

Documentation for Vintage 2017 Bridged-Race Postcensal Population Estimates for Calculating Vital Rates

The Vintage 2017 bridged-race postcensal population estimates files contain estimates of the resident population of the United States as of April 1, 2010 - July 1, 2017 (based on the 2010 census). The following series of postcensal estimates are being released by the National Center for Health Statistics (NCHS):

- 1) Ages 0 to 85 years and over: County postcensal estimates of the resident population of the United States (April 1, 2010 and July 1, 2010-July 1, 2017) by year, county, single-year of age (0, 1, 2, ..., 85 years and over), bridged-race category (White, Black or African American, American Indian or Alaska Native, Asian or Pacific Islander), Hispanic origin (not Hispanic or Latino, Hispanic or Latino), and sex (male, female) (1). These estimates are available for download;
- 2) Ages 85 to 100 years and over: National postcensal estimates of the U.S. resident population 85 years and over (April 1, 2010 and July 1, 2010, July 1, 2010 - July 1, 2017) by year, single-year of age (85, 86, ..., 100 years and over) bridged-race category (White, Black or African American, American Indian or Alaska Native, Asian or Pacific Islander), Hispanic origin (not Hispanic or Latino, Hispanic or Latino), and sex (male, female) (2). These estimates are available by special request.

The estimates on these files are based on Census 2010 and result from bridging the Vintage 2017 postcensal estimates with 31 race groups (the 31 race groups used in Census 2010 in accordance with the 1997 Office of Management and Budget (OMB) standards for the collection of data on race and ethnicity) to the four race categories specified under the 1977 OMB standards (3, 4).

Source of the Estimates

The Vintage 2017 bridged-race postcensal estimates were produced by the Population Estimates Program of the U.S. Census Bureau in collaboration with NCHS.

NOTE: The U.S. Census Bureau annually releases unbridged population estimates for five-year age groups and race at the county level (<http://www.census.gov/popest/>) The Census Bureau does not release bridged-race or unbridged estimates by single year of age at the county level due to concerns about the reliability of these estimates. However, these estimates are provided to the National Center for Health Statistics to meet programmatic needs such as the creation of age groupings that differ from the standard groupings used by the Census Bureau. Users of the single-year-of-age county-level bridged race population estimates should carefully consider the limited reliability of these estimates.

The Census Bureau released the unbridged Vintage 2017 postcensal series of estimates (five single-race groups and one group for two or more races) by 5-year age group on June 21, 2018 NCHS released the bridged-race Vintage 2017 postcensal estimates by single-year of age on June 27, 2018(1, 2).

Population Estimates Background

What is the resident population? The resident population of the United States includes persons resident in the 50 States and the District of Columbia. An area's resident population consists of those persons "usually resident" in that particular area (where they live and sleep most of the time). The resident population excludes people whose usual residence is outside of the United States, such as the U.S. military and federal civilian personnel living overseas (and their dependents living with them), as well as private U.S. citizens living overseas. The resident population also excludes residents of the Commonwealth of Puerto Rico, and residents of the island areas under United States sovereignty or jurisdiction (principally American Samoa, Guam, Virgin Islands of the United States, and the Commonwealth of the Northern Mariana Islands).

What are April 1, census counts? The census of the population (decennial census) enumerates the resident population of the United States as of April 1 of the census year. Data on sex, race, age, and Hispanic origin are collected from 100% of the enumerated population and are referred to as census counts. The Census Bureau adjusts the 100% April 1 count data for: 1) errors in the census data discovered, 2) nonspecified race and Hispanic origin. The April 1 census counts are further modified as described below to produce the April 1 base population estimates used to derive postcensal and intercensal population estimates.

.What is the base population? The base population is an updated version of the April 1 census counts that is used as the starting point for the postcensal and intercensal estimates series. For the 2010-based postcensal series, the enumerated April 1 census counts are modified in three ways to produce the April 1, 2010 base population:

- 1) Changes to the 2010 Census population resulting from successful challenges by legal entities of their enumerated census counts (under the Count Question Resolution (CQR) program) are incorporated in the base population.
- 2) Legal boundary updates (which typically affect county, city or town boundaries) reported by January 1 of the vintage year and other geographic program revisions are incorporated in the base population. Each vintage contains an entirely new time series that uses the most recent geographic boundaries for every estimates period.
- 3) "Some Other Race" responses in the 2010 Census are modified so the race categories in the census data match those that appear in the administrative data bases. When a "Some other race" response appears in combination with one or more of the five 1997 OMB race categories, the "Some other race" response is

dropped. “Some Other Race alone” responses are allocated to one or more of the five OMB categories. This modification is done one time, at the beginning of the decade.

What are postcensal population estimates? - Postcensal population estimates are estimates made for the years following a census, before the next census has been taken. They are derived by updating the base population (the modified resident population enumerated in the decennial census) using various measures of population change including: births to U.S. resident women, deaths to U.S. residents, net international immigration, net movement of U.S. Armed Forces and civilian citizens of the U.S., and migration within the U.S. The Census Bureau annually produces a series of postcensal estimates that includes estimates for the current data year and revised estimates for earlier years. Estimates for earlier years in a given series are revised to reflect: 1) changes in the components of population change data sets (for example, a preliminary natality file is replaced with a final natality file), 2) changes to the population estimates, and 3) changes in the estimation methodology. The base population may also be updated annually. A series of estimates is referred to as a Vintage and the last year in the series is used to name it. For example, the Vintage 2012 postcensal series has estimates for July 1, 2010 July 1, 2011, and July 1, 2012. Because of the revisions made to the estimates in each series, pulling estimates from several vintages rather than from a single vintage may introduce discontinuities.

