

2024 Oct-10 PM 10:34

2021 Citizen Voting Age Population (CVAP) Data for Alabama from the American Community Survey (ACS)  
 5-Year Estimates (2017-2021) Disaggregated to 2020 Census Blocks

U.S. DISTRICT COURT  
N.D. OF ALABAMA

## RDH Date Retrieval  
 03/01/23

## ## Sources

CVAP data originally downloaded from this [link](https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.2021.html).

PL data and CVAP data retrieved from U.S. Census via Redistricting Data Hub website.

## ## Fields:

Field Name	Description
GEOID20	Census Block GEOID
CVAP_TOT21	CVAP Estimate for Total
CVAP_NHS21	CVAP Estimate for Not Hispanic or Latino
CVAP_AIA21	CVAP Estimate for American Indian or Alaska Native Alone or In Combination
CVAP_ASN21	CVAP Estimate for Asian Alone or In Combination
CVAP_BLK21	CVAP Estimate for Black or African American Alone or In Combination
CVAP_NHP21	CVAP Estimate for Native Hawaiian or Other Pacific Islander Alone
CVAP_WHT21	CVAP Estimate for White Alone
CVAP_AIW21	CVAP Estimate for American Indian or Alaska Native and White
CVAP_ASW21	CVAP Estimate for Asian and White
CVAP_BIW21	CVAP Estimate for Black or African American and White
CVAP_AIB21	CVAP Estimate for American Indian or Alaska Native and Black or African American
CVAP_20M21	CVAP Estimate for Remainder of Two or More Race Responses
CVAP_HSP21	CVAP Estimate for Hispanic or Latino
C_TOT21	Citizen Estimate for Total
C_NHS21	Citizen Estimate for Not Hispanic or Latino
C_AIA21	Citizen Estimate for American Indian or Alaska Native Alone or In Combination
C_ASN21	Citizen Estimate for Asian Alone or In Combination
C_BLK21	Citizen Estimate for Black or African American Alone or In Combination
C_NHP21	Citizen Estimate for Native Hawaiian or Other Pacific Islander Alone
C_WHT21	Citizen Estimate for White Alone
C_AIW21	Citizen Estimate for American Indian or Alaska Native and White
C_ASW21	Citizen Estimate for Asian and White
C_BIW21	Citizen Estimate for Black or African American and White
C_AIB21	Citizen Estimate for American Indian or Alaska Native and Black or African American
C_20M21	Citizen Estimate for Remainder of Two or More Race Responses
C_HSP21	Citizen Estimate for Hispanic or Latino

## ## Processing Steps

The processing for this dataset was completed in multiple parts.

## Part 1: Processing the 2021 Block Group CVAP data

CVAP data was retrieved at the block group level from link in "Sources" above.

The Alabama data was extracted from the national data to create a statewide dataset.

The data was pivoted from narrow to wide data based on GEOIDs so that one row is one block group, and each field represents a particular race/ethnicity.

The fields were renamed to fit character length requirements.

Processing was primarily completed using the pandas library.

To improve the usefulness of the data, we have modified three categories to correspond with the Office of Management and Budget (OMB) racial categories. The "Alone" categories for American Indian or Alaska Native (fields with "AIA"), Asian (fields with "ASN"), and Black or African American (fields with "BLK") represent an encompassing racial category that is inclusive of all categories that include that race. For example, CVAP\_AIA21 would be the sum of the original "Alone" CVAP\_AIA21, CVAP\_AIB21, and CVAP\_AIW21. For CVAP\_BLK21, the field would be the sum of the original CVAP\_BLK21, CVAP\_AIB21, and CVAP\_BIW21. For CVAP\_ASN21, the field would be the sum of the original CVAP\_ASN21 and CVAP\_ASW21. These fields are also noted in the description as being "Alone or In Combination". No other estimate categories were modified.

All of the racial estimates provided are Non-Hispanic. Breakdowns for Hispanic/Non-Hispanic by race are not provided in the CVAP special tabulation.

21-cv-01531

11/12/2024 Trial

Plaintiffs Exhibit No. 206

## Part 2: Disaggregating the 2021 Block Group CVAP data to 2020 Blocks

The 2021 CVAP data was disaggregated using 2020 PL 94-171 data. The following variables were created from block-level PL files retrieved on the RDH website (some were summed or subtracted, as indicated below, to better resemble the OMB categories):

## CVAP Field Corresponding PL Field(s)

CVAP\_TOT21 P0040001  
 CVAP\_NHS21 P0040003  
 CVAP\_AIA21 P0040007 + P0040018 + P0040014  
 CVAP\_ASN21 P0040008 + P0040015  
 CVAP\_BLK21 P0040006 + P0040013 + P0040018  
 CVAP\_NHP21 P0040009  
 CVAP\_WHT21 P0040005  
 CVAP\_AIW21 P0040014  
 CVAP\_ASW21 P0040015  
 CVAP\_BLW21 P0040013  
 CVAP\_AIB21 P0040018  
 CVAP\_20M21 P0040011 - P0040018 - P0040014 - P0040013 - P0040015  
 CVAP\_HSP21 P0040002  
 C\_TOT21 P0020001  
 C\_NHS21 P0020003  
 C\_AIA21 P0020007 + P0020018 + P0020014  
 C\_ASN21 P0020008 + P0020015  
 C\_BLK21 P0020006 + P0020013 + P0020018  
 C\_NHP21 P0020009  
 C\_WHT21 P0020005  
 C\_AIW21 P0020014  
 C\_ASW21 P0020015  
 C\_BLW21 P0020013  
 C\_AIB21 P0020018  
 C\_20M21 P0020011 - P0020018 - P0020014 - P0020013 - P0020015  
 C\_HSP21 P0020002

For each block in each column (e.g. CVAP\_TOT21) the value for the 2020 block was multiplied by the 2020 total for the block group.

The totals for the block group were retrieved by grouping the block data by block group ID.

This provides a ratio of block to block group population for each individual racial category.

The ratios for each block in each column were multiplied by the 2021 CVAP total for the block's corresponding block group.

In the scenario where no blocks in a block group contain a value for a particular race/ethnicity combination in 2020, but have a value in the 2021 estimates, total CVAP population or total citizen estimate population was used as a proxy, depending on the variable.

In the scenario where a block group does not contain a value in its respective population or voting-age population field in the PL data, the 2021 population is divided evenly amongst all blocks in the block group.

All data fields are rounded to two decimal places.

## ## Additional Notes

For more information on the ACS CVAP documentation please refer to the ACS technical documentation included in this folder (also available at this [link]([https://www2.census.gov/programs-surveys/decennial/rdo/technical-documentation/special-tabulation/CVAP\\_2017-2021\\_ACS\\_documentation\\_v1.pdf](https://www2.census.gov/programs-surveys/decennial/rdo/technical-documentation/special-tabulation/CVAP_2017-2021_ACS_documentation_v1.pdf))).

For more information on OMB racial categories, please see this [link]([https://obamawhitehouse.archives.gov/omb/bulletins\\_b00-02/#n\\_1\\_](https://obamawhitehouse.archives.gov/omb/bulletins_b00-02/#n_1_)).

Visit the RDH GitHub and the processing script for this code [here](<https://github.com/nonpartisan-redistricting-datahub/cvap-processing>)

Please direct questions related to processing this dataset to [info@redistrictingdatahub.org](mailto:info@redistrictingdatahub.org).