Racially Polarized Voting Analysis for the Virginia Redistricting Commission

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Executive Summary

We analyzed racially polarized voting (RPV) in Virginia using recent statewide elections. We find that while there is evidence of racially polarized voting in Virginia at the state level, there is significant variation in the level of polarization, including geographic areas where voting is not polarized. Minority voters, including African American, Hispanic, and Asian voters, vote cohesively for Democratic candidates. On the other hand, support for Democratic candidates by White voters varies across the state. Areas with no or very low levels of racially polarized voting include much of Northern Virginia and parts of Central Virginia and Hampton Roads.

What is Racially Polarized Voting?

The landmark case *Thornburg v. Gingles* set forth a three-part test to determine violations of Section 2 of the Voting Rights Act due to vote dilution. Section 2 prohibits voting practices that deny groups of citizens an equal opportunity to elect candidates of their choice, and, post *Thornburg v. Gingles*, Section 2 challenges must show "(a) that the minority group at issue is 'sufficiently large and geographically compact to constitute a majority in a single member district," (b) that the minority group is 'politically cohesive,' and (c) that the surrounding majority group usually votes as a bloc to defeat the minority's preferred candidate."¹

In this report, our concern is not with vote dilution in general but rather with racially polarized voting, which could be said to comprise parts (b) and (c) of the above test. Racially polarized voting (RPV) occurs when the majority group and a minority group vote differently, for example when "Black voters and White voters vote differently."² Importantly, all that RPV requires is for a racial minority to systematically prefer one candidate while a majority group prefers another — this can and does occur without any racially discriminatory intent on the part of voters, officials or anyone else.

In practice, identifying RPV will amount to answering two key questions. First, is each group of interest *cohesive* in their voting behavior? To determine this, we identify whether clear majorities of a minority group support the same candidate — that is, we seek to determine if the minority group(s) of interest in a geographic location have a candidate of choice.

Second, conditional on the existence of a candidate of choice for Minority voters, do White voters support or oppose this candidate and to what extent are they cohesive in doing so?

Given these questions, efforts to identify the extent of RPV in the Commonwealth of Virginia require understanding how different racial groups vote. In a world without secret ballots, such an effort would be

¹Yishaiya Abosch, Matt A. Barreto, and Nathan D. Woods, "An Assessment of Racially Polarized Voting for and against Latino Candidates in California," Voting Rights Act Reauthorization of 2006: Perspectives on Democracy, Participation, and Power, (2007): p. 108.

 $^{^{2}}$ See Bernard Grofman, "Multivariate Methods and the Analysis of Racially Polarized Voting: Pitfalls in the Use of Social Science by the Courts," Social Science Quarterly 72, no. 4 (1991): p. 827. This is itself a quote from *Thornburg v. Gingles* at 53 n. 21.

straightforward; we could simply tally up candidate totals by voters' race for the state and for any geographic regions we chose. However, because under a secret ballot we do not observe individual vote choices we must instead estimate group-level voting behavior from the available aggregate-level data from precincts and localities.

To estimate group-level voting behavior from aggregate vote and population totals in precincts, we employ ecological inference (EI), a well-known and widely accepted statistical method.³ We use ecological inference techniques to estimate the share of each ethnic group that votes for each candidate (and we account for but do not report the share of each group that votes, e.g., turnout).⁴

How to Use This Analysis

Below, we discuss the data used in this analysis and then present key results. We begin with statewide results, and then show variation across Virginia by region, congressional district, state legislative district, and locality. Our complete results, including for individual districts not shown in this report, are included in a supplementary data file.

This report and the supplementary data can be used to identify where there is racially polarized voting across the Commonwealth of Virginia. This can be useful when drawing minority opportunity districts. In places with high levels of racially polarized voting, a larger minority population may be needed in order to create a district where the minority group can successfully elect their candidates of choice. In contrast, in places where there are low levels of racially polarized voting, or where there is no racially polarized voting, the minority group can be a smaller share of the district and still elect their candidates of choice.

Data Sources

To perform ecological inference for the RPV analysis, we draw upon two key sources of data: (1) Historical election results recorded in each precinct, and (2) historical citizen voting age population (CVAP) data, which allows us to ascertain the composition of the population in each precinct. Due to changes to precinct boundaries that occur over time, linking election results to precinct shape files can be time consuming and difficult, and is not feasible in all cases.

Elections Data

We estimate ecological inference models using several different statewide elections at different levels of geography, including by region, congressional district, state legislative district, and locality.⁵ We focus primarily on the 2016 presidential election, the 2017 elections for governor, lieutenant governor, and attorney general, and the 2018 election for U.S. Senate. We also include a more limited analysis of the 2020 presidential and U.S. Senate elections. In addition to analyzing general election results, we also include the 2017 Democratic primary for lieutenant governor. Primaries can have limited utility for analyzing racially polarized voting, because the existence of RPV in the primary does not mean that there is RPV in the general election. Furthermore, the electorates in partisan primaries and in general elections are very different. However, the presence of RPV in primaries may be useful to the Commission when considering different ways to draw particular districts.

³Gary King, A Solution to the Ecological Inference Problem (Princeton University Press, 2013).

⁴For more details on ecological inference, see Appendix A.

 $^{^{5}}$ When estimating models at the district level, such as for a single congressional district, we use statewide election results, but we only include precincts located in that particular district. This allows for comparability across districts, because the candidates are the same in each model.

For the 2016⁶, 2017⁷, and 2018⁸ elections, we use precinct-level election results and shape files from the Voting and Election Science Team (VEST). These files include general election results. To examine the 2017 Democratic Primary election, we obtained precinct-level primary election results from the Virginia Department of Elections.⁹ Following the method used in the VEST data, we allocated absentee votes (recorded only at the locality level) to precincts in proportion to the number of non-absentee votes cast in each precinct. For 2020, in which we analyze results based on election totals at the locality level, we also used data from the Virginia Department of Elections.¹⁰

Population Data

We use citizen voting age population (CVAP) data from the American Community Survey (ACS) to determine population by race in each precinct.¹¹ The ACS reports CVAP data by block-group, which we aggregate to precincts for each year. For the 2020 elections, we use locality-level population data.

We define racial groups for our analysis in two ways. First, for statewide analyses, we include four different racial/ethnic groups: White, Black, Hispanic, and Asian voters. The Hispanic group includes people of all races who identify as Hispanic. Second, for regional and district-level analyses, we include only two groups: White and Minority voters, where Minority includes all groups except non-Hispanic Whites.¹²

Racially Polarized Voting Results

At the state level, elections in Virginia exhibit consistent racially polarized voting. Figure 1, below, plots the ecological inference results for five statewide elections. In the plot, the estimated level of support for the Democratic candidate for each group is marked with a circle. The horizontal lines on either side of the circles mark the bounds of the 95% confidence intervals, which reflect uncertainty in the estimate. We interpret these plots in two steps. First, the cluster of points on the right side of the plot show that large majorities of African American, Hispanic, and Asian voters supported the Democratic candidate in each election. For example, in the 2016 presidential election, we estimate that about 92% of African American voters supported Hillary Clinton. The results are similar across all five elections. This is evidence that African American, Hispanic, and Asian voters have a clear *candidate of choice* in each election. Additionally, large majorities of voters of all three groups support the same candidate in each election, indicating that these groups vote together cohesively.

Second, we examine voting patterns among White voters. In each election, a minority of White voters supported the Democratic candidate (the candidate of choice of African American, Hispanic, and Asian voters), and a majority voted against this candidate and supported the Republican candidate. This is evidence of racially polarized voting. However, it is also important to note the degree of opposition to the minority groups' candidate of choice in each election. In the 2016 presidential election, 36% of White voters supported the Democratic candidate. In contrast, in the 2018 Senate election, 44% did so.

We now turn to racially polarized voting across different regions in Virginia. We present results for seven of the eight regions defined by the Virginia Redistricting Commission.¹³ We exclude the Southwest region, because it is more than 90% White.

 $^{^6 \}rm Voting$ and Election Science Team, 2018, "2016 Precinct-Level Election Results", https://doi.org/10.7910/DVN/NH5S2I, Harvard Dataverse, V67

⁷Voting and Election Science Team, 2019, "2017 Precinct-Level Election Results", https://doi.org/10.7910/DVN/VNJAB1, Harvard Dataverse, V5

⁸Voting and Election Science Team, 2019, "2018 Precinct-Level Election Results", https://doi.org/10.7910/DVN/UBKYRU, Harvard Dataverse, V45

 $^{^{9}}$ Virginia Department of Elections, Historical Election Results, available at https://apps.elections.virginia.gov/SBE_CSV/E LECTIONS/ELECTIONRESULTS/

 $^{^{10}}$ We provide a full explanation for this approach later in our report.

¹¹U.S. Census Bureau, 2021. "Citizen Voting Age Population by Race and Ethnicity".

 $^{^{12}}$ Combining groups is necessary due to the small number of precincts in some districts, as well as the very small populations of some racial/ethnic groups in many areas of the state.

¹³Virginia Redistricting Commission Public Hearings FAQs, p.4

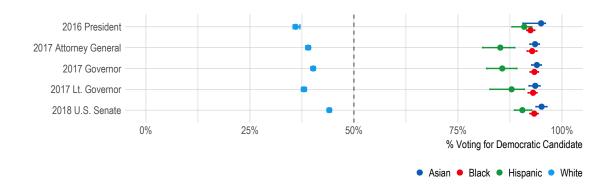


Figure 1: Ecological Inference Results — Statewide

Figure 2, below, presents two maps. The top map shows the average percentage of Minority voters supporting the Democratic candidate across the 2016–2018 statewide elections. The bottom map shows the average percentage of White voters supporting the Democratic candidate. Comparing the two maps illustrates where there is racially polarized voting.¹⁴

First, the top map is uniformly blue, indicating that on average more than 70% of Minority voters supported the Democratic candidate. This is evidence that Minority voters in every region have clear candidates of choice, and are cohesive in supporting these candidates.

In contrast, there is significant variation in the bottom map. We see very low levels of support for Democratic candidates in the Eastern and Southside regions, low levels of support in the Valley, West Central, and Hampton Roads regions, 40-50% support in the Central region, and 50-60% support in Northern Virginia. This indicates that voters are not polarized in Northern Virginia, and only a small majority of White voters support Republican candidates in the Central region.

We see a similar pattern when looking at results by Congressional District in Figure 3. Minority voters consistently support Democratic candidates, but support from White voters varies. In the 1st, 5th, 6th, and 7th Districts, White voters support Democratic candidates with 30-40% of the vote. In contrast, in the 2nd, 3rd, 4th, and 10th Districts, White voters are close to split; they support Democratic candidates with 40-50% of the vote. Finally, in the 8th and 11th Districts, a majority of White voters support Democratic candidates and there is no evidence of racially polarized voting.¹⁵

Figure 4 and Figure 5 present average levels of support for Democratic candidates from Minority voters and White voters by State Senate and House of Delegates districts. Appendix B provides zoomed-in maps focusing on the districts in each region. As before, Minority voters consistently support Democratic candidates. The maps of White voters, however, show variation in support for Minority-preferred candidates across the legislative districts.¹⁶

 $^{^{14}}$ All maps in this report present the average results for the five statewide general elections included in this analysis. Results for each individual election for each region or district are available in the supplementary data.

 $^{^{15}\}mathrm{We}$ exclude the 9th Congressional District, which is more than 90% White.

 $^{^{16}\}mathrm{We}$ exclude all districts that are more than 90% White.

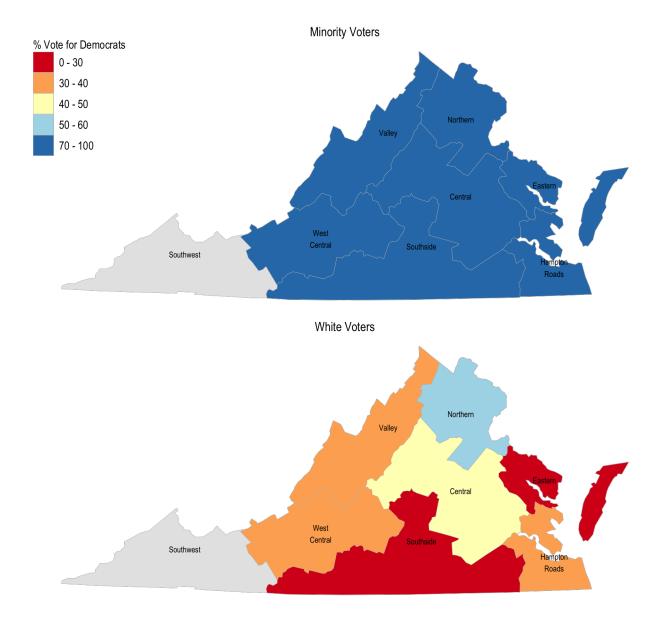


Figure 2: Ecological Inference Results — Regional

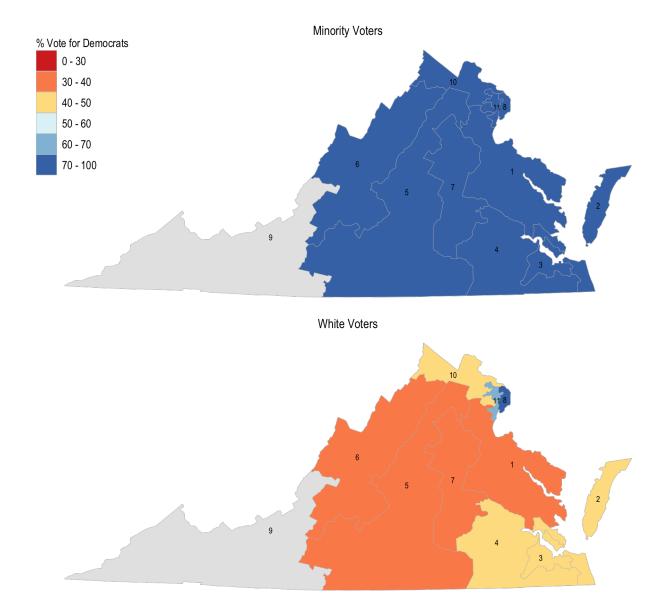


Figure 3: Ecological Inference Results — Congressional Districts

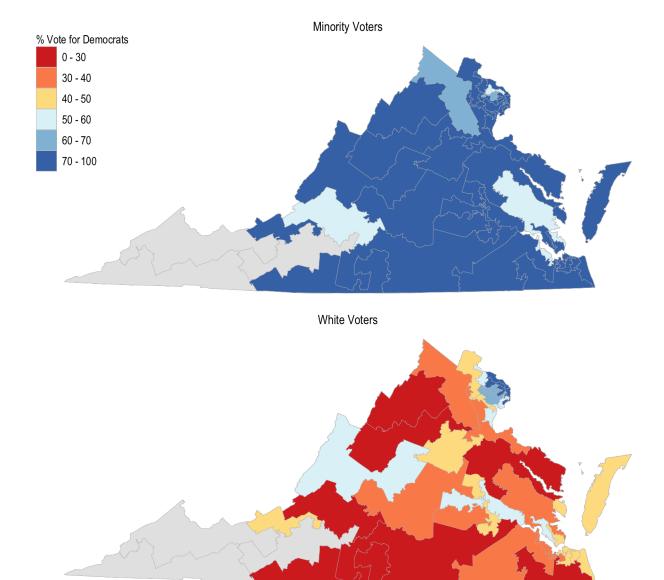


Figure 4: Ecological Inference Results — Senate Districts

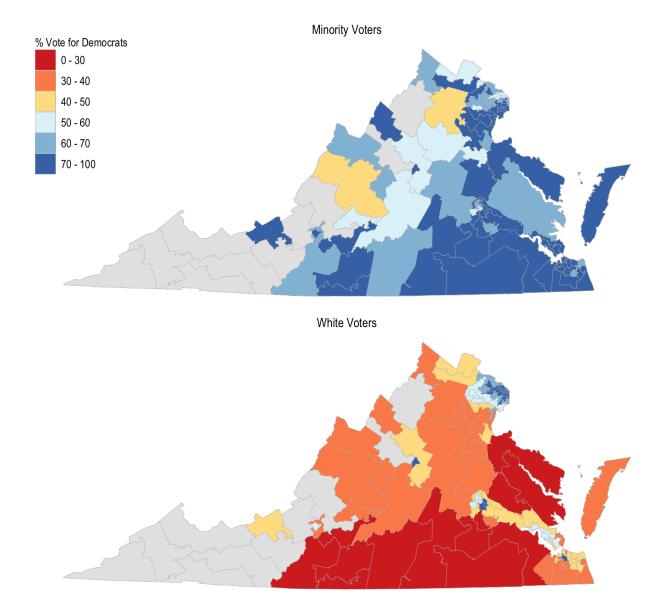


Figure 5: Ecological Inference Results — House Districts

To more clearly illustrate the variation in racially polarized voting across the congressional and state state legislative districts, we plot the average percentage of voters supporting the Democratic candidate across the 2016–2018 statewide elections in Figure 6, below, for each congressional district with at least 40% Minority voting age population.¹⁷ As in Figure 1, the average estimate for each group is represented by a circle, and the horizontal lines on either side indicate a 95% confidence interval reflected uncertainty in the estimate. For the congressional districts, the plot shows that majorities of Minority and White voters in districts 8 and 11 both supported the Democratic candidate. In contrast, in districts 3, 4, and 10, there is evidence of somewhat racially polarized voting as a majority of White voters opposed the Minority candidate of choice.

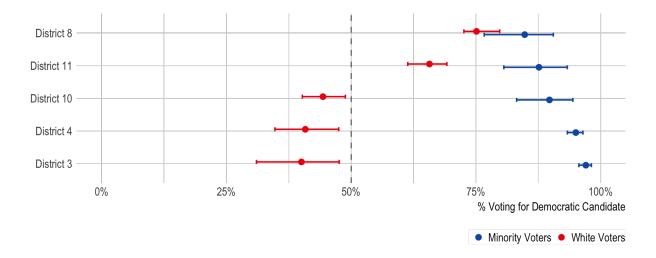


Figure 6: Ecological Inference Results — Congressional Districts

Figure 7 shows the same results for State Senate districts. For many of the estimates, the error bars here are much larger, and in some cases as so wide that it is hard to say anything meaningful about polarization in the district. This is due to the smaller number of precincts in each district or the distribution of Minority voters within the district. For example, in District 35, the confidence interval for Minority voters is very wide. However, the confidence interval from White voters is narrower and above 50%, indicating that a majority of White voters supported the Democratic candidate in that district. In Districts 30 and 39, we estimate that majorities of both groups support Democratic candidates, indicating no racially polarized voting. In Districts 33, 9, 36, 1, 29, 13, 6, 7, 5, 16, and 2, a clear majority of Minority voters support the Democratic candidate, but the confidence interval for White voters spans across 50%. We cannot draw a confident conclusion about the level of racially polarized voting in these districts from this election. Finally, in District 18, we see clear evidence of racially polarized voting.

We see similar patterns in the results for House of Delegates districts in Figure 8. In some districts, such as 71, 69, 89, and 44, we see clear evidence that majorities of both groups support Democratic candidates. In most of the other districts in the top and middle part of the figure, the confidence intervals are too broad to draw a conclusion about racially polarized voting in the districts. For most of the districts at the bottom of the figure, we see evidence of racially polarized voting.

Finally, Figure 9 shows the same analysis for localities with at least 30 precincts and at least 20% Minority voting age population. Across all localities in the figure, we see that a large majority of Minority voters support the Democratic candidate. In Arlington County, Richmond City, and Fairfax County, a majority of White voters also supported the Democratic candidate. In Norfolk City, Loudoun County, Hampton City, Newport News City, Henrico County, Prince William County, and Portsmouth City, the confidence interval for the percentage of White voters supporting the Democratic candidate spans the 50% line. In the remaining localities in the lower past of the figure, majorities of White voters oppose the Minority candidate of choice,

 $^{^{17}}$ Voting age population data from the 2020 Census. Results for all districts available in the supplementary data file.

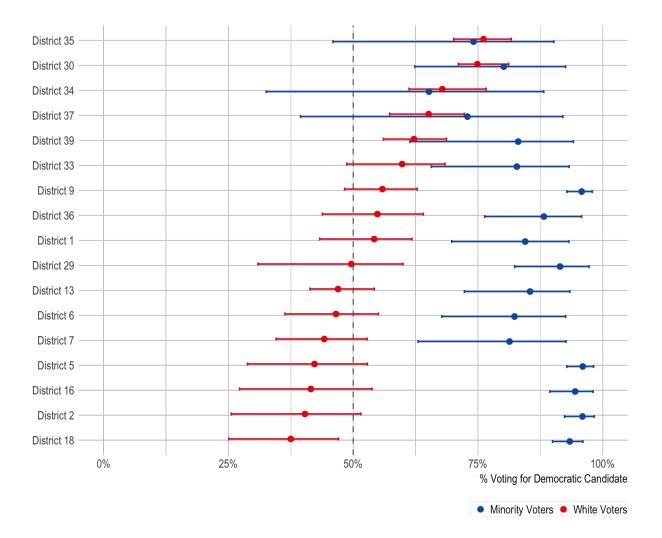


Figure 7: Ecological Inference Results — State Senate Districts

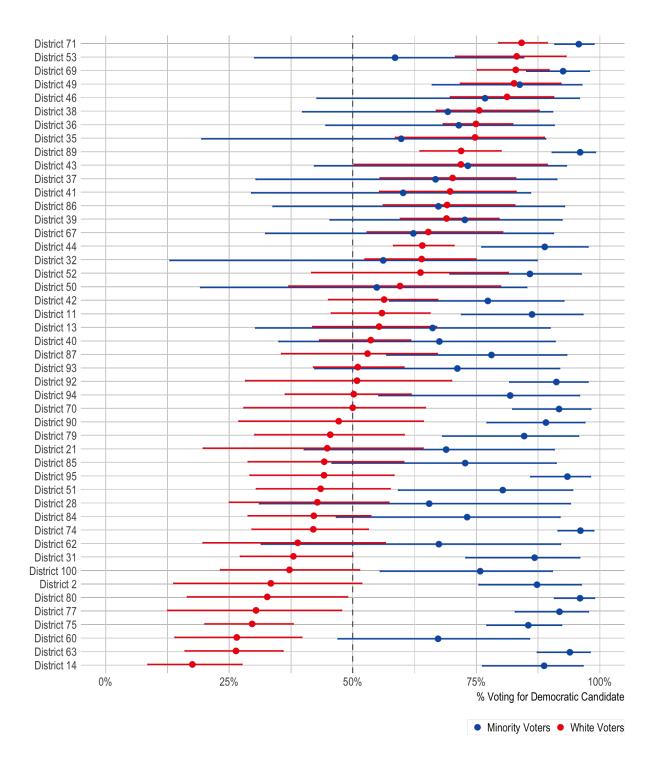


Figure 8: Ecological Inference Results — House of Delegates Districts

indicating racially polarized voting, with the exception of Spotsylvania County where the confidence interval for minority voters overlaps the 50% line.

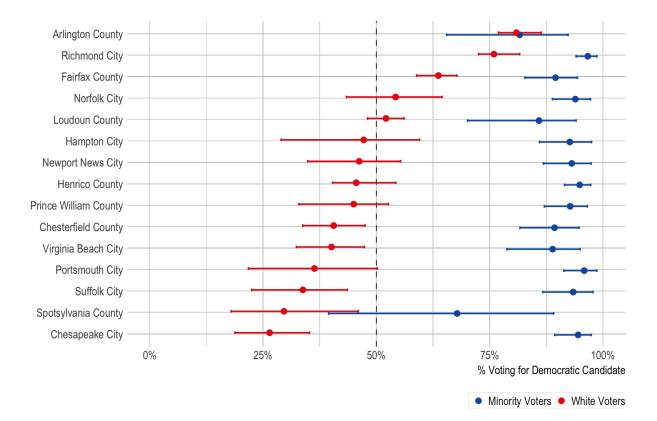


Figure 9: Ecological Inference Results — Localities

2020 Election Results

The 2020 General Election in Virginia was unprecedented due to the share of voters who voted by mail rather than at a polling place. From 2016 to 2018, an average of 12% of voters cast absentee ballots; in 2020 the number was 63%.¹⁸ This presents a unique challenge for making sound ecological inferences because absentee ballots in Virginia are tracked at the locality level rather than by precinct. As a result, we have much less information available to us about the geographic patterns of voter turnout and vote choice for the 2020 election. Given these limitations, we present our estimates for 2020 separately and with a word of caution that they contain additional uncertainties as compared to earlier years.

With less data available to us in 2020, we think it prudent to also estimate fewer parameters. We report results only at the state-wide level and just using two racial groups: White and Minority voters. We estimate that 64% of Minority voters supported the Democratic candidate in the presidential election. This is a large enough margin to conclude that Minority voters at the state-wide level were relatively cohesive in their support for the Democratic candidate. However, since 51% of White voters also voted for the Democratic Candidate, Minority voters did not meaningfully oppose the candidate of choice among Minority voters. There does not appear to be sufficient evidence to say that RPV occurred at the state-wide level in the 2020 Presidential Election.

For the 2020 Senate election, we estimate that 52% of White voters voted for the Democratic candidate in the U.S. Senate election and that 67% of Minority voters did so. Again, a majority of both White and Minority voters supported the Democratic candidate. Therefore, there is not sufficient evidence to conclude the existence of RPV in the 2020 Senate election at the state-wide level.

However, we urge caution at interpreting these results as amounting to a change in patterns of racially polarized voting at the state level when compared to earlier years. The use of locality-level data instead of precinct-level data may hide important within-locality variation that could provide evidence of racially polarized voting. Additionally, using this aggregate data prevents us from analyzing variation across the state.

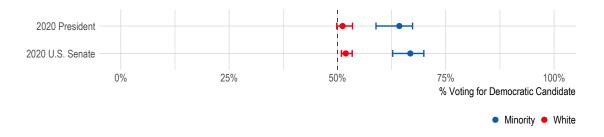


Figure 10: Ecological Inference Results 2020 General Election — Statewide

¹⁸Calculated from Virginia Department of Elections Data using elections for President, U.S. Senate, and U.S. House.

2017 Primary Election Results

The 2017 Democratic Primary Election for Lieutenant Governor provides a unique opportunity to examine RPV because it pitted a Black candidate, Justin Fairfax, against two White candidates, Susan Platt and Gene Rossi, in an open-seat race. Fairfax ultimately won the primary election race with 49% of the vote. Platt received 39% of the vote, and Rossi received 12%. This election allows us to analyze whether voter preferences generally follow the same patterns in a Democratic primary with Black and White candidates. We estimate that 67% of Black voters supported Fairfax in this election. In fact, at the state-wide level, Black voters supported Fairfax at substantially higher rates than any other racial group did. Asian voters also preferred Fairfax, with 49% supporting him in comparison with 42% support for Platt and the remainder for Rossi.