What are intercensal population estimates? - Intercensal population estimates are estimates made for the years between two completed censuses which take into account the census at both the beginning and end of the decade. Intercensal estimates are derived by adjusting the final postcensal estimates for the decade to account for differences between the April 1, base population (from the census at the end of the decade) and the postcensal estimates for April 1 of that census year. For example, after completion of the 2010 census, the postcensal estimates for the period between April 1, 2000 and April 1, 2010 were modified to account for differences between the April 1, 2010 census counts and the April 1, 2010 postcensal estimates (based on the 2000 census). Replacement of postcensal estimates with intercensal estimates is desirable because as the end of the decade approaches, the postcensal estimates become increasingly less accurate.

Methodology changes for 2010-based postcensal population estimates – The Census Bureau frequently implements changes to the methodology used to derive the base population data base and the postcensal population estimates. Major methodology changes may affect comparison of population estimates across vintages.

Methodology changes effective with Vintage 2017: Methodology changes for Vintage 2017 affected net international migration estimates and domestic migration estimates (5, 6). The updates produce lower estimates of foreign-born emigration compared to Vintage 2016 and increases the net native-born migration estimate. The Vintage 2017 net domestic migration estimates reflect the following methodological changes since the Vintage 2016 release: In the

Vintage 2016 methodology, IRS tax return data was used to allocate domestic migrants of all ages to state and county demographic groups but this was revised for Vintage 2017 to use Medicare enrollment data instead of IRS data for the age 65 and above population.

- **Methodology changes effective with Vintage 2016:** Methodology changes for Vintage 2016 affected net international migration estimates and domestic migration estimates (7, 8). These changes increased estimates of foreign-born emigration and reduced estimates of net international migration. Changes in the way IRS tax records are used resulted in changes in population demographic characteristics, particularly race and Hispanic origin, in some states and counties.
- **Methodology changes effective with Vintage 2014-Vintage 2015:** No substantive methodology changes were implemented for Vintage 2014-Vintage 2015 (9,10)
- **Methodology changes effective with Vintage 2013:** The Vintage 2013 estimates reflect the following changes in the estimation methodology: 1) improvements in the methodology and data inputs used to derive state and county total population estimates, 2) changes in the methodology and data inputs used to assign race to military personnel and to estimate international migration of military personnel, and 3) modification of the data inputs used for computation of deaths (11, 12).
- **Methodology changes effective with Vintage 2012:** The Vintage 2012 population estimates reflect improvements in the estimates methodology and data inputs (13,14). Major improvements include changes in: 1) estimation of net international migration, 2) estimation of deaths to people 70 years and over by age, sex, race, and Hispanic origin, 3) assignment of race and Hispanic origin characteristic detail to domestic migrants with 2010 Census data, 4) incorporation of 2010 Census Count Question Resolution Program corrections in the estimates base population, and 5) incorporation of Post-2010 Census Group Quarters updates in the estimates base population.

Race Bridging Background

What is race bridging? - Race bridging refers to making data collected using one set of race categories consistent with data collected using a different set of race categories, to permit estimation and comparison of race-specific population-based statistics at a point in time or over time. More specifically, race bridging is a method used to make multiple-race and single-race data collection systems sufficiently comparable to permit estimation and analysis of race-specific statistics.

OMB's 1977 and 1997 standards on race and ethnicity - In 1997, OMB issued "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity," which supersedes the 1977 Statistical Policy Directive 15, "Race and Ethnic

Standards for Federal Statistics and Administrative Reporting” (3, 4). Both documents specify rules for the collection, tabulation, and presentation of race and ethnicity data within the Federal statistical system. The race categories specified in both standards represent a social-political construct and are not anthropologically or biologically based. The revised standards increased the minimum number of race categories to be used by Federal agencies from four (White, Black, American Indian or Alaska Native, and Asian or Pacific Islander) to five (White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander). In addition, the revised standards require Federal data collection programs to allow respondents to select more than one race category when responding to a query on their racial identity. This provision means that under the revised standards there are potentially 31 race groups (5 single-race and 26 multiple-race), depending on whether an individual selects one, two, three, four, or all five of the single-race categories.

Why race bridge? - During the transition to full implementation of the 1997 OMB standards on race and ethnicity (see paragraph above), two different standards for the collection of race and ethnicity data are being used, creating incomparability across data systems. For example, the 2000 and 2010 censuses collected race data in accordance with the 1997 OMB standards – resulting in population estimates for five single-race categories and up to 26 multiple-race categories. Because implementation of the 1997 standards within the Vital Statistics Cooperative System did not begin until 2003 and is not yet complete (with one remaining state having not transitioned for mortality data), Census data and vital statistics data have incomparable race categories. (Beginning in 2016, all states have transitioned for natality data.) Race bridging also may be needed within a given data system because the change in the race standards results in incomparability across time, thus making it difficult to perform trend analyses. The OMB recognized that race-bridging approaches would be needed to make race data collected under the 1997 standards comparable to race data collected under the 1977 standards. Therefore, the OMB issued “Provisional Guidance on the Implementation of the 1997 Standards for Federal Data on Race and Ethnicity” (15). The guidance document contains a detailed discussion of various bridging methods.

