

VEST AR 2016

State: Arkansas

Organization: Voting and Election Science Team (VEST)

Summary of Races included: Presidential, U.S. Senate. [General]

Date File Updated: 07/27/2021

Date Report Updated: 11/15/2021

RDH Validation Code (Github): <https://github.com/nonpartisan-redistricting-datahub/pdv-ar>

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 AR 16 data file <ul style="list-style-type: none"> ○ Accessed 10/29/21, Source: VEST ○ https://dataverse.harvard.edu/file.xhtml?fileId=4931773&version=72.0 ● VEST AR 16 documentation file <ul style="list-style-type: none"> ○ Accessed: 10/29/21, Source: VEST ○ https://dataverse.harvard.edu/file.xhtml?fileId=5371866&version=72.0 ● AR Precinct-Level Election Results <ul style="list-style-type: none"> ○ Accessed: 10/29/21, Source: Open Elections ○ https://github.com/openelections/openelections-data-ar ● AR Voting Precincts 2020 Shapefile <ul style="list-style-type: none"> ○ Accessed: 11/04/21, Source: Arkansas GIS Office ○ https://gis.arkansas.gov/ ○ Downloaded: Voting Districts - 2020 Census
<p>Processing steps available?</p> <p>Yes</p>	<p><u>Description of processing steps:</u></p> <ul style="list-style-type: none"> ● The full processing steps can be accessed at the link above and were accessed on 10/29/21. Part of the documentation is copied below: <ul style="list-style-type: none"> ○ Election results from Arkansas Secretary of State (https://www.sos.arkansas.gov/elections/research/election-results) ○ Precinct shapefile primarily from Jennifer Wheeler at the Arkansas GIS Office who provided an unreleased interim version of the statewide precinct shapefile with updated or corrected boundaries.

Where noted below, the 2016 shapefile release from the Arkansas GIS Office was used to reverse changes not yet enacted for the 2016 election.

- Countywide votes were distributed for Calhoun, Fulton, Izard, Jefferson, Ouachita, Union. These were distributed by candidate to precincts based on their share of the precinct-level reported vote.
- Precinct merges were made in the following counties to match county reporting units: Ashley, Carroll, Chicot, Clark, Crittenden, Dallas, Faulkner, Hot Spring, Howard, Independence, Jackson, Mississippi, Monroe, Nevada, Ouachita, Phillips, Poinsett, St. Francis.
- The following additional revisions were made to match the 2016 precinct boundaries.
 - Benton: Reduce precincts from 117 to 94 based on 2016 county PDF; Precinct 61 and 72 boundaries from 2016 shapefile; Align Siloam Springs and Gravette with 2016 municipal boundaries
 - Boone: Add precinct splits with municipal and district boundaries on county map
 - Craighead: Align Lake City with 2016 municipal boundary
 - Crawford: Add Van Buren ward numbers from 2010 VTDS
 - Cross: Add Twist Precinct from 2016 shapefile
 - Franklin: Merge Ozark 1-C with Ozark 1-B to match 2016 voter file; Add Ozark Rural 1-C boundaries from 2012/2014 Secretary of State shapefile
 - Fulton: Split Afton/Mammoth Spring with 2016 shapefile
 - Greene: Align Paragould wards with city PDF
 - Howard: Add Mineral Springs wards from 2016 shapefile
 - Izard: Split Sage in Melbourne 4 and Oxford in Brockwell with township shapefile
 - Jackson: Newport JP 2, Newport JP 7, Tuckerman 2 from Justice of the Peace shapefile; Omit R&I 7 as it was not in use for 2016 general election
 - Jefferson: Precincts 6, 35, 38, 39, 42, 43, 44, 46, 52, 63, 129, 402, 411 from 2016 shapefile; Reverse Redfield annexation for Precincts 87, 94, 810
 - Madison: County precincts outside Huntsville from 2016 shapefile
 - Newton: Omit Plumlee although 0 votes reported in election results; Plumlee had merged into Ponca
 - Phillips: Add Helena-West Helena wards from city redistricting map

	<ul style="list-style-type: none"> ■ Sebastian: Reverse Fort Smith annexation for Precincts 4-H, 9-6A ■ Sharp: Washington 1 and Washington 2 had no defined boundary; Voters in Washington Township were given the option of 2 poll locations ■ St. Francis: Align Forrest City wards with city PDF and municipal code ■ Stone: Split Ben 1/Ben 2 according to Secretary of State map; Merge Fifty Six/Northwest and Foothills 1/2 due to early vote reporting errors ■ Washington: Reverse Greenland and West Fork annexations with 2016 shapefile ■ Yell: Split Dardanelle Ward 3 JP 10 with Justice of the Peace shapefile <p><u>Information not in their processing steps:</u></p> <ul style="list-style-type: none"> ● List of precinct name changes.
<p>Able to replicate joining election data and shapefiles?</p> <p>No</p>	<p>Given the documentation VEST provided we were not able to follow all of their steps to complete the shapefile join. However, we were able to join 1980 precincts with 767 precinct shapefiles unjoined and 509 election result precincts unjoined. We made a number of name changes to complete the election data join.</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</p>	<p>There is no boundary data on the file.</p>

<p>data?</p> <p>N/A</p>	
<p>Successfully ran validation?</p> <p>No</p>	<p><u>Election results:</u> Yes</p> <ul style="list-style-type: none"> ● We validated election results at three different levels: <ul style="list-style-type: none"> ○ Statewide candidate vote totals ○ Countywide candidate vote totals ○ Precinct-level candidate votes ● At the statewide total level, the election results did not match VEST's. Write-In votes for U.S. Senate were off by one, due to an error in the Open Elections file that we notified them of. VEST's totals matched the Arkansas Secretary of State's official results summary (https://results.enr.clarityelections.com/AR/63912/184685/Web01/en/summary.html). ● At the countywide total level, the election results matched VEST's except for the U.S. Senate Write-In vote mentioned above. VEST's countywide totals matched those of the Arkansas Secretary of Secretary of State's official results summary (https://results.enr.clarityelections.com/AR/63912/184685/Web01/en/summary.html). ● At the precinct-level of the 2125 precincts we were able to check (all but 400 VEST precincts and 364 election result precincts), 2103 matched exactly. In Ouachita County CLEVELAND precinct is off by a number of votes. This is most likely due to the fact we were unable to join a number of precincts in this county. This may be because some of the precincts are actually part of the CLEVELAND precinct. We were unable to complete the same process as VEST with the documentation provided. All other vote differences were 1-3 votes and were most likely due to a difference in the allocation of Absentee votes. <p><u>Geographies:</u> No</p> <ul style="list-style-type: none"> ● We were not able to fully validate as there were a number of merges and splits VEST conducted that we were unable to conduct. ● Out of 1965 precincts we did compare (out of 2525 in VEST's file): <ul style="list-style-type: none"> ○ 2 precincts w/ a difference of 0 km² ○ 1793 precincts w/ a difference between 0 and 0.1 km² ○ 134 precincts w/ a difference between 0.1 and 0.5 km² ○ 13 precincts w/ a difference between 0.5 and 1 km² ○ 3 precincts w/ a difference between 1 and 2 km²

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| | <ul style="list-style-type: none">○ 6 precincts w/ a difference between 2 and 5 km²○ 14 precincts w/ a difference greater than 5 km² |
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