2020 Census Detailed Demographic and Housing Characteristics File A (Detailed DHC-A) Technical Documentation

2020 Census of Population and Housing

Technical Documentation

Issued September 2023
TD/Detailed DHC-A2020

United States® Census Bureau

U.S. Department of Commerce
U.S. CENSUS BUREAU
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United States® Census 2020

Additional Information

For additional information concerning the files, contact the Customer Liaison and Marketing Services Office, Customer Services Center, U.S. Census Bureau, Washington, DC, 20233, or by phone at 301-763-INFO (4636).

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2020 Census of
Population and Housing

U.S. Census Bureau,
Robert L. Santos,
Director

Suggested Citation

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Chapter 1.
Abstract

CITATION

2020 Census Detailed Demographic and Housing Characteristics File A.

Prepared by the U.S. Census Bureau, 2023.

CLEARANCE FOR PUBLIC RELEASE

Public release of the 2020 Census Detailed Demographic and Housing Characteristics File A (Detailed DHC-A) has been authorized by the Census Bureau's Disclosure Review Board (clearance number CBDRB-FY21-DSEP-005).

TYPE OF FILE

Summary statistics.

DATA CONFIDENTIALITY

The Census Bureau operates under Title 13 of the U.S. Code, which prohibits the publication of any results in which an individual's data can be identified. The Census Bureau has been and continues to be a leader in the science of protecting respondent data. To ensure protection of respondent data in present and future data releases, the Census Bureau has launched a modernization of our disclosure avoidance techniques by deploying differential privacy, a form of formal privacy, to the 2020 Census Detailed Demographic and Housing Characteristics File A (Detailed DHC-A). Differential privacy is a sophisticated, mathematical approach to disclosure avoidance that inserts a small amount of statistical "noise" into the data to protect the confidentiality of individuals' information. To learn more about disclosure avoidance, please read "Chapter 4. Confidentiality of the Data."

SUBJECT CONTENT

The Detailed DHC-A contains the data compiled from the questions on race, ethnicity, sex, and age asked of all people in the 2020 Census. The Detailed DHC-A includes population counts and sex and age statistics for detailed race and ethnic groups and American Indian and Alaska Native tribes and villages.

Data are eligible to be produced for 2,996 population groups: 34 Hispanic origins (reflecting 30 detailed origins and 4 regional groups), as well as alone and alone or in any combination iterations for 104 detailed and 3 regional White groups, 62 detailed and 3 regional Black or African American groups, 1,187 detailed and 8 regional American Indian or Alaska Native groups, 47 detailed and 5 regional Asian groups, 35 detailed and 3 regional Native Hawaiian or Other Pacific Islander groups, and 22 detailed and 2 regional Some Other Race groups. The presentation of Detailed DHC-A tables for any of the population groups is subject to population thresholds. Refer to "Appendix G. Characteristic Iterations" for more information.

GEOGRAPHIC CONTENT

The Detailed DHC-A provides data for the entire United States, as well as for states, counties, places, census tracts, and American Indian/Alaska Native/Native Hawaiian areas. Refer to "Chapter 2. How to Use This Product" for the full geographic content of this product and "Appendix A. Geographic Terms and Concepts" for a more detailed description of the Census Bureau's geography contained in this product.

USER UPDATES

User updates supply data users with additional or corrected information that becomes available after the technical documentation and files are prepared. They are issued as data notes and geographic notes. After this technical document is released, data notes are appended to this technical document and geographic notes are placed on the Census Bureau's website at <www.census.gov/data/errata-notes/2020/dec/2020-decennial-census.html>.

RELATED PRODUCTS

Listed below are 2020 Census data products available on data.census.gov.

2020 Census Redistricting Data (Public Law 94-171) Summary File. Files containing counts of the total population and the population 18 years and over by race and Hispanic origin. Counts of occupied and vacant housing units and counts of group quarters population by major group quarters types are also included. Data are available down to the census block level, in 52 file sets—one for each state, the District of Columbia, and the Commonwealth of Puerto Rico.
(Released: August 12, 2021, on the FTP site and September 16, 2021, on data.census.gov)

2020 Census Demographic Profile. One quick table available on data.census.gov that contains a limited set of counts and cross-tabulations, including age groups, sex, race, Hispanic or Latino origin, relationship to householder, household type and size, housing occupancy, and tenure. Data are available down to the census tract level. (Released: May 25, 2023)

2020 Census Demographic and Housing Characteristics File (DHC). The DHC includes many of the demographic and housing tables previously included in the 2010 Census Summary File 1 (2010 SF 1). Some tables are repeated by race and ethnicity. Subjects include age, sex, race, Hispanic or Latino origin, household type, family type, relationship to householder, group quarters population, housing occupancy, and housing tenure. The lowest level of geography available varies with many tables provided at the census block level.
(Released: May 25, 2023)

2020 Census 118th Congressional District Summary File. This file contains retabulated selected summary levels from the Demographic and Housing Characteristics File (DHC) for the 118th Congress and 2022 state legislative districts. If states report additional changes for future congressional sessions (e.g., 119th or the 120th), the Census Bureau will regenerate the summary file using the new boundaries. If no changes for a future session are reported, the previously generated congressional district file is used as both its original and subsequent congressional session product and no retabulation is created. Subjects include age, sex, race, Hispanic or Latino origin, household type, family type, relationship to householder, group quarters population, housing occupancy, and housing tenure. Data are available for congressional districts, state legislative districts, and other selected geographies. (Released: August 31, 2023)

2020 Census Detailed Demographic and Housing Characteristics (Detailed DHC)

The Census Bureau had originally planned to produce and release statistics on detailed racial, ethnic, and tribal groups along with data that combine characteristics about households and the people living in them as a single data product, the 2020 Census Detailed DHC. However, to better facilitate developing disclosure protections for these complex data, we separated the Detailed DHC into three products: Detailed DHC-A (this product), Detailed DHC-B, and S-DHC.

2020 Census Detailed Demographic and Housing Characteristics File B (Detailed DHC-B). The Detailed DHC-B will provide household type and tenure information for the same detailed race and ethnicity groups and American Indian and Alaska Native tribes and villages as Detailed DHC-A. Together, the Detailed DHC-A and Detailed DHC-B data products are the successors to the 2010 Census Summary File 2 and American Indian and Alaska Native Summary File.
(Planned release: September 2024)

2020 Census Supplemental Demographic and Housing Characteristics File (S-DHC). The S-DHC will provide data that combine characteristics about households and the people living in them. This includes data on population in households, including average household size by age and tenure, average family size, household/family type of people under 18 years, and total population in households by tenure.
(Planned release: September 2024)

2020 Census Privacy-Protected Microdata File (PPMF). The PPMF replaces the Public Use Microdata Sample (PUMS) file. The PPMF will include all privacy-protected data from the production run of the DHC, including the 2020 Census Redistricting Data (P.L. 94-171) Summary File.
(Planned release: TBD)

For more information on 2020 Census data products, contact the U.S. Census Bureau's Customer Services Center by phone at 1-800-923-8282 or 301-763-INFO (4636).

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Chapter 2.
How to Use This Product

LOCATING THE 2020 CENSUS DETAILED DEMOGRAPHIC AND HOUSING CHARACTERISTICS FILE A (DETAILED DHC-A)

The 2020 Census Detailed Demographic and Housing Characteristics File A (Detailed DHC-A) can be found on data.census.gov.

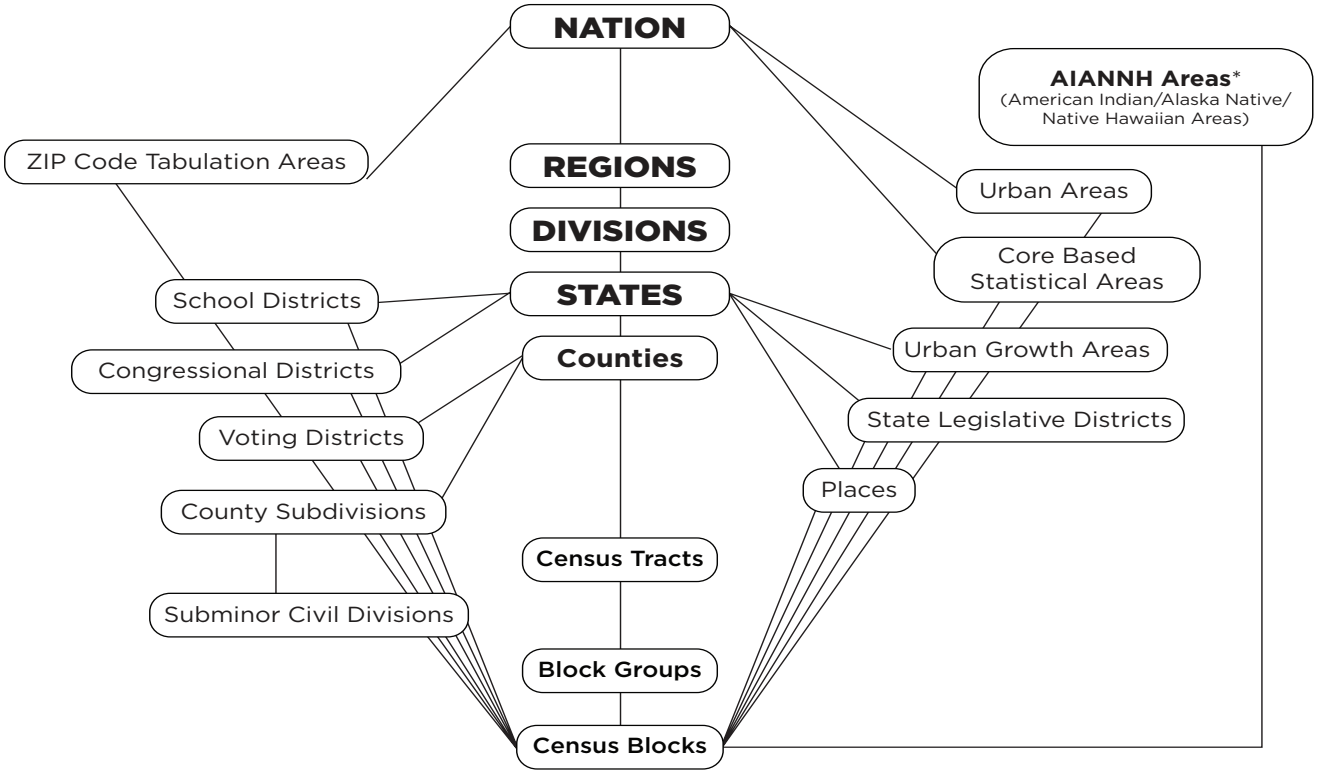
GEOGRAPHIC HIERARCHY PRIMER

The smallest component for all census geography is the block. Figure 2-1 provides an example of the various geographic hierarchies used, all aggregated from the block level. The chart allows a graphical examination of the hierarchies. The lines show how blocks aggregate to block groups, which then aggregate to census tracts, and then counties. This means that blocks, block groups, and tracts are uniquely identified within counties, and, therefore, do not cross county boundaries. Places, on the other hand, can cross county boundaries so there is no line connecting counties and places. Figure 2-2 may be used in a similar fashion to find the hierarchy for the American Indian/Alaska Native/Native Hawaiian areas.

GEOGRAPHIC CONTENT

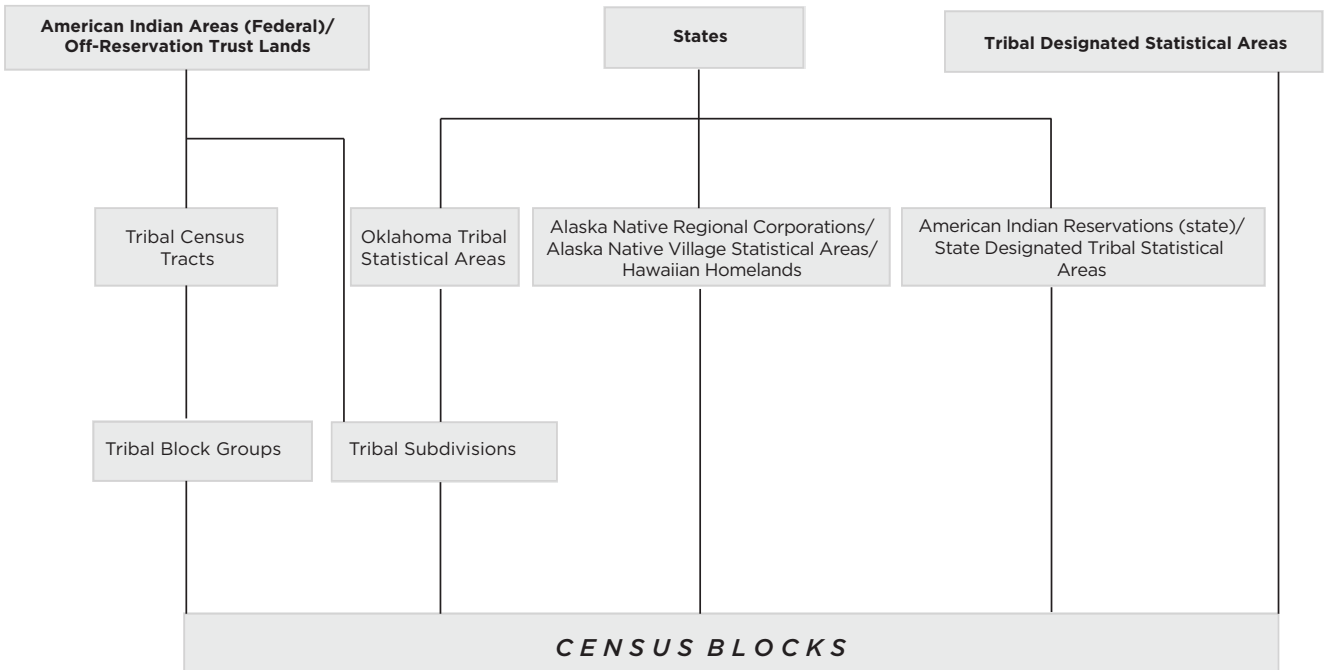
The Detailed DHC-A contains data for each of the 50 states, the District of Columbia, and Puerto Rico. This product provides data for these areas in a hierarchical sequence down to the census tract level.

Figure 2-1.
Standard Hierarchy of Census Geographic Entities



* Refer to the "Hierarchy of American Indian/Alaska Native/Native Hawaiian Areas."

Figure 2-2.
Hierarchy of American Indian/Alaska Native/Native Hawaiian Areas



SUMMARY LEVELS

Summary levels identify the geographic level for which the statistical data in a given Census Bureau product have been summarized. A summary level is depicted as a three-character code and the summary level's definition, which is a sequence of one or more geographic levels in a top-down hierarchy. The last geographic level in the sequence is the geographic level defined by the summary level; any prior geographic levels simply identify the geographic hierarchy. For example, in summary level 140 (State-County-Census Tract), a record contains data for a census tract within a county within a state.

SUMMARY LEVEL HIERARCHY CHART AND SEQUENCE LIST

The Summary Level Hierarchy Chart and the Summary Level Sequence List identify the summary levels that are included in this product. The summary level code precedes the summary level definition, and symbols are used with special meaning for summary levels:

- Hyphen "-" separates the elements of a hierarchy.
- Slash "/" denotes two or more equivalent elements at the same level in the hierarchy.
- Parentheses "( )" are not used in the specification for summary levels but are used occasionally in the usual and customary manner in statements of clarification.

Summary Level Hierarchy Chart

The Summary Level Hierarchy Chart displays the hierarchical relationships among the summary levels in this product. The superior/subordinate relationships are depicted by indenting the lines.

Refer to the Detailed DHC-A Summary Level Hierarchy Chart.

Summary Level Sequence List

The Summary Level Sequence List shows the summary levels sorted by summary level code, plus the geographic components associated with each summary level.

Refer to the Detailed DHC-A Summary Level Sequence List.

EXPLANATION OF NOISE INFUSION

The data included in the 2020 Census Detailed DHC-A have been adjusted to protect the confidentiality of census responses through a differential privacy mechanism implemented through an algorithm called SafeTab-P. The SafeTab-P algorithm calculates statistics using the confidential 2020 Census data, then adds or subtracts a small amount of statistical noise to those statistics. The infusion of this statistical noise preserves the usefulness of statistics about groups and communities, while making it harder to figure out the identity or characteristics of specific individuals in the data we publish. To learn more about disclosure avoidance and the SafeTab-P algorithm, refer to "Chapter 4. Confidentiality of the Data."

ADAPTIVE DESIGN

The Detailed DHC-A uses an adaptive design to determine the amount of data that detailed and regional racial and ethnic groups and American Indian and Alaska Native tribes and villages receive based on population threshold and geography level. At the nation and state levels, detailed and regional groups receive a total population count table and groups meeting a population threshold also receive a sex by age table. For substate geographies (counties, census tracts, and places) and American Indian/Alaska Native/Native Hawaiian (AIANNH) areas, the adaptive design uses population thresholds to determine eligibility for a total population count table and a sex by age table.

Based on data from the 2010 Census, we anticipated that some groups would be too small to receive a sex by age table in 2020. Detailed groups with a national population less than 50 in the 2010 Census were preset to only receive nation and state level total population counts. This was determined in advance, which allowed us to adjust the noise infusion and produce more accurate counts for these small populations. For these groups, noise-infused total population counts are available at the nation and state levels, but no other data are produced.

All other population groups were eligible to go through the adaptive design, meaning groups with a national population of at least 50 in the 2010 Census, or that we did not collect data for in the 2010 Census.

The noise-infused population count is calculated and compared to minimum population thresholds used to determine which table(s) the group is eligible to receive. This process, shown in Figure 2-3, is repeated for each group in each geography.

The following groups receive total population counts only:

- Detailed groups with noise-infused counts of less than 500 at the nation and state levels.
- Detailed groups with noise-infused counts of 22-999 in substate geographies and AIANNH areas.
- Regional groups with noise-infused counts of less than 5,000 at the nation and state levels.
- Regional groups with noise-infused counts of 94-4,999 in substate geographies.[1]

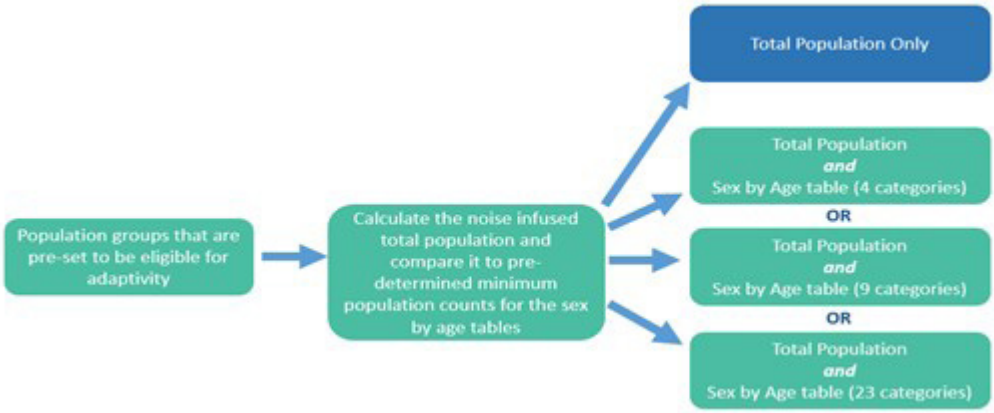
Groups not exclusively limited to total population counts only are eligible for sex by age data. The number of age categories a group is eligible for is dependent on their population at a given geography, as shown in Table 2-2.[2]

The adaptive design used for the Detailed DHC-A means that the tables produced for a detailed or regional group will vary based on the specific geography a data user selects. The type of table a group qualifies for at

[1] Regional groups are not available for AIANNH areas except when postprocessing was applied.
[2] Groups are assigned the sex by age table that corresponds to their total population count 99.9 percent of the time.

a given geography is independent of the table(s) a group is qualified for at other geographic levels. Similarly, there may be differences within a given geographic level: a group that qualifies for sex by age tables in some states may only receive a total count in others because of the size of that specific group in any given state.

Figure 2-3.
Adaptive Design



DATA ACCURACY AND MARGINS OF ERROR

One of the key measures we use to ensure quality data is the margin of error (MOE) with a 95 percent confidence interval.[3] The MOE is how close we can expect the noise-infused counts to be to the enumerated counts approximately 95 percent of the time. In other words, if we were to run the disclosure avoidance system or noise infusion 100 times, we would expect the enumerated counts to be within the MOE of the noise-infused counts in about 95 of those 100 runs. For a noise-infused count of 20 with an MOE of ±3, we are 95 percent confident that the enumerated count is somewhere between 17 and 23. The smaller the MOE the more accurate the data. However, given the same MOE, the relative impact is less for large groups when compared to small groups. Table 2-1 illustrates this by showing small and large population counts with the same MOE. The MOE for detailed groups in the Detailed DHC-A varies by geography. When only the total population count table is produced for a detailed group at the nation and state level, the MOE is ±3. When only a total population count table is produced at substate geographies and AIANNH areas, the MOE is ±11. As regional groups are larger than detailed groups, their MOE is ±50 when only the total population count is produced at all levels of geography.

When a sex by age table is produced for a group, the MOE shown in Table 2-2 applies to the individual sex by age counts. This means we expect these noise-infused sex by age counts to vary from their enumerated count by no more than plus or minus their MOE 95 percent of the time. As illustrated in Table 2-3, in a sex by age table with four age categories, eight counts are noise-infused and, therefore, have an MOE of ±3 (each of the four age categories, listed twice [once for male and once for female]).

[3] Margins of error in the Detailed DHC-A may be rounded.

Table 2-1.
Examples of Margin of Error of ±50 for Groups of Varying Sizes

Characteristic	Noise-infused count of 50	Noise-infused count of 75	Noise-infused count of 1,000	Noise-infused count of 50,000
Enumerated count between	0 to 100	25 to 125	950 to 1,050	49,950 to 50,050

Source: U.S. Census Bureau.

Table 2-2.
Detailed Demographic and Housing Characteristics File A Minimum Noise-Infused Population Thresholds and Margins of Error (MOE) by Geography

Most comprehensive table type produced	Detailed groups		Regional groups	
	Nation and state (MOE = ±3)	Substate and AIANNH (MOE = ±11)	Nation and state (MOE = ±50)	Substate (MOE = ±50)
Total count only	0–499	22–999	0–4,999	94–4,999
Sex by age—4 categories.	500–999	1,000–4,999	5,000–19,999	5,000–19,999
Sex by age—9 categories.	1,000–6,999	5,000–19,999	20,000–149,999	20,000–149,999
Sex by age—23 categories.	7,000+	20,000+	150,000+	150,000+

Note: AIANNH is American Indian/Alaska Native/Native Hawaiian areas. Substate includes county, place, and census tract.
Source: U.S. Census Bureau.

Table 2-3.
Example of Aggregated Margins of Error (MOE) for Sex by Age Tables

Sex by age—four categories	Nation and state (MOE = ±3.0)
Total count	**Aggregated MOE = ±8.5**
Male	Aggregated MOE = ±6.0
Under 18 years	Noise infused with MOE = ±3.0
18 to 44 years	Noise infused with MOE = ±3.0
45 to 64 years	Noise infused with MOE = ±3.0
65 years and over.	Noise infused with MOE = ±3.0
Female	Aggregated MOE = ±6.0
Under 18 years	Noise infused with MOE = ±3.0
18 to 44 years	Noise infused with MOE = ±3.0
45 to 64 years	Noise infused with MOE = ±3.0
65 years and over.	Noise infused with MOE = ±3.0

Source: U.S. Census Bureau.

However, the total count for groups with sex by age data is aggregated from the noise-infused sex by age counts. This leads to a higher MOE for the total population count because each individual sex by age count is noise-infused. As a result, totals created from these counts combine the noise from each individual count, leading to noisier totals. As shown in Table 2-3, the aggregated male and female totals have larger MOEs than the individual sex by age counts, as does the total count for the whole population group.

Table 2-4 shows the MOE for the total population counts for groups based on the sex by age data they receive. While the MOEs do increase, it is important to remember that the larger MOEs shown below correspond to larger population groups. We expect these aggregated noise-infused counts to vary from their enumerated count by no more than plus or minus their MOE 95 percent of the time.

Table 2-4.
Aggregated Margins of Error by Geography and Sex by Age Data

Most comprehensive table type produced	Nation and state detailed groups	Substate and AIANNH detailed groups	Regional groups
Total count only	±3.0	±11.0	±50.0
Total count aggregated from sex by age—4-category table	±8.5	±31.1	±141.4
Total count aggregated from sex by age—9-category table	±12.7	±46.7	±212.1
Total count aggregated from sex by age—23-category table	±20.3	±74.6	±339.1

Note: AIANNH is American Indian/Alaska Native/Native Hawaiian areas. Substate includes county, place, and census tract.
Source: U.S. Census Bureau.

Data users should be aware that the MOEs in the Detailed DHC-A measure the expected amount of noise that has been applied to enumerated counts for the purpose of disclosure avoidance. It does not measure nonsampling error, such as coverage error or potential bias from nonresponse, which should be taken into account when making assessments about data fitness-for-use and suitability.

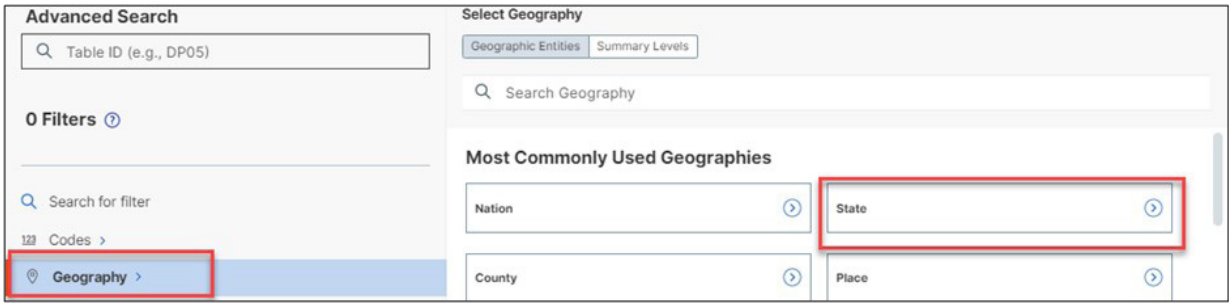
FINDING DATA FROM THE DETAILED DEMOGRAPHIC AND HOUSING CHARACTERISTICS FILE A FOR DETAILED RACE AND ETHNICITY GROUPS IN DATA.CENSUS.GOV AND THE CENSUS DATA API

The Detailed DHC-A provides total population counts and sex by age data from the 2020 Census for detailed racial and ethnic groups. Below are examples of using data.census.gov and the Census Data API to access the data.

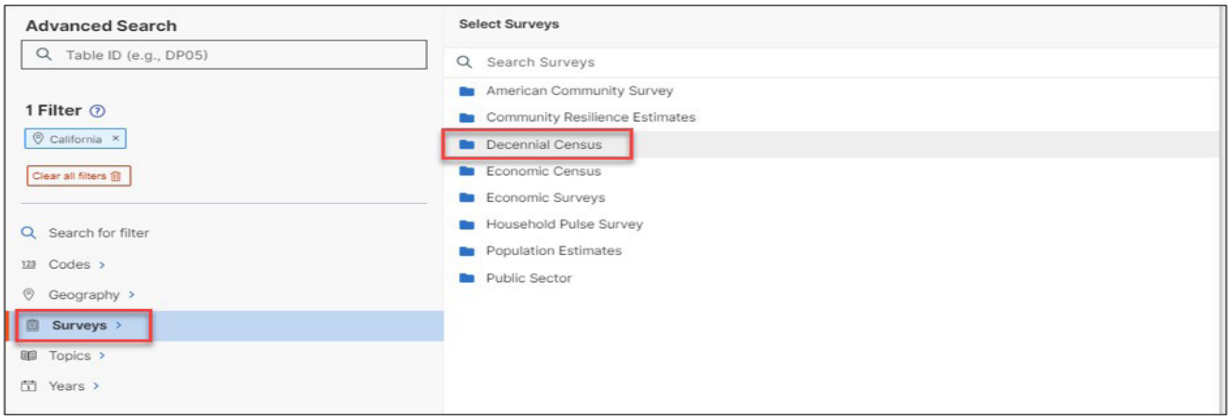
Using data.census.gov: Locating a table for the Afghan population, exporting and downloading it, and accessing additional data through the FTP.

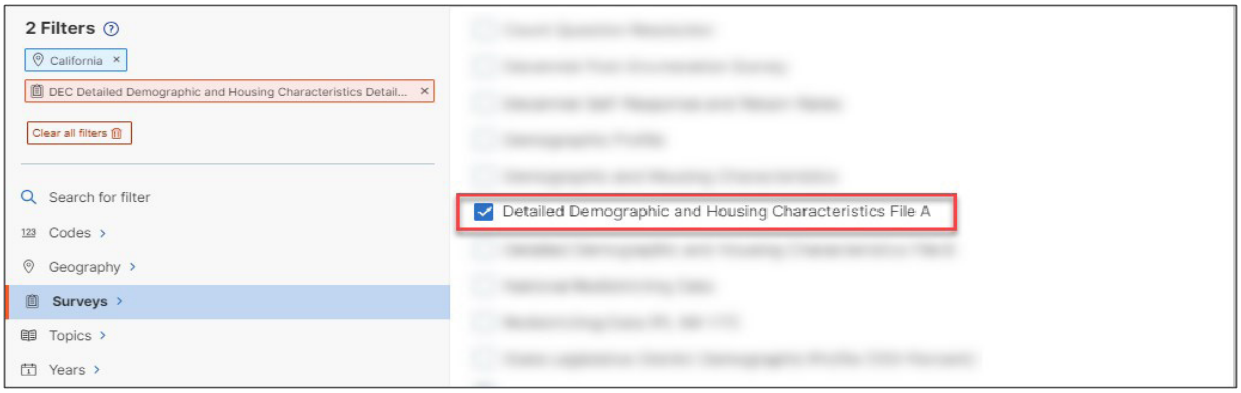
1. Go to <https://data.census.gov/> and click on the “Advanced Search” button below the search bar.

2. Use the panel on the left side of the screen to add filters to your search. If you would like the data for a certain geography, it is typically recommended that you add that to your search first. For this example, click on “Geography,” then “State,” and then check the box for “California.”

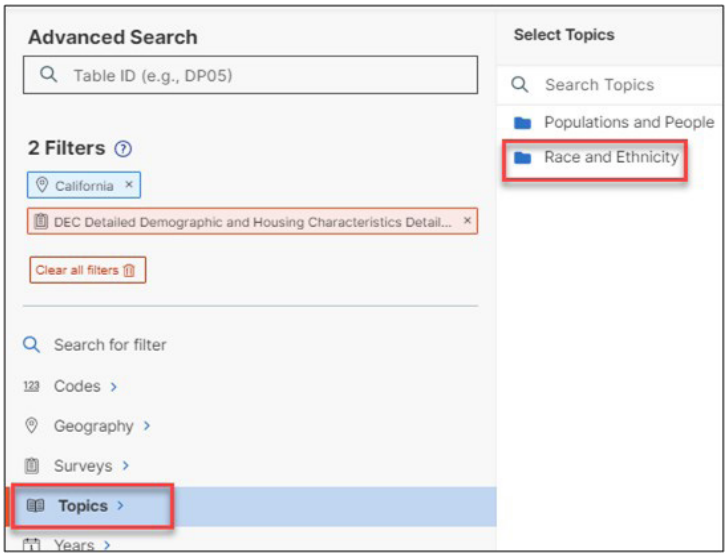


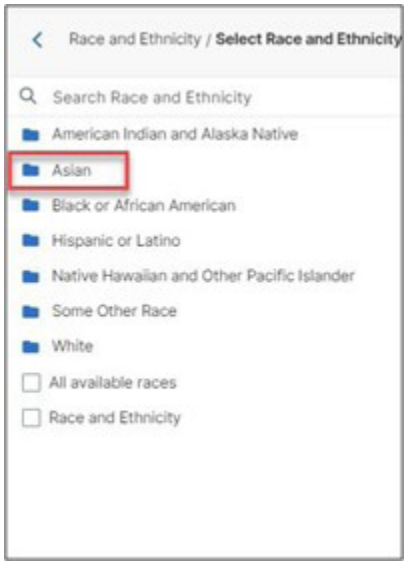
3. On the left side of the screen, click on “Surveys,” then “Decennial Census,” and then “Detailed Demographic and Housing Characteristics File A.”





4. To specifically find data on the Afghan population by adding it to this search, navigate back to the left side of the screen and click on “Topics,” then “Race and Ethnicity,” and then “Asian.”





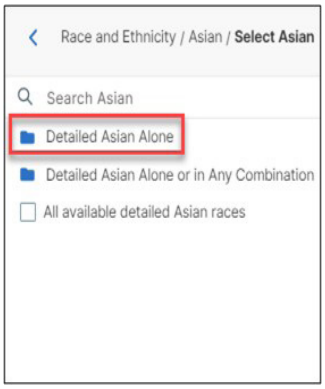
You will observe three different options available:

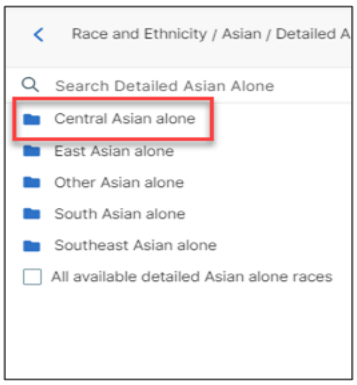
a. Detailed Asian Alone: using these will give you data on those who reported a single entry (e.g., Korean) and no other race(s).

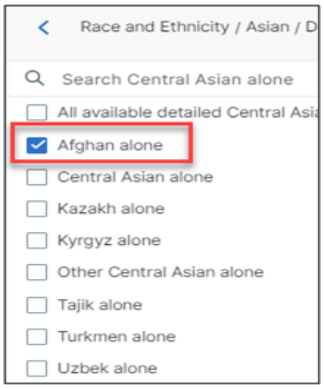
b. Detailed Asian Alone or in Any Combination: using these will give you data on those who reported a single entry, such as those mentioned above, and those who reported that entry with one or more other races (e.g., Korean and Thai, or Korean and Black or African American).

c. All available detailed Asian races: using this option will give you data on any of the detailed Asian alone groups, as well as the detailed Asian alone or in any combination groups, that are available.

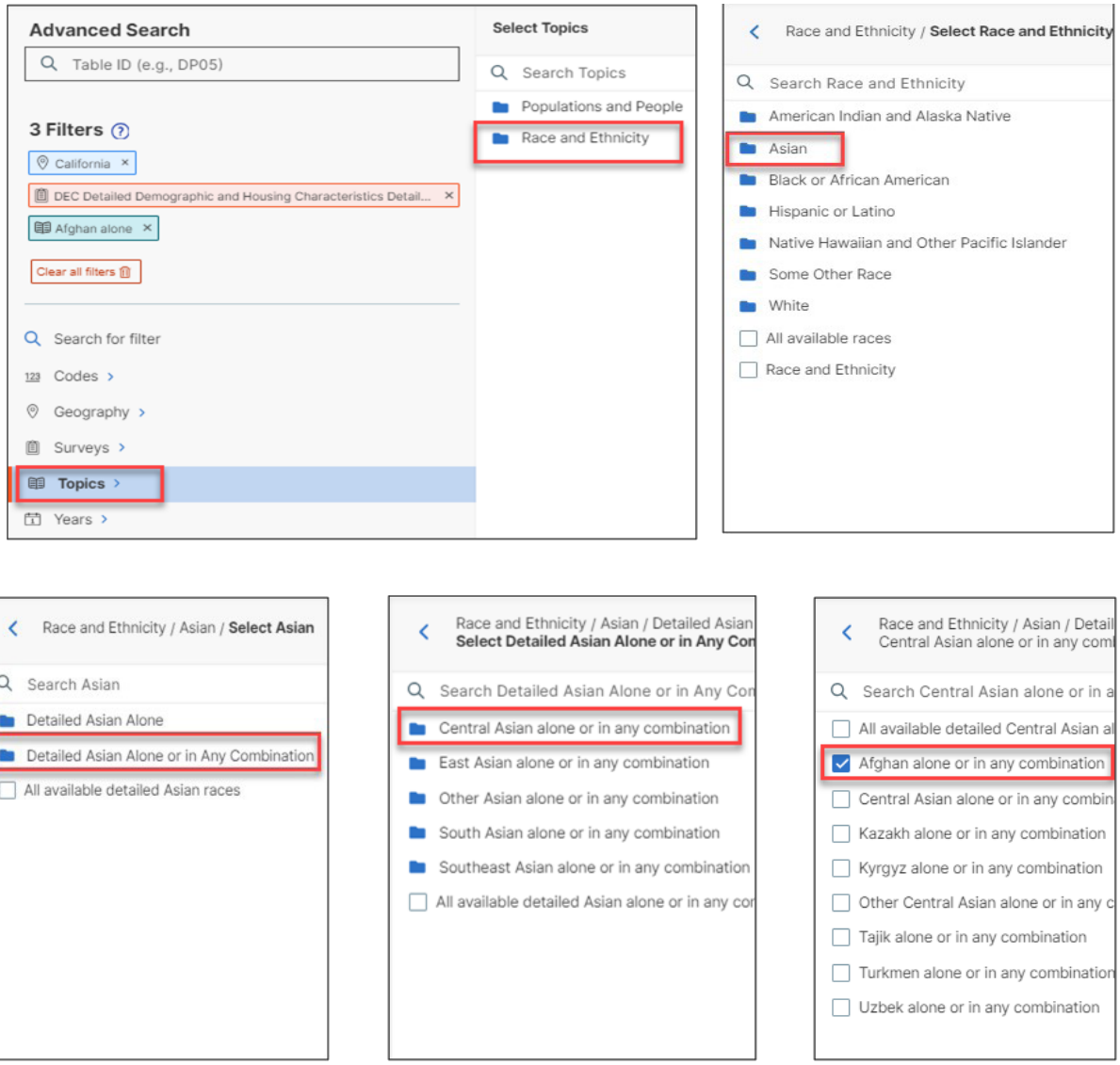
For this example, click on “Detailed Asian Alone,” then “Central Asian alone,” and then check the box for “Afghan alone.”



