

Using Data from the 2005 American Community Survey

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INTRODUCTION

America is changing and so is the Census. In 1790, the year of the first census, 3.9 million individuals were counted. Over two hundred years later, the number is approaching 300 million. As our Nation expands, so do its needs, specifically the need for more current and up-to-date information. The Census Bureau is using a powerful new tool to adjust to this increased need - the American Community Survey.

The American Community Survey (ACS) is a part of the Decennial Census Program. The decennial census takes place every ten years, the next being conducted in 2010. The 2010 Census will continue to count the population to support the Constitutional mandate to provide population counts needed to apportion the seats in the U. S. House of Representatives. States develop redistricting plans based on this important information. The ACS will not provide these counts. The ACS will provide annually updated data on the characteristics of population and housing. The Text Box, *What is the American Community Survey?* provides more information on the ACS.

This guide includes a broad set of information relating directly to the 2005 ACS. It covers the type of information produced from the ACS, including measures of quality that are critical for users to consider. It explains specifically which geographic areas will receive data products from the 2005 ACS and how users can determine if a specific area is eligible to receive ACS products in 2005. This guide includes details on each of the specific 2005 ACS data products, along with tips on how to access and use these products. A timetable for the 2005 ACS data releases is included. This document includes guidance on the use and interpretation of ACS estimates along with references and contacts for users who need additional help.

What is the American Community Survey?

The American Community Survey (ACS) is a new approach to producing critical information about the characteristics of local communities. It will eliminate the need for a long form in the 2010 Census and is a key part of the Census Bureau's Decennial Census Program. The ACS publishes social, housing, and economic characteristics for demographic groups covering a broad spectrum of geographic areas in the United States and Puerto Rico. The ACS shifted from a demonstration program with a different sample design and sample size to the full sample size and design in 2005. It became the largest household survey in the United States, with an annual sample size of about 3 million addresses. Every year the ACS can support the release of single-year estimates for geographic areas with populations of 65,000 or more. The ACS will accumulate sample over 3-year and 5-year intervals to produce estimates for smaller geographic areas including census tracts and block groups. For more information about the ACS, you can refer to the *ACS Design and Methodology*

When discussing the type of information produced by the ACS, two things should be considered - the specific topics covered in the ACS and the type of statistics that are produced for these topics. Understanding the information contained within the ACS data will go a long way in helping you to use the data to fit your individual needs.

Topics Covered

The topics covered by the ACS focus on demographic, social, economic, and housing characteristics. These topics are virtually the same as those covered by the Census 2000 long form sample data. Details are provided in the Text Box, *What Topics are Included in the ACS?*

What Topics are Included in the ACS?

Demographic Characteristics

Sex, age, relationship, households by type, race, and Hispanic origin

Social Characteristics

School enrollment, educational attainment, marital status, fertility, grandparents caring for children, veteran status, disability status, residence one year ago, place of birth, U.S. citizenship status, year of entry, world region of birth of foreign born, language spoken at home, and ancestry

Economic Characteristics

Employment status, commuting to work, occupation, industry, class of worker, income and benefits, and poverty status

Housing Characteristics

Housing occupancy, units in structure, year structure built, number of rooms, number of bedrooms, housing tenure, year householder moved into unit, vehicles available, house heating fuel, utility costs, occupants per room, housing value, mortgage status and costs,

Statistics Produced

The statistics produced from the ACS are meaningful because they describe the characteristics of population and housing in the United States and Puerto Rico. The Census Bureau uses the data collected by the ACS to create estimates and variances, which are termed statistics, for these characteristics. The ACS releases statistics in several forms - totals, proportions, percentages, means, medians, averages, and ratios.

Totals

Estimated totals include estimates of the total population and its subsets. Examples include the total male population, the total population 3 years and over enrolled in school, the total foreign-born population, the total population below the poverty level, and much more. Figure 1 shows an example of the total population 3 years and over enrolled in school - 597,507 - for Dallas County, Texas, based on the 2005 ACS estimate.

Figure 1. Total Population 3 Years and Over Enrolled in School and the Proportion of that Population Enrolled in Public or Private School for Dallas County, Texas, based on the 2005 ACS Estimate

| Dallas County, Texas | | | | | | |
|--|----------------|-----------------|--------------------------------|---------------|-------------------|---------------|
| S1401. School Enrollment [?] | | | | | | |
| Data Set: 2005 American Community Survey | | | | | | |
| Survey: 2005 American Community Survey | | | | | | |
| NOTE: Data are limited to the household population and exclude the population living in institutions, college dormitories, and other group quarters. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see Survey Methodology . | | | | | | |
| Subject | Total | MOE | Percent of enrolled population | | | |
| | | | In public school | MOE | In private school | MOE |
| Population 3 years and over enrolled in school | 597,507 | +/-8,211 | 85.3% | +/-1.1 | 14.7% | +/-1.1 |
| Nursery school, preschool | 40,184 | +/-3,815 | 56.1% | +/-5.0 | 43.9% | +/-5.0 |
| Kindergarten | 39,368 | +/-3,737 | 84.7% | +/-3.4 | 15.3% | +/-3.4 |
| Elementary: grade 1 to grade 4 | 141,208 | +/-5,443 | 91.3% | +/-1.4 | 8.7% | +/-1.4 |
| Elementary: grade 5 to grade 8 | 136,911 | +/-6,314 | 89.9% | +/-1.7 | 10.1% | +/-1.7 |
| High school: grade 9 to grade 12 | 130,577 | +/-4,184 | 89.9% | +/-1.5 | 10.1% | +/-1.5 |
| College, undergraduate | 87,933 | +/-5,308 | 81.5% | +/-2.8 | 18.5% | +/-2.8 |
| Graduate, professional school | 21,326 | +/-2,257 | 59.6% | +/-6.2 | 40.4% | +/-6.2 |

Similarly, estimates are produced of total households and subsets such as total family households and total family households with female householders with no husband present. Estimates are made of total housing units along with estimates of occupied housing units, owner-occupied, and renter-occupied housing units.