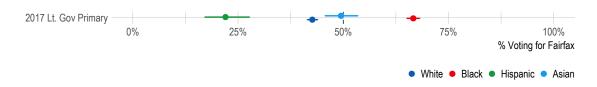


Figure 11: Ecological Inference Results 2017 Democratic Primary Election — Statewide

When examining variation in support for Fairfax by region, Minority voters gave a plurality of their support to Fairfax in every region, according to our estimates. Even in regions where less than 50% of Minority voters supported Fairfax, these voters still supported Fairfax at a higher rate than either of the other two candidates. In Hampton Roads, where the Minority population comprises slightly over 40% of the citizen-voting age population, we estimate that Fairfax received 68% of the vote among Minority voters.

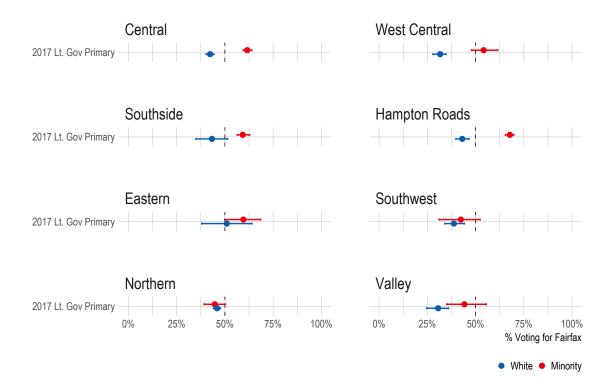


Figure 12: Ecological Inference Results 2017 Democratic Primary Election — Regions

Appendix A

Ecological inference combines the method of bounds,¹⁹ which produces deterministic bounds on the share of a minority group voting for a given representative, and ecological regression,²⁰ which makes use of how candidate support across precincts varies with a racial group's population share. Ecological inference stands out as a method that incorporates both deterministic information (e.g., from method of bounds) as well as statistical information (e.g., from ecological regression) when seeking to estimate group-level voting behavior from aggregate data.

There are several different methods for estimating racially polarized voting using ecological inference. We use the RxC method, which allows us to estimate voting patterns for multiple groups (such as White, Black, Hispanic, and Asian voters) and actions (such as voting for the Democratic candidate, voting for the Republican candidate, or not turning out to vote).

An example helps illustrate the utility of ecological inference for determining RPV. Table 1 reports the state-wide citizen voting age population shares (CVAP) in Virginia along with the aggregate two-party vote share for the 2016 Presidential Election. For 2016, in each locality we observe aggregate vote shares and aggregate population shares (e.g., the bottom-most row and right-most columns in the table), but not the group level voting behaviors (e.g., the interior cells in the table). We use ecological inference to estimate the interior cells. With these group-level estimates in hand, we are in a position to evaluate the extent of RPV for the 2016 Presidential Election in Virginia.

Table 1: Virginia 2016 Presidential Election Ecological Inference, Two-Party Vote Shares

	D	R	CVAP Pct.
White	36.3%	63.7%	70.7%
Black	92.2%	7.8%	19.4%
Hispanic	90.0%	10.0%	5.2%
Asian	94.3%	5.7%	4.7%
Total	52.8%	47.2%	

We estimate that 92% of Black voters voted for Hillary Clinton, the Democratic candidate in the election. Given the high level of support for the candidate, it would appear non-controversial to say that Clinton was the candidate of choice for Black voters in Virginia in the 2016 Presidential election. Furthermore, the high degree of support for this candidate among Black voters would suggest cohesion. Among White voters, we estimate that 36% supported Clinton and 64% supported Trump. While in general RPV should not be thought of in binary or absolute terms, the gap in this example between the behavior of Black and Minority voters is sufficiently large as to suggest evidence of racially polarized voting at the state-wide level in this election.²¹

¹⁹Otis Dudley Duncan and Beverly Davis. "An alternative to ecological correlation." American sociological review (1953).

 $^{^{20}}$ Leo A. Goodman, "Some alternatives to ecological correlation." American Journal of Sociology 64, no. 6 (1959): 610-625. 21 Each of these estimates have confidence intervals only a few percentage points wide. For sake of clarity, we do not report the 95% confidence intervals in this table. They are (91%, 93%) for Black voters and (36%, 38%) for Minority voters.

Appendix B

Northern Region

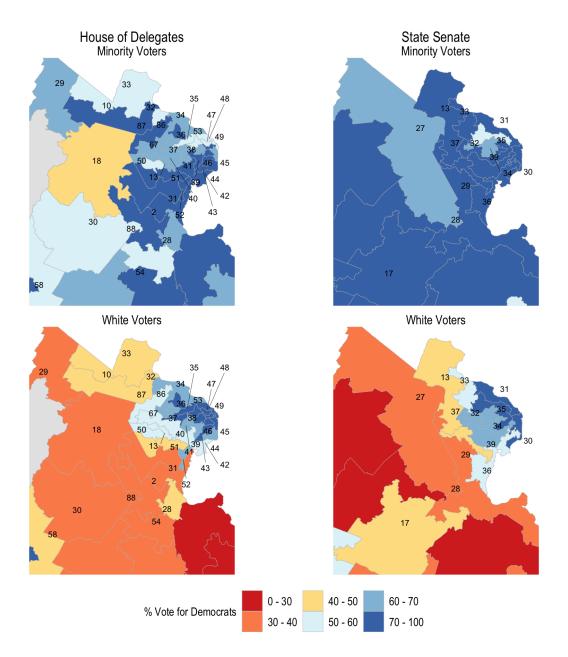


Figure 13: Ecological Inference Results — Northern Region

Valley Region

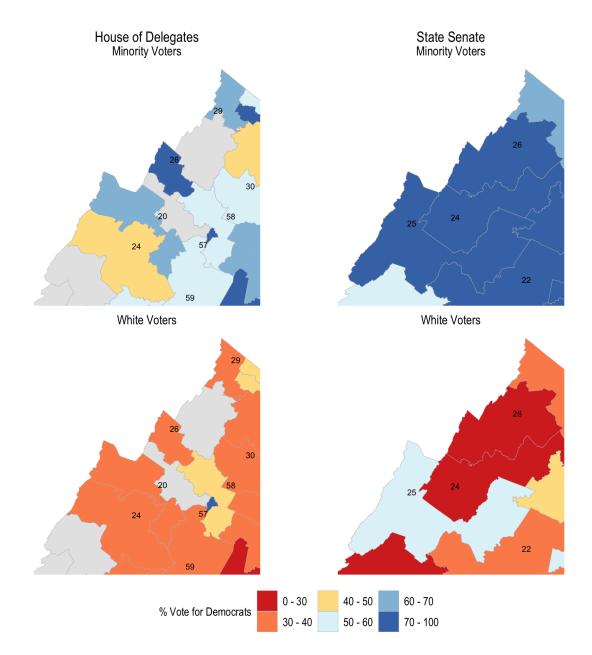


Figure 14: Ecological Inference Results — Valley Region

Central Region

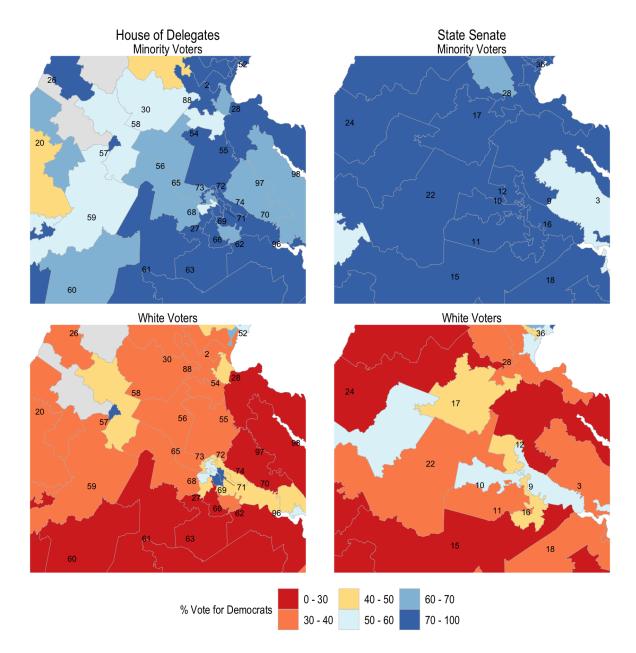


Figure 15: Ecological Inference Results — Central Region

Eastern Region

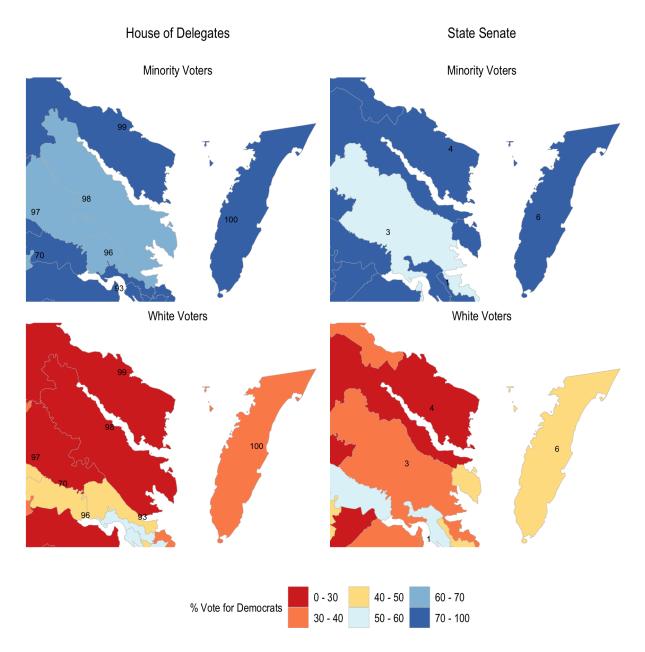


Figure 16: Ecological Inference Results — Eastern Region

Hampton Roads Region

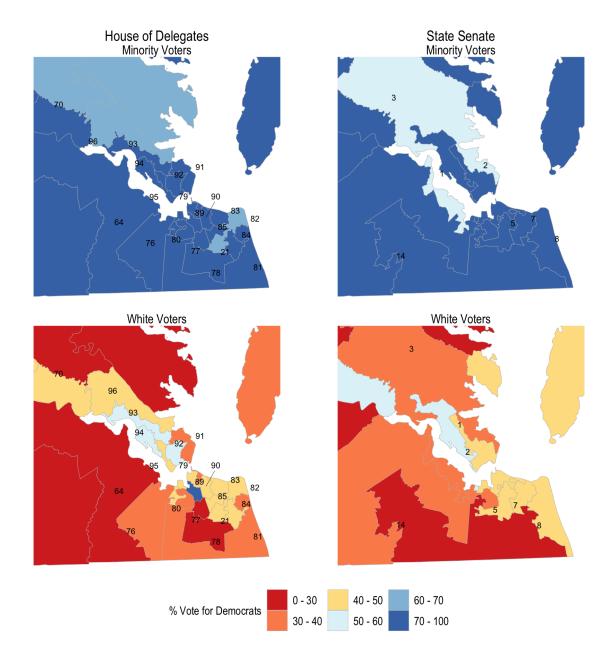
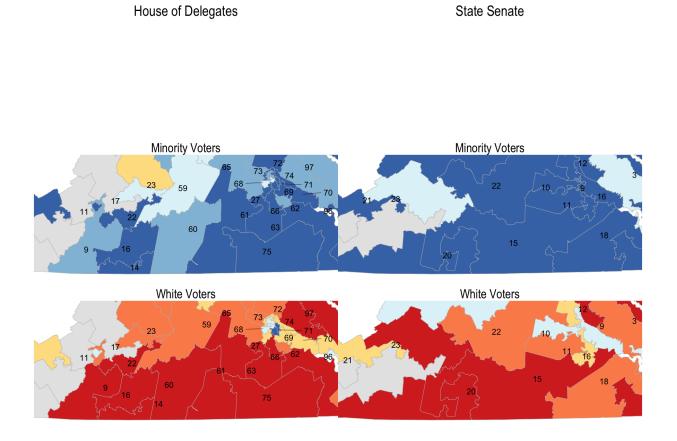


Figure 17: Ecological Inference Results — Hampton Roads Region

Southside Region



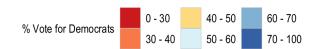
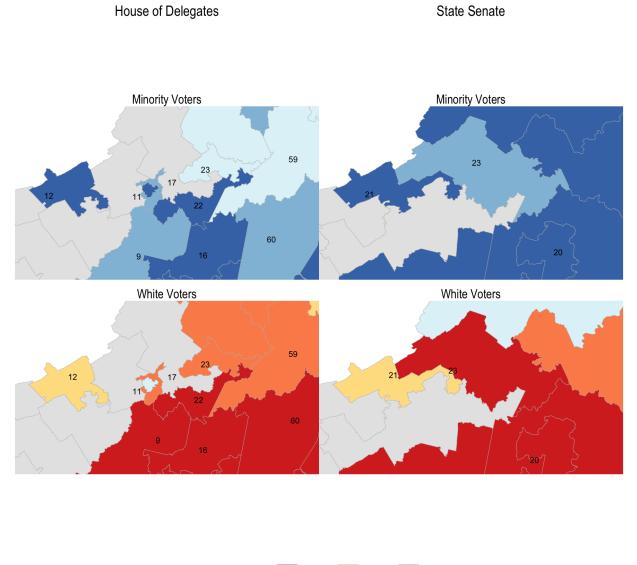


Figure 18: Ecological Inference Results — Southside Region

West Central Region



State Senate

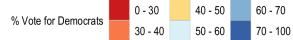
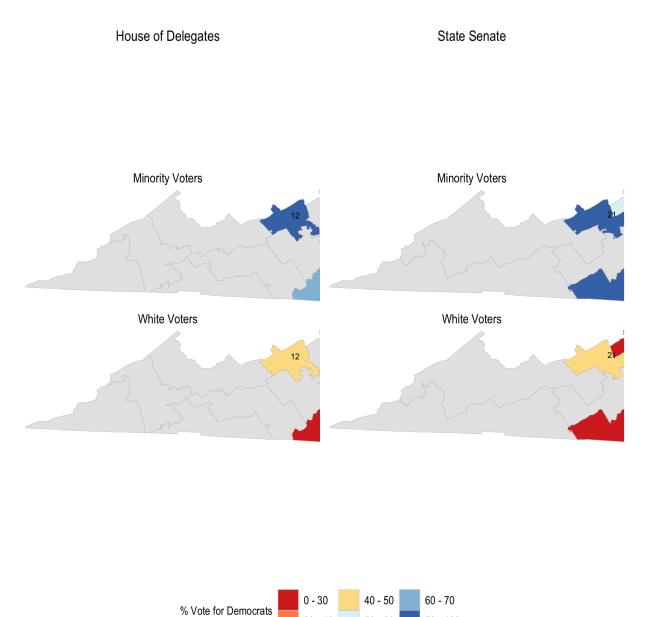


Figure 19: Ecological Inference Results — West Central Region

Southwest Region



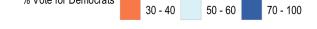


Figure 20: Ecological Inference Results — Southwest Region

Year	Office Group	Vote For	Estimate	95% Cl Lower	95% Cl Upper
2016	2016 Presiden Asian	Democrat	94.3	89.2	95.8
2016	2016 Presiden Asian	Republican	5.7	4.2	10.8
2016	2016 Presiden Black	Democrat	92.2	91.0	93.2
2016	2016 Presiden Black	Republican	7.8	6.8	9.0
2016	2016 Presiden Hispanic	Democrat	90.0	87.5	91.7
2016	2016 Presiden Hispanic	Republican	10.0	8.3	12.5
2016	2016 Presiden White	Democrat	36.3	35.6	37.7
2016	2016 Presiden White	Republican	63.7	62.3	64.4
2017	2017 Governo Asian	Democrat	93.9	92.6	95.1
2017	2017 Governo Asian	Republican	6.1	4.9	7.4
2017	2017 Governo Black	Democrat	93.2	92.0	94.2
2017	2017 Governo Black	Republican	6.8	5.8	8.0
2017	2017 Governo Hispanic	Democrat	86.5	82.3	89.9
2017	2017 Governo Hispanic	Republican	13.5	10.1	17.7
2017	2017 Governo White	Democrat	40.2	39.7	40.7
2017	2017 Governo White	Republican	59.8	59.3	60.3
2017	2017 Lt. Gove Asian	Democrat	93.6	92.2	94.9
2017	2017 Lt. Gove Asian	Republican	6.4	5.1	7.8
2017	2017 Lt. Gove Black	Democrat	93.0	91.7	94.1
2017	2017 Lt. Gove Black	Republican	7.0	5.9	8.3
2017	2017 Lt. Gove Hispanic	Democrat	86.6	82.9	89.6
2017	2017 Lt. Gove Hispanic	Republican	13.4	10.4	17.1
2017	2017 Lt. Gove White	Democrat	38.0	37.4	38.5
2017	2017 Lt. Gove White	Republican	62.0	61.5	62.6
2017	2017 Attorney Asian	Democrat	93.9	92.8	94.9
2017	2017 Attorney Asian	Republican	6.1	5.1	7.2
2017	2017 Attorney Black	Democrat	93.1	91.9	94.0
2017	2017 Attorney Black	Republican	6.9	6.0	8.1
2017	2017 Attorney Hispanic	Democrat	85.5	80.3	88.8
2017	2017 Attorney Hispanic	Republican	14.5	11.2	19.7
2017	2017 Attorney White	Democrat	38.8	38.3	39.6
2017	2017 Attorney White	Republican	61.2	60.4	61.7
2018	2018 U.S. Sen: Asian	Democrat	95.1	93.6	95.9
2018	2018 U.S. Sen Asian	Republican	4.9	4.1	6.4
2018	2018 U.S. Sen Black	Democrat	93.4	92.5	94.4
2018	2018 U.S. Sen Black	Republican	6.6	5.6	7.5
2018	2018 U.S. Sen Hispanic	Democrat	90.1	87.4	92.3
2018	2018 U.S. Sen: Hispanic	Republican	9.9	7.7	12.6
2018	2018 U.S. Sen White	Democrat	44.1	43.6	44.6
2018	2018 U.S. Sen White	Republican	55.9	55.4	56.4

Virginia Redistricting Commission COMMUNICATIONS AND OUTREACH UPDATE

September 2, 2021





Data Management

- Platform identified for data management JAMBO
 - To upload public input received to date and future input
- Preparation for data upload underway
- Maps provided to date/comments on proposed maps to be included
- Finalizing data organization fields:
 - Name
 - Email
 - Region
 - Stakeholder type (individual, business, organization, other)



- Community of interest
- General comment versus response to map
- Whether person providing input resides within the area being commented on



Messaging and Website Functionality

- Website optimization so Commission website is more easily found when searched via Google and other search engines
- Homepage messaging updates describe who, what, when, where, why, how
- Immediate pop-up added to enable visitors to subscribe for updates
- Instructional graphics to be added on how to provide input
- Further define communities of interest
- Add a confirmation message when input is submitted





Messaging and Website Functionality

- Expand FAQs to cover:
 - Public input and engagement
 - Census data
 - Standards and criteria
 - Redistricting process
 - The Commission
 - Other topics as needed





Outreach Goals

- Ensure members of the public understand how and where to provide input <u>and</u> that "time is of the essence" to make their voices heard
- Increase attendance and input at upcoming public hearings
- Reach as many Virginia residents as possible with broad print advertising, digital media and related strategies that encourage public input
- Conduct targeted outreach with historically underrepresented/ disadvantaged populations to encourage input
- Other goals, as identified by Commission





Outreach Strategies

- Leverage existing state relationships and networks to share information and encourage public input
 - Virginia Complete Count Commission
 - *Chief Diversity, Equity and Inclusion Officer*
 - Secretary of the Commonwealth
 - Virginia Department of Health Office of Health Equity
 - Equity Leadership Task Force

- Virginia African American Advisory Board
- Virginia Latino Advisory Board
- Virginia Asian Advisory Board
- Virginia Indian Advisory Board
- Others as appropriate





Outreach Strategies

- Provide content to encourage input for use by Virginia elected officials to use in constituent outreach (state and Congressional level)
- Partner with Virginia Municipal League and Virginia Association of Counties to share information with local government officials for distribution to communities/residents
- Leverage social media to reach a broader audience: Facebook, NextDoor, YouTube





Outreach Strategies

- Provide content to NGOs to share with their networks, as appropriate
 - State, regional and local chambers of commerce and business groups
 - Historical/cultural organizations (i.e., NAACP chapters, Urban League chapters, Hispanic and Latino chambers of commerce/organizations, Asian chambers of commerce/organizations, and the like)
 - Organizations that represent residents residing in rural areas in Virginia
 - Others to be identified





Outreach Strategies – details coming soon

- Print advertising strategy to comply with statutory requirements, maximize resources and best achieve outreach goals
- Digital media strategy
 - Focus on increasing reach and encouraging input
 - Expand platforms to watch livestreams of public hearings
 - Provide "pop-up" ads during livestreams, linking viewers to where/how to provide input
 - Target historically under-represented/disadvantaged communities
 - Other details and proposed budget to come





Efforts underway/next steps

- Finalize data fields for data management platform and upload input received to date
- Implement recommended website updates and improvements
- Digital and print media content being developed
- Reaching out to potential outreach partner contacts and preparing comprehensive list of outreach partner contacts
- Preparing for upcoming public meetings
- Regular updates on progress to be provided to the Commission









QUESTIONS/DISCUSSION





Current Data Fields:

Name, Email Address, Subject Comment

Additional Data Fields for Approval:

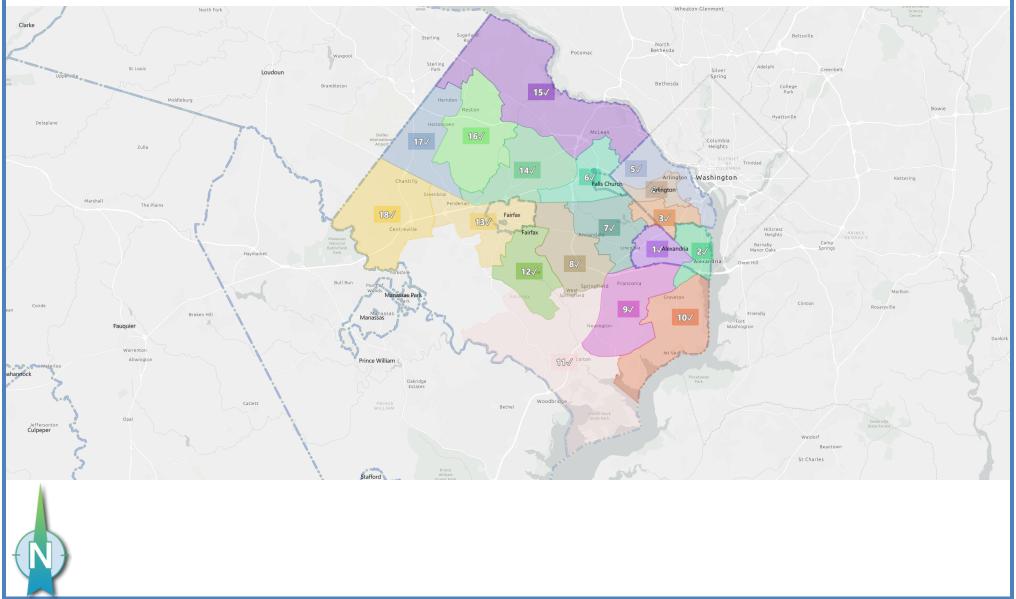
- Region
- Community of interest/description
- Tag
- Stakeholder type (individual, business, organization)
- Whether the input is general or in response to a map
- Whether the person providing input "lives in the area referenced in comment"

A1 Northern Virginia House of Del ates Plan (A1 NOVA HOD)