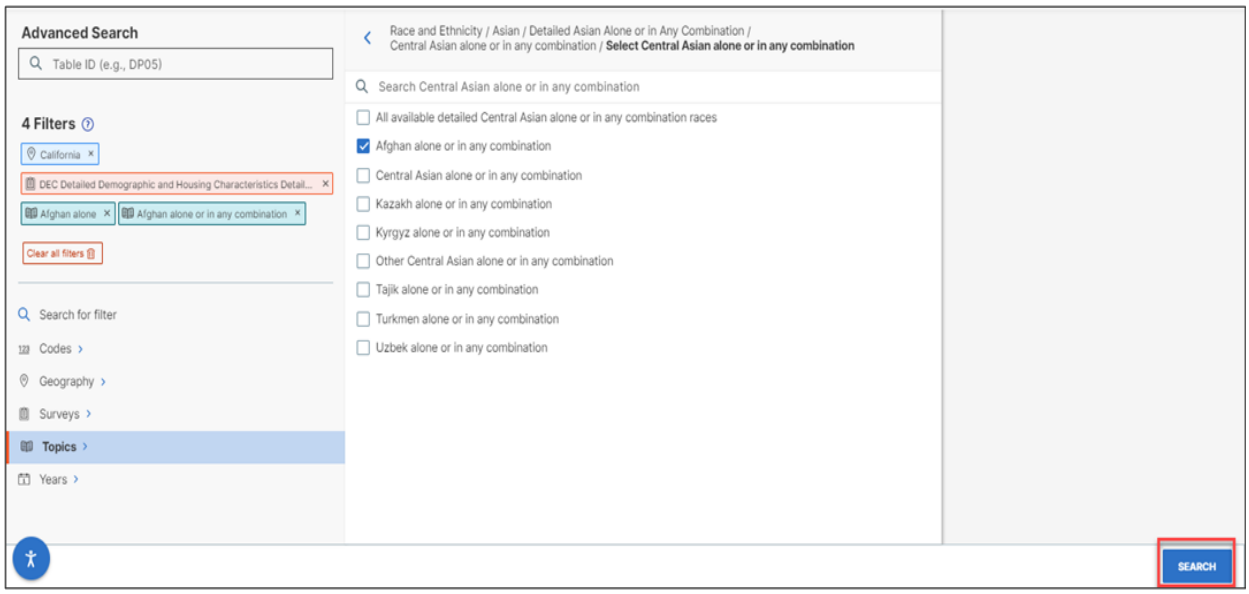




Then click on “Topics,” then “Race and Ethnicity,” then “Asian,” then “Detailed Asian Alone or in Any Combination,” then “Central Asian alone or in any combination,” and then check the box for “Afghan alone or in any combination.”



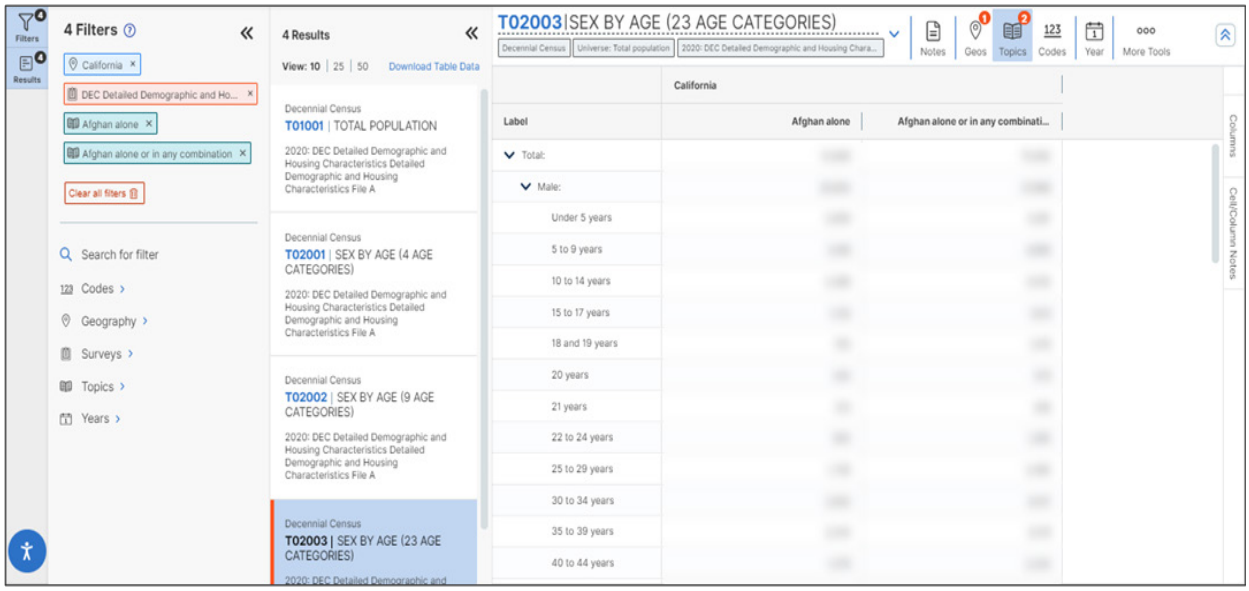
5. With these selections made, click the “Search” button in the lower right corner of the screen.



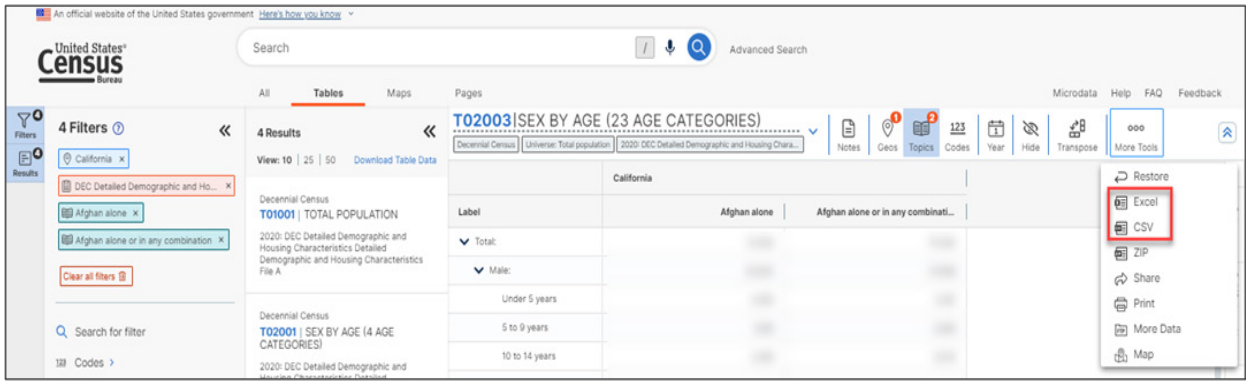
You may observe up to four tables, but not all tables may have data for your group of interest.

This example will focus on table T02003 “Sex by Age (23 Age Categories)” to view the available sex by age data for the Afghan population in California.

You can observe that you have a column of data for the selections made earlier—Afghan alone and Afghan alone or in any combination—in California. The Afghan alone column gives us data on those who reported themselves as only being Afghan. The Afghan alone or in any combination column gives us data on those who reported themselves as only Afghan and those who reported themselves as being Afghan with one or more additional races.



6. To export the table in a presentation-friendly format to Excel, click on the “Excel” button. The CSV button will also export the table, only in a CSV format.



Within the exported version in Excel, you will find information on the table on the first worksheet, while the actual table of data are found on the second worksheet.

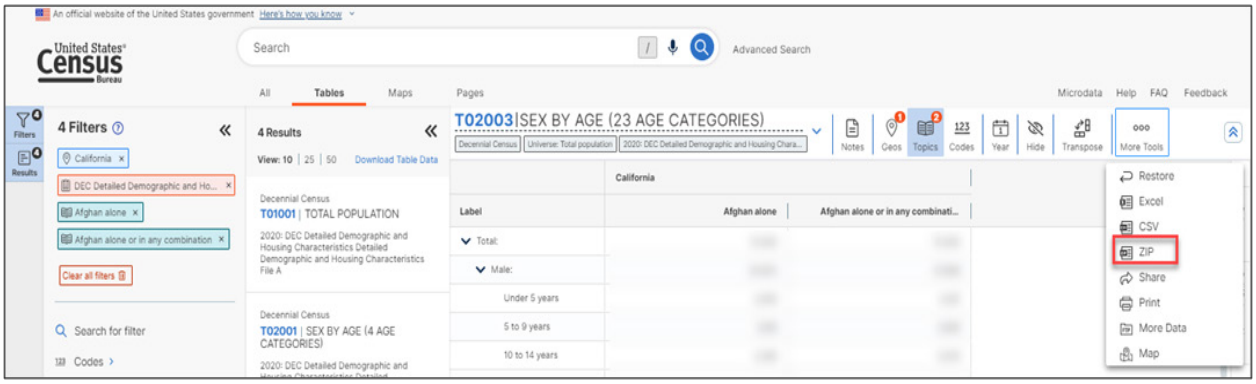
	A	B	C	D
1	**SEX BY AGE (23 AGE CATEGORIES)**		United States Census Bureau	
2				
3	**Note: The table shown may have been modified by user selections. Some information may be missing.**			
4				
5	**DATA NOTES**			
6	TABLE ID:	T02003		
7	SURVEY/PROGRAM:	Decennial Census		
8	VINTAGE:	2020		
9	DATASET:	DECENNIALDDHCA2020		
10	PRODUCT:	DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A		
11	UNIVERSE:	Total population		
12	FTP URL:	[redacted]		
13	API URL:	[redacted]		
14				
15	**USER SELECTIONS**			
16	GEOS	California		
17	DATASETS	DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A		
18	TOPICS	Afghan alone; Afghan alone or in any combination		
19				
20	**EXCLUDED COLUMNS**	None		
21				
22	**APPLIED FILTERS**	None		

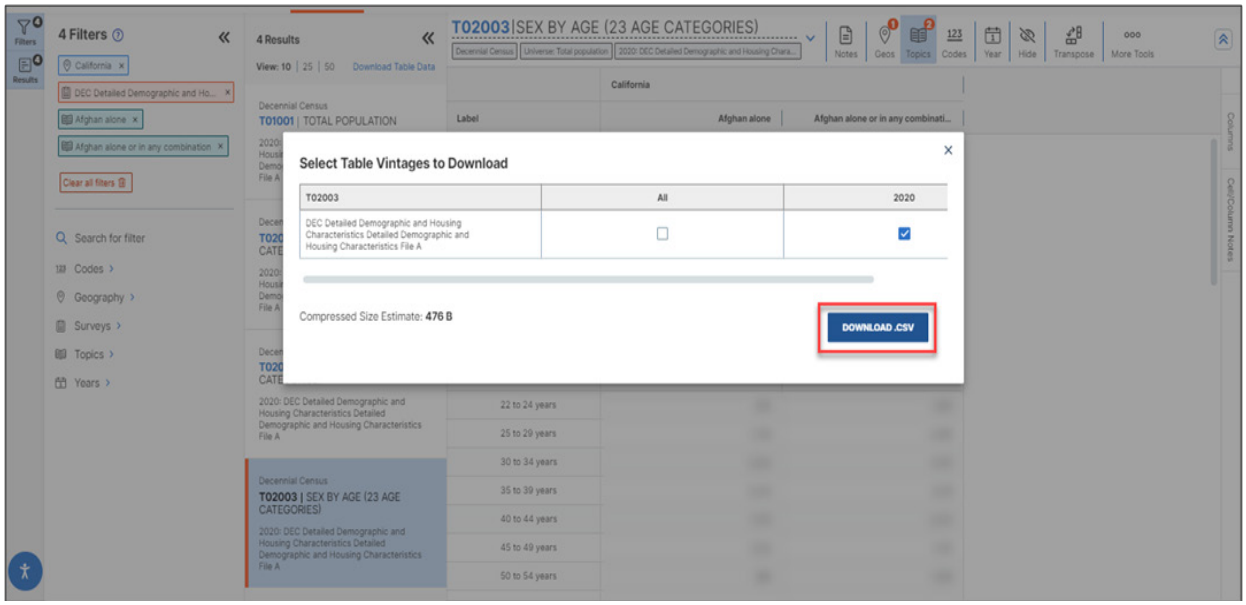
Information | Data

	A	B	C	D	E	F	G	H	I
1		California							
2	Label	Afghan alone	Afghan alone or in any combination						
3	Total:	[redacted]	[redacted]						
4	Male:	[redacted]	[redacted]						
5	Under 5 years	[redacted]	[redacted]						
6	5 to 9 years	[redacted]	[redacted]						
7	10 to 14 years	[redacted]	[redacted]						
8	15 to 17 years	[redacted]	[redacted]						
9	18 and 19 years	[redacted]	[redacted]						
10	20 years	[redacted]	[redacted]						
11	21 years	[redacted]	[redacted]						
12	22 to 24 years	[redacted]	[redacted]						
13	25 to 29 years	[redacted]	[redacted]						
14	30 to 34 years	[redacted]	[redacted]						
15	35 to 39 years	[redacted]	[redacted]						
16	40 to 44 years	[redacted]	[redacted]						
17	45 to 49 years	[redacted]	[redacted]						
18	50 to 54 years	[redacted]	[redacted]						
19	55 to 59 years	[redacted]	[redacted]						
20	60 and 61 years	[redacted]	[redacted]						
21	62 to 64 years	[redacted]	[redacted]						

Information | Data

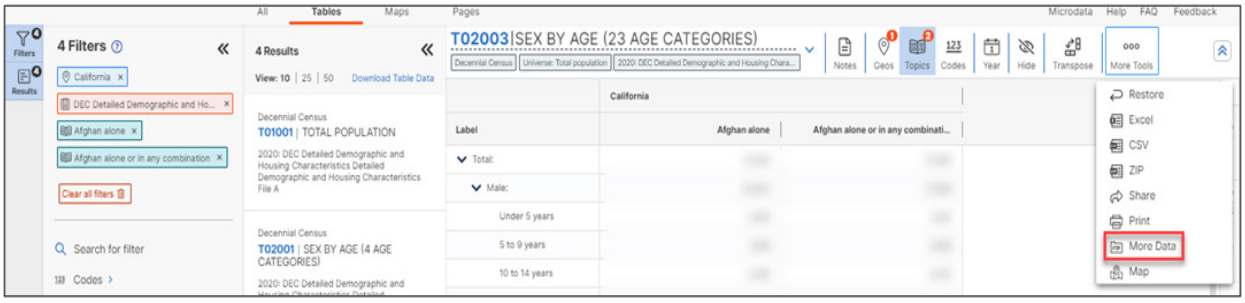
Use the ZIP button to download the table in a flat machine-readable format. The downloaded version of the table is where data users can easily find the GEO_ID tag. Click on the “ZIP” button and then click on the “Download .CSV” button that appears in the pop-up panel.

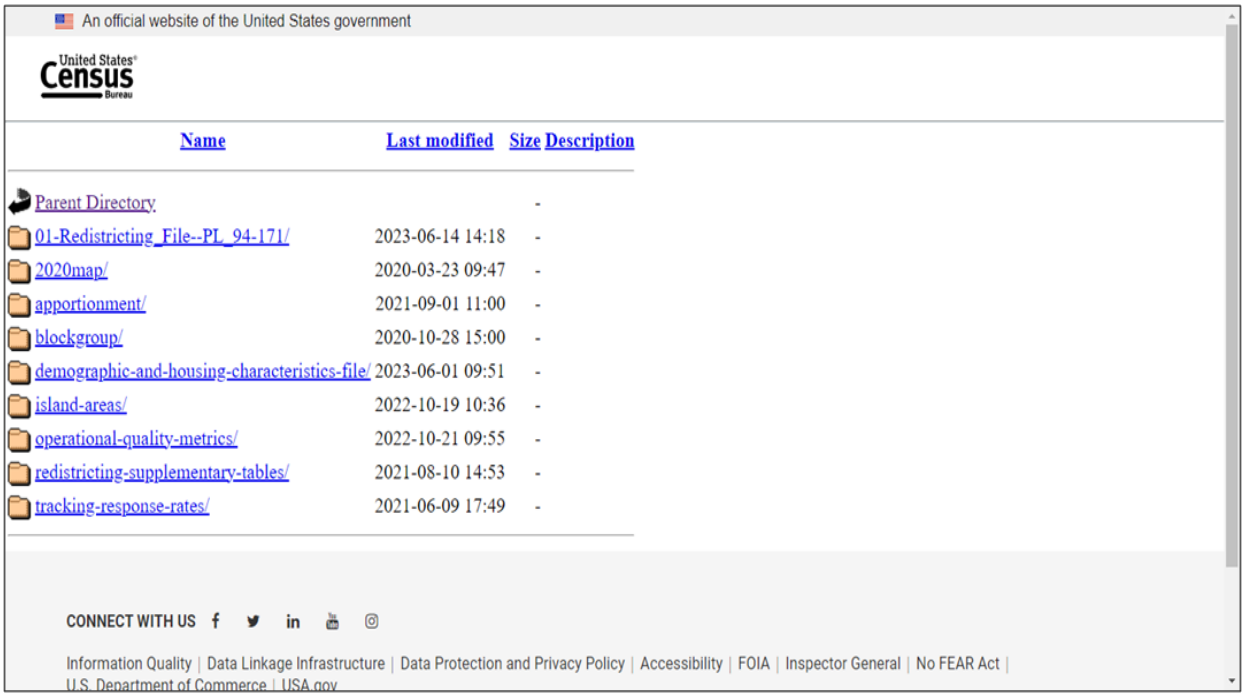




	A	B	C	D	E	F	G	H	I
1	GEO_ID	NAME	T02003_001N	T02003_001NA	POPGROUP	POPGROUP_LABEL	T02003_002N	T02003_002NA	T02003_003N
2	Geography	Geographic Area Name	!!Total:	Annotation of !!Total:	Race/Ethnic Group	Population Groups	!!Total:!!Male:	Annotation of !!Total:!!Male:	!!Total:!!Male:!!Under 5 years
3	0400000US06	California				Afghan alone			
4	0400000US06	California				Afghan alone or in any combination			
5									

To access these data via the FTP site, click on the “More Data” button. The FTP site is a great way to do a bulk download of the data.

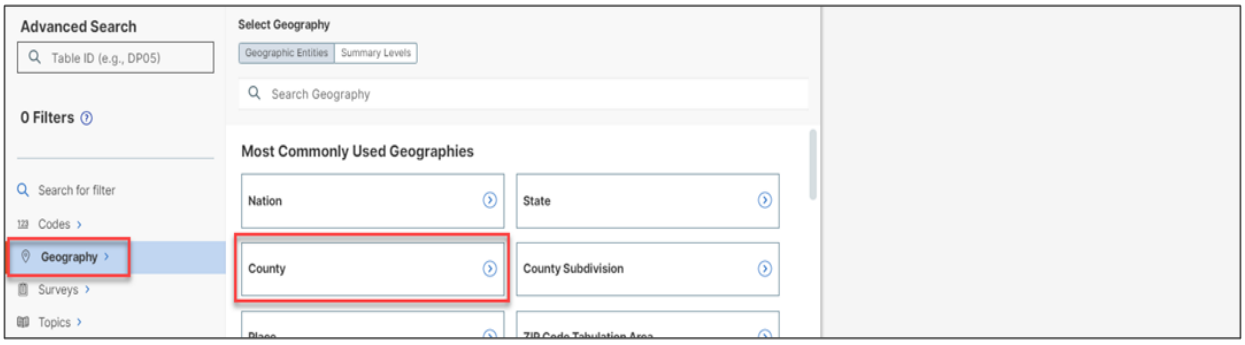


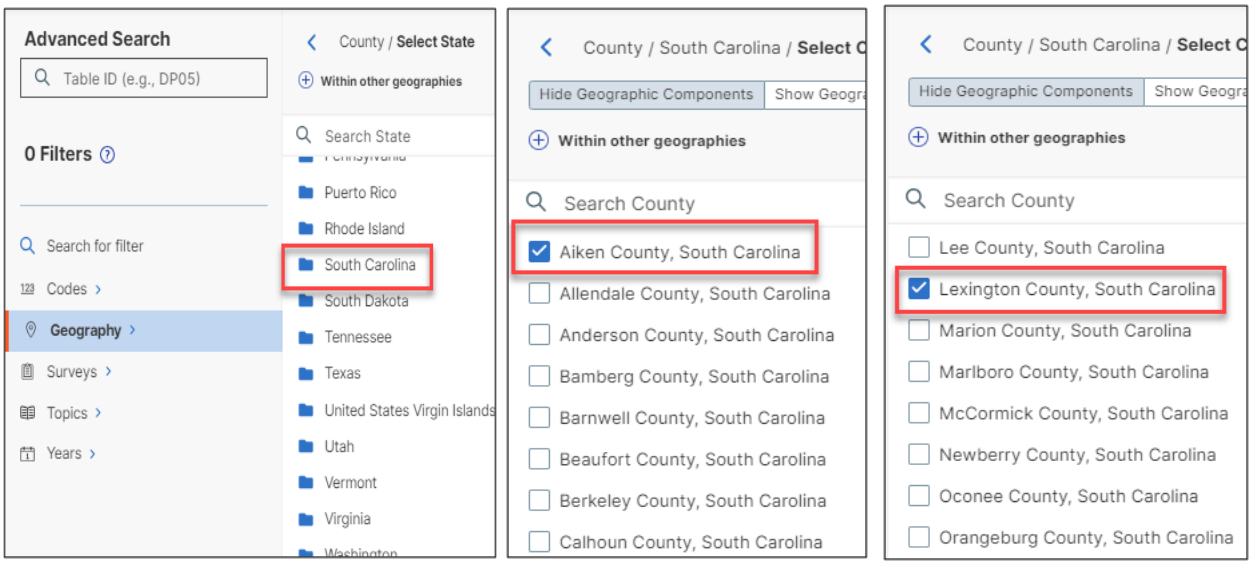


Using data.census.gov: Locating a table for the Puerto Rican Population and viewing the data in a map.

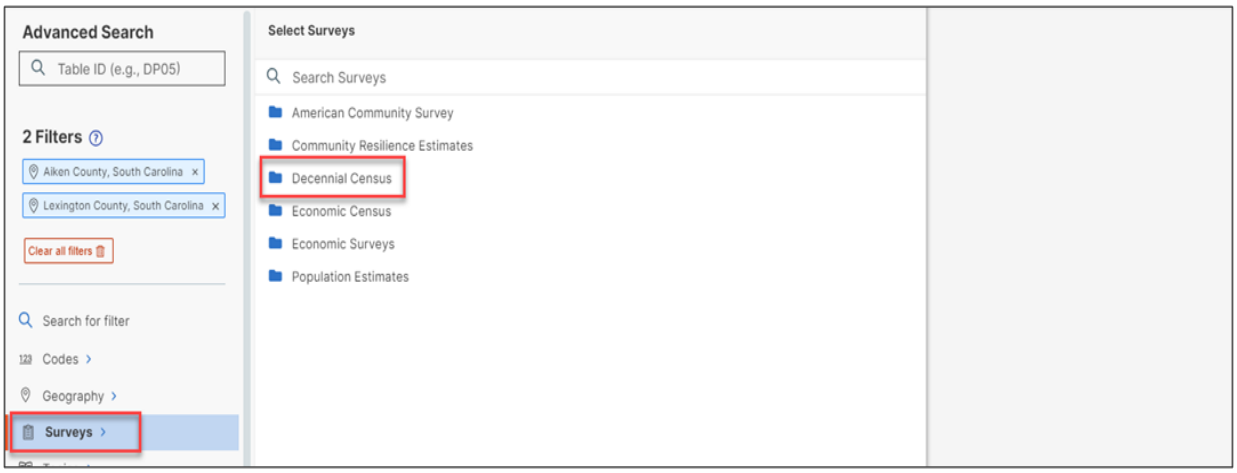
1. Go to <https://data.census.gov/> and click on the "Advanced Search" button found below the search bar.

2. Use the panel on the left side of the screen to add filters to your search. If you would like the data for a certain geography, it is recommended that you add that to your search first. For this example, click on "Geography," then "County," then "South Carolina," and then check the boxes for "Aiken" and "Lexington" counties.

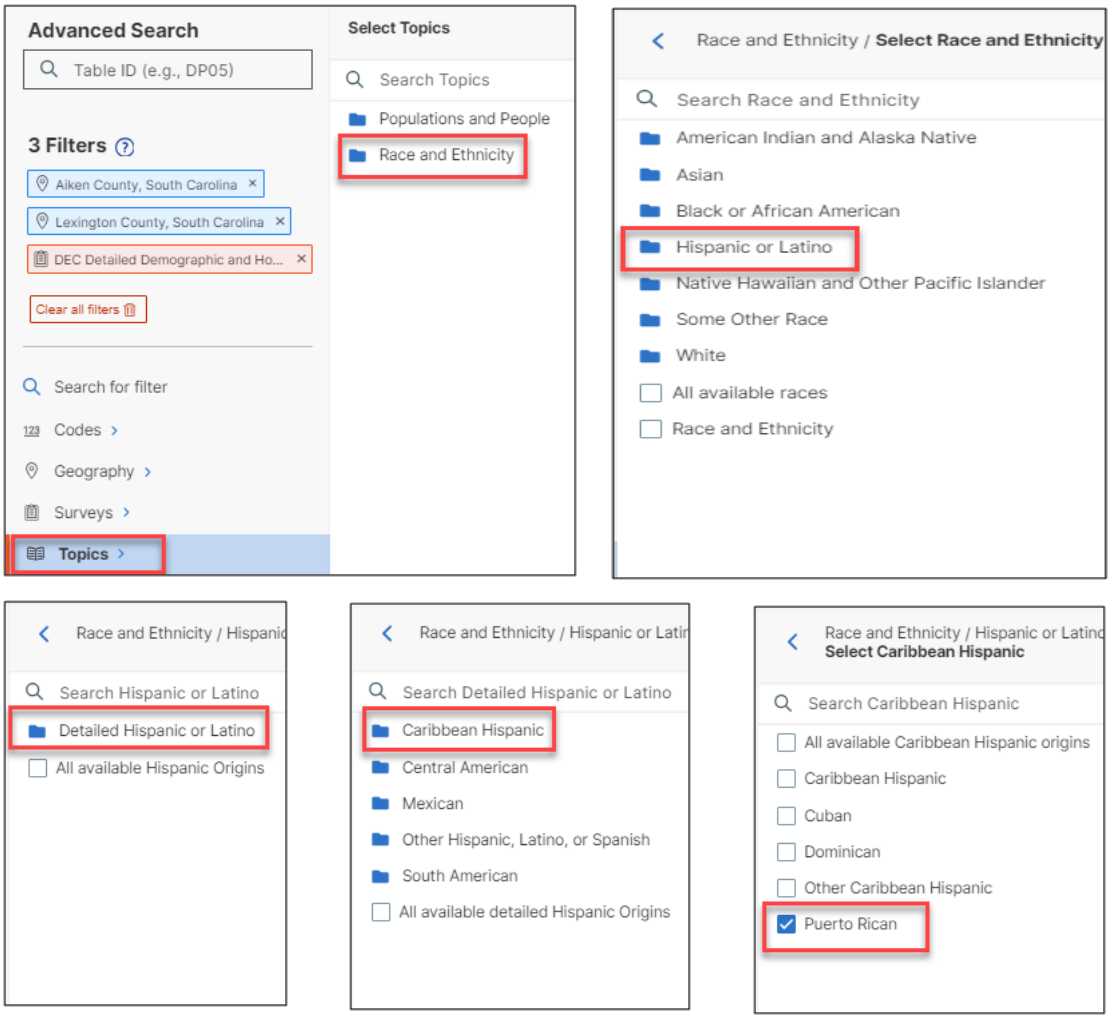




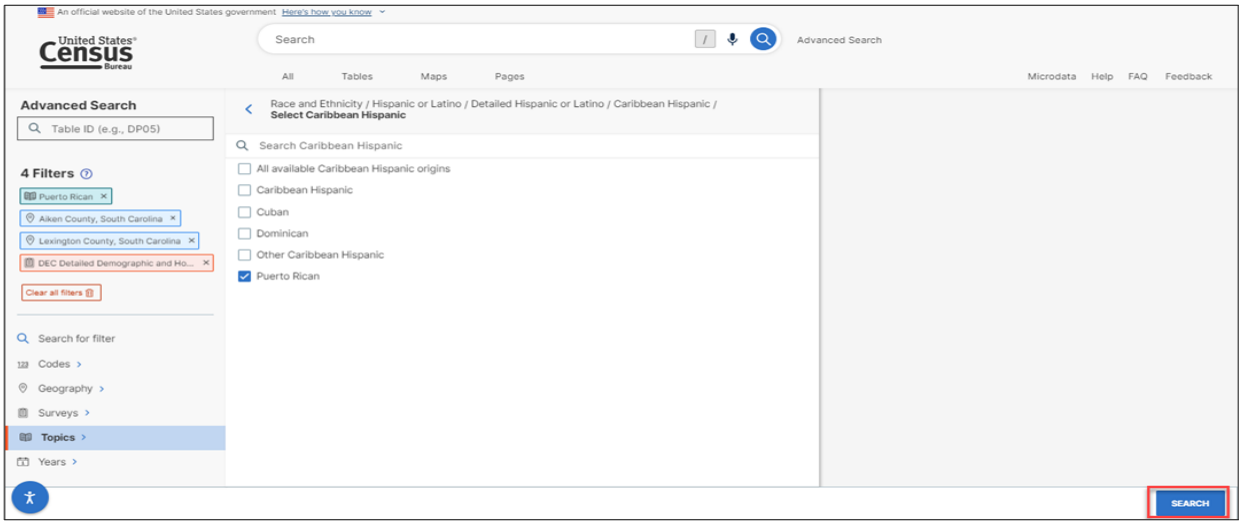
3. On the left side of the screen, click on "Surveys," then "Decennial Census," and then check the box for "Detailed Demographic and Housing Characteristics File A."



4. You want to specifically find data on the Puerto Rican population. To add this to the search, look on the left side of the screen and click on “Topics,” then “Race and Ethnicity,” then “Hispanic or Latino,” then “Detailed Hispanic or Latino,” then “Caribbean Hispanic,” and then check the box for “Puerto Rican.”

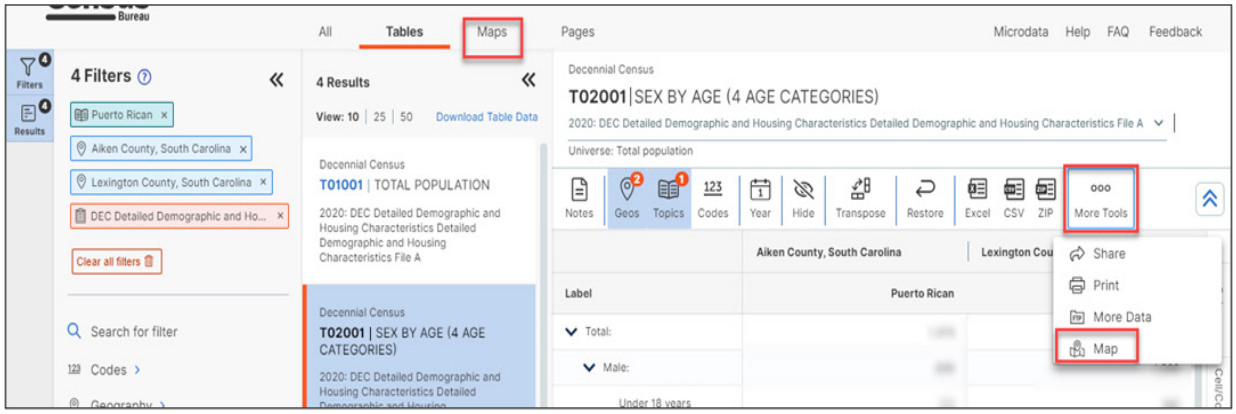


5. With these selections made, click the “Search” button in the lower right corner of the screen.

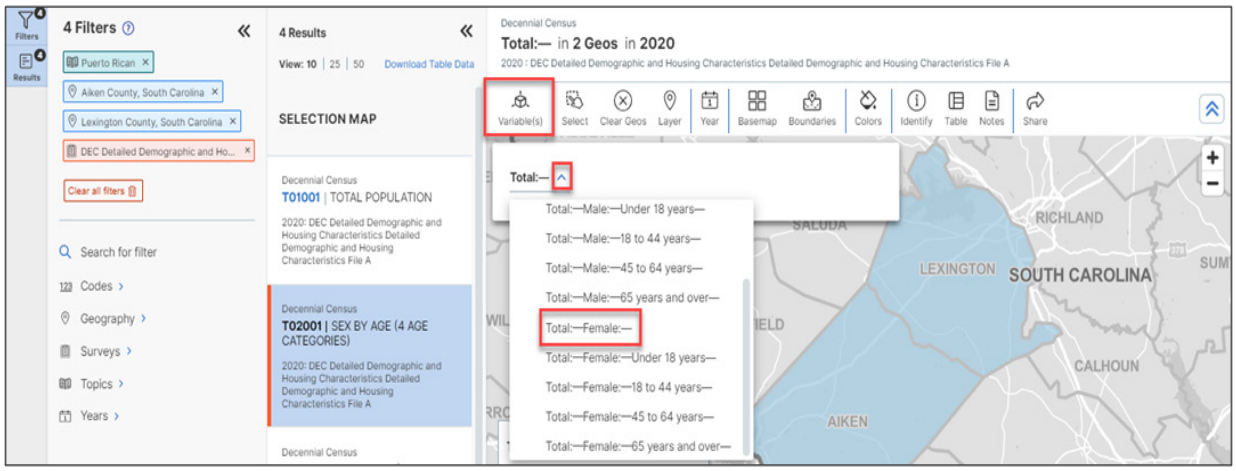


You may observe up to four tables, but not all tables may have data for your group of interest. Click on table “T01001” for the population count of the Puerto Rican population in these counties. Click on table “T02001 Sex by Age (4 Age Categories)” to view the sex by age data available for the Puerto Rican population. You can observe that you have columns of data for the Puerto Rican population for both counties.

6. To view a map of this data, click on the “Maps” tab above the table or on the “Map” button found in the ribbon (in this instance, under the “More Tools” option).

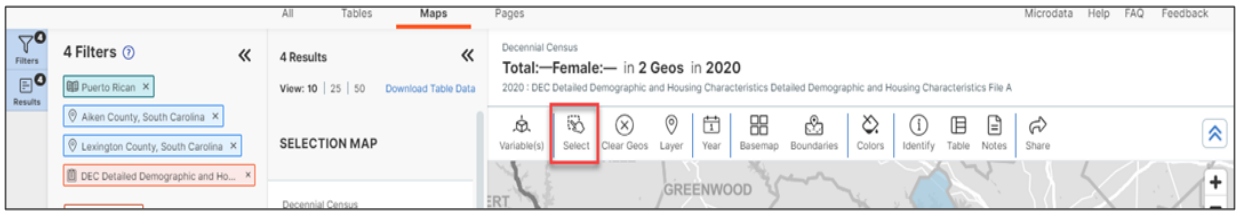


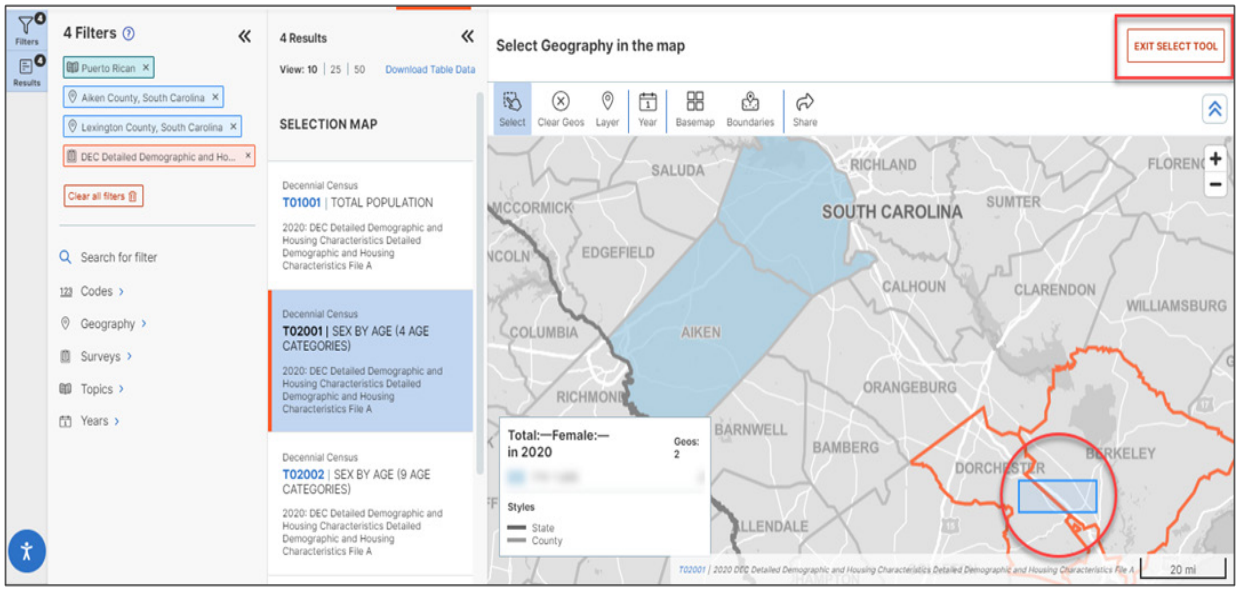
7. The map should zoom to the two counties. Right now, the map is displaying the total population data for the first line in table T02001. To change what is showing in the map to something from table T02001 besides the total population, click on the “Variable(s)” button, then the chevron, and make a selection. For this example, change it to Total—Female.



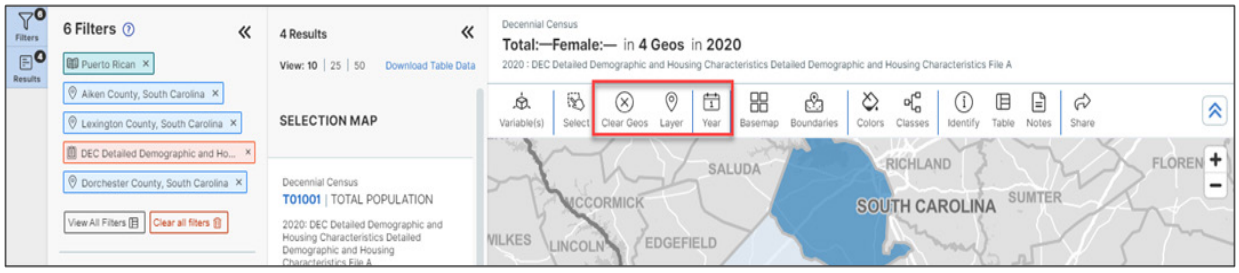
8. Now that the variable showing in the map has changed, and the map has updated, let's go over some of the other buttons found in the map ribbon.

   The "Select" button can be used to add more geographies to your search. If you wanted to add some other counties for comparison, navigate to the geographies of interest in the map, click on the "Select" button, left-click on one of the geographies you'd like to add, and while holding the left-side button of the mouse, drag the mouse to create the blue rectangle. Anything that touches the blue rectangle will get added to the search. Once you are done making your selections, click on the "Exit Select Tool" button.

