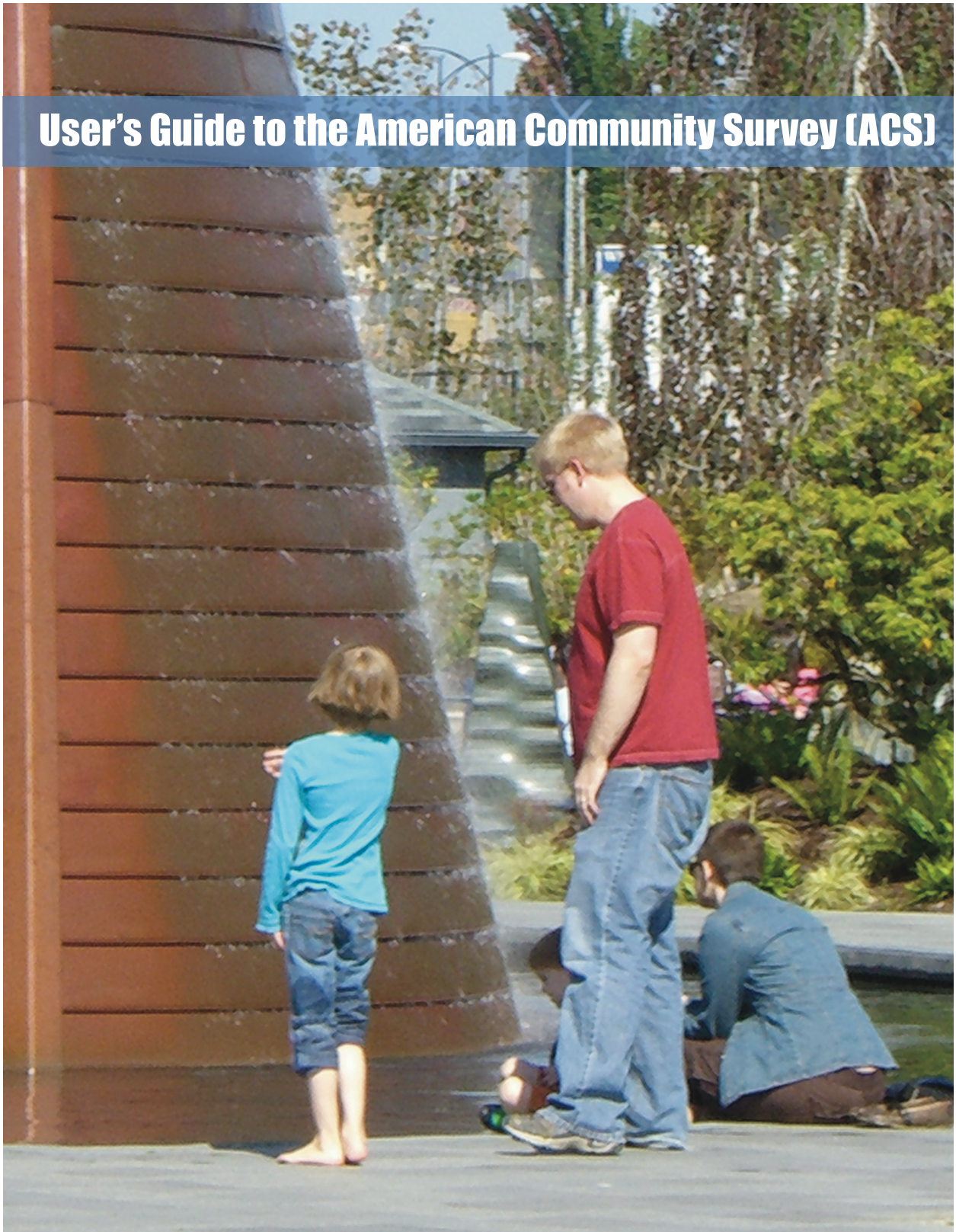


User's Guide to the American Community Survey (ACS)





What is the American Community Survey?