What is the NCHS regression bridging method? – The bridging methodology developed by NCHS bridges the multiple-race group population counts to the four single-race categories specified in the 1977 OMB standards (16,17). Information from the pooled 1997-2000 National Health Interview Survey (NHIS) was used to develop the bridging methodology. Regression models with person-level and county-level covariates were used to generate the probability of selecting each single-race category possible for a multiple-race group. The probabilities generated from the fitted regression models are referred to as the NHIS bridging proportions. The Census Bureau has applied the NHIS bridging proportions generated by NCHS to the Census 2000 and Census 2010 counts, to the annual postcensal series of estimates for 2000-2013, and to the 2000-2009 intercensal estimates (the same set of bridging proportions was applied for all estimates series). These applications have resulted in bridged population estimates for each of the four single-race categories (White, Black or African American, American Indian or

Alaska Native, and Asian or Pacific Islander) by county, age, Hispanic origin group, and sex. The bridging methodology is described in detail in the report, “United States Census 2000 Population with Bridged Race Categories” (which is available for download) (16).

Why does NCHS use bridged-race population estimates? - Vital statistics rates are based on information obtained from vital records collected through the state-based Vital Statistics Cooperative Program (numerators) and population estimates derived from the U.S. Census Bureau (denominators). Implementation of the 1997 OMB standards within the Vital Statistics Cooperative System did not begin until 2003, and is proceeding on an individual state basis. Birth data for ten states in 2011, nine states in 2012, six states in 2013, and two states in 2014 and 2015 are based on the 1989 revision of the U.S. Standard Certificate of Live Birth that follows the 1977 OMB standard, allowing only a single race to be reported. Beginning in 2016, all states have transitioned to the revised birth certificate. Twelve states in 2011, ten in 2012, eight in 2013, four in 2014, two in 2015, one in 2016 and 2017 continued to report the minimum set of four single-races stipulated under the 1977 OMB standards on their death certificates. For this reason and because of the need for birth and death trend data, NCHS continues to compute death rates using the 1977 OMB race categories. However, as noted above, all states have implemented the revised birth certificates and NCHS has begun to present birth and fertility rates that comply with the 1997 OMB standards. With the implementation of the revised death certificates by the all states, expected in 2018, NCHS will be able to likewise present death rates using population estimates that comply with the 1997 standards.

Production of the Vintage 2017 Bridged-Race Postcensal Series

Using the race bridging methodology described in “Race Bridging Background”, the Census Bureau, in collaboration with NCHS, derived the Vintage 2017 series of bridged-race postcensal estimates from the Vintage 2017 postcensal series with 31 race groups (the 31 race groups used in Census 2010). Modified population counts from the 2010 census serve as the base data for this 2010-based postcensal series (5, 6).

Variance of Bridged-Race Population Estimates

Population estimates generally are assumed to be fixed and do not contribute to the variance of rates. However, this is not true for bridged-race population estimates. Although efforts were made to use the best available data and methods to produce the bridged-race estimates, the modeling process introduces error into the estimates. The potential for error will be greatest for the smallest population groups, particularly the smaller race groups and county level estimates. Methodology to compute variances for bridged-race population estimates has been developed (18).

Geographic Codes in the Bridged-Race Population Files

County geography changes over time – new counties are created and old counties are renamed, deleted or their boundaries are modified (19). Changes that have occurred in the county FIPS codes on the bridged-race population files (as a result of county geography changes that affected population estimates for 1990-2017) are detailed in Appendix I.

NCHS Use of Bridged-Race Population Estimates

NCHS publishes national (and some state) birth and death rates on an annual basis. Beginning with 2001, NCHS used bridged-race postcensal population estimates to calculate race-specific birth and death rates for the annual preliminary and final birth and death reports. The 2001-2009 and 2011 and later vital rates in these reports were calculated using population estimates from the bridged-race postcensal estimates series corresponding with each data year (i.e., vital rates for 2001 were calculated using population estimates from the Vintage 2001 bridged-race postcensal series, vital rates for 2002 were calculated using estimates from the Vintage 2002 bridged-race postcensal series, and so forth).

Some vital rates for 2001-2009 have been recalculated using the bridged-race intercensal population estimates and published (20, 21).

Vital rates for 2010 were calculated using April 1, 2010 bridged-race census counts. NCHS did not use the Vintage 2010 postcensal population estimates to calculate vital rates.

Release of Bridged-Race Population Estimates

In response to the need for bridged estimates by a wide range of users, NCHS makes the bridged-race population estimates available for download from the web site “U.S. Populations with Bridged Race Categories” (http://www.cdc.gov/nchs/nvss/bridged_race.htm). The report detailing the bridging methodology, “United States Census 2000 Population with Bridged Race Categories”, also is available for download from this site (16).

Comments and Questions

NCHS would appreciate receiving feedback on the usefulness of the bridged-race estimates as well as notification of any problems that have been identified. Comments or questions about the estimates may be sent via e-mail to:

PopEst@cdc.gov.