Although totals may have meaning alone, the major reason they exist in the ACS is to define a universe that will be described in detail. For example, the U.S. population is not the important information coming from ACS data – it’s information on the percent of the U.S. population that is age 65 or older, foreign-born, or 16 years and over and in the labor force and employed. This also applies to housing data where the ACS releases an estimate of total housing units, but the important ACS information is the characteristics of these housing units - the percent of vacant housing units, mobile homes, or homes built in 1939 or earlier.

The Census Bureau produces official estimates of total population and housing for the nation and for a broad set of additional geographic areas. The Census Bureau uses the most current population and housing estimates from the Population Estimates Program as controls to reduce variance and coverage bias in the ACS estimates. That is why many of the totals produced from the ACS are identical to the population estimates and why some totals do not have associated margins of error. Whenever you see an ACS total with a series of asterisks in the margin of error column, you can conclude that this is a controlled estimate. Data users should always refer to the Population Estimates Program for estimates of the total population as well as estimates of the population by age, sex, race, and Hispanic origin when those estimates are available. For some geographic areas and some population totals, the Census Bureau does not release population

estimates (e.g., Congressional Districts, workers age 16 years and over). In these instances, the totals provided in the ACS may be the only available estimates.

This is not to say that totals are not meaningful on their own. Local governments use population totals for forecasting needs for services such as police and fire protection. Local communities do need to know the total population so they can plan and prepare for responding to natural disasters or other emergencies.

For instance, one of the challenges in a bio-terrorist attack is to determine the location and size of the population at risk of exposure to biochemical weapons. Using ACS data, hospitals and other public health agencies can use ACS population totals to estimate the size of the population in the affected area. Agencies can use this information to predict how many patients the hospital can expect so the hospital is able to plan for the magnitude of the response. It is especially critical in situations like this that nation has up-to-date population data.

Estimated Proportions

Estimated proportions include specific characteristics of the estimated totals displayed as percents. For example, the ACS estimates the proportion of the total population under 5 years, the proportion of the population 16 years and over in the labor force, and the proportion of households with food stamp benefits. Many ACS estimates are proportions.

Figure 1 displays an example of a proportion produced from the ACS. In this example, the top row of the table displays the total population 3 years and over enrolled in school. To the right, the table displays the proportion, or percentage, of the population enrolled in public or private school. The 2005 ACS estimated that 85.3 percent of the population 3 years and over was enrolled in public school in Dallas County, Texas.

Medians, Means, and Averages

Medians describe the middle of a distribution of a certain characteristic for a given universe. Examples of medians include median age of the U.S. population, median family income, median value of owner-occupied housing units, and median selected monthly owner costs for units with a mortgage. Means describe the average of a certain characteristic for a given universe. Examples of means include mean travel time to work, mean earnings for full-time, year-round workers, and mean retirement income. Some items use the term, “average” to describe the mean, such as the average household size. Figure 2 shows the median age at first marriage for the household population, 15 to 54 years of age, for the state of Mississippi, based on the 2005 ACS estimate.

Figure 2. Median Age at First Marriage for the Household Population, 15 to 54 years of Age, for the State of Mississippi, based on the 2005 ACS Estimate

B12007. MEDIAN AGE AT FIRST MARRIAGE - Universe: POPULATION 15 TO 54 YEARS
 Data Set: [2005 American Community Survey](#)
 Survey: 2005 American Community Survey

NOTE: Data are limited to the household population and exclude the population living in institutions, college dormitories, information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

| Mississippi | | |
|---------------------------------|----------|-----------------|
| | Estimate | Margin of Error |
| Median age at first marriage -- | | |
| Male | 26.0 | +/-0.3 |
| Female | 25.5 | +/-0.5 |

Source: U.S. Census Bureau, 2005 American Community Survey

It is important to recognize the universe for any mean, median, or average. In this example the universe (shown in the table title) is the population 15 to 54 years old in Mississippi. The table note points out that the data are limited to the household population. This is important to keep in mind if you are making any comparisons of the ACS data with data from other sources.

Ratios

Ratios describe the relationship between two quantities, such as the number of occupants per room. Figure 3 shows an example of several ratios produced from the ACS. Figure 3 displays the sex ratio, which is the distribution for the ratio, “males per 100 females” for Peoria city, Illinois. You see that ratio is 91.8.

Figure 3. Sex Ratio (males per 100 females) for Peoria city, Illinois, based on the 2005 ACS Estimate

Peoria city, Illinois
S0101. Age and Sex ?
 Data Set: 2005 American Community Survey
 Survey: 2005 American Community Survey

| Subject | Total | MOE |
|-----------------------------------|-------|--------|
| SUMMARY INDICATORS | | |
| Median age (years) | 34.4 | +/-1.4 |
| Sex ratio (males per 100 females) | 91.8 | +/-4.5 |
| Age dependency ratio | 67.8 | +/-3.9 |
| Old-age dependency ratio | 22.9 | +/-2.3 |
| Child dependency ratio | 44.1 | +/-2.8 |

WHAT MEASURES OF QUALITY ARE PRODUCED AND HOW SHOULD THEY BE USED?

The 2005 ACS collected data from a sample of housing units and persons living in housing units in the United States and Puerto Rico. The data are used to produce estimates of the actual figures that would have been obtained by interviewing the entire housing unit population. As noted earlier, these estimates consist of totals, proportions, percentages, means, medians, and ratios.

ACS users come from many different disciplines. A user can be an individual who works in the federal government responsible for formulating policy, or an individual who works in a local government evaluating the effects of a social or economic intervention. Even a student in a statistical course wanting to use ACS data for developing a case study or a statistical application can be a user.

The purpose of this section is to help users to correctly interpret and use the ACS data. It is important to understand that the ACS estimates are subject to sampling error and that sampling error is a source of variability that exists in the 2005 ACS estimates. It is not necessary for users to become experts in statistical methods to understand the ACS data. To ensure that data users report data accurately, they should become familiar with the concepts of both sampling and nonsampling error.

This section will discuss sampling error measures, such as the standard error, and margin of error. In addition, this section discusses the steps required to perform a statistical test of significance. The section concludes with the statistics used to inform users about the quality of the data, including potential nonsampling errors. The Text Box, *Where can I find more technical information about the design and quality of the ACS?* includes additional references and links about sampling error and statistical testing.