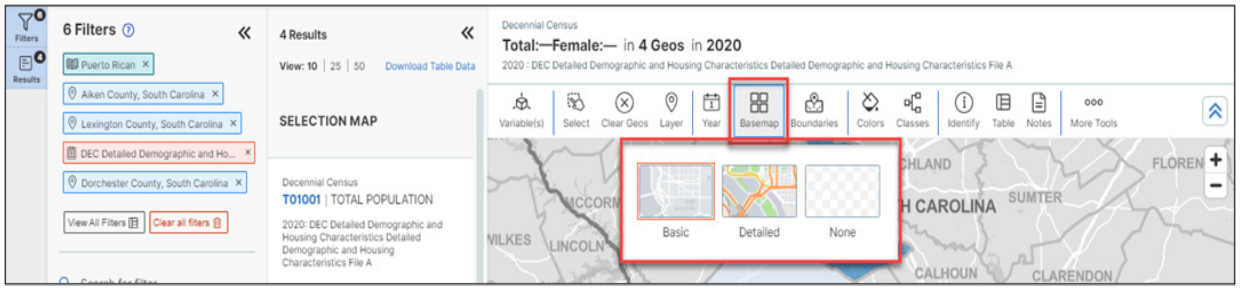


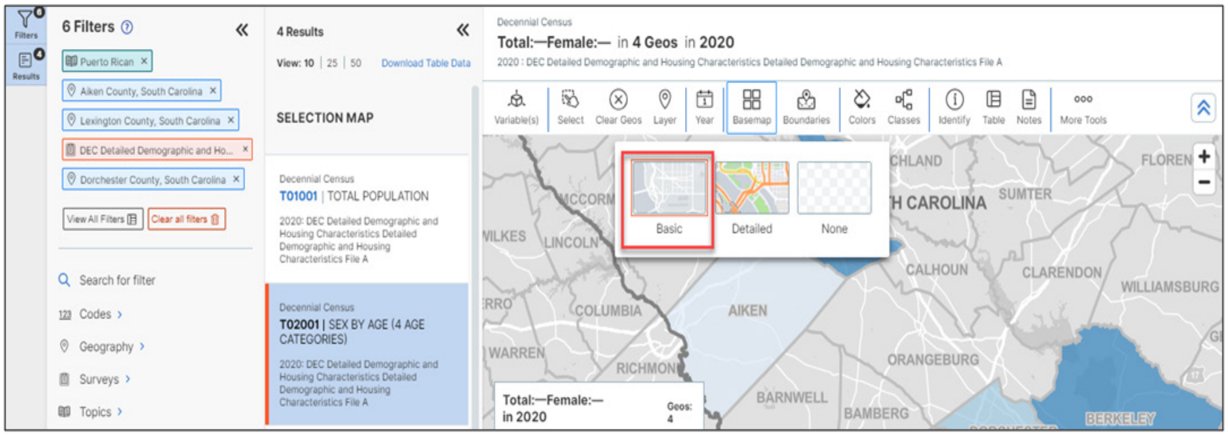


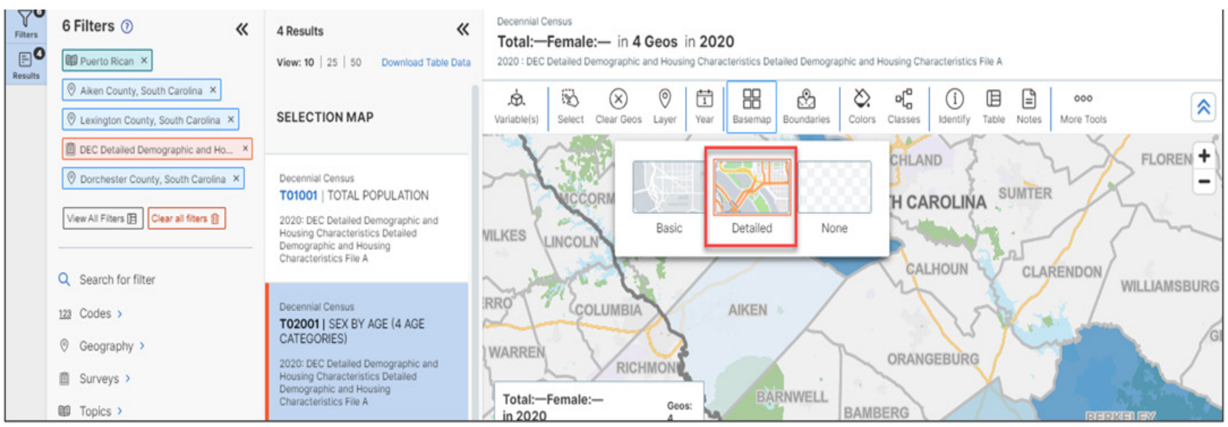
   The "Clear Geos" button will allow you to quickly remove the selected geographies from your search. The "Layer" button allows you to look at a map of other types of geographies. The "Year" button allows you to toggle between years of data when they are available.

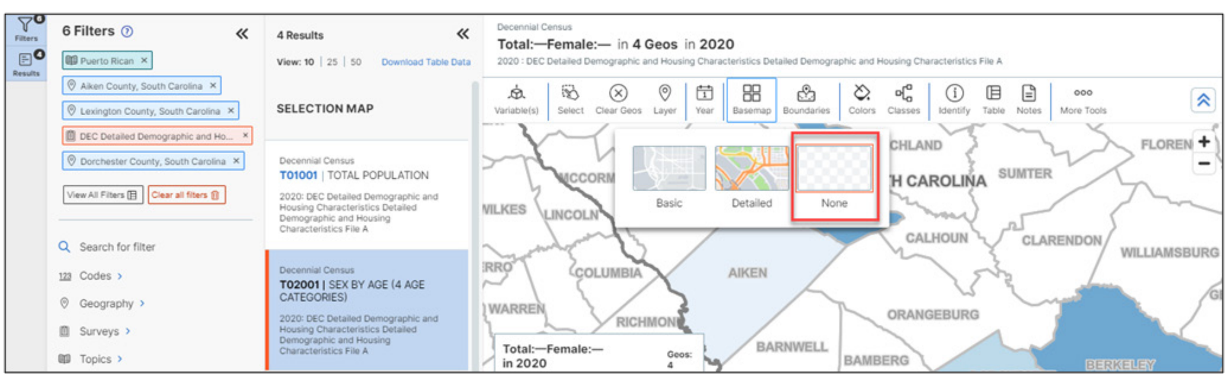


   The "Basemap" button allows you to change the detail found in the map by switching to a different base map. The map defaults to the "Basic" view. The "Detailed" view shows roadways and other landmarks more clearly. The "None" option provides a blank white map that doesn't show any roadways or other landmarks. Click on the "Basemap" button again to close the menu.

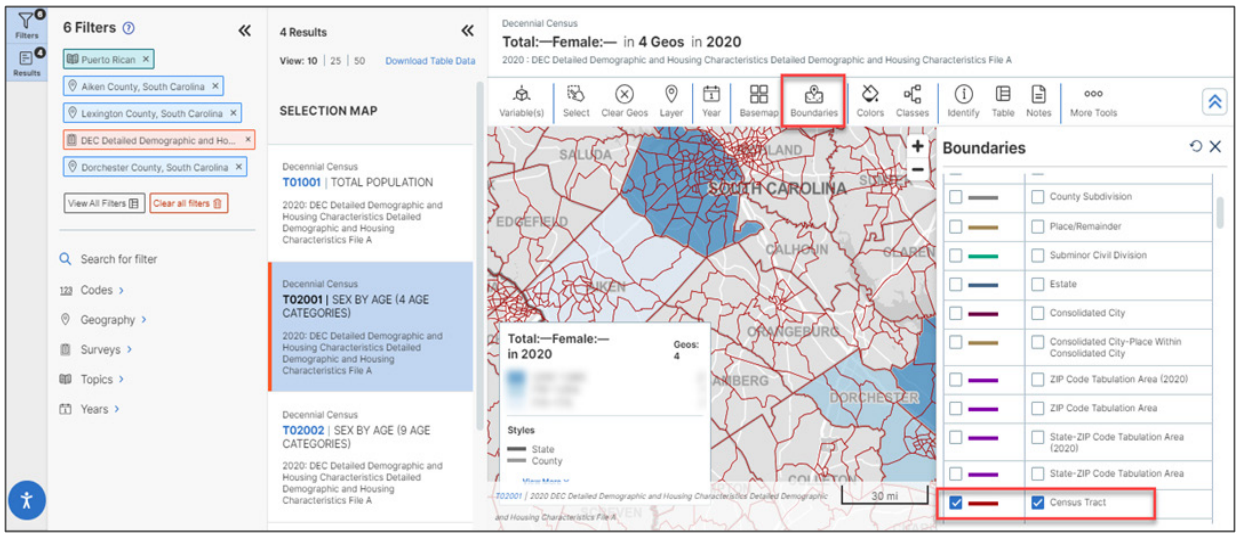

Filters
Results
6 Filters
Puerto Rican
Aiken County, South Carolina
Lexington County, South Carolina
DEC Detailed Demographic and Ho...
Dorchester County, South Carolina
View All Filters
Clear all filters
4 Results
View: 10 | 25 | 50
Download Table Data
SELECTION MAP
Decennial Census
T01001 | TOTAL POPULATION
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
Total:—Female:— in 4 Geos in 2020
2020 : DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Variable(s)
Select
Clear Geos
Layer
Year
Basemap
Boundaries
Colors
Classes
Identify
Table
Notes
More Tools
Basic
Detailed
None
H CAROLINA
SUMTER
CALHOUN
CLARENDON
LINCOLN


Filters
Results
6 Filters
Puerto Rican
Aiken County, South Carolina
Lexington County, South Carolina
DEC Detailed Demographic and Ho...
Dorchester County, South Carolina
View All Filters
Clear all filters
Search for filter
Codes
Geography
Surveys
Topics
4 Results
View: 10 | 25 | 50
Download Table Data
SELECTION MAP
Decennial Census
T01001 | TOTAL POPULATION
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
T02001 | SEX BY AGE (4 AGE CATEGORIES)
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
Total:—Female:— in 4 Geos in 2020
2020 : DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Variable(s)
Select
Clear Geos
Layer
Year
Basemap
Boundaries
Colors
Classes
Identify
Table
Notes
More Tools
Basic
Detailed
None
H CAROLINA
SUMTER
CALHOUN
CLARENDON
WILLIAMSBURG
LINCOLN
COLUMBIA
AIKEN
WARREN
RICHMOND
ORANGEBURG
BARNWELL
BAMBERG
BERKELEY
Total:—Female:—
in 2020
Geos:
4

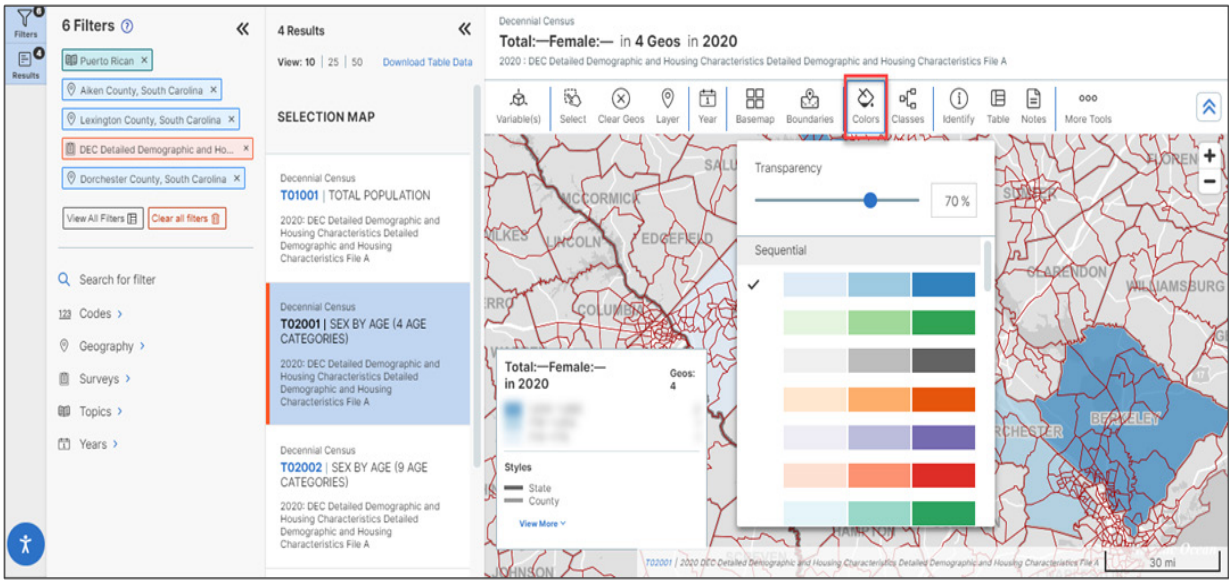

Filters
Results
6 Filters
Puerto Rican
Aiken County, South Carolina
Lexington County, South Carolina
DEC Detailed Demographic and Ho...
Dorchester County, South Carolina
View All Filters
Clear all filters
Search for filter
Codes
Geography
Surveys
Topics
4 Results
View: 10 | 25 | 50
Download Table Data
SELECTION MAP
Decennial Census
T01001 | TOTAL POPULATION
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
T02001 | SEX BY AGE (4 AGE CATEGORIES)
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
Total:—Female:— in 4 Geos in 2020
2020 : DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Variable(s)
Select
Clear Geos
Layer
Year
Basemap
Boundaries
Colors
Classes
Identify
Table
Notes
More Tools
Basic
Detailed
None
H CAROLINA
SUMTER
CALHOUN
CLARENDON
WILLIAMSBURG
LINCOLN
COLUMBIA
AIKEN
WARREN
RICHMOND
ORANGEBURG
BARNWELL
BAMBERG
Total:—Female:—
in 2020
Geos:
4


Filters
Results
6 Filters
Puerto Rican
Aiken County, South Carolina
Lexington County, South Carolina
DEC Detailed Demographic and Ho...
Dorchester County, South Carolina
View All Filters
Clear all filters
Search for filter
Codes
Geography
Surveys
Topics
4 Results
View: 10 | 25 | 50
Download Table Data
SELECTION MAP
Decennial Census
T01001 | TOTAL POPULATION
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
T02001 | SEX BY AGE (4 AGE CATEGORIES)
2020: DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Decennial Census
Total:—Female:— in 4 Geos in 2020
2020 : DEC Detailed Demographic and Housing Characteristics Detailed Demographic and Housing Characteristics File A
Variable(s)
Select
Clear Geos
Layer
Year
Basemap
Boundaries
Colors
Classes
Identify
Table
Notes
More Tools
Basic
Detailed
None
H CAROLINA
SUMTER
CALHOUN
CLARENDON
WILLIAMSBURG
LINCOLN
COLUMBIA
AIKEN
WARREN
RICHMOND
ORANGEBURG
BARNWELL
BAMBERG
BERKELEY
Total:—Female:—
in 2020
Geos:
4

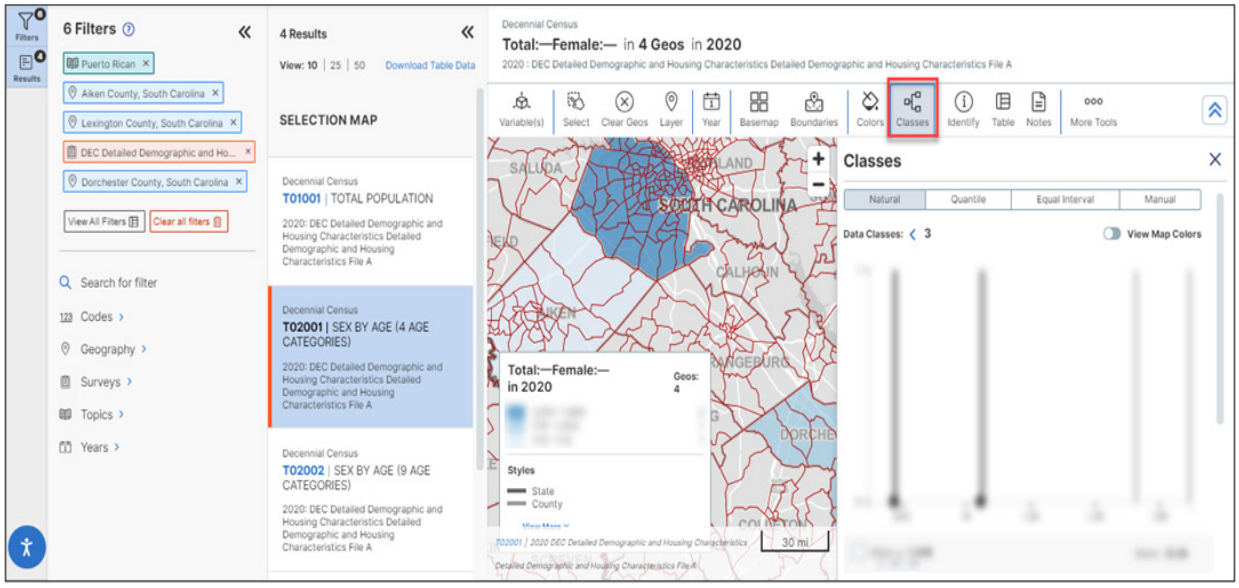
The “Boundaries” button allows you to add boundaries for other geographies to your map. For example, if you wanted to observe how the census tract boundaries compare with the county boundaries, you can scroll down the list and check the boxes next to “Census Tract.” Each geography selection has a different color boundary associated with it; the one for Census Tracts happens to be red. To remove the boundaries, just uncheck both boxes. To close the panel, click the “Boundaries” button again or click on the “X” in the upper right corner of the panel.



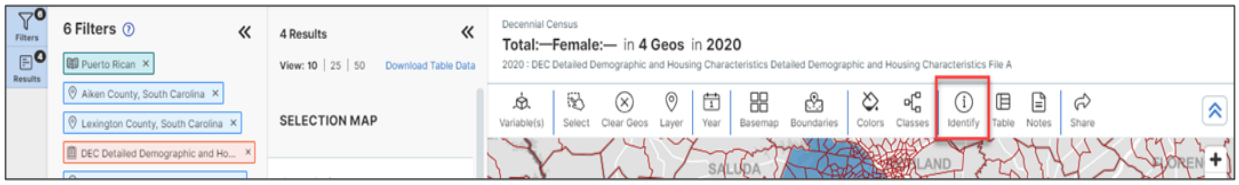
The “Colors” button allows you to change the map from the default color scheme to a different one. To close the “Colors” menu, click on the button again.



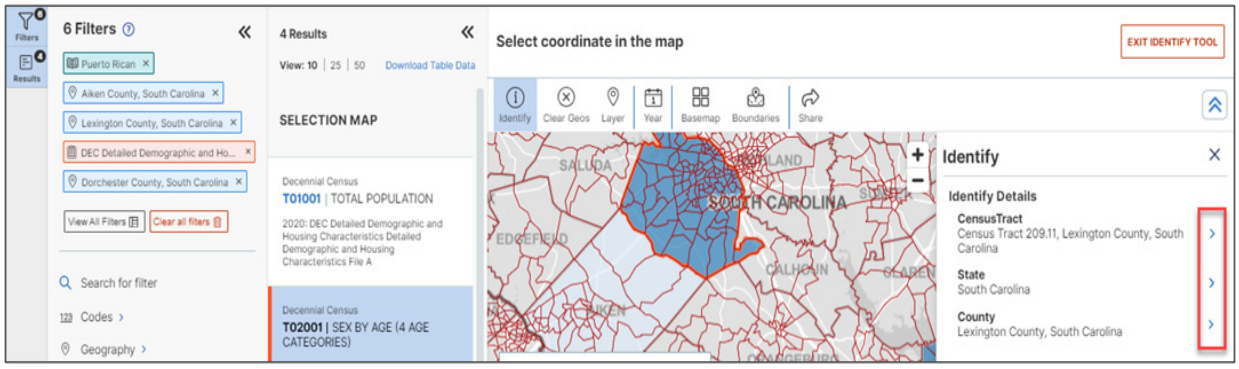
The “Classes” button allows you to change the data classes. You can use natural, quantile, or equal interval breaks. You also have the option to manually create your own breaks. Click on the button again to close the panel.



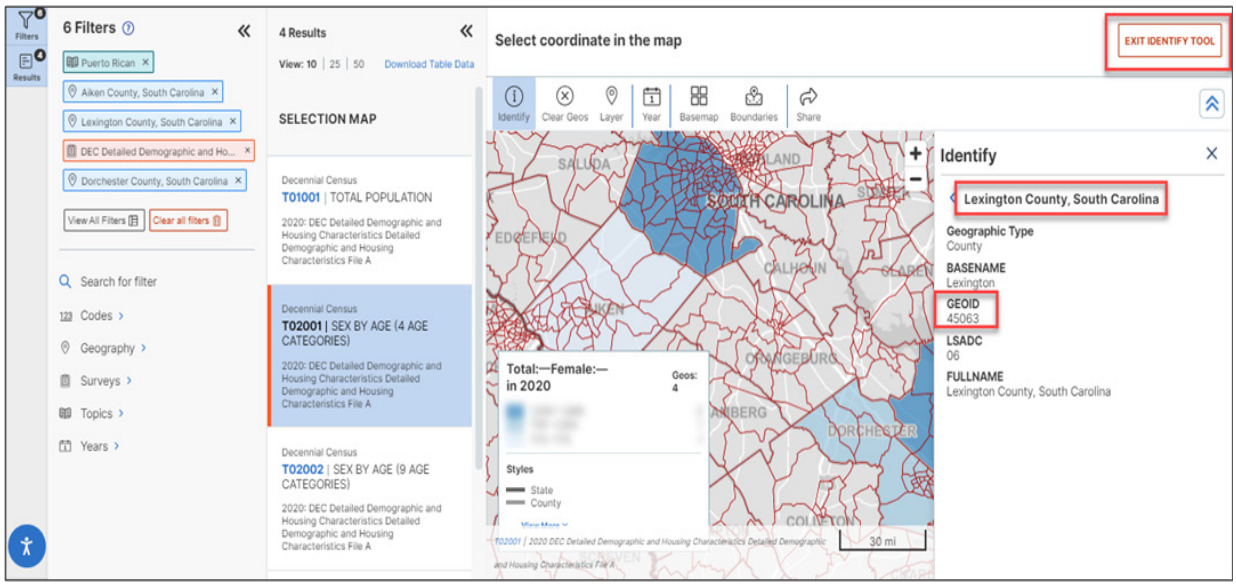
Clicking on the “Identify” button takes you to the Identify Tool.



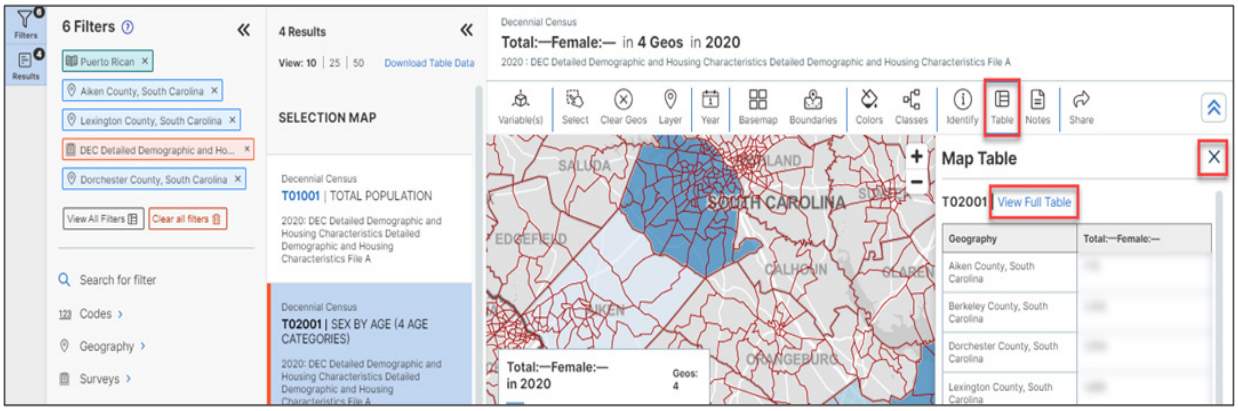
Once the tool is open, click on any geography to find out more information about it. The information displayed is directly related to the information that is already used within the map. If you click on the chevron, you’ll find additional geographic information.



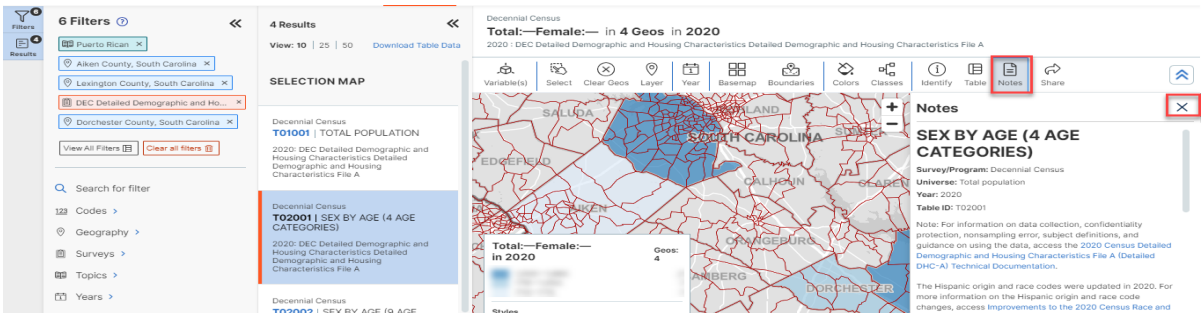
This is one of the ways that you can find the GEOID for a geography. To exit the Identify Tool, click on the “EXIT IDENTIFY TOOL” button in the upper corner.



The “Table” button allows you to view the data for the specific variable you have selected for all the geographies. To close out of it, click on the “X” button in the right corner of the panel. If you want to go back to view the entire table, rather than just a handful of data one at a time, you can click on the “View Full Table” button.



The “Notes” button will show you relevant notes for the map that you are viewing, including the source information. To close the “Notes” button, click on it again, or click on the “X” in the corner of the panel.

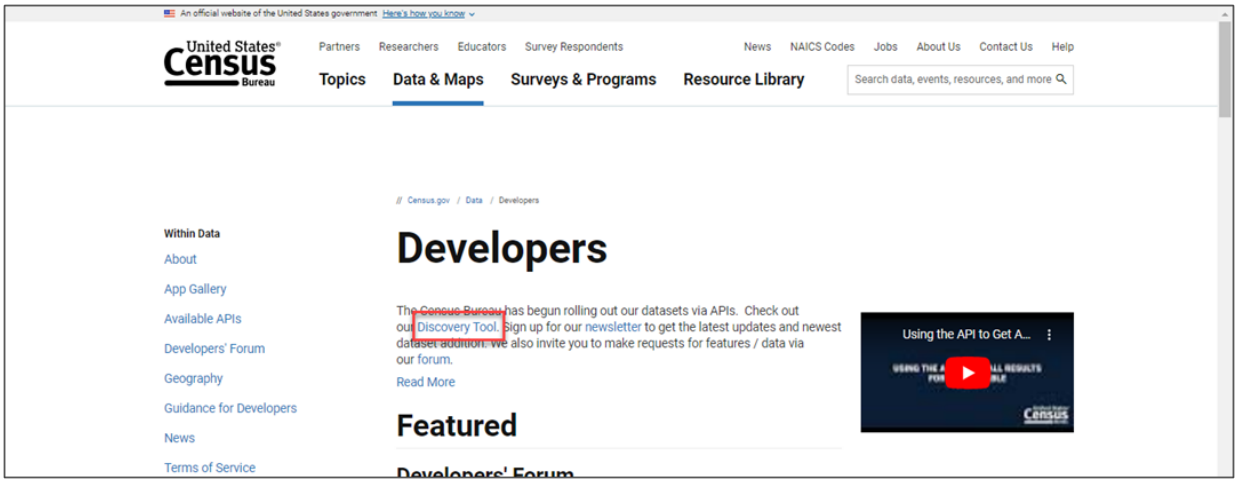


The “Share” button gives you the URL that you can easily use to share the map to social media or with someone else.

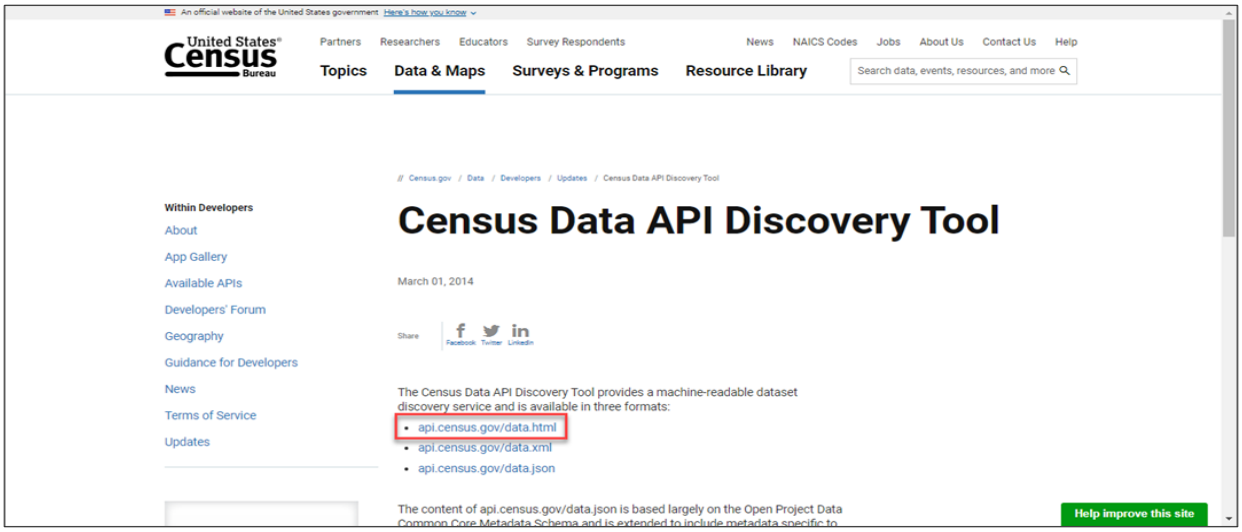
Using the Census Data API: Finding Individual Estimates for a Detailed Population Group

1. The goal with this example is to use the Census Data API to find data for males and females aged 18 to 24 years and 25 to 34 years who reported being only Native Hawaiian for all counties in Hawaii.

   Using your web browser, go to the census.gov developers page at <www.census.gov/data/developers.html>. Under the “Developers” heading, click on the link to the “Discovery Tool.”



2. Next, click on the format that you would like to view the Discovery Tool in. For this example, click on the “html” version.



3. The Discovery Tool houses all the different datasets found in the Census Data API. To locate the 2020 Detailed Demographic and Housing Characteristics dataset, click on "Ctrl + F" and type "Detailed Demographic and Housing Characteristics" into the search bar that appears. This will take you directly to the correct dataset. To isolate the information for this dataset from the other 1,500+ datasets found on this page, click on the "API Base" URL found in the last column and add ".html" to the end of it. The resulting URL should be <https://api.census.gov/data/2020/dec/ddhca.html>.
4. Find the variables that you need. To get the full list of variables, right-click on the "Variables" link and choose "Open link in new tab."

Census API: Datasets in /data/2020/dec/ddhca and its descendants

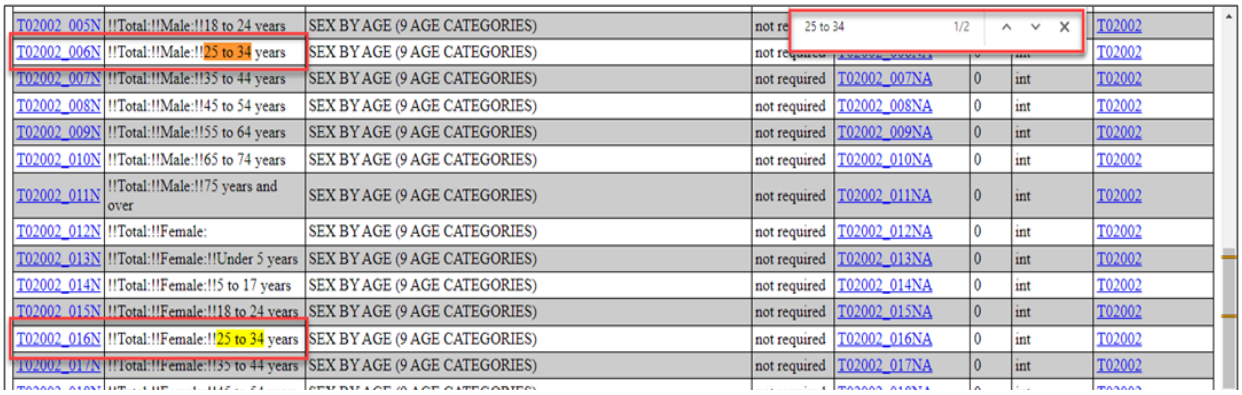
Title	Description	Vintage	Dataset Name	Dataset Type	Geography List	Variable List	Group List	SortList	Examples	Developer Documentation	API I
Decennial Census: Detailed Demographic and Housing Characteristics: Detailed Demographic and Housing Characteristics File A	This product provides the population counts and sex and age statistics for detailed racial and ethnic groups and American Indian and Alaska Native tribes and villages.	2020	dec› ddhca	Aggregate	geographies	variables	groups	sorts	examples	documentation	http:/
1 dataset											

5. Find the age group variables that you need. Click on "Ctrl + F" and type "18 to 24" in the resulting text box. There are two variables that match this that you want to take note of: T02002_005N (Total Male 18 to 24 years) and T02002_015N (Total Female 18 to 24 years).

18 to 24 1/2

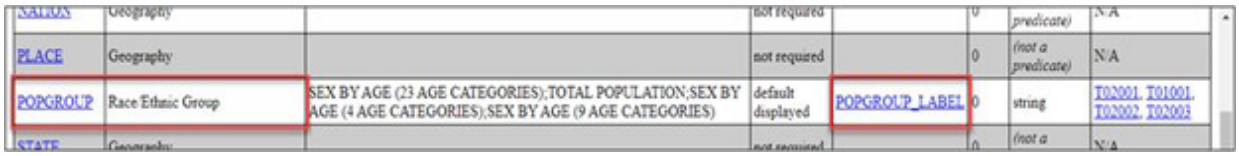
T02002_004N	!!Total:!!Male:!!5 to 17 years	SEX BY AGE (9 AGE CATEGORIES)	not re					T02002
T02002_005N	!!Total:!!Male:!!18 to 24 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_005NA	0	int		T02002
T02002_006N	!!Total:!!Male:!!25 to 34 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_006NA	0	int		T02002
T02002_007N	!!Total:!!Male:!!35 to 44 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_007NA	0	int		T02002
T02002_008N	!!Total:!!Male:!!45 to 54 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_008NA	0	int		T02002
T02002_009N	!!Total:!!Male:!!55 to 64 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_009NA	0	int		T02002
T02002_010N	!!Total:!!Male:!!65 to 74 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_010NA	0	int		T02002
T02002_011N	!!Total:!!Male:!!75 years and over	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_011NA	0	int		T02002
T02002_012N	!!Total:!!Female:	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_012NA	0	int		T02002
T02002_013N	!!Total:!!Female:!!Under 5 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_013NA	0	int		T02002
T02002_014N	!!Total:!!Female:!!5 to 17 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_014NA	0	int		T02002
T02002_015N	!!Total:!!Female:!!18 to 24 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_015NA	0	int		T02002
T02002_016N	!!Total:!!Female:!!25 to 34 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_016NA	0	int		T02002

Then delete “18 to 24” and type “25 to 34.” Again, there are two variables that match this that you want to take note of: T02002_006N (Total male 25 to 34 years) and T02002_016N (Total Female 25 to 34 years).



T02002_005N	!!Total:!!Male:!!18 to 24 years	SEX BY AGE (9 AGE CATEGORIES)	not re	25 to 34 1/2				T02002
T02002_006N	!!Total:!!Male:!!25 to 34 years	SEX BY AGE (9 AGE CATEGORIES)	not re					T02002
T02002_007N	!!Total:!!Male:!!35 to 44 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_007NA	0	int		T02002
T02002_008N	!!Total:!!Male:!!45 to 54 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_008NA	0	int		T02002
T02002_009N	!!Total:!!Male:!!55 to 64 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_009NA	0	int		T02002
T02002_010N	!!Total:!!Male:!!65 to 74 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_010NA	0	int		T02002
T02002_011N	!!Total:!!Male:!!75 years and over	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_011NA	0	int		T02002
T02002_012N	!!Total:!!Female:	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_012NA	0	int		T02002
T02002_013N	!!Total:!!Female:!!Under 5 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_013NA	0	int		T02002
T02002_014N	!!Total:!!Female:!!5 to 17 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_014NA	0	int		T02002
T02002_015N	!!Total:!!Female:!!18 to 24 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_015NA	0	int		T02002
T02002_016N	!!Total:!!Female:!!25 to 34 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_016NA	0	int		T02002
T02002_017N	!!Total:!!Female:!!35 to 44 years	SEX BY AGE (9 AGE CATEGORIES)	not required	T02002_017NA	0	int		T02002

6. The only other variable you will need for this is the one called “POPGROUP.” You will need this because you want to get data for the people who reported themselves as being Native Hawaiian with no other race(s). Take note of this variable name, as well as its related label variable, “POPGROUP_LABEL.”



NATION	Geography		not required		0	predicate)	N/A	
PLACE	Geography		not required		0	(not a predicate)	N/A	
POPGROUP	Race Ethnic Group	SEX BY AGE (23 AGE CATEGORIES);TOTAL POPULATION;SEX BY AGE (4 AGE CATEGORIES);SEX BY AGE (9 AGE CATEGORIES)	default displayed	POPGROUP_LABEL	0	string	T02001, T01001, T02002, T02003	
STATE	Geography		not required		0	(not a	N/A	

7. Now that you have the variables you need, return to the information page where you initially selected the variables link. To get a list of example queries, right-click on the “Examples” link and choose “Open link in new tab.”

Census API: Datasets in /data/2020/dec/ddhca and its descendants

Title	Description	Vintage	Dataset Name	Dataset Type	Geography List	Variable List	Group List	SortList	Examples	Developer Documentation	API
Decennial Census: Detailed Demographic and Housing Characteristics: Detailed Demographic and Housing Characteristics File A	This product provides the population counts and sex and age statistics for detailed racial and ethnic groups and American Indian and Alaska Native tribes and villages.	2020	dec› ddhca	Aggregate	geographies	variables	groups	sorts	examples	documentation	http:/

1 dataset

8. Here you can find example links for all the geographies that are available with the 2020 Detailed Demographic and Housing Characteristics File-A dataset. For this example, you are looking at county-level data, so you will want to focus on the queries found for "Geography Level" (or "Summary Level") 050.

Census API: Examples for /data/2020/dec/ddhca

Geography Hierarchy	Geography Level	Example URL	Number
us	010	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE	1
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE	2
state	040	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE	3
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE	4
state› county	050	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE	5
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE	6
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE	7
state› county› tract	140	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:*&in=state:06&key=YOUR_KEY_GOES_HERE	8
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:*&in=state:06&in=county:*&key=YOUR_KEY_GOES_HERE	9
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:018700&in=state:06%20county:073&key=YOUR_KEY_GOES_HERE	10
state› place	160	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&key=YOUR_KEY_GOES_HERE	11
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&in=state:*&key=YOUR_KEY_GOES_HERE	12
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:51000&in=state:36&key=YOUR_KEY_GOES_HERE	13
american indian area/alaska native area/hawaiian home land	250	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=american%20indian%20area/alaska%20native%20area/hawaiian%20home%20land:*&key=YOUR_KEY_GOES_HERE	14
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=american%20indian%20area/alaska%20native%20area/hawaiian%20home%20land:5620&key=YOUR_KEY_GOES_HERE	15

The "&for" portion of the query dictates the geography. The first two queries are going to give you data for all counties in the United States. You can tell that they are going to give data for all counties because they use the wildcard (represented by an asterisk). The difference between the two is that the second query spells it out for all counties in all states. This second query is useful because you could change the asterisk for the state to a two-digit FIPS code that is associated with each state.

Census API: Examples for /data/2020/dec/ddhca

Geography Hierarchy	Geography Level	Example URL	Number
us	010	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE	1
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE	2
state	040	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE	3
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE	4
state› county	050	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE	5
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE	6
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE	7

The last query allows you to look at data for a single county within a given state.