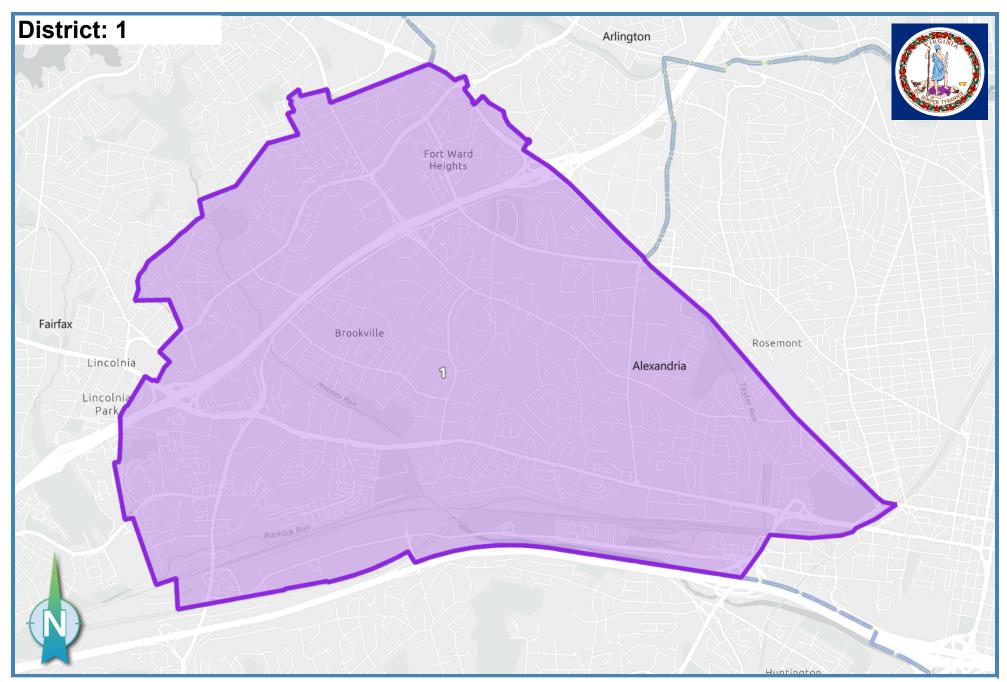
House of Delegates Plan

A1 NOVA HOD



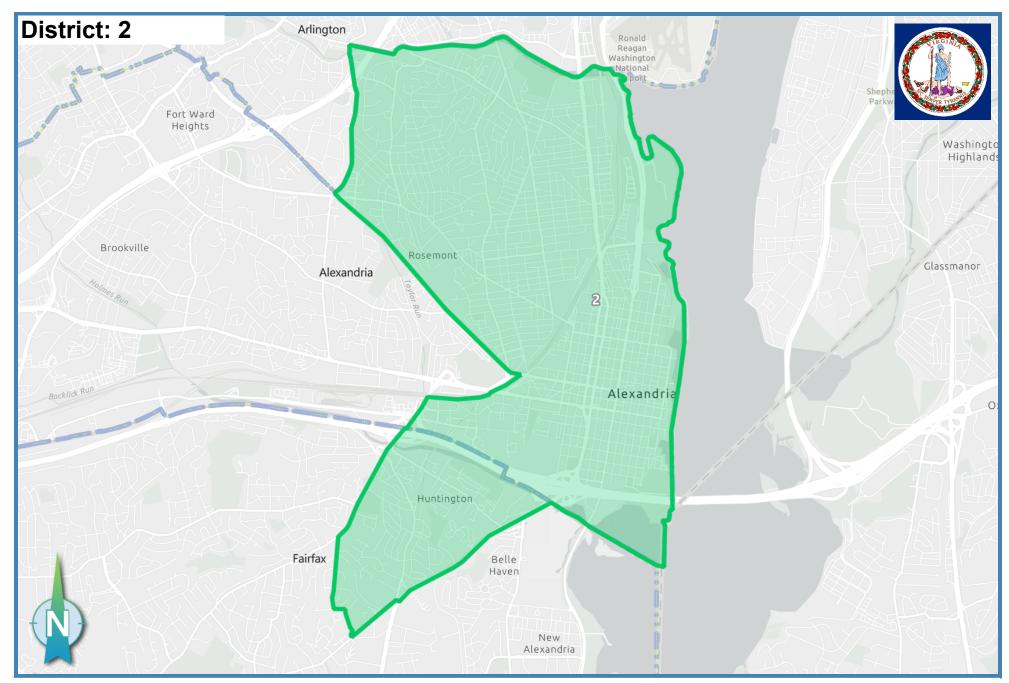




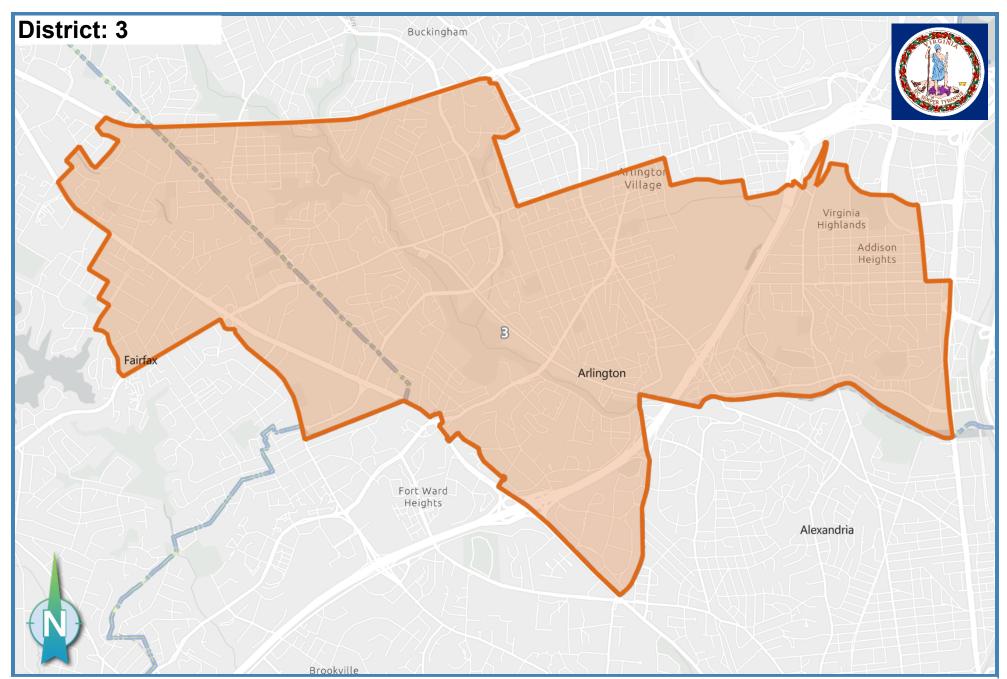




AutoBound Edge MAP

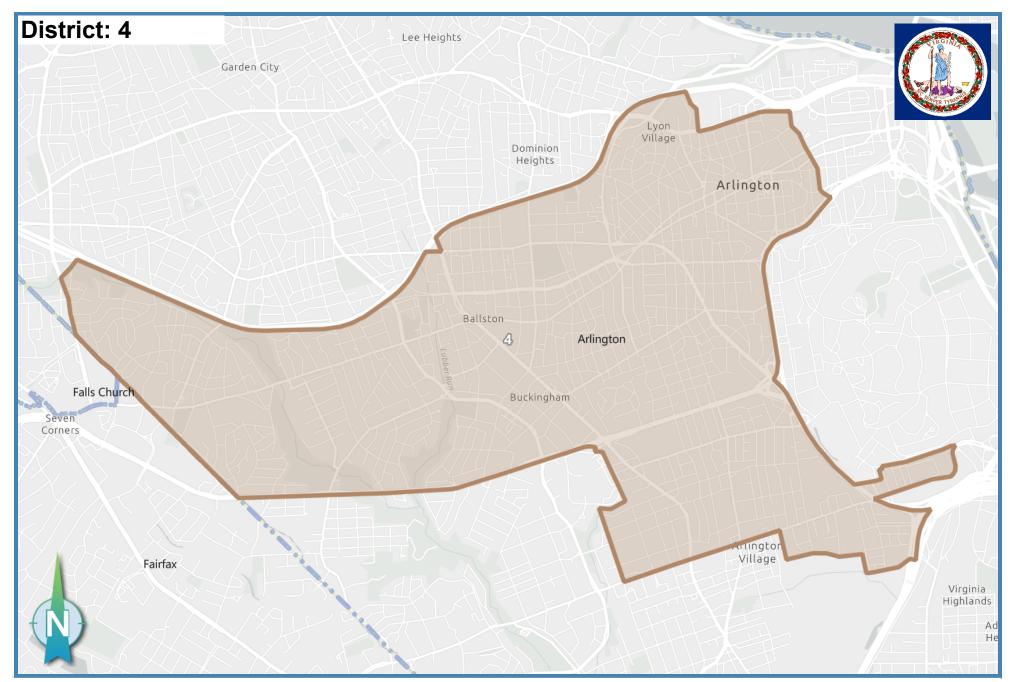




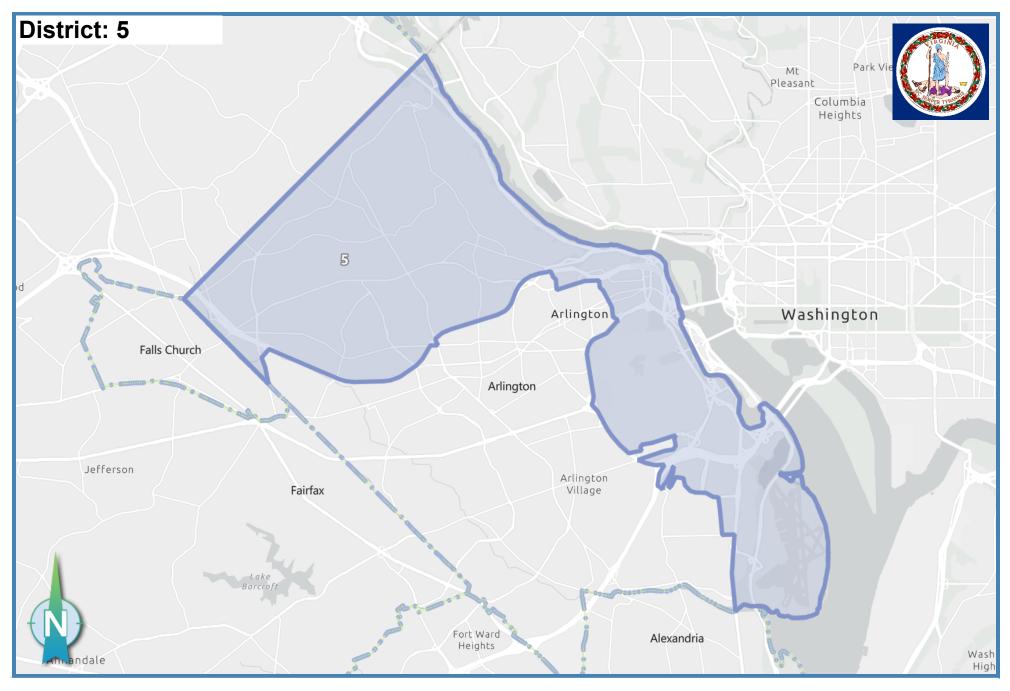




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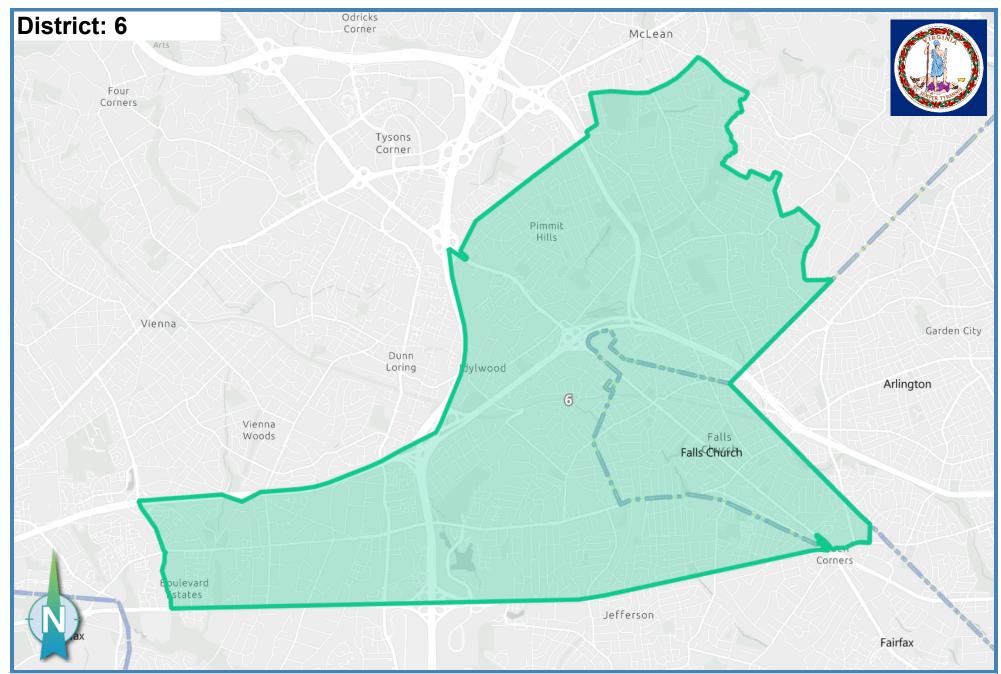






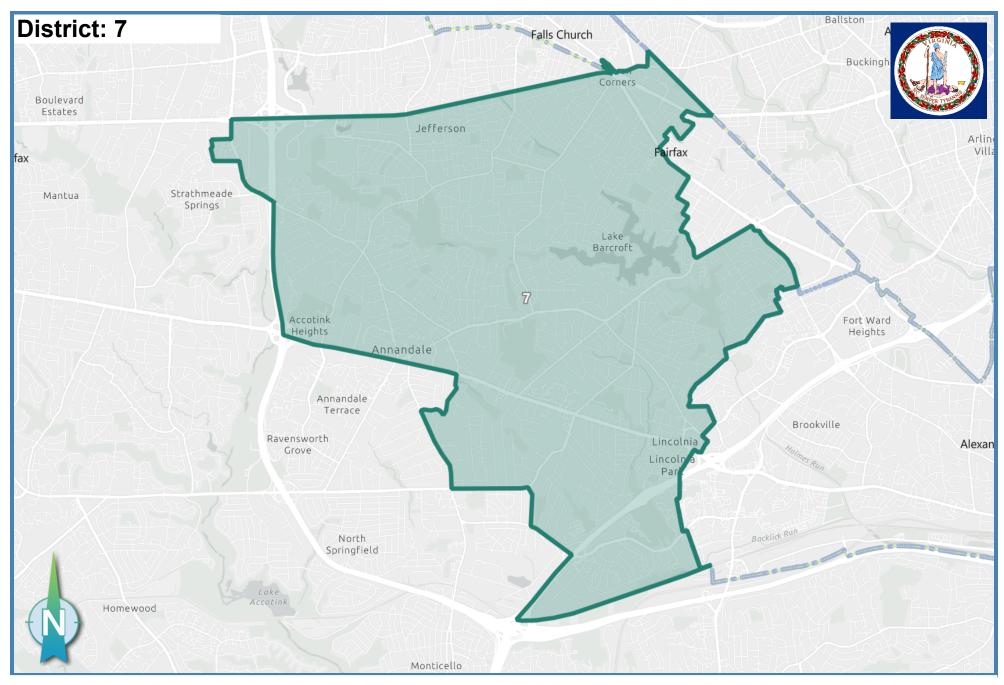


GE 2020





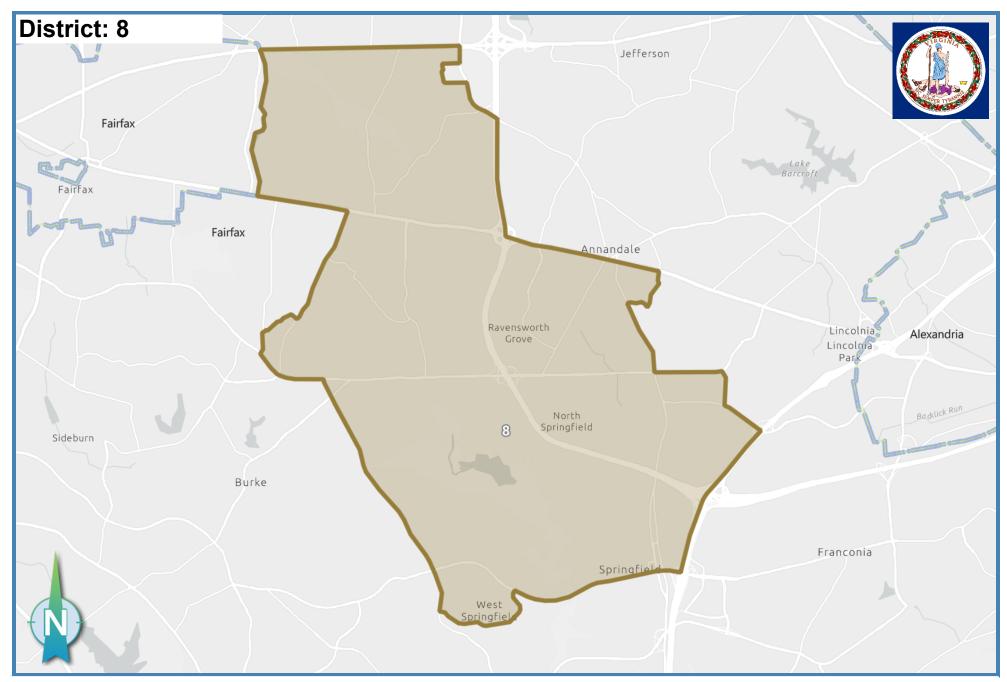
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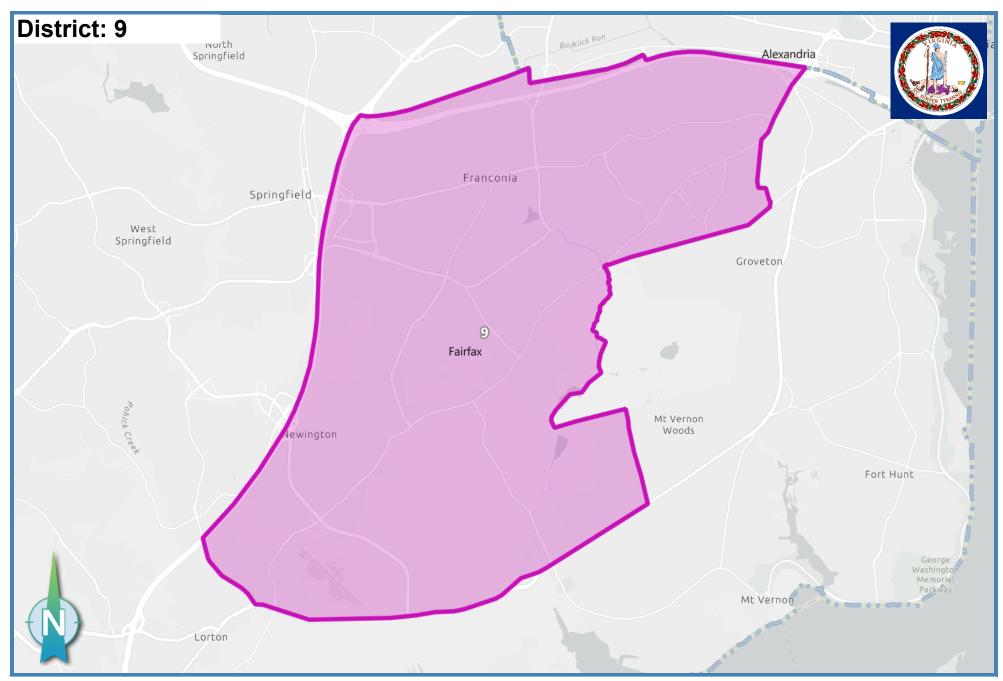


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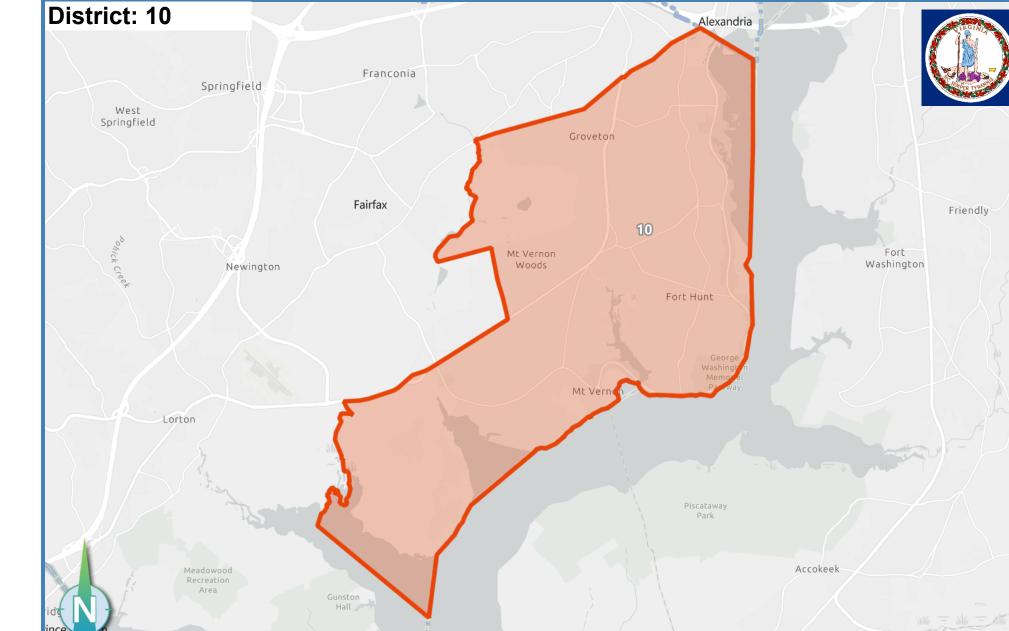


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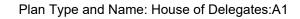






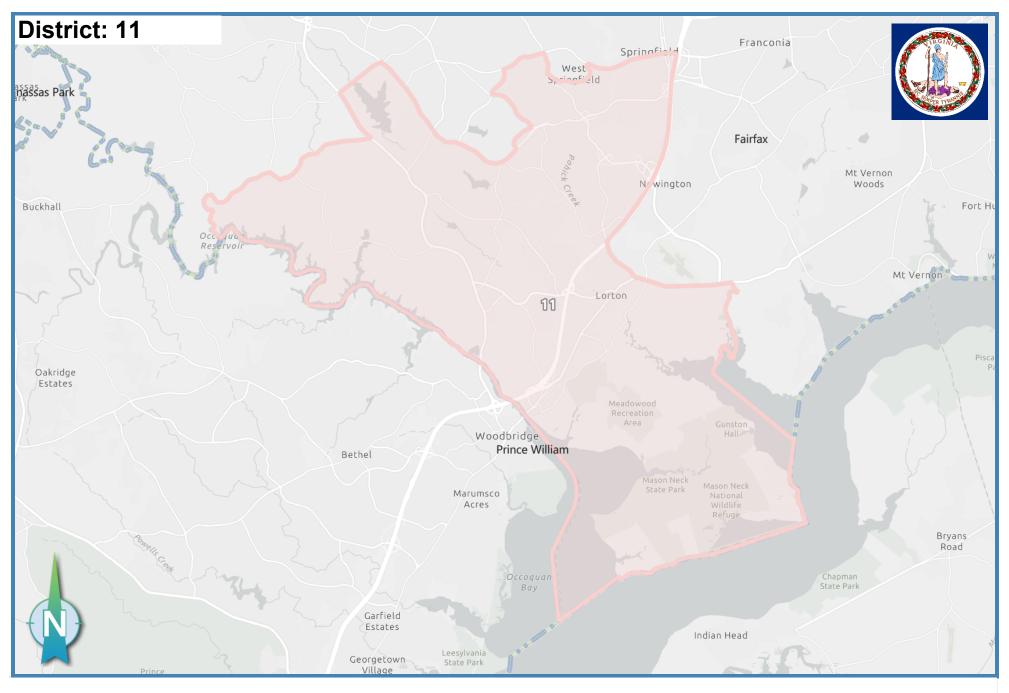




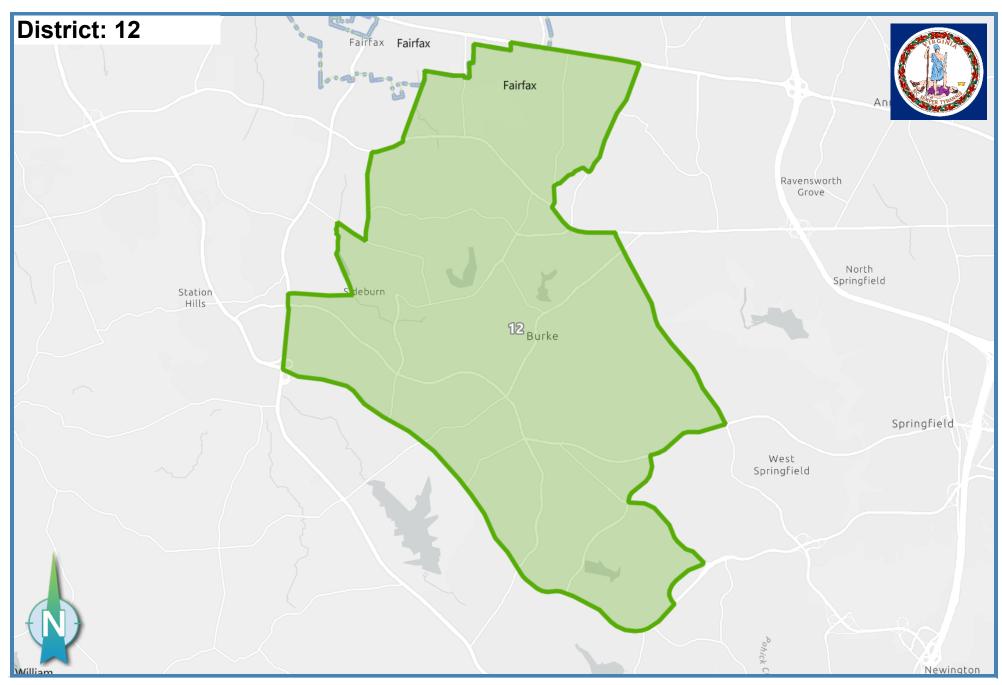




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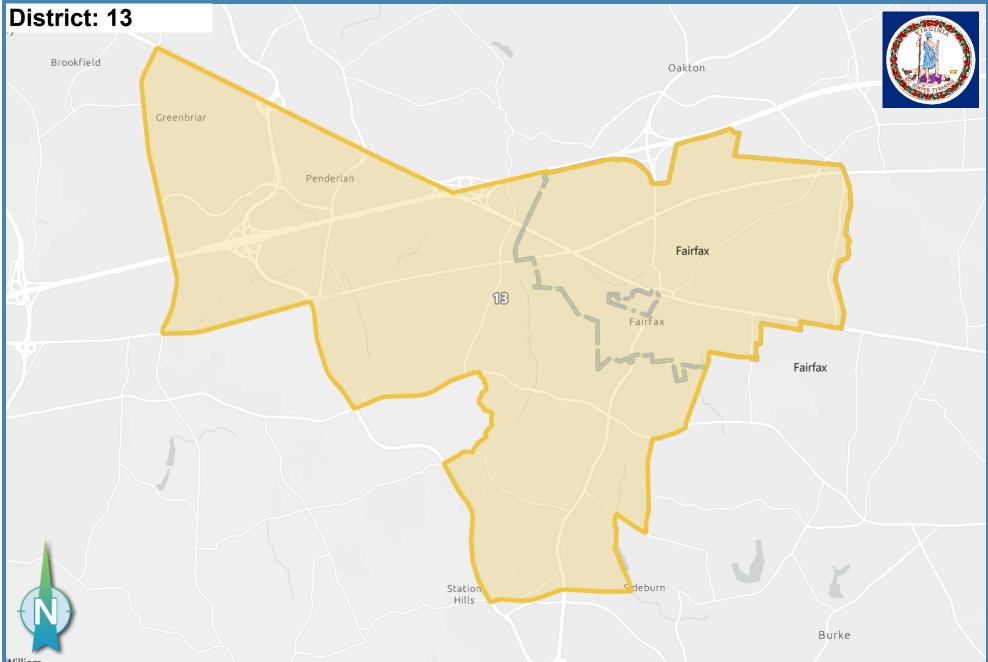