Suggested Citation

Ages 0 to 85 years and over

National Center for Health Statistics. Vintage 2017 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010-July 1, 2017), by year, county, single-year of age (0, 1, 2, .., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: http://www.cdc.gov/nchs/nvss/bridged_race.htm as of June 27, 2018, following release by the U.S. Census Bureau of the unbridged Vintage 2017 postcensal estimates by 5-year age group on June 21, 2018

Ages 85 to 100 years and over

National Center for Health Statistics. Vintage 2017 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010-July 1, 2017), by single-year of age (85,, 100 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from NCHS on request as of June 27, 2018, following release by the U.S. Census Bureau of the unbridged Vintage 2017 postcensal estimates by 5-year age group on June 21, 2018.

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Vintage 2017 Bridged-Race Postcensal Estimates Files

The following Vintage 2017 postcensal series with estimates for July 1, 2010-July 1, 2017 are available as text and SAS files.

Estimates for persons 0 to 85 years and over - The bridged-race Vintage 2017 postcensal estimate series (July 1, 2010-July 1, 2017) for persons 0 to 85+ years contains bridged-race postcensal estimates of the July 1 resident population of the United States by year, county, age (0, 1, ..., 85 years and over), bridged-race category (White, Black or African American, American Indian or Alaska Native, Asian or Pacific Islander), Hispanic origin (not Hispanic or Latino, Hispanic or Latino), and sex. There is a record on each file for each combination of county, age, race, Hispanic origin, and sex. Text and SAS files are available for download. Age, sex, and Hispanic origin subtotals for "All races" obtained from the bridged-race files are consistent with those from the unbridged files.

Estimates for persons 85 to 100 years and over - The bridged-race Vintage 2017 estimate series (April 1, 2010-July 1, 2017) for persons 85 to 100+ years contain bridged-race postcensal estimates of the resident population of the United States by year, single-year of age (85, 86, ..., 100 years and over), bridged-race category (White, Black or African American, American Indian or Alaska Native, Asian or Pacific Islander), Hispanic origin (not Hispanic or Latino, Hispanic or Latino), and sex. There is a record on each file for each combination of month, year, age, race, Hispanic origin, and sex. Text and SAS files are available on request. The race, sex, and Hispanic origin subtotals for "Ages 85 and over combined" derived from these files do not match corresponding subtotals from the files with estimates for persons aged 0 to 85+ years.

The bridged-race population estimates on the files were derived by the U.S. Census Bureau using modified population counts from the 2010 census as the base file. The U.S. Census Bureau released the unbridged Vintage 2017 population estimates by 5-year age group on June 21, 2018 NCHS released the bridged-race Vintage 2017 estimates by single-year of age on June 27, 2018

Control totals for Vintage 2017 data files

File name	Number of records ¹	Estimate month, year	Total population count	File size
pcen_v2017_y1017.txt pcen_v2017_y1017.sas7bdat	4,323,392	April 1, 2010- July 1, 2017	See individual years below	367MB 508MB
pcen_v2017_y10_apr.txt pcen_v2017_y10_apr.sas7bdat	4,323,392	April 1, 2010	308,758,105	118MB 305MB
pcen_v2017_y10_jul.txt pcen_v2017_y10_jul.sas7bdat	4,323,392	July 1, 2010	309,338,421	118MB 305MB
pcen_v2017_y11.txt pcen_v2017_y11.sas7bdat	4,323,392	July 1, 2011	311,644,280	118MB 305MB
pcen_v2017_y12.txt pcen_v2017_y12.sas7bdat	4,323,392	July 1, 2012	313,993,272	118MB 305MB
pcen_v2017_y13.txt pcen_v2017_y13.sas7bdat	4,323,392	July 1, 2013	316,234,505	118MB 305MB
pcen_v2017_y14.txt pcen_v2017_y14.sas7bdat	4,323,392	July 1, 2014	318,622,525	118MB 305MB
pcen_v2017_y15.txt pcen_v2017_y15.sas7bdat	4,323,392	July 1, 2015	321,039,839	118MB 305MB
pcen_v2017_y16.txt pcen_v2017_y16.sas7bdat	4,323,392	July 1, 2016	323,405,935	118MB 305MB
pcen_v2017_y17.txt pcen_v2017_y17.sas7bdat	4,323,392	July 1, 2017	325,719,178	118MB 305MB
pcen_v2017_85to100.txt pcen_v2017_85to100.sas7bdat	2,304	April 1, 2010 July 1, 2010 July 1, 2011 July 1, 2012 July 1, 2013 July 1, 2014 July 1, 2015 July 1, 2016 July 1, 2017	5,495,003 5,543,134 5,701,892 5,878,177 6,014,210 6,154,403 6,278,584 6,381,877 6,468,682	54KB 192KB

¹For files with estimates for all ages, there is one record for each county, age, race, Hispanic origin, and sex combination. For files with estimates for persons 85 years and over, there is one record for each single-year of age, race, Hispanic origin, and sex combination.

