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VEST MT 2020

State: Montana
Organization: Voting and Election Science Team (VEST)
Summary of Races included: Presidential, U.S. Senate, U.S. House, Governor and Lt. Governor, Attorney General, Secretary of State, State Auditor, State Superintendent of Public Instruction [General]
Date File Updated: 06/02/2021
Date Report Updated: 06/16/2021
RDH Validation Code (Github): https://github.com/nonpartisan-redistricting-datahub/pdv-mt

RDH Criteria	Explanation
Is all raw data available? Yes	<u>Accessible files:</u> ● VEST MT 20 data file ○ Accessed 06/09/21, Source: VEST ○ https://dataverse.harvard.edu/file.xhtml?fileId=4773527&version=10.0 ● VEST MT 20 documentation file ○ Accessed: 06/09/21, Source: VEST ○ https://dataverse.harvard.edu/file.xhtml?fileId=4773529&version=9.0 ● MT Precinct-Level Election Results ○ Accessed: 06/09/21, Source: MT Secretary of State Election Archive ○ https://sosmt.gov/elections/results/ ○ Note: Click 2020 Election Results-Precinct by Precinct to download. ● MT Voting Precincts 2020 Shapefile ○ Accessed: 06/11/21, Source: Montana State Library ○ https://mslservices.mt.gov/Geographic_Information/Data/DataList/datalist_Details.aspx?did=%7bdbd29997-21d8-4af1-9d87-5c5134775995%7d ○ Note: Click “Download Data” button and then MontanaVotingPrecincts_shp.zip

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Processing steps available? Yes	**Description of processing steps:** ● The full processing steps can be accessed at the link above and were accessed on 06/09/21. The steps are short enough to copy fully below: ○ Election results from Montana Secretary of State (https://sosmt.gov/elections/results/) ○ Precinct shapefile primarily from Dave Ritts at the Montana State Library, as prepared for submission to the U.S. Census Bureau's 2020 Redistricting Data Program. ○ The three precincts in Treasure County were merged as the county transitioned to a single countywide precinct prior to the 2020 election. ● We were able to follow these steps. **Information not in their processing steps:** ● List of name changes for precincts between election results and VEST's file.
Able to replicate joining election data and shapefiles? Yes	Yes, we were able to replicate joining election data and shapefiles. ● There were initially 666 precinct shapefiles and 663 precinct election results. ● After the name changes listed above all but 3 zero vote precincts were able to be joined. ● Assigned the names 'FLATHEAD-1', 'FLATHEAD-2', and 'LAKE-1' to both the VEST file and the shapefile for the 3 zero vote precincts. The files were then able to be fully joined.
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	There is no boundary data on the file.

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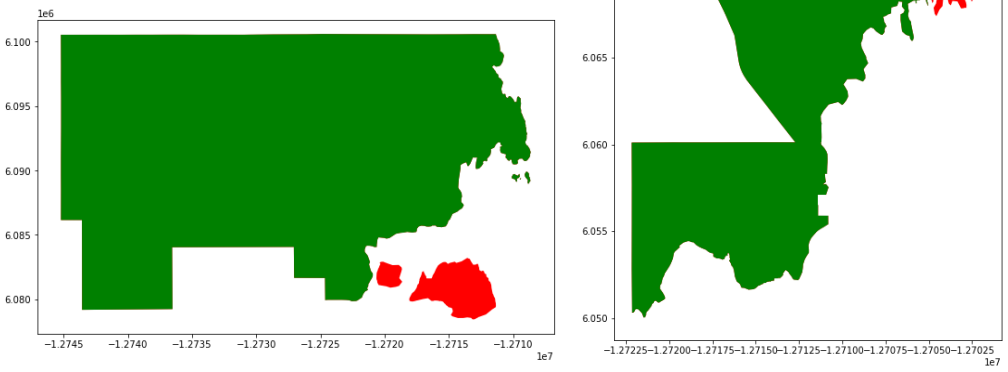
data? N/A	
Successfully validated election results? Ye	<u>Election results:</u> • We validated the election results at the state, county and precinct levels. • At the state-level, candidate vote totals matched exactly. The statewide race totals also matched the totals from the State Canvass report (https://sosmt.gov/wp-content/uploads/State_Canvass_Report.pdf) on the MT SOS website. • At the county-level, candidate vote totals matched exactly. • At the precinct-level, candidate votes also matched exactly. <u>Geographies:</u> • 31 precincts w/ a difference of 0 km^2 • 569 precincts w/ a difference between 0 and 0.1 km^2 • 58 precincts w/ a difference between 0.1 and 0.5 km^2 • 5 precincts w/ a difference between 0.5 and 1 km^2 • 1 precincts w/ a difference between 1 and 2 km^2 • 2 precincts w/ a difference between 2 and 5 km^2 • 0 precincts w/ a difference greater than 5 km^2 • The largest differences in the shapefiles concern Flathead lake. It appears that VEST assigned islands(red) in Flathead lake to precincts “DAY 1 HD12” and “POL 2 HD12”.  • Other differences greater than 0.1km^2 appear to be boundary differences and can be seen in the notebook.

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