

## Six Decades of County-Level Net Migration: Data Dictionary

This dataset includes estimates of the net migration rate for all U.S. counties by five-year age group, race, Hispanic origin, and sex for each decade between 1950 and 2010.

**Source:** These data were generated by different teams of researchers each decade and aggregated into a consistent dataset by Voss, McNiven, and others after the completion of the estimates for the 1990s (see Voss et al. 2004). After completion of the 2000-2010 data by Winkler et al. (2013), Jim Beaudoin at the Applied Population Laboratory at the University of Wisconsin- Madison created the interactive website serving net migration estimate data in an integrated format for the 1950s through 2000s at [www.netmigration.wisc.edu](http://www.netmigration.wisc.edu). Data for each decade are available for individual download at [ICPSR](http://www.icpsr.org).

1950s: Bowles, G. K. and J. D. Tarver. 1965. *Net Migration of the Population, 1950-60, by Age, Sex and Color*. Washington, D.C.: U.S. Department of Agriculture, Economic Research Service.

1960s: Bowles, G. K., C. L. Beale, and E. S. Lee. 1975. *Net Migration of the Population, 1960-70, by Age, Sex and Color*. Washington: U.S. Department of Agriculture, Economic Research Service and Athens: University of Georgia.

1970s: White, M. J., P. Mueser, and J. P. Tierney. 1987. Net migration of the population of the United States 1970-80, by age, race and sex. (Computer file with documentation.) Ann Arbor, MI: Inter-university Consortium for Political and Social Research.

1980s: Fuguitt, G. V., C. L. Beale, and P. R. Voss. 2010. County-Specific Net Migration Estimates, 1980-1990. ICPSR26761-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2010-04-02. doi:10.3886/ICPSR26761

1990s: Voss, P. R., S. McNiven, R. B. Hammer, K. M. Johnson, G. V. Fuguitt. 2004. County-specific net migration by five-year age groups, Hispanic origin, race and sex 1990-2000. CDE Working Paper No. 2004-24. Center for Demography and Ecology, University of Wisconsin—Madison. Madison, WI.

2000s: Winkler, R.L., K. M. Johnson, C. Cheng, P.R. Voss, and K.J. Curtis. 2013. County-specific net migration by five-year age groups, Hispanic origin, race and sex 2000-2010. CDE Working Paper No. 2013-04. Center for Demography and Ecology, University of Wisconsin-Madison. Madison, WI.

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**Data description:**

VARIABLE	DESCRIPTION
FIPS3145	The five-digit federal information processing standard (FIPS). The first two digits represent the state, the following three digits represent the county. These FIPS codes are adjusted for some counties to generate 3,095 county-level units with consistent geographic boundaries across the five decade time series plus 50 state level units for a total number of 3,145 observations. Counties that did not experience geographic change retain a standard FIPS. State total data are specified with the state FIPS code as the first two characters followed by “000”. For counties that did experience geographic change, individual counties are aggregated into groups and assigned a common FIPS, as described below, or data from early decades is missing.
Net Migration Rate	The estimated net migration rate is calculated using a residual method whereby the initial population at the start of the decade is aged forward in time to the end of the decade adding in an estimate (or count) of the number of births and subtracting out an estimate (or count) of the number of deaths to generated an “expected” population at the end of the decade. Net migration is calculated as the observed final population at the end of the decade (based on Census population counts) minus the expected population. Net migration rates per 100 are calculated as net migration divided by expected final population times 100. If expected population is zero, the observation is coded as missing.
Race/Ethnicity	Race categories included in this dataset vary by decade. For the 1950s, 1960s, and 1970s the race categories are coded as white or nonwhite. No ethnicity is recorded. For the 1980s, no estimates by race or ethnicity are available. For the 1990s and 2000s, more detailed race/ethnic groups are available. These include four categories: Hispanic, non-Hispanic white, non-Hispanic black, and non-Hispanic others. “Others” primarily include Asians and American Indians. Totals of all race/ethnic groups are available for each decade.
Sex	This variable represents sex as identified on US Census questionnaires and on birth and death certificates. Classifications for males, females, and totals are available for each decade.
Age	Five-year age groups beginning with the population age 0-4, 5-9, and so forth through age 75 and over. Age references age at the end of the decade.

## **Data organization:**

### Type

The first letter indicates what type of data the variable holds:

“e” – expected population at end of decade, absent net migration

“m” – net migrants (NM= final observed population – expected population)

“r” – net migration rate (NMR= net migrants/expected population\*100). If expected population is zero, then NMR is missing. Expressed as per 100 individuals.

### Decade

The second character represents the decade. These include the following.

- 5: 1950s
- 6: 1960s
- 7: 1970s
- 8: 1980s
- 9: 1990s
- 0: 2000s

### Race

The third character in a variable’s name represents race.

- b: Black
- n: Non-White (Asian and American Indian and Black)
- o: Other (Asian and American Indian)
- w: White
- t: Total. That is, all races combined.

### Hispanic Origin

The fourth character in a variable’s name represents Hispanic origin.