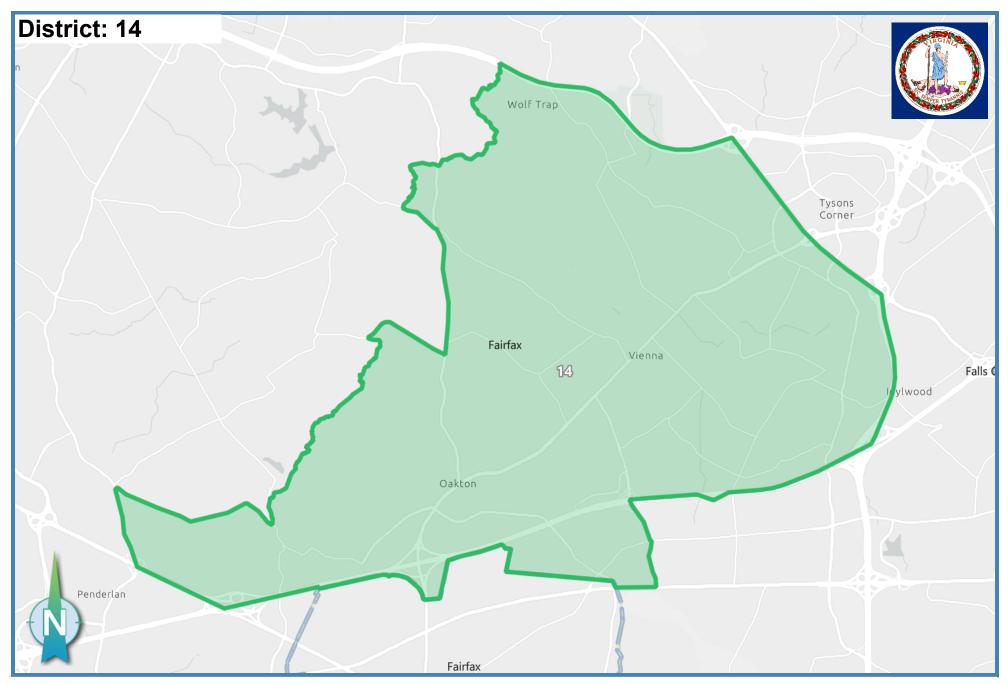




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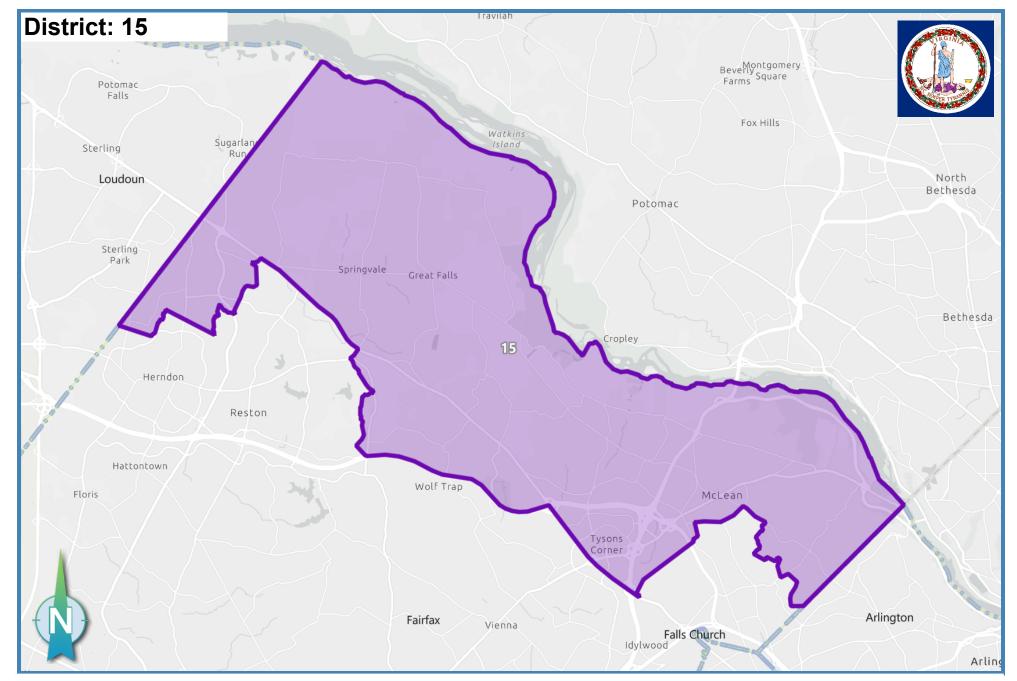






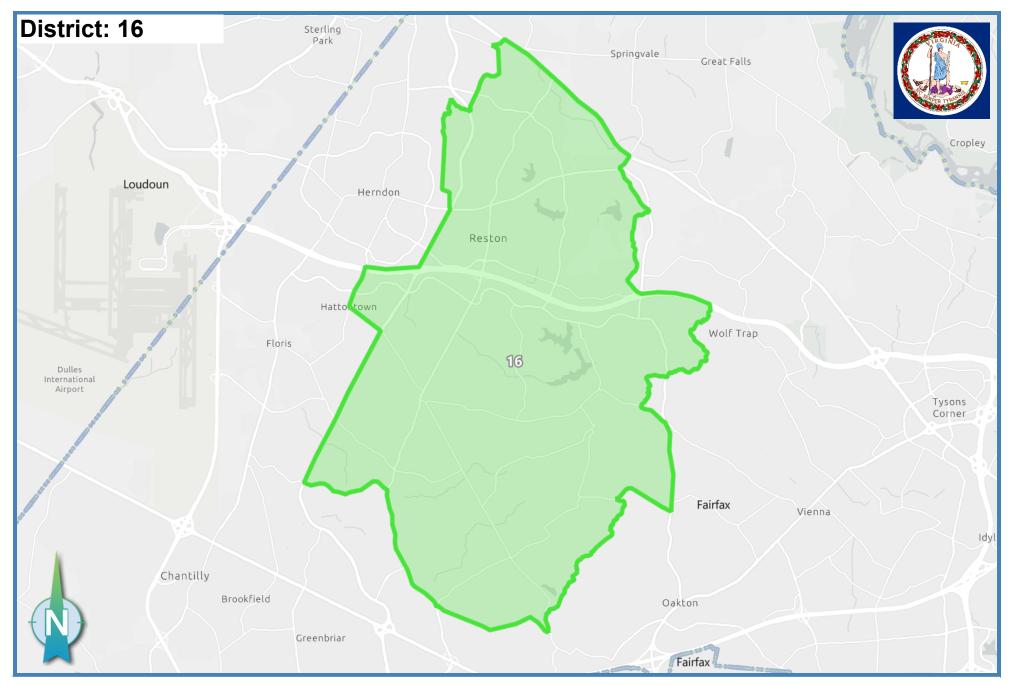


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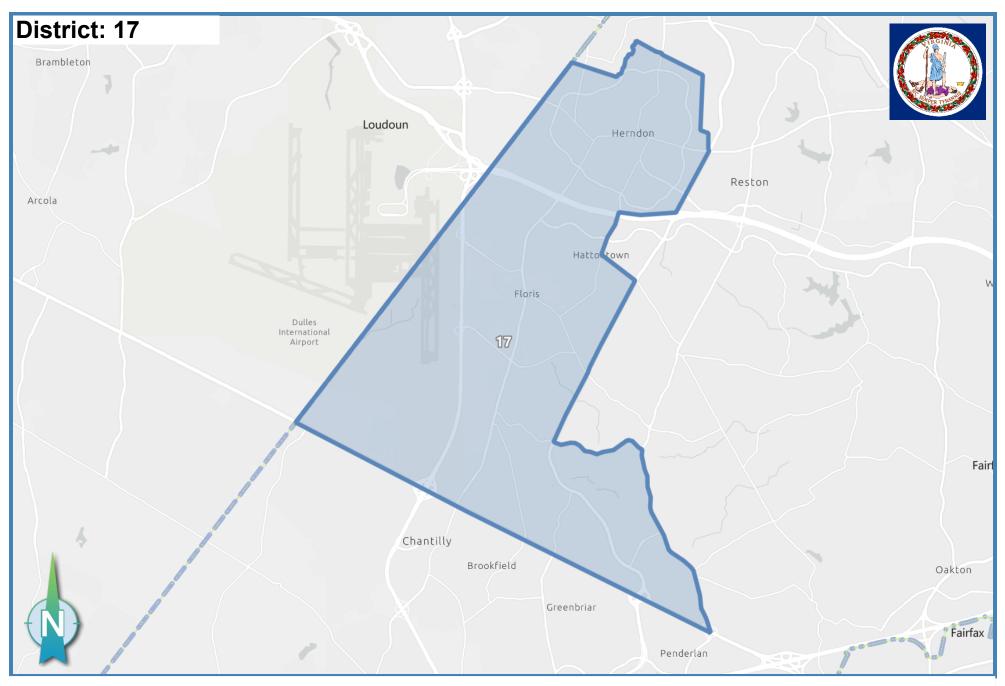


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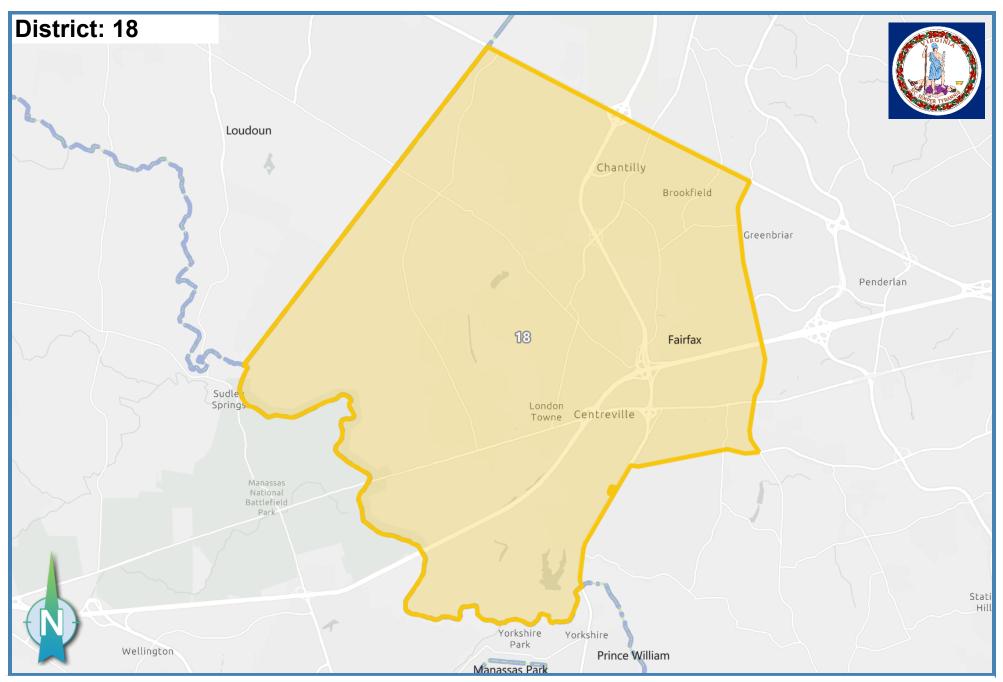
AutoBound Edge MAP



Map Date: 9/1/2021 6:38:06 PM Plan Last Edited on: 9/1/2021 6:19:59 PM



AutoBound Edge MAP





A1 NOVA HOE	Data Tables
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	Total P	opulation Tak	bulation		Racial Dem	ographics as a F	Percent of Total	Population	Percent	Racial Demographics as a p			rcent of VAP		
DISTRICT	All Persons ADJ Targe	et Dev.	Dif	ference	White	Black	Hispanic	Minority	Voting Age	White	Black	Hispanic	Minority		
1	87,974	86,314 1	L.92%√	1,660	39.48%	27.60%	20.50%	60.52%	80.77%	42.19%	27.37%	18.64%	57.81%		
2	87,354	86,314 1	L.20%√	1,040	62.95%	11.84%	17.09%	37.05%	82.58%	65.50%	11.81%	14.85%	34.50%		
3	87,599	86,314 1	L.49%√	1,285	43.79%	14.14%	28.51%	56.21%	79.20%	46.51%	14.15%	25.73%	53.49%		
4	85,101	86,314 -1	.41%√	-1,213	63.41%	7.15%	14.28%	36.59%	85.04%	65.86%	6.98%	12.80%	34.14%		
5	86,821	86,314 0).59%√	507	68.64%	5.86%	9.81%	31.36%	81.53%	69.32%	6.28%	9.23%	30.68%		
6	87,770	86,314 1	L.69%√	1,456	52.59%	4.62%	17.49%	47.41%	76.71%	54.72%	4.70%	16.17%	45.28%		
7	85,288	86,314 -1	l.19%√	-1,026	39.34%	12.09%	28.20%	60.66%	77.57%	41.68%	11.66%	25.83%	58.32%		
8	85,720	86,314 -0).69%√	-594	43.76%	6.15%	25.50%	56.24%	76.00%	45.95%	5.87%	23.36%	54.05%		
9	86,111	86,314 -0).24%√	-203	47.02%	18.00%	17.44%	52.98%	76.91%	49.03%	17.83%	16.21%	50.97%		
10	87,812	86,314 1	L.74%√	1,498	48.48%	17.24%	26.08%	51.52%	73.11%	50.89%	17.63%	23.54%	49.11%		
11	85,651	86,314 -0).77%√	-663	47.12%	16.07%	13.83%	52.88%	75.65%	49.28%	15.40%	12.77%	50.72%		
12	85,069	86,314 -1	44%√	-1,245	56.15%	6.81%	13.78%	43.85%	75.71%	57.57%	6.60%	12.93%	42.43%		
13	85,843	86,314 -0).55%√	-471	50.31%	9.55%	13.11%	49.69%	79.40%	52.38%	9.26%	12.03%	47.62%		
14	86,964	86,314 0).75%√	650	56.94%	4.56%	10.55%	43.06%	75.72%	59.04%	4.58%	9.63%	40.96%		
15	86,181	86,314 -0).15%√	-133	62.48%	3.38%	6.82%	37.52%	77.80%	64.40%	3.56%	6.28%	35.60%		
16	87,344	86,314 1	l.19%√	1,030	63.92%	7.46%	11.62%	36.08%	79.60%	66.65%	7.08%	10.38%	33.35%		
17	86,527	86,314 0).25%√	213	37.13%	9.32%	18.80%	62.87%	75.02%	39.86%	9.42%	16.93%	60.14%		
18	84,633	86,314 -1	L.95%√	-1,681	42.14%	7.42%	17.60%	57.86%	76.88%	43.95%	7.33%	16.01%	56.05%		

DISTRICT	Total	Tot	al		Total					Total					Total
	All Persons	White Alone	Black Alone	% Black			% Minority	Amer Indian	Asian	Non Hisp Other	One Race	Non White	Haw-Pac	Multi-Race	Minority
1	87,974	34,728	24,281	27.6%	18,031	20.5%	60.52%	568	8,310	69,816	77,915	53,246	56	9,932	53,246
2	87,354	54,985	10,342	11.8%	14,931	17.1%	37.05%	542	4,646	72,436	78,344	32,369	54	9,023	32,369
3	87,599	38,359	12,388	14.1%	24,976	28.5%	56.21%	1,195	10,057	62,515	76,625	49,240	65	10,866	49,240
4	85,101	53,963	6,087	7.2%	12,151	14.3%	36.59%	716	10,238	72,975	76,251	31,138	42	8,875	31,138
5	86,821	59,597	5,089	5.9%	8,521	9.8%	31.36%	226	10,111	78,281	77,907	27,224	43	8,895	27,224
6	87,770	46,156	4,055	4.6%	15,349	17.5%	47.41%	471	19,036	72,371	77,364	41,614	57	10,356	41,614
7	85,288	33,556	10,310	12.1%	24 <i>,</i> 053	28.2%	60.66%	1,110	16,001	61,135	74,420	51,732	48	10,768	51,732
8	85,720	37,512	5,268	6.1%	21,855	25.5%	56.24%	675	19,249	63,777	74,726	48,208	53	10,906	48,208
9	86,111	40,492	15,501	18.0%	15,019	17.4%	52.98%	524	11,982	71,023	75,516	45,619	147	10,526	45,619
10	87,812	42,572	15,138	17.2%	22 <i>,</i> 898	26.1%	51.52%	632	5,858	64,787	77,252	45,240	111	10,433	45,240
11	85,651	40,357	13,762	16.1%	11,843	13.8%	52.88%	298	16,023	73,724	75,364	45,294	103	10,203	45,294
12	85,069	47,764	5,791	6.8%	11,722	13.8%	43.85%	308	16,500	73,305	74,511	37,305	56	10,516	37,305
13	85,843	43,191	8,200	9.6%	11,251	13.1%	49.69%	360	20,279	74,888	77,251	42,652	57	8,888	42,652
14	86,964	49,519	3,962	4.6%	9,178	10.6%	43.06%	198	20,358	77,744	77,630	37,445	43	9,292	37,445
15	86,181	53 <i>,</i> 849	2,911	3.4%	5,874	6.8%	37.52%	107	19,618	80,285	78,270	32,332	43	7,889	32,332
16	87,344	55 <i>,</i> 830	6,513	7.5%	10,147	11.6%	36.08%	242	11,288	77,140	78,257	31,514	37	9,030	31,514
17	86,527	32,128	8,060	9.3%	16,268	18.8%	62.87%	536	28,314	70,176	78,052	54,399	26	8,392	54,399
18	84,633	35,668	6,282	7.4%	14,894	17.6%	57.86%	469	25,440	69,685	75,368	48,965	62	9,211	48,965

DISTRICT							Voting Age Per	sons					
	VA Persons	VA White	VA Black	VA Hispanic	VA Non Hisp	VA Non Hisp White	VA Asian	VA Non Hisp Other	VA NATIVE AM	VA HAW-PAC	VA Minority	VA Multi-Race	VA one Race
1	71,053	29,975	19,449	13,247	57,806	28,396	6,693	341	98	42	41,078	7,293	63,760
2	72,139	47,253	8,522	10,711	61,428	45,807	4,047	604	103	44	24,886	6,448	65,691
3	69,382	32,272	9,819	17,855	51,527	30,439	8,361	388	81	59	37,110	7,725	61,657
4	72,371	47,661	5,053	9,263	63,108	46,119	8,840	560	74	38	24,710	6,358	66,013
5	70,787	49,069	4,446	6,536	64,251	47,720	8,894	681	63	39	21,718	5,922	64,865
6	67,326	36,838	3,163	10,888	56,438	35,277	14,989	536	83	42	30,488	6,601	60,725
7	66,157	27,571	7,711	17,086	49,071	25,760	13,190	305	94	41	38,586	7,423	58,734
8	65,143	29,936	3,822	15,217	49,926	28,272	15,407	444	90	46	35,207	7,158	57,985
9	66,228	32,471	11,810	10,733	55,495	30,963	9,595	344	123	110	33,757	6,754	59,474
10	64,198	32,669	11,318	15,110	49,088	30,999	4,505	325	94	81	31,529	6,568	57,630
11	64,797	31,932	9,981	8,273	56,524	30,825	12,648	354	79	74	32,865	6,476	58,321
12	64,408	37,077	4,251	8,329	56,079	35,794	13,359	451	66	47	27,331	6,397	58,011
13	68,157	35,701	6,310	8,198	59,959	34,441	16,117	468	131	52	32,456	5,901	62,256
14	65,848	38,876	3,019	6,340	59,508	37,900	15,671	492	46	35	26,972	5,584	60,264
15	67,048	43,181	2,390	4,208	62,840	42,347	15,244	543	35	33	23,867	4,836	62,212
16	69,528	46,340	4,924	7,216	62,312	45,162	9,149	500	66	28	23,188	5,747	63,781
17	64,910	25,873	6,112	10,987	53,923	24,618	20,985	262	60	21	39,037	5,497	59,413
18	65,064	28,594	4,766	10,419	54,645	27,267	20,024	290	102	48	36,470	6,016	59,048

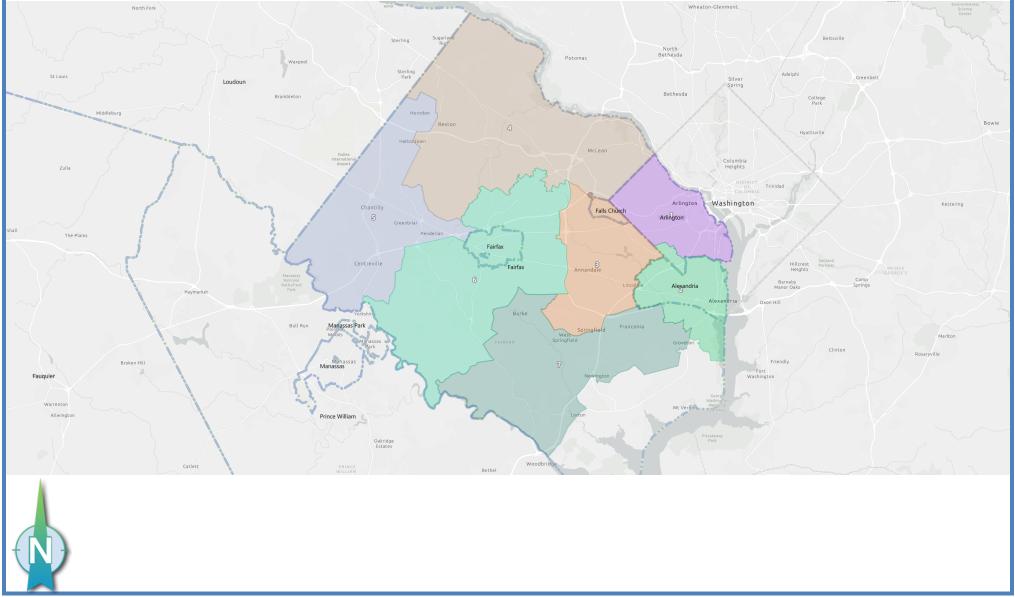
			2020 Elect	ions		2	2018 Elect	ions		2	017 Elect	ions					2	016 Elect	ions			2	2013 Ele	ctions					2	012 Electio	ons	
DISTRICT	PRES20DEM	PRES20REP	PRES20LIB	USSEN20D	JSSEN2OR	USSEN18D	USSEN18R U	SSEN18L AT	TTGEN17D AT	TGEN17R	GOV17D	GOV17R	GOV17L	LT.GOV17D	T.GOV17R	PRES16DEM	PRES16REP	RES16LIB P	RES16IND	PRES16GRN	ATTGEN13D A	TTGEN13R	GOV13D	GOV13R	GOV13L L	T.GOV13D LT	.GOV13R P	RES12DEM	PRES12REP	PRES12LIB	PRES12CON PR	ES12GRN
1	5,529	2,608	190	5,587	2,713	21,017	4,122	523	15,994	4,212	16,206	4,009	170	16,010	4,213	20,588	4,910	652	443	241	12,788	4,220	12,546	3,880	704	13,047	3,798	21,626	7,322	232	42	90
2	5,947	3,671	233	5,847	4,086	27,345	5,861	906	22,337	6,934	22,717	6,474	272	22,387	6,902	24,852	6,301	1,067	808	278	16,974	6,179	16,495	5,532	1,315	17,479	5,384	22,827	9,819	298	43	86
3	5,924	2,893	206	6,068	2,923	22,878	4,197	704	18,399	4,541	18,647	4,224	230	18,334	4,561	22,390	5,171	826	704	257	12,996	4,090	12,650	3,711	900	13,306	3,638	19,348	7,298	235	37	90
4	4,702	2,846	263	4,598	3,271	25,204	4,781	1,003	20,128	5,096	20,431	4,670	321	20,046	5,144	22,215	5,462	1,254	774	224	15,160	4,959	14,680	4,416	1,262	15,493	4,432	21,843	9,777	445	37	102
5	4,179	3,246	220	4,111	3,653	25,110	5,960	805	21,118	6,613	21,416	6,270	221	20,960	6,725	20,130	5,950	936	671	208	17,355	6,825	16,664	6,158	1,567	17,867	6,048	20,894	11,226	344	31	109
6	5,505	4,408	244	5,566	4,567	22,142	6,488	678	17,791	6,445	18,149	5,995	287	17,844	6,398	20,875	7,305	959	837	303	12,288	5,775	11,878	5,322	1,037	12,684	5,298	18,611	9,793	317	50	98
7	7,356	4,901	214	7,625	4,746	19,747	6,081	545	15,505	5,757	15,749	5,483	185	15,576	5,659	19,813	6,956	683	502	258	11,537	5,416	11,173	5,108	868	11,921	4,924	18,433	9,047	233	37	94
8	8,409	7,393	291	8,737	7,247	20,218	8,342	600	16,117	8,077	16,410	7,719	212	16,176	7,988	20,514	9,619	878	584	299	12,820	8,351	12,312	7,936	1,152	13,412	7,647	19,388	12,735	283	58	103
9	8,460	6,040	304	8,657	6,021	22,075	7,272	657	16,776	7,008	17,008	6,669	219	16,747	6,972	20,549	8,369	837	581	249	12,307	6,864	11,940	6,494	929	12,852	6,285	20,777	11,608	250	63	92
10	7,742	5,581	249	7,662	5,859	19,295	6,944	552	15,148	7,516	15,389	7,220	186	15,089	7,553	18,659	7,849	742	515	221	12,443	7,315	12,046	6,830	1,027	12,954	6,649	18,692	10,922	198	42	58
11	8,677	7,459	295	8,837	7,460	22,010	9,827	579	16,734	9,689	17,072	9,268	208	16,805	9,589	21,064	11,432	866	638	243	12,656	9,614	12,315	9,131	1,050	13,375	8,800	20,540	14,895	251	53	72
12	8,610	7,848	344	8,698	8,029	23,122	10,067	809	18,250	10,217	18,639	9,714	270	18,268	10,178	22,013	11,771	1,177	805	281	14,555	10,559	13,954	10,063	1,360	15,344	9,683	21,626	16,070	379	68	112
13	5,504	5,445	264	5,708	5,463	20,106	8,042	657	15,162	7,665	15,366	7,444	270	15,277	7,579	19,769	9,788	1,146	660	338	10,994	7,991	10,532	7,564	1,091	11,489	7,399	18,377	12,932	345	47	80
14	5,724	5,653	278	5,750	5,877	22,600	8,634	675	18,230	8,773	18,521	8,363	249	18,218	8,763	20,925	9,746	1,029	803	294	14,339	8,978	13,856	8,402	1,281	15,059	8,150	20,839	14,716	301	49	89
15	5,866	6,844	290	5,773	7,281	21,233	10,775	690	16,936	10,848	17,217	10,497	207	16,820	10,950	18,956	11,880	907	701	243	13,819	10,745	13,352	10,015	1,426	14,540	9,820	16,197	16,027	232	23	62
16	7,728	6,377	374	7,709	6,736	25,971	9,280	765	21,166	8,957	21,450	8,547	315	21,131	8,989	23,622	10,405	1,140	682	343	16,673	8,878	16,027	8,358	1,431	17,222	8,257	23,213	14,598	365	46	108
17	6,379	5,090	235	6,520	5,093	19,029	6,580	542	14,054	6,168	14,227	5,858	255	14,053	6,142	18,315	8,012	836	499	277	10,218	6,262	9,866	5,807	955	10,522	5,890	17,651	10,595	274	43	66
18	6,675	6,766	284	6,944	6,712	19,073	8,992	609	13,866	8,277	14,064	7,908	271	13,876	8,251	18,376	10,499	1,071	580	279	9,667	8,186	9,251	7,826	947	10,108	7,718	17,939	13,442	284	36	63

A1 Northern Virginia Senate Plan (A1 NOVA SD)

