

VEST UT 2020

State: Utah

Organization: Voting and Election Science Team (VEST)

Summary of Races included: Presidential, Governor, Attorney General, Auditor, Treasurer [General]

Date File Updated: 06/28/2021

Date Report Updated: 11/05/2021

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

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 UT 20 Data File <ul style="list-style-type: none"> ○ Accessed: 10/20/21, Source: VEST on the Harvard Dataverse ○ https://dataverse.harvard.edu/file.xhtml?fileId=4863167&version=21.0 ● VEST UT 20 Documentation <ul style="list-style-type: none"> ○ Accessed: 10/20/21, Source: VEST on the Harvard Dataverse ○ https://dataverse.harvard.edu/file.xhtml?fileId=5206372&version=21.0 ● UT Precinct-Level Election Results <ul style="list-style-type: none"> ○ Accessed: 10/20/21, Source: Open Elections ○ https://github.com/openelections/openelections-data-ut/tree/master/2020 ● UT Precinct Shapefile <ul style="list-style-type: none"> ○ Accessed: 10/20/21, Source: Utah Geospatial Resource Center ○ https://gis.utah.gov/data/political/voter-precincts/
<p>Processing steps available?</p> <p>Yes</p>	<p><u>Description of processing steps:</u></p> <ul style="list-style-type: none"> ● VEST's documentation, which we accessed 10/20/21, can be found at the link above. The documentation is short enough to be pasted below: <ul style="list-style-type: none"> ○ Election results from OpenElections (https://github.com/openelections/openelections-data-ut/tree/master/2020). ○ Precinct shapefile from Utah Automated Geographic Reference Center (https://gis.utah.gov/data/political/voter-precincts/).

	<ul style="list-style-type: none"> ○ The shapefile from the AGRC is of subprecincts, breaking down precincts in cases of district splits. In some cases, results are reported at the subprecinct level, in most cases, they weren't, so merging was done where necessary. ○ Emery County - 52 "canvas votes" were distributed to precincts. <p><u>Information not in their processing steps:</u></p> <ul style="list-style-type: none"> ● A list of subprecinct merges that VEST performed.
<p>Able to replicate joining election data and shapefiles?</p> <p>No</p>	<p>No, given the documentation they provided we would not be able to follow their steps to complete the join. However, we were able to join 2289 precincts, with 152 precinct shapefiles and 56 precinct election results unjoined. UT updates their precinct shapefile in place and does not store older versions of the precinct shapefile on their website and any updates to the precinct shapefiles since the 2020 elections may explain the differences.</p> <p>A full list of name changes needed to join these precincts is available in the validation notebook.</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 ran validation?</p>	<p><u>Election results:</u> No</p> <ul style="list-style-type: none"> ● We validated election results at three different levels:

No

- 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, as there was one additional vote in VEST's file for each of the following elections: G20PRERTRU, G20GOVRCOX, G20GOVOWRI, G20ATGRREY, G20AUDRDOU, and G20TRERDAM. VEST's totals matched those of UT's election summary report (<https://electionresults.utah.gov/elections/>), although we were unable to verify write-in totals as those were not included in the summary report.
- At the countywide total level, the election results did not match VEST's, as there was one additional vote in VEST's file for each of the following elections in Duchesne County: G20PRERTRU, G20GOVRCOX, G20ATGRREY, G20AUDRDOU, and G20TRERDAM and one additional vote in VEST's file for G20GOVOWRI in Iron County. VEST's totals matched those of UT's county-level election summary report (<https://electionresults.utah.gov/elections/>), although we were unable to verify write-in totals as those were not included in the summary report.
- At the precinct-level, we were able to join and check 2341 precincts (there were 83 zero-vote precincts in VEST's file that were not initially present in the election results that we did not join to check). Of these 2341 precincts, 2336 precincts matched exactly. Of the 5 precincts with differences, the largest difference was 1 vote. Three of these precincts had differences due to differences in rounding the Emery County allocated votes. The other two precincts with differences were in Duchesne and Iron counties and differed by one vote.

Geographies: No

- Out of 2289 total precincts that we were able to join (all but 135 precincts in the VEST file):
 - 2268 precincts w/ a difference between 0 and .1 km²
 - 11 precincts w/ a difference between .1 and .5 km²
 - 0 precincts w/ a difference between .5 and 1 km²
 - 1 precincts w/ a difference between 1 and 2 km²
 - 0 precincts w/ a difference between 2 and 5 km²
 - 9 precincts w/ a difference greater than 5 km²
- Of the 10 precincts with differences, three of the differences appear to be due to different shapefile assignments, which may be due to updates to the shapefile and the other 7 differences are due to additional subprecincts being merged into a precinct.