Sampling Error

Sampling error results when a survey produces estimates of the whole population using only a portion of the population. Since the ACS is a survey based only on a sample of the population, the estimates will contain sampling error. This means that the estimates derived from the sample will differ from the values that would have been obtained if the whole population were included in the survey. The estimates would be different if the survey had selected another sample.

The sampling error is reduced as the sample size increases, so that, if a census or a 100 percent sample is performed there will be no sampling error. There is still error in census data. It is from different sources referred to as non-sampling error. The decennial long form estimates had a smaller amount of sampling error than the 2005 ACS because the census long form sample was much larger than the 2005 ACS sample. Although the Census 2000 long form sample data included sampling error, the data tables did not display it and many users were unaware of this important information. Two related measures of sampling error are the standard error and the margin of error.

Standard Error

The standard error measures the variability of an estimate due to sampling. The standard error is commonly used to measure how precisely one can estimate a population value from a given sample. The Census Bureau produces standard error estimates to accompany survey statistics to help users understand the sampling variability associated with each estimate.

The standard error of an estimate depends on the sample size. In general, the larger the sample size, the smaller the standard error of the estimates produced from the sample. Table 1 shows an example of estimates with their standard errors.

Table 1. Example of Standard Errors - Educational Attainment of Population 18-24 Years

| Subject | Estimate (Percent of total) | Standard Error |
|---|--|-----------------------|
| High school graduate (includes equivalency) | 33.8 | 0.2 |
| Some college or associate's degree | 37.0 | 0.3 |

Margin of Error

The margin of error describes the precision of the estimate at a given level of confidence. The confidence level measures the likelihood that the true value is within a certain distance of the results of a sample estimate. The Census Bureau statistical standard for published data is to use the 90 percent confidence level. However, practitioners can use other confidence levels, such as 95 or 99 percent. The confidence level chosen is usually a matter of preference, balancing risk for the specific application.

The margin of error is an alternative measure of sampling error. Since the estimate is based on a sample and not the entire population, it is necessary to know how precisely the results of the sample reflect the characteristics of the entire population. The Census Bureau chose to use the margin of error to define the range of values that may contain the true population value. The margin of error is important because relying on statistical inference can save you from drawing incorrect conclusions from data based on a sample. It can help prevent you from interpreting small or nonexistent differences as important. The margin of error will help in drawing conclusions.

The formula for the margin of error is

$$\text{Margin of Error} = 1.65 \times \text{Standard Error.}$$

The Census Bureau uses a constant value of 1.65 for the 90 percent confidence level. If you prefer to use a 95 or 99 level of confidence, you would multiply by a larger value.

Table 2 shows an example of an estimate with its margin of error. By adding and subtracting the margin of error from the point estimate, you produce the range around it called the confidence interval. With 90 percent confidence, the interval 6.9 – 7.1 contains the true percentage of the population under 5 years of age.

Table 2. Example of Margins of Error – Age

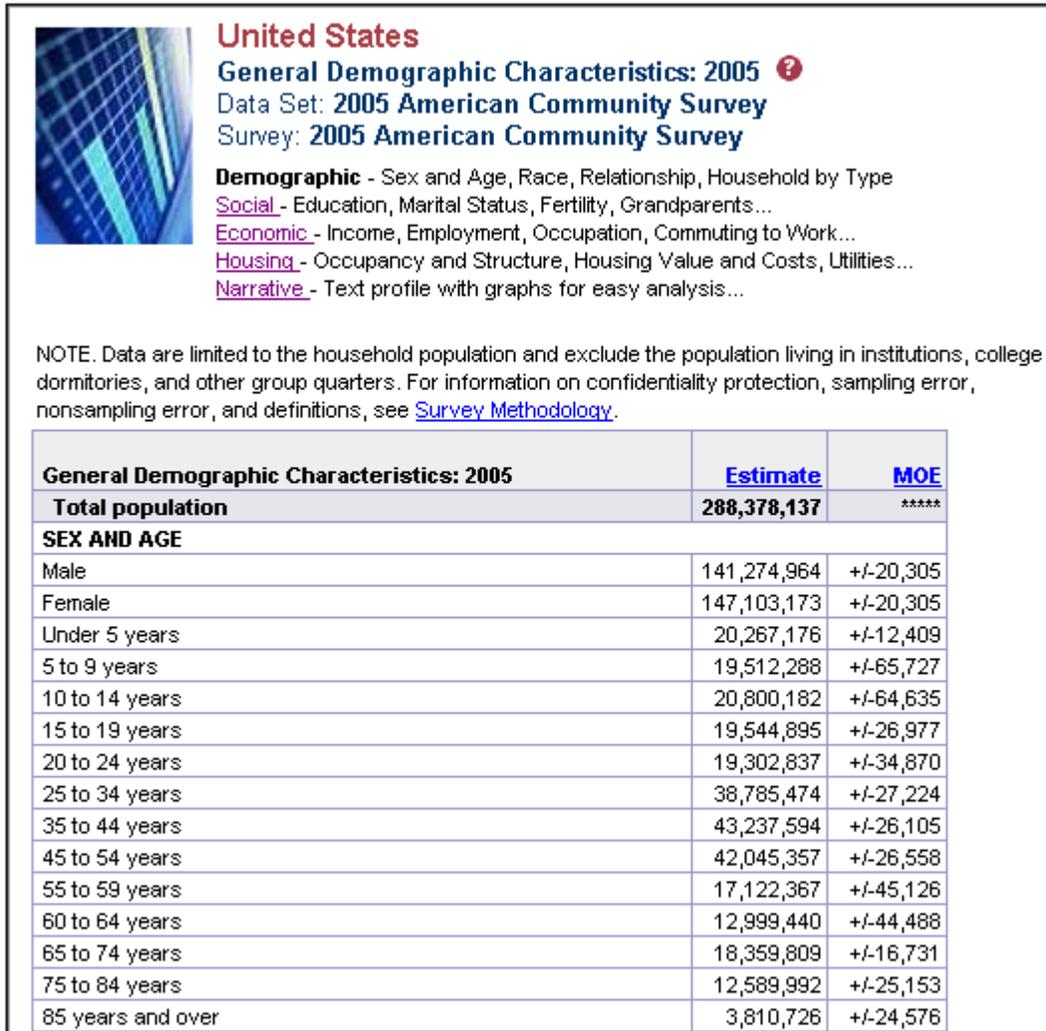
| Subject | Estimate (Percent of total) | Margin of Error (MOE) |
|----------------|--|----------------------------------|
| Under 5 Years | 7.0 | +/- 0.1 |

In general, larger samples are more likely to yield results closer to the target population quantity and therefore have smaller margins of error than smaller samples. Estimates for small population groups for which we would expect smaller sample sizes would have relatively large margins of error. Estimates for large population groups for which we would expect larger sample sizes would have relatively small margins of error. For example, estimates of the population 65 years and older who attend school will have larger margins of error than estimates of the population 18 to 29 years old who attend school.

