VEST ME 2020

State: Maine
Organization: Voting and Election Science Team (VEST)
Summary of Races included: Presidential, U.S. Senate [General]
Date File Updated: 06/28/2021
Date Report Updated: 09/24/2021
RDH Validation Code (Github): https://github.com/nonpartisan-redistricting-datahub/pdv-me

RDH Criteria	Explanation

Is all raw data available?
 	
Yes
	<u>Accessible files:</u>
	● VEST ME 20 data file
	   ○ Accessed 07/08/21, Source: VEST
	   ○ https://dataverse.harvard.edu/file.xhtml?fileId=4863161&version=16.0
	● VEST ME 20 documentation file
	   ○ Accessed: 08/16/21, Source: VEST
	   ○ https://dataverse.harvard.edu/file.xhtml?fileId=4986645&version=16.0
	● ME Precinct-Level Election Results
	   ○ Accessed: 08/16/21, Source: ME Secretary of State
	   ○ https://www.maine.gov/sos/cec/elec/results/results20.html#novtab
	   ○ File names: presandvisecnty1120.xls and ussenator1120.xls (available upon request)
	● ME Voting Precincts 2020 Shapefile
	   ○ Accessed: 07/13/21, Source: U.S. Census Bureau's 2020 Redistricting Data Program Phase 2 release
	   ○ https://www.census.gov/geo/partnerships/pvs/partnership19v2/st23_me.html
	   ○ Note: Up to 5 downloaded at a time
	● Auburn Election Results
	   ○ Accessed: 08/16/21
	   ○ https://www.auburnmaine.gov/CMSContent/City_Clerk/OFFICIAL%20RESULTS%20NOV%202020.pdf
	● Augusta Election Results
	   ○ Accessed: 08/16/21

- o https://cms6.revize.com/revize/augustame/Official%20State%20and%20City%20ROVC%20November%2003%202020%20Signed.pdf
- Belfast Election Results
  - o Accessed: 08/16/21
  - o https://www.cityofbelfast.org/DocumentCenter/View/4509/City-Clerks-Return-State-Election-Results-?bidId=
- Ellsworth Election Results
  - o Accessed: 08/16/21
  - o https://www.ellsworthmaine.gov/wp-content/uploads/2020/11/2020-Ellsworth-Election-Results-1.png
- Gorham Election Results
  - o Accessed: 08/16/21
  - o https://www.gorham-me.org/sites/g/files/vyhlif4456/f/uploads/election_results_11-03-2020.pdf
- Lewiston Election Results
  - o Accessed: 08/16/21
  - o https://www.lewistonmaine.gov/DocumentCenter/View/11785/Official-1132020-General-Election-Results?bidId=
- Portland Election Results
  - o Accessed: 08/16/21
  - o https://www.portlandmaine.gov/DocumentCenter/View/29465/Amended-Official-Election-Results-Nov-3-2020-Election
- Sanford Election Results
  - o Accessed: 08/16/21
  - o https://www.sanfordmaine.org/vertical/sites/%7B9A3D3C8D-76EE-4CC5-B86E-C19FDBF5E473%7D/uploads/OFFICIAL_STATE_TALLY_NOV_3_2020.pdf
- South Portland Election Results
  - o Accessed: 08/16/21
  - o https://www.southportland.org/files/6216/0709/2585/ELECTION_DAY_OFFICIAL_RESULTS.pdf
- Biddeford Shapefile
  - o Accessed: 07/20/21
  - o https://www.biddefordmaine.org/2522/GIS-Data-Catalog
- Ellsworth Shapefile
  - o Accessed: 07/20/21
  - o https://www.ellsworthmaine.gov/wp-content/uploads/2016/06/Detailed-Ellsworth-Election-Ward-Map-as-of-October-2020.pdf
  - o Only PDF maps available
- Gorham Shapefile
  - o Accessed: 07/20/21

- https://www.gorham-me.org/sites/g/files/vyhlif4456/f/uploads/voting_ward_map.pdf
  - Only PDF maps available

Inaccessible files:
- Harpswell Shapefile
  - No Precinct Map available

Processing steps available?