State Senate Plan

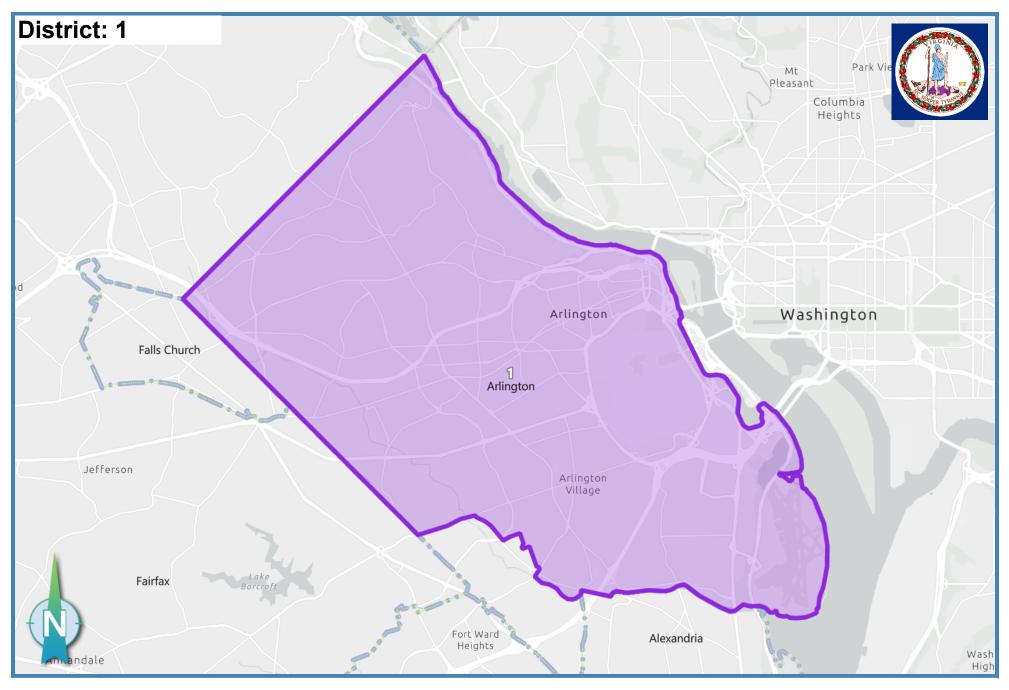
A1 NOVA SD





AutoBound Edge MAP - Based on: 2020 Census Geography, 2010 PL94-171

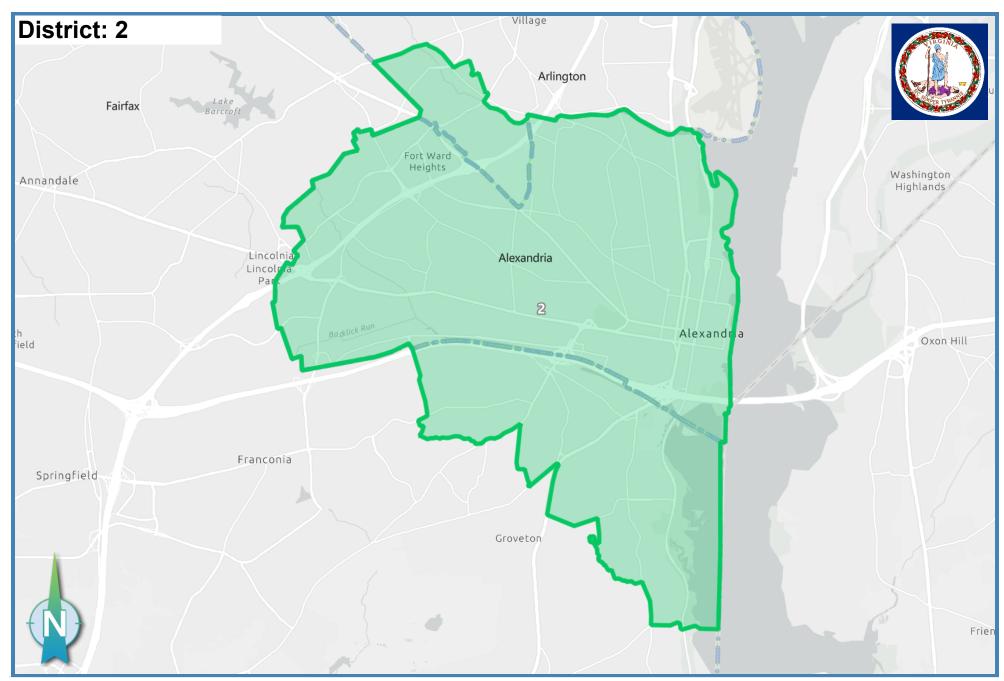








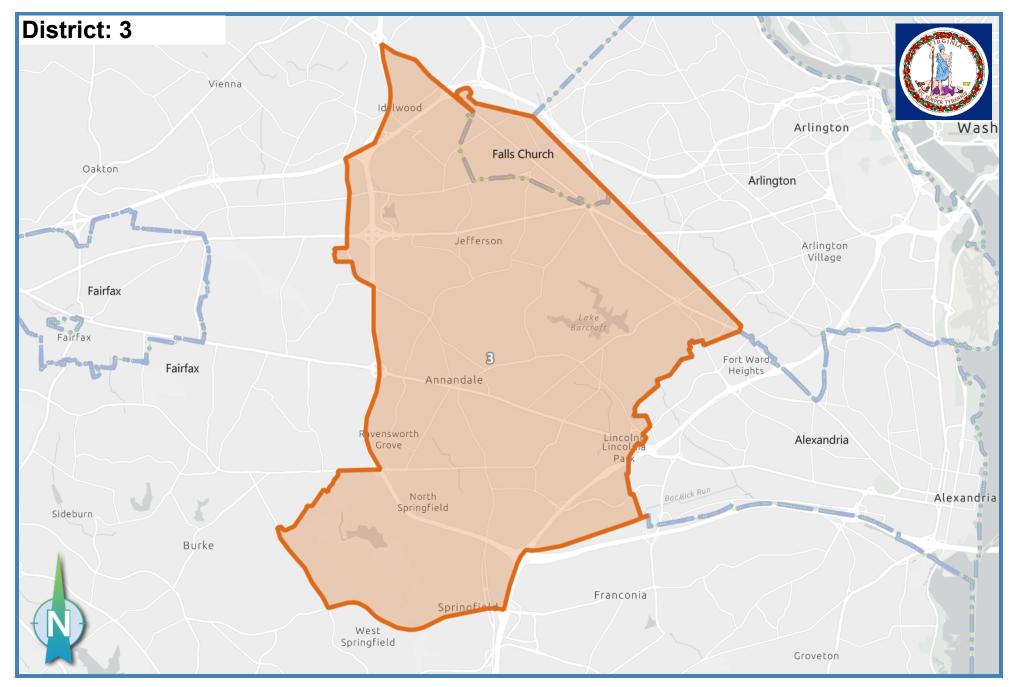
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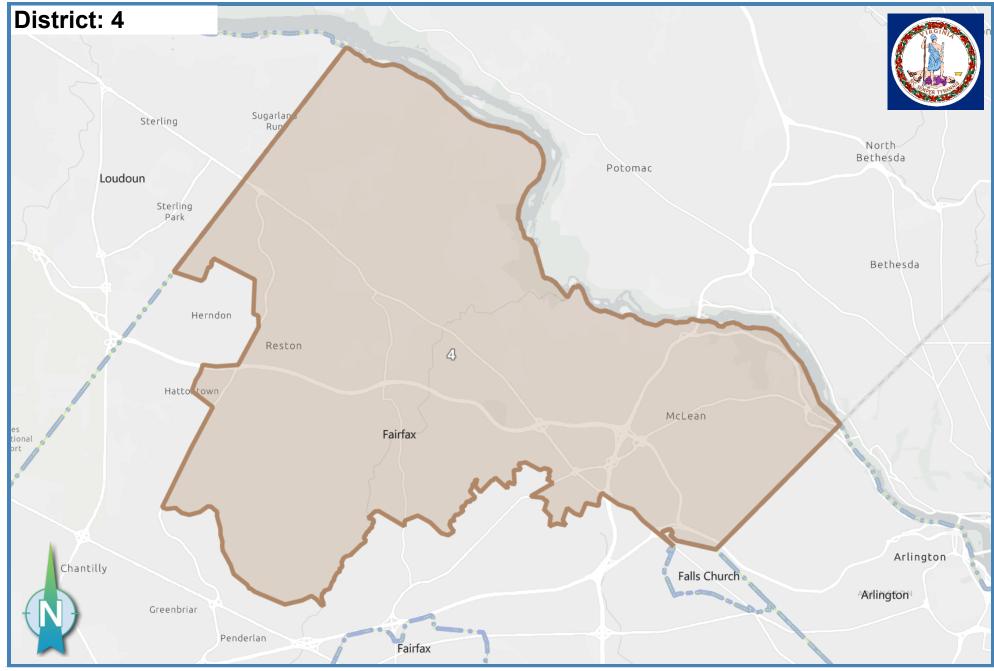
AutoBound Edge MAP







AutoBound Edge MAP

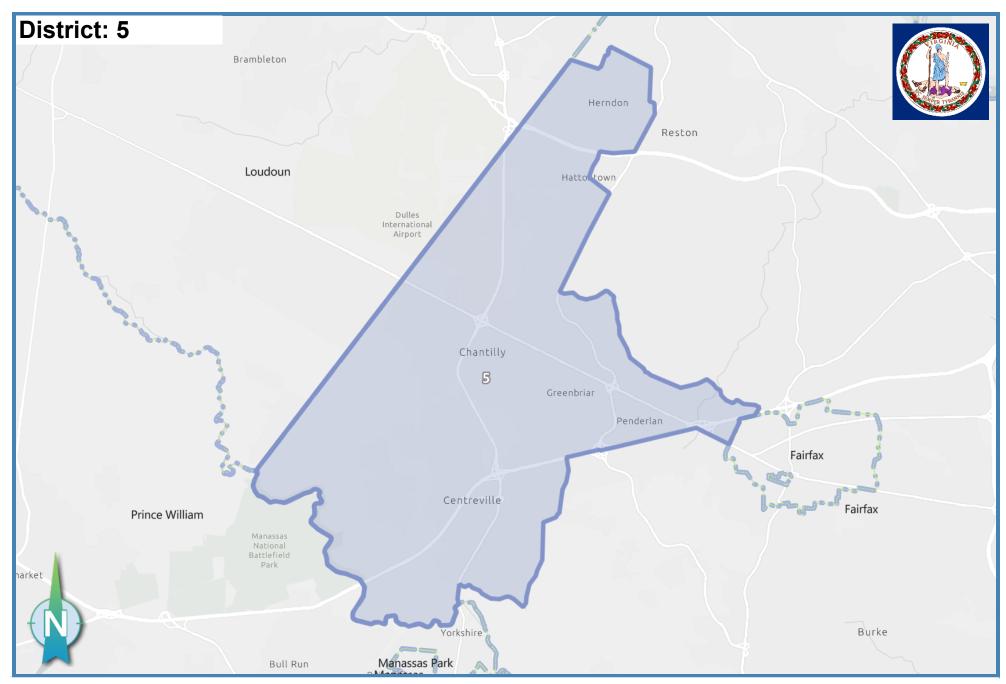




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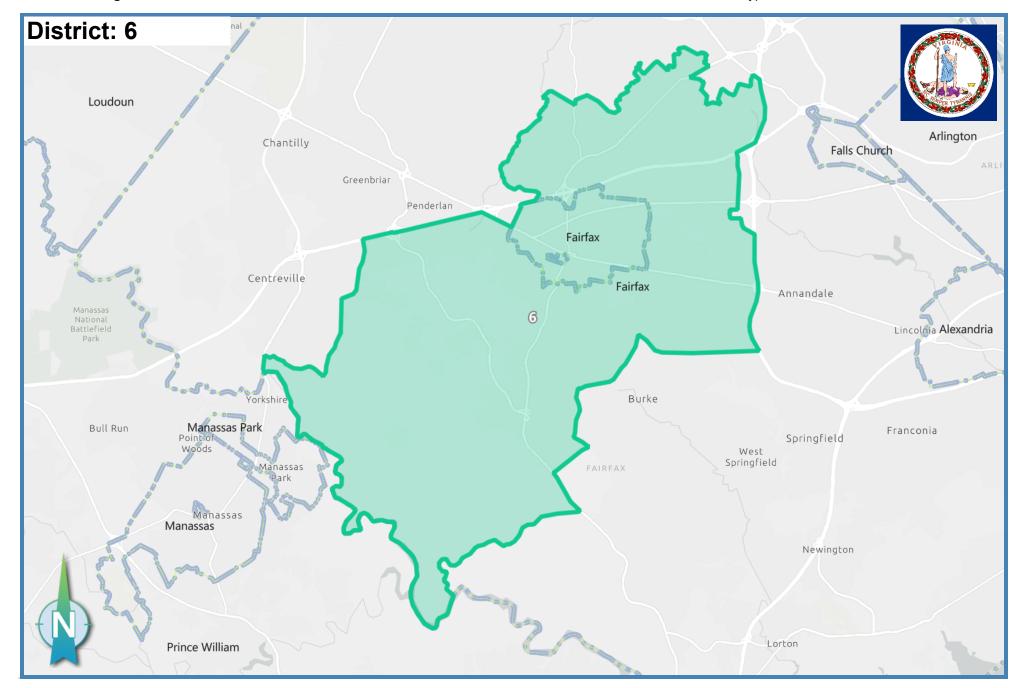
GE 2020





Plan Type and Name: State Senate:A1 NOVA SD

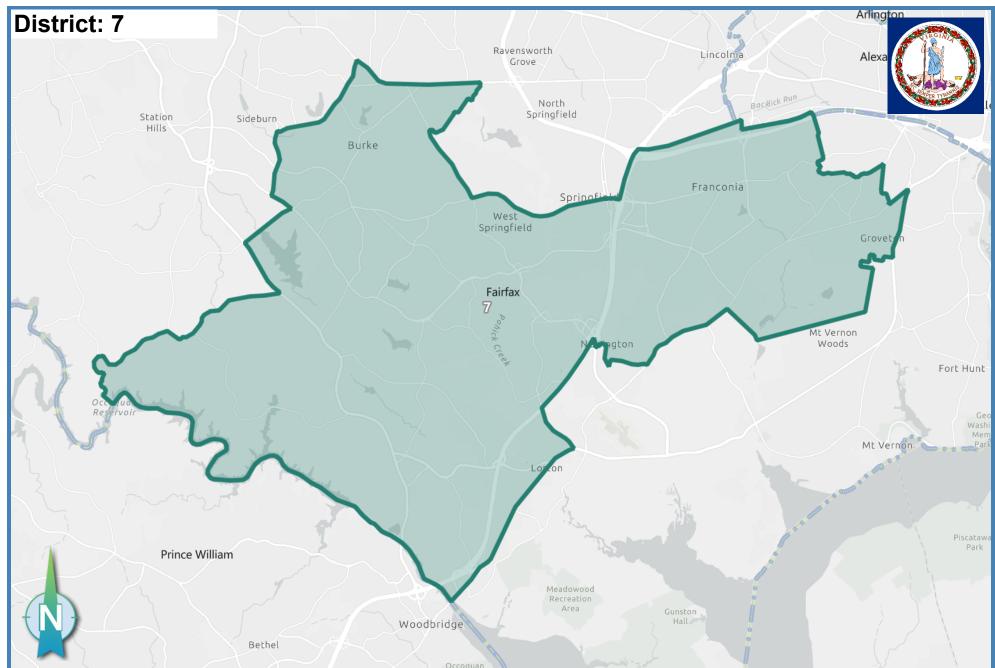
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GE 2020



A1 NOVA SD Data Tables

	Total	Population [*]	Tabulatic	on	Racial Dem	ographics as a l	Percent of Total	Population	Percent	Racial Den	nographics a	ographics as a percent of VAP		
DISTRICT	All Persons ADJ Tai	rget De		Difference	White	Black	Hispanic	Minority	Voting Age	White	Black	Hispanic	Minority	
1	216,662	215,785	0.41%√	877	61.44%	8.43%	15.08%	38.56%	82.48%	63.30%	8.45%	13.70%	36.70%	
2	212,824	215,785	-1.37%√	-2,961	52.68%	18.02%	18.96%	47.32%	81.38%	55.35%	17.88%	16.92%	44.65%	
3	212,602	215,785	-1.47%√	-3,183	40.07%	9.27%	29.20%	59.93%	76.95%	42.32%	9.08%	26.64%	57.68%	
4	213,289	215,785	-1.16%√	-2,496	62.98%	4.84%	9.05%	37.02%	77.77%	65.42%	4.82%	8.23%	34.58%	
5	216,292	215,785	0.24%√	507	41.70%	8.31%	16.79%	58.30%	76.37%	44.03%	8.31%	15.18%	55.97%	
6	213,755	215,785	-0.94%√	-2,030	55.99%	6.15%	11.76%	44.01%	77.57%	57.82%	6.08%	10.87%	42.18%	
7	212,335	215,785	-1.60%√	-3,450	49.35%	13.99%	15.56%	50.65%	76.06%	51.27%	13.72%	14.41%	48.73%	

DISTRICT	Total	Tot	al		Total					Total					
	All Persons	White Alone	Black Alone	% Black			% Minority	Amer Indian	Asian	Non Hisp Other	One Race	Non White	Haw-Pac	Multi-Race	Minority
1	216,662	133,127	18,270	8.4%	32,668	15.1%	38.56%	1,369	25,424	183,934	193,440	83,535	126	23,162	83,535
2	212,824	112,109	38,357	18.0%	40,349	19.0%	47.32%	1,393	15,933	172,336	189,267	100,715	134	23,418	100,715
3	212,602	85,183	19,703	9.3%	62,073	29.2%	59.93%	2,602	42,094	150,287	184,896	127,419	120	27,464	127,419
4	213,289	134,330	10,316	4.8%	19,312	9.1%	37.02%	458	39,778	193,885	192,236	78,959	98	20,961	78,959
5	216,292	90,201	17,972	8.3%	36,308	16.8%	58.30%	1,134	65,900	179,812	193,744	126,091	122	22,376	126,091
6	213,755	119,685	13,143	6.1%	25,136	11.8%	44.01%	707	47,061	188,864	191,264	94,070	126	22,736	94,070
7	212,335	104,786	29,709	14.0%	33,046	15.6%	50.65%	943	36,699	179,123	186,114	107,549	249	26,055	107,549

DISTRICT	Voting Age Persons													
	VA Persons	VA White	VA Black	VA Hispanic	VA Non Hisp	VA Non Hisp White	VA Asian	VA Non Hisp Other	VA NATIVE AM	VA HAW-PAC	VA Minority	VA Multi-Race	VA one Race	
1	178,711	113,121	15,104	24,482	154,229	109,293	22,049	1,428	188	115	65,590	16,109	162,602	
2	173,191	95,867	30,961	29,304	143,887	92,113	13,189	1,132	244	107	77,324	16,830	156,361	
3	163,588	69,225	14,847	43,573	120,015	64,695	34,356	900	192	96	94,363	18,747	144,841	
4	165,885	108,528	7,992	13,654	152,231	106,112	30,886	1,293	125	78	57,357	12,811	153,074	
5	165,192	72,739	13,729	25,069	140,123	69,538	50,498	775	192	96	92,453	14,500	150,692	
6	165,801	95,858	10,073	18,021	147,780	93,071	37,307	1,269	242	111	69,943	14,243	151,558	
7	161,506	82,806	22,155	23,270	138,236	79,550	29,254	936	218	189	78,700	16,438	145,068	

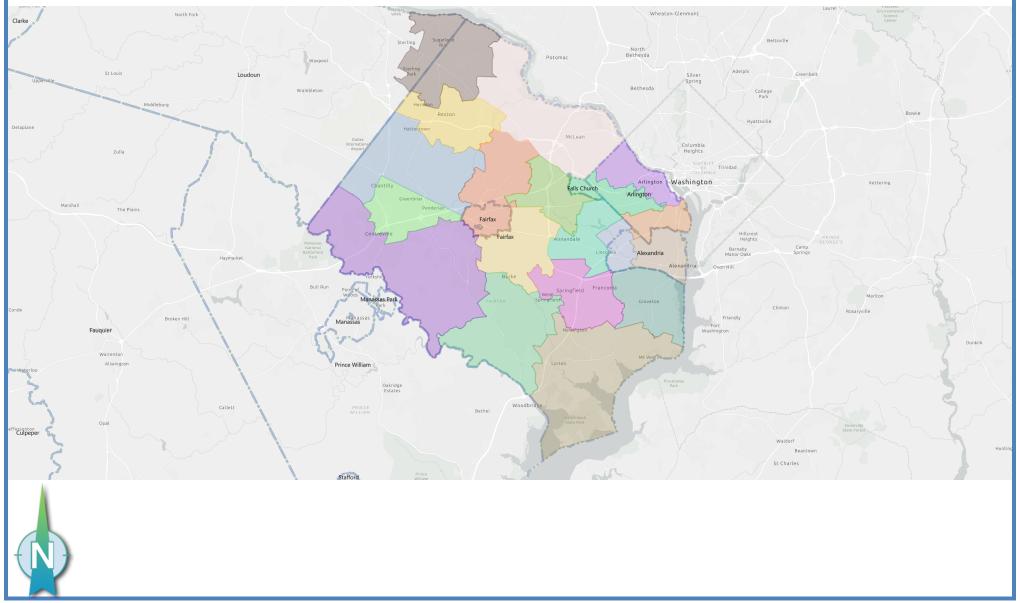
		:	2020 Electi	ons		2	2018 Elec	ctions		2	2017 Elec	tions					2	016 Elect	ions			2	2013 Ele	ctions					2	012 Electio	ns	
DISTRICT	PRES20DEM	PRES20REP	PRES20LIB	USSEN20D U	SSEN2OR	USSEN18D	JSSEN18R	USSEN18L	TTGEN17D A	TTGEN17R	GOV17D	GOV17R	GOV17L	LT.GOV17D L	T.GOV17R	PRES16DEM	PRES16REP P	RES16LIB F	RES16IND	RES16GRN	ATTGEN13D A	TTGEN13R	GOV13D	GOV13R	GOV13L LT	GOV13D LT.	GOV13R P	RES12DEM PF	RES12REP	PRES12LIB	PRES12CON PI	RES12GRN
1	11,581	7,490	580	11,504	8,322	62,239	12,995	2,174	50,751	14,196	51,509	13,225	662	50,502	14,339	54,390	14,274	2,667	1,844	564	39,099	13,845	37,758	12,468	3,284	40,072	12,349	52,681	24,703	909	89	263
2	14,529	8,489	586	14,524	9,167	59,867	12,997	1,844	47,938	14,489	48,633	13,699	562	47,924	14,525	55,969	14,661	2,191	1,638	643	36,879	13,629	35,948	12,335	2,609	37,905	12,017	54,235	22,463	667	107	227
3	17,578	12,288	521	18,216	11,881	48,036	14,594	1,357	37,550	13,811	38,193	13,068	501	37,678	13,621	47,514	16,594	1,747	1,323	689	27,185	13,045	26,314	12,264	2,107	28,088	11,951	44,027	21,599	590	94	229
4	16,525	16,217	801	16,420	17,165	57,980	24,651	1,758	47,289	24,487	48,032	23,497	632	47,131	24,616	52,528	27,267	2,525	1,823	709	37,940	24,352	36,568	22,772	3,539	39,572	22,372	49,373	38,018	725	94	213
5	16,525	15,080	641	17,021	15,030	48,814	20,105	1,460	35,888	18,714	36,367	17,940	660	35,873	18,684	46,025	23,130	2,421	1,381	716	25,294	18,753	24,307	17,753	2,401	26,304	17,624	45,450	31,312	726	103	156
6	15,427	16,005	741	15,649	16,455	54,549	23,205	1,749	43,057	23,250	43,770	22,236	657	43,199	23,109	52,604	27,242	2,801	1,873	762	33,517	23,692	32,217	22,372	3,197	35,234	21,695	49,318	37,309	867	129	236
7	21,661	17,581	781	22,004	17,710	56,171	22,436	1,663	43,179	22,146	44,004	21,070	588	43,241	21,990	53,533	26,080	2,343	1,681	640	32,881	22,158	31,777	21,010	2,804	34,555	20,298	52,274	34,933	724	162	214

B1 Northern Virginia House of Delegates Plan (B1 NOVA HOD)