Most ACS products display a margin of error. Some ACS tables indicate the margin of error by the term “MOE.” Tables will show estimates “plus or minus” the margin of error. For example, 50 percent of the respondents in a survey say that they are employed in the labor force and the 90 percent confidence level is cited as plus or minus 2 percent. This information means that if we conducted the survey 100 times, the percentage of respondents who say that they are in the labor force would range between 48 and 52 percent most (90 percent) of the time. Figures 1 through 4 all include examples of the margins of error found in 2005 ACS data products.

In Figure 4 the total population row does not have a margin of error, since it is fixed to the population estimate that was used as a control during weighting. In this case, there will be a series of asterisks instead of the MOE. The Census Bureau’s Population Estimates Program produces this estimate of the total U.S population. This program produces official Census Bureau estimates of the population for selected geographic areas. These estimates are used in federal funding allocations, in setting the controls of national surveys, and in monitoring recent demographic changes. Since the total population in the table is a controlled estimate, it is not subject to sampling error and there will not be a margin of error associated with the estimate.

Figure 4. Example of ACS presentation of Margins of Error



Statistical Testing

Users should conduct statistical testing to determine if two estimates are statistically different from one another. Two estimates are "significantly different" at the 90 percent confidence level if the difference between them is large enough to infer that there was a less than 10 percent chance that the difference was purely random. Users may want to compare estimates across years or geographies. It is important to note that small differences, which may be statistically significant, may not have any practical significance. A conservative test is to determine if the difference is less than the sum of the two margins of error. However, this may lead you to assume that the difference is not significant when this may in fact not be the case.

There is a more efficient method to determine if two estimates are significantly different from each other. The first step is to state that two estimates are statistically different if the difference between the two estimates is statistically different from zero. The second step is to calculate the standard error of the difference. The third step is to calculate the margin of error of the

difference. Finally, the original difference between the estimates is compared to the margin of error of that difference. If the difference is greater than the margin of error, then you conclude that the two estimates are significantly different. If the difference is less than the margin of error, you conclude that the two estimates are not significantly different.

The following example will show how to conduct a statistical test. Suppose you want to know if the proportion of those enrolled in high school in one geographic area is significantly different from the proportion in another geographic area. Table 3 shows the estimates and margins of error for the two geographic areas. The difference between the two estimates seems large but the margins of error are also quite sizeable relative to the difference.

Table 3. Example of Statistical Testing - Proportion of those enrolled in high school

| Geographic Area | Estimate (Percent of total) | Margin of Error |
|------------------------|--|------------------------|
| Area 1 | 20.0 | +/-5.0 |
| Area 2 | 12.3 | +/-4.7 |

To calculate the standard error of the difference you must calculate the standard error for each estimate. For margins of error calculated at the 90 percent confidence level, we can define the standard error for each estimate as the margin of error divided by 1.65.

$$SE(estimate) = \frac{MOE(estimate)}{1.65}$$

$$SE(Area1) = \frac{5.0}{1.65} = 3.03$$

$$SE(Area2) = \frac{4.7}{1.65} = 2.85$$

The standard error of the difference is the square root of the sum of the squares of the two standard errors (assuming the estimates are uncorrelated). The standard error of the difference for this example is equal to 4.16 as shown below.

$$SE(Diff) = \sqrt{SE(Area1)^2 + SE(Area2)^2}$$

$$SE(Diff) = \sqrt{3.03^2 + 2.85^2} = 4.16$$

To calculate the margin of error of the difference, simply multiply the standard error of the difference by 1.65. This is shown below.

$$MOE(Diff) = 1.65 \times SE(Diff)$$

$$MOE(Diff) = 1.65 \times 4.16 = 6.86\%$$

Finally, you should compare the difference of the estimates to the margin of error of the difference.

$$Diff = 20.0 - 12.3 = 7.7\%$$

$$MOE(Diff) = 6.86\%$$

The difference between the estimates is greater than the margin of error of the difference. Therefore, one can conclude that the two estimates are significantly different with 90 percent confidence.

Quality Measures

In addition to the demographic, social, economic, and housing characteristics produced from the ACS each year, the Census Bureau produces four statistics - sample size, coverage rates, response rates, and item allocation rates to help inform users of the quality of the ACS estimates. The Census Bureau produces these quality measures annually at national and state levels to accompany each ACS data release. Beginning with the 2005 ACS, we will release quality measures for Puerto Rico. Some of the quality measures describe nonsampling error. Examples of nonsampling error include errors due to respondent misinterpretation of a question, interviewer errors in asking the questions incorrectly or not asking them at all, and the inability to obtain information about all cases in the sample. The Text Box, *Where can I find more technical information about the design and quality of the ACS?* includes additional references and links to the Quality Measures website are provided in

Sample Size

The sample size measures on the ACS Quality Measures website display the number of initial sampled addresses and the number of final survey interviews by state. The number of initial addresses is the sum of the 12 monthly address samples selected from the Master Address File for a given year. The number of final interviews is the total number of interviews successfully completed by mail, telephone, or personal visit between January 1 and December 31 of a year. The difference between these two counts is accounted for by several factors including the identification of initial sample addresses that were determined to be ineligible for the survey (for example, they were found to be nonexistent or commercial units rather than housing units), sample addresses not selected in the subsample for personal visit follow up, and survey nonresponse.