**File layout for text file with estimates for years 2010-2017 and ages 0 to 85+ years:
pcen_v2017_y1017.txt**

Location	Field size	Item and code outline	Format
1-4	4	<u>Series vintage (2017)</u>	Numeric
5-6	2	<u>State FIPS code</u>	Numeric
7-9	3	<u>County FIPS code</u>	Numeric
10-11	2	<u>Age(0, 1, 2,..., 85 years and over)</u>	Numeric
12	1	<u>Bridged-race-sex</u> 1=White male 2=White female 3=Black or African American male 4=Black or African American female 5=American Indian or Alaska Native male 6=American Indian or Alaska Native female 7=Asian or Pacific Islander male 8=Asian or Pacific Islander, female	Numeric
13	1	<u>Hispanic origin</u> 1=not Hispanic or Latino 2=Hispanic or Latino	Numeric
14-21	8	<u>April 1, 2010 base population estimate</u>	Numeric
22-29	8	<u>July 1, 2010 postcensal resident population estimate</u>	Numeric
30-37	8	<u>July 1, 2011 postcensal resident population estimate</u>	Numeric
38-45	8	<u>July 1, 2012 postcensal resident population estimate</u>	Numeric
46-53	8	<u>July 1, 2013 postcensal resident population estimate</u>	Numeric
54-61	8	<u>July 1, 2014 postcensal resident population estimate</u>	Numeric
62-69	8	<u>July 1, 2015 postcensal resident population estimate</u>	Numeric
70-77	8	<u>July 1, 2016 postcensal resident population estimate</u>	Numeric
78-85	8	<u>July 1, 2017 postcensal resident population estimate</u>	Numeric

File layout for SAS file with estimates for 2010-2017 and ages 0 to 85+ years:
pcen_v2017_y1017.sas7bdat

Variable name	Item and code outline	Format
VINTAGE	<u>Series vintage (2016)</u>	Numeric
ST_FIPS	<u>State FIPS code</u>	Numeric
CO_FIPS	<u>County FIPS code</u>	Numeric
AGE	<u>Age (0, 1, 2, ..., 85 years and over)</u>	Numeric
RACESEX	<u>Bridged-race-sex</u> 1=White male 2=White female 3=Black male 4=Black female 5=American Indian or Alaska Native male 6=American Indian or Alaska Native female 7=Asian or Pacific Islander male 8=Asian or Pacific Islander female	Numeric
HISP	<u>Hispanic origin</u> 1=not Hispanic or Latino 2=Hispanic or Latino	Numeric
POP2010_apr	<u>April 1, 2010 base population estimate</u>	Numeric
POP2010_jul	<u>July 1, 2010 postcensal resident population estimate</u>	Numeric
POP2011	<u>July 1, 2011 postcensal resident population estimate</u>	Numeric
POP2012	<u>July 1, 2012 postcensal resident population estimate</u>	Numeric
POP2013	<u>July 1, 2013 postcensal resident population estimate</u>	Numeric
POP2014	<u>July 1, 2014 postcensal resident population estimate</u>	Numeric
POP2015	<u>July 1, 2015 postcensal resident population estimate</u>	Numeric
POP2016	<u>July 1, 2016 postcensal resident population estimate</u>	Numeric
POP2017	<u>July 1, 2017 postcensal resident population estimate</u>	Numeric

File layout for annual text files with estimates for ages 0 to 85+ years:

pcen_v2017_y10_apr.txt pcen_v2017_y10_jul.txt pcen_v2017_y11.txt pcen_v2017_y12.txt
pcen_v2017_y13.txt pcen_v2017_y14.txt pcen_v2017_y15.txt pcen_v2017_y16.txt
pcen_v2017_y17.txt

Location	Field size	Item and code outline	Format
1-4	4	<u>Series vintage</u> (2017)	Numeric
5-8	4	<u>Estimate year</u> (2010-2017)	Numeric
9	1	<u>Estimate month</u> 4=April 7=July	Numeric
10-11	2	<u>State FIPS code</u>	Numeric
12-14	3	<u>County FIPS code</u>	Numeric
15-16	2	<u>Age</u> (0, 1, 2, ..., 85 years and over)	Numeric
17	1	<u>Bridged-race-sex</u> 1=White male 2=White female 3=Black or African American male 4=Black or African American female 5=American Indian or Alaska Native male 6=American Indian or Alaska Native female 7=Asian or Pacific Islander male 8=Asian or Pacific Islander female	Numeric
18	1	<u>Hispanic origin</u> 1=not Hispanic or Latino 2=Hispanic or Latino	Numeric
19-26	8	<u>Postcensal resident population estimate</u> file y10_apr: April 1, 2010 base population estimates file y10_jul: July 1, 2010 resident population estimates file y11: July 1, 2011 resident population estimates file y12: July 1, 2012 resident population estimates file y13: July 1, 2013 resident population estimates file y14: July 1, 2014 resident population estimates file y15: July 1, 2015 resident population estimates file y16: July 1, 2016 resident population estimates file y17: July 1, 2017 resident population estimates	Numeric

File layout for annual SAS files with estimates for ages 0 to 85+ years:

pcen_v2017_y10_apr.sas7bdat pcen_v2017_y10_jul.sas7bdat pcen_v2017_y11.sas7bdat
 pcen_v2017_y12.sas7bdat pcen_v2017_y13.sas7bdat pcen_v2017_y14.sas7bdat
 pcen_v2017_y15.sas7bdat pcen_v2017_y16.sas7bdat pcen_v2017_y17.sas7bdat