- h: Hispanic
- n: Non-Hispanic
- t: Total – Hispanics and non-Hispanics combine

Note: Hispanic origin is only available in the 1990s and 2000s data.

### Sex

The fifth character (final alphabetic character) in a variable’s name represents sex.

- m: Male
- f: Female
- t: Total – males and females combined.

### Age

The final characters in a variables name represent age.

- 0: Ages 0-4
- 5: Ages 5-9
- ...
- 70: Ages 70-74
- 75: Ages 75+

## Summary

For the 1950's to the 1970's, seven categories are included: Non-White Total Females (ntf), Non-White Total Males (ntm), White Total Females (wtf), White Total Males (wtm), Total Total Females (ttf), Total Total Males (ttm) and Total Total Total (ttt). The 1980's contains only Total Total Females (ttf), Total Total Males (ttm) and Total Total Total (ttt). The 1990's and 2000s contain all the above categories, plus Black Non-Hispanic Females (bnf), Black Non-Hispanic Males (bnm), Other Non-Hispanic Females (onf), Other Non-Hispanic Males (onm), White Non-Hispanic Females (wbnf), White Non-Hispanic Males (wnm), Total Hispanic Females (thf) and Total Hispanic Males (thm).

## **Geographic Change:**

The following counties experienced geographic change in boundaries between Census 1950 and Census 2010, prompting the research team to aggregate the individual counties in county groupings that maintained consistent boundaries across the five decades. In other cases, we chose to provide data for the most recent county geographies, but then to leave as missing data for prior decades. These decisions are specified below. The Alaskan and Hawaiian county groupings are only relevant for the 2000s, with data from prior decades only available at the state level. The name and FIPS included in this dataset for each county grouping is underlined with associated individual counties listed below.

## County Groupings:

<u>Denali-Yukon-SE Fairbanks, Alaska</u>	<u>02991</u>
Denali Borough	02068
Southeast Fairbanks Census Area	02240
Yukon-Koyukuk Census Area	02290
<u>Wrangell-Petersburg-Ketchikan, Alaska</u>	<u>02992</u>
Ketchikan Census Area	02130
Petersburg Census Area	02195
Prince of Wales-Hyder Census Area	02198
Prince of Wales-Outer Ketchikan Census Area	02201
Wrangell City and Borough	02275
Wrangell-Petersburg	02280
<u>Skagway-Hoonah-Angoon-Yakutat, Alaska</u>	<u>02993</u>
Hoonah-Angoon	02105
Skagway Municipality	02230
Yakutat City and Borough	02282
<u>Kalawao-Maui, Hawaii</u>	<u>15010</u>
Kalawao County	15005
Maui County	15009

<u>Miami-Dade, Florida</u>	<u>12086</u>
Dade County	12025
Miami-Dade County	12086
<u>Park, Montana (30)</u>	<u>30067</u>
Park County	30067
Yellowstone National Park	30113
<u>Albemarle, Virginia</u>	<u>51900</u>
Albemarle County	51003
Charlottesville City	51540
<u>Alleghany- Clifton Forge- Covington, Virginia</u>	<u>51901</u>
Alleghany County	51005
Clifton Forge City	51560
Covington City	51580
<u>Augusta- Staunton- Waynesboro, Virginia</u>	<u>51902</u>
Augusta County	51015
Staunton City	51790
Waynesboro City	51820
<u>Bedford – Campbell- Lynchburg, Virginia</u>	<u>51903</u>
Bedford County	51019
Bedford City	51515
Campbell County	51031
Lynchburg City	51680
<u>Carroll – Grayson - Galax, Virginia</u>	<u>51904</u>
Carroll County	51035
Galax City	51640
Grayson County	51077
<u>Chesterfield – Henrico - Richmond, Virginia</u>	<u>51905</u>
Chesterfield County	51041
Colonial Heights City	51570
Henrico County	51087
Richmond City	51760
<u>Fairfax - Arlington, Virginia</u>	<u>51906</u>
Fairfax County	51059
Falls Church City	51610
Fairfax City	51600
Arlington County	51013
Alexandria City	51510
<u>Frederick, Virginia</u>	<u>51907</u>
Frederick County	51069
Winchester City	51840

<u>Greensville, Virginia</u>	<u>51908</u>
Greensville County	51081
Emporia City	51595
<u>Halifax, Virginia</u>	<u>51909</u>
Halifax County	51083
South Boston City	51780
<u>Henry, Virginia</u>	<u>51910</u>
Henry County	51089
Martinsville City	51690
<u>James City, Virginia</u>	<u>51911</u>
James City County	51095
Williamsburg City	51830
<u>Montgomery, Virginia</u>	<u>51912</u>
Montgomery County	51121
Radford City	51750
<u>Norfolk, Virginia</u>	<u>51913</u>
Norfolk County	51129
Princess Anne County	51151
South Norfolk City	51785
Norfolk City	51710
Portsmouth City	51740
Chesapeake City	51550
Virginia Beach City	51810
<u>Pittsylvania, Virginia</u>	<u>51914</u>
Pittsylvania County	51143
Danville City	51590
<u>Prince George - Dinwiddie, Virginia</u>	<u>51915</u>
Prince George County	51149
Hopewell City	51670
Dinwiddie County	51053
Petersburg City	51730
<u>Prince William, Virginia</u>	<u>51916</u>
Prince William County	51153
Manassas City	51683
Manassas Park City	51685
<u>Roanoke, Virginia</u>	<u>51917</u>
Roanoke County	51161
Roanoke City	51770
Salem City	51775