You can find additional detail about the sample sizes used to produce 2005 ACS estimates on the ACS homepage. If you click on the *Survey Basics* tab, you will see a list of topics for which greater information is available. One option, *Sample Size*, will link you to a list of the 2005 ACS sample sizes for all published counties and county equivalents.

Coverage Error

There are two kinds of coverage error, under-coverage and over-coverage. Under-coverage exists when housing units or people do not have a chance of being selected in the sample. This includes people who were not selected to be part of the survey, and those who refuse to answer the questions in the survey. Over-coverage exists when housing units or people have more than one chance of selection in the sample, or are included in the sample when they should not have been. It is important to measure coverage error, because if the characteristics of under-covered or over-covered housing units or individuals differ from those that are eligible to be selected, the ACS may not provide an accurate picture of the population prior to the coverage adjustment.

The Census Bureau adjusts the final ACS estimates for coverage error by controlling specific survey estimates to independent population and housing controls. The Census Bureau's Population Estimates Program produces these independent estimates.

The ACS Quality Measures website displays coverage rates as a measure of survey coverage. We produce these measures at the national level by sex and race/ethnicity and at the state level by sex. We calculate coverage rates as the ratio of the ACS estimate of the population for an area or group to the Population Estimates Program's independent estimate of the population for that area or group, times 100.

Nonresponse Error – Unit Level

The Census Bureau calculates survey response rates to measure unit nonresponse in the ACS. Unit nonresponse is the failure to obtain the minimum required information from a housing unit in the sample for it to be counted as an interview. It occurs when respondents are unable or unwilling to participate; interviewers are unable to locate addresses or respondents; or when other barriers exist to completing the interview.

It is important to measure unit nonresponse because it has a direct effect on the quality of the data. If the rate of unit nonresponse is high, it increases the chance that the final survey estimates may contain bias. This will happen if the characteristics of nonresponding units differ from the characteristics of responding units.

The ACS calculates a weighted survey response rate as the ratio of the estimate of housing units interviewed after data collection is complete to the estimate of all units that the survey should have interviewed. For the ACS this means all interviews after the completion of mail, telephone and personal visit follow-up. Interviews include complete and partial interviews with enough information to be processed. Unit nonresponse is the complement of the response rate. You arrive at it by subtracting the response rate from 100. We weight the survey response rate because not all housing units have the same probability of selection. These weights account for the probability of sampling and subsampling.

Nonresponse Error – Item Level

Item nonresponse occurs when a respondent fails to provide an answer to a required item, or when the answer given is inconsistent with other information. When data are missing, and the correct answers cannot be determined from other answers on the form, the Census Bureau uses imputation methods to determine acceptable answers. Imputation methods may use information

from the person or from other household members. Imputation may also use answers from similar people or housing units that correctly provided this information. Imputation helps to reduce bias but does not eliminate it. The imputation rates for the ACS are lower than for most other Census Bureau surveys, so the opportunity for bias to occur in the estimates is also low.

It is important to measure item nonresponse so data users can judge the completeness of the data on which the survey estimates are based. Final estimates can be adversely impacted when item nonresponse is high, since bias can be introduced if the actual characteristics of the people who do not respond differ from those reported by respondents. Users should consider levels of item and unit nonresponse when judging any sample survey estimates.

The ACS Quality Measures website displays item allocation rates at state and national levels. We define item allocation rates as the ratio of the total number of responses allocated for an item to the total number of required responses to that item.

Where can I find more technical information about the design and quality of the ACS?

You can find more detailed information about the sample design, accuracy of the data, and estimation methodology at this link to the Accuracy of Data Statement
<http://www.census.gov/acs/www/UseData/Accuracy/Accuracy1.htm>.

You can find more detailed information about the ACS Quality Measures at this link to the Quality Measures Website -
<http://www.census.gov/acs/www/UseData/sse/index.htm>.

WHAT GEOGRAPHIC AREAS DO THE 2005 ACS DATA PRODUCTS SUPPORT?

The Census Bureau strives to produce information for the geographic areas that are useful to a wide spectrum of data users. For example, the Census Bureau presents data summaries for the nation's many legal and administrative entities such as states (including the District of Columbia and Puerto Rico), American Indian and Alaska Native (AIAN) areas, counties and *municipios*, minor civil divisions (MCDs), incorporated places, and Congressional Districts.

Data products are also available for other geographic entities. In cooperation with state and local agencies, the Census Bureau identifies and delineates geographic entities referred to as, "statistical areas." These include census regions and divisions, urbanized areas (UAs) and *zonas urbanas*, census designated places (CDPs), Public Use Microdata Sample Areas (PUMAs), census tracts and block groups, and more. The data user community, composed of individuals, businesses, and agencies at all levels of government, each with somewhat different needs, can select the geographic entity or set of entities that most closely represent their geographic area of interest.

The Census Bureau will only release 2005 ACS data for legal, administrative, or statistical areas with estimated populations of 65,000 or more. The estimated populations used are the most recent estimates from the Census Bureau's Population Estimates Program. The thresholds for the 2005 ACS data products are based on the estimated total populations as of July 1, 2005. The next few sections will detail the types and numbers of geographic areas covered by the 2005 ACS data products and will explain how to determine the geographic areas, by state, that are available.

Geographic Areas Published in 2005

Table 4 provides a list of the various geographic areas in the United States for which the Census Bureau will release 2005 ACS estimates. The table also includes counts of the number of published entities by type of geographic area. Each of these areas has a total population of 65,000 or more.