Variable name	Item and code outline	Format
VINTAGE	<u>Series vintage</u> (2017)	Numeric
YEAR	<u>Estimate year</u> (2010-2017)	Numeric
MONTH	<u>Estimate month</u> 4=April 7=July	
ST_FIPS	<u>State FIPS code</u>	Numeric
CO_FIPS	<u>County FIPS code</u>	Numeric
AGE	<u>Age</u> (0, 1, 2, ..., 85 years and over)	Numeric
RACESEX	<u>Bridged-race-sex</u> 1=White male 2=White female 3=Black male 4=Black female 5=American Indian or Alaska Native male 6=American Indian or Alaska Native female 7=Asian or Pacific Islander male 8=Asian or Pacific Islander female	Numeric
HISP	<u>Hispanic origin</u> 1=not Hispanic or Latino 2=Hispanic or Latino	Numeric
Pop	<u>Postcensal resident population estimate</u> file y10_apr: April 1, 2010 base population estimates file y10_jul: July 1, 2010 resident population estimates file y11: July 1, 2011 resident population estimates file y12: July 1, 2012 resident population estimates file y13: July 1, 2013 resident population estimates file y14: July 1, 2014 resident population estimates file y15: July 1, 2015 resident population estimates file y16: July 1, 2016 resident population estimates file y17: July 1, 2017 resident population estimates	Numeric

File layout for text file with single-year of age estimates ages 85 to 100+ years:
pcen_v2017_85to100.txt

Location	Field size	Item and code outline	Format
1-4	4	<u>Series vintage</u> (2017)	Numeric
5-8	4	<u>Estimate year</u> (2010-2017)	Numeric
9	1	<u>Estimate month</u> 4=April 7=July	Numeric
10-12	3	<u>Age</u> 85 = 85 years 86 = 86 years ... 100=100 years and over	Numeric
13	1	<u>Bridged-race-sex</u> 1=White male 2=White female 3=Black or African American male 4=Black or African American female 5=American Indian or Alaska Native male 6=American Indian or Alaska Native female 7=Asian or Pacific Islander male 8=Asian or Pacific Islander female	Numeric
14	1	<u>Hispanic origin</u> 1=not Hispanic or Latino 2=Hispanic or Latino	Numeric
15-22	8	<u>Postcensal resident population estimate</u> (April 1, 2010 base population estimate, July 1, 2010-July 1, 2017 postcensal estimates)	Numeric

File layout for SAS file with single-year of age estimates for ages 85 to 100+ years:
pcen_v2017_85to100.sas7bdat

Variable name	Item and code outline	Format
VINTAGE	<u>Series vintage</u> (2017)	Numeric
YEAR	<u>Estimate year</u> (2010-2017)	Numeric
MONTH	<u>Estimate month</u> 4=April 7=July	Numeric
AGE	<u>Age</u> 85 =85 years 86 = 86 years ... 100 = 100 years and over)	Numeric
RACESEX	<u>Bridged-race-sex</u> 1=White male 2=White female 3=Black male 4=Black female 5=American Indian or Alaska Native male 6=American Indian or Alaska Native female 7=Asian or Pacific Islander male 8=Asian or Pacific Islander female	Numeric
HISP	<u>Hispanic origin</u> 1=not Hispanic or Latino 2=Hispanic or Latino	Numeric
Pop	<u>Postcensal resident population estimate</u> (April 1, 2010 base population estimate, July 1, 2010-July 1, 2017 postcensal estimates)	Numeric

APPENDIX I

County Geography Changes: 1990-2017

County geography changes over time – new counties are created and old counties are renamed, deleted or their boundaries altered (19). As a result, the counties/county equivalents for which estimates are available in each of the bridged-race population series may vary somewhat. For example, the Vintage 2009 files have population estimates for three new Alaska county equivalents (Wrangell Borough, Petersburg Census Area, and Prince of Wales-Hyder Census Area) and do not have estimates for two former Alaska county equivalents (Wrangell-Petersburg Census Area and Prince of Wales-Outer Ketchikan Census Area).

The tables below summarize differences in county geography across the various estimates series.

New counties and county equivalents on the bridged-race population files: 1990-2017							
Estimate series	Number of counties	New and renamed county or county equivalent					
		Kusilvak Census Area, AK (02158)	Oglala Lakota County, SD (46102)			Petersburg Borough ¹ , AK (02195)	
2015-2017 postcensal series							
Vintage 2015-Vintage 2017	3,143	X	X			X	
Vintage 2014 ¹	3,143	--*--	--*--			X	
New county or county equivalent							
		Broomfield County, CO (08014)	Hoonah-Angoon Census Area, AK (02105)	Petersburg Census Area ¹ , AK (02195)	Prince of Wales-Hyder Census Area, AK (02198)	Skagway Municipality, AK (02230)	Wrangell City and Borough, AK (02275)
Postcensal estimate series based on 2010 census							
Vintage 2014-Vintage 2017	3,143	X	X	--*--	X	X	X

Vintage 2011- Vintage 2013	3,143	X	X	X	X	X	X
2010 census							
April 1, 2010	3,143	X	X	X	X	X	X
2000-2010 intercensal estimates							
July 1, 2000- July 1, 2010	3,143	X	X	X	X	X	X
Postcensal estimate series based on 2000 census ²							
Vintage 2009- Vintage 2010	3,143	X	X	X	X	X	X
Vintage 2008	3,142	X	X	--*--	--*--	X	--*--
Vintage 2005 -Vintage 2007 ²	3,141	X	--*--	--*--	--*--	--*--	--*--
Vintage 2003 - Vintage 2004	3,140	--*--	--*--	--*--	--*--	--*--	--*--
Vintage 2002 ²	3,141	X	--*--	--*--	--*--	--*--	--*--
Vintage 2001	No county estimates on file, only national estimates						
2000 census							
April 1, 2000	3,141	--*--	--*--	--*--	--*--	--*--	--*--
1990-1999 intercensal estimates							
July 1, 1990- July 1, 1999	3,141	--*--	--*--	--*--	--*--	--*--	--*--

--*-- County or county equivalent is not on the file.