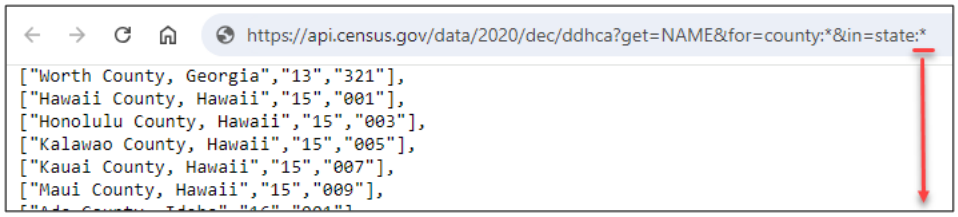
Census API: Examples for /data/2020/dec/ddhca

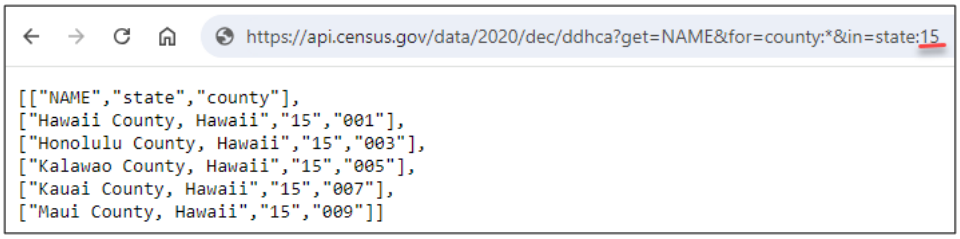
Geography Hierarchy	Geography Level	Example URL	Number
us	010	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE	1
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE	2
state	040	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE	3
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE	4
state› county	050	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE	5
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE	6
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE	7

For this example, let's use the second query: <https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&in=state:*>. Right-click on the second query and choose "Open link in new tab." When it opens, you will observe that it is listing all the counties in the United States (first portion of each line, labeled as "NAME"), along with their respective state FIPS code (second portion of each line, labeled as "state") and county code (last portion of each line, labeled as "county").


```
[["NAME","state","county"],
["Autauga County, Alabama","01","001"],
["Baldwin County, Alabama","01","003"],
["Barbour County, Alabama","01","005"],
["Bibb County, Alabama","01","007"],
["Blount County, Alabama","01","009"],
["Bullock County, Alabama","01","011"],
["Butler County, Alabama","01","013"],
["Calhoun County, Alabama","01","015"],
["Chambers County, Alabama","01","017"],
["Cherokee County, Alabama","01","019"],
["Chilton County, Alabama","01","021"],
["Choctaw County, Alabama","01","023"],
["Clarke County, Alabama","01","025"],
["Clay County, Alabama","01","027"],
["Cleburne County, Alabama","01","029"],
["Coffee County, Alabama","01","031"],
["Colbert County, Alabama","01","033"],
["Conecuh County, Alabama","01","035"],
["Coosa County, Alabama","01","037"],
["Covington County, Alabama","01","039"],
["Crenshaw County, Alabama","01","041"],
["Cullman County, Alabama","01","043"],
["Dale County, Alabama","01","045"],
```


Since you want data for all the counties in Hawaii, you need to first determine what the state FIPS code is for Hawaii. Click on "Ctrl + F" and type "Hawaii." When you locate the lines for Hawaii, you will observe that the state FIPS code is 15. Navigate to the top of the query and replace the asterisk after state: with "15." Then, click on "Enter." This isolates the geographies so that you only observe the counties in Hawaii.

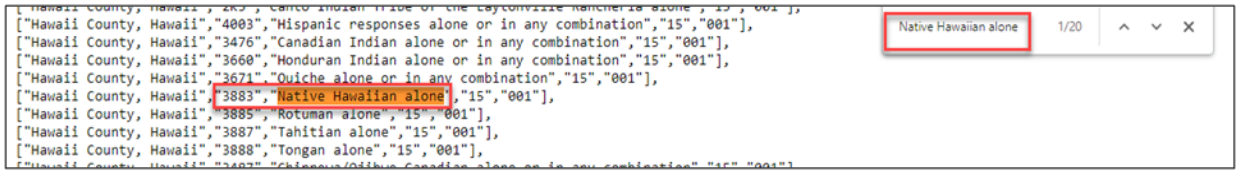




9. Next, look for the pop group code for the Native Hawaiian alone population. To get the full list of available pop groups and their respective codes, type in ",POPGROUP,POPGROUP_LABEL" right after "NAME" in the URL. Make sure to include commas to separate each variable, but do not include any spaces. Once you do this, the query should be <https://api.census.gov/data/2020/dec/ddhca?get=NAME,POPGROUP,POPGROUP_LABEL&for=county:*&in=state:15>. Once you click "Enter" to run this new query, you should observe a list of all the different population groups and their respective codes.

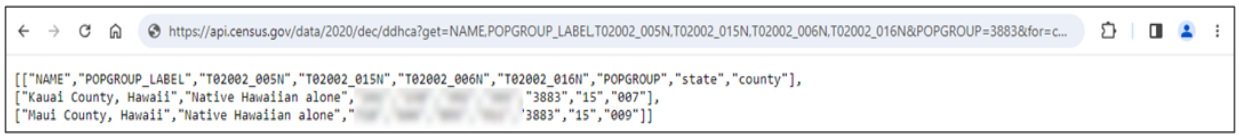
```
[["NAME","POPGROUP","POPGROUP_LABEL","state","county"],
["Hawaii County, Hawaii","58G","Luiseno alone or in any combination","15","001"],
["Hawaii County, Hawaii","65P","Te-Moak Tribes of Western Shoshone Indians of Nevada alone or in any combination","15","001"],
["Hawaii County, Hawaii","65W","Confederated Tribes of Siletz Indians of Oregon tribal grouping alone or in any combination","15","001"],
["Hawaii County, Hawaii","58R","Makah Indian tribal grouping alone or in any combination","15","001"],
["Hawaii County, Hawaii","58U","Mandan tribal grouping alone or in any combination","15","001"],
["Hawaii County, Hawaii","65Y","Blackfoot Sioux alone or in any combination","15","001"],
["Hawaii County, Hawaii","669","Liberia","15","001"],
["Hawaii County, Hawaii","538","Hungarian","15","001"],
["Hawaii County, Hawaii","598","Three or more races with Some Other Race","15","001"],
["Hawaii County, Hawaii","59F","Micmac alone or in any combination ","15","001"],
["Hawaii County, Hawaii","66I","Pine Ridge Sioux alone or in any combination","15","001"],
["Hawaii County, Hawaii","66L","Santee Sioux Nation, Nebraska alone or in any combination","15","001"],
["Hawaii County, Hawaii","53A","Bad River Band of the Lake Superior Tribe alone or in any combination","15","001"],
["Hawaii County, Hawaii","53D","Chippewa alone or in any combination","15","001"],
["Hawaii County, Hawaii","53F","Grand Portage alone or in any combination","15","001"],
["Hawaii County, Hawaii","66Q","Standing Rock Sioux Tribe alone or in any combination","15","001"],
["Hawaii County, Hawaii","66R","Teton Sioux alone or in any combination","15","001"],
["Hawaii County, Hawaii","53Q","Red Cliff Band of Lake Superior Chippewa alone or in any combination","15","001"],
["Hawaii County, Hawaii","53V","Sokaogon Chippewa Community alone or in any combination","15","001"],
["Hawaii County, Hawaii","67E","Cow Creek Band of Umpqua Indians of Oregon alone or in any combination","15","001"],
["Hawaii County, Hawaii","540","Iranian","15","001"],
["Hawaii County, Hawaii","8K8","Schaghticoke tribal grouping alone or in any combination","15","001"],
["Hawaii County, Hawaii","789","Sri Lanka","15","001"],
["Hawaii County, Hawaii","790","Tajikistan","15","001"],
["Hawaii County, Hawaii","8N9","Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota alone or in any combination","15","001"],
["Hawaii County, Hawaii","7B9","Haliwa-Saponi Indian tribal grouping alone or in any combination","15","001"],
["Hawaii County, Hawaii","8S2","Cold Springs Rancheria of Mono Indians alone or in any combination","15","001"],
["Hawaii County, Hawaii","8U0","Montauk alone or in any combination","15","001"],
["Hawaii County, Hawaii","8U5","Ponca Tribe of Nebraska alone or in any combination","15","001"],
["Hawaii County, Hawaii","607","Andean Indian alone or in any combination","15","001"],
["Hawaii County, Hawaii","608","Arawak alone or in any combination","15","001"],
["Hawaii County, Hawaii","8W3","Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada alone or in any combination","15","001"],
["Hawaii County, Hawaii","7M6","Santa Ynez Band of Chumash Mission Indians alone or in any combination","15","001"],
["Hawaii County, Hawaii","904","Yugoslavia","15","001"],
["Hawaii County, Hawaii","912","North Macedonia (Macedonia) ","15","001"],
["Hawaii County, Hawaii","913","Slovenia","15","001"],
```

10. Click on "Ctrl + F" and type "Native Hawaiian alone" in the resulting text box. There are multiple matches for this, but the only two that you need to worry about are the ones for "Native Hawaiian alone." One of the POPGROUP codes for this is 3883 and the other is 052. Since the population group codes have changed from three-digits to four-digits for 2020, for this example, you're only going to need the four-digit code of 3883.



To add this code to the query, delete "POPGROUP," from its current position in the URL. After "POPGROUP_LABEL," type "&POPGROUP=3883." When you are done, it should look like <https://api.census.gov/data/2020/dec/ddhca?get=NAME,POPGROUP_LABEL&POPGROUP=3883&for=county:*&in=state:15>. Click "Enter" to run this new query.

11. Now you can add in the four age group variables. Directly after "POPGROUP_LABEL" in the URL, type in ",T02002_005N,T02002_015N,T02002_006N,T02002_016N." Make sure to include commas to separate each variable, but do not include any spaces. Once you do this, the query should be <https://api.census.gov/data/2020/dec/ddhca?get=NAME,POPGROUP_LABEL,T02002_005N,T02002_015N,T02002_006N,T02002_016N&POPGROUP=3883&for=county:*&in=state:15>. When you click "Enter," you will receive data back for the requested age group variables for the counties in Hawaii for which they are available.



12. Let's review the output. The first portion is the NAME of the geography:

```
[["NAME","POPGROUP_LABEL","T02002_005N","T02002_015N","T02002_006N","T02002_016N","POPGROUP","state","county"],
["Kauai County, Hawaii","Native Hawaiian alone","                ","3883","15","007"],
["Maui County, Hawaii","Native Hawaiian alone","                ","3883","15","009"]]
```

The next portion is the POPGROUP_LABEL (in this case it is Native Hawaiian alone).

```
[["NAME","POPGROUP_LABEL","T02002_005N","T02002_015N","T02002_006N","T02002_016N","POPGROUP","state","county"],
["Kauai County, Hawaii","Native Hawaiian alone","                ","3883","15","007"],
["Maui County, Hawaii","Native Hawaiian alone","                ","3883","15","009"]]
```

Next are the individual counts for the four age group variables: T02002_005N (Total Male 18 to 24 years), T02002_015N (Total Female 18 to 24 years), T02002_006N (Total male 25 to 34 years), and T02002_016N (Total Female 25 to 34 years).

```
[["NAME","POPGROUP_LABEL","T02002_005N","T02002_015N","T02002_006N","T02002_016N","POPGROUP","state","county"],
["Kauai County, Hawaii","Native Hawaiian alone","                ","3883","15","007"],
["Maui County, Hawaii","Native Hawaiian alone","                ","3883","15","009"]]
```

Next is the POPGROUP code, which in this case is 3883.

```
[["NAME","POPGROUP_LABEL","T02002_005N","T02002_015N","T02002_006N","T02002_016N","POPGROUP","state","county"],
["Kauai County, Hawaii","Native Hawaiian alone","                ","3883","15","007"],
["Maui County, Hawaii","Native Hawaiian alone","                ","3883","15","009"]]
```

Next is the state FIPS code, which in this case is 15 for Hawaii.

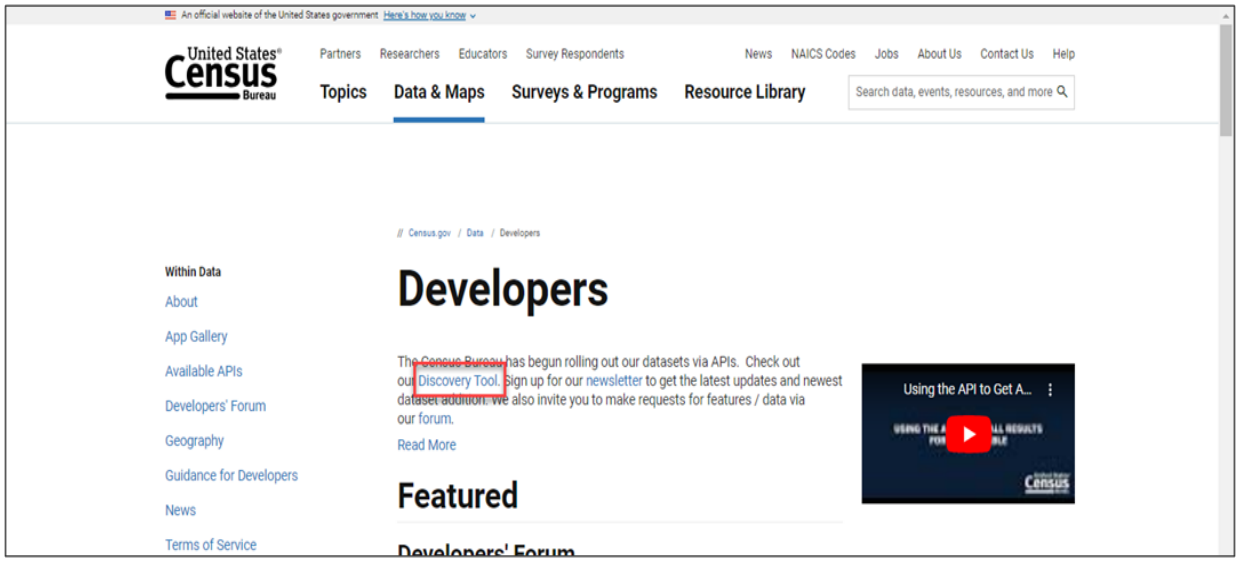
```
[["NAME","POPGROUP_LABEL","T02002_005N","T02002_015N","T02002_006N","T02002_016N","POPGROUP","state","county"],
["Kauai County, Hawaii","Native Hawaiian alone","                ","3883","15","007"],
["Maui County, Hawaii","Native Hawaiian alone","                ","3883","15","009"]]
```

And last is the county code for the counties in Hawaii.

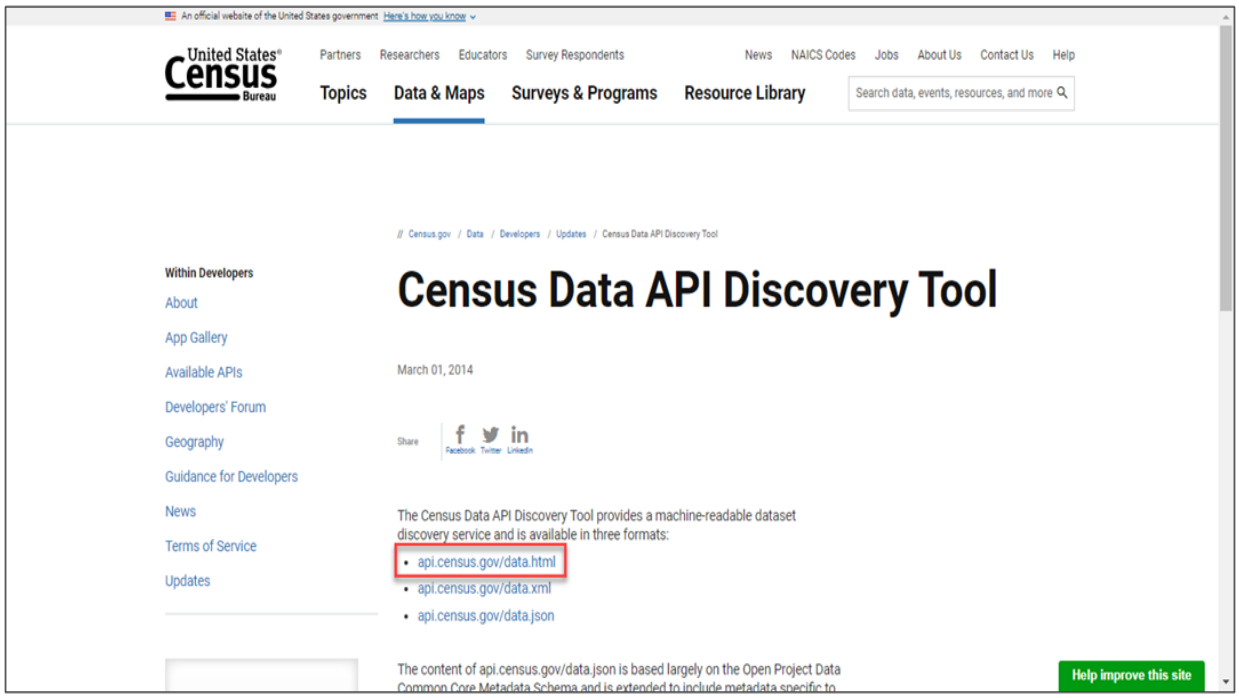

```
[["NAME","POPGROUP_LABEL","T02002_005N","T02002_015N","T02002_006N","T02002_016N","POPGROUP","state","county"],
["Kauai County, Hawaii","Native Hawaiian alone","[redacted]","3883","15","007"],
["Maui County, Hawaii","Native Hawaiian alone","[redacted]","3883","15","009"]]
```


Using the Census Data API: Finding an Entire Table for a Detailed Population Group

1. The goal with this example is to use the Census Data API to find all the data found in table T02001 "Sex by Age (4 Age Categories)" for people who reported as being part of the Muscogee (Creek) Nation alone or in any combination. You want this data for any places (e.g., cities, towns) in Oklahoma that it's available for.
   Using your web browser, go to the census.gov developers page at <https://www.census.gov/data/developers.html>. Under the "Developers" heading, click on the link to the "Discovery Tool."



2. Then click on the format that you would like to view the Discovery Tool in. For this example, click on the "html" version.



3. The Discovery Tool houses all the different datasets found in the Census Data API. To locate the 2020 Detailed Demographic and Housing Characteristics dataset, click on "Ctrl + F" and type "Detailed Demographic and Housing Characteristics" into the search bar that appears. This will take you directly to the correct dataset. To isolate the information for this dataset from the other 1,500+ datasets found on this page, click on the "API Base" URL found in the last column and add ".html" to the end of it. The resulting URL should be <https://api.census.gov/data/2020/dec/ddhca.html>.
4. You first want to confirm that you will be able to pull data from the table in its entirety. When you pull data for an entire table, it is referred to as "making a group call." To confirm that the table needed is available for group calls, right-click on the "Groups" link and choose "Open link in new tab."

Census API: Datasets in /data/2020/dec/ddhca and its descendants

Title	Description	Vintage	Dataset Name	Dataset Type	Geography List	Variable List	Group List	SortList	Examples	Developer Documentation	API I
Decennial Census: Detailed Demographic and Housing Characteristics: Detailed Demographic and Housing Characteristics File A	This product provides the population counts and sex and age statistics for detailed racial and ethnic groups and American Indian and Alaska Native tribes and villages.	2020	dec› ddhca	Aggregate	geographies	variables	groups	sorts	examples	documentation	http:/

1 dataset

5. You can observe that the table needed, T02001, is available for group calls.

Census API: groups in /data/2020/dec/ddhca/groups

Name	Description	Variable List
T01001	TOTAL POPULATION	selected variables
T02001	SEX BY AGE (4 AGE CATEGORIES)	selected variables
T02002	SEX BY AGE (9 AGE CATEGORIES)	selected variables
T02003	SEX BY AGE (23 AGE CATEGORIES)	selected variables

4 groups

6. The next step is to find the variable that will allow you to choose data for the Muscogee (Creek) Nation alone or in any combination population. To get the full list of variables, return to the main information page for the dataset, right click on the "Variables" link, and choose "Open link in new tab."

Census API: Datasets in /data/2020/dec/ddhca and its descendants

Title	Description	Vintage	Dataset Name	Dataset Type	Geography List	Variable List	Group List	SortList	Examples	Developer Documentation	API I
Decennial Census: Detailed Demographic and Housing Characteristics: Detailed Demographic and Housing Characteristics File A	This product provides the population counts and sex and age statistics for detailed racial and ethnic groups and American Indian and Alaska Native tribes and villages.	2020	dec› ddhca	Aggregate	geographies	variables	groups	sorts	examples	documentation	http:/

1 dataset

The variable you will need for this is titled "POPGROUP." You will need this because you want to get data for the people who reported as being part of the Muscogee (Creek) Nation alone or in any combination. Take note of this variable name, as well as its related label variable, "POPGROUP_LABEL."

PLACE	Geography		not required		0	(not a predicate)	N/A
POPGROUP	Race/Ethnic Group	SEX BY AGE (23 AGE CATEGORIES);TOTAL POPULATION;SEX BY AGE (4 AGE CATEGORIES);SEX BY AGE (9 AGE CATEGORIES)	default displayed	POPGROUP_LABEL	0	string	T02001, T01001, T02002, T02003
STATE					0	(not a	

7. Now that you have the population group variables you need, return to the information page where you initially selected the "Variables" link. To get a list of example queries, right click on the "Examples" link and choose "Open link in new tab."

Census API: Datasets in /data/2020/dec/ddhca and its descendants

Title	Description	Vintage	Dataset Name	Dataset Type	Geography List	Variable List	Group List	SortList	Examples	Developer Documentation	API I
Decennial Census: Detailed Demographic and Housing Characteristics: Detailed Demographic and Housing Characteristics File A	This product provides the population counts and sex and age statistics for detailed racial and ethnic groups and American Indian and Alaska Native tribes and villages.	2020	dec› ddhca	Aggregate	geographies	variables	groups	sorts	examples	documentation	http:/
1 dataset											

8. Here you can find example links for all the geographies that are available with the 2020 Detailed Demographic and Housing Characteristics File A dataset. For this example, you are looking at place-level data, so you will want to focus on the queries found for "Geography Level" (or "Summary Level") 160.

Census API: Examples for /data/2020/dec/ddhca

Geography Hierarchy	Geography Level	Example URL	Number
us	010	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:*&key=YOUR_KEY_GOES_HERE	1
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=us:1&key=YOUR_KEY_GOES_HERE	2
state	040	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:*&key=YOUR_KEY_GOES_HERE	3
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=state:06&key=YOUR_KEY_GOES_HERE	4
state› county	050	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&key=YOUR_KEY_GOES_HERE	5
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:*&in=state:*&key=YOUR_KEY_GOES_HERE	6
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=county:037&in=state:06&key=YOUR_KEY_GOES_HERE	7
state› county› tract	140	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:*&in=state:06&key=YOUR_KEY_GOES_HERE	8
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:*&in=state:06&in=county:*&key=YOUR_KEY_GOES_HERE	9
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:018700&in=state:06%20county:073&key=YOUR_KEY_GOES_HERE	10
state› place	160	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&key=YOUR_KEY_GOES_HERE	11
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&in=state:*&key=YOUR_KEY_GOES_HERE	12
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:51000&in=state:36&key=YOUR_KEY_GOES_HERE	13
american indian area/alaska native area/hawaiian home land	250	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=american%20indian%20area/alaska%20native%20area/hawaiian%20home%20land:*&key=YOUR_KEY_GOES_HERE	14
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=american%20indian%20area/alaska%20native%20area/hawaiian%20home%20land:5620&key=YOUR_KEY_GOES_HERE	15

The “&for” portion of the query dictates the geography. The first two queries give you data for all places (e.g., cities, towns, census-designated places) in the United States. You can tell that they are going to give data for all places because they use the wildcard (represented by an asterisk). The difference is that the second query spells it out for all places in all states. This second query is useful because you could change the asterisk for the state to a two-digit FIPS code that is associated with each state.

tract	140	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:018700&in=state:06%20county:073&key=YOUR_KEY_GOES_HERE	10
state› place	160	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&key=YOUR_KEY_GOES_HERE	11
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&in=state:*&key=YOUR_KEY_GOES_HERE	12
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:51000&in=state:36&key=YOUR_KEY_GOES_HERE	13
american indian area/alaska		https://api.census.gov/data/2020/dec/ddhca?	14

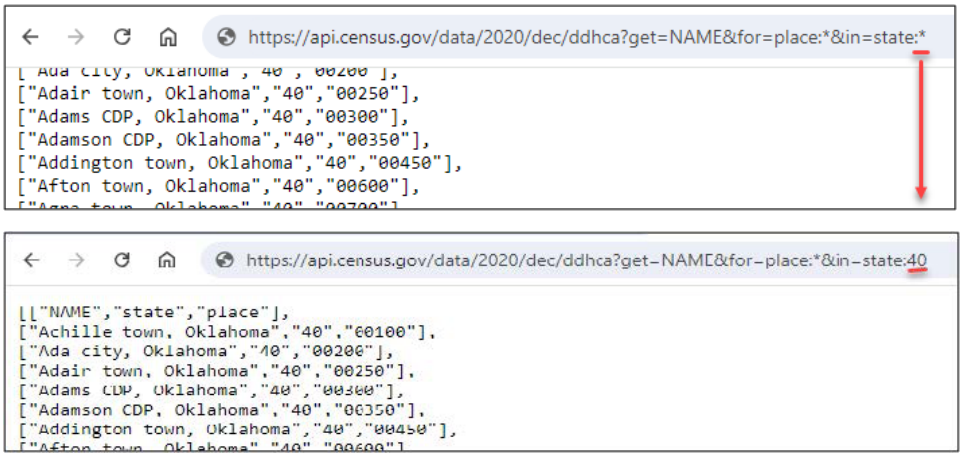
The last query allows you to look at data for a single place within a given state.

tract	140	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=tract:018700&in=state:06%20county:073&key=YOUR_KEY_GOES_HERE	10
state› place	160	https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&key=YOUR_KEY_GOES_HERE	11
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&in=state:*&key=YOUR_KEY_GOES_HERE	12
		https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:51000&in=state:36&key=YOUR_KEY_GOES_HERE	13
american indian area/alaska		https://api.census.gov/data/2020/dec/ddhca?	14

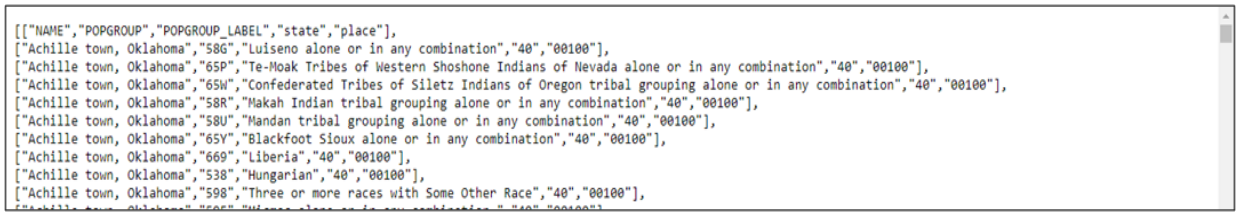
For this example, we will use the second query: <https://api.census.gov/data/2020/dec/ddhca?get=NAME&for=place:*&in=state:*>. Right-click on the second query and choose “Open link in new tab.” When it opens, you will observe that it is listing out all the places in the United States (first portion of each line, labeled as “NAME”), along with their respective state FIPS code (second portion of each line, labeled as “state”) and place code (last portion of each line, labeled as “place”).


```
[["NAME","state","place"],
["Abanda CDP, Alabama","01","00100"],
["Abbeville city, Alabama","01","00124"],
["Adamsville city, Alabama","01","00460"],
["Addison town, Alabama","01","00484"],
["Akron town, Alabama","01","00676"],
["Alabaster city, Alabama","01","00820"],
["Albertville city, Alabama","01","00988"],
["Alexander City city, Alabama","01","01132"]
```

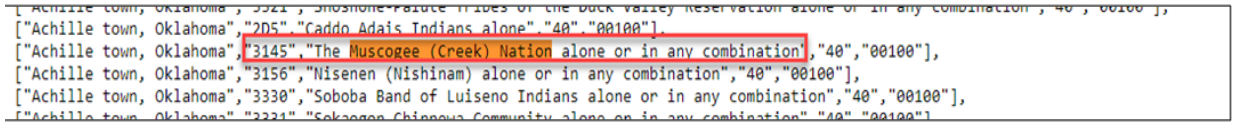

Since you want data for all the places in Oklahoma, you need to first determine what the state FIPS code is for Oklahoma. Click on “Ctrl + F” and type “Oklahoma.” When you locate the lines for Oklahoma, you will observe the state FIPS code is 40. Navigate to the top of the query and replace the asterisk after “state:” with “40,” and then hit “Enter.” This isolates the geographies so that you only observe the places in Oklahoma.



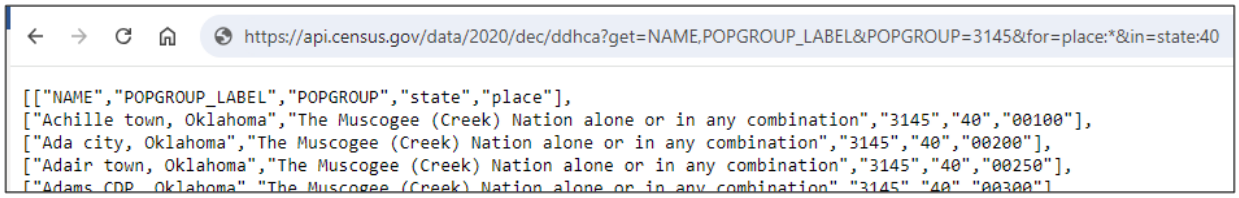
9. Next, look for the pop group code for the Muscogee (Creek) Nation alone or in any combination population group. To get the full list of available pop groups and their respective codes, right after "NAME" in the URL, type in ",POPGROUP,POPGROUP_LABEL." Be sure to include commas to separate each variable, but do not include any spaces. Once you do this, the query is <https://api.census.gov/data/2020/dec/ddhca?get=NAME,POPGROUP,POPGROUP_LABEL&for=place:*&in=state:40>. When you click "Enter" to run this new query, you should observe a list of all the different population groups and their respective codes.



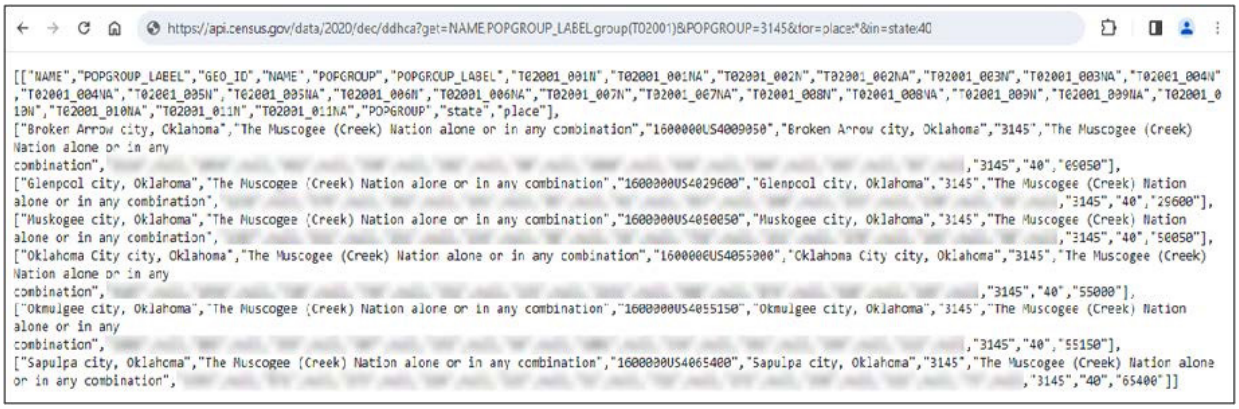
10. Click on "Ctrl + F" and type "Muscogee (Creek) Nation" in the resulting text box. You can observe that the pop group code for the Muscogee (Creek) Nation alone or in any combination population group is 3145.



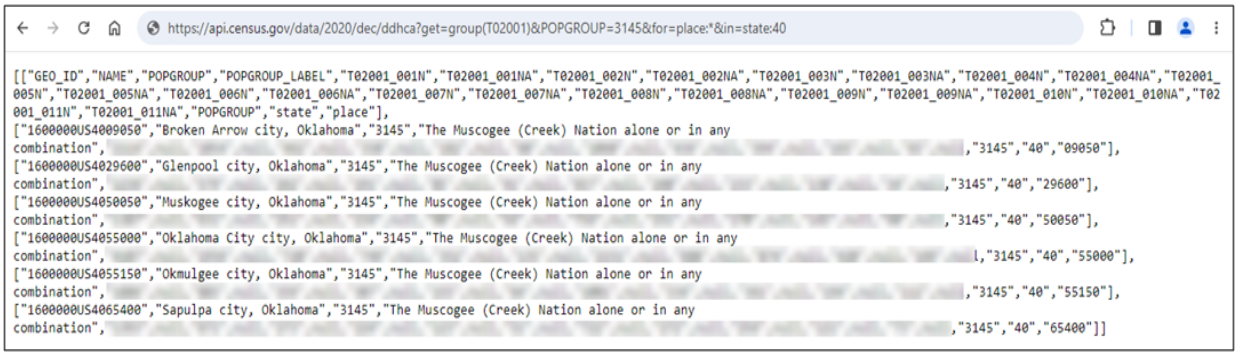
To add this code to the query, delete "POPGROUP," from its current position in the URL. After POPGROUP_LABEL, type "&POPGROUP=3145." When you are done, the query should be <https://api.census.gov/data/2020/dec/ddhca?get=NAME,POPGROUP_LABEL&POPGROUP=3145&for=place:*&in=state:40>. Click "Enter" to run this new query.



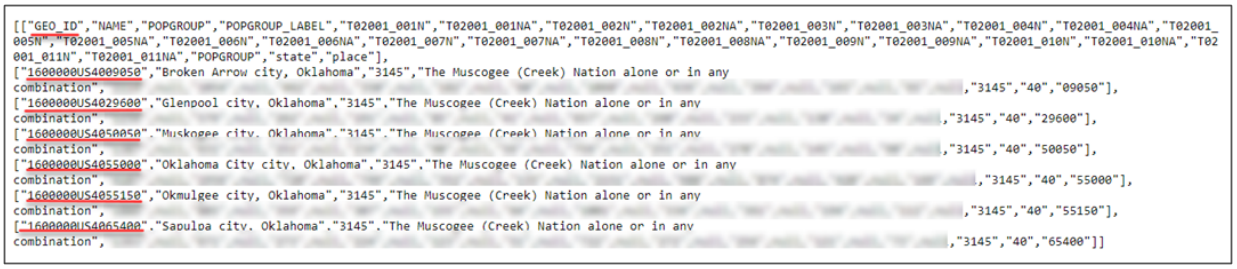
11. Now you can add in table T02001. Directly after "POPGROUP_LABEL'" in the URL, type ",group(T02001)." Once you do this, the query is <https://api.census.gov/data/2020/dec/ddhca?get=NAME,POPGROUP_LABEL,group(T02001)&POPGROUP=3145&for=place:*&in=state:40>. When you hit "Enter," you will receive data back for the requested table with all the places that data for this population group are available.



12. The last thing to do is to clean up the URL so the resulting output is cleaner. Remove "NAME,POPGROUP_LABEL," The final query is <https://api.census.gov/data/2020/dec/ddhca?get=group(T02001)&POPGROUP=3145&for=place:*&in=state:40>. Click "Enter" to run this new query.



13. Let's review the output. The first portion is the "GEO_ID." This is the unique geographic identifier for the given geography.



The next portion is the “NAME” of the geography.


```
[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_
005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02
001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","65400"]]
```


Next is the “POPGROUP” code, which in this case is 3145.


```
[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_
005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02
001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","65400"]]
```


The next portion is the “POPGROUP_LABEL,” which in this case is the Muscogee (Creek) Nation alone or in any combination.


```
[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_
005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02
001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any
combination", [illegible],"3145","40","65400"]]
```

Next are the individual counts that make up table T02001. Remember, you can find out what each variable is by visiting the Variables page at <https://api.census.gov/data/2020/dec/ddhca/variables.html>.

T02001_001N	Total population
T02001_002N	Total Male
T02001_003N	Total Male Under 18 years
T02001_004N	Total Male 18 to 44 years
T02001_005N	Total Male 45 to 64 years
T02001_006N	Total Male 65 years and over
T02001_007N	Total Female
T02001_008N	Total Female Under 18 years
T02001_009N	Total Female 18 to 44 years
T02001_0010N	Total Female 45 to 64 years
T02001_0011N	Total Female 65 years and over

T02001_001NA	Annotation of Total
T02001_002NA	Annotation of Total Male
T02001_003NA	Annotation of Total Male Under 18 years
T02001_004NA	Annotation of Total Male 18 to 44 years
T02001_005NA	Annotation of Total Male 45 to 64 years
T02001_006NA	Annotation of Total Male 65 years and over
T02001_007NA	Annotation of Total Female
T02001_008NA	Annotation of Total Female Under 18 years
T02001_009NA	Annotation of Total Female 18 to 44 years
T02001_0010NA	Annotation of Total Female 45 to 64 years
T02001_0011NA	Annotation of Total Female 65 years and over

[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","65400"]]

Next is the “POPGROUP” code again, which in this case is 3145.

[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","65400"]]

Next is the “state” FIPS code, which in this case is 40 for Oklahoma.


```
[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","65400"]]
```


And last is the “place” code for the places in Oklahoma. Each code is unique to its respective city.


```
[["GEO_ID","NAME","POPGROUP","POPGROUP_LABEL","T02001_001N","T02001_001NA","T02001_002N","T02001_002NA","T02001_003N","T02001_003NA","T02001_004N","T02001_004NA","T02001_005N","T02001_005NA","T02001_006N","T02001_006NA","T02001_007N","T02001_007NA","T02001_008N","T02001_008NA","T02001_009N","T02001_009NA","T02001_010N","T02001_010NA","T02001_011N","T02001_011NA","POPGROUP","state","place"],
["1600000US4009050","Broken Arrow city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","09050"],
["1600000US4029600","Glenpool city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","29600"],
["1600000US4050050","Muskogee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","50050"],
["1600000US4055000","Oklahoma City city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55000"],
["1600000US4055150","Okmulgee city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","55150"],
["1600000US4065400","Sapulpa city, Oklahoma","3145","The Muscogee (Creek) Nation alone or in any combination",[illegible],"3145","40","65400"]]
```

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Chapter 3.
Table Structure

The Detailed Demographic and Housing Characteristics File A uses an adaptive design to determine the amount of data that detailed and regional racial and ethnic groups and American Indian and Alaska Native tribes and villages receive based on population thresholds and geography level. At the nation and state levels, detailed and regional groups receive a total population count table and groups meeting a minimum threshold also receive a sex by age table. For substate geographies (counties, places, and census tracts) and American Indian/Alaska Native/Native Hawaiian (AIANNH) areas, the adaptive design uses population thresholds to determine eligibility for a total population count table and a sex by age table. Table 3-1 shows the thresholds used to determine table type eligibility.