The U.S. Census Bureau has changed the way it conducts the Census. In the past, American households received either the Census short form or long form every 10 years. The short form will still be sent out once a decade for an official population count, but the long form has now been replaced by the American Community Survey (ACS). The ACS provides up-to-date demographic data for our communities on an annual basis. Cities and counties can use the ACS to track the well-being of children, families, and the elderly; to determine where to locate new roads and transit routes, schools, and hospitals; or to show a large corporation that a community has the workforce the company needs.

Every month, the ACS goes out to a sample of residences around the country — about one in 40 households annually. From the survey responses, the Census Bureau produces three ACS data series: **one-year**, **three-year**, and **five-year estimates**. ACS data are accumulated and released once a year for larger geographic places (those with 65,000 people or more). Data for places with fewer than 65,000 people are accumulated over three or five years (the extra time is needed to acquire enough survey responses to provide statistically reliable samples in small areas). As of December, 2008, only the one-year and three-year estimates are available. Five-year estimates will be released starting in 2010.

The size of a community determines which estimates are available. For example, Granite Falls, with a population under 20,000, will have only five-year estimates available. Puyallup, with a population of more than 20,000 and fewer than 65,000, will have three- and five-year estimates (also called multiyear estimates) available. And Tacoma, with a population much larger than 65,000, will have one-year estimates, plus the multiyear estimates. New one-year, three-year and five-year estimates will come out annually, so each community will have fresh ACS data every year. More information about multiyear estimates is available from the Census Bureau at <http://www.census.gov/acs/www/UseData/myoverview.html>.

A handbook providing user-friendly information about understanding and using ACS data is available at http://www.census.gov/acs/www/UseData/Compass/compass_series.html.

ACS Data Availability

Population 65,000 or larger

- One-year estimates
- Three-year estimates
- Five-year estimates

Population between 20,000 and 65,000

- Three-year estimates
- Five-year estimates

Population smaller than 20,000

- Five-year estimates only

Three Important Things to Know About the ACS

One: It's about characteristics, not counts

The ACS is not a population count. Instead, it estimates the characteristics of a community based on a small sample of the population. It's useful for gauging trends over time or for comparing different areas, but should not be used to find out the size of the total population (or the number of Hispanics, speakers of Latvian, or households with incomes under \$20,000) living in your city.

Two: Consider the margin of error

Fewer households are sampled for the ACS than for the Census long form. As a result, ACS estimates carry a larger amount of sampling error.¹ The Census Bureau informs people about the chance of error by publishing the margin of error (MOE) next to ACS estimates. The MOE is indicated with a "plus or minus" (+/-) sign, and is based on a 90 percent confidence interval. For example, the 2006 ACS estimate of the average income for Seattle residents was shown as \$38,648. The MOE was +/- \$1,392. That means the Census Bureau believes there was a 90 percent chance that the actual per capita income in Seattle was within plus or minus \$1,392 of \$38,648. The proportionally smaller the MOE is to the estimate, the more accurate the estimate is.

Three: Proceed with caution when making comparisons

Always use the same ACS estimate series when making comparisons. For example, let's say you want to compare Seattle to the smaller city of Bremerton. Bremerton has three-year estimates available, but Seattle has both three-year and one-year estimates. Which Seattle estimate should you use? The three-year estimate. One-year estimates shouldn't be compared with three-year estimates because the methodology used for producing the data sets is different. Comparing a one-year estimate to a three-year estimate is like comparing apples to oranges and may give you inaccurate results.

Which estimates do you use if you are analyzing a city or county that has both one-year estimates and multiyear estimates available? The answer depends on whether timeliness or accuracy is more important in your research. One-year estimates are more current and reflect annual trends better than multiyear estimates. But, three- and five-year estimates are based on a larger sample, and thus are more statistically reliable.