X County or county equivalent is on the file.

¹Beginning with Vintage 2014, Petersburg Borough, AK (02195), created from part of Petersburg Census Area (02195) and part of Hoonah-Angoon Census Area (02105), replaced Petersburg Census Area. The new area retained the FIPS code of Petersburg Census Area

²Vintage 2002, Vintage 2005, Vintage 2006, and Vintage 2007 have estimates for the same 3,141 counties and county equivalents.

Specific details:

Broomfield County, Colorado (FIPS code=08014) was created effective November 15, 2001 from parts of four Colorado counties: Adams, Boulder, Jefferson, and Weld. There are estimates for this county on some, but not all, of the bridged-race files. Note that data for Broomfield County do not appear on NCHS birth or mortality files until data year 2003.

Hoonah-Angoon Census Area, AK (FIPS code = 02105). The Hoonah-Angoon Census Area was created from the remainder of the former Skagway-Hoonah-Angoon Census Area (FIPS code = 02232) when Skagway Municipality (FIPS code = 02230) was created effective June 20, 2007. Estimates for this area are on the Vintage 2008 and later bridged-race population files. Effective January 3, 2013, a mostly unpopulated part of this area was removed and merged with part of Petersburg Census Area (FIPS code=02195) to form the new Petersburg Borough (FIPS code=02195). Note that no data for Hoonah-Angoon Census Area appear on NCHS birth and mortality files until the 2014 data year.

Kusilvak Census Area, AK (FIPS code=02158).-Effective July 1, 2015, Wade Hampton Census Area (FIPS code=02270) was renamed Kusilvak Census Area and assigned a new FIPS code. Kusilvak Census Area first appears on the bridged-race population files for Vintage 2015. Note that Wade Hampton, rather than Kusilvak continues to be used on NCHS birth and mortality files.

Oglala Lakota County, SD (FIPS code=46102). Effective May 1, 2015, Shannon County, SD (FIPS code=46113) was renamed Oglala Lakota County and assigned a new FIPS code. Oglala Lakota first appears on the bridged-race population files for Vintage 2015. Note that Shannon County, rather than Oglala Lake continues to appear on NCHS birth and mortality files.

Petersburg Borough (FIPS code=02195). Effective January 3, 2013, Petersburg Borough was created from part of the former Petersburg Census Area (FIPS code=02195) and a mostly unpopulated part of Hoonah-Angoon Census Area (FIPS code=02105). Petersburg Borough appears on the Vintage 2014 and later bridged-race population files. Note that no data for this Borough appear on NCHS birth and mortality files.

Petersburg Census Area (FIPS code=02195). Petersburg Census Area was created from part of the former Wrangell-Petersburg Census Area (FIPS code = 02280) effective June 1, 2008. Estimates for this area are on the Vintage 2009 – Vintage 2013 bridged-race population files. Effective January 3, 2013, most of this area was aggregated with a mostly unpopulated part of Hoonah-Angoon Census Area (FIPS code=02105) to form Petersburg Borough (FIPS code=02195). The new area replaced Petersburg Census Area starting with Vintage 2014. Note that no data for this Census Area appear on NCHS birth and mortality files prior to 2014.

Prince of Wales-Hyder Census Area (FIPS code = 02198). Prince of Wales-Hyder Census Area was created from the remainder of the former Prince of Wales-Outer Ketchikan Census Area (FIPS code = 02201) after part (Outer Ketchikan) was annexed by Ketchikan Gateway Borough (FIPS code = 02130) effective May 19, 2008 and another part was included in the new Wrangell Borough (effective June 1, 2008). Estimates for this area are on the Vintage 2009 and later bridged-race files. No data for this Census Area appear on NCHS birth and mortality files until the 2014 data year.

Skagway Municipality, AK (FIPS code = 02230). Skagway Municipality was created from part of the former Skagway-Hoonah-Angoon Census Area (FIPS code = 02232) effective June 20, 2007; boundaries are identical to the Skagway census subarea. The remainder of the former Skagway-Hoonah-Angoon Census Area was established as the new Hoonah-Angoon Census Area (FIPS code = 02105). Estimates for this area appear on the Vintage 2008 and later bridged-race population files. Note that no data for Skagway Municipality appear on NCHS birth and mortality files until the 2014 data year.

Wrangell City and Borough (FIPS code = 02275). Effective June 1, 2008, Wrangell City and Borough was created from part of Wrangell-Petersburg Census Area (FIPS code = 02280) and part of Prince of Wales-Outer Ketchikan Census Area (FIPS code = 02201). Estimates for this area appear on Vintage 2009 and later bridged-race population files. Note that no data for Wrangell Borough appear on NCHS birth and mortality files until the 2014 data year.