Table 3-1.
Detailed Demographic and Housing Characteristics File A Minimum Population Thresholds by Geography

Most comprehensive table type produced	Detailed groups		Regional groups	
	Nation and state	Substate and AIANNH	Nation and state	Substate
Total count only	0-499	22-999	0-4,999	94-4,999
Sex by age – 4 categories	500-999	1,000-4,999	5,000-19,999	5,000-19,999
Sex by age – 9 categories	1,000-6,999	5,000-19,999	20,000-149,999	20,000-149,999
Sex by age – 23 categories	7,000+	20,000+	150,000+	150,000+

Note: AIANNH is American Indian/Alaska Native/Native Hawaiian areas. Substate includes county, place, and census tract.
Source: U.S. Census Bureau.

TABLES

Note: When detailed sex by age data are available for a population group, one of three age category tables will be published in addition to a total population count. The sex by age tables available are a four-category table, a nine-category table, and a 23-category table.

T01001 TOTAL POPULATION
Universe: Total population

T02001 SEX BY AGE (4 AGE CATEGORIES)
Universe: Total population
Male:
Under 18 years
18 to 44 years
45 to 64 years
65 years and over
Female:
Under 18 years
18 to 44 years
45 to 64 years
65 years and over

T02002 SEX BY AGE (9 AGE CATEGORIES)
Universe: Total population
Male:
Under 5 years
5 to 17 years
18 to 24 years
25 to 34 years
35 to 44 years
45 to 54 years
55 to 64 years
65 to 74 years
75 years and over
Female:
Under 5 years
5 to 17 years
18 to 24 years
25 to 34 years
35 to 44 years
45 to 54 years
55 to 64 years
65 to 74 years
75 years and over

T02003 SEX BY AGE (23 AGE CATEGORIES)
Universe: Total population
Male:
Under 5 years
5 to 9 years
10 to 14 years
15 to 17 years
18 and 19 years
20 years
21 years
22 to 24 years
25 to 29 years
30 to 34 years
35 to 39 years
40 to 44 years
45 to 49 years
50 to 54 years
55 to 59 years
60 and 61 years

62 to 64 years
65 and 66 years
67 to 69 years
70 to 74 years
75 to 79 years
80 to 84 years
85 years and over
Female:
Under 5 years
5 to 9 years
10 to 14 years
15 to 17 years
18 and 19 years
20 years
21 years
22 to 24 years
25 to 29 years
30 to 34 years
35 to 39 years
40 to 44 years
45 to 49 years
50 to 54 years
55 to 59 years
60 and 61 years
62 to 64 years
65 and 66 years
67 to 69 years
70 to 74 years
75 to 79 years
80 to 84 years
85 years and over

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Chapter 4.
Confidentiality of the Data

CONFIDENTIALITY OF THE DATA

The U.S. Census Bureau has modified some data in this data release to protect confidentiality. Title 13 U.S. Code, Section 9 prohibits the Census Bureau from publishing results in which an individual's data can be identified. Section 8(b) clarifies that this includes "information reported by, or on behalf of, any particular respondent."

Title 13 of the U.S. Code authorizes the Census Bureau to conduct surveys and censuses and mandates that any information obtained from private individuals and establishments remains confidential. Section 9 of Title 13 prohibits the Census Bureau from releasing "any publication whereby the data furnished by any particular establishment or individual under this title can be identified." Section 214 of Title 13, as modified by the Federal Sentencing Reform Act, imposes a fine of not more than $250,000 and/or imprisonment of not more than 5 years for publication or communication in violation of Section 9.

DISCLOSURE AVOIDANCE

Disclosure avoidance is the process of disguising data to protect confidentiality. A disclosure of data occurs when someone can use published statistical information to identify an individual who provided information under a pledge of confidentiality. Using disclosure avoidance, the Census Bureau modifies or removes the characteristics that put confidential information at risk for disclosure. Although it may appear that a table or combination of tables show information about a specific individual, the Census Bureau has implemented a disclosure avoidance process to disguise the original data while ensuring that the results are useful.

DIFFERENTIAL PRIVACY

The disclosure avoidance process used for the Detailed Demographic and Housing Characteristics File A is based on the principles of differential privacy. Formally private disclosure avoidance methods, like differential privacy, are similar to a broad class of traditional disclosure avoidance methods that protect confidentiality through the introduction of statistical noise into the data. This noise introduces uncertainty intended to reduce the likelihood that a specific individual can be identified and to reduce the likelihood that characteristics about that individual can be inferred. Differential privacy differs from traditional noise-injection disclosure avoidance methods insofar as the amount of noise required to protect confidentiality is precisely calibrated to provide provable mathematical guarantees regarding the maximum amount of disclosure risk possible from the publication of data products derived from the confidential data. This guarantee is independent of the tools and external information that a would-be attacker (present or future) could use to attempt to reidentify individuals or to infer sensitive attributes about them. This maximum bound to the disclosure risk is reflected in a parameter called the privacy-loss budget (described in a later section) for the data products and represents a mathematically rigorous confidentiality guarantee to our respondents.

THE SAFETAB-P ALGORITHM

SafeTab-P, the disclosure avoidance algorithm used to protect confidentiality for the Detailed DHC-A, differs from the algorithm used to protect the 2020 Census Redistricting Data (Public Law 94-171) Summary File, Demographic and Housing Characteristics File (DHC), and Demographic Profile. The Redistricting Data, DHC, and Demographic Profile were protected using the TopDown Algorithm, which included additional post-processing and the creation of a privacy-protected microdata file in order to ensure consistency across and geographies and tables in the data products. However, the data requirements for the Detailed DHC-A are different from those for the Redistricting and DHC data. In particular, the number of categories of detailed race,

ethnicity, and American Indian and Alaska Native tribes and villages far exceed the 128 categories used in the Redistricting and DHC data files. The Census Bureau determined that the quality of the published data would be greatly improved by using a different algorithm, SafeTab-P, to protect respondent confidentiality for the Detailed DHC-A.

The SafeTab-P algorithm works by calculating statistics using the confidential 2020 Census data, then adds or subtracts a small amount of statistical noise to those statistics. The amount of noise added or subtracted from each statistic is determined by the privacy-loss budget (PLB) assigned to the calculation of that statistic. PLB allocations were determined to ensure that all tables included in the Detailed DHC-A meet preestablished margins of error (uncertainty) at least 95 percent of the time.

DIFFERENCES BETWEEN THE TOPDOWN AND SAFETAB-P ALGORITHMS

Like the TopDown Algorithm, SafeTab-P infuses noise into the 2020 Census data to protect respondent confidentiality. However, SafeTab-P differs from TopDown in several important ways (Table 1).

Table 1.
Differences Between the TopDown and SafeTab-P Algorithms

TopDown Algorithm	SafeTab-P
Algorithm produces privacy-protected microdata.	Algorithm directly produces privacy-protected tabulations.
All geographies aggregate as expected.	There is no requirement that geographies aggregate as expected.
When aggregating data, the statistical noise generally cancels out and the statistics become more accurate.	When aggregating data, it generally becomes more variable the more you aggregate.
Consistent across data products.	Not consistent with other 2020 Census data products.
Overall accuracy can be targeted, but the exact levels of accuracy cannot be known in advance.	All margins of error are determined in advance and met 95 percent of the time.
Does not use adaptive design.	Uses adaptive design to determine the amount of data provided.

Source: U.S. Census Bureau.

In the TopDown Algorithm, counts are produced first for the United States and then counts for lower-level geographies are controlled to the U.S. counts so that all counts are consistent, as in previous census data products. For example, the algorithm ensures that state totals, when added together, are consistent with the national data. Data for very small geographic areas, such as census blocks, may be very noisy and should be aggregated into larger geographic areas before use.

Unlike the TopDown Algorithm, SafeTab-P produces privacy-protected counts for each count and geography independently and does not enforce consistency, so counts within the Detailed DHC-A may not be consistent with related counts in this or other 2020 Census data products. Consequently, geographies may not aggregate as expected (e.g., state counts may not add up to the national count). When aggregating data from the Detailed DHC-A, the independent noise added to each statistic will typically compound rather than cancelling out. Data users should exercise caution when aggregating data for custom geographies, adding (or subtracting) as few geographic units as possible to minimize the aggregation of noise across counts.

THE PRIVACY-LOSS BUDGET

The level of noise introduced to protect against disclosure is guided by a "privacy-loss budget" (PLB)—the budget controls the distribution of the statistical noise and the associated probability of confidentiality breach for data with the schema of the Detailed DHC-A. The PLB, reflected in the parameter "*rho*," can be set higher or lower, acting like a dial that tunes the amount of noise that is added to the data. This PLB can be set anywhere on a spectrum from "no accuracy but high protection" to "high accuracy but no protection." Choosing the PLB is a decision based on balancing accuracy and strong confidentiality protection needed to meet the 13 U.S.C. Section 9 legal requirements for confidentiality. This balance choice is informed by the feedback on data utility received by the Census Bureau from stakeholders and the legal requirement to protect respondent confidentiality. The lower the budget, the higher the protection and the less precise each data point will be. As the PLB rises, noise decreases (a greater share of the random noise numbers drawn are at or close to zero), meaning the data will be more accurate, but the risk of disclosure rises.

The Detailed DHC-A uses a PLB of *rho* = 19.776. Shares of this PLB were allocated to statistics in the Detailed DHC-A according to the following table to meet the target margins of error for those statistics.

Geography	Iteration level	Margin of error (±)	*rho*
Nation	Regional	50	0.032
Nation	Detailed	3	8.536
State	Regional	50	0.032
State	Detailed	3	8.536
County	Regional	50	0.032
County	Detailed	11	0.636
Place	Regional	50	0.032
Place	Detailed	11	0.636
Tract	Regional	50	0.032
Tract	Detailed	11	0.636
AIANNH[1]	Regional	N	0.000
AIANNH[1]	Detailed	11	0.636
Total *rho*			**19.776**

N Not applicable.
[1] AIANNH is American Indian/Alaska Native/Native Hawaiian areas.
Note: The privacy-loss allocations in this table calculate *rho* using bounded neighbor sensitivity, as was used for the 2020 Census Redistricting Data (P.L. 94-171) Summary File and 2020 Census Demographic and Housing Characteristics File, implemented with zero-concentrated differential privacy privacy-loss accounting using the Discrete Gaussian Mechanism.
Source: U.S. Census Bureau.

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Chapter 5.
Data Limitations and Guidance

LIMITATIONS OF THE DATA

The Detailed Demographic and Housing Characteristics File A is not consistent with the Redistricting Data (PL 94-171) Summary File, the Demographic and Housing Characteristics File (DHC), or the Demographic Profile.

Although the inconsistencies listed below can seem illogical, they help preserve random noise and unbiased estimates in the data product, as well as preserving the margins of error of the data with 95 percent confidence.

Inconsistencies From the Noise Necessary to Protect Confidentiality—Because of the way noise is applied to data to protect respondent confidentiality, aggregating counts can result in noisier (or less accurate) data. This applies to several uses of the data, including the creation of custom regional groupings and aggregation of detailed race and ethnicity data to create data at higher levels of geography.

- Total population counts for groups with sex by age statistics will have larger margins of error. Each sex by age count in a sex by age table has noise applied to it, which makes the total count noisier than if only the total population count had been published. This is because the population totals for groups with sex by age data are the aggregation of those individual noise-infused sex by age counts. The resulting total population count will have a larger margin of error because of the aggregation of noise-infused counts used to create it.
- Detailed groups may not sum to their corresponding regional group. If a data user adds up all detailed groups in a regional group, they may get a different total than the noise-infused total count for the regional group. Noise is applied once to the regional group total, whereas the aggregation of individual detailed groups compounds the noise applied to each detailed group's individual data resulting in a noisier total. Similarly, a detailed group may be larger than its corresponding regional group because of noise being applied independently to detailed and regional groups.

Inconsistent Data Because of Minimal Postprocessing Consistency Requirements—Noise is applied independently to each group at every geography level. This means that geographic hierarchies were not considered when applying noise to the data. In data products using the TopDown Algorithm, postprocessing procedures were applied to ensure geographic consistency. This was not enforced for the Detailed DHC-A, and as a result, data may be geographically inconsistent.

- Values from lower-level geographies may not sum to values from higher-level geographies. Using California as an example, if you sum the total of all the California county data for a specific group, it is possible that the county total for that group would not equal the California state total provided for that group. Similarly, summing together the totals of all 50 states plus the District of Columbia may not equal the national total.
- There may be cases where individual counts at lower geographies are larger than the total for that group at higher geographies. One such example would be for a group that has a national count of ten; because of how disclosure avoidance is applied, there may be a state with a count of 12 for this same group. For more information, refer to "Chapter 2. How to Use This Product."
- Postprocessing was applied to set counts equal for certain geographies that are coterminous (meaning geographies with the same boundaries that cover the same area) or for areas that are statistically equivalent (meaning they contain the same exact population). The District of Columbia is an example of a coterminous geography with the same state, county, and place level boundaries; all three of these geographic

levels have the state level counts. Kalawao County, HI, is an example of a statistically equivalent geography, where the county is comprised of two tracts but only one of those tracts contains people. Kalawao County and the populated tract have the same counts. As a result of this postprocessing, American Indian/Alaska Native/Native Hawaiian (AIANNH) areas may have counts for regional groups.

Data Suppression—There are suppressed values in the Detailed DHC-A. Suppression was applied to counts in one of two ways: individual data cells and whole tables.

An "X" appears in the data cell when an individual count was suppressed because of data reasonableness requirements. This suppression occurred on a line-by-line basis in the following order:

- The noise-infused count suppressed was a negative value, meaning it was below zero.
- The noise-infused "race alone" count was suppressed because of it being larger than its paired "race alone or in any combination" count.

Whole tables were suppressed for detailed and regional groups because of population thresholds. These population thresholds ensure that published population counts reflect positive enumerated counts 99.99 percent of the time. This suppression occurred in the following situations:

- The detailed group noise-infused count was less than 22 in that particular substate geography or AIANNH area.
- The regional group noise-infused count was less than 94 in that particular substate geography.

DATA USER GUIDANCE

Calculating Percentages

Data users may need to create several types of percentages using Detailed DHC-A data. The U.S. Census Bureau recommends using the following denominators:

Characteristic	Example		Source of denominator
	To calculate the percentage of . . .	Use . . . as the denominator	
Race (White, Black or African American, etc.)	The Asian alone population that is Korean alone at the national level	The total Asian alone population in the United States (19,886,049)	2020 Census Redistricting Data (P.L. 94-171) Summary File
Hispanic or Latino origin	People of Hispanic or Latino origin who are Salvadoran in the District of Columbia	The total Hispanic or Latino origin population in the District of Columbia (77,652)	2020 Census Redistricting Data (P.L. 94-171) Summary File
Geography (California; Harris County, TX; etc.)	The population of Honolulu County, HI, that is Native Hawaiian alone or in any combination	The total population of Honolulu County, HI (1,016,508)	2020 Census Redistricting Data (P.L. 94-171) Summary File
Regional group (European, Caribbean, etc.)	The Sub-Saharan African alone or in any combination population that is Beninese alone	The Sub-Saharan African alone or in any combination population	2020 Census Detailed Demographic and Housing Characteristics File A

Data Aggregation

Data users should add or subtract the minimum number of counts when aggregating data for custom counts to minimize the accumulation of noise across counts. This is because the expected amount of noise in a sum (or a difference) gets larger with each additional count being added (or subtracted).

Margins of error (MOEs) capture the uncertainty in the counts because of the noise infusion and to evaluate data for fitness-for-use. Users can calculate MOEs for custom tabulations or geographies as follows.

The expected level of noise (MOE) for a sum of two counts is:

$$MOE\ for\ count\ A + count\ B = \pm\sqrt{MOE_A^2 + MOE_B^2}$$

The individual count MOEs (displayed in Table 2-2) depend on which geographic level the count is from and whether the count is an aggregation of sex by age detail. One example is to calculate the expected total and MOE for the Tokelauan alone population (which receives only a total count) in California and Hawaii (state geographic levels).[1] The formula is:

$$Total = Count_{California} + Count_{Hawaii} = 20 + 48 = 68$$

$$MOE = \pm\sqrt{MOE_{California}^2 + MOE_{Hawaii}^2} = \pm\sqrt{3^2 + 3^2} = \pm\sqrt{18} = \pm 4.2$$

That is, a count of 68 with an MOE of ±4.2. The expected level of noise (MOE) for a sum of three counts is as follows:

$$MOE\ for\ count\ A + count\ B + count\ C = \pm\sqrt{MOE_A^2 + MOE_B^2 + MOE_C^2}$$

Continuing the example from above, the expected MOE for the Tokelauan alone population in California, Hawaii, and Washington combined is:

$$Total = Count_{California} + Count_{Hawaii} + Count_{Washington} = 20 + 48 + 8 = 76$$

$$MOE = \pm\sqrt{MOE_{California}^2 + MOE_{Hawaii}^2 + MOE_{Washington}^2} = \pm\sqrt{3^2 + 3^2 + 3^2} = \pm\sqrt{27} = \pm 5.2$$

That is, a count of 76 with an MOE of ±5.2. This demonstrates how the sum of three counts (e.g., California, Hawaii, and Washington) has a higher MOE than the sum of two counts (e.g., California and Hawaii).

The same formula can be used for estimating the margin of error for sums across age groups, sums across racial/ethnic groups, or sums across sex groups.

[1] All example data come from the Proof of Concept for the 2020 Census Detailed DHC-A, which was based on 2010 Census data and was designed for public review and feedback; they are not from the 2020 Census.

This formula is what is used to derive the expected MOEs for aggregated sex by age categories in Tables 2-3 and 2-4. For example, for a group that receives four age categories, the MOEs for the aggregated sex totals are calculated as:

$$Total_{\ Female} = Count_{Female\ Under\ 18} + Count_{Female\ 18\ to\ 44} + Count_{Female\ 45\ to\ 64} + Count_{Female\ 65+}$$

$$MOE_{Female} = \pm\sqrt{MOE^2_{Female\ Under\ 18} + MOE^2_{Female\ 18\ to\ 44} + MOE^2_{Female\ 45\ to\ 64} + MOE^2_{Female\ 65+}}$$
$$= \pm\sqrt{3^2 + 3^2 + 3^2 + 3^2} = \pm\sqrt{36} = \pm 6$$

Which can be seen in the table part excerpted below.

(Excerpt from Table 2-3)

Female	Aggregated MOE = ±6
Under 18 years	Noise infused with MOE = ±3
18 to 44 years	Noise infused with MOE = ±3
45 to 64 years	Noise infused with MOE = ±3
65 years and over	Noise infused with MOE = ±3

For calculating MOEs from counts that are aggregated (e.g., for sums across sex groups), data users should be careful to use the correct MOE in the formula. For example, to calculate the total population of Central Asian alone or in any combination for Maryland and Virginia, a data user would consult the following table:

Example of Aggregated Margins of Error for Regional Groups

State	2010 noise-infused count	2010 noise-infused count margin of error (±)
Maryland		
Total count	**1,035**	**50**
Virginia		
Total count	**8,792**	**141.4**
Male	**4,328**	**100**
Under 18	1,259	50
18 to 44	1,746	50
45 to 64	1,020	50
65 and over	303	50
Female	**4,464**	**100**
Under 18	1,275	50
18 to 44	1,957	50
45 to 64	897	50
65 and over	335	50

Source: U.S. Census Bureau, Detailed Demographic and Housing Characteristics File A (Detailed DHC-A) Proof of Concept.

The population of Central Asians alone or in any combination in Virginia is large enough that it receives a sex-by-age breakdown for the population, and its total population is the sum of these individual sex-by-age categories. Therefore, the formula to calculate the total population for these two states is:

$$Total = Count_{Maryland} + Count_{Virginia} = 1{,}035 + 8{,}792 = 9{,}827$$

$$MOE = \pm\sqrt{MOE^2_{Maryland} + MOE^2_{Virginia}} = \pm\sqrt{50^2 + 141.4^2} = \pm\sqrt{22{,}493.96} = \pm 149.98$$

That is, a count of 9,827 with an MOE of approximately ±150.

The MOE estimation formula can also be applied to data that are subtracted, such as subtracting a county's data from a state's total.

$$MOE\ for\ State\ S - County\ C = \pm\sqrt{MOE_{State\ S}^2 + MOE_{County\ C}^2}$$

For example, the expected MOE for the Tahitian alone or in any combination population in Honolulu County, HI (MOE = ±31.1 because of the total being aggregated from 8 sex by age categories) outside of Tract 102.02 in Honolulu County (MOE = ±11) would be:

$$Total = Count_{Hawaii} - Count_{Honolulu} = 1{,}728 - 130 = 1{,}598$$

$$MOE = \pm\sqrt{MOE_{Hawaii}^2 + MOE_{Honolulu}^2} = \pm\sqrt{31.1^2 + 11^2} = \pm\sqrt{1{,}088.21} = \pm 32.99$$

(Note that this MOE is much smaller than the ±171.5 MOE that would come from adding up the count in every tract of Honolulu County other than Census Tract 12.02).

This formula is true for other subtractions as well, such as subtracting an age group from total population.

As can be seen in the previous examples, minimizing the number of counts being added or subtracted will result in a less noisy total. To that end, the Census Bureau recommends the following:

To create new aggregations of detailed groups, remove or add as few groups as possible. For example:

- To create a Central American count that includes Mexican, take the Central American total and add the Mexican count, rather than adding together all detailed Central American groups.
- To create a count of West African groups, add together the counts for the desired West African groups, such as Senegalese and Ghanaian, rather than subtracting non-West African detailed groups from the Sub-Saharan African total.

When using race data, data users should be mindful of whether they want to use the alone count or the alone or in any combination count.

To create counts for a custom geography, remove or add as few geographies as possible. For example:

- To create a count for the Pacific West states, add together the counts for Alaska, California, Hawaii, Oregon, and Washington rather than subtracting the 46 other states and state equivalents from the national counts.
- To create a count for Arizona counties that are majority urban, remove Apache, Graham, Greenlee, Navajo, and Santa Cruz counties from the Arizona state total rather than adding together the ten majority urban counties.

To create custom counts using age data, collapse as few categories as possible. For example:

- To compare groups that have 9 and 23 age categories, collapse the 23 age categories into the 9 rather than into 4 age categories or other custom categories when possible.

National Total

The national total includes data for the 50 states and the District of Columbia.

Counts from Puerto Rico are not included in the national total. Data from Puerto Rico are shown starting at the state level.

Suppressed Counts

When an alone count has been suppressed, we recommend using the count from the equivalent alone or in any combination table, if available.

There are situations where a data user may be able to use subtraction to recreate a suppressed count such as when only one count in a sex by age table has been suppressed. We do not recommend using these counts because they may be implausible or statistically unreliable.

Comparing to Previous Decennial Censuses

The following table shows the key differences between the race and ethnicity data released in the 2020 Census Detailed DHC-A and releases from the 2010 Census, specifically Summary File 2 (SF 2), the American Indian and Alaska Native Summary File (AIANSF), and the American Indian and Alaska Native Tribes in the United States and Puerto Rico: 2010 table (CPH-T-6).

Characteristic	2010 Census	2020 Detailed DHC-A
	Available Geographies	

Geographies	Up to 104 geographies including:
	• Nation.
	  ○ Region.
	  ○ Division.
	  ○ State.
	  ○ County.
	  ○ Census Tract.
	  ○ Place and/or township.
	  ○ American Indian/Alaska Native/ Native Hawaiian areas (AIANNH areas).
	  ○ Metropolitan Statistical Area.
	  ○ Congressional District.
	  ○ School District.
	  ○ Zip Code Tabulation Area.
		Six levels of geography:
		• Nation.
		• State.
		• County.
		• Census Tract.
		• Place.
		• American Indian/Alaska Native/Native Hawaiian Areas (AIANNH areas).

Characteristic	2010 Census	2020 Detailed DHC-A
	Total Population Counts	
Nation and state	Asian, Native Hawaiian and Other Pacific Islander, and Hispanic origin groups: • Minimum population count of 100. American Indian and Alaska Native tribes and villages: • No minimum population count. For a list of Asian, Native Hawaiian and Other Pacific Islander, and Hispanic origin groups available in 2010, refer to the 2010 Census Summary File 2 Technical Documentation. For a list of the American Indian and Alaska Native tribes and villages available in 2010, refer to CPH-T-6.	All race and ethnicity groups and American Indian and Alaska Native tribes and villages: • No minimum population counts, but data may be suppressed. For a list of groups available in 2020, refer to the 2020 Hispanic Origin and Race Iterations List.
County, census tract, and place levels and AIANNH areas	Minimum population count of 100.	Minimum population count of 22.
	Sex by Age Data	
Nation and state	Minimum population count of 100.	Minimum population count of 500.
County, census tract, and place levels and AIANNH areas	Minimum population count of 100.	Minimum population count of 1,000.
Age breakdown	Single years of age.	Will receive one of three types: • Four age categories. • Nine age categories. • 23 age categories.

To learn about how race and ethnicity collection has changed over the decades, refer to U.S. Decennial Census Measurement of Race and Ethnicity Across the Decades: 1790–2020.

The Detailed Race and Ethnicity Crosswalk: 2010 to 2020 shows which codes were used to tabulate each group in 2010 and 2020.

Hispanic Origin Data—Caution is not required when comparing detailed Hispanic origin data from the ethnicity question to the 2010 Census.

Race Data—It is important to note that data comparisons between the 2020 Census and 2010 Census race data should be made with caution, taking into account the improvements we have made to the Hispanic origin and race questions and the ways we code what people tell us.

Some of these improvements include differences in how groups were tabulated in 2010 compared to 2020. For example:

- In 2010, Sikh was tabulated as "Asian Indian," whereas, in 2020 it is tabulated on its own.
- In 2010, there was a "Guamanian or Chamorro" checkbox, whereas, in 2020 the checkbox was updated to "Chamorro."
- In 2010, Niuean was tabulated as "Tokelauan," whereas, in 2020 it is tabulated on its own.

For more updates similar to those listed above, data users can reference the 2010 Hispanic or Latino Origin and Race Code Lists and the 2020 Hispanic Origin and Race Code List for how specific groups were tabulated in both censuses.

Because of the improvements to the 2020 Census race question design, processing, and coding, users may observe differences in the data when comparing to other Census Bureau surveys or non-Census Bureau data sources. If unexpected differences occur, this may be related to a number of factors, primarily the design of the race and ethnicity questions and the improvements to the ways in which we code what people tell us. We are confident that differences in the overall racial distributions are largely because of improvements in the design of the two separate questions for race data collection and processing as well as some demographic changes over the past 10 years.

Comparing to the American Community Survey

The 2020 Census provides the official counts (including Hispanic origin and race) of the population and housing units for the nation, states, counties, cities, and towns. The American Community Survey (ACS) provides estimates of certain additional characteristics of the population to add rich context for understanding the nation's population.

Data users should be aware that the MOEs presented in this document (the Detailed DHC-A Margins of Error) measure the expected amount of noise that has been applied to enumerated counts for the purpose of disclosure avoidance. In contrast, ACS Margins of Error summarize a different source of variability, the sampling error, which is the amount of uncertainty that can be expected because of ACS estimates being based on a survey. Neither statistic measures nonsampling error, such as coverage error or potential bias from nonresponse, which should be taken into account when making assessments about data fitness-for-use and suitability.

Comparisons between the 2020 Census Detailed DHC-A data and the ACS will also be impacted by differences in the disclosure avoidance methods used. Unlike the SafeTab-P algorithm, which injects noise into the Detailed DHC-A based on the framework of differential privacy, the disclosure avoidance algorithms used for the ACS add uncertainty to published estimates by swapping a percentage of household records between households in different geographic regions.

Hispanic Origin Data—Detailed Hispanic origin data are tabulated from the ethnicity question on the ACS. Caution is not required when comparing detailed Hispanic origin data from the Detailed DHC-A to the ACS regardless of data year.

Race Data—The detailed White, Black or African American, and Some Other Race groups available in the 2020 Census Detailed DHC-A have historically been tabulated from the ancestry question on the ACS. For the full list of groups coded in ancestry, refer to the 2021 American Community Survey Code List. There are key differences between the race and ancestry data collection and tabulation that data users should be aware of before comparing data from the ancestry question to data from the Detailed DHC-A. The key differences are highlighted in the following table.

Key Differences of Data Collection and Tabulation Between Ancestry and Race		
Differences	**Ancestry (American Community Survey)**	**Race (Detailed DHC-A)**
Number of write-in responses coded per write-in area	Maximum of two	Maximum of six
Number of reported groups maintained from any respondent	Maximum of two	Maximum of eight
Use of imputation for missing responses	None	Assignment or allocation used for all missing responses
Use of prompt for respondents not answering question	No prompt	Prompt for electronic questionnaires

Detailed race data from the Asian, Native Hawaiian or Other Pacific Islander, and American Indian or Alaska Native write-in lines are tabulated from the race question on the ACS.

Comparisons using 2020 Census Detailed DHC-A data to ACS race data from 2019 or earlier should be made with caution, taking into account the improvements we have made to the Hispanic origin and race questions and the ways we code what people tell us. These improvements were applied to the ACS race and ethnicity questions and data processing starting with the 2020 ACS.

Comparing to the 2020 Census Redistricting Data (P.L. 94-171) Summary File, Demographic and Housing Characteristics File, and Demographic Profile

The Redistricting Data (P.L. 94-171) Summary File, Demographic and Housing Characteristics File (DHC), and Demographic Profile provide the official total counts for the major race and ethnicity categories. The Detailed DHC-A provides the official counts for detailed and regional race and ethnicity groups and American Indian and Alaska Native tribes and villages.

The Redistricting Data (P.L. 94-171) Summary File, DHC, and Demographic Profile use the TopDown Algorithm. In contrast, the Detailed DHC-A uses an algorithm called SafeTab-P. As a result of using two different algorithms, the data from products using the TopDown Algorithm will not be consistent with data using the SafeTab-P algorithm.

Specifically, this means that were you to sum all the detailed groups that comprise one of the major race and ethnicity categories (e.g. White, Hispanic or Latino, etc.) they will not sum to the official counts provided in the Redistricting Data (P.L. 94-171) Summary File, DHC, or Demographic Profile. For example, if you sum all the American Indian and Alaska Native tribes and villages counts from the Detailed DHC-A in Arizona, they will not sum to the total American Indian and Alaska Native count for Arizona provided in the Redistricting Data (P.L. 94-171) Summary File, DHC, or Demographic Profile.

To learn more about the differences in the algorithms, refer to Chapter 4. Confidentiality of the Data.

Hispanic Responses From the Ethnicity Question Compared to Hispanic Responses to the Race Question

Use the "Hispanic or Latino" responses for the official counts of detailed Hispanic origin groups (e.g., Mexican, Salvadoran, or Dominican, etc.). These are the responses collected from the ethnicity question.

The Detailed DHC-A includes data on respondents who reported in the race question that they were (alone or alone or in any combination): Hispanic, Latin American, Mexican, Puerto Rican, Cuban, or another Hispanic, Latino, or Spanish response. These are not the official counts for these Hispanic origin groups, rather they are the official counts for people who gave these responses when asked to provide their race.

One of the best ways to tell these data apart is whether they include the terms "alone" or "alone or in any combination." If they do, such as "Puerto Rican alone," they are race data and are not the official Hispanic origin counts. If they do not, such as "Puerto Rican," they are Hispanic origin data and are the official Hispanic origin counts.

Chapter 6.
User Notes

TECHNICAL NOTE ON THE CLASSIFICATION OF THE HMONG POPULATION

In the 2020 Census, the Hmong population is classified within the East Asian regional grouping, guided by the "original peoples" language in the standards set by the U.S. Office of Management and Budget in 1997. However, after extensive engagement with leaders from the Hmong community, the Census Bureau recognizes that many within the Hmong population in the United States identify as part of the Southeast Asian population.

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Appendix A.
Geographic Terms and Concepts

INTRODUCTION

This appendix provides definitions of geographic terms and concepts as well as a description of the different methods used to present information for geographic entities in U.S. Census Bureau data products presenting demographic and housing data (geographic terms and concepts unique to the economic census and other specialized surveys and censuses are not included in this document). **The inclusion of a particular term or concept in this document does not imply that data for that geographic entity or attribute appear in each data product**. In addition, the description of both the hierarchical and inventory approaches to presenting data for geographic entities does not imply that both formats are used in each data product.

GEOGRAPHIC PRESENTATION OF DATA

In Census Bureau data products, geographic entities usually are presented in a hierarchical arrangement or as an inventory listing.

Hierarchical Presentation

A hierarchical geographic presentation shows the geographic entities in a superior/subordinate structure. This structure is derived from the legal, administrative, or areal relationships of the entities. The hierarchical structure is depicted in report tables by means of indentation. For computer-readable media, the hierarchy is shown in the descriptive name applied to a summary level with the hierarchy in order separated by hyphens.

An example of hierarchical presentation is the census geographic hierarchy consisting of census block, within block group, within census tract, within place, within county subdivision, within county, within state. Graphically, this is shown as:

State

County

County subdivision

Place (or part)

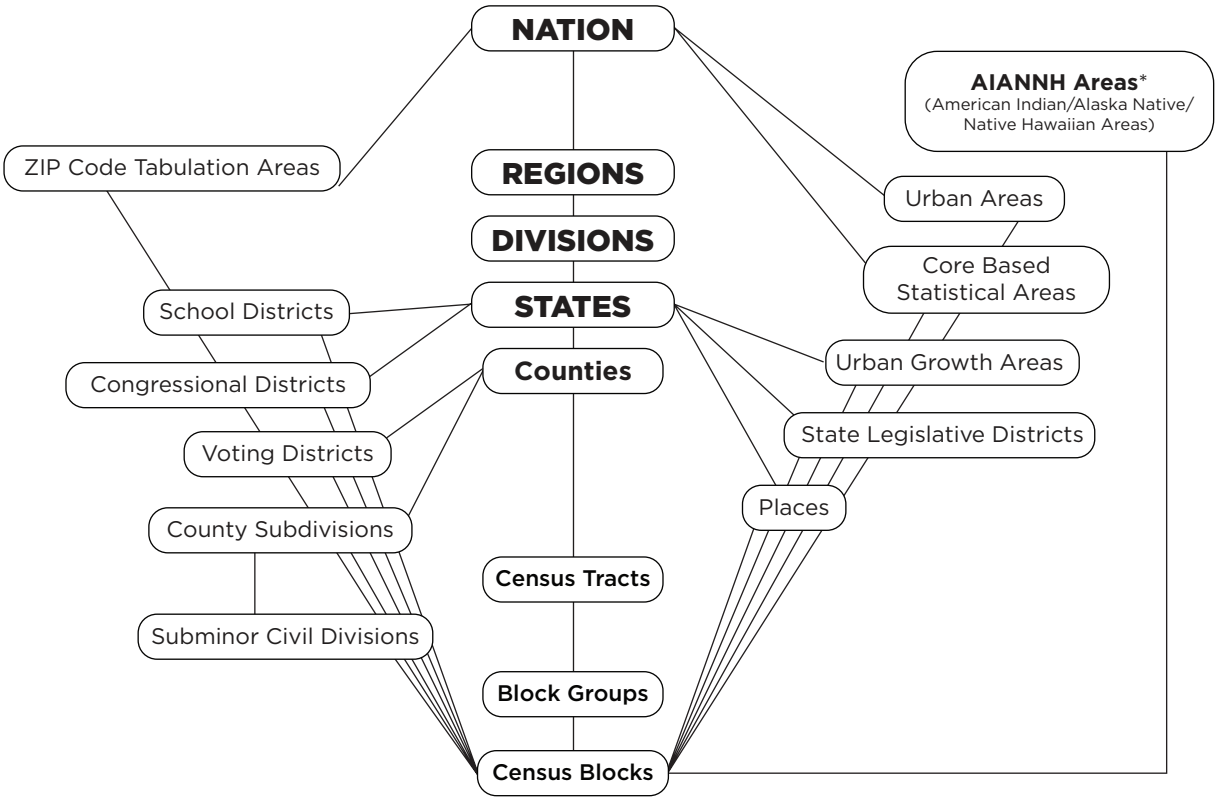
Census tract (or part)

Block group (or part)

Block

Standard Hierarchy of Census Geographic Entities, a diagram of the geographic hierarchy, presents this information as a series of nesting relationships (Figure A–1). For example, a line joining the lower-level entity "Place" and the higher-level entity "State" means that a place cannot cross a state boundary; a line linking "Census Tract" and "County" means that a census tract cannot cross a county line, and so forth. There is no implied hierarchy between different line tracks; for example, a census tract nests within a county, but it may cross a county subdivision boundary even though "County Subdivision" also nests within "County."

Figure A-1.
Standard Hierarchy of Census Geographic Entities



* Refer to the "Hierarchy of American Indian/Alaska Native/Native Hawaiian Areas."

Inventory Presentation

An inventory presentation of geographic entities is one in which all entities of the same type are shown in alphabetical, code, or geographic sequence without reference to their hierarchical relationships. Generally, an inventory presentation shows totals for entities that may be split in a hierarchical presentation such as place, census tract, or block group. An example of a series of inventory presentations is a state, followed by all the counties in that state, followed by all the places in that state. Graphically, this is shown as:

State

County A

County B

County C

Place X

Place Y

Place Z

Nation-Based Hierarchies

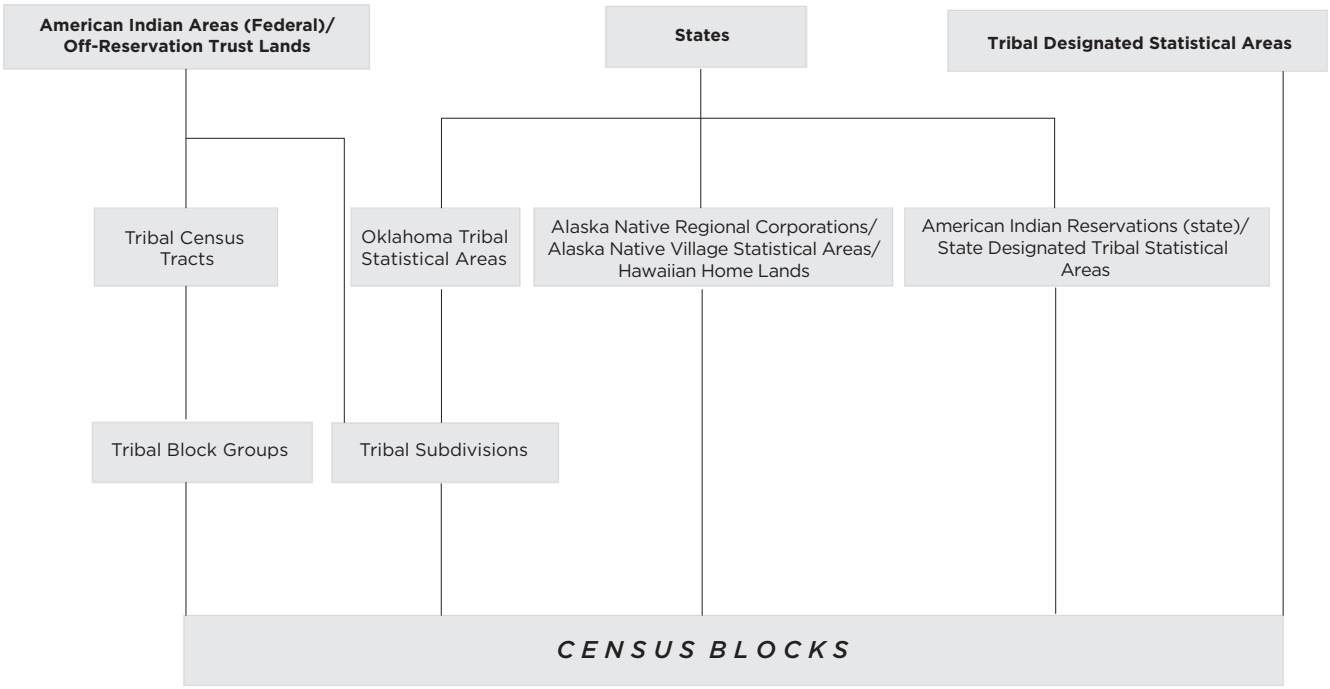
Exceptions to the standard hierarchical presentation occur for entities that do not necessarily nest within states, most notably American Indian/Alaska Native/Native Hawaiian areas, urban areas, ZIP Code Tabulation Areas, and core based statistical areas.

