

Census Data Primer

Prepared by the Demographics and Workforce Group of the University of Virginia's Weldon Cooper Center for Public Service

September 28, 2010 — Census 2010 is over. The snapshot has been taken. We are waiting for the photo to develop, and soon we will see how it looks and what it tells us.

In past decennial censuses conducted by the United States Census Bureau a combination of short and long questionnaires was used to collect data from every American household. Beginning with the 2010 census, only a short form was used. But this does not mean that the Census Bureau is no longer collecting detailed information. The long form, which used to be taken only every 10 years, has been replaced by a new annual survey called the American Community Survey, or ACS.

In the months and years after each decennial census, the Census Bureau releases several datasets showing the results. These data releases and data products can be hard to navigate, but they are essential in helping us better understand who we are and how we live. (The full release schedule for 2010 Census data products can be found at <http://www.census.gov/population/www/cen2010/glance/index.html>).

To assist reporters and others with the upcoming data releases, the Cooper Center has compiled the following information from the Census Bureau website (www.census.gov).

Differences Between the 2010 Census and the American Community Survey

The next few years may be confusing to people who want to understand and use census data because it will come from these two different sources. Understanding the basic differences between the 2010 Census and the American Community Survey is an important first step to clearing up the confusion. The following table shows some notable characteristics of the 2010 Census and the American Community Survey.

	2010 Census	American Community Survey
Purpose	To show the <i>number</i> of people who live in the U.S.	To show <i>how</i> people in the U.S. live
Length	10 questions	69 questions
Frequency	April 1, 2010	Ongoing
How it should be used	To obtain counts of the population and their basic characteristics (gender, age, race, Hispanic origin and homeowner status)	To learn about the population's demographic, social, economic and housing characteristics
Who is questioned	The entire population (over 130 million households)	A sample of the population (approximately 3 million households each year)
Type of data	Counts	Estimates with margins of error

The American Community Survey is a Survey, Not a Census

The American Community Survey has additional complexities that should be understood. Unlike the Census 2010, which was filled out by everyone, the American Community Survey is filled out by just a sample of people in each community, and their answers are used to generate estimates that describe the entire community population. To make good estimates about the whole population, a sufficient number of people must be surveyed.

For example, the survey responses of one person are not sufficient to make generalizations about even the smallest community in Virginia. Depending on the size of the community, a sample size of 100, 1,000, or even 5,000 people per year may be required.

In large communities, the Census Bureau can sample enough people each year to produce annual estimates. In small communities, however, the annual sample sizes are small and five years' worth of survey data are required to get a reliable base for estimates.

American Community Survey Data Covers Different Time Periods

American Community Survey data are combined to provide 12, 36 or 60 months of data. The release of each of these datasets is driven by the population size; one-year estimates are available for large areas (those with population of 65,000 or more), while five-year estimates are available for geographic areas as small as the Census tract (a relatively homogeneous area with an average of 4,000 inhabitants) and block group (an area that is smaller than an entire tract but larger than a single block). It is important to remember that unlike the decennial census, which gives us a snapshot of the population on a single day, the American Community Survey estimates tell us how the population was living over a period of one, three or five years.

Why and How To Use American Community Survey Data

Choosing which American Community Survey dataset to use involves more than simply considering the population size in your area. You must think about the balance between currency and sample size/reliability/precision. The following table shows the features of American Community Survey estimates.

1-year estimates	3-year estimates	5-year estimates
12 months of collected data	36 months of collected data	60 months of collected data
Data for areas with populations of 65,000+	Data for areas with populations of 20,000+	Data for all areas
Smallest sample size	Larger sample size than 1-year	Largest sample size
Less reliable than 3-year or 5-year	More reliable than 1-year; less reliable than 5-year	Most reliable
Most current data	Less current than 1-year estimates; more current than 5-year	Least current
Best used when	Best used when	Best used when
Currency is more important than precision	More precise than 1-year, more current than 5-year	Precision is more important than currency
Analyzing large populations	Analyzing smaller populations	Analyzing very small populations
	Examining smaller geographies because 1-year estimates are not available	Examining tracts and other smaller geographies because 1-year estimates are not available

Not Confused enough? Now, Add in the Decennial Census Data

While American Community Survey data have been released each year since 2005, the coming years mark the first time since the survey's inception that new decennial census data will also be released. To further complicate matters, it is also the first time that five-year data from the American Community Survey will be available. To help ease the transition, the following table provides the release dates for the major census products, with 2010 Census release dates shown in bold and American Community Survey release dates shown in italics.

Planned Release	Data Product	Lowest Level Geography
<i>September 2010</i>	2009 American Community Survey 1-year estimates	65,000+ population
<i>December 2010</i>	2005-2009 American Community Survey 5-year estimates	Census tracts
Dec. 31, 2010	Official national and state population counts for reapportionment	State
<i>January 2011</i>	2007-2009 American Community Survey 3-year estimates	20,000+ population
February – March 2011	2010 Census Redistricting Data (P.L. 94-171) Summary File: Includes state population counts for race and Hispanic/Latino categories and state housing unit counts by occupancy status	Blocks
May 2011	Demographic Profile: Includes selected population and housing characteristics and Congressional Districts of the 111th Congress	Places/ Minor Civil Divisions
June 2011 – August 2011	Summary File 1 (SF 1): Includes population counts for many detailed race and Hispanic/Latino categories, and American Indian and Alaska Native tribes; and selected population and housing characteristics	Blocks/Census Tracts
<i>September 2011</i>	2010 American Community Survey 1-year estimates	65,000+ population
December 2011 – April 2012	Summary File 2 (SF 2): Includes population and housing characteristics iterated for many detailed race and Hispanic/Latino categories, and American Indian and Alaska Native tribes	Census Tracts
<i>Winter 2011 – Spring 2012</i>	2008-2010 American Community Survey 3-year estimates	20,000+ population
	2006-2010 American Community Survey 5-year estimates	Census tracts

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