

VEST VA 2018

State: Virginia
Organization: Voting and Election Science Team (VEST)
Summary of Races included: State House [Special]
Date File Updated: 10/25/2019
Date Report Updated: 06/14/2021
RDH Validation Code (Github): <https://github.com/nonpartisan-redistricting-datahub/pdv-va>

RDH Criteria	Explanation
<p>Is all raw data available?</p> <p>Yes</p>	<p><u>Accessible files:</u></p> <ul style="list-style-type: none"> ● VEST Data File <ul style="list-style-type: none"> ○ Accessed: 03/01/2021, Source: VEST ○ https://dataverse.harvard.edu/file.xhtml?persistentId=doi:10.7910/DVN/UBKYRU/FQDLOO&version=33.0 ● VEST documentation <ul style="list-style-type: none"> ○ Accessed: 03/01/2021, Source: VEST ○ https://dataverse.harvard.edu/file.xhtml?fileId=4366213&version=33.0 ● VA Precinct-Level Election Results <ul style="list-style-type: none"> ○ Accessed: 04/08/2021, Source: VA Dept. of Elections ○ https://historical.elections.virginia.gov/elections/search/year_from:2018/year_to:2018/office_id:8 ○ Note: Results for District 8 and 24 need to be downloaded by clicking on the candidates value, then “See Details for Election”, “Download this Election” (on the left side of the screen under “Actions”) and finally “Precinct Results”. ● U.S. Census Bureau's 2020 Redistricting Data Program Phase 2 release <ul style="list-style-type: none"> ○ Accessed: 03/02/2021, Source: U.S. Census ○ https://www.census.gov/geo/partnerships/pvs/partnership20v2/st51va.html ○ Note: One can download five county VTD shapefiles at a time. These files were aggregated together as part of this analysis. <p>Note: There were a handful of local municipal files that VEST describes in laying out their precinct shapefile changes. We did not attempt to locate these due to</p>

	<p>minimal direction from VEST as to where to locate these files and how exactly to use them.</p>
<p>Processing steps available?</p> <p>Yes</p>	<p><u>Description of processing steps:</u></p> <ul style="list-style-type: none"> ● VEST’s full processing steps were accessed on 03/01/2021 and can be found via the link above. VEST uses one documentation file for their three VA 2018 files. ● Description of VEST process: <ul style="list-style-type: none"> ○ VEST describes the source files for their election results and precinct shapefiles, which match those listed above. ○ For election results, VEST also mentions that: <ul style="list-style-type: none"> ■ “Absentee ballots and provisional votes were reported at the county or city level throughout the state. These were distributed by candidate to precincts based on their share of the precinct-level reported vote.” ○ For the precinct shapefiles, VEST also mentions that: <ul style="list-style-type: none"> ■ “Virginia election reports often include precinct splits that are obsolete or unused in practice. These have been omitted. In cases where voters were incorrectly assigned to the wrong district the de facto precinct split has been included for that election.” ○ Then VEST lists out the various modifications they made to the 2018 precinct boundaries. This full list can be found in their documentation file. ○ Lastly, VEST notes that “results are divided across three files. Because precincts can be split across legislative districts, the legislative races are reported with their own geography that divides these split precincts, resulting in shapes that are assigned to exactly one district.” <p><u>Information not in their processing steps:</u></p> <ul style="list-style-type: none"> ● A full list of name changes used to join shapefiles and election results.
<p>Able to replicate joining election data and shapefiles?</p> <p>Yes</p>	<p>79 precinct identifiers successfully joined between the election data and shapefile out of 80 precincts in the shapefile and 79 in the election results/final file. Based on the plot of the one precinct identified in the shapefile not in VEST’s file appears to be the edges of another precinct.</p>

<p>Able to replicate joining demographic data to block-level shapefiles?</p> <p>N/A</p>	<p>There is no demographic data on the file.</p>
<p>Able to replicate joining boundary data?</p> <p>N/A</p>	<p>There is no boundary data on the file.</p>
<p>Successfully validated election results?</p> <p>Yes</p>	<p><u>Election results:</u></p> <ul style="list-style-type: none"> ● We validated election results at the column total, county and precinct level. ● Totals matched exactly at the column total and county levels between VEST's and the RDH's dataframes. ● VEST's party totals matched perfectly with the VA Department of Elections report for all party columns in district 8 except for write-in totals. VEST reported 50 write-in votes, whereas the state reported 47 at this link (https://results.elections.virginia.gov/vaelections/2018%20November%20General/Site/GeneralAssembly.html). Upon closer examination, this 3 vote difference was attributable to three, 1-vote differences in Roanoke County's Wildwood, Oak Grove, and Absentee precincts between that link and the slightly different access point we used for election results (https://historical.elections.virginia.gov/elections/search/year_from:2018/year_to:2018/office_id:8). We reached out to the Virginia Department of Elections to let them know about this difference. ● VEST's party totals matched perfectly with the Ballotpedia (not available on VA Dept of Election site) report for all party columns in district 24. (https://ballotpedia.org/Virginia_House_of_Delegates_District_24) ● There are 79 precincts in VEST's file. By joining to the source file, we were able to match all 79 precincts. Of the 79: <ul style="list-style-type: none"> ○ 21 of these precincts have election result differences ○ 58 of these precincts are the same

- The max difference between any one shared column in a row is: 1.0
- Given the max difference of one and equivalent county and race totals, the precinct-by-precinct differences are due to rounding differences in allocating votes.

Geographies:

- Of the 79 precinct shapefile geometries:
 - 61 precincts w/ a difference of 0 km²
 - 11 precincts w/ a difference between 0 and 0.1 km²
 - 5 precincts w/ a difference between 0.1 and 0.5 km²
 - 1 precincts w/ a difference between 0.5 and 1 km²
 - 1 precincts w/ a difference between 1 and 2 km²
 - 0 precincts w/ a difference between 2 and 5 km²
 - 0 precincts w/ a difference greater than 5 km²