American Indian/Alaska Native/Native Hawaiian Area (AIANNHA) Hierarchy

Because federally recognized American Indian areas can cross state lines, a separate AIANNHA hierarchy exists for these areas. The following American Indian entities can cross state lines: federally recognized American Indian reservations or off-reservation trust lands, tribal subdivisions, tribal designated statistical areas, tribal census tracts, and tribal block groups. National summary data for American Indian reservations or statistical areas may be presented as an alphabetical listing of names followed by the state portions of each area. Also, a tribal census tract or tribal block group may be located in more than one state or county. Data for tribal census tracts and tribal block groups are presented only in Census Bureau products utilizing the AIANNHA hierarchy and are not present in products utilizing the standard Census Bureau geographic hierarchy.

The diagram in Figure A–2 shows geographic relationships among geographic entities in the AIANNHA hierarchy. It does not show the geographic levels of county, county subdivision, and place, among others, because AIANNHAs do not necessarily nest within them.

Figure A-2.
Hierarchy of American Indian/Alaska Native/Native Hawaiian Areas



DEFINITIONS OF GEOGRAPHIC ENTITIES, TERMS, AND CONCEPTS

The definitions below are for geographic entities and concepts that the Census Bureau includes in its standard data products. Not all entities, terms, and concepts are shown in any one data product.

AMERICAN INDIAN/ALASKA NATIVE/NATIVE HAWAIIAN AREA

There are both legal and statistical American Indian/Alaska Native/Native Hawaiian areas (AIANNHAs) for which the Census Bureau provides data. The legal entities consist of federally recognized American Indian reservations and off-reservation trust land areas, the tribal subdivisions that can divide these entities, state-recognized American Indian reservations, Alaska Native Regional Corporations (ANRCs), and Hawaiian Home Lands. The statistical entities are Alaska Native Village statistical areas (ANVSAs), Oklahoma tribal statistical areas (OTSAs), tribal designated statistical areas, and state designated tribal statistical areas. Statistical tribal subdivisions can exist within OTSAs. In all cases, these areas are mutually exclusive in that no AIANNHA can overlap another tribal entity, except for tribal subdivisions (which by definition subdivide some American Indian entities) and ANVSAs (which exist within ANRCs). In cases where more than one tribe claims jurisdiction over an area, the Census Bureau creates a joint-use area as a separate entity to define this area of dual claims. The following provides more detail about each of the various AIANNHAs.

Legal Entities

Alaska Native Regional Corporations (ANRCs) were created pursuant to the Alaska Native Claims Settlement Act (Pub. L. 92–203, 85 Stat. 688 [1971]; 43 U.S.C. 1602 et seq. [2000]), enacted in 1971 as a "Regional Corporation" and organized under the laws of the state of Alaska to conduct both the for-profit and non-profit affairs of Alaska Natives within a defined region of Alaska. The Census Bureau considers ANRCs as legal

geographic entities. Twelve ANRCs cover the entire state of Alaska except for the area within the Annette Island Reserve (a federally recognized American Indian reservation under the governmental authority of the Metlakatla Indian Community). The Census Bureau offers representatives of the 12 nonprofit ANRCs (also known as Alaska Native Regional Associations) in Alaska the opportunity to review and update the ANRC boundaries before each decennial census. Each ANRC is assigned a five-digit numeric Federal Information Processing Series code and an eight-digit National Standard code. ANRCs are not included in the Detailed DHC-A data product.

American Indian reservations (AIRs) (Federal) are areas that have been set aside by the United States for the use of tribes where the exterior boundaries are more particularly defined in the final tribal treaties, agreements, executive orders, federal statutes, secretarial orders, or judicial determinations.

The Bureau of Indian Affairs maintains a list of all federally recognized tribal governments and makes final determination of the inventory of federal AIRs. Federal reservations (and associated off-reservation trust lands) are territory over which American Indian tribes have governmental authority. AIRs can be legally described as colonies, communities, Indian colonies, Indian communities, Indian rancherias, Indian reservations, Indian villages, pueblos, rancherias, ranches, reservations, reserves, settlements, or villages. The Census Bureau contacts representatives of federally recognized American Indian tribal governments to identify the boundaries for federal reservations through its annual Boundary and Annexation Survey. Federal reservations may cross state and all other area boundaries within the United States.

Each federal AIR is assigned a four-digit census code ranging from 0001 through 4799 in alphabetical order of AIR names nationwide. This nation-based census code is the primary unique identifier for the AIR. Each federal AIR also is assigned five-digit Federal Information Processing Series (FIPS) codes and an eight-digit National Standard code. Because FIPS codes are assigned in alphabetical sequence within each state, the FIPS codes are different in each state for reservations that include territory in more than one state.

American Indian reservations (AIRs) (State) are reservations established by some state governments for tribes recognized by the state. A governor-appointed state liaison provides the names and boundaries for state-recognized AIRs to the Census Bureau. State reservations must be defined within a single state but may cross county and other types of boundaries. Each state AIR is assigned a four-digit census code ranging from 9000 through 9499. Each state AIR also is assigned a five-digit Federal Information Processing Series code and an eight-digit National Standard code. To further identify and differentiate state-recognized American Indian areas from those that are federally recognized, the text "(state)" is appended to the AIR name.

American Indian tribal subdivisions, described as additions, administrative areas, areas, chapters, county districts, communities, districts, or segments are legal administrative subdivisions of federally recognized American Indian reservations and off-reservation trust lands or are statistical subdivisions of Oklahoma tribal statistical areas (OTSAs). These entities are internal units of self-government or administration that serve social, cultural, or economic purposes for the American Indians on the reservations, off-reservation trust lands, or OTSAs. The Census Bureau obtains the boundary and name information for tribal subdivisions from tribal governments. Each American Indian tribal subdivision is assigned alphabetically a three-digit census code that is unique within each American Indian area, a five-digit Federal Information Processing Series (FIPS) code assigned alphabetically within state, and an eight-digit National Standard code. Because FIPS codes are assigned in alphabetical sequence within each state, the FIPS codes are different in each state for tribal subdivisions that include territory in more than one state. Not all reservations, off-reservation trust lands, and OTSAs have tribal subdivisions. All summary levels that include tribal subdivisions in the presentation hierarchy have records for only the American Indian areas and OTSAs that actually have tribal subdivisions. Tribal subdivisions are not included in the Detailed DHC-A data product.

Hawaiian Home Lands (HHLs) are areas held in trust for Native Hawaiians by the state of Hawaii, pursuant to the Hawaiian Homes Commission Act of 1920, as amended. The Census Bureau obtains the names and boundaries for HHLs from state officials. The names of the home lands are based on the traditional ahupua'a

names of the Crown and government lands of the Kingdom of Hawaii from which the lands were designated or from the local name for an area. Being lands held in trust, HHLs are treated as equivalent to off-reservation trust land areas with the American Indian Trust Land/Hawaiian Home Land Indicator coded as "T." Each HHL is assigned a national four-digit census code ranging from 5000 through 5499 based on the alphabetical sequence of each HHL name, a five-digit Federal Information Processing Series code in alphabetical order within the state of Hawaii, and an eight-digit National Standard code.

Joint-use areas, as applied to any American Indian area by the Census Bureau, refer to an area that is administered jointly or claimed by two or more American Indian tribes. The Census Bureau designates legal joint-use areas as unique geographic entities equivalent to a reservation for the purpose of presenting statistical data. Each is assigned a national four-digit census code ranging from 4800 through 4999 based on the alphabetical sequence of each joint-use area name, a five-digit Federal Information Processing Series code in alphabetical order within state, and an eight-digit National Standard code. No joint-use areas exist in multiple states.

Off-reservation trust lands are areas for which the United States holds title in trust for the benefit of a tribe (tribal trust land) or for an individual American Indian (individual trust land). Trust lands can be alienated or encumbered only by the owner with the approval of the Secretary of the Interior or his/her authorized representative. Trust lands may be located on or off a reservation; however, the Census Bureau tabulates data only for off-reservation trust lands, with the off-reservation trust lands always associated with a specific federally recognized reservation or tribal government. The Census Bureau also does not distinguish between tribal and individual trust lands. As for federally recognized reservations, the Census Bureau obtains the boundaries of off-reservation trust lands from American Indian tribal governments through its annual Boundary and Annexation Survey. The Census Bureau recognizes and tabulates data for reservations and off-reservation trust lands because American Indian tribes have governmental authority over these lands. The Census Bureau does not identify fee land (or land in fee simple status) or restricted fee lands as specific geographic areas.

Off-reservation trust lands are assigned a four-digit census code, a five-digit Federal Information Processing Series (FIPS) code, and an eight-digit National Standard code that is the same as that for the reservation, if any, with which they are associated. Trust lands associated with tribes that do not have a reservation are assigned unique codes. The census code is assigned by tribal name within the range 0001 through 4799, interspersed alphabetically among the reservation names. Because FIPS codes are assigned in alphabetical sequence within each state, the FIPS code are different in each state for off-reservation trust lands that include territory in more than one state. In decennial census data tabulations, the American Indian Trust Land/Hawaiian Home Land Indicator uniquely identifies off-reservation trust lands, as well as reservation or statistical area only portions, Hawaiian Home Lands, and records that consist of the combination of reservation and off-reservation trust land.

Statistical Entities

Alaska Native Village statistical areas (ANVSAs) represent the more densely settled portion of Alaska Native Villages (ANVs). The ANVs constitute associations, bands, clans, communities, groups, tribes, or villages recognized pursuant to the Alaska Native Claims Settlement Act of 1971 (Public Law 92-203). Because ANVs do not always have clear, legally defined boundaries or boundaries that include most of the population and housing associated with the ANV, the Census Bureau does not delimit ANVs. Instead, the Census Bureau presents statistical data for ANVSAs that represent the settled portion of ANVs. In addition, each ANVSA should include only an area where Alaska Natives, especially members of the defining ANV, represent a substantial proportion of the population during at least one season of the year. ANVSAs are delineated or reviewed by officials of the ANV or, if no ANV official chose to participate in the delineation process, officials of the Alaska Native Regional Corporation in which the ANV is located. An ANVSA may not overlap the boundary of another ANVSA or an American Indian reservation. Each ANVSA is alphabetically assigned a national four-digit census code ranging from 6000 through 7999, an alphabetically assigned state-based, five-digit Federal Information Processing Series code, and an eight-digit National Standard code.

Oklahoma tribal statistical areas (OTSAs) are statistical entities identified and delineated by the Census Bureau in consultation with federally recognized American Indian tribes that had a former reservation in Oklahoma. The boundary of an OTSA is intended to be that of the former reservation in Oklahoma, except where modified by agreements with neighboring tribes, and is only for statistical data presentation purposes. Each OTSA is alphabetically assigned a national four-digit census code ranging from 5500 through 5899, an alphabetically assigned state-based, five-digit Federal Information Processing Series code, and an eight-digit National Standard code. Tribal subdivisions are allowed within OTSAs.

Oklahoma tribal statistical area (OTSA) joint-use areas, as applied to OTSAs by the Census Bureau, refer to an area that is administered jointly or claimed by two or more American Indian tribes that have a delineated OTSA. The Census Bureau designates statistical joint-use areas as unique geographic entities for the purpose of presenting statistical data. Only OTSAs have statistical joint-use areas. Each Oklahoma tribal joint-use area is alphabetically assigned a national four-digit census code ranging from 5900 through 5999, an alphabetically assigned state-based, five-digit Federal Information Processing Series code, and an eight-digit National Standard code.

State designated tribal statistical areas (SDTSAs) are statistical entities for state-recognized American Indian tribes that do not have a state-recognized land base (reservation). SDTSAs are identified and delineated for the Census Bureau by a state liaison identified by the governor's office in each state. SDTSAs generally encompass a compact and contiguous area that contains a concentration of people who identify with a state-recognized American Indian tribe and in which there is structured or organized tribal activity. A SDTSA may not be located in more than one state and it may not include area within any other American Indian/Alaska Native/Native Hawaiian area. Each SDTSA is alphabetically assigned a four-digit census code ranging from 9500 through 9998, an alphabetically assigned state-based, five-digit Federal Information Processing Series code, and an eight-digit National Standard code.

Tribal designated statistical areas (TDSAs) are statistical entities identified and delineated for the Census Bureau by federally recognized American Indian tribes that do not currently have a federally recognized land base (reservation or off-reservation trust land). A TDSA generally encompasses a compact and contiguous area that contains a concentration of individuals who identify with a federally recognized American Indian tribe and in which there is structured or organized tribal activity. A TDSA may be located in more than one state, but it may not include area within any other American Indian, Alaska Native, or Native Hawaiian area. Each TDSA is alphabetically assigned a four-digit census code ranging from 8000 through 8999, an alphabetically assigned state-based, five-digit Federal Information Processing Series code, and an eight-digit National Standard code.

American Indian/Alaska Native/Native Hawaiian Area (AIANNHA) Codes—AIANNHAs are represented in Census Bureau products using a national four-character numeric census code field and a single alphabetic character American Indian Trust Land/Hawaiian Home Land Indicator field. The census codes are assigned in alphabetical order in assigned ranges by AIANNHA type nationwide, except that joint-use areas appear at the end of the code range. Off-reservation trust lands are assigned the same code as the reservation with which they are associated. Trust lands associated with tribes that do not have a reservation are assigned codes based on tribal name. Federal Information Processing Series (FIPS) codes for all AIANNHAs range from 00001 through 89999, without differentiation among the many types of areas.

The type of AIANNHA can be identified either by the census code or by the FIPS class code. The range of census codes allocated to each AIANNHA and the valid FIPS class code(s) associated with each are as follows:

American Indian/Alaska Native/ Native Hawaiian Area (AIANNHA) type	Census code range	Valid FIPS class code(s)
Federal American Indian reservation (AIR)/ off-reservation trust land	0001 to 4799	D1, D2, D3, D5, D8
Joint-use federal AIR	4800 to 4999	D0
Hawaiian Home Land	5000 to 5499	F1
Oklahoma tribal statistical area (OTSA)	5500 to 5899	D6
Joint-use OTSA	5900 to 5999	D0
Alaska Native Village statistical area	6000 to 7999	E1
Tribal designated statistical area (TDSA)	8000 to 8999	D6
State AIR	9000 to 9499	D4
State designated tribal statistical area (SDTSA)	9500 to 9998	D9
AIANNHA type	American Indian Trust Land/ Hawaiian Home Land indicator	
AIR with associated off-reservation trust land	M	
AIR or statistical entity only	R	
Off-reservation trust land only	T	
Hawaiian Home Land	T	

Note: FIPS is Federal Information Processing Series.

AREA MEASUREMENT

Area measurement data provide the size in square units (metric and nonmetric) of geographic entities for which the Census Bureau tabulates and disseminates data. Area is calculated from the specific boundary recorded for each entity in the Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) System (refer to "MAF/TIGER System"). The Census Bureau provides area measurement data for both land area and water area. The water area figures include inland, coastal, Great Lakes, and territorial sea water. Inland water consists of any lake, reservoir, pond, or similar body of water that is recorded in the Census Bureau's geospatial database. It also includes any river, creek, canal, stream, or similar feature that is recorded in that database as a two-dimensional feature (rather than as a single line). The portions of the oceans and related large embayments (such as the Chesapeake Bay and the Puget Sound), the Gulf of Mexico, and the Caribbean Sea that belong to the United States and the territories are classified as coastal and territorial waters; the Great Lakes are treated as a separate water entity. Rivers and bays that empty into these bodies of water are treated as inland water from the point beyond which they are narrower than one nautical mile across. Identification of land and inland, coastal, territorial, and Great Lakes waters is for data presentation purposes only and does not necessarily reflect their legal definitions.

Land and water area measurements may disagree with the information displayed on Census Bureau maps and in the MAF/TIGER System because, for area measurement purposes, hydrologic features identified as intermittent water, glacier, or swamp are reported as land area. The water area measurement reported for some geographic entities includes water that is not included in any lower-level geographic entity. Therefore, because water is contained only in a higher-level geographic entity, summing the water measurements for all the component lower-level geographic entities does not yield the water area of that higher-level entity. This occurs, for example, where water is associated with a county, but is not within the legal boundary of any county subdivision. The accuracy of any area measurement data is limited by the accuracy inherent in: (1) the

location and shape of the various boundary information in the MAF/TIGER System, (2) the identification and classification of water bodies coupled with the location and shapes of the shorelines of water bodies in the MAF/TIGER System, and (3) rounding affecting the last digit in all operations that compute or sum the area measurements.

BOUNDARY CHANGES

Many of the legal and statistical entities for which the Census Bureau tabulates decennial data have had boundary changes between decennial censuses; specifically, between January 1, 2010, and January 1, 2020. Boundary changes to geographic entities result from:

- Annexations to or deannexations from legally established governmental units.
- Mergers or consolidations of two or more governmental units.
- Establishment of new governmental units.
- Disincorporations or disorganizations of existing governmental units.
- Changes in treaties or executive orders and governmental action placing additional lands in trust.
- Decisions by federal, state, and local courts.
- Redistricting for congressional districts and state legislative districts.
- Ancillary changes to legal or statistical areas as a result of annexations and deannexations, for example, reduction of territory for a census designated place as the result of an annexation by an adjacent incorporated place.
- Changes to correct errors or more accurately place boundaries relative to visible features.
- Changes to statistical areas as the result of concept or criteria changes.

All legal boundaries used for the 2020 Census are those reported to the Census Bureau to be in effect as of January 1, 2020. The statistical area boundaries also reflect a January 1, 2020, date for delineation.

The legal boundaries are collected through various surveys and programs including the Boundary and Annexation Survey, Redistricting Data Program, and the School District Review Program. Legal boundaries in the U.S. Island Areas are reported by a liaison appointed by the governor of each U.S. Island Area.

Statistical entity boundaries generally are reviewed by local, state, or tribal governments and can have changes to adjust boundaries to existing features to better define the geographic area each encompasses or to account for shifts and changes in the population distribution within an area. Where statistical areas have a relationship to legal area boundaries, complementary updates occur; for example, removing territory from a census designated place if annexed to an incorporated place, or removing territory from a tribal designated statistical area if the area is added to an American Indian reservation.

The historical counts shown for states, counties, county subdivisions, places, American Indian/Alaska Native/Native Hawaiian areas, and other areas are not updated for boundary changes and, thus, reflect the population and housing units in each entity as delineated at the time of each decennial census or survey. Statistical data released by the Census Bureau are intended to be used in conjunction with the geospatial data of the same “geographic vintage” released by the Census Bureau, i.e., geospatial data released at the same time and used to tabulate the statistical data presented. The Census Bureau regularly rereleases geospatial data of a given geographic vintage for purposes of geographic comparability. Because of the topologic nature of the MAF/TIGER System and the fact that this can reshape geographic areas as time passes, data users need to be

aware that the 2020 Census geospatial data released with the 2020 Census statistical data are the official data that should be used in the comparison of data.

The ideas of "geographic equivalency" and "geographic comparability" have always been important to data users, but technology now allows many data users to compare data not just in the same geographic vintage, i.e., geographic equivalency, but also across time, i.e., geographic comparability. For example, if a school district is coextensive with a county in a product from the Census Bureau, the statistical data from that product might be considered geographically equivalent.

Geographic comparability, on the other hand, means comparing the same geographic entity across time, and thus data product. For example, a census designated place that existed in the 2010 Census and the 2020 Census is the same place in both censuses. But if the census designated place doubled in land area between censuses, then the place might be considered to be too different for a meaningful comparison and therefore not comparable. Data users need to consider and decide for themselves if the statistical data, and thus the data products, are comparable or not for their specific use.

CENSUS TRACT

Census tracts are small, relatively permanent statistical subdivisions of a county or statistically equivalent entity that can be updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program. The Census Bureau delineates census tracts in situations where no local participant responded or where state, local, or tribal governments declined to participate. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data.

Census tracts generally have a population size between 1,200 and 8,000 people with an optimum size of 4,000 people. A census tract usually covers a contiguous area; however, the spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. Census tracts are occasionally split because of population growth or merged as a result of substantial population decline.

Census tract boundaries generally follow visible and identifiable features. They may follow nonvisible legal boundaries, such as minor civil division or incorporated place boundaries in some states and situations, to allow for census tract-to-governmental unit relationships where the governmental boundaries tend to remain unchanged between censuses. State and county boundaries are always census tract boundaries in the standard census geographic hierarchy. Tribal census tracts are a unique geographic entity type defined within federally recognized American Indian reservations and off-reservation trust lands and can cross state and county boundaries. The tribal census tracts may be completely different from the standard county-based census tracts defined for the same area.

Census Tract Codes and Numbers—Census tracts are identified by an up to four-digit integer number and may have an optional two-digit suffix; for example 23 or 1457.02. The census tract codes consist of six digits with an implied decimal between the fourth and fifth digit corresponding to the basic census tract number, but with leading zeros and trailing zeros for census tracts without a suffix. The tract number examples above would have codes of 002300 and 145702, respectively.

Some ranges of census tract numbers in the 2020 Census are used to identify distinctive types of census tracts. The code range in the 9400s is used for those census tracts with a majority of population, housing, or land area associated with an American Indian area and matches the numbering used for the 2010 Census. The code range in the 9800s is used to specifically identify special land-use census tracts that may have little to no housing or are defined to encompass a large area with little or no residential population with special characteristics, such as large parks or employment areas. The range of census tracts in the 9900s represents census tracts delineated specifically to cover large bodies of water.

The Census Bureau uses suffixes to help identify census tract changes for comparison purposes. Census tract suffixes may range from .01 to .98. As part of local review of existing census tracts before each census, some census tracts may have grown enough in population size to qualify as more than one census tract. When a census tract is split, the split parts usually retain the basic number, but receive different suffixes. For example, if census tract 14 is split, the new tract numbers should be 14.01 and 14.02. In a few counties, local participants request major changes to, and renumbering of, the census tracts; however, this is generally discouraged. Changes to individual census tract boundaries usually do not result in census tract numbering changes.

CODES FOR GEOGRAPHIC ENTITIES

The Census Bureau and other federal agencies assign codes to geographic entities to facilitate the organization, presentation, and exchange of statistical data and other information. Geographic entity codes allow for the unambiguous identification of individual entities, generally within a specific, higher-level geographic entity (for example, county codes are assigned uniquely within each state). For geographic entities that have names (such as states, counties, places, county subdivisions, urban areas, and metropolitan and micropolitan statistical areas), codes are generally assigned alphabetically based on name.

Census Bureau data products contain several types of geographic entity codes: Federal Information Processing Series, National Standard, and Census Bureau codes.

Federal Information Processing Series (FIPS)—These are codes formerly known as Federal Information Processing Standards codes, until the National Institute of Standards and Technology announced its decision in 2005 to remove geographic entity codes from its oversight. The Census Bureau continues to maintain and issue codes for geographic entities covered under FIPS oversight, albeit with a revised meaning for the FIPS acronym. Geographic entities covered under FIPS include states, counties, congressional districts, core based statistical areas, places, county subdivisions, subminor civil divisions, consolidated cities, estates, and all types of American Indian/Alaska Native/Native Hawaiian areas. FIPS codes are assigned alphabetically according to the name of the geographic entity and may change to maintain alphabetic sort when new entities are created or names change. FIPS codes for specific geographic entity types are usually unique within the next highest level of geographic entity with which a nesting relationship exists. For example, FIPS state and core based statistical area codes are unique within nation; FIPS county, place, county subdivision, subminor civil division, and congressional district codes are unique within state. The codes for American Indian/Alaska Native/Native Hawaiian areas also are unique within state; those areas in multiple states have different codes for each state-based portion.

American National Standards Institute (ANSI)—With the removal of geographic entities from the Federal Information Processing Standards, the federal government sought ANSI oversight for geographic entity codes. These codes are referred to as "National Standard" or "NS" codes in Census Bureau products. Geographic entities covered under ANSI include states, counties, congressional districts, core based statistical areas and related statistical areas, places, county subdivisions, consolidated cities, subminor civil divisions, estates, and all types of American Indian/Alaska Native/Native Hawaiian areas: specifically Alaska Native Regional Corporations, Alaska Native Village statistical areas, American Indian reservation and off-reservation trust lands, American Indian tribal subdivisions, Hawaiian Home Lands, Oklahoma tribal statistical areas, state designated tribal statistical areas, and tribal designated statistical areas.

Relationship Between Federal Information Processing Series (FIPS) and National Standard (NS) Codes—Geographic entities for which the National Institute of Standards and Technology formerly provided Federal Information Processing Standards oversight continue to be referred to as FIPS codes in most Census Bureau data products, despite the federal government having sought American National Standards Institute (ANSI) oversight authority. These geographic entities include states, counties, congressional districts, and core based statistical areas and related statistical areas. The Census Bureau continues to maintain and issue codes for these entities following the same structure and without change to existing codes, except when necessary to

maintain alphabetic sorting based on names of entities. The Census Bureau also continues to maintain and issue five-digit FIPS codes (formerly FIPS 55) for places, county subdivisions, consolidated cities, subminor civil divisions, and all types of American Indian/Alaska Native/Native Hawaiian areas, and has not sought ANSI oversight authority for these entity codes. The U.S. Geological Survey has ANSI oversight authority for its Geographic Names Information System identifier (GNIS ID), which has been adopted as an NS code for states, counties, places, county subdivisions, subminor civil divisions, consolidated cities, estates, and all types of American Indian/Alaska Native/Native Hawaiian areas. The Census Bureau includes the GNIS ID for these entities in most of its data products, identified as "National Standard codes" (NS codes) or less preferred, "ANSI codes." While NS codes (GNIS IDs) are numeric, the Census Bureau portrays them as a fixed length eight-digit character field with leading zeros. NS codes (GNIS IDs) do not sort geographic entities in alphabetical order based on name or title, as is the case with FIPS codes.

The following lists the published code standards used for the 2020 Census (with its associated previous standard):

- INCITS 38-2009, Codes for the Identification of the States, the District of Columbia, Puerto Rico, and the Insular Areas of the United States (Formerly FIPS 5-2).
- INCITS 31-2009, Codes for the Identification of Counties and Equivalent Areas of the United States, Puerto Rico, and the Insular Areas of the United States (Formerly FIPS 6-4).
- INCITS 454-2009, Codes for the Identification of Metropolitan and Micropolitan Statistical Areas and Related Areas of the United States and Puerto Rico (Formerly FIPS 8-6).
- INCITS 455-2009, Codes for the Identification of Congressional Districts and Equivalent Areas of the United States, Puerto Rico, and the Insular Areas (Formerly FIPS 9-1).
- INCITS 446-2008, (GNIS) Identifying Attributes for Named Physical and Cultural Geographic Features (Except Roads and Highways) of the United States, Territories, Outlying Areas, and Freely Associated Areas, and the Waters of the Same to the Limit of the Twelve-Mile Statutory Zone (Replaced FIPS 55-4).

Note: INCITS refers to InterNational Committee for Information Technology Standards.

Census Bureau Codes—The Census Bureau assigns and issues codes for a number of geographic entities for which Federal Information Processing Series (FIPS) or National Standard (NS) codes are not available, and sometimes in addition to FIPS and NS codes. Geographic entities for which census codes are assigned and issued in Census Bureau data products include regions, divisions, census tracts, block groups, census blocks, urban areas, and all types of American Indian/Alaska Native/Native Hawaiian areas. Some codes (voting district and state legislative district) use standards established by the states—or for school district codes, the U.S. Department of Education.

CONSOLIDATED CITY

Consolidated City—A consolidated government is a unit of local government for which the functions of an incorporated place and its county or minor civil division (MCD) have merged. This action results in both the primary incorporated place and the county or MCD continuing to exist as legal entities, even though the county or MCD performs few or no governmental functions and has few or no elected officials. Where this occurs—and where one or more other incorporated places in the county or MCD continue to function as separate governments, even though they have been included in the consolidated government—the primary incorporated place is referred to as a consolidated city. The Census Bureau classifies the separately incorporated

places within the consolidated city as place entities and creates a separate place (balance) record for the portion of the consolidated city not within any other place.

Consolidated City (Balance) Portions—The areas of a consolidated city not included in another separately incorporated place. For example, Butte-Silver Bow, MT, is a consolidated city (former Butte city and Silver Bow County) that includes the separately incorporated municipality of Walkerville city. The area of the consolidated city that is not in Walkerville city is assigned to Butte-Silver Bow (balance). The name always includes the "(balance)" identifier (refer to "Place").

COUNTY OR STATISTICALLY EQUIVALENT ENTITY

The primary legal divisions of most states are termed counties. In Louisiana, these divisions are known as parishes. In Alaska, which has no counties, the equivalent entities are the organized boroughs, city and boroughs, municipalities, and census areas; the latter of which are delineated cooperatively for statistical purposes by the state of Alaska and the Census Bureau. Additionally, the Census Bureau treats the following entities as equivalents of counties for purposes of data presentation: municipios in Puerto Rico, districts and islands in American Samoa, municipalities in the Commonwealth of the Northern Mariana Islands, and islands in the U.S. Virgin Islands. In four states (Maryland, Missouri, Nevada, and Virginia), there are one or more incorporated places that are independent of any county organization and thus constitute primary divisions of their states. These incorporated places are known as independent cities and are treated as equivalent entities for purposes of data presentation. The District of Columbia and Guam have no primary divisions, and each area is considered an equivalent entity for purposes of data presentation in decennial censuses. All of the counties in Connecticut and Rhode Island and nine counties in Massachusetts were dissolved as functioning governmental entities; however, the Census Bureau continues to present data for these historical entities in order to provide comparable geographic units at the county level of the geographic hierarchy for these states and represents them as nonfunctioning legal entities in data products. Each county or statistically equivalent entity is assigned a three-character numeric Federal Information Processing Series code based on alphabetical sequence that is unique within state, and an eight-digit National Standard code.

GEOGRAPHIC AREA ATTRIBUTES

The Census Bureau collects and maintains information describing selected attributes and characteristics of geographic areas. These attributes are Federal Information Processing Series (FIPS) class code, functional status, legal/statistical area description, internal point, and name of geographic entities.

FIPS Class Codes—Describe the general characteristics of a geographic area related to its legal or statistical status, governmental status, and in some cases relationship to other geographic entities. Class codes exist for counties, county subdivisions, subminor civil divisions, estates, places, consolidated cities, and all types of American Indian/Alaska Native/Native Hawaiian areas.

Functional Status Codes—Describe whether a geographic entity is a functioning governmental unit, has an inactive government, is an administrative area without a functioning government, or is a statistical area identified and defined solely for tabulation and presentation of statistical data. Functional status codes are:

A Active government providing primary general-purpose functions.

B Active government that is partially consolidated with another government, but with separate officials providing primary general-purpose functions.

C Active government consolidated with another government with a single set of officials.

E Active government providing special-purpose functions.

F Fictitious entity created to fill the Census Bureau's geographic hierarchy.

G Active government that is subordinate to another unit of government and thus not considered a functioning government.

I Inactive governmental unit that has the power to provide primary special-purpose functions.

N Nonfunctioning legal entity.

S Statistical entity.

Internal Point—The Census Bureau calculates an internal point (latitude and longitude coordinates) for each geographic area. For many geographic areas, the internal point is the centroid, the geographic center of the entity. For some irregularly shaped areas (such as those shaped like a crescent), the centroid may be located outside the boundaries of the entity. In such instances, the internal point is identified as a point inside the entity boundaries nearest to the centroid and, if possible, a point that is on land area, not water.

Legal/Statistical Area Description (LSAD)—The LSAD describes the particular typology for each geographic entity; that is, whether the entity is a borough, city, county, town, or township, among others. For legal entities, the LSAD reflects the term that appears in legal documentation pertaining to the entity, such as a treaty, charter, legislation, resolution, or ordinance. For statistical entities, the LSAD is the term assigned by the Census Bureau or other agency defining the entity. The LSAD code is a two-character field that corresponds to a description of the legal or statistical type of entity and identifies whether the LSAD term should be capitalized and should precede or follow the name of the geographic entity. Note that the same LSAD code is assigned to entities at different levels of the geographic hierarchy when they share the same LSAD. For example, the Census Bureau assigns the same LSAD code ("21") to boroughs in New York and Connecticut, although they are county subdivisions in the former and incorporated places in the latter.

Name—Each geographic entity included in Census Bureau products has a name. For most geographic entities, the name is derived from the official or legally recognized name, is assigned by local officials participating in Census Bureau statistical area programs, or is based on component entities and determined according to specified criteria. For legal entities, the name appearing in Census Bureau products may be the more commonly used name rather than the name as it appears in legal documents. For example, "Virginia" instead of "the Commonwealth of Virginia" and "Baltimore" instead of "City of Baltimore." In some instances, the name for an entity in Census Bureau products reflects the official name as well as a more commonly used name listed parenthetically, i.e., San Buenaventura (Ventura), CA, or Bath (Berkeley Springs), WV. For some types of geographic entities, the name reflected in Census Bureau products may be the geographic entity code assigned by local officials. For example, a census tract's name is the actual number assigned by local officials, such as 1.01, whereas the census tract code would reflect a full four-digit base code and two-digit suffix (for example, for the preceding tract named 1.01, 000101).

GEOGRAPHIC COMPONENT

A geographic component is a subset of a given type of geographic entity based on a certain geographic or population characteristic.

GEOGRAPHIC NAMES INFORMATION SYSTEM

The Geographic Names Information System (GNIS) is the federal standard for geographic nomenclature. The U.S. Geological Survey (USGS) developed the GNIS for the U.S. Board on Geographic Names as the official repository of domestic geographic names data, the official vehicle for geographic names used by all departments of the federal government, and the source for applying geographic names to federal electronic and printed products. The GNIS contains information about physical and cultural geographic features of all types in the United States and its territories, current and historical, but not including roads and highways. The database holds the federally recognized name of each feature and defines the feature location by state, county,

USGS topographic map, and geographic coordinates. Other attributes include names or spellings other than the official name, feature designations, feature classification, historical and descriptive information, and, for some categories, the geometric boundaries.

GEOGRAPHIC NAMES INFORMATION SYSTEM IDENTIFIER

The Geographic Names Information System Identifier (GNIS ID) is a variable length, permanent, numeric identifier of up to eight digits in length that identifies each entity uniquely within the nation. The GNIS ID is the American National Standards Institute National Standard code for several entity types. Because each entity's GNIS ID is permanent, it should not change if the entity changes its name or if creation of a new entity changes the alphabetic sort. (Federal Information Processing Series codes are assigned based on the alphabetic sorting of entity names within a state and occasionally require changing codes to maintain the alphabetic sort.) The GNIS IDs are assigned sequentially and stored in a right-justified, variable-length, numeric field without leading zeros. The GNIS contains more than 2.6 million sequential records, thus no GNIS ID currently exceeds seven digits. The Census Bureau portrays the GNIS ID in its data products as a fixed-width, eight-character field with leading zeros.

GEOGRAPHIC VARIANT

A geographic variant is a version of a geographic entity based on the date that the entity's boundaries are intended to represent. Geographic variants only apply to specific types of geographic entities that need to be added or replaced by a more recent version, for example congressional districts when a state redraws its congressional district boundaries.

GEOSPATIAL DATA

Geospatial data are those data and products that are clearly geographic in nature, rather than primarily statistical, especially maps and spatial data for use by Geographic Information Systems software and services, for example, TIGER/Line Shapefiles. The Census Bureau creates, maintains, and provides geospatial data, specifically in the MAF/TIGER System, to give statistical data added value and utility as a frame of reference for data users.

ISLAND AREAS OF THE UNITED STATES

The Island Areas of the United States are the U.S. Territories of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (Northern Mariana Islands), and the U.S. Virgin Islands.

The Census Bureau treats the Island Areas as entities that are statistically equivalent to states for data presentation purposes; data for the Island Areas, however, are presented separately from data for the United States and Puerto Rico. Geographic definitions specific to the Island Areas are shown in the appropriate publications and documentation that accompany the data products for the Island Areas. Sometimes the Island Areas are referred to as "Island Territories" or "Insular Areas."

Separate from the Island Areas is the term "U.S. Minor Outlying Islands." The U.S. Minor Outlying Islands refers to certain small islands that are U.S. territories under U.S. jurisdiction in the Caribbean Sea and Pacific Ocean: Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Palmyra Atoll, and Wake Island. These areas usually are not part of standard data products, because they generally do not include population year-round.

MAF/TIGER SYSTEM

MAF/TIGER is an acronym for the Master Address File/Topologically Integrated Geographic Encoding and Referencing System. It is a digital (computer-readable) geospatial database that automates the mapping and related geographic activities required to support the Census Bureau's census and survey programs. The

Census Bureau developed the TIGER® System to automate the geospatial support processes needed to meet the major geographic needs of the 1990 Census: producing cartographic products to support data collection and map presentations, providing geographic structure for tabulation and dissemination of the collected statistical data, assigning residential and employer addresses to the correct geographic location and relating those locations to the geographic entities used for data tabulation, and so forth. During the 1990s, the Census Bureau developed an independent Master Address File (MAF) to support field operations and allocation of housing units for tabulations. After the 2000 Census, both the address-based MAF and geospatial TIGER Databases merged to form MAF/TIGER. The content of the MAF/TIGER System is undergoing continuous updates and is made available to the public through a variety of TIGER/Line Shapefiles and other geospatial data products.

PLACE

Incorporated places are those reported to the Census Bureau as legally in existence as of January 1, 2020, as reported in the latest Boundary and Annexation Survey, under the laws of their respective states. An incorporated place is established to provide governmental functions for a concentration of people as opposed to a minor civil division (MCD), which generally is created to provide services or administer an area without regard, necessarily, to population. Places always are within a single state or equivalent entity but may extend across county and county subdivision boundaries. An incorporated place usually is a city, town, village, or borough, but can have other legal descriptions. For Census Bureau data tabulation and presentation purposes, incorporated places exclude:

- Boroughs in Alaska (treated as statistical equivalents of counties).
- Towns in the New England states, New York, and Wisconsin (treated as MCDs).
- Boroughs in New York (treated as MCDs).

Census Designated Places (CDPs)—The statistical counterparts of incorporated places delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located. The boundaries are usually defined in cooperation with local or tribal officials and generally updated prior to each decennial census. These boundaries, which usually coincide with visible features or the boundary of an adjacent incorporated place or another legal entity boundary, have no legal status, nor do these places have officials elected to serve traditional municipal functions. CDP boundaries may change from one decennial census to the next with changes in the settlement pattern; a CDP with the same name as in an earlier census does not necessarily have the same boundary. CDPs must be contained within a single state and may not extend into an incorporated place. There are no population size requirements for CDPs, but they must include some residential population or housing.