Yes

Description of processing steps:
- The full processing steps can be accessed at the link above and were accessed on 08/16/21. Part of the documentation is copied below:
  - Election results by township from Maine Bureau of Corporations, Elections & Commissions (https://www.maine.gov/sos/cec/elec/results/index.html)
  - Election results by ward from municipal reports for Auburn, Augusta, Belfast, Ellsworth, Gorham, Lewiston, Portland, Sanford, South Portland.
  - Precinct shapefiles primarily from the U.S. Census Bureau's 2020 Redistricting Data Program. Voting district shapefiles were available for Androscoggin, Cumberland, Kennebec, Sagadahoc, Waldo, York. County subdivision shapefiles were used instead for Aroostook, Franklin, Hancock, Knox, Lincoln, Oxford, Penobscot, Piscataquis, Somerset, Washington.
  - For Portland City the state reported 33786 votes for Joe Biden (D) and 6486 votes for Donald Trump (R). In the Senate election the state reported 28053 votes for Sara Gideon (D) and 8659 votes for Susan Collins (R). Amended precinct returns by Portland City add up to 33784 votes for Biden, 6483 votes for Trump, 28071 votes for Gideon, and 8656 votes for Collins.
- Documentation also includes a list where absentee votes were reported at the township level.
- We were able to distribute absentee votes based on processing steps and perform the merges, when we had a county shapefile. For some splits, we could visually confirm them, but did not perform them.

Information not in their processing steps:
- List of name changes for precincts between election results and VEST's file.
- List of assigned unorganized townships that were assigned to nearby incorporated townships.

Able to replicate joining election data and shapefiles? **No**	No, we were unable to replicate joining election data and shapefiles, as we did not have the shapefiles for every part of the state. For some townships, we were unable to locate a shapefile, but could find a precinct map. For these townships, we took a quick look to see if the precinct names appeared to match the election results. For Harpswell we were unable to find a precinct map. For the areas where we did have a shapefile, we were able to join 497 precincts.
Able to replicate joining demographic data to block-level shapefiles? N/A	There is no demographic data on the file.
Able to replicate joining boundary data? N/A	There is no boundary data on the file.
Successfully ran validation? **No**	**Election results: No** ● We validated the election results at the state, county and precinct levels. ● VEST notes vote differences in Portland city but our totals matched the state reported totals. ● At the state-level, candidate vote totals did not match and were off by 18 total votes. All differences among our file, VEST's file, and the SOS report (https://www.maine.gov/sos/cec/elec/results/results20.html#novtab) are shown below:

Election Name	RDH Total	VEST Total	SOS Total (hyperlinked)
G20USSDGID	347223	347241	347223

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G20USSRCOL	417641	417642	417645
G20PREDBID	435071	435070	435072
G20PRERTRU	360734	360734	360737

- At the county-level, candidate vote totals did not match. VEST had a number of small vote differences in Aroostook, Cumberland, Hancock, Kennebec, and Penobscot. We were unable to locate a state county canvass report to compare these against.
- At the precinct-level, we were only able to join all 547 precincts to VEST's election results. There were 26 zero-vote precincts in the VEST file that were not present in the election results. For the precincts we joined, candidate vote totals matched exactly in the 523 of 547 precincts.
- Of the 24 precincts with differences, all differences of 10 votes or more were in Augusta Wards 1, 2, 3, or 4. VEST appears to have made a mistake in their Augusta allocation, which we have alerted them to. Beyond that, the differences appear to be due to allocation differences and differences in the received Portland votes.

Geographies: No
- We were not able to fully validate the geographies, as we did not have shapefile data for every township
- For the counties where we did have shapefile data, we were able to validate 497 precincts. There were 573 total precincts in VEST's file. Of the 497 precincts we were able to compare:
    - 354 precincts w/ a difference of 0 km^2
    - 81 precincts w/ a difference between 0 and 0.1 km^2
    - 6 precincts w/ a difference between 0.1 and 0.5 km^2
    - 3 precincts w/ a difference between 0.5 and 1 km^2
    - 3 precincts w/ a difference between 1 and 2 km^2
    - 0 precincts w/ a difference between 2 and 5 km^2
    - 50 precincts w/ a difference greater than 5 km^2
- VEST talks about a number of shapefile changes that we did not carry out that could explain most of these differences. The notebook contains a print out of all differences larger than 5km^2.
- We were unable to find a precinct shapefile or map for Harpswell.