If you are doing trend analysis, also be aware of the following:

- Trends will not appear as clearly with multiyear estimates as they will with one-year estimates, due to the smoothing of the data that occurs with multiyear estimates. If the data drop or increase one year in the middle of a five-year estimate, the multiyear estimate will make the change look less pronounced because it's flattened it out over several years.
- Estimates with overlapping years should not be compared (i.e., do not compare the five-year estimates for 2005-2009 with the estimate for 2006-2010). Where there are overlapping years, the differences in the two multiyear estimates are driven by the differences in the non-overlapping years and would be difficult to identify.
- The boundaries of cities and towns can change over time (due to annexations, for example). Estimates for different periods may reflect changed boundaries and may not be exactly comparable from period to period. Multiyear period estimates reflect the most recent year's boundaries. In other words, if a city expands in 2009, the Census Bureau calculates the three-year 2007-2009 estimates as if the additional area had existed in 2007 and 2008.

¹ Sampling error happens whenever data are gathered from a sample of the population instead of the whole group. With any samples, there are likely to be differences between the characteristics of the sampled population and the entire population.

Comparing the ACS With the 2000 Census

Not all of the ACS questions were asked on the 2000 Census long form. In some other cases, the questions were similar, but they covered different time periods. Below are some differences you should watch out for if you need to compare data from the two surveys.

What counts as home?

Residence Rules

The ACS has different rules for residency than the decennial census. In the Census, you are counted at your *primary* residence as of Census day. The ACS, on the other hand, asks where you live on the day you get the survey. It follows the “two-month” rule: Anyone staying for longer than two months at an address receiving the ACS is counted as a resident of that address. Residents away from home for fewer than two months (on business or vacation, for example) are counted at their usual address. People staying for shorter periods of time with no other place to live are considered residents of the unit where they are surveyed. The Census Bureau has made some exceptions to the two-month rule for those with complicated living arrangements, such as college students, children in joint custody, and the owners of second homes. Refer to the ACS questionnaire for more information.

ACS Data Items

The Census Bureau offers detailed information for people who want to know more about how to compare ACS data with 2000 Census data.

A handy table shows what items in the ACS may not be compared to Census 2000. It also has guidance for comparing the latest two years of the ACS: <http://www.census.gov/acs/www/UseData/compACS.htm>.

Copies of ACS and Census 2000 questionnaires are here: <http://www.census.gov/acs/www/SBasics/SQuest/SQuest1.htm>.

If Census Day is April 1, when is ACS Day?

Period Estimates

The decennial census produces “point-in-time estimates” that show a snapshot of a community’s characteristics as of Census day, April 1. The ACS, on the other hand, collects data on an ongoing basis instead of on a single date. It produces what the Census Bureau calls “period estimates,” based on data accumulated and averaged over one, three or five years.

How are vacation areas affected?

Seasonal communities and areas with large changes

ACS data for areas with stable populations are very similar to decennial census data. However, in areas with a fluctuating population — such as seasonal communities or areas experiencing large changes — the ACS will smooth out the changes over the estimation period, making comparisons with decennial census data difficult.

How does an ongoing survey handle school enrollment or income?

Reference Periods

Some survey questions specify a period of time (for example, “last week” or “in the last three months”) relative to the interview date. Two examples of differences in the reference periods used by the ACS compared with the decennial census are:

School enrollment: The Census long form asked if the respondent attended school any time after February 1. The ACS asks if a person has attended school during the last three months. You may see different enrollment estimates between the ACS and the Census because of the varied time periods.

Income: The Census long form asked for income from the previous calendar year; the ACS asks for the last 12 months of income. People who received the ACS in January 2008 reported income earned between January 2007 and December 2007. Those who received the survey in December 2008 recorded income from December 2007 to November 2008. The Census Bureau pooled together all income data reported during the 23-month period (January 2007 to November 2008), adjusted it for inflation, and then released it in the 2008 ACS.

Are people in nursing homes and colleges surveyed by the ACS?