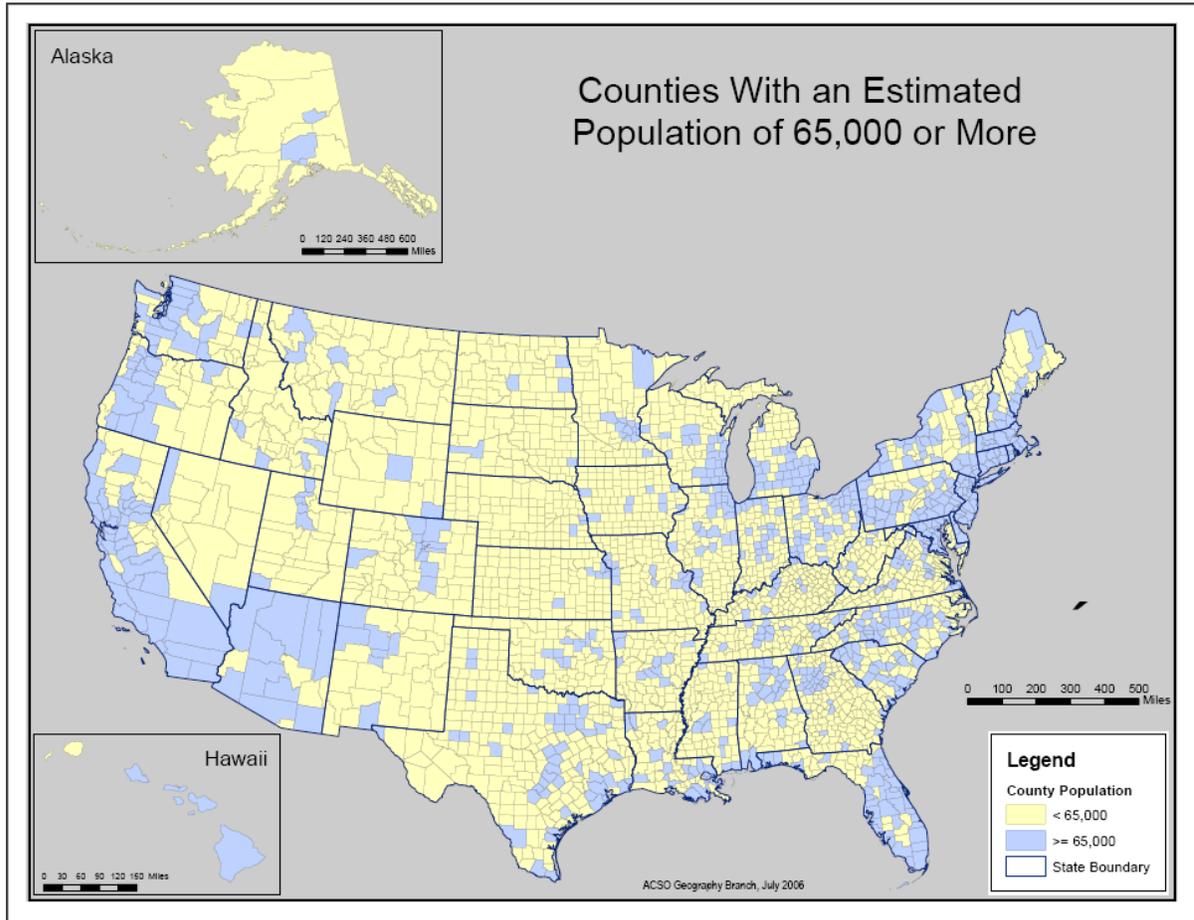
Figure 5 identifies the U.S. counties¹ and Puerto Rico *municipios* receiving 2005 ACS products. As this map indicates, ACS estimates at the county level based on a single year of sample are clustered in the more densely populated parts of the country. This leaves many rural states with few or no counties with ACS estimates for 2005. How can we provide more data for these areas? In the next few sections, we describe some of the additional geographic areas with a population of 65,000 or more that will receive 2005 ACS data products.

¹ County equivalents include Alaska Burroughs and Louisiana Parishes.

Table 4. Geographic Summary Levels receiving 2005 ACS data

| Geographic Type | Number of geographic areas with a population of 65,000 or more | | Total Geographic Count |
|--|--|---------------------------|------------------------|
| | Count | Percent of All Such Areas | |
| Nation | 1 | 100.0 | 1 |
| Region | 4 | 100.0 | 4 |
| Division | 9 | 100.0 | 9 |
| State | 51 | 100.0 | 51 |
| County | 775 | 24.7 | 3,141 |
| County Subdivision | 186 | 0.9 | 21,200 |
| Place | 492 | 2.0 | 25,112 |
| Congressional District – 109th | 436 | 100.0 | 436 |
| School District, Elementary | 65 | 2.5 | 2,648 |
| School District, Secondary | 89 | 13.5 | 657 |
| School District, Unified | 724 | 6.5 | 11,089 |
| Public Use Microdata Area | 2,071 | 100.0 | 2,071 |
| American Indian Area/Alaska Native Area/Native Hawaiian Area | 14 | 2.3 | 603 |
| Combined Statistical Area | 120 | 100.0 | 120 |
| Metropolitan Statistical Area/Micropolitan Statistical Area | 492 | 52.6 | 936 |
| Principal City | 330 | 1.2 | 26,550 |
| Metropolitan Division | 29 | 3.0 | 954 |
| Combined New England City and Town Area | 9 | 90.0 | 10 |
| New England City and Town Area | 25 | 58.1 | 43 |
| Principal City | 19 | 0.1 | 25,163 |
| NECTA Division | 9 | 17.6 | 51 |
| Urban Area | 363 | 10.1 | 3,607 |
| Urban | 65 | 100.0 | 65 |
| Rural | 64 | 98.5 | 65 |
| In metropolitan or micropolitan statistical area | 65 | 100.0 | 65 |
| Not in metropolitan or micropolitan statistical area | 57 | 87.7 | 65 |
| In metropolitan statistical area | 65 | 100.0 | 65 |
| In metropolitan statistical area—in principal city | 64 | 98.5 | 65 |
| In metropolitan statistical area—not in principal city | 63 | 96.9 | 65 |
| In micropolitan statistical area | 60 | 92.3 | 65 |
| In micropolitan statistical area—in principal city | 55 | 84.6 | 65 |
| In micropolitan statistical area—not in principal city | 59 | 90.8 | 65 |
| TOTAL | 6,930 | -- | 125,106 |