Deleted and renamed counties and county equivalents: bridged-race population files for 1990-2017						
Estimate series	Number of counties	Deleted county of county equivalent				
		Petersburg Borough ¹ , AK (02195)	Shannon County, SD (46113)	Wade Hampton Census Area, AK (02270)		
Postcensal estimates based on 2010 census						
Vintage 2015- Vintage 2017	3,143	--*--	--*--	--*--		
Vintage 2014	3,143	--*--	X	X		
		Bedford city, VA (51515)	Clifton Forge city, VA (51560)	Prince of Wales-Outer Ketchikan Census Area, AK (02201)	Skagway-Hoonah-Angoon Census Area, AK (02232)	Wrangell – Petersburg Census Area, AK (02280)
Postcensal estimate series based on 2010 census						
Vintage 2014- Vintage 2017	3,143	--*--	--*--	--*--	--*--	--*--
Vintage 2011- Vintage 2013	3,143	X	--*--	-*-	--*--	--*--
2010 census						
April 1, 2010	3,143	X	--*--	--*--	--*--	--*--
2000-2010 intercensal estimates						
July 1, 2000- July 1, 2010	3,143	X	--*--	--*--	--*--	--*--
Postcensal estimate series based on 2000 census						
Vintage 2009- Vintage 2010	3,143	X	--*--	--*--	--*--	--*--
Vintage 2008	3,142	X	--*--	X	--*--	X
Vintage 2005 - Vintage 2007 ¹	3,141	X	--*--	X	X	X

Vintage 2003 - Vintage 2004	3,140	X		--*--	X	X	X
Vintage 2002 ¹	3,141	X		--*--	X	X	X
Vintage 2001	No county estimates on file, only national estimates						
2000 census							
April 1, 2000	3,141	X	X	X--	X		X
1990-1999 intercensal estimates							
July 1, 2000- July 1, 2009	3,141	X	X	X	X		X

--*-- County or county equivalent is not on the file.

X County or county equivalent is on the file.

¹Vintage 2002, Vintage 2005, Vintage 2006, and Vintage 2007 have estimates for the same 3,141 counties and county equivalents.

Specific details:

Bedford City, Virginia (FIPS code = 51515). Effective July 1, 2013, Bedford city, Virginia (51515), formerly an independent city, was added to Bedford County (51019). Beginning with the Vintage 2014 postcensal series, estimates for this county equivalent no longer appear on the bridged-race population files. Note that data for Bedford city still appear on NCHS birth and mortality files.

Clifton Forge City, Virginia (FIPS code = 51560). Effective July 1, 2001, Clifton Forge city, Virginia, formerly an independent city, merged with Alleghany county (FIPS code=51005). Estimates for this county equivalent only appear on the 1990-1999 intercensal bridged-race files and the April 1, 2000 bridged-race files. Note that data for Clifton Forge city appear on NCHS birth and mortality files prior to data year 2003; but beginning with the 2003 data year, no data for Clifton Forge city appear on the birth and mortality files.

Petersburg Census Area (FIPS code=02195). Petersburg Census Area was created from part of the former Wrangell-Petersburg Census Area (FIPS code = 02280) effective June 1, 2008. Estimates for this area are on the Vintage 2009 –Vintage 2013 bridged-race population files. Effective January 3, 2013, most of this area was aggregated with a mostly unpopulated part of Hoonah-Angoon Census Area (FIPS code=02105) to form Petersburg Borough (FIPS code=02195). The new area replaced Petersburg Census Area starting with Vintage 2014. Note that no data for this Census Area appear on NCHS birth and mortality files prior to 2014.

Prince of Wales-Outer-Ketchikan Census Area (FIPS code = 02201). Part of this area (Outer Ketchikan) was annexed by Ketchikan Gateway Borough (FIPS code = 02130), part was included in the new Wrangell City and borough (FIPS code = 02275), and the remainder was renamed Prince of Wales-Hyder Census Area (FIPS code = 02198). Estimates for Prince of Wales-Outer Ketchikan do not appear on the bridged-race files after Vintage 2008. Note that data for this area appear on NCHS birth and mortality files for 1994 – 2013.

Shannon County, SD (FIPS code=46113). Effective May 1, 2015, Shannon County was renamed Oglala Lakota County and given a new FIPS code (46102). It last appeared in the bridged-race Vintage 2014 population files. Note that Shannon County continues to appear on NCHS birth and mortality files.

Skagway-Hoonah-Angoon Census Area, AK (FIPS code = 02232). Effective June 20, 2007, Skagway-Hoonah-Angoon Census area was split to create Skagway Municipality (FIPS = 02230) and Hoonah-Angoon Census Area (FIPS code = 02105). Estimates for Skagway-Hoonah-Angoon do not appear on bridged-race files after Vintage 2007. Note that data for Skagway-Hoonah-Angoon Census Area appear on NCHS birth and mortality files for 1994 – 2013.

Wade Hampton Census Area, AK (FIPS code=02270). Effective July 1, 2015, Wade Hampton Census Area was renamed Kusilvak Census Area and given a new FIPS code (02158). It last appeared in the Vintage 2014 bridged-race population files.- Wade Hampton Census Area still appear on NCHS birth and mortality files.

Wrangell-Petersburg Census Area (FIPS code = 02280). Effective June 1, 2008, Wrangell-Petersburg Census Area was split to create part of Wrangell City and Borough (FIPS code = 02275) and all of Petersburg Census Area (FIPS code = 02-195). Estimates for Wrangell-Petersburg do not appear on bridged-race files after Vintage 2008. Note that data for Wrangell-Petersburg Census Area appear on NCHS birth and mortality files for 1994 – 2013.