Hawaii, Puerto Rico, and Guam are the only states or state-equivalent entities that have no incorporated places recognized by the Census Bureau. All places shown in decennial census data products for Hawaii, Puerto Rico, and Guam are CDPs. By agreement with the state of Hawaii, the Census Bureau does not show data separately for the city of Honolulu, which is coextensive with Honolulu County. In Puerto Rico, CDPs are described as comunidades or zonas urbanas. Hamlets, primarily in the state of New York, are usually represented as CDPs in Census Bureau products.

Place Codes—There are two types of place codes. The five-digit Federal Information Processing Series place code is assigned based on alphabetical sequence within a state. If place names are duplicated within a state and they represent distinctly different areas, a separate code is assigned to each place name alphabetically by the primary county in which each place is located, or if both places are in the same county, they are assigned alphabetically by their legal descriptions (for example, “city” before “village”). Places also are assigned an eight-digit National Standard code.

Dependent and independent places refer to the relationship of places to the county subdivisions. Depending on the state, incorporated places are either dependent within, or independent of, county subdivisions, or there is a mixture of dependent and independent places in the state and in a county. Dependent places are part of the county subdivision; the county subdivision code of the place is the same as that of the underlying county subdivision(s) but is different from the place code. Independent places are not part of any minor civil division (MCD) and serve as primary county subdivisions. The independent place Federal Information Processing Series (FIPS) code usually is the same as that used for the MCD for that place. The only exception is if the place is independent of the MCDs in a state (Iowa, Louisiana, Maryland, Nebraska, North Carolina, and Virginia) in which the FIPS MCD codes are in the 90000 range. Then, the FIPS MCD and FIPS place codes do differ. CDPs always are dependent within county subdivisions and all places are dependent within statistical county subdivisions.

Consolidated City (Balance) Portions—The areas of a consolidated city not included in another separately incorporated place. For example, Butte-Silver Bow, MT, is a consolidated city (former Butte city and Silver Bow County) that includes the separately incorporated municipality of Walkerville city. The area of the consolidated city that is not in Walkerville city is assigned to Butte-Silver Bow (balance). The name of the area of a consolidated city not specifically within a separately incorporated place always includes the "(balance)" identifier. Balance portions of consolidated cities are included with other places in Census Bureau products.

POPULATION AND HOUSING UNIT DENSITY

Population and housing unit density are computed by dividing the total population or number of housing units within a geographic entity by the land area of that entity measured in square miles or in square kilometers. Density is expressed as "population per square mile (kilometer)" or "housing units per square mile (kilometer)."

PUERTO RICO

The Census Bureau treats the Commonwealth of Puerto Rico as the statistical equivalent of a state for data presentation purposes.

Municipio

The primary legal divisions of Puerto Rico are termed "municipios." For data presentation purposes, the Census Bureau treats a municipio as the equivalent of a county in the United States.

Barrio, Barrio-Pueblo, and Subbarrio

The Census Bureau recognizes barrios and barrios-pueblo as the primary legal divisions of municipios. These entities are similar to the minor civil divisions used for reporting data in some states of the United States. Subbarrios, also known as subminor civil divisions, exist in some municipios, and are the primary legal subdivisions of the barrios-pueblo and some barrios. The Census Bureau presents the same types of statistical data for subbarrios as it does for the barrios and barrios-pueblo. (There is no geographic entity in the United States equivalent to the subbarrio.)

Zona Urbana and Comunidad

There are no incorporated places in Puerto Rico; instead, the Census Bureau provides data for two types of census designated places: zonas urbanas, representing the governmental center of each municipio, and comunidades, representing other settlements.

Some types of geographic entities do not apply in Puerto Rico. For instance, Puerto Rico is not in any census region or census division (refer also to "Congressional District").

STATE OR STATISTICALLY EQUIVALENT ENTITY

States and Equivalent Entities—The primary governmental divisions of the United States. In addition to the 50 states, the Census Bureau treats the District of Columbia, Puerto Rico, American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands as the statistical equivalents of states for the purpose of data presentation.

SUMMARY LEVEL

Summary levels identify the geographic level for which the statistical data in a given Census Bureau product have been summarized. The summary level hierarchy chart for each statistical data product describes the hierarchical arrangement of the specified geographic areas with other geographic areas in that product, if any. The summary level must be used in combination with the geographic area codes to identify a specific geographic area (for example, summary level 050 and a specific state and county code must be used together to locate the data for a particular county). Summary levels allow statistical data to be systematically tabulated, produced, and edited, thus allowing more data to be available for those defined geographic relationships. Additional geographic relationships exist in Census Bureau geospatial data, but less statistical data are available for those relationships since they are not defined as summary levels.

UNITED STATES (NATION)

The United States consists of the 50 states and the District of Columbia. The term “nation” in data products refers to the United States.

UNITED STATES AND TERRITORIES

The United States and Territories consists of the 50 states, the District of Columbia, Puerto Rico, the Island Areas, and the Minor Outlying Islands.

Appendix B.
Definitions of Subject Characteristics

CONTENTS

POPULATION CHARACTERISTICS

Age

The data on age were derived from answers to a two-part question (i.e., age and date of birth) asked for all people in a household or group quarters. The age classification for a person in census tabulations is the age of the person in completed years as of the census reference date (April 1, 2020). Respondents were asked to give an age in whole, completed years as of the census reference date as well as the month, day, and year of birth. People were asked not to round up an age if the person was close to having a birthday; however, they were instructed to estimate an age if the exact age was not known. For babies less than 1 year old, respondents were asked not to write the age in months, but instead to write "0" as the age in years.

Both age and date of birth responses are used in combination to determine the most accurate age for the person as of the census reference date. Inconsistently reported and missing values were either assigned, allocated, or substituted based on the values of other variables either for that person, from other people in the household, or from people in other households (i.e., hot deck imputation).

Age data are tabulated in age groupings.

Uses of Data—Data on age are used to determine the applicability of other questions for a particular individual and to classify other characteristics in tabulations.

Age data are needed to interpret most social and economic characteristics used to plan and analyze programs and policies. Age is central for any number of federal, state, and local programs that target funds or services to children, working-age adults, women of childbearing age, or the older population.

Limitation of the data—There is some tendency for respondents to provide their age as of the date they completed the census questionnaire or interview, not their age as of the census reference date. The two-part question and editing procedures have attempted to minimize the effect of this reporting problem on tabulations. Additionally, the current census age question displays the census reference date prominently ("What is your age on April 1, 2020"), and interviewer training emphasizes the importance of collecting age as of the reference date.

Respondents sometimes round a person's age up if they were close to having a birthday. For most single years of age, the misstatements are largely offsetting. The problem is most pronounced at age 0. Also, there may have been more rounding up to age 1 to avoid reporting age as 0 years. (Age in completed months was not collected for infants under the age of 1.) Editing procedures correct this problem.

Respondents sometimes round a person's age up if they were close to having a birthday. For most single years of age, these misstatements are largely offsetting; however, the problem is more pronounced at age 0. There may be rounding up to age one to avoid reporting age as 0 years. Also, there is some respondent resistance to reporting the ages of babies in completed years (i.e., 0 years of age) when the baby is under 1 year;

instead, babies' ages are sometimes reported in months. To minimize this misreporting, the 2020 Census age question includes an instruction saying "For babies less than 1 year old, do not write the age in months. Write 0 as the age." The two-part question along with enhanced editing and data capture procedures correct much of this problem before the age data are finalized in tabulations.

Age heaping is a common age misreporting error. Age heaping is the tendency for people to overreport ages (or years of birth) that end in certain digits (commonly digits "0" or "5") and underreport ages or years of birth ending in other digits. The two-part question helps minimize the effect of age heaping on the final tabulations.

Age data for centenarians have a history of data quality challenges. The counts in the 1970 and 1980 Censuses for people 100 years and over were substantially overstated. Since then, editing and data collection methods have been enhanced to improve the data quality for this population.

It also has been documented that the population aged 69 in the 1970 Census and the population aged 79 in the 1980 Census were overstated. The population aged 89 in 1990 and the population aged 99 in 2000 did not have an overstated count. (For more information on the design of the age question, refer to the "Comparability" section below.)

Comparability—Age data have been collected in every census. However, there have been some differences in the way they have been collected and processed over time. Since the 2000 Census, both an age and an exact date of birth has been provided for each person. The 1990 Census collected age and year of birth; prior censuses had collected month and quarter of birth in addition to age and year of birth.

In each census since 1940, the age of a person was assigned when it was not reported. In censuses before 1940, with the exception of 1880, people of unknown age were shown as a separate category. Since 1960, assignment of unknown age has been performed by a general procedure described as "imputation." The specific procedures for imputing age have been different in each census.

Caution should be taken when comparing population in age groups across time. The entire population continually ages into older age groups over time, and babies fill in the youngest age group. Therefore, the population of a certain age is made up of a completely different group of people in one time period than in another (e.g., one age group in 2020 versus the same age group in 2010). Since populations occasionally experience booms/increases and busts/decreases in births, deaths, or migration (for example, the postwar Baby Boom from 1946 to 1964), one should not necessarily expect that the population in an age group in one census is similar in size or proportion to the population in the same age group in a different census. For example, Baby Boomers were ages 36 to 54 during the 2000 Census while they were ages 56 to 74 during the 2020 Census.

The age structure and distribution would therefore shift in those age groups to reflect the change in people occupying those age-specific groups over time.

Ethnicity and Racial Classification

The ethnicity and racial classifications used by the U.S. Census Bureau adhere to the October 30, 1997, Federal Register Notice entitled, "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity" issued by the Office of Management and Budget (OMB). These OMB standards govern the definitions and categories used to collect and present federal data on ethnicity and race. OMB requires two minimum categories on ethnicity (Hispanic or Latino and Not Hispanic or Latino) and five minimum categories on race (White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander). The ethnicity and race categories are described below with a sixth category, "Some Other Race," added with OMB approval. In addition to the five race groups, OMB also states that respondents should be offered the option of selecting one or more races. Based on extensive research and outreach over the past decade, the design of the 2020 Census race and ethnicity questions provides ways for all respondents to self-identify their detailed identities.

Hispanic or Latino Origin

The data on the Hispanic or Latino population were derived from answers to a question that was asked of all people. The 2020 Census Hispanic origin question included three detailed checkboxes (Mexican, Puerto Rican, Cuban), along with a "Yes, another Hispanic, Latino, or Spanish origin" checkbox, updated example groups, and a write-in line to collect additional detailed Hispanic responses. The instruction stated, "Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc." The examples for 2020 are the largest Hispanic population groups representing the geographic diversity of the Hispanic or Latino category, as defined by the 1997 OMB standards.

The terms "Hispanic," "Latino," and "Spanish" are used interchangeably. Some respondents identify with all three terms, while others may identify with only one of these three specific terms. People who identify with the terms "Hispanic," "Latino," or "Spanish" are those who classify themselves in one of the specific Hispanic, Latino, or Spanish categories listed on the questionnaire ("Mexican," "Puerto Rican," or "Cuban") as well as those who indicate that they are "another Hispanic, Latino, or Spanish origin." People who do not identify with one of the specific origins listed on the questionnaire but indicate that they are "another Hispanic, Latino, or Spanish origin" are those whose origins are from Spain, the Spanish-speaking countries of Central or South America, or another Spanish culture or origin. Up to six write-in responses to the "another Hispanic, Latino, or Spanish origin" category are coded. Knowing that some respondents may self-identify by reporting multiple Hispanic ethnicities, such as "Cuban" AND "Salvadoran," entries with multiple detailed Hispanic responses were collected for research purposes. However, following the OMB standards, only a single Hispanic response was tabulated.

Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Hispanic, Latino, or Spanish may be of any race.

Coding of Hispanic Origin Write-in Responses—There were two types of coding operations: (1) automated coding where a write-in response was automatically coded if it matched a write-in response already contained in a database known as the "master file," and (2) expert coding, which took place when a write-in response did not match an entry already on the master file and was sent to expert coders familiar with the subject matter.

For more information on how detailed Hispanic origin groups are coded, refer to the 2020 Hispanic Origin and Race Code List.

Editing of Hispanic Origin Responses—If an individual did not provide a Hispanic origin response, their origin may have been assigned from previous census records or federal administrative records, if available, or was allocated using specific rules of precedence of household relationship. For example, if origin was missing for a natural-born child in the household, then either the origin of the householder, another natural-born child, or spouse of the householder was allocated. If Hispanic origin was not reported for anyone in the household and origin could not be obtained from a response to the race question, then the Hispanic origin of a householder in a previously processed household with the same race was allocated to the individual missing a response.

Comparability—There were two important changes to the Hispanic origin question for the 2020 Census compared to the 2010 Census. First, in 2020, the six example groups provided with the "Yes, another Hispanic, Latino, or Spanish origin" category were updated to Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, and Ecuadorian to reflect the largest Hispanic groups in the United States. In 2010, the examples provided were Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, and Spaniard. Second, in 2020, 200 characters were captured, allowing for up to six responses to be coded from the write-in category, "Yes, another Hispanic, Latino, or Spanish origin." In 2010, 30 characters were captured, and up to two responses were coded from this write-in field. However, following the OMB standards, only a single Hispanic response will be tabulated, as was done for the 2010 Census.

The improvements made to the 2020 Census are presented in the blog entitled, "Improvements to the 2020 Census Race and Hispanic Origin Question Designs, Data Processing, and Coding Procedures."

Race

The data on race were derived from answers to the question on race that was asked of all people. The U.S. Census Bureau collects race data in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB), and these data are based on self-identification. The racial categories included in the census questionnaire generally reflect a social definition of race recognized in this country and not an attempt to define race biologically, anthropologically, or genetically. In addition, it is recognized that the categories of the race item include racial and national origin or sociocultural groups. People may choose to report more than one race to indicate their racial mixture, such as "American Indian" and "White." People who identify their origin as Hispanic, Latino, or Spanish may be any race.

The design of the 2020 Census race question included 15 separate response categories and five areas where respondents could write-in detailed information about their race. The response categories and write-in answers can be combined to create the five minimum OMB race categories plus Some Other Race, and the Two or More Races population. In addition to White, Black or African American, American Indian or Alaska Native, and Some Other Race, seven of the 15 response categories are detailed Asian groups and four are detailed Native Hawaiian or Other Pacific Islander groups.

Coding of Race Responses—There are two types of coding operations: (1) automated coding where a write-in response is automatically coded if it matches a write-in response already contained in a database known as the "master file," and (2) expert coding, which took place when a write-in response did not match an entry already on the master file and was sent to expert coders familiar with the subject matter. During the coding process, subject-matter specialists reviewed and coded written entries from all write-in lines available on the race question.

Editing of Race Responses—If an individual did not provide a race response, a response may have been assigned from previous census records or federal administrative records, if available, or their response may have been allocated using specific rules of precedence based on household relationship. For example, if race was missing for a natural-born child in the household, then either the race or races of the householder, another natural-born child, or spouse of the householder were allocated.

If race could not be assigned from other sources and was not reported for anyone in the household, then the race or races of a householder in a previously processed household were allocated to the individual missing a response.

Definitions from OMB guide the Census Bureau in classifying written responses to the race question:

White—A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report responses such as German, Irish, English, Italian, Lebanese, and Egyptian. The category also includes groups such as Polish, French, Iranian, Slavic, Cajun, Chaldean, etc.

Black or African American—A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black or African American" or report responses such as African American, Jamaican, Haitian, Nigerian, Ethiopian, or Somali. The category also includes groups such as Ghanaian, South African, Barbadian, Kenyan, Liberian, Bahamian, etc.

American Indian or Alaska Native—A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicate their race as "American Indian or Alaska Native" or report responses such as Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, or Nome Eskimo Community.

Respondents who identified themselves as "American Indian or Alaska Native" were asked to report their enrolled or principal tribe. Therefore, tribal data in tabulations reflect the written entries reported on the questionnaires. Some of the entries (for example, Metlakatla Indian Community and Umatilla) represent reservations or a confederation of tribes on a reservation. The information on tribe is based on self-identification and therefore does not reflect any designation of federally or state-recognized tribe. The information for the 2020 Census was updated from 2010 to 2020 based on the annual Federal Register notice entitled "Indian Entities Recognized and Eligible to Receive Services from the United States Bureau of Indian Affairs," Department of the Interior, Bureau of Indian Affairs, issued by OMB, and through consultation with American Indian or Alaska Native communities and leaders.

Asian—A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, India, China, the Philippine Islands, Japan, Korea, or Vietnam. It includes people who indicate their race as Asian Indian, Chinese, Filipino, Korean, Japanese, Vietnamese, and Other Asian, or provide other detailed Asian responses such as Pakistani, Cambodian, Hmong, Thai, Bengali, Mien, etc.

Native Hawaiian or Other Pacific Islander—A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as Native Hawaiian, Chamorro, Samoan, and Other Pacific Islander, or provide other detailed Pacific Islander responses such as Palauan, Tahitian, Chuukese, Pohnpeian, Saipanese, Yapese, etc.

Some Other Race—Includes all other responses not included in the "White," "Black or African American," "American Indian or Alaska Native," "Asian," and "Native Hawaiian or Other Pacific Islander" race categories described above. Respondents reporting entries such as multiracial, mixed, interracial, or a Hispanic, Latino, or Spanish group (for example, Mexican, Puerto Rican, Cuban, or Spanish) in response to the race question are included in this category.

Two or More Races—People may choose to provide two or more races either by checking two or more race response checkboxes, by providing multiple responses, or by some combination of checkboxes and other responses. The race response categories shown on the questionnaire are collapsed into the five minimum race groups identified by OMB and the Census Bureau's "Some Other Race" category. For data product purposes, "Two or More Races" refers to combinations of two or more of the following race categories:

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. Some Other Race

Race Concepts—The Detailed DHC-A tabulates race in two ways, the first of which is "detailed" race groups. Detailed race groups include disaggregated groups such as German, Lebanese, Jamaican, Nigerian, Chinese, Navajo, Samoan, Brazilian, etc.

The race question tabulates multiple race responses when reported and, as a result, detailed race groups come in two forms: "alone" and "alone or in any combination."

- The concept of "detailed race alone" includes people who reported a single entry (e.g., Korean) and no other race(s).
- The concept of "detailed race alone or in any combination" includes people who reported a single entry (e.g., Korean) and people who reported that entry with one or more other race(s) (e.g., Korean *and* Thai, or Korean *and* Black or African American). The "detailed race alone or in any combination" concept therefore represents the maximum number of people who reported as that detailed race group, either alone or in any combination with one or more additional race(s).

The Detailed DHC-A also tabulates regional groups for race groups. Regional groups include groups such as European, Middle Eastern or North African, Caribbean, Sub-Saharan African, Central Asian, American Indian, Polynesian, etc. Regional race groups come in two forms: "alone" and "alone or in any combination."

- The concept of "regional group alone" includes people who reported one or more detailed race group(s) that aggregate into the same regional group header. For example, respondents who reported Beninese, as well as those who reported Nigerian *and* Ghanaian, are part of the larger "Sub-Saharan African alone" regional group.
- The concept of "regional group alone or in any combination" includes people who reported one or more detailed race group(s) that aggregate into the same regional group header, as well as people who reported detailed race groups that aggregate into different regional group headers. For example, respondents who reported Navajo Nation as well as those who reported Hopi *and* Brazilian are part of the larger "American Indian alone or in any combination" regional group.

Comparability— Several important updates were made to the race question for the 2020 Census. First, write-in response areas were added for the "White" and "Black or African American" racial categories. For the 2010 Census, the "White" and "Black or African American" categories did not have an area for write-in responses. Second, six examples were provided for each of the write-in fields allocated to the "White," "Black or African American," and "American Indian or Alaska Native" groups. These examples represent some of the largest population groups within the geographically diverse population of each category in the United States. Third, the category "Black, African Am., or Negro" was changed to "Black or African Am." on paper questionnaires and "Black or African American" on electronic questionnaires. Fourth, the examples provided for the "Other Asian" and "Other Pacific Islander" groups have been updated to reflect the changes in population sizes and proportions in the United States. Fifth, the checkbox category "Guamanian or Chamorro" was changed to "Chamorro." Finally, the write-in instructions for the "Some Other Race" category have been updated to better solicit detailed reporting. Whereas the 2010 Census form included the instruction to "Print race," the instruction used in the 2020 Census was updated to "Print race or origin."

Several updates were made to the amount of data that are collected from each of the write-in lines on the race question. While the 2010 Census captured up to 30 characters from each line, allowing for two distinct groups to be tabulated from each, the 2020 Census captured 200 characters, allowing for up to six groups to be coded and tabulated from each line. The OMB standards encourage the collection of more detailed information and facilitating the reporting of detailed racial/ethnic identities for all population groups has been a major objective of the Census Bureau's research for improving race and ethnicity data over the past decade. This objective is in line with OMB standards, which encourage federal agencies to collect additional detailed data, as long as the data can be aggregated to the minimum OMB categories.

The improvements made to the race question design, processing, and coding are presented in the Improvements to the 2020 Census Race and Hispanic Origin Question Designs, Data Processing, and Coding Procedures blog. For more information on how detailed race groups are coded, refer to the 2020 Hispanic Origin and Race Code List.

Sex

All individuals in a household or group quarters were asked to mark either "male" or "female" to indicate their sex. For many cases in which sex was not reported, the appropriate entry was determined from the person's given (i.e., first) name or household relationship or from a person's reported age and fertility (i.e., people age 15 or older who reported at least one child ever born were assigned as "female"). Otherwise, sex was either allocated according to the person's age and relationship to the householder or imputed via "hot deck."

Uses of Data—Sex question responses are used to determine the applicability of other census questions for a particular individual. Sex data are aggregated both to provide the number of males and females in the population and to classify other characteristics in tabulations.

Data on sex are critical because many federal programs must differentiate between males and females. These data are used to analyze the social and economic characteristics of males and females needed to predict, plan, fund, and evaluate federal programs and policies (e.g., childcare and education programs, equal employment opportunity laws, housing policies and practices, veterans' facilities and benefits).

Comparability—A question on the sex of individuals has been asked of the total population in every census.

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Appendix C.
Data Collection and Processing Procedures

CONTENTS

2020 CENSUS MISSION AND SCOPE

The purpose of the 2020 Census was to conduct a census of the population and housing, and disseminate the results to the President, the states, and the American people. The goal of the 2020 Census was to count everyone once, only once, and in the right place. The primary requirement served by the decennial census is the apportionment of seats allocated to the states for the House of Representatives. This requirement is mandated in the U.S. Constitution:

> Article I, Section 2; The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years.
>
> Fourteenth Amendment, Section 2; Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State.

The Congressional Act of March 6, 1902, legally established the U.S. Census Bureau as the "official" data collector for the United States. Public Law 94-171, enacted in 1975, states the Commerce Secretary shall furnish redistricting data tabulations to the states by no later than 1 year from Census Day (April 1, 2021). The Secretary delegates this task to the Director of the Census Bureau and the Redistricting & Voting Rights Data Office. States use the redistricting data tabulations, provided by the Census Bureau, to define the representative boundaries for congressional districts, state legislative districts, school districts, voting precincts, and other types of districts.

Additionally, decennial data are used to enforce voting rights and civil rights legislation. The Census Bureau also uses the decennial census results to determine the statistical sampling frames for the American Community Survey, which replaced the long form in the decennial census and is part of the Decennial Census Program, and the dozens of current surveys conducted by the Census Bureau. The results of these surveys are used to support important government functions, such as appropriating federal funds to local communities (hundreds of billions of dollars annually)[1]; calculating monthly unemployment, crime, and poverty rates; and publishing health and education data.

Finally, decennial census data play an increasingly important role in U.S. commerce and the economy. As people expand their use of data to make decisions at the local and national levels, they increasingly depend on data from the Census Bureau to make these decisions. Today, local businesses look at data provided by the Census Bureau on topics like population growth and income levels to make decisions about whether or where to locate their restaurants or stores. Similarly, a real estate investor who is considering investing significant funds to develop a piece of land in the community relies on Census Bureau data to measure the demand for

[1] "Uses of Census Bureau Data in Federal Funds Distribution," prepared by Marisa Hotchkiss and Jessica Phelan, U.S. Census Bureau, Washington, DC, September 2017, <www.census.gov/library/working-papers/2017/decennial/census-data-federal-funds.html>.

housing, predict future need, and review aggregate trends. Big businesses also rely heavily on Census Bureau data to make critical decisions that impact their success and shape the economy at the national level.

The Census Bureau conducted the most automated, modern, and dynamic decennial census in history. The 2020 Census included design changes in four key areas (compared to the 2010 Census), including new methodologies to conduct address canvassing, innovative ways of optimizing self-response, the use of administrative records and third-party data to reduce the nonresponse follow-up workload, and the use of technology to reduce the manual effort and improve the productivity of field operations. The primary goal of these design changes was to achieve efficiency by:

- Adding new addresses to the Census Bureau's address frame using geographic information systems and aerial imagery instead of sending Census Bureau employees to walk and physically check 11 million census blocks.
- Encouraging the population to respond to the 2020 Census using the internet, reducing the need for more expensive paper data capture.
- Using administrative data the public has already provided to the government and data available from commercial sources, allowing realized savings to focus additional visits in areas that have been historically undercounted.
- Using sophisticated operational control systems to send Census Bureau employees to follow up with nonresponding housing units and to track daily progress.

The scope of the 2020 Census included the following:

- The 2020 Census shall cover the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, the Commonwealth of the Northern Mariana Islands, Guam, the Pacific Island Area of American Samoa, and Federally Affiliated Americans overseas.
- Census Day for the 2020 Census shall be April 1, 2020; have a boundary reference date of January 1, 2020; deliver apportionment counts to the President by December 31, 2020; and deliver Public Law 94-171 redistricting tabulations to the states by April 1, 2021.
- The 2020 Census concludes upon delivery of all products and the subsequent closeout activities ending September 30, 2023.

THE 2020 CENSUS OPERATIONAL OVERVIEW

The Census Bureau implemented four operational planning categories to count everyone once, only once, and in the right place in the 2020 Census. These planning categories include: Establish Where to Count, Motivate People to Respond, Count the Population, and Release Census Results. High-level descriptions of the operational planning categories are:

- **Establish Where to Count**—The first step in conducting the 2020 Census was to identify all of the addresses where people could live. To determine all of the addresses where people could live, the Census Bureau:
    - Conducted a 100 percent review and update of the nation's address list.
    - Minimized in-field work with in-office updating.
    - Used multiple data sources to identify areas with address changes.

- Received input from local governments.

- **Motivate People to Respond**—The 2020 Census included a nationwide communications and partnership campaign to motivate people to respond to the census. The Census Bureau:
  - Worked with trusted sources to increase participation.
  - Maximized outreach using traditional and new media.
  - Targeted advertisements to specific audiences.
- **Count the Population**—The 2020 Census collected data from all households, including group and unique living arrangements. The 2020 Census:
  - Made it easy for people to respond anytime, anywhere.
  - Encouraged people to use the online response option.
  - Used the most cost-effective strategy to contact and count nonrespondents.
  - Streamlined in-field census taking.
  - Knocked on doors only when necessary.
- **Release Census Results**—The last step in the 2020 Census was to process and provide the 2020 Census data. The Census Bureau:
  - Delivered apportionment counts to the President by April 26, 2021.
  - Released counts for redistricting on August 12, 2021, and then made available on data.census.gov on September 16, 2021.
  - Released 2020 Census data products to data.census.gov, so the public could access the data in one location.

THE 2020 CENSUS OPERATIONS

The 2020 Census design comprised 35 operations organized into eight major areas that corresponded with the Census Bureau's standard Work Breakdown Structure. The term operation refers to both support and business functions. For example, Program Management is considered a support function, and Address Canvassing was considered a business function. Table C-1 provides a high-level purpose statement for each

operation. Figure C-1 shows a graphic representation of the 35 operations organized into the eight areas described in Table C-1. Detailed information on the 2020 Census design and the 35 operations is available on the Census Bureau's internet site <www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/plan/op-plans.html>.

Table C-1. **Operations and Purpose**

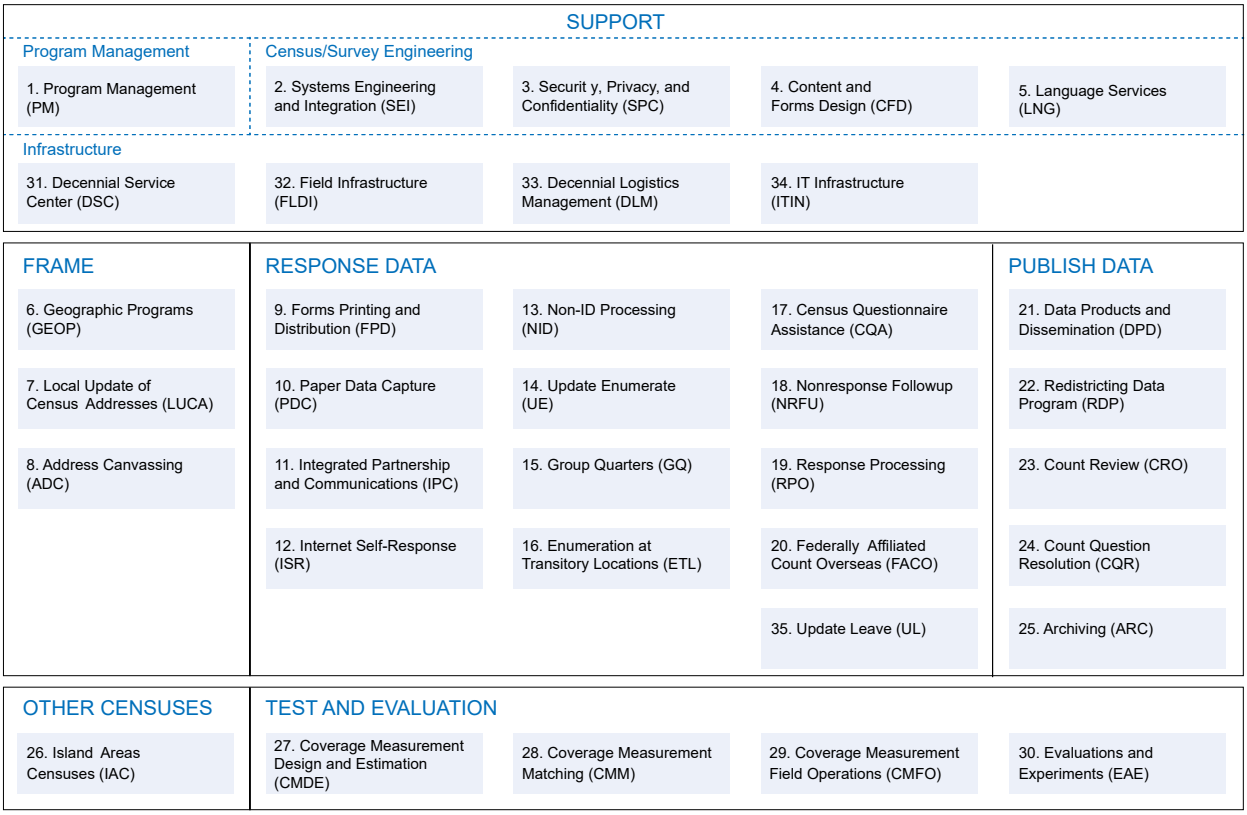
Operations	Purpose
Program Management	
Program Management (PM)	Define and implement program management policies, processes, and the control functions for planning and implementing the 2020 Census in order to ensure an efficient and well-managed program.
Census/Survey Engineering	
Systems Engineering and Integration (SEI)	Manage the delivery of a System of Systems that meets the 2020 Census.
Program business and capability requirements.	
Security, Privacy, and Confidentiality (SPC)	Ensure that all operations and systems used in the 2020 Census adhere to laws, policies, and regulations that ensure appropriate systems and data security, and protect respondent and employee privacy and confidentiality.
Content and Forms Design (CFD)	Identify and finalize content and design of questionnaires and other associated nonquestionnaire materials, ensure consistency across data collection modes and operations, and provide the optimal design and content of the questionnaires to encourage high response rates.
Language Services (LNG)	Assess and support language needs of non-English speaking populations, determine the number of non-English languages and level of support for the 2020 Census, optimize the non-English content of questionnaires and associated nonquestionnaire materials across data collection modes and operations, and ensure cultural relevancy and meaningful translation of 2020 Census questionnaires and associated nonquestionnaire materials.
Frame	
Geographic Programs (GEOP)	Provide the geographic foundation in support of the 2020 Census data collection and tabulation activities, within the Master Address File (MAF)/Topologically Integrated Geographic Encoding and Referencing (TIGER) System. The MAF/TIGER System (software applications and databases) serves as the national repository for all of the spatial, geographic, and residential address data needed for census and survey data collection, data tabulation, data dissemination, geocoding services, and map production. Components of this operation include Geographic Delineations, Geographic Partnership Programs, and Geographic Data Processing.

Operations	Purpose
Local Update of Census Addresses (LUCA)	Provide an opportunity for tribal, state, and local governments to review and improve the address lists and maps used to conduct the 2020 Census as required by Public Law (P.L.) 103-430.
Address Canvassing (ADC)	Deliver a complete and accurate address list and spatial database for enumeration and determine the type and address characteristics for each living quarter.
Response Data	
Forms Printing and Distribution (FPD)	Print and distribute internet invitation letters, reminder cards or letters or both, questionnaire mailing packages, and materials for other special operations, as required. Other materials required to support field operations are handled in the Decennial Logistics Management operation.
Paper Data Capture (PDC)	Capture and convert data from the 2020 Census paper questionnaires, including mail receipt, document preparation, scanning, Optical Character Recognition, Optical Mark Recognition, Key From Image, data delivery, checkout, and form destruction.
Integrated Partnership and Communications (IPC)	Communicate the importance of participating in the 2020 Census to the entire population of the 50 states, the District of Columbia, and Puerto Rico to engage and motivate people to self-respond (preferably via the internet), raise and keep awareness high throughout the entire 2020 Census to encourage response, support field recruitment efforts, and effectively support dissemination of census data to stakeholders and the public.
Internet Self-Response (ISR)	Maximize online response to the 2020 Census via contact strategies and improved access for respondents and collect response data via the internet to reduce paper and the Nonresponse Followup operation workload.
Non-ID Processing (NID)	Make it easy for people to respond anytime, anywhere to increase self-response rates by providing response options that do not require a unique Census ID, maximizing real-time matching of non-ID respondent addresses to the census living quarters address inventory, and accurately assigning nonmatching addresses to census blocks.
Update Enumerate (UE)	Update the address and feature data and enumerate respondents in person. UE is designated to occur in areas where the initial visit requires enumerating while updating the address frame, in particular in remote geographic areas that have unique challenges associated with accessibility.
Update Leave (UL)	Update the address and feature data and leave a choice questionnaire package at every housing unit identified to allow the household to self-respond. UL occurs in areas where the majority of housing units do not have a city-style address to receive mail.

Operations	Purpose
Group Quarters (GQ)	Enumerate people living or staying in group quarters and provide an opportunity for people experiencing homelessness and receiving service at service-based locations, such as soup kitchens, to be counted in the census.
Enumeration at Transitory Locations (ETL)	Enumerate individuals in occupied units at transitory locations who do not have a usual home elsewhere. Transitory locations include recreational vehicle parks, campgrounds, racetracks, circuses, carnivals, marinas, hotels, and motels.
Census Questionnaire Assistance (CQA)	Provide questionnaire assistance for respondents by answering questions about specific items on the census form or other frequently asked questions about the 2020 Census and provide an option for respondents to complete a census interview over the telephone. Also provide outbound calling support of Coverage Improvement.
Nonresponse Followup (NRFU)	Determine housing unit status for nonresponding addresses that do not self-respond to the 2020 Census and enumerate households that are determined to have a housing unit status of occupied.
Response Processing (RPO)	Create and distribute the initial 2020 Census enumeration universe, assign the specific enumeration strategy for each living quarter based on case status and associated paradata, create and distribute workload files required for enumeration operations, track case enumeration status, run post-data collection processing actions in preparation for producing the final 2020 Census results, and check for suspicious returns.
Federally Affiliated Count Overseas (FACO)	Obtain counts by home state of U.S. military and federal civilian employees stationed or assigned overseas and their dependents living with them.
Publish Data	
Data Products and Dissemination (DPD)	Prepare and deliver the 2020 Census apportionment data to the President of the United States to provide to Congress, tabulate 2020 Census data products for use by the states for redistricting, and tabulate and disseminate 2020 Census data for use by the public.
Redistricting Data (RDP)	Provide states an opportunity to define the 2020 Census geography they need for redistricting and reapportionment purposes, as well as provide to each state the legally required Public Law 94-171 redistricting data tabulations for that geography and other geographic areas by the mandated deadline of April 1, 2021, 1 year from Census Day.

Operations	Purpose
Count Review (CRO)	Enhance the accuracy of the 2020 Census through remediating potential gaps in coverage by implementing an efficient and equitable process to identify and incorporate housing units that are missing from the Census Bureau Master Address File, identify and include or correct large group quarters that are missing from the Master Address File or geographically misallocated, and position unresolved cases for a smooth transition to the Count Question Resolution operation.
Count Question Resolution (CQR)	Provide a mechanism for governmental units to challenge their official 2020 Census results.
Archiving (ARC)	Coordinate storage of materials and data and provide 2020 Census records deemed permanent, include files containing individual responses, to the National Archives and Records Administration and provide similar files to the National Processing Center to use as source materials to conduct the Age Search Service. Also store data to cover in-house needs.
Other Censuses	
Island Areas Censuses (IAC)	Enumerate all residents of American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands; process and tabulate the collected data; and disseminate data products to the public.
Test and Evaluation	
Coverage Measurement Design and Estimation (CMDE)	Develop the survey design and sample for the Post-Enumeration Survey of the 2020 Census and produce estimates of census coverage based on the Post-Enumeration Survey.
Coverage Measurement Matching (CMM)	Identify matches, nonmatches, and discrepancies between the 2020 Census and the Post-Enumeration Survey for both housing units and people in the same areas. Both computer and clerical components of matching are conducted.
Coverage Measurement Field Operations (CMFO)	Collect person and housing unit information (independent from the 2020 Census operations) for the sample of housing units in the Post-Enumeration Survey to provide estimates of census net coverage error and components of census coverage for the United States and Puerto Rico, excluding Remote Alaska.
Evaluations and Experiments (EAE)	Document how well the 2020 Census was conducted, and analyze, interpret, and synthesize the effectiveness of census components and their impact on data quality, coverage, or both. Assess the 2020 Census operations. Formulate and execute an experimentation program to support early planning and inform the transition and design of the 2030 Census and produce an independent assessment of population and housing unit coverage.
Infrastructure	

Operations	Purpose
Decennial Service Center (DSC)	Support 2020 Census Field operations for decennial staff (i.e., headquarters, paper data capture centers, regional census center, area census office, Island Areas Censuses, remote workers, and listers/enumerators.)



LIST OF STATES SERVICED BY EACH REGIONAL OFFICE

Atlanta	Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina
Chicago	Arkansas, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Wisconsin
Denver	Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming
Los Angeles	Alaska, California, Hawaii, Idaho, Nevada, Oregon, Washington
New York	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Puerto Rico, Rhode Island, Vermont
Philadelphia	Delaware, District of Columbia, Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia

For more information, visit <www.census.gov/regions>.

Appendix D.
Questionnaire

OMB No. 0607-1006: Approval Expires 11/30/2021

United States® Census 2020

U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU

This is the official questionnaire for this address.
It is quick and easy to respond, and your answers are protected by law.