House of Delegates Plan

B1 NOVA HOD

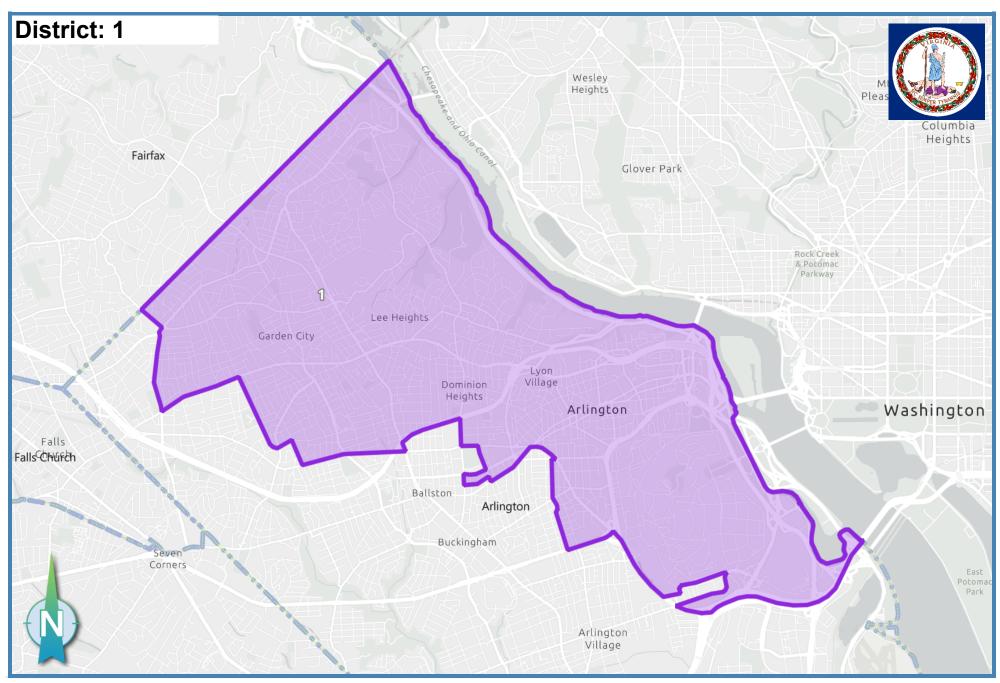




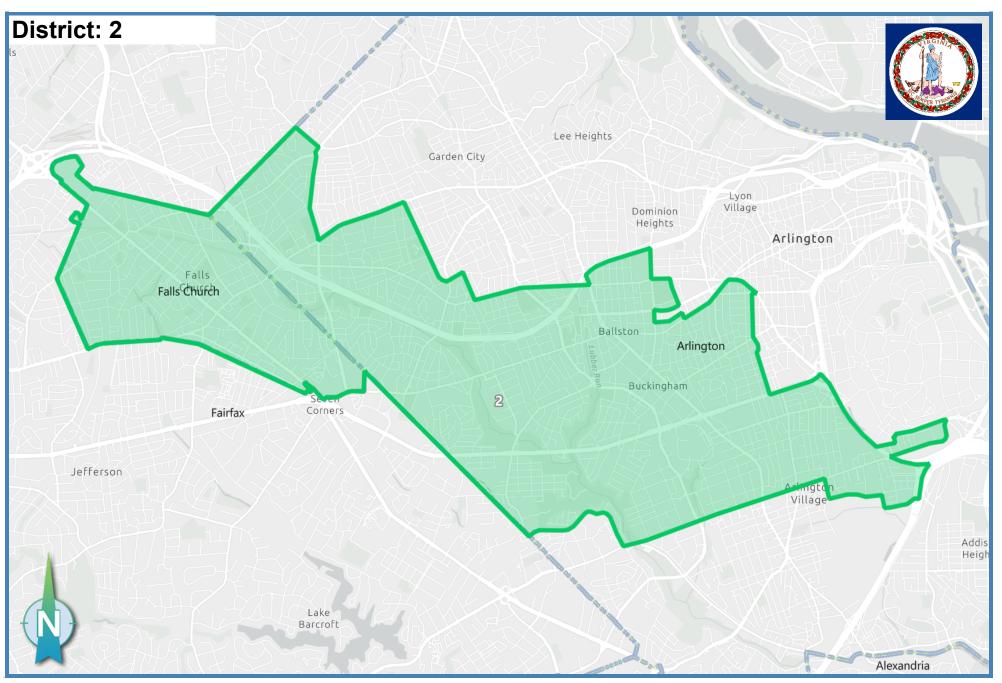
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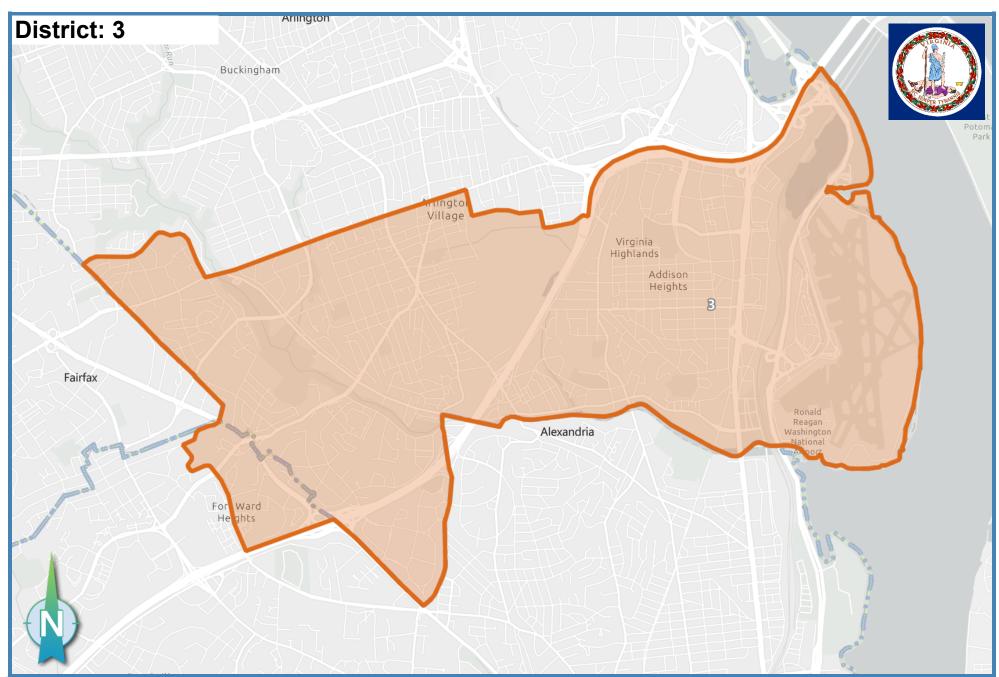
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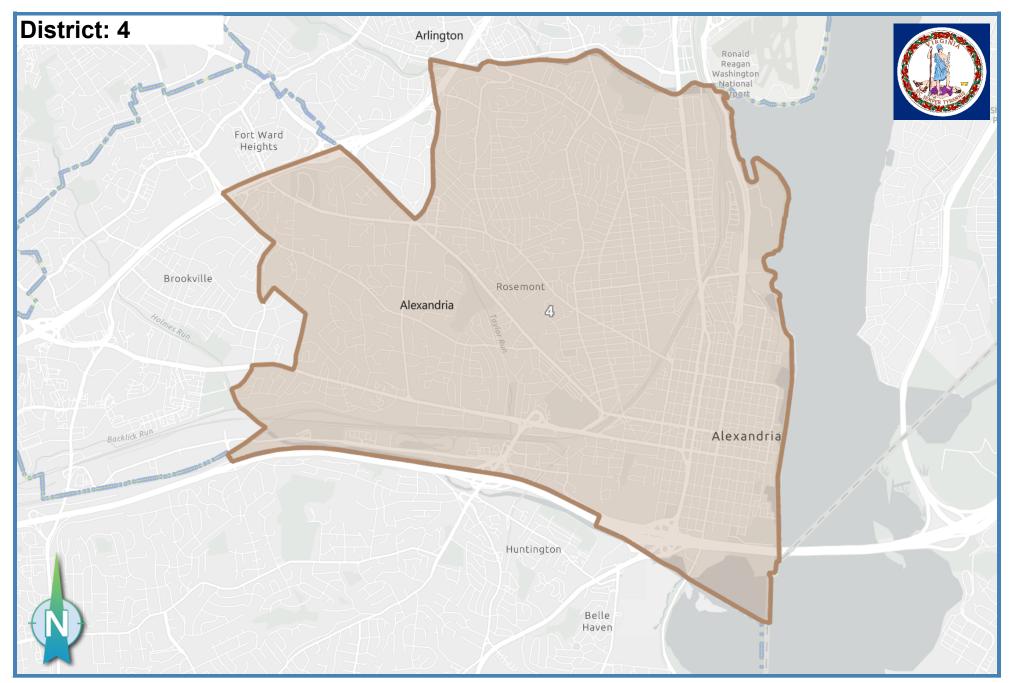






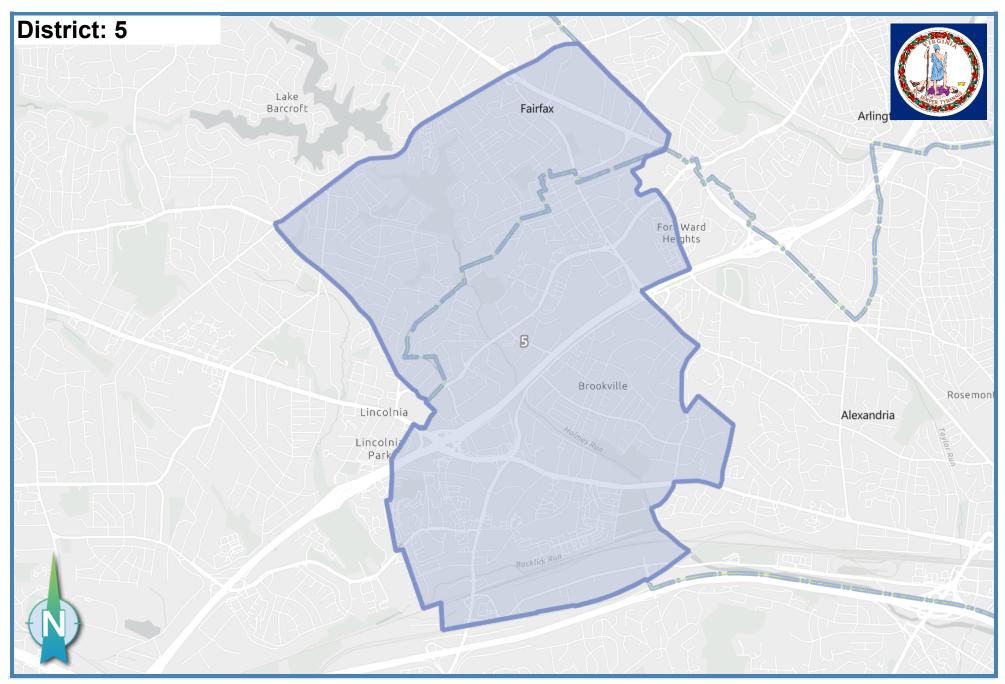


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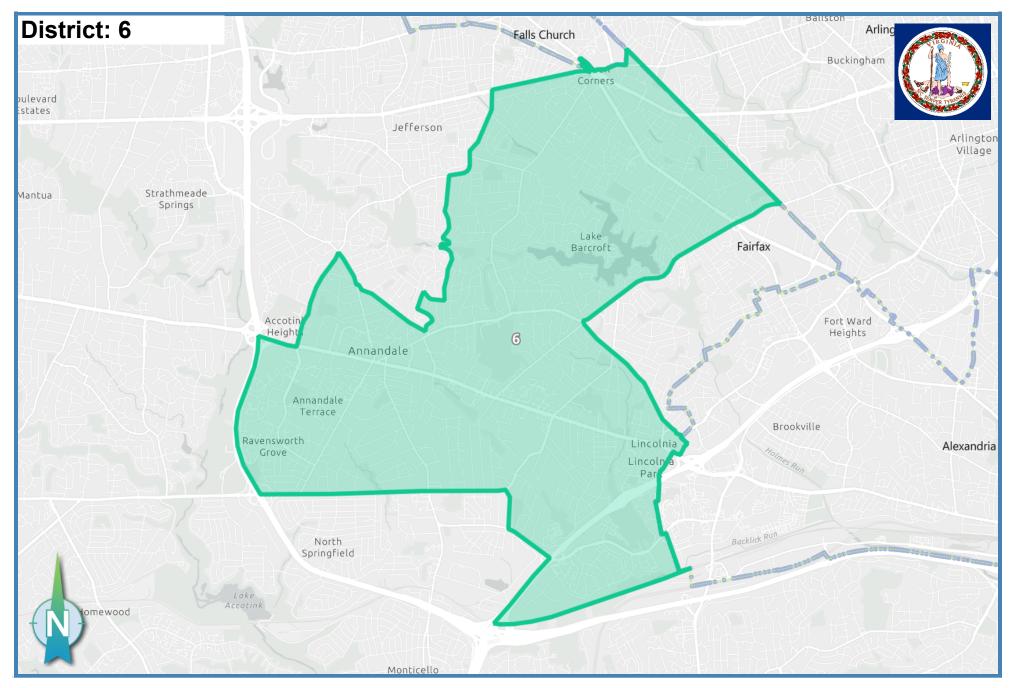


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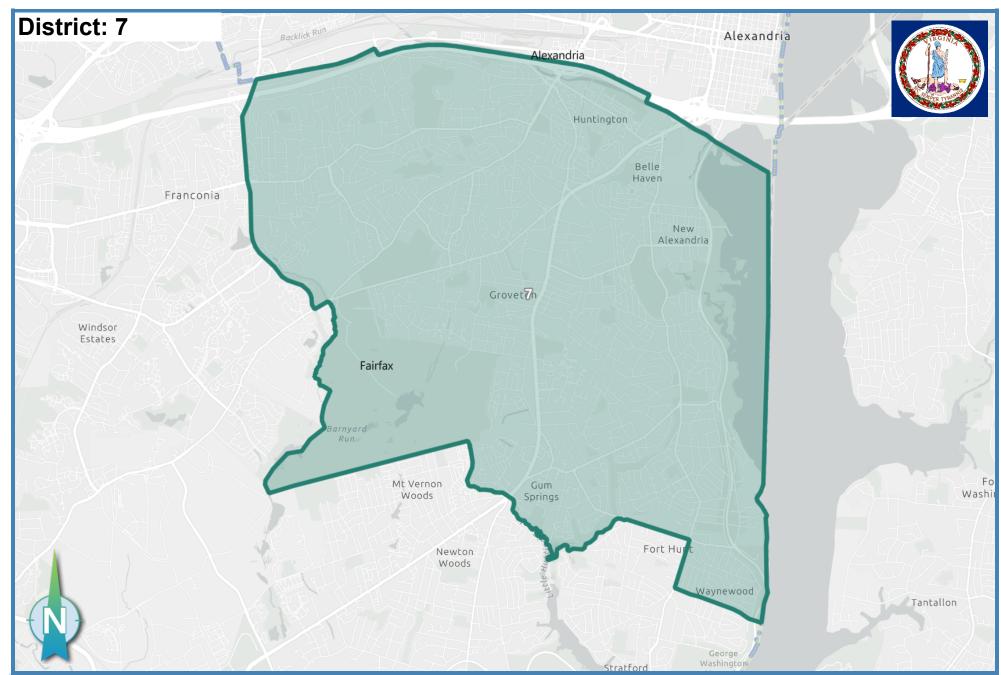




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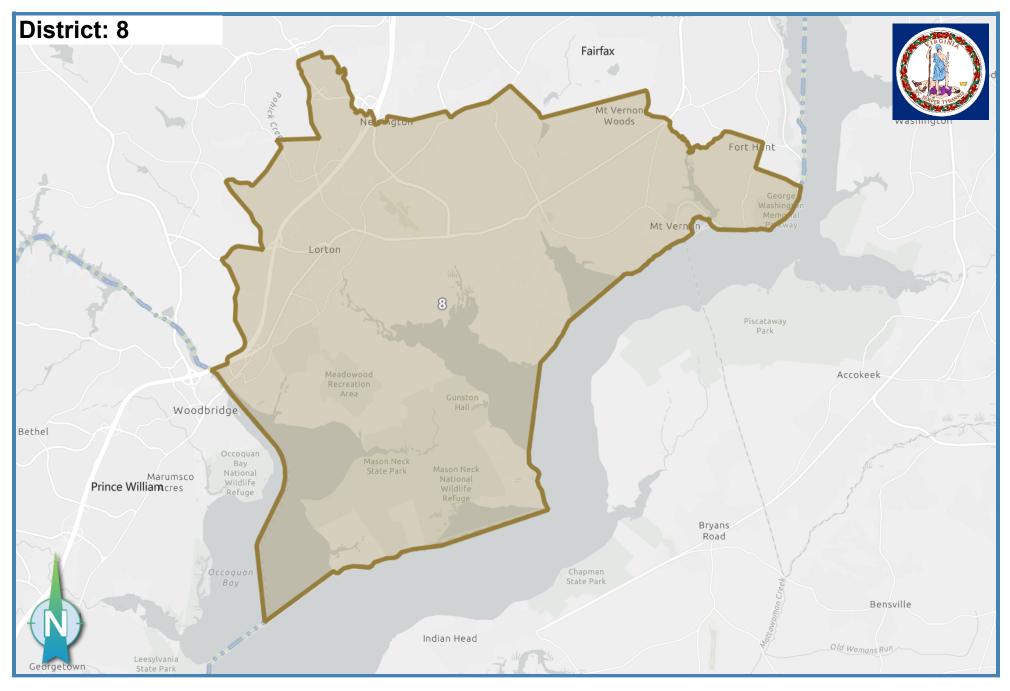




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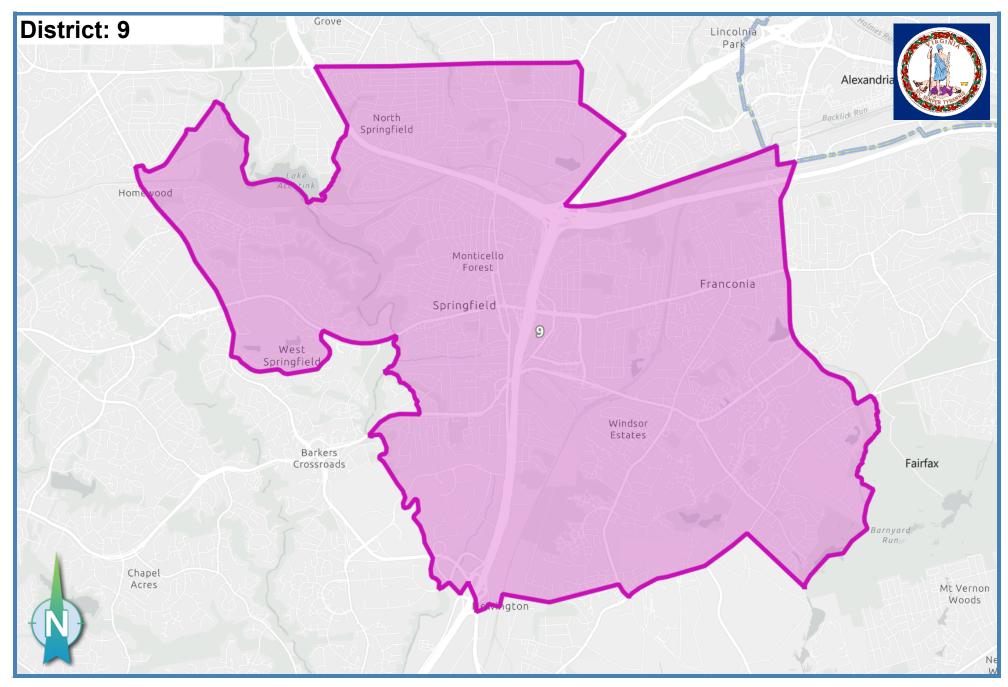
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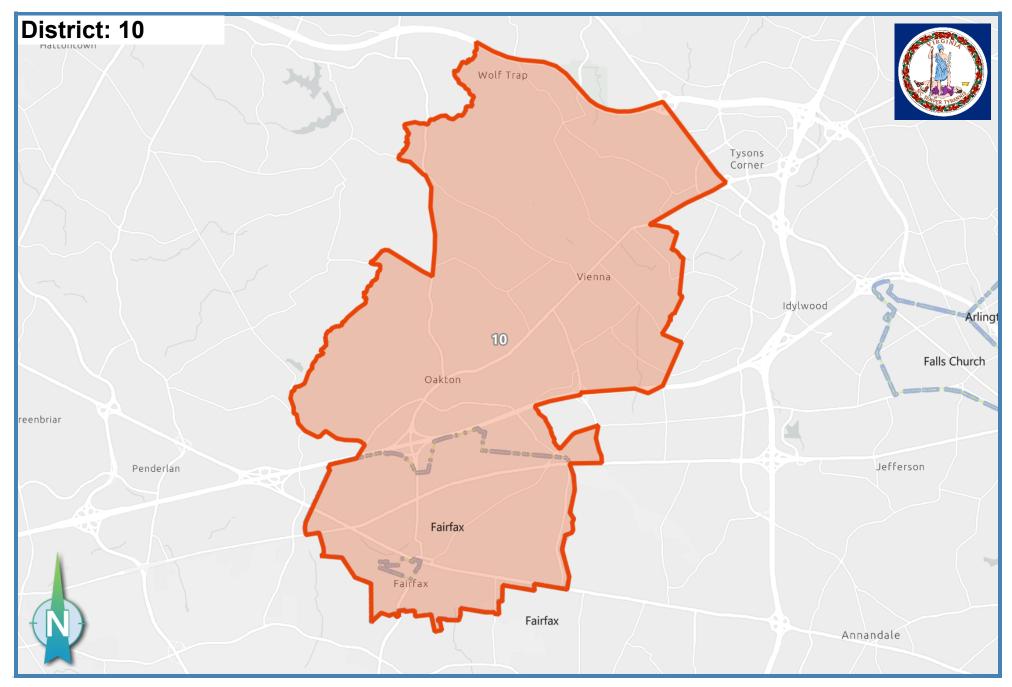


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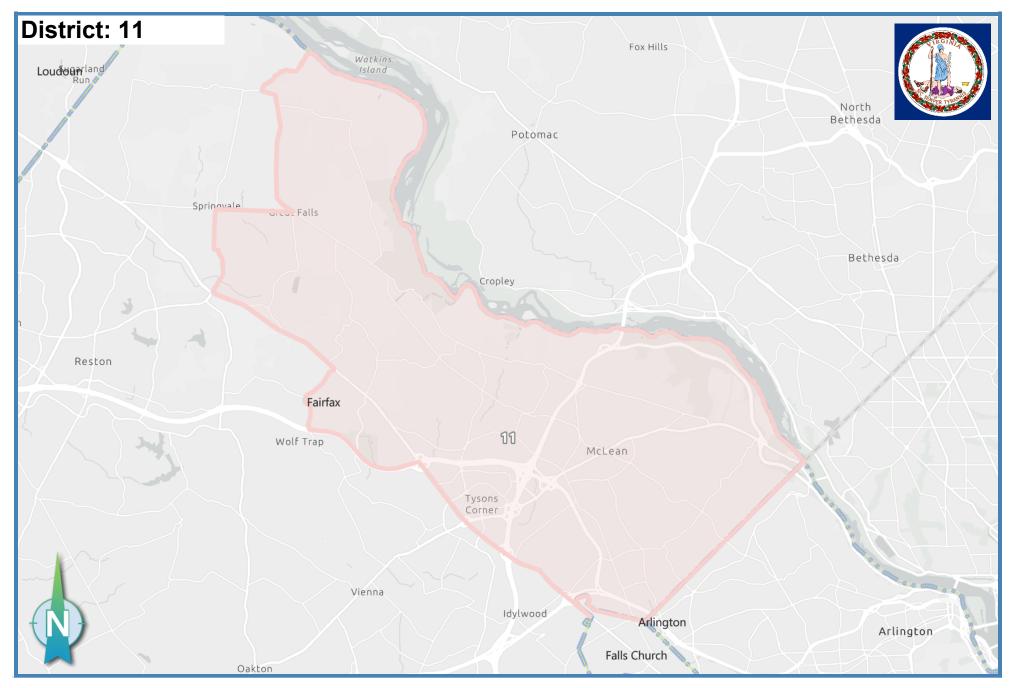
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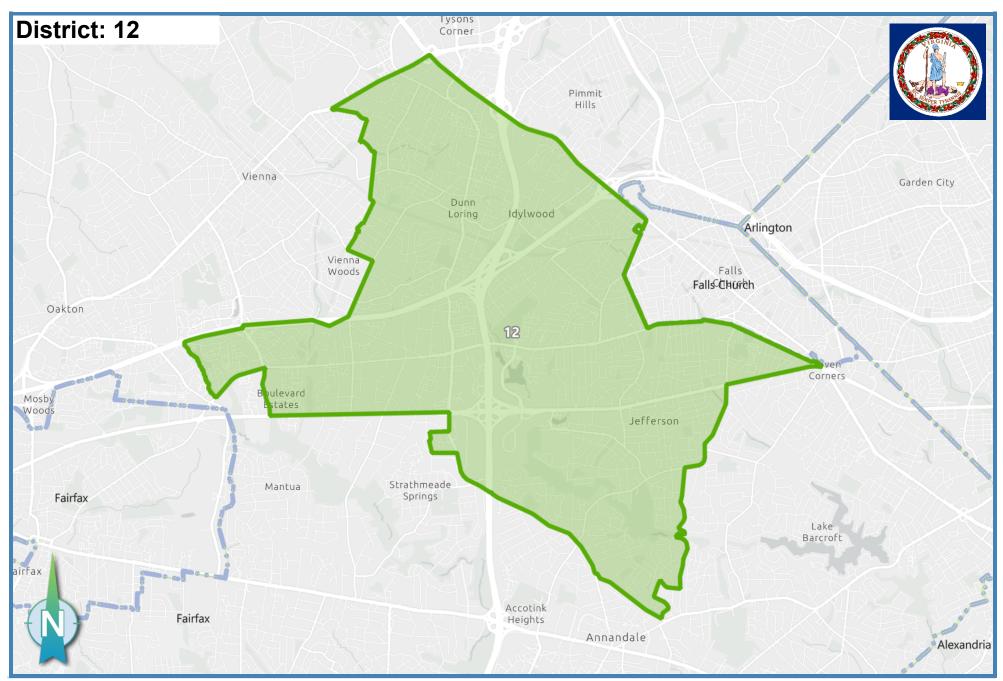


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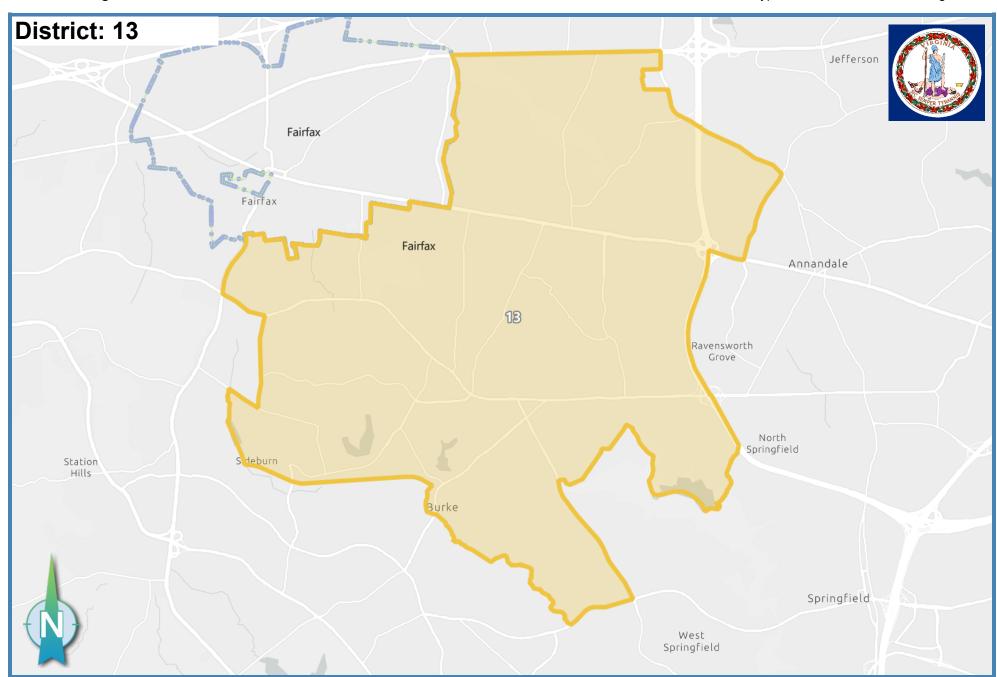


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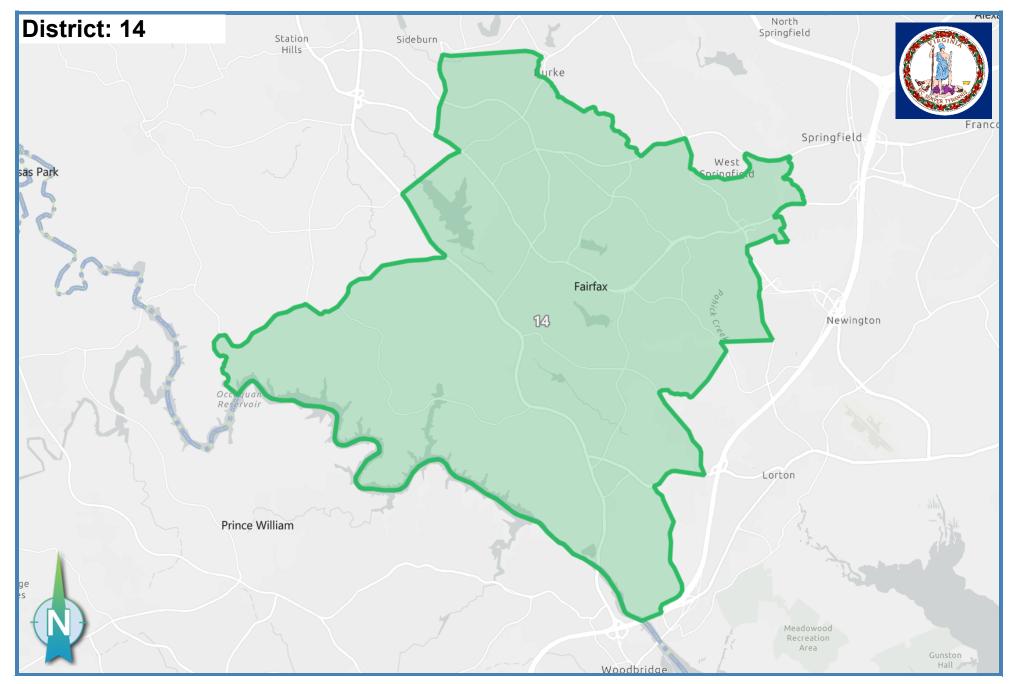