<u>Rockbridge, Virginia</u>	<u>51918</u>
Rockbridge County	51163
Buena Vista City	51530
Lexington City	51678
<u>Rockingham, Virginia</u>	<u>51919</u>
Rockingham County	51165
Harrisonburg City	51660
<u>Southampton, Virginia</u>	<u>51920</u>
Southampton County	51175
Franklin City City	51620
<u>Spotsylvania, Virginia</u>	<u>51921</u>
Spotsylvania County	51177
Fredericksburg City	51630
<u>Washington, Virginia</u>	<u>51922</u>
Washington County	51191
Bristol City	51520
<u>Wise, Virginia</u>	<u>51923</u>
Wise County	51195
Norton City	51720
<u>York, Virginia</u>	<u>51924</u>
York County	51199
Hampton City	51650
Newport News City	51700
Poquoson City	51735

Counties Missing Data

FIPS	County Name	State	1950s	1960s	1970s	1980s	1990s	2000s
2013	Aleutians East Borough	AK	missing	missing	missing	missing	missing	available
2016	Aleutians West Census Area	AK	missing	missing	missing	missing	missing	available
2020	Anchorage Municipality	AK	missing	missing	missing	missing	missing	available
2050	Bethel Census Area	AK	missing	missing	missing	missing	missing	available
2060	Bristol Bay Borough	AK	missing	missing	missing	missing	missing	available
2070	Dillingham Census Area	AK	missing	missing	missing	missing	missing	available
2090	Fairbanks North Star Borough	AK	missing	missing	missing	missing	missing	available
2100	Haines Borough	AK	missing	missing	missing	missing	missing	available
2110	Juneau City and Borough	AK	missing	missing	missing	missing	missing	available
2122	Kenai Peninsula Borough	AK	missing	missing	missing	missing	missing	available
2150	Kodiak Island Borough	AK	missing	missing	missing	missing	missing	available
2164	Lake and Peninsula Borough	AK	missing	missing	missing	missing	missing	available
2170	Matanuska-Susitna Borough	AK	missing	missing	missing	missing	missing	available

2180	Nome Census Area	AK	missing	missing	missing	missing	missing	available
2185	North Slope Borough	AK	missing	missing	missing	missing	missing	available
2188	Northwest Arctic Borough	AK	missing	missing	missing	missing	missing	available
2220	Sitka City and Borough	AK	missing	missing	missing	missing	missing	available
2261	Valdez-Cordova Census Area	AK	missing	missing	missing	missing	missing	available
2270	Wade Hampton Census Area	AK	missing	missing	missing	missing	missing	available
2282	Yakutat City and Borough	AK	missing	missing	missing	missing	missing	available
2991	Denali-Yukon-SE Fairbanks	AK	missing	missing	missing	missing	missing	available
2992	Wrangell-Petersburg-Ketchik	AK	missing	missing	missing	missing	missing	available
2993	Skagway-Hoonah-Angoon-Ya	AK	missing	missing	missing	missing	missing	available
4012	La Paz County	AZ	missing	missing	missing	missing	missing	available
4027	Yuma County	AZ	missing	missing	missing	missing	missing	available
8001	Adams County	CO	NOTE	NOTE	NOTE	NOTE	NOTE	available
8005	Arapahoe County	CO	missing	missing	missing	available	available	available
8013	Boulder County	CO	NOTE	NOTE	NOTE	NOTE	NOTE	available
8014	Broomfield County	CO	NOTE	NOTE	NOTE	NOTE	NOTE	available
8031	Denver County	CO	missing	missing	missing	available	available	available
8059	Jefferson County	CO	NOTE	NOTE	NOTE	NOTE	NOTE	available
8123	Weld County	CO	NOTE	NOTE	NOTE	NOTE	NOTE	available
13053	Muscogee County	GA	missing	missing	missing	available	available	available
13215	Chatahoochee County	GA	missing	missing	missing	available	available	available
15001	Hawaii County	HI	missing	missing	missing	missing	missing	available
15003	Honolulu County	HI	missing	missing	missing	missing	missing	available
15007	Kauai County	HI	missing	missing	missing	missing	missing	available
15009	Maui County	HI	missing	missing	missing	missing	missing	available
15010	Kalawao-Maui	HI	missing	missing	missing	missing	missing	available
35006	Cibola County	NM	missing	missing	missing	missing	available	available
35061	Valencia County	NM	missing	missing	missing	missing	available	available
55078	Menominee County	WI	missing	missing	missing	available	available	available
55083	Oconto County	WI	missing	missing	missing	available	available	available
55115	Shawano County	WI	missing	missing	missing	available	available	available

NOTE: for Adams, Jefferson, Boulder, and Weld counties in Colorado, migration patterns prior to 2000-2010 include what is today Broomfield County.