Para completar el cuestionario en español, dele la vuelta y complete el lado verde.

FOR OFFICIAL USE ONLY

Start here **OR** go online at **my2020census.gov** to complete your 2020 Census questionnaire.

Use a blue or black pen.

Before you answer Question 1, count the people living in this house, apartment, or mobile home using our guidelines.

- Count all people, including babies, who live and sleep here most of the time.
- If no one lives and sleeps at this address most of the time, go online at my2020census.gov or call the number on page 8.

The census must also include people without a permanent place to live, so:

- If someone who does not have a permanent place to live is staying here on April 1, 2020, count that person.

The Census Bureau also conducts counts in institutions and other places, so:

- Do not count anyone living away from here, either at college or in the Armed Forces.
- Do not count anyone in a nursing home, jail, prison, detention facility, etc., on April 1, 2020.
- Leave these people off your questionnaire, even if they will return to live here after they leave college, the nursing home, the military, jail, etc. Otherwise, they may be counted twice.

1. How many people were living or staying in this house, apartment, or mobile home on April 1, 2020?

Number of people = ☐☐

2. Were there any additional people staying here on April 1, 2020 that you did not include in Question 1?

Mark ☒ all that apply.

- ☐ Children, related or unrelated, such as newborn babies, grandchildren, or foster children
- ☐ Relatives, such as adult children, cousins, or in-laws
- ☐ Nonrelatives, such as roommates or live-in babysitters
- ☐ People staying here temporarily
- ☐ No additional people

3. Is this house, apartment, or mobile home — *Mark ☒ ONE box.*

- ☐ Owned by you or someone in this household with a mortgage or loan? *Include home equity loans.*
- ☐ Owned by you or someone in this household free and clear (without a mortgage or loan)?
- ☐ Rented?
- ☐ Occupied without payment of rent?

4. What is your telephone number?

We will only contact you if needed for official Census Bureau business.

Telephone Number

☐☐☐ – ☐☐☐ – ☐☐☐☐

FORM **DI-Q1(E/S)** (05-31-2019)

11100013

Person 1

5. Please provide information for each person living here. If there is someone living here who pays the rent or owns this residence, start by listing him or her as Person 1. If the owner or the person who pays the rent does not live here, start by listing any adult living here as Person 1.

What is Person 1's name? *Print name below.*

First Name | MI

Last Name(s)

6. What is Person 1's sex? *Mark X ONE box.*

☐ Male ☐ Female

7. What is Person 1's age and what is Person 1's date of birth? *For babies less than 1 year old, do not write the age in months. Write 0 as the age.*

Print numbers in boxes.

Age on April 1, 2020 | Month | Day | Year of birth

years

➜ NOTE: Please answer BOTH Question 8 about Hispanic origin and Question 9 about race. For this census, Hispanic origins are not races.

8. Is Person 1 of Hispanic, Latino, or Spanish origin?

☐ **No**, not of Hispanic, Latino, or Spanish origin

☐ Yes, Mexican, Mexican Am., Chicano

☐ Yes, Puerto Rican

☐ Yes, Cuban

☐ Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

9. What is Person 1's race?

*Mark X one or more boxes **AND** print origins.*

☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*

☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*

☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*

☐ Chinese ☐ Vietnamese ☐ Native Hawaiian

☐ Filipino ☐ Korean ☐ Samoan

☐ Asian Indian ☐ Japanese ☐ Chamorro

☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*

☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*

☐ Some other race – *Print race or origin.*

➜ If more people were counted in Question 1 on the front page, continue with Person 2 on the next page.

2 11100021

1. Print name of **Person 2**

First Name | MI

Last Name(s)

2. Does this person usually live or stay somewhere else?
Mark ☒ all that apply.

- ☐ No
- ☐ Yes, for college
- ☐ Yes, for a military assignment
- ☐ Yes, for a job or business
- ☐ Yes, in a nursing home
- ☐ Yes, with a parent or other relative
- ☐ Yes, at a seasonal or second residence
- ☐ Yes, in a jail or prison
- ☐ Yes, for another reason

3. How is this person related to Person 1? *Mark ☒ ONE box.*

- ☐ Opposite-sex husband/wife/spouse
- ☐ Opposite-sex unmarried partner
- ☐ Same-sex husband/wife/spouse
- ☐ Same-sex unmarried partner
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roommate or housemate
- ☐ Foster child
- ☐ Other nonrelative

4. What is this person's sex? *Mark ☒ ONE box.*

☐ Male ☐ Female

5. What is this person's age and what is this person's date of birth? *For babies less than 1 year old, do not write the age in months. Write 0 as the age.*

Print numbers in boxes.

Age on April 1, 2020 | Month | Day | Year of birth

years

➜ NOTE: Please answer BOTH Question 6 about Hispanic origin and Question 7 about race. For this census, Hispanic origins are not races.

6. Is this person of Hispanic, Latino, or Spanish origin?

- ☐ **No**, not of Hispanic, Latino, or Spanish origin
- ☐ Yes, Mexican, Mexican Am., Chicano
- ☐ Yes, Puerto Rican
- ☐ Yes, Cuban
- ☐ Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

7. What is this person's race?
*Mark ☒ one or more boxes **AND** print origins.*

- ☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*
- ☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*
- ☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*
- ☐ Chinese
- ☐ Filipino
- ☐ Asian Indian
- ☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*
- ☐ Vietnamese
- ☐ Korean
- ☐ Japanese
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Chamorro
- ☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*
- ☐ Some other race – *Print race or origin.*

➜ If more people were counted in Question 1 on the front page, continue with Person 3 on the next page.

1. Print name of **Person 3**

First Name | MI

Last Name(s)

2. Does this person usually live or stay somewhere else?
Mark ✗ all that apply.

- ☐ No
- ☐ Yes, for college
- ☐ Yes, for a military assignment
- ☐ Yes, for a job or business
- ☐ Yes, in a nursing home
- ☐ Yes, with a parent or other relative
- ☐ Yes, at a seasonal or second residence
- ☐ Yes, in a jail or prison
- ☐ Yes, for another reason

3. How is this person related to Person 1? *Mark ✗ ONE box.*

- ☐ Opposite-sex husband/wife/spouse
- ☐ Opposite-sex unmarried partner
- ☐ Same-sex husband/wife/spouse
- ☐ Same-sex unmarried partner
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roommate or housemate
- ☐ Foster child
- ☐ Other nonrelative

4. What is this person's sex? *Mark ✗ ONE box.*

☐ Male ☐ Female

5. What is this person's age and what is this person's date of birth? *For babies less than 1 year old, do not write the age in months. Write 0 as the age.*

Print numbers in boxes.

Age on April 1, 2020 | Month | Day | Year of birth

years

➜ **NOTE: Please answer BOTH Question 6 about Hispanic origin and Question 7 about race. For this census, Hispanic origins are not races.**

6. Is this person of Hispanic, Latino, or Spanish origin?

- ☐ **No**, not of Hispanic, Latino, or Spanish origin
- ☐ Yes, Mexican, Mexican Am., Chicano
- ☐ Yes, Puerto Rican
- ☐ Yes, Cuban
- ☐ Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

7. What is this person's race?
*Mark ✗ one or more boxes **AND** print origins.*

- ☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*
- ☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*
- ☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*

- ☐ Chinese
- ☐ Filipino
- ☐ Asian Indian
- ☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*
- ☐ Vietnamese
- ☐ Korean
- ☐ Japanese
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Chamorro
- ☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*

- ☐ Some other race – *Print race or origin.*

➜ **If more people were counted in Question 1 on the front page, continue with Person 4 on the next page.**

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1. Print name of **Person 4**

First Name MI

Last Name(s)

2. Does this person usually live or stay somewhere else?
Mark ☒ all that apply.

- ☐ No
- ☐ Yes, for college
- ☐ Yes, for a military assignment
- ☐ Yes, for a job or business
- ☐ Yes, in a nursing home
- ☐ Yes, with a parent or other relative
- ☐ Yes, at a seasonal or second residence
- ☐ Yes, in a jail or prison
- ☐ Yes, for another reason

3. How is this person related to Person 1? *Mark ☒ ONE box.*

- ☐ Opposite-sex husband/wife/spouse
- ☐ Opposite-sex unmarried partner
- ☐ Same-sex husband/wife/spouse
- ☐ Same-sex unmarried partner
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roommate or housemate
- ☐ Foster child
- ☐ Other nonrelative

4. What is this person's sex? *Mark ☒ ONE box.*

☐ Male ☐ Female

5. What is this person's age and what is this person's date of birth? *For babies less than 1 year old, do not write the age in months. Write 0 as the age.*

Print numbers in boxes.

Age on April 1, 2020 — years | Month | Day | Year of birth

➜ **NOTE: Please answer BOTH Question 6 about Hispanic origin and Question 7 about race. For this census, Hispanic origins are not races.**

6. Is this person of Hispanic, Latino, or Spanish origin?

- ☐ **No**, not of Hispanic, Latino, or Spanish origin
- ☐ Yes, Mexican, Mexican Am., Chicano
- ☐ Yes, Puerto Rican
- ☐ Yes, Cuban
- ☐ Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

7. What is this person's race?
*Mark ☒ one or more boxes **AND** print origins.*

- ☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*
- ☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*
- ☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*
- ☐ Chinese
- ☐ Filipino
- ☐ Asian Indian
- ☐ Vietnamese
- ☐ Korean
- ☐ Japanese
- ☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Chamorro
- ☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*
- ☐ Some other race – *Print race or origin.*

➜ **If more people were counted in Question 1 on the front page, continue with Person 5 on the next page.**

1. Print name of Person 5

First Name | MI

Last Name(s)

2. Does this person usually live or stay somewhere else?
Mark ✗ all that apply.

- ☐ No
- ☐ Yes, for college
- ☐ Yes, for a military assignment
- ☐ Yes, for a job or business
- ☐ Yes, in a nursing home
- ☐ Yes, with a parent or other relative
- ☐ Yes, at a seasonal or second residence
- ☐ Yes, in a jail or prison
- ☐ Yes, for another reason

3. How is this person related to Person 1? *Mark ✗ ONE box.*

- ☐ Opposite-sex husband/wife/spouse
- ☐ Opposite-sex unmarried partner
- ☐ Same-sex husband/wife/spouse
- ☐ Same-sex unmarried partner
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roommate or housemate
- ☐ Foster child
- ☐ Other nonrelative

4. What is this person's sex? *Mark ✗ ONE box.*

☐ Male ☐ Female

5. What is this person's age and what is this person's date of birth? *For babies less than 1 year old, do not write the age in months. Write 0 as the age.*

Print numbers in boxes.

Age on April 1, 2020 | Month | Day | Year of birth

years

➜ **NOTE: Please answer BOTH Question 6 about Hispanic origin and Question 7 about race. For this census, Hispanic origins are not races.**

6. Is this person of Hispanic, Latino, or Spanish origin?

- ☐ **No**, not of Hispanic, Latino, or Spanish origin
- ☐ Yes, Mexican, Mexican Am., Chicano
- ☐ Yes, Puerto Rican
- ☐ Yes, Cuban
- ☐ Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

7. What is this person's race?
*Mark ✗ one or more boxes **AND** print origins.*

- ☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*
- ☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*
- ☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*
- ☐ Chinese
- ☐ Filipino
- ☐ Asian Indian
- ☐ Vietnamese
- ☐ Korean
- ☐ Japanese
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Chamorro
- ☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*
- ☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*
- ☐ Some other race – *Print race or origin.*

➜ **If more people were counted in Question 1 on the front page, continue with Person 6 on the next page.**

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1. Print name of **Person 6**

First Name | MI

Last Name(s)

2. Does this person usually live or stay somewhere else?
Mark ☒ all that apply.

- ☐ No
- ☐ Yes, for college
- ☐ Yes, for a military assignment
- ☐ Yes, for a job or business
- ☐ Yes, in a nursing home
- ☐ Yes, with a parent or other relative
- ☐ Yes, at a seasonal or second residence
- ☐ Yes, in a jail or prison
- ☐ Yes, for another reason

3. How is this person related to Person 1? *Mark ☒ ONE box.*

- ☐ Opposite-sex husband/wife/spouse
- ☐ Opposite-sex unmarried partner
- ☐ Same-sex husband/wife/spouse
- ☐ Same-sex unmarried partner
- ☐ Biological son or daughter
- ☐ Adopted son or daughter
- ☐ Stepson or stepdaughter
- ☐ Brother or sister
- ☐ Father or mother
- ☐ Grandchild
- ☐ Parent-in-law
- ☐ Son-in-law or daughter-in-law
- ☐ Other relative
- ☐ Roommate or housemate
- ☐ Foster child
- ☐ Other nonrelative

4. What is this person's sex? *Mark ☒ ONE box.*

☐ Male ☐ Female

5. What is this person's age and what is this person's date of birth? *For babies less than 1 year old, do not write the age in months. Write 0 as the age.*

Print numbers in boxes.

Age on April 1, 2020 | Month | Day | Year of birth

years

➜ **NOTE: Please answer BOTH Question 6 about Hispanic origin and Question 7 about race. For this census, Hispanic origins are not races.**

6. Is this person of Hispanic, Latino, or Spanish origin?

- ☐ **No**, not of Hispanic, Latino, or Spanish origin
- ☐ Yes, Mexican, Mexican Am., Chicano
- ☐ Yes, Puerto Rican
- ☐ Yes, Cuban
- ☐ Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

7. What is this person's race?
*Mark ☒ one or more boxes **AND** print origins.*

- ☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*
- ☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*
- ☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*
- ☐ Chinese
- ☐ Filipino
- ☐ Asian Indian
- ☐ Vietnamese
- ☐ Korean
- ☐ Japanese
- ☐ Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*
- ☐ Native Hawaiian
- ☐ Samoan
- ☐ Chamorro
- ☐ Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*
- ☐ Some other race – *Print race or origin.*

➜ **If more people were counted in Question 1 on the front page, continue with Person 7 on the next page.**

Use this section to complete information for the rest of the people you counted in Question 1 on the front page.
We may call for additional information about them.

Person 7

First Name | **MI** | **Last Name(s)**

Sex ☐ Male ☐ Female

Age on April 1, 2020 ____ years

Date of Birth Month ____ Day ____ Year of birth ____

Related to Person 1? ☐ Yes ☐ No

Person 8

First Name | **MI** | **Last Name(s)**

Sex ☐ Male ☐ Female

Age on April 1, 2020 ____ years

Date of Birth Month ____ Day ____ Year of birth ____

Related to Person 1? ☐ Yes ☐ No

Person 9

First Name | **MI** | **Last Name(s)**

Sex ☐ Male ☐ Female

Age on April 1, 2020 ____ years

Date of Birth Month ____ Day ____ Year of birth ____

Related to Person 1? ☐ Yes ☐ No

Person 10

First Name | **MI** | **Last Name(s)**

Sex ☐ Male ☐ Female

Age on April 1, 2020 ____ years

Date of Birth Month ____ Day ____ Year of birth ____

Related to Person 1? ☐ Yes ☐ No

Thank you for completing your 2020 Census questionnaire.

FOR OFFICIAL USE ONLY

JIC1 ____ JIC2 ____

If your enclosed postage-paid envelope is missing, please mail your completed questionnaire to:

U.S. Census Bureau
[Address Removed]

If you need help completing this questionnaire, call toll-free 1-844-330-2020, Sunday through Saturday from 7:00 a.m. to 2:00 a.m. ET.

TDD — Telephone display device for the hearing impaired. Call toll-free 1-844-467-2020, Sunday through Saturday from 7:00 a.m. to 2:00 a.m. ET.

The U.S. Census Bureau estimates that completing the questionnaire will take 10 minutes on average. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-1006, U.S. Census Bureau, DCMD-2H174, 4600 Silver Hill Road, Washington, DC 20233. You may email comments to <2020.census.paperwork@census.gov>. Use "Paperwork Reduction Project 0607-1006" as the subject.

This collection of information has been approved by the Office of Management and Budget (OMB). The eight-digit OMB approval number 0607-1006 confirms this approval. If this number were not displayed, we could not conduct the census.

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Appendix E.
Maps

INTRODUCTION

There is one map type that supports the 2020 Census Detailed Demographic and Housing Characteristics File-A (Detailed DHC-A). This large format reference map type is produced in Adobe's portable document format (PDF). These georeferenced PDF files are available through the U.S. Census Bureau's map products website.

Additionally, data users can view the geographies used to tabulate the 2020 Detailed DHC-A using the TIGERweb Decennial application. TIGERweb is a web-based map viewing application that allows users to visualize features from the Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) System. To display the 2020 Detailed DHC-A geographies in the TIGERweb Decennial application, select "Census 2020" from the "Select Vintage" drop-down list. The TIGERweb User Guide provides detailed instructions for using the TIGERweb application. Other geographic products available include the TIGER/Line Shapefiles, which data users can utilize to display the geographies in their own mapping software.

MAP AVAILABLE

2020 Census—Census Tract Reference Map

These county (or county equivalent)-based reference maps show and label the census tracts as delineated to support 2020 Census data dissemination. These maps also show and label American Indian reservations/Alaska Native areas/Hawaiian Home Lands, counties, county subdivisions (in states where they function as governmental units), and places. Additionally, these maps display a base feature network including roads, railroads, and water bodies. The map sheet configuration is optimized to keep the number of map sheets for each county to a minimum. Each county is covered by one or more parent map sheets at a single scale. Inset map sheets at larger scales are created where there are clusters of census tracts that cannot be identified at the parent map scale. An index map showing the sheet configuration is created for all counties requiring more than one parent map sheet. The map sheet size is 36 by 32 inches.

Each county's map is accompanied by a Census Tract to Map Sheet relationship file. This semicolon-delimited text file includes one record for each census tract within the county and a list of all the map sheets where that census tract appears. In addition to the 11-character census tract full code, each record contains the codes for the corresponding state, county, and census tract.

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Appendix F.

Residence Criteria and Residence Situations for the 2020 Census of the United States

CONTENTS

WHERE YOU ARE COUNTED IS IMPORTANT

The U.S. Census Bureau is committed to counting every person in the 2020 Census once, only once, and in the right place. The fundamental reason that the decennial census is conducted is to fulfill the Constitutional requirement (Article I, Section 2) to apportion the seats in the U.S. House of Representatives among the states[1]. For a fair and equitable apportionment, it is crucial that the Census Bureau counts everyone in the right place during the decennial census.

THE CONCEPT OF USUAL RESIDENCE

The Census Bureau's enumeration procedures are guided by the constitutional and statutory mandates to count all residents of the several states. [U.S. Const. Art. 1, Section 2, cl.3, Title 13, United States Code, Section 141.] The state in which a person resides and the specific location within that state is determined in accordance with the concept of "usual residence," which is defined by the Census Bureau as the place where a person lives and sleeps most of the time. This is not always the same as a person's legal residence, voting residence, or where they prefer to be counted. This concept of "usual residence" is grounded in the law providing for the first census, the Act of March 1, 1790, expressly specifying that persons be enumerated at their "usual place of abode."

[1] Apportionment is based on the resident population, plus a count of overseas federal employees, for each of the 50 states. Redistricting data include the resident population of the 50 states, District of Columbia, and Puerto Rico.

Determining usual residence is straightforward for most people. However, given our nation's wide diversity in types of living arrangements, the concept of usual residence has a variety of applications. Some examples of these living arrangements include people experiencing homelessness, people with a seasonal/second residence, people in group facilities, people in the process of moving, people in hospitals, children in shared custody arrangements, college students, live-in employees, military personnel, and people who live in workers' dormitories.[2]

Applying the usual residence concept to real living situations means that people will not always be counted at the place where they happen to be staying on Census Day (April 1, 2020) or at the time they complete their census questionnaire. Therefore, this document lists many specific residence situations after defining the residence criteria, in order to illustrate how the criteria are applied.

THE RESIDENCE CRITERIA

The Residence Criteria are used to determine where people are counted during the 2020 Census. The Criteria state:

- Count people at their usual residence, which is the place where they live and sleep most of the time.
- People in certain types of group facilities on Census Day are counted at the group facility.
- People who do not have a usual residence, or who cannot determine a usual residence, are counted where they are on Census Day.

The following sections describe how the Residence Criteria apply to certain living situations for which people commonly request clarification.

1. PEOPLE AWAY FROM THEIR USUAL RESIDENCE ON CENSUS DAY

a) ***People away from their usual residence on Census Day, such as on a vacation or a business trip, visiting, traveling outside the United States, or working elsewhere without a usual residence there (for example, as a truck driver or traveling salesperson)***—Counted at the residence where they live and sleep most of the time.

2. VISITORS ON CENSUS DAY

a) ***Visitors on Census Day***—Counted at the residence where they live and sleep most of the time. If they do not have a usual residence to return to, they are counted where they are staying on Census Day.

3. FOREIGN CITIZENS IN THE UNITED STATES

a) ***Citizens of foreign countries living in the United States***—Counted at the U.S. residence where they live and sleep most of the time.

b) ***Citizens of foreign countries living in the United States who are members of the diplomatic community***—Counted at the embassy, consulate, United Nations' facility, or other residences where diplomats live.

c) ***Citizens of foreign countries visiting the United States, such as on a vacation or business trip***—Not counted in the census.

[2] In this document, "group facilities" (referred to also as "group quarters" [GQ]) are defined as places where people live or stay in group living arrangements, which are owned or managed by an entity or organization providing housing and/or services for the residents.

4. PEOPLE LIVING OUTSIDE THE UNITED STATES

a) ***People deployed outside the United States on Census Day (while stationed or assigned in the United States) who are military or civilian employees of the U.S. government***—Counted at the U.S. residence where they live and sleep most of the time, using administrative data provided by federal agencies.[3, 4]

b) ***People stationed or assigned outside the United States on Census Day who are military or civilian employees of the U.S. government, as well as their dependents living with them outside the United States***—Counted as part of the U.S. federally affiliated overseas population, using administrative data provided by federal agencies.

c) ***People living outside the United States on Census Day who are not military or civilian employees of the U.S. government and are not dependents living with military or civilian employees of the U.S. government***—Not counted in the stateside census.

5. PEOPLE WHO LIVE IN MORE THAN ONE PLACE

a) ***People living away most of the time while working, such as people who live at a residence close to where they work and return regularly to another residence***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

b) ***People who live or stay at two or more residences (during the week, month, or year), such as people who travel seasonally between residences (for example, snowbirds)***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

c) ***Children in shared custody or other arrangements who live at more than one residence***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

6. PEOPLE MOVING INTO OR OUT OF A RESIDENCE AROUND CENSUS DAY

a) ***People who move into a new residence on or before Census Day***—Counted at the new residence where they are living on Census Day.

b) ***People who move out of a residence on Census Day and do not move into a new residence until after Census Day***—Counted at the old residence where they were living on Census Day.

c) ***People who move out of a residence before Census Day and do not move into a new residence until after Census Day***—Counted at the residence where they are staying on Census Day.

7. PEOPLE WHO ARE BORN OR WHO DIE AROUND CENSUS DAY

a) ***Babies born on or before Census Day***—Counted at the residence where they will live and sleep most of the time, even if they are still in a hospital on Census Day.

b) ***Babies born after Census Day***—Not counted in the census.

[3] In this document, "Outside the United States" and "foreign port" are defined as being anywhere outside the geographical area of the 50 United States and the District of Columbia. Therefore, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, the Pacific Island Areas (American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands), and all foreign countries are considered to be "outside the United States." Conversely, "stateside," "U.S. homeport," and "U.S. port" are defined as being anywhere in the 50 United States and the District of Columbia.

[4] Military and civilian employees of the U.S. government who are deployed or stationed/assigned outside the United States (and their dependents living with them outside the United States) are counted using administrative data provided by the Department of Defense and the other federal agencies that employ them. If they are deployed outside the United States (while stationed/assigned in the United States), the administrative data are used to count them at their usual residence in the United States. Otherwise, if they are stationed/assigned outside the United States, the administrative data are used to count them (and their dependents living with them outside the United States) in their home state for apportionment purposes only.

c) ***People who die before Census Day***—Not counted in the census.

d) ***People who die on or after Census Day***—Counted at the residence where they were living and sleeping most of the time as of Census Day.

8. RELATIVES AND NONRELATIVES

a) ***Babies and children of all ages, including biological, step, and adopted children, as well as grandchildren***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day. (Only count babies born on or before Census Day.)

b) ***Foster children***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

c) ***Spouses and close relatives, such as parents or siblings***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

d) ***Extended relatives, such as grandparents, nieces/nephews, aunts/uncles, cousins, or in-laws***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

e) ***Unmarried partners***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

f) ***Housemates or roommates***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

g) ***Roomers or boarders***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

h) ***Live-in employees, such as caregivers or domestic workers***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

i) ***Other nonrelatives, such as friends***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

9. PEOPLE IN RESIDENTIAL SCHOOL-RELATED FACILITIES

a) ***Boarding school students living away from their parents' or guardians' home while attending boarding school below the college level, including Bureau of Indian Affairs boarding schools***—Counted at their parents' or guardians' home.

b) ***Students in residential schools for people with disabilities on Census Day***—Counted at the school.

c) ***Staff members living at boarding schools or residential schools for people with disabilities on Census Day***—Counted at the residence where they live and sleep most of the time. If they do not have a usual home elsewhere, they are counted at the school.

10. COLLEGE STUDENTS (AND STAFF LIVING IN COLLEGE HOUSING)

a) ***College students living at their parents' or guardians' home while attending college in the United States***—Counted at their parents' or guardians' home.

b) ***College students living away from their parents' or guardians' home while attending college in the United States (living either on-campus or off-campus)***—Counted at the on-campus or off-campus residence where they live and sleep most of the time. If they are living in college/university student housing (such as dormitories or residence halls) on Census Day, they are counted at the college/university student housing.

c) ***College students living away from their parents' or guardians' home while attending college in the United States (living either on-campus or off-campus) but staying at their parents' or guardians' home while on break or vacation***—Counted at the on-campus or off-campus residence where they live and sleep most of the time. If they are living in college/university student housing (such as dormitories or residence halls) on Census Day, they are counted at the college/university student housing.

d) ***College students who are U.S. citizens living outside the United States while attending college outside the United States***—Not counted in the stateside census.

e) ***College students who are foreign citizens living in the United States while attending college in the United States (living either on-campus or off-campus)***—Counted at the on-campus or off-campus U.S. residence where they live and sleep most of the time. If they are living in college/university student housing (such as dormitories or residence halls) on Census Day, they are counted at the college/university student housing.

f) ***Staff members living in college/university student housing (such as dormitories or residence halls) on Census Day***—Counted at the residence where they live and sleep most of the time. If they do not have a usual home elsewhere, they are counted at the college/university student housing.

11. PEOPLE IN HEALTH CARE FACILITIES

a) ***People in general or Veterans Affairs hospitals (except psychiatric units) on Census Day, including newborn babies still in the hospital on Census Day***—Counted at the residence where they live and sleep most of the time. Newborn babies are counted at the residence where they will live and sleep most of the time. If patients or staff members do not have a usual home elsewhere, they are counted at the hospital.

b) ***People in mental (psychiatric) hospitals and psychiatric units in other hospitals (where the primary function is for long-term non-acute care) on Census Day***—Patients are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

c) ***People in assisted living facilities where care is provided for individuals who need help with the activities of daily living but do not need the skilled medical care that is provided in a nursing home***—Residents and staff members are counted at the residence where they live and sleep most of the time.[5]

d) ***People in nursing facilities/skilled-nursing facilities (which provide long-term non-acute care) on Census Day***—Patients are counted at the facility. Staff members are counted at the residence where

[5] Nursing facilities/skilled-nursing facilities, in-patient hospice facilities, assisted living facilities, and housing intended for older adults may coexist within the same entity or organization in some cases. For example, an assisted living facility may have a skilled-nursing floor or wing that meets the nursing facility criteria, which means that specific floor or wing is counted according to the guidelines for nursing facilities/skilled-nursing facilities, while the rest of the living quarters in that facility are counted according to the guidelines for assisted living facilities.

they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

e) ***People staying at in-patient hospice facilities on Census Day***—Counted at the residence where they live and sleep most of the time. If patients or staff members do not have a usual home elsewhere, they are counted at the facility.

12. PEOPLE IN HOUSING FOR OLDER ADULTS

a) ***People in housing intended for older adults, such as active adult communities, independent living, senior apartments, or retirement communities***—Residents and staff members are counted at the residence where they live and sleep most of the time.

13. U.S. MILITARY PERSONNEL

a) ***U.S. military personnel assigned to military barracks/dormitories in the United States on Census Day***—Counted at the military barracks/dormitories.

b) ***U.S. military personnel (and dependents living with them) living in the United States (living either on base or off base) who are not assigned to barracks/dormitories on Census Day***—Counted at the residence where they live and sleep most of the time.

c) ***U.S. military personnel assigned to U.S. military vessels with a U.S. homeport on Census Day***—Counted at the onshore U.S. residence where they live and sleep most of the time. If they have no onshore U.S. residence, they are counted at their vessel's homeport.

d) ***People who are active duty patients assigned to a military treatment facility in the United States on Census Day***—Patients are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

e) ***People in military disciplinary barracks and jails in the United States on Census Day***—Prisoners are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

f) ***U.S. military personnel who are deployed outside the United States (while stationed in the United States) and are living on or off a military installation outside the United States on Census Day***—Counted at the U.S. residence where they live and sleep most of the time, using administrative data provided by the Department of Defense.

g) ***U.S. military personnel who are stationed outside the United States and are living on or off a military installation outside the United States on Census Day, as well as their dependents living with them outside the United States***—Counted as part of the U.S. federally affiliated overseas population, using administrative data provided by the Department of Defense.

h) ***U.S. military personnel assigned to U.S. military vessels with a homeport outside the United States on Census Day***—Counted as part of the U.S. federally affiliated overseas population, using administrative data provided by the Department of Defense.

14. MERCHANT MARINE PERSONNEL ON U.S. FLAG MARITIME/MERCHANT VESSELS

a) ***Crews of U.S. flag maritime/merchant vessels docked in a U.S. port, sailing from one U.S. port to another U.S. port, sailing from a U.S. port to a foreign port, or sailing from a foreign port to a U.S. port on Census Day***—Counted at the onshore U.S. residence where they live and sleep most of the time. If they have no onshore U.S. residence, they are counted at their vessel. If the vessel is docked in a U.S. port, sailing from a U.S. port to a foreign port, or sailing from a foreign port to a U.S. port,

crewmembers with no onshore U.S. residence are counted at the U.S. port. If the vessel is sailing from one U.S. port to another U.S. port, crewmembers with no onshore U.S. residence are counted at the port of departure.

b) ***Crews of U.S. flag maritime/merchant vessels engaged in U.S. inland waterway transportation on Census Day***—Counted at the onshore U.S. residence where they live and sleep most of the time.

c) ***Crews of U.S. flag maritime/merchant vessels docked in a foreign port or sailing from one foreign port to another foreign port on Census Day***—Not counted in the stateside census.

15. PEOPLE IN CORRECTIONAL FACILITIES FOR ADULTS

a) ***People in federal and state prisons on Census Day***—Prisoners are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

b) ***People in local jails and other municipal confinement facilities on Census Day***—Prisoners are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

c) ***People in federal detention centers on Census Day, such as Metropolitan Correctional Centers, Metropolitan Detention Centers, Bureau of Indian Affairs Detention Centers, Immigration and Customs Enforcement (ICE) Service Processing Centers, and ICE contract detention facilities***— Prisoners are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

d) ***People in correctional residential facilities on Census Day, such as halfway houses, restitution centers, and prerelease, work release, and study centers***—Residents are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

16. PEOPLE IN GROUP HOMES AND RESIDENTIAL TREATMENT CENTERS FOR ADULTS

a) ***People in group homes intended for adults (non-correctional) on Census Day***—Residents are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

b) ***People in residential treatment centers for adults (non-correctional) on Census Day***—Counted at the residence where they live and sleep most of the time. If residents or staff members do not have a usual home elsewhere, they are counted at the facility.

17. PEOPLE IN JUVENILE FACILITIES

a) ***People in correctional facilities intended for juveniles on Census Day***—Juvenile residents are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

b) ***People in group homes for juveniles (non-correctional) on Census Day***—Juvenile residents are counted at the facility. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the facility.

c) ***People in residential treatment centers for juveniles (non-correctional) on Census Day***—Counted at the residence where they live and sleep most of the time. If juvenile residents or staff members do not have a usual home elsewhere, they are counted at the facility.

18. PEOPLE IN TRANSITORY LOCATIONS

a) ***People at transitory locations such as recreational vehicle (RV) parks, campgrounds, hotels and motels, hostels, marinas, racetracks, circuses, or carnivals***—Anyone, including staff members, staying at the transitory location is counted at the residence where they live and sleep most of the time. If they do not have a usual home elsewhere, or they cannot determine a place where they live most of the time, they are counted at the transitory location.

19. PEOPLE IN WORKERS' RESIDENTIAL FACILITIES

a) ***People in workers' group living quarters and Job Corps Centers on Census Day***—Counted at the residence where they live and sleep most of the time. If residents or staff members do not have a usual home elsewhere, they are counted at the facility.

20. PEOPLE IN RELIGIOUS-RELATED RESIDENTIAL FACILITIES

a) ***People in religious group quarters, such as convents and monasteries, on Census Day***—Counted at the facility.

21. PEOPLE IN SHELTERS AND PEOPLE EXPERIENCING HOMELESSNESS

a) ***People in domestic violence shelters on Census Day***—People staying at the shelter (who are not staff) are counted at the shelter. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the shelter.

b) ***People who, on Census Day, are in temporary group living quarters established for victims of natural disasters***—Anyone, including staff members, staying at the facility is counted at the residence where they live and sleep most of the time. If they do not have a usual home elsewhere, they are counted at the facility.

c) ***People who, on Census Day, are in emergency and transitional shelters with sleeping facilities for people experiencing homelessness***—People staying at the shelter (who are not staff) are counted at the shelter. Staff members are counted at the residence where they live and sleep most of the time. If staff members do not have a usual home elsewhere, they are counted at the shelter.

d) ***People who, on Census Day, are at soup kitchens and regularly scheduled mobile food vans that provide food to people experiencing homelessness***—Counted at the residence where they live and sleep most of the time. If they do not have a usual home elsewhere, they are counted at the soup kitchen or mobile food van location where they are on Census Day.

e) ***People who, on Census Day, are at targeted non-sheltered outdoor locations where people experiencing homelessness stay without paying***—Counted at the outdoor location where they are on Census Day.

f) ***People who, on Census Day, are temporarily displaced or experiencing homelessness and are staying in a residence for a short or indefinite period of time***—Counted at the residence where they live and sleep most of the time. If they cannot determine a place where they live most of the time, they are counted where they are staying on Census Day.

Appendix G.

Characteristic Iterations

For the full list of groups eligible for data in the Detailed Demographic and Housing Characteristics File A, refer to the 2020: Hispanic Origin and Race Iterations List.

There are 2,996 population group iterations for the Detailed DHC-A. The iterations comprise 34 Hispanic origins (reflecting 30 detailed origins and 4 regional groups), as well as alone and alone or in any combination iterations for 104 detailed and 3 regional White groups, 62 detailed and 3 regional Black or African American groups, 1,187 detailed and 8 regional American Indian or Alaska Native groups, 47 detailed and 5 regional Asian groups, 35 detailed and 3 regional Native Hawaiian or Other Pacific Islander groups, and 22 detailed and 2 regional Some Other Race groups.

The Detailed DHC-A uses an adaptive design to determine the amount of data detailed and regional racial and ethnic groups and American Indian or Alaska Native tribes and villages receive based on population thresholds and geography level. At the nation and state levels, detailed and regional groups will receive a total population count table and groups meeting a population threshold will also receive a sex by age table.

For substate geographies (county, place, and census tract) and American Indian/Alaska Native/Native Hawaiian (AIANNH) areas, the adaptive design will use population thresholds to determine eligibility for a total population count table and a sex by age table. When detailed sex by age data are available, it will show one of three age category types. The sex by age tables available are a four-category table, a nine-category table, and a 23-category table. Table G-1 below shows the thresholds used to determine table type eligibility.

Table G-1.
Detailed Demographic and Housing Characteristics File A Minimum Population Thresholds and Margins of Error (MOE) by Geography

Most comprehensive table type produced	Detailed groups		Regional groups	
	Nation and state (MOE = ±3)	Substate and AIANNH (MOE = ±11)	Nation and state (MOE = ±50)	Substate (MOE = ±50)
Total count only	0–499	22–999	0–4,999	94–4,999
Sex by age—4 categories	500–999	1,000–4,999	5,000–19,999	5,000–19,999
Sex by age—9 categories	1,000–6,999	5,000–19,999	20,000–149,999	20,000–149,999
Sex by age—23 categories	7,000+	20,000+	150,000+	150,000+

Note: AIANNH is American Indian/Alaska Native/Native Hawaiian areas. Substate includes county, place, and census tract.
Source: U.S. Census Bureau.

The Detailed DHC-A tabulates race and ethnicity in two ways, the first of which is "detailed" racial and ethnic groups. Detailed groups include disaggregated groups such as German, Lebanese, Salvadoran, Jamaican, Nigerian, Chinese, Navajo, Samoan, Brazilian, etc.

Following the 1997 Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, only a single Hispanic origin response was tabulated in response to the Hispanic origin question. For this census, Hispanic origins are not races. People who identified their origin as Hispanic, Latino, or Spanish may be of any race.

The race question tabulates multiple race responses when reported and, as a result, detailed race groups come in two forms: "alone" and "alone or in any combination."

- The concept of "detailed race alone" includes people who reported a single entry (e.g., Korean) and no other race(s).
- The concept of "detailed race alone or in any combination" includes people who reported a single entry (e.g., Korean) and people who reported that entry with one or more other race(s) (e.g., Korean *and* Thai, or Korean *and* Black or African American). The "detailed race alone or in any combination" concept therefore represents the maximum number of people who reported as that detailed race group, either alone or in any combination with one or more additional race(s).

The second way the Detailed DHC-A tabulates race and ethnicity is "regional" racial and ethnic groups. Regional groups include groups such as European, Middle Eastern or North African, Central American, Caribbean, Sub-Saharan African, Central Asian, American Indian, Polynesian, etc.

Because of tabulating only one Hispanic origin response from the Hispanic origin question, regional ethnic groups only come in one form. Regional race groups come in two forms: "alone" and "alone or in any combination."

- The concept of "regional group alone" includes people who reported one or more detailed race group(s) that aggregate into the same regional group header. For example, respondents who reported Beninese, as well as those who reported Nigerian *and* Ghanaian, are part of the larger "Sub-Saharan African alone" regional group.
- The concept of "regional group alone or in any combination" includes people who reported one or more detailed race group(s) that aggregate into the same regional group header, as well as people who reported detailed race groups that aggregate into different regional group headers. For example, respondents who reported Navajo Nation, as well as those who reported Hopi and Brazilian, are part of the larger "American Indian alone or in any combination" regional group.

The detailed and regional groups included in the Detailed DHC-A are located at 2020 Hispanic Origin and Race Iterations List. The iteration number (shown in the first column) can be used to call data from the 2020 Decennial API. The race and ethnicity codes that comprise the group are located in the third column. These codes correspond to those listed in the 2020 Hispanic Origin and Race Code List.

Information on comparing the 2020 Census Characteristics Iterations to the 2010 Census Characteristics iterations is available in the Detailed Race and Ethnicity Crosswalk: 2010 to 2020.

Appendix H.
Code List

The 2020 Hispanic Origin and Race Code List is available here.

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