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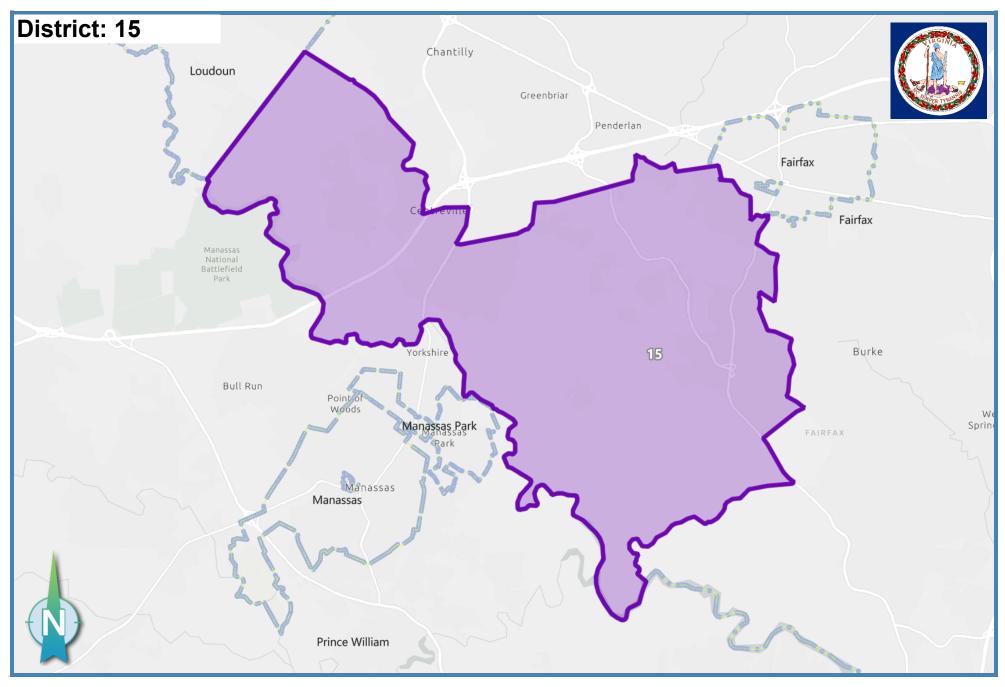
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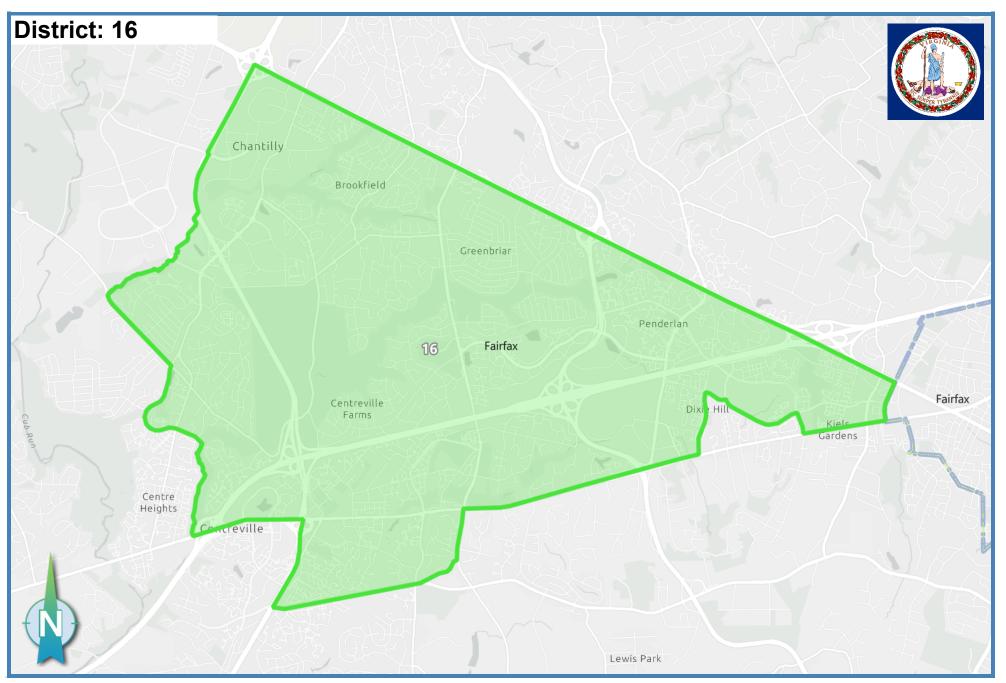




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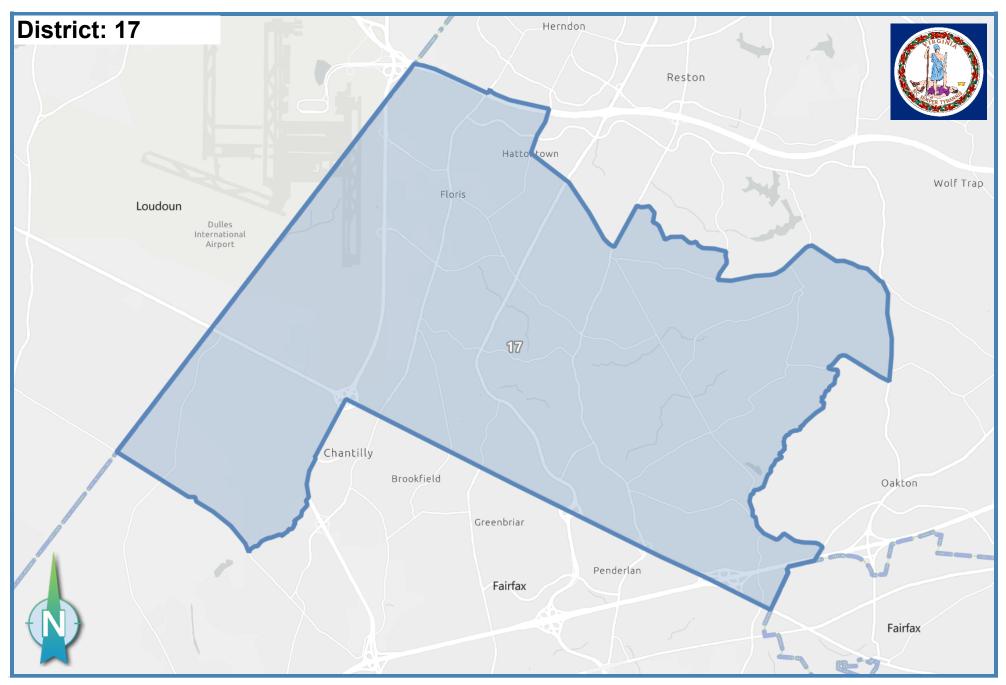






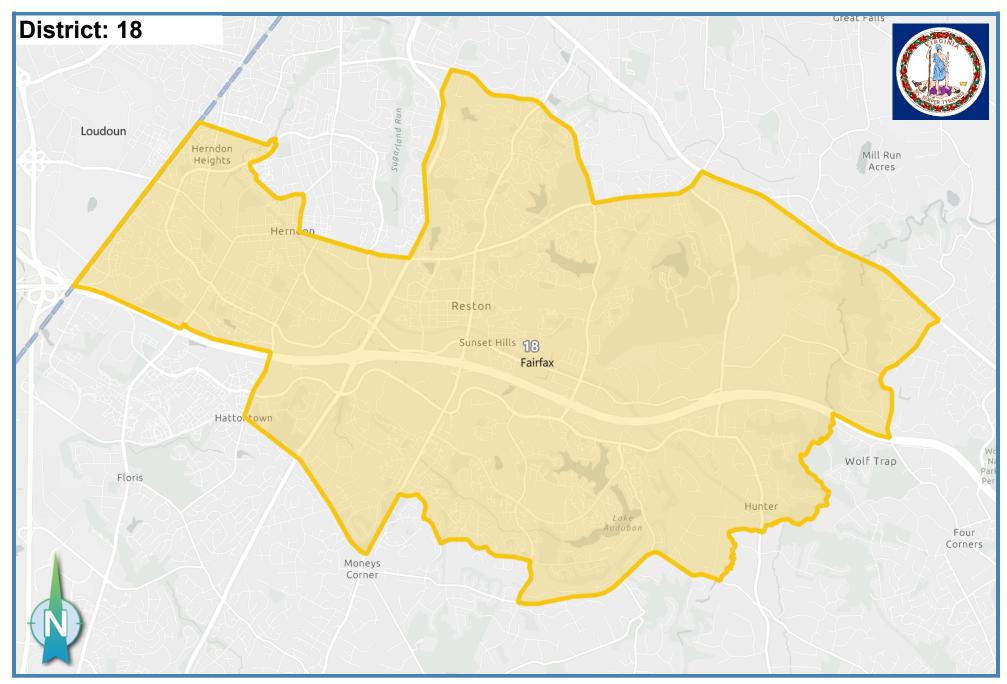


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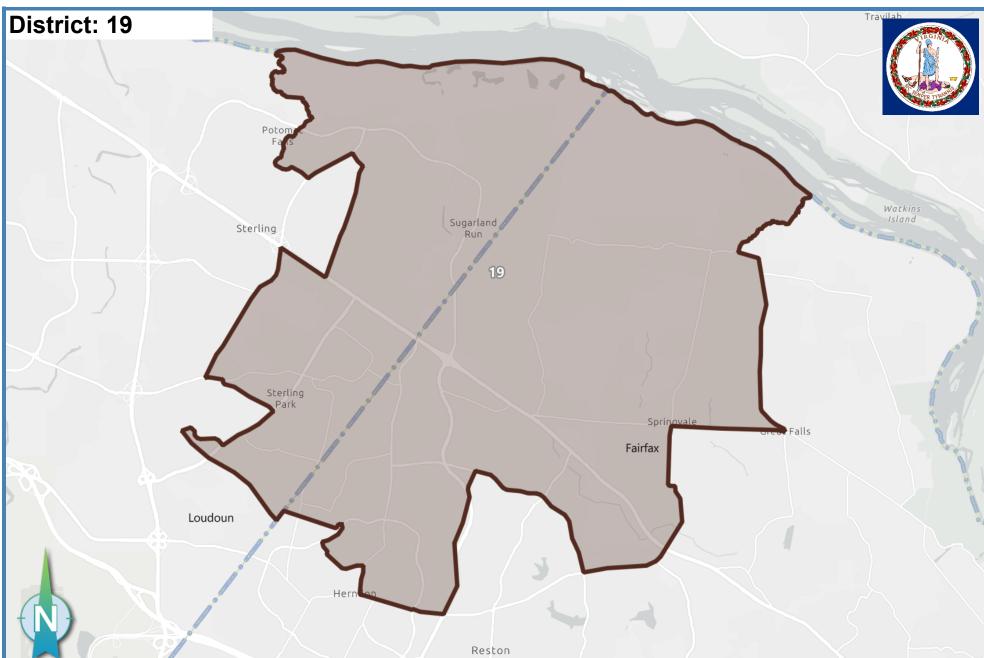


AutoBound Edge MAP





Based on: 2020 Census Geography, 2010 PL94-171





B1 NOVA HOD2 Data Tables

	Total Po	opulation Tab	ulation		Racial Dem	ographics as a F	Percent of Total	Population	Percent	Racial De	mographics a	as a percent o	of VAP
DISTRICT	All Persons ADJ Targe	et Dev.	Diffe		White	Black	Hispanic	Minority	Voting Age	White	Black	Hispanic	Minority
1	87,021	86,314 0.	.82%√	707	70.84%	4.81%	10.10%	29.16%	82.46%	72.31%	4.96%	9.34%	27.69%
2	87,866	86,314 1.	.80%√	1,552	62.96%	6.88%	15.32%	37.04%	80.09%	65.00%	6.98%	13.96%	35.00%
3	85,491	86,314 - <mark>0</mark> .	.95%√	-823	48.68%	15.27%	20.89%	51.32%	83.76%	51.19%	14.93%	18.72%	48.81%
4	87,369	86,314 1.	22%√	1,055	65.11%	11.49%	15.81%	34.89%	81.96%	67.55%	11.31%	13.82%	32.45%
5	85,426	86,314 -1.	.03%√	-888	35.12%	28.06%	22.60%	64.88%	79.94%	37.92%	27.88%	20.66%	62.08%
6	85,220	86,314 -1.	27%√	-1,094	32.92%	12.04%	35.01%	67.08%	76.42%	35.28%	11.73%	31.71%	64.72%
7	85,882	86,314 -0.	.50%√	-432	49.31%	15.56%	24.41%	50.69%	76.82%	52.01%	15.86%	21.75%	47.99%
8	85,066	86,314 -1.	45%√	-1,248	41.41%	22.47%	21.31%	58.59%	72.69%	43.01%	22.33%	19.82%	56.99%
9	85,506	86,314 -0.	.94%√	-808	43.10%	13.52%	20.62%	56.90%	77.51%	45.21%	13.29%	18.98%	54.79%
10	87,268	86,314 1.	11%√	954	57.87%	4.61%	13.28%	42.13%	77.05%	59.69%	4.70%	12.08%	40.31%
11	86,015	86,314 -0.	.35%√	-299	60.97%	3.14%	7.51%	39.03%	76.76%	63.32%	3.33%	7.02%	36.68%
12	87,672	86,314 1.	.57%√	1,358	46.34%	5.23%	21.17%	53.66%	78.45%	48.38%	5.20%	19.38%	51.62%
13	85,562	86,314 -0.	.87%√	-752	54.33%	7.08%	13.87%	45.67%	75.80%	56.03%	6.76%	13.04%	43.97%
14	86,282	86,314 - <mark>0</mark> .	04%√	-32	58.13%	8.93%	12.15%	41.87%	75.62%	60.06%	8.77%	11.18%	39.94%
15	86,982	86,314 0.	.77%√	668	54.75%	6.33%	13.20%	45.25%	76.76%	56.58%	6.29%	12.04%	43.42%
16	87,109	86,314 0.	92%√	795	42.79%	8.39%	12.97%	57.21%	78.41%	45.04%	8.31%	11.83%	54.96%
17	87,977	86,314 1.	.93%√	1,663	47.75%	7.17%	9.02%	52.25%	75.28%	50.56%	7.31%	8.20%	49.44%
18	85,994	86,314 -0.	37%√	-320	52.28%	9.50%	21.71%	47.72%	79.31%	55.70%	8.97%	18.93%	44.30%
19	86,476	86,314 <mark>0</mark> .	19%√	162	52.51%	5.56%	23.36%	47.49%	75.89%	54.73%	5.79%	21.10%	45.27%

DISTRICT	Total	Tota	al		Total					Total					Total
	All Persons	White Alone	Black Alone	% Black			% Minority	Amer Indian	Asian	Non Hisp Other	One Race	Non White	Haw-Pac	Multi-Race	
1	87,021	61,650	4,186	4.8%	8,793	10.1%	29.16%	242	9,262	78,291	78,640	25,371	38	8,444	25,371
2	87,866	55,323	6,043	6.9%	13,457	15.3%	37.04%	744	9,706	74,341	77,841	32,543	43	9,957	32,543
3	85,491	41,621	13,052	15.3%	17,858	20.9%	51.32%	642	10,663	67,561	75,356	43,870	79	10,063	43,870
4	87,369	56,889	10,035	11.5%	13,815	15.8%	34.89%	551	3,991	73,569	78,361	30,480	49	9,023	30,480
5	85,426	30,000	23,974	28.1%	19,305	22.6%	64.88%	641	9,736	65,983	75,684	55,426	44	9,604	55,426
6	85,220	28,052	10,262	12.0%	29,836	35.0%	67.08%	1,582	16,234	55,273	73,349	57,168	53	11,760	57,168
7	85,882	42,348	13,363	15.6%	20,961	24.4%	50.69%	617	7,564	64,802	75,726	43,534	81	10,037	43,534
8	85,066	35,228	19,114	22.5%	18,127	21.3%	58.59%	515	10,225	66,839	74,439	49,838	176	10,527	49,838
9	85,506	36,857	11,562	13.5%	17,634	20.6%	56.90%	550	16,990	67,793	75,176	48,649	91	10,251	48,649
10	87,268	50,504	4,027	4.6%	11,585	13.3%	42.13%	297	17,943	75,982	77,865	36,764	47	9,702	36,764
11	86,015	52,445	2,700	3.1%	6,461	7.5%	39.03%	162	20,448	79,533	77,879	33,570	44	8,115	33,570
12	87,672	40,629	4,586	5.2%	18,556	21.2%	53.66%	574	21,609	69,050	77,214	47,043	45	10,392	47,043
13	85,562	46,484	6,062	7.1%	11,870	13.9%	45.67%	369	17,842	73,657	75,939	39,078	49	9,588	39,078
14	86,282	50,156	7,707	8.9%	10,484	12.2%	41.87%	213	14,089	75,740	75,613	36,126	75	10,611	36,126
15	86,982	47,622	5,508	6.3%	11,485	13.2%	45.25%	373	18,780	75,448	77,437	39,360	72	9,496	39,360
16	87,109	37,272	7,311	8.4%	11,301	13.0%	57.21%	296	28,384	75,744	78,222	49,837	59	8,823	49,837
17	87,977	42,007	6,311	7.2%	7,936	9.0%	52.25%	250	28,653	80,007	80,606	45,970	27	7,337	45,970
18	85,994	44,958	8,171	9.5%	18,673	21.7%	47.72%	486	11,963	67,221	75,706	41,036	38	10,188	41,036
19	86,476	45,405	4,808	5.6%	20,198	23.4%	47.49%	503	13,972	66,175	75,783	41,071	50	10,590	41,071

DISTRICT							Voting Age Per	sons					
	VA Persons	VA White	VA Black	VA Hispanic	VA Non Hisp	VA Non Hisp White	VA Asian	VA Non Hisp Other	VA NATIVE AM	VA HAW-PAC	VA Minority	VA Multi-Race	VA one Race
1	71,761	51,888	3,558	6,706	65,055	50,503	7,967	613	50	36	19,873	5,634	66,127
2	70,373	45,740	4,910	9,825	60,548	44,331	8,226	570	80	33	24,633	6,507	63,866
3	71,604	36,651	10,693	13,403	58,201	34,825	9,373	521	98	69	34,953	7,498	64,106
4	71,604	48,366	8,101	9,898	61,706	47,026	3,584	570	104	41	23,238	6,367	65,237
5	68,291	25,896	19,037	14,111	54,180	24,316	7,703	292	97	38	42,395	7,076	61,215
6	65,122	22,973	7,638	20,651	44,471	21,127	13,478	293	69	43	42,149	8,146	56,976
7	65,978	34,317	10,467	14,350	51,628	32,564	5,978	376	91	67	31,661	6,610	59,368
8	61,833	26,595	13,808	12,257	49,576	25,164	7,902	284	109	118	35,238	6,676	55,157
9	66,274	29,962	8,807	12,576	53,698	28,416	13,664	339	104	69	36,312	6,817	59,457
10	67,244	40,137	3,160	8,123	59,121	38,956	14,090	544	62	39	27,107	6,003	61,241
11	66,022	41,805	2,201	4,637	61,385	40,909	15,533	529	39	35	24,217	4,786	61,236
12	68,782	33,275	3,576	13,329	55,453	31,497	17,491	462	90	35	35,507	7,086	61,696
13	64,853	36,336	4,387	8,457	56,396	35,136	14,132	543	126	43	28,517	5,890	58,963
14	65,249	39,186	5,721	7,295	57,954	38,086	11,266	419	59	62	26,063	6,420	58,829
15	66,771	37,779	4,199	8,037	58,734	36,620	15,006	419	114	62	28,992	5,807	60,964
16	68,299	30,764	5,676	8,081	60,218	29,556	22,127	326	74	47	37,535	5,858	62,441
17	66,226	33,481	4,843	5,431	60,795	32,598	20,915	346	57	22	32,745	4,412	61,814
18	68,206	37,991	6,118	12,911	55,295	36,422	9,901	416	66	27	30,215	6,906	61,300
19	65,626	35,919	3,798	13,846	51,780	34,365	10,917	408	62	41	29,707	6,965	58,661

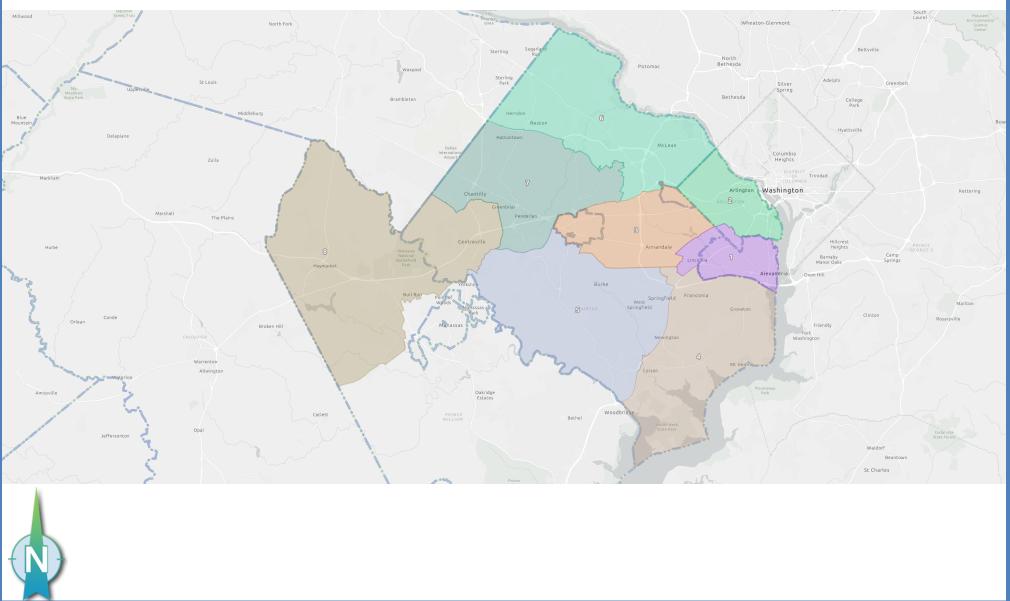
				2020 Elect	ions			2018 Elect	tions		2	017 Electi	ions					2	2016 Electio	ons			1	2013 Elec	ctions					2	012 Electio	ns	
DI	STRICT	PRES20DEM	PRES20REP	PRES20LIB	USSEN20D	USSEN20R	USSEN18D	USSEN18R L	JSSEN18L A	TTGEN17D AT	TGEN17R	GOV17D G	GOV17R	GOV17L	LT.GOV17D LT	r.GOV17R P	RES16DEM	PRES16REP	PRES16LIB PRE	ES16IND	PRES16GRN	ATTGEN13D A	TTGEN13R	GOV13D	GOV13R	GOV13L L	T.GOV13D LT	GOV13R P	RES12DEM	PRES12REP	PRES12LIB	PRES12CON PI	RES12GRN
	1	3,900	3,027	248	3,776	3,515	25,812	5,836	909	21,427	6,477	21,735	6,115	251	21,266	6,588	21,811	6,155	1,157	802	225	17,132	6,352	16,447	5,724	1,525	17,600	5,623	21,024	11,060	359	28	107
	2	5,186	3,289	254	5,184	3,618	26,329	5,212	929	21,992	5,829	22,386	5,342	329	21,950	5,863	23,250	5,928	1,141	767	257	16,441	5,439	15,929	4,877	1,327	16,833	4,861	21,702	9,539	403	42	114
	3	5,097	2,758	221	5,163	2,933	23,178	4,376	770	18,152	4,705	18,413	4,375	243	18,089	4,754	21,021	5,003	861	733	230	12,529	4,363	12,169	3,914	957	12,828	3,879	19,684	8,323	282	41	89
	4	5,335	3,470	226	5,202	3,930	27,948	6,195	920	23,116	7,377	23,487	6,945	265	23,154	7,365	25,245	6,635	1,069	828	251	18,018	6,673	17,495	5,990	1,379	18,542	5,789	23,525	10,423	302	40	78
	5	6,243	2,570	172	6,358	2,540	19,440	3,633	398	14,611	3,544	14,811	3,366	136	14,619	3,535	19,357	4,377	515	372	243	11,265	3,481	11,118	3,195	579	11,501	3,161	19,812	6,074	194	37	80
	6	6,887	4,569	180	7,255	4,258	16,952	5,159	436	13,279	4,791	13,503	4,553	153	13,333	4,698	17,841	5,958	561	371	246	9,903	4,508	9,576	4,274	740	10,216	4,122	16,263	7,522	178	32	92
	7	8,616	5,635	297	8,689	5,808	21,394	6,828	714	16,797	7,129	16,984	6,832	242	16,744	7,148	20,904	7,896	872	582	264	13,261	6,958	12,833	6,510	1,042	13,787	6,328	20,460	10,760	253	55	96
	8	7,433	5,426	217	7,480	5,470	18,133	6,374	431	13,470	6,516	13,747	6,183	167	13,506	6,447	16,690	7,328	628	441	206	10,177	6,240	9,916	5,914	749	10,602	5,735	17,756	10,016	183	38	57
	9	8,881	6,687	273	9,162	6,544	21,594	7,533	631	16,606	7,023	16,845	6,699	196	16,617	6,948	21,524	8,846	841	574	298	12,092	7,052	11,685	6,681	979	12,602	6,485	20,446	11,662	247	60	89
	10	5,609	5,866	292	5,697	6,056	22,470	9,152	700	17,968	9,360	18,284	8,958	270	18,016	9,325	20,673	10,373	1,122	869	295	14,626	9,585	14,105	9,006	1,341	15,379	8,680	20,932	15,177	328	56	104
	11	5,558	5,946	261	5,466	6,364	20,767	9,445	656	17,050	9,698	17,340	9,344	196	16,954	9,777	18,662	10,198	833	735	254	13,809	9,514	13,355	8,798	1,354	14,493	8,596	16,355	14,021	224	34	71
	12	5,942	4,548	232	6,037	4,581	21,542	6,387	684	16,706	5,961	16,941	5,596	277	16,777	5,857	20,960	7,299	932	660	298	12,000	5,825	11,582	5,424	993	12,402	5,344	19,718	10,249	342	46	94
	13	8,003	7,263	330	8,119	7,442	23,300	9,396	782	18,652	9,713	18,997	9,236	274	18,698	9,656	22,885	11,043	1,268	754	279	15,014	9,977	14,395	9,448	1,411	15,763	9,097	21,579	15,238	393	60	105
	14	8,726	8,571	365	8,771	8,800	23,325	11,702	738	18,164	11,730	18,593	11,219	245	18,187	11,696	21,715	13,369	1,056	822	259	14,389	12,012	13,898	11,365	1,397	15,301	10,983	20,972	17,972	320	69	92
	15	7,305	8,670	333	7,392	8,859	21,221	12,140	653	16,002	11,829	16,318	11,355	266	16,002	11,819	18,942	13,197	1,062	685	298	12,082	11,678	11,519	11,183	1,268	12,762	10,930	19,197	18,055	316	46	71
	16	6,101	5,750	250	6,405	5,640	19,461	7,860	570	14,333	7,046	14,495	6,812	262	14,366	7,002	19,031	9,421	1,030	546	297	9,562	7,171	9,226	6,816	851	9,986	6,730	18,320	12,479	296	37	58
	17	6,941	6,707	278	7,004	6,884	21,845	9,130	607	16,690	8,911	16,959	8,498	262	16,647	8,938	20,207	10,774	1,001	603	283	12,668	8,898	12,174	8,394	1,220	13,149	8,361	19,533	14,764	308	44	68
	18	7,012	4,722	305	7,098	4,853	22,478	6,689	678	17,786	6,085	17,968	5,787	297	17,788	6,077	21,166	7,633	974	568	330	13,576	6,239	13,097	5,825	1,107	13,940	5,802	20,668	10,675	334	45	96
	19	6,863	7,368	346	6,999	7,520	21,605	10,557	699	16,075	9,514	16,353	9,169	260	15,968	9,628	20,155	12,240	1,049	698	291	12,669	9,511	12,032	9,076	1,284	13,043	9,053	19,625	15,429	318	34	94
	19	6,863	7,368	346	6,999	7,520	21,605	10,557	699	16,075	9,514	16,353	9,169	260	15,968	9,628	20,155	12,240	1,049	698	291	12,669	9,511	12,032	9,076	1,284	13,043	9,053	19,625	15,429	318	3	4

