VEST FL 2018

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State: FL
Organization: Voting and Election Science Team (VEST)
File Year: 2018
Date Updated: 2/1/2021

1. Is all raw data available?

No
- Accessible files:
    - VEST Florida, 2018
        - Accessed: 12/30/2020
        - Source: VEST on the Harvard Dataverse
        - https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/UBKYRU
    - FL Precinct-Level Election Results, 2018
        - Accessed: 12/30/2020
        - Source: Florida Department of State
        - https://dos.myflorida.com/elections/data-statistics/elections-data/precinct-level-election-results/
    - VEST Florida, 2016
        - Accessed: 1/11/2021
        - Source: VEST on the Harvard Dataverse
        - https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/NH5S2I
        - Note: the VEST 2016 file is the source of precinct shapefiles for 17 counties, as the precinct boundaries were unchanged from 2016 to 2018.
    - US Census 2020 Redistricting Data Program Phase 2
        - Accessed: 1/11/2021
        - Source: U.S. Census
        - https://www.census.gov/geo/partnerships/pvs/partnership20v1/st12_fl.html

- ■ Note: These must be downloaded 5 at a time
- ○ Collier County Precincts File
  - ■ Accessed: 1/15/2021
  - ■ Source: Collier County Supervisor of Elections
  - ■ https://www.colliervotes.com/Voting-System-Maps-Stats/Precinct-Map-Voting-Boundaries
  - ■ Note: From the above link, click on "View additional maps" and then download the map on the next screen as a KML
- ○ Flagler County Precincts Shapefile
  - ■ Accessed: 1/14/2021
  - ■ Source: Flagler County Supervisor of Elections
  - ■ https://www.flaglerelections.com/For-Voters/District-Precinct-Maps
  - ■ Note: Click "Current GIS Shape File" which should link to the "2018_SHP" zip file
- ○ Hillsborough County Precincts Shapefile
  - ■ Accessed: 1/14/2021
  - ■ Source: Hillsborough County Supervisor of Elections
  - ■ https://www.votehillsborough.org/RESEARCH-DATA/Maps-Districts
  - ■ Note: Scroll to the bottom of the page and click "Shapefiles - Hillsborough County Precinct Map" and on the next page, download "2017ShapeFiles.zip"
- ○ Lee County Precincts File
  - ■ Accessed: 1/14/2021
  - ■ Source: Lee County Supervisor of Elections
  - ■ https://www.lee.vote/District-Maps
  - ■ Note: To download, click the square looking button to "View Larger Map" and then download as KML
- ○ Leon County Precincts Shapefile
  - ■ Accessed: 1/15/2021
  - ■ Source: Tallahassee - Leon County GIS GeoData Hub
  - ■ https://geodata-tlcgis.opendata.arcgis.com/datasets/election-precincts-leon-county
- ○ Miami-Dade County Precincts Shapefile
  - ■ Accessed: 1/15/2021
  - ■ Source: Miami-Dade County Open Data Hub
  - ■ https://gis-mdc.opendata.arcgis.com/datasets/precinct-1
- ○ Okaloosa County Precincts Shapefile
  - ■ Accessed: 1/15/2021
  - ■ Source: Okaloosa County Commission
  - ■ http://www.co.okaloosa.fl.us/gis_data
  - ■ Note: Downloaded "Voting.zip"
- ○ Palm Beach County Precincts Shapefile
  - ■ Accessed: 1/15/2021
  - ■ Source: Palm Beach County Supervisor of Elections

- - - https://www.pbcelections.org/Records-Data/Voting-District-Maps
    - Note: Click on "Precinct Shapefiles"
  - Pasco County Precincts Shapefile
    - Accessed: 1/15/2021
    - Source: Pasco County, GIS Department
    - https://www.pascocountyfl.net/342/GIS-Data-Shape-Files
- Inaccessible files:
  - FL Department of State Precinct Shapefile
    - This was obtained by VEST through a records request, but the file is not publicly available.
    - The RDH contacted the Florida DOS and requested the raw precinct shapefile, but we have not yet received it as of 2/2/2021.
  - County Precinct Shapefiles from the county websites, for:
    - Highlands County
    - Lake County
    - Osceola County
    - Sumter County
    - Volusia County
    - Columbia County
    - Duval County

2. Processing steps available?

Yes
- Description of processing steps:
  - In 'documentation.txt' (accessed 12/30/2020) from the Harvard Dataverse: lists the source of election results and the source of precincts by county. The precinct shapefiles come from four different sources, listed out for the following counties:
    - "Alachua, Baker, Bay, Bradford, Brevard, Calhoun, Citrus, Clay, Dixie, Escambia, Hardee, Hendry, Hernando, Indian River, Lafayette and Sarasota come from the Department of State."
    - "Broward, Desoto, Gadsden, Gilchrist, Gulf, Manatee, Marion, Martin, Monroe, Nassau, Pinellas, Polk, Putnam, Santa Rosa, St. Johns, St. Lucie, and Union are unchanged from the 2016 VEST shapefile."
    - "Charlotte, Franklin, Glades, Hamilton, Holmes, Jackson, Jefferson, Levy, Liberty, Madison, Okeechobee, Orange, Seminole, Suwannee, Taylor, Wakulla, Walton, and Washinton come from the U.S. Census Bureau's 2020 Redistricting Data Program Phase 2 release."
    - "Collier, Columbia, Duval, Flagler, Highlands, Hillsborough, Lake, Lee, Leon, Miami-Dade, Okaloosa, Osceola, Palm Beach, Pasco, Sumter, and Volusia come from the counties."