Figure 5. Counties with an Estimated Population of 65,000 or More

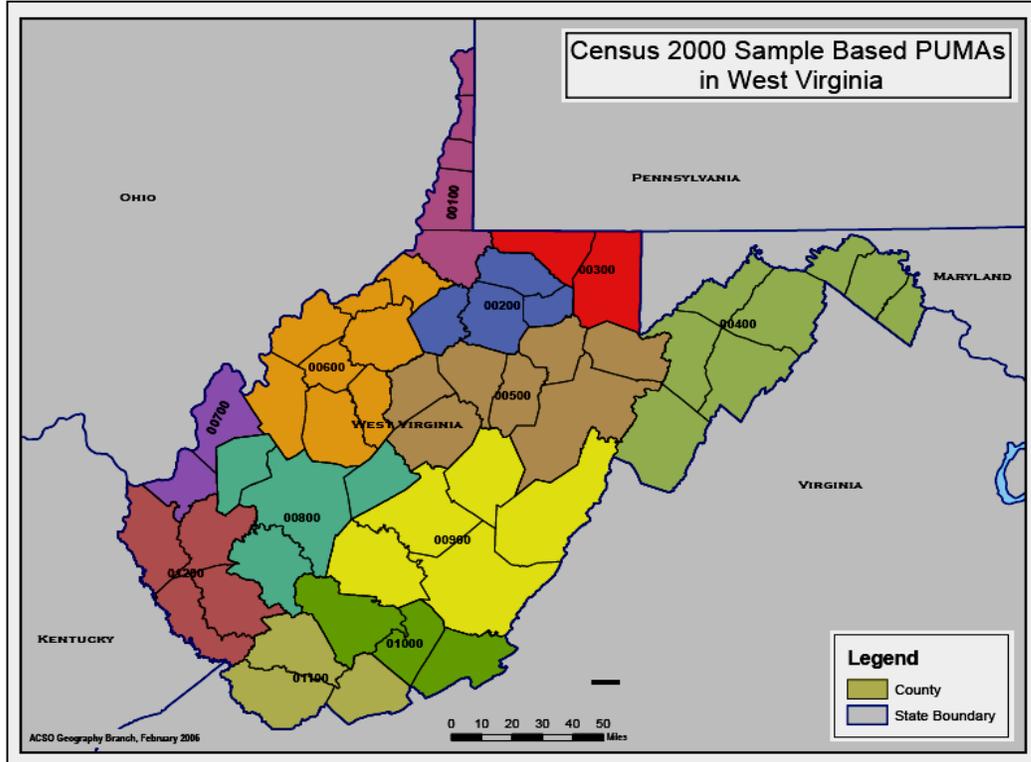


Public Use Micro Data Sample Areas (PUMAs)

Beginning in August 2006, the primary way to access data for rural areas in the ACS will be through Public Use Micro Data Sample Areas (PUMAs), which are special, non-overlapping areas that partition a state. Each PUMA contains a population of about 100,000. State governments drew the PUMA boundaries for the Census 2000 sample PUMS files. We will produce 2005 ACS data products, which contain selected demographic, social, economic, and housing characteristics, for all 2071 PUMAs. Because the states defined these areas for the Census Bureau, they should be meaningful areas to many data users.

PUMAs allow us to publish data for additional sub-state areas. Take West Virginia, for example, which has 55 counties. Only seven of these 55 counties are large enough to receive estimates from the 2005 ACS. However, because West Virginia is partitioned into 12 PUMAs, each of these areas will receive 2005 ACS estimates. Figure 6 illustrates this point.

Figure 6. West Virginia PUMAs receiving 2005 ACS estimates



Metropolitan and Micropolitan Statistical Areas

Another geographic breakdown, new for the 2005 ACS, is metropolitan and micropolitan statistical areas. For the first time, the Census Bureau will release data products for these areas. The general concept of a metropolitan or micropolitan statistical area is that of a core area containing a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core.

Metropolitan and micropolitan statistical areas comprise one or more entire counties. A metropolitan statistical area contains at least one population nucleus with a population of 50,000 or more. A micropolitan statistical area contains at least one population nucleus with 10,000 to 49,999 people. Like all other 2005 ACS products, these areas must meet the population threshold of 65,000.

Components of the State Summary Levels

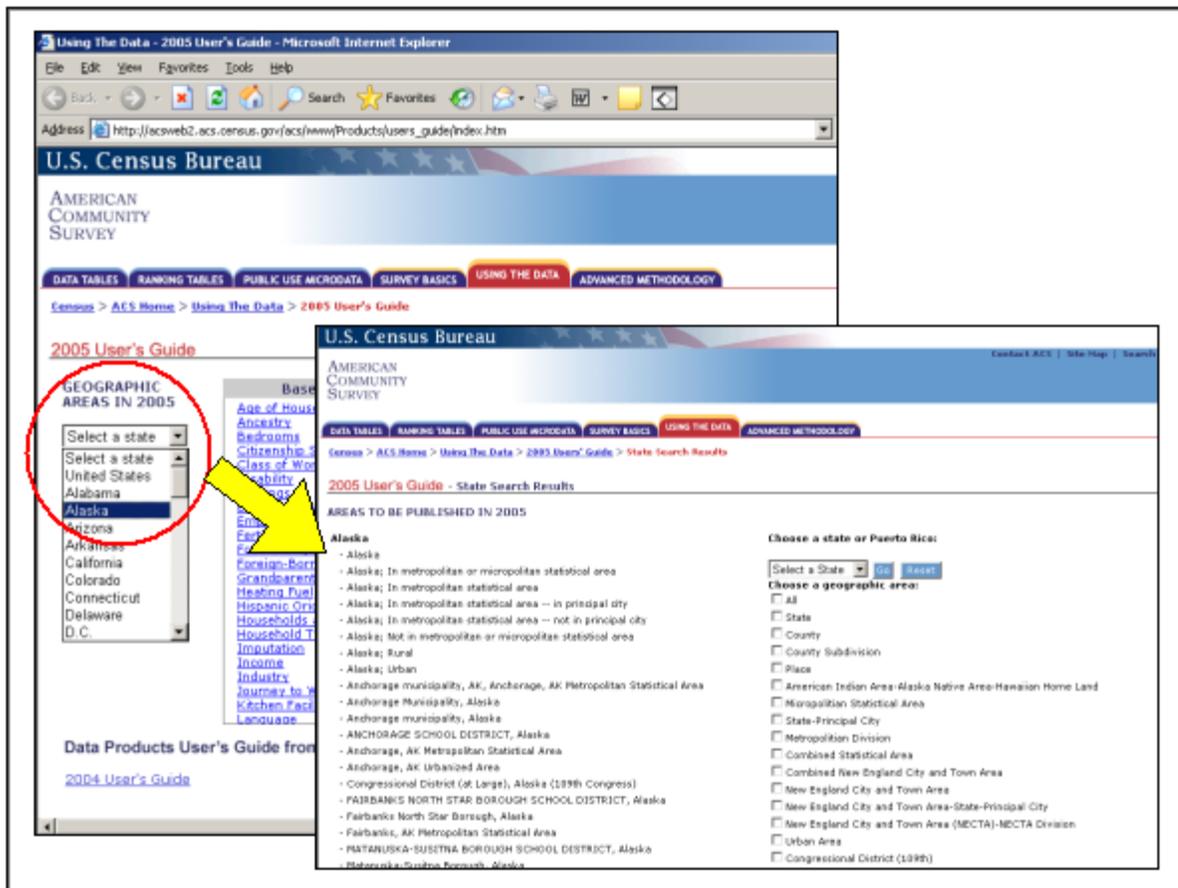
Another way that we can provide data for geographies that include areas that have not met the minimum population threshold is through components of the state summary levels. Some examples of components are urban/rural, inside/outside an incorporated place, inside/outside a metropolitan statistical area, and inside/outside a micropolitan statistical area. For example, the urban/rural component will provide data on the urban versus rural area for all 50 states (excluding DC) and Puerto Rico.