B1 Northern Virginia Senate Plan (B1 NOVA SD)

State Senate Plan

B1 NOVA SD

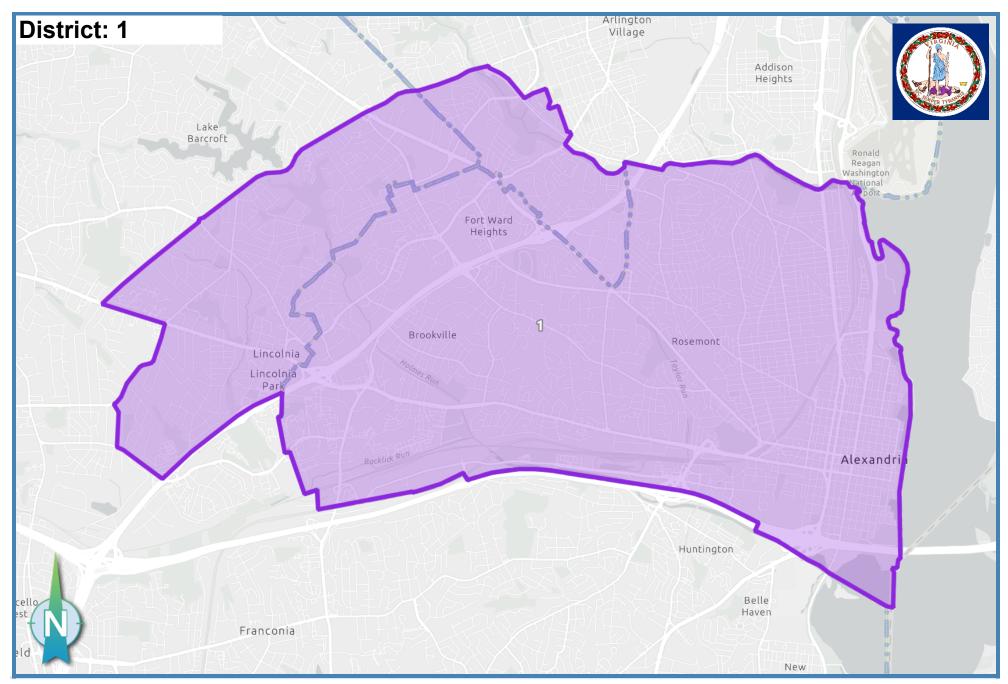




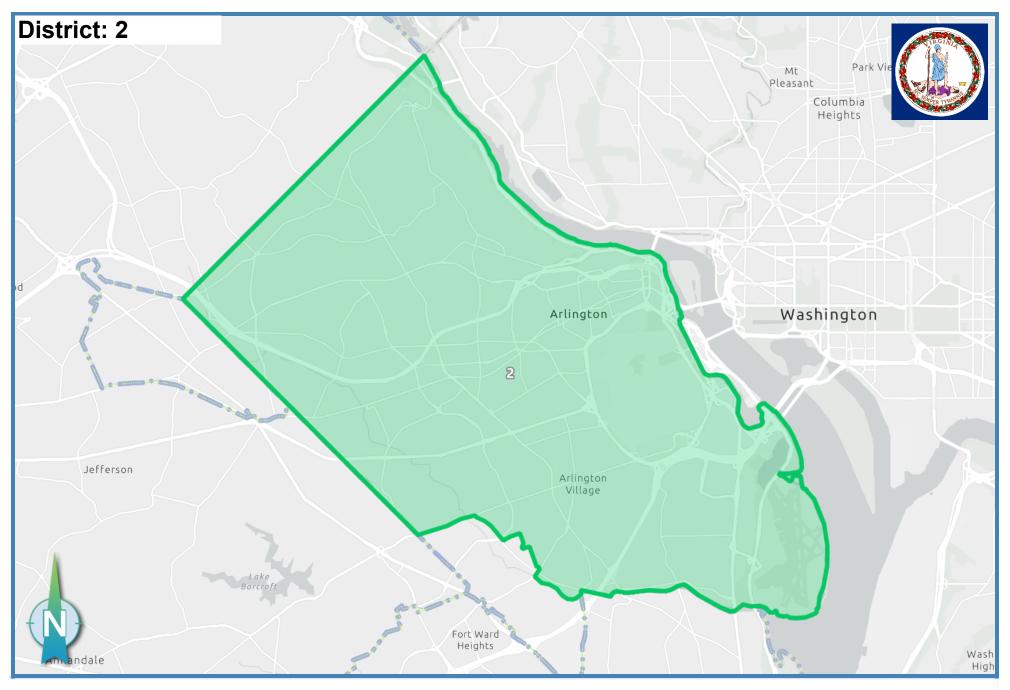
AutoBound Edge MAP - Based on: 2020 Census Geography, 2010 PL94-171





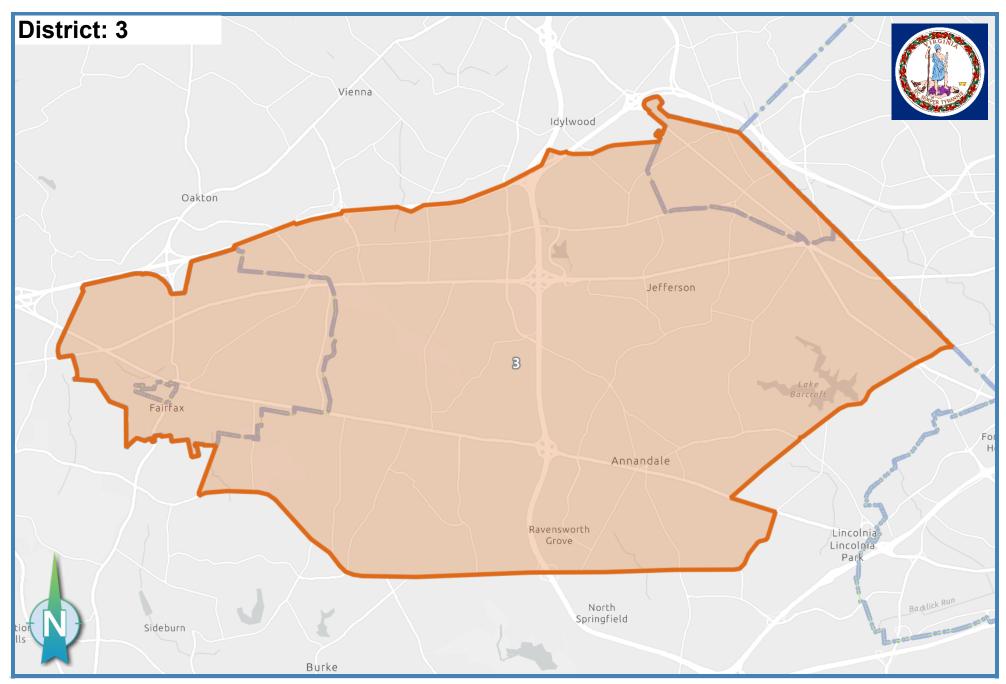








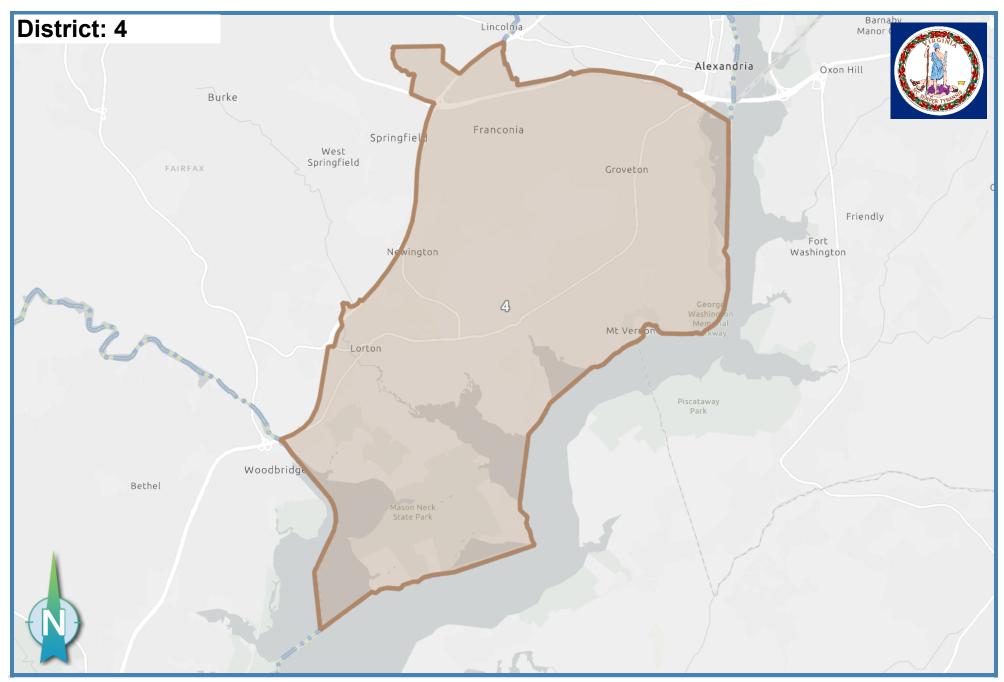
AutoBound Edge MAP





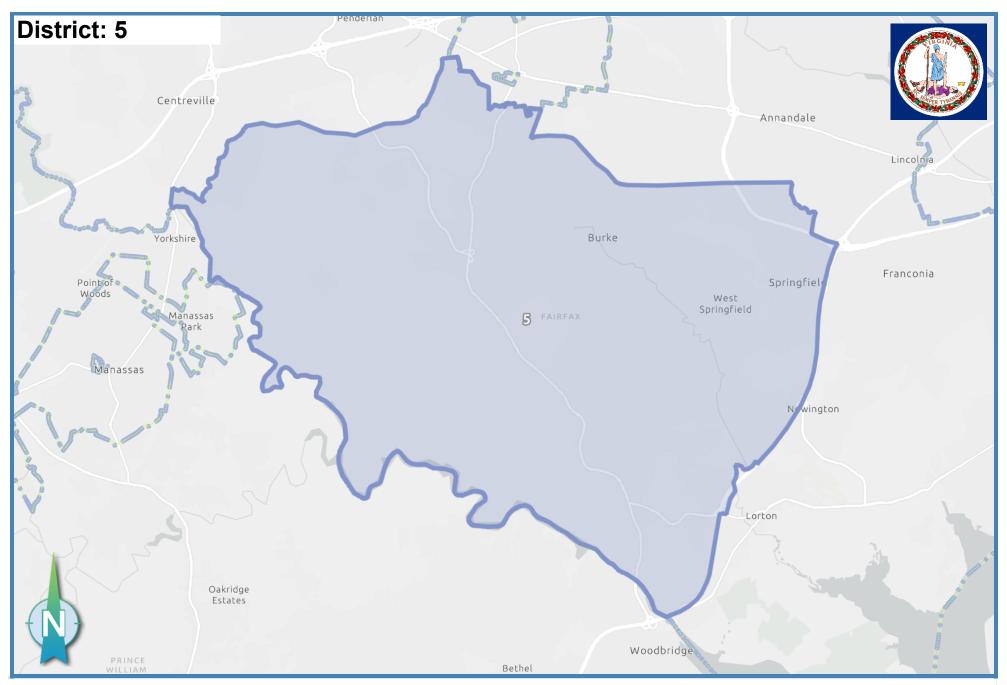


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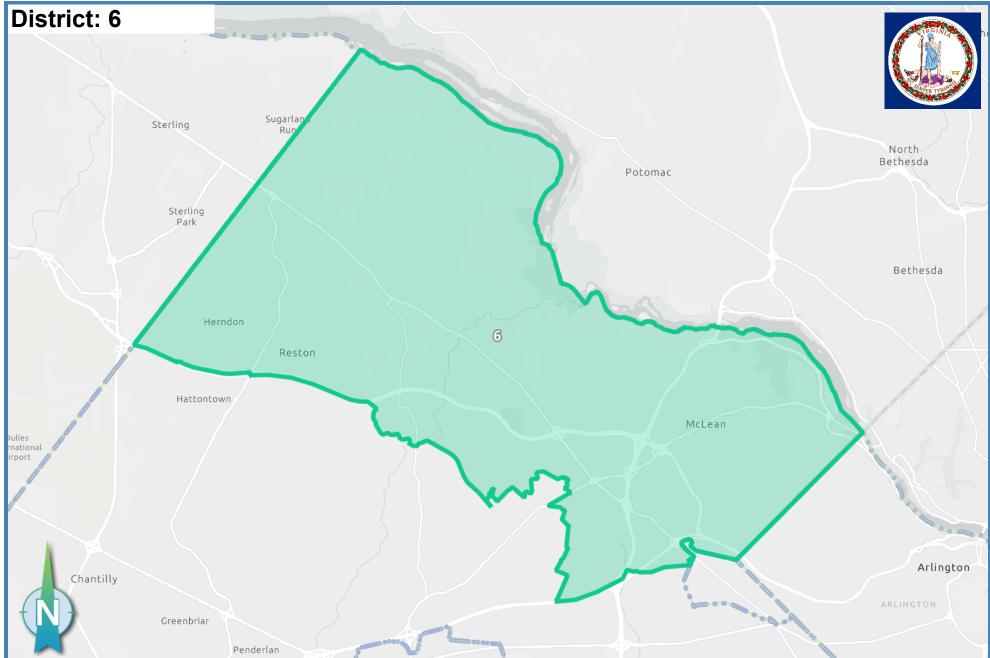




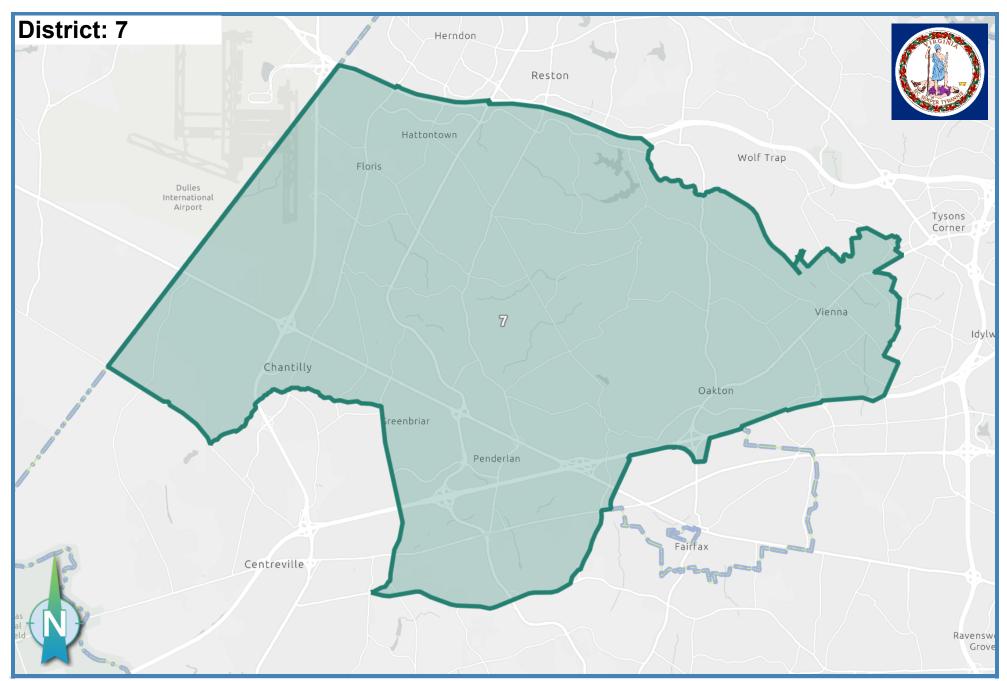


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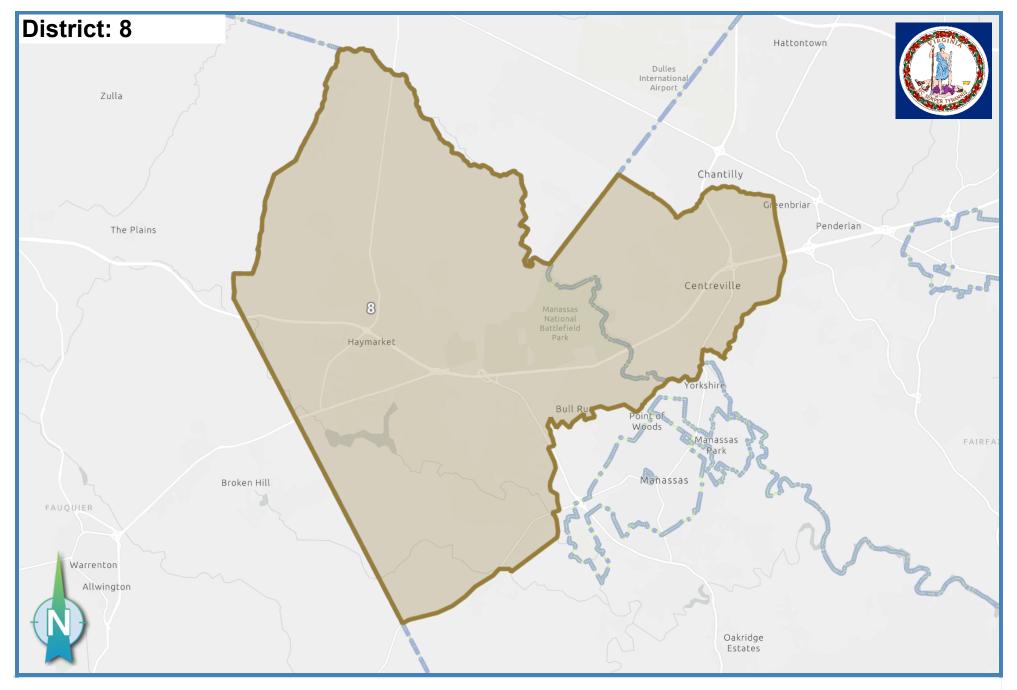






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AutoBound Edge MAP







	Total	Population [•]	Tabulatio	on	Racial Den	nographics as a F	Percent of Tota	Population	Percent	Racial Der	nographics a	as a percent o	of VAP
DISTRICT	All Persons ADJ Ta	rget De		Difference	White	Black	Hispanic	Minority	Voting Age	White	Black	Hispanic	Minority
1	214,955	215,785	-0.38%√	-830	49.52%	19.21%	19.71%	50.48%	80.88%	52.35%	18.90%	17.73%	47.65%
2	216,662	215,785	0.41%√	877	61.44%	8.43%	15.08%	38.56%	82.48%	63.30%	8.45%	13.70%	36.70%
3	214,379	215,785	-0.65%√	-1,406	46.15%	6.17%	24.40%	53.85%	77.74%	48.29%	6.05%	22.07%	51.71%
4	215,084	215,785	-0.32%√	-701	45.93%	18.74%	21.65%	54.07%	75.74%	48.14%	18.78%	19.67%	51.86%
5	217,204	215,785	0.66%√	1,419	53.44%	8.82%	15.17%	46.56%	75.80%	55.32%	8.46%	14.07%	44.68%
6	212,049	215,785	-1.73%√	-3,736	57.78%	5.03%	12.84%	42.22%	77.45%	60.27%	5.02%	11.52%	39.73%
7	216,855	215,785	0.50%√	1,070	50.47%	7.54%	11.72%	49.53%	76.52%	53.06%	7.56%	10.65%	46.94%
8	214,905	215,785	-0.41%√	-880	50.00%	10.15%	16.89%	50.00%	74.24%	51.81%	10.04%	15.42%	48.19%

DISTRICT	Total	Tot	al		Total					Total					Total
	All Persons	White Alone	Black Alone	% Black			% Minority	Amer Indian	Asian	Non Hisp Other	One Race	Non White	Haw-Pac	Multi-Race	
1	214,955	106,449	41,300	19.2%	42,366	19.7%	50.48%	1,482	18,759	172,437	191,160	108,506	120	23,643	108,506
2	216,662	133,127	18,270	8.4%	32,668	15.1%	38.56%	1,369	25,424	183,934	193,440	83,535	126	23,162	83,535
3	214,379	98,942	13,228	6.2%	52,303	24.4%	53.85%	2,303	45,153	162,236	187,824	115,437	116	26,715	115,437
4	215,084	98,781	40,296	18.7%	46,574	21.7%	54.07%	1,428	23,964	168,252	189,081	116,303	301	25,745	116,303
5	217,204	116,083	19,154	8.8%	32,949	15.2%	46.56%	896	40,472	184,102	191,106	101,121	200	25,945	101,121
6	212,049	122,520	10,663	5.0%	27,235	12.8%	42.22%	747	43,656	184,696	190,032	89,529	104	21,899	89,529
7	216,855	109,437	16,349	7.5%	25,424	11.7%	49.53%	629	57,462	191,307	195,052	107,418	100	21,679	107,418
8	214,905	107,445	21,810	10.1%	36,298	16.9%	50.00%	1,113	41,940	178,387	190,521	107,460	162	24,164	107,460

DISTRICT							Voting Age Pers	sons					
	VA Persons	VA White	VA Black	VA Hispanic	VA Non Hisp	VA Non Hisp White	VA Asian	VA Non Hisp Other	VA NATIVE AM	VA HAW-PAC	VA Minority	VA Multi-Race	VA one Race
1	173,848	91,004	32,856	30,824	143,024	87,230	15,365	1,084	237	99	82,844	17,009	156,839
2	178,711	113,121	15,104	24,482	154,229	109,293	22,049	1,428	188	115	65,590	16,109	162,602
3	166,663	80,482	10,076	36,789	129,874	76,308	36,999	1,139	209	92	86,181	17,823	148,840
4	162,913	78,434	30,590	32,037	130,876	74,521	18,973	859	266	223	84,479	16,696	146,217
5	164,648	91,085	13,931	23,160	141,488	87,964	32,309	1,076	254	164	73,563	16,210	148,438
6	164,230	98,984	8,241	18,914	145,316	96,166	34,086	1,151	119	79	65,246	13,765	150,465
7	165,933	88,051	12,541	17,677	148,256	85,332	43,410	1,037	139	84	77,882	13,526	152,407
8	159,551	82,659	16,017	24,609	134,942	79,424	32,549	868	221	111	76,892	14,830	144,721

			2020 Elect				2018 Elec	4		2	017 Elec	41.000					-	016 Elec	41				2013 Ele							012 Election		
			2020 Elect	ions			2016 Elec	tions		2	UT/ Elec	tions					4	UIO Elec	tions				2013 Ele	ctions					4	UIZ Election	15	
DIST	RICT PRES20D	M PRES20REP	PRES20LIB	USSEN20D	USSEN20R	USSEN18D	USSEN18R	USSEN18L	ATTGEN17D	TTGEN17R	GOV17D	GOV17R	GOV17L L	T.GOV17D	T.GOV17R	PRES16DEM	PRES16REP F	PRES16LIB	PRES16IND	PRES16GRN A	TTGEN13D A	TTGEN13R	GOV13D	GOV13R	GOV13L	LT.GOV13D LT	GOV13R	RES12DEM F	RES12REP	PRES12LIB	PRES12CON P	RES12GR
1	. 14	634 7,739	533	14,670	8,247	59,183	12,052	1,696	47,175	13,287	47,869	12,536	517	47,207	13,274	55,518	13,646	2,001	1,533	627	35,928	12,399	35,045	11,212	2,449	36,864	10,915	53,692	20,746	626	100	2
2	11	581 7,490	580	11,504	8,322	62,239	12,995	2,174	50,751	14,196	51,509	13,225	662	50,502	14,339	54,390	14,274	2,667	1,844	564	39,099	13,845	37,758	12,468	3,284	40,072	12,349	52,681	24,703	909	89	26
3	15	884 12,929	587	16,412	12,795	50,310	17,202	1,568	39,767	16,876	40,455	16,038	614	39,977	16,680	49,217	19,692	2,183	1,570	674	29,840	16,219	28,778	15,273	2,497	31,003	14,781	44,843	26,017	733	111	2
4	20	362 14,174	668	20,601	14,377	51,430	16,978	1,505	39,449	17,142	40,051	16,330	507	39,405	17,082	49,289	19,512	1,968	1,337	596	30,295	16,667	29,382	15,684	2,310	31,505	15,249	49,497	26,771	556	132	2
5	21	577 20,690	835	21,827	21,067	56,568	26,912	1,762	43,979	26,921	44,888	25,743	623	44,033	26,811	53,616	30,484	2,682	1,842	725	34,010	27,320	32,717	25,943	3,318	35,997	25,073	51,741	41,451	829	149	23
6	15	280 14,467	709	15,232	15,207	53,667	22,014	1,684	43,167	21,667	43,815	20,787	581	43,020	21,755	49,268	24,516	2,313	1,690	688	33,782	21,659	32,612	20,149	3,180	35,269	19,824	45,869	34,006	672	84	19
7	15	768 14,745	704	16,072	15,022	54,034	20,764	1,523	41,870	19,977	42,475	19,121	664	41,876	19,932	50,733	24,367	2,503	1,631	763	31,788	20,279	30,587	19,136	2,874	33,012	18,914	49,938	34,011	778	121	20
8	12	271 15,250	618	12,883	15,155	40,008	24,320	1,450	29,267	22,372	29,703	21,547	616	27,732	21,249	36,881	28,200	2,269	1,257	572	20,658	21,513	19,772	20,741	1,987	21,671	20,396	36,705	33,788	599	112	1