

# MI VEST 2018

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State: Michigan

Organization: VEST

Date Updated: Report Date: 03/17/21, VEST File Date: 06/02/20

## 1. Is raw data available?

No

- Accessible Files:
  - File: 2018GEN
    - Election precinct results from Michigan Secretary of State ([https://miboecfr.nictusa.com/cgi-bin/cfr/precinct\\_srch.cgi](https://miboecfr.nictusa.com/cgi-bin/cfr/precinct_srch.cgi))
    - Accessed: 2/2/2021
  - File: 2018\_Voting\_Precincts-shp
    - Election shapefile from Michigan GIS Open Data site (<https://gis-michigan.opendata.arcgis.com/datasets/2018-voting-precincts>)
    - Accessed: 1/5/2021
- Inaccessible Files:
  - File linking Detroit precincts to AVCBs referenced in VEST's documentation from Derek Willis of OpenElections
    - OpenElections Github available, but the above file not present (<https://github.com/openelections/openelections-data-mi/tree/master/2018>)

## 2. Processing steps available?

Yes

- Election/candidate column identifier/naming convention process available and replicable in VEST's 2018 documentation.
- Precinct election results merged in cities where the city name and precinct number match in two different counties. VEST identified three cases in their 2018 documentation.
- The shapefile from the MI GIS Open Data site uses the unique identifier "PRECINCTID" for every precinct in the state. VEST's precinct boundary and election result shapefile has a matching column "PRECINCTID" in addition to a unique identifier "precinct\_2".

- “WP-” + three digit county FIPs code + “-” + five digit MCD FIPs code + two digit ward code + 3 digit precinct code
      - Ex: WP-001-01040-00001
  - The “precinct\_2” column was presumably used to match the election results to the raw shapefile. VEST’s documentation does not explain the processing steps they used to create the common identifier “precinct\_2” column between the election results and precinct boundaries. The RDH believes the “precinct\_2” column is formatted as follows:
    - Three digit county FIPs code + “-” + City/Town Name + “-” + one digit ward code + “-0” + three digit precinct code
      - Ex: 001-ALCONA TOWNSHIP-0-0001
  - After re-formatting the election results provided by the Secretary of State, 98% of the RDH’s “precinct\_2” identifiers match VEST’s “precinct\_2” identifiers.

### 3. Able to replicate joining election data and shapefiles?

No

- As mentioned above, the shapefile provided by Michigan’s GIS portal includes unique precinct identifiers that rely on MCD FIPs codes in the field “PRECINCTID”. The election result files do not contain MCD FIPs, instead they include the City/Town names.
- The RDH attempted to use the [Census Geocodes File](#) to match the City/Town names to MCD FIPs to link “precinct\_2” to “PRECINCTID”, but we were able to match fewer than 70% of the IDs. As a result, we did not merge the election results with the shapefile and checked each against VEST’s file separately.

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

N/A

### 5. Able to replicate joining boundary data?

N/A

### 6. Successfully validated election results?

No

- There are 4,701 total rows that overlapped between VEST’s final file and the precinct election results file we processed. 545 of these rows have election result differences and 4,156 of these rows are the same.
- The maximum difference in vote totals for a given candidate and race was 2.8% for G18UBRDKUM - Anil Kumar, Democrat, Wayne State University Board of Trustees election.
- 099-RICHMOND CITY-0-0001 is one of the precincts where the vote totals are off and is one where the results were merged as per VEST’s documentation, “St. Clair County's Richmond precinct 1 results merged into Macomb County's Richmond precinct 1.”

- In addition, vote total discrepancies were observed in a few precincts within Cass County, Kalamazoo County, and Lapeer County. The rest of the result discrepancies were in St. Clair County and Wayne County. All of the Wayne County discrepancies (which comprise the majority of overall discrepancies) were in Detroit City.
- There are 502 precincts in Detroit City. None of the vote totals for the Detroit City precincts matched VEST's results because we did not re-allocate the AVCB votes. If we had access to the file from OpenElections, our match rate would improve.
- While we did not merge any election results with precinct boundaries, we did compare the shapefile from the state with VEST's final file. Based on that comparison, VEST did not alter any precinct boundaries from the original shapefile and the geometries match up perfectly.