement for this competition. Toward this goal, we began altering the existing districts at the county and city level, attempting to create districts while respecting those boundaries. We found that it was difficult to form districts with Equi-population and Majority Minority populations while preserving these boundaries. In order to achieve the maximum level of Majority-Minority populations and equality, it was necessary to descend to the VTD level and sometimes even to the census block level and break up localities to achieve other requirements. When the choice was between splitting a county or a city, we chose to preserve the city boundary. This is because the populace of cities is more compact and their sense of community is as a result stronger, thus the adverse effects of dividing a city is

more than a county.

In other cases, the counties and cities are too large to fit within a single 80,000 person district, such as the city of Richmond. In this case the city is divided into 4 districts, 68, 69, 70, and 71; one fewer than the 2001 VA House of Delegates plan. The four districts that encompass the city of Richmond extend into the surrounding Henrico and Chesterfield Counties. While imposing not insignificant administrative obstacles for local governments, dividing localities can have positive results. By bringing people from the city and county together into one district, people of differing backgrounds are brought into closer contact and required to cooperate in order for both to accomplish their goals. Also, candidates coming from such mixed districts are more likely to be moderate in their political orientation due to the need to please constituents from more varied ethnic, religious and economic backgrounds. Finally, there are many precincts that have greater than the 7,000 population that is stipulated by VA state law. This would require localities to redraw their precinct lines as soon as the redistricting plan is announced. For example, the City of Charlottesville is adding an 8<sup>th</sup> precinct to their city to account for the population increase since the precinct lines were frozen in 2008 in preparation for redistricting. So when in heavily populated areas we had to split large precincts to achieve any of the other requirements, it may be that the impact on localities will actually be less after the precinct lines are adjusted for population changes. Despite these other considerations, our map minimized the division of counties and cities whenever feasible.

**Compactness** is the final requirement for a redistricting plan. This is to prevent Gerrymandering and other abuses of legislature as well as to create an aesthetically and logically appealing plan. This is the factor that will make a redistricting plan the most acceptable to the public. This factor, however, sometimes suffered in order to achieve the above 4 requirements because it contributes the least to the goals of the competition. Districts were made as compact as possible while still meeting the other requirements. Due to the complexity and irregularity of the Virginia state boundary, some districts are not as compact but that is simply unavoidable. Likewise, in order to keep counties and cities intact, sometimes compactness was sacrificed. Despite these complications, I still have a district that reaches 71% compactness with an average compactness near 55%, which is nearly 10% better than the 2001 average compactness percentage.

The few districts whose compactness score falls below 40% are Majority-Minority ones and their neighbors. For example, Districts 74 and 62 have a score of 29.3% and 35.77% respectively, the lowest two percentages in the entire map. The reason for the low scores is that in forming Majority-Minority districts, heavily populated African-American regions may not be touching and the less-dense areas around them would exceed the required 60% total population stipulated by the



Districts 62 and 74: Effect of Majority- Minority Districts on Compactness

Voting Rights Act. So to connect the regions and create a Majority-Minority district, the district is attenuated, increasing the perimeter of the district while decreasing the area and causing the compactness score to drop. The surrounding districts suffer as well; to create a district with majority African-American Voting Age Population, precincts that have fewer African-Americans than neighboring precincts are excised from District 74 and added to District 62. It is a great strength of this plan that it has a higher average compactness score than the 2001 VA House of Delegates Plan even though it also has 2 additional Majority-Minority districts.

In Conclusion, the strengths of our VA House of Delegates redistricting plan are that it is contiguous throughout the state, it has formed two additional Majority-Minority districts, it has achieved a population deviation between the most populous and the least populous districts well within the lawful +/- 2% of equality, it respected locality boundaries when possible while also achieving all the other goals and finally it has a high average compactness level with nearly all of the districts appearing logically and aesthetically pleasing.