- ○ Additionally, the file provides the following processing step and comment about the data:
  - ■ "Brevard and Seminole reported votes in virtual and early precincts countywide, these were reapportioned by candidate based on the precinct reported vote."
  - ■ "Florida had recounts in several races this election, but the precinct-level results posted by the state report the counts prior to the recount in some cases, which makes the sum totals of columns in the shapefile slightly different than those found in the official statewide vote totals."
- Information not in their processing steps:
  - ○ Columbia and Duval counties are the two counties missing from the list above of the sources of precinct shapefiles by county. We checked with VEST and found out that precinct shapefiles were sent from the respective Supervisor of Elections offices for Columbia and Duval counties.
  - ○ Any precinct name manipulation, vote aggregation, or precinct geometry disaggregation to make the election results join to the precinct shapefiles for all of the sources, as outlined below.
  - ○ If there were changes made to the precinct boundaries from the raw sources that account for differences in the topology of precincts between the VEST file and the raw sources.

3. Able to replicate joining election data and shapefiles?

No
- The FL precinct-level election results file has results for 5,999 precincts. We downloaded this file, and attempted to join the precinct-level election results with the precinct shapefiles from the following four sources of shapefiles:
  - ○ Department of State file: we did not join any precincts from this file as VEST did not post the raw file, and we requested the file but have not yet received it. This file accounts for 1,272 precincts.
  - ○ VEST 2016 precinct file: we were able to match 1,561 precincts to election results, with 11 precincts not matching from the election results and 15 precincts not matching from the shapefile. It appears as though aggregation of election results may have occurred for some of the precincts, for example:
    - ■ Precinct 'UNI3A & 3B' appears in the election results, and Precincts 'UNI003A' and 'UNI003B' appear in the precinct shapefile. These did not match, and VEST does not specify how they disaggregated the election results to the precincts in their documentation.
  - ○ Census Redistricting Data Program: we were able to match 483 precincts to election results, with 97 precincts not matching from the election results and 190 precincts not matching from the shapefile.
    - ■ Some of these precincts that did not match have obvious string matching that could occur. For example, in Okeechobee County, the election result precincts have names like 'OKE0001' where the precinct shapefile has precinct names like 'OKEP-01'.

- - Most of these precincts, however, do not have an apparent reason they did not join. For example, in Washington County, the election results has precinct 'WAS0008' which does not have a corresponding precinct in the shapefile. VEST does not specify how the precincts were joined.
    - County specific precinct shapefiles: we were able to match 2,567 precincts to election results, with 8 precincts not matching from the election results and 59 precincts not matching from the shapefile.
      - The precincts that did not match from the election results were in Collier, Flagler, Palm, and Pasco counties. The precincts that did not match from the shapefile were in Collier, Flagler, Leon, Palm, and Pasco counties.
      - For both the precincts that did not match in the election results and in the shapefile, it is not obvious if there is string matching, precinct splitting, or vote aggregation that must occur to get them to join. For example, in Collier County, precinct 'CLL0416' exists in the election results and does not join, and precincts 'CLL0204' and 'CLL0304' exist in the precinct shapefile and do not join. VEST does not document the steps that were taken to deal with these discrepancies in the number of precincts between the files.
  - In total, of the 5,999 precincts with election results in the FL precinct-level election results file:
    - We cannot match 1,272 precincts to shapefiles because we do not have the raw precinct shapefile from the DOS.
    - Of the remaining 4,727 precincts in the election results file, we were able to join 4,611 precincts to election results.

4. Able to replicate joining demographic data to block-level shapefiles?

N/A
- The VEST 2018 file does not include any demographic data.

5. Able to replicate joining boundary data?

N/A
- The VEST 2018 file does not include any legislative boundary data.

6. Successfully ran validation?

Yes
- Election results:
  - When we compare the election results between the VEST file and the 4,611 precincts that we were able to join to election results, we find that our election results match VEST's in 4,587 precincts. In only 24 precincts, the election results do not match. Overall, however, the total vote deviation is under 10 people in 99% of precincts.

- ○ We also ran validation on the election results for the precincts where we were not able to join the election results to the shapefile.
  - ■ For the 1,271 precincts from the FL DOS where we do not have the shapefile, the election results matched in 100% of the precincts.
  - ■ For the 101 precincts where we have the shapefile but were not able to join the election results to the shapefile, the election results match VEST's in all but one precinct ('WAS0011').
- ○ Furthermore, the election result totals between the VEST file and the FL SOS file match almost completely, with a maximum relative difference of 0.15% (or 8 votes), in the 'G18GOVONPA' election results column (General 2018 Governor, no party affiliation candidates). Every election results column in total did not match completely between the VEST file and the FL SOS, but the differences are under 0.15% of the total SOS votes.
- ● Geometries:
  - ○ We compared the geometries of the precincts in the VEST file and in the file that we created from the sources listed by VEST. Of the 4,697, out of 6,073, that we were able to match from our shapefile to VEST's, the geometry columns match to 1 decimal place in 3,992 precincts. In the remaining 705 precincts, there are differences in the geometries between the raw files and the VEST file.