Group Quarter Populations

Yes, starting in 2006. Group quarters (GQ) include college dorms, residential treatment centers, nursing homes, group homes, military barracks, and correctional facilities. The 2005 ACS did not include GQ data; they were incorporated into the ACS in 2006. Some GQ populations are demographically, socially, or economically dissimilar from other residents of the same area. Because of these differences, the characteristics of some communities looked considerably different after GQ were added to the ACS. If you need to compare 2005 ACS data to subsequent years, it's a good idea to limit the comparison to the characteristics of households or household populations (i.e. excluding GQ populations).

The characteristics of the GQ population in the ACS may not be comparable with the 2000 Census because: a) there are some Census 2000 GQ types that are out of the scope of the ACS, and b) there are some Census 2000 GQ type categories that are no longer valid. The exclusion of these GQ types from the 2007 ACS may result in a small bias in some ACS estimates to the extent that the excluded population is different from the included population.

ACS Data Products

The Census Bureau provides ACS data in a number of ways:

- **Base Tables** (aka "Detailed Tables"). Base Tables provide the most detailed data on all topics and are the foundation from which other ACS data products are built. They will be familiar to users of the decennial census Summary File tables.
- **Data Profiles.** Data Profiles contain selected data from the Base Tables and provide basic overviews of communities. There are four of them:
 - **DP-1:** General demographic summary (age, sex, race, Hispanic origin, etc.)
 - **DP-2:** Social profile (education, marital status, fertility, etc.)
 - **DP-3:** Economic profile (income, poverty status, employment status, etc.)
 - **DP-4:** Housing profile (Housing values, tenure, units in structure, etc.)
- **Subject Tables.** Subject Tables provide more detail about subject areas than Data Profiles.
- **Selected Population Profiles.** These profiles provide ready-made data tabulations on various population groups.
- **Geographic Ranking and Comparison Tables.** These tables compare key indicators across geographic areas.
- **Public Use Microdata Sample (PUMS).** The Public Use Microdata Sample files (PUMS) are a sample of the actual responses to the American Community Survey and include most population and housing characteristics. These files provide users with the flexibility to prepare customized tabulations and can be used for detailed research and analysis. Users should note: PUMS data are taken from a smaller sample of the population (1 percent) than the standard ACS dataset (2.5 percent). As a result, PUMS has a larger margin of error than the rest of the ACS.

Where to Find ACS Data

ACS Data Profiles for counties and cities in the central Puget Sound region are available on PSRC's website: <http://www.psrc.org/data/census/ACS/ACSintro.htm>.

ACS data for all of the U.S. is available from the Census Bureau's American FactFinder website: <http://factfinder.census.gov/>.

Where to Learn More About the ACS

Census Bureau

- ACS home page <http://www.census.gov/acs/www/>
- Compass for Understanding and Using American Community Survey Data http://www.census.gov/acs/www/UseData/Compass/handbook_def.html
- Guidance on comparing the decennial Census with the ACS <http://www.census.gov/acs/www/UseData/compACS.htm>
- ACS Questionnaires <http://www.census.gov/acs/www/SBasics/SQuest/SQuest1.htm>
- The 2006 ACS Handbook <http://www.census.gov/acs/www/Downloads/Handbook2006.pdf>

Articles

- Population Reference Bureau. "The American Community Survey." *Population Bulletin*. Sep. 2005. <http://www.prb.org/Publications/PopulationBulletins.aspx>.
- MacDonald, Heather. "Warmer (More Current), but Fuzzier (Less Precise) than the Decennial Census." *Journal of the American Planning Association*. Autumn 2006, Vol. 72, No. 4.
- Blodgett, John. "Ten Things to Know about the American Community Survey (2005 edition)." Missouri Census Data Center. http://mcdc2.missouri.edu/pub/data/acs2005/Ten_things_to_know.shtml

Book

- Taeuber, Cynthia M. *American Community Survey Data for Community Planning* Victoria, B.C., Canada: Trafford Publishing. 2006.

Calculator

- ACS Statistical Significance Calculator <http://www.demography.state.mn.us/resource.html?Id=19047>

Classes

- Online course on the ACS offered by Statistics.com (\$449 as of July 2008).