How Can Users Determine the Specific Geographic Areas that are Available?

Many users want to know what is available for their area. The ACS homepage has tools to help you determine the geographic areas supported by the 2005 ACS data products. You can check to see what is available for a given state, or check to see if a specific area is included.

Begin by going to the main ACS website, www.census.gov/acs/www. The top right corner of this page provides a link to the “Guide to the New ACS Data Products.” Clicking “[The Guide](#)” directs you to the “2005 User’s Guide” where you are able to view a list of geographic areas published within each state by selecting a state from a dropdown menu. As seen in Figure 8, we have selected Alaska. On the next page, we see a list of geographic areas that will be published for the state of Alaska based on the 2005 ACS. Also, notice that on the right side of the screen, you can filter on areas below the state level.

Figure 8. Determining Which Geographic Areas are included in the 2005 ACS Data Products



THE 2005 ACS DATA PRODUCTS

The 2005 ACS release includes ten different data products. Similar to some of the products produced for the 2000 decennial census, the ACS products show the characteristics of the country's population and housing.

This section will describe the various 2005 ACS data products. The descriptions highlight information on each product so that you can determine which product fits your particular need. Additionally, we provide tips for accessing and using the data. These products are available through the *American FactFinder*, accessible on the main Census Bureau website. The Text Box, *What are the Various ACS Data Products?*, provides a basic description of each of these products.

Base Tables

Base Tables show basic distributions of population and housing characteristics. These tables provide the most detailed data and are the basis for other ACS products. Base Tables include tables iterated for race and Hispanic origin universes and tables that show imputation (allocation) rates for selected variables. We will release approximately 1,200 Base Tables for the 2005 ACS. Figure 9 is an example of a Base Table.

The ACS table title describes the variables in the table, any combination of variables for which estimates are presented, and the universe. In this example the variable of interest is sex by marital status, and the universe is the population 15 years and over. It is important to refer to the universe to understand what the statistics are describing. In this example, the note above the table clarifies that the universe is restricted to the household population.

The number indicated before the title is the table number and is a reference unique to each table. The data set indicates the survey name and year the data were collected. For the 2005 ACS data, the data set will always read *2005 American Community Survey*. We display the level of geography on the first row of the table. In this example, statistics for Boston city, MA; Boston-Cambridge-Quincy, and the MA-NH Metro Area are displayed. The table has an additional column titled "Margin of Error." As we discussed earlier, a margin of error is the difference between an estimate and its upper or lower confidence bounds. We base all published margins of error for the ACS on a 90 percent confidence level.

Base table topics are varied, encompassing demographic, social, economic, and housing characteristics. For example, you can retrieve tables for such characteristics as sex by age by race and Hispanic origin; means of transportation to work by travel time to work; median number of rooms in housing units; school enrollment by level of school; and poverty status in the past 12 months by sex and age.

Figure 9. Example of a 2005 ACS Base Table as displayed on the *American FactFinder*

Table Number: B12001

Table Title: SEX BY MARITAL STATUS FOR THE POPULATION 15 YEARS AND OVER - Universe: POPULATION 15 YEARS AND OVER

Universe: POPULATION 15 YEARS AND OVER

Data Set: 2005 American Community Survey

NOTE: Data are limited to the household population and exclude the population living in institutions, college dormitories, and other group quarters. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

| | Boston city, MA; Boston-Cambridge-Quincy, MA-HH Metro Area | | |
|-------------------------|--|-----------------|----------|
| | Estimate | Margin of Error | |
| Total: | 430,225 | | +/-7,420 |
| Male: | 203,216 | | +/-4,336 |
| Never married | 103,529 | | +/-4,593 |
| Now married: | 82,689 | | +/-4,727 |
| Married, spouse present | 69,141 | | +/-4,544 |
| Married, spouse absent: | 13,548 | | +/-2,751 |
| Separated | 5,323 | | +/-1,573 |
| Other | 8,225 | | +/-2,469 |
| Widowed | 4,022 | | +/-1,113 |
| Divorced | 12,976 | | +/-2,222 |
| Female: | 227,009 | | +/-3,853 |
| Never married | 107,052 | | +/-4,770 |
| Now married: | 81,194 | | +/-5,099 |
| Married, spouse present | 65,809 | | +/-4,524 |
| Married, spouse absent: | 15,385 | | +/-2,551 |
| Separated | 8,962 | | +/-1,905 |
| Other | 6,423 | | +/-1,733 |
| Widowed | 20,459 | | +/-2,030 |
| Divorced | 18,304 | | +/-2,159 |

Source: U.S. Census Bureau, 2005 American Community Survey

What are the Various ACS Data Products?

Base Tables provide the most detailed data on all topics and geographic areas and are the foundation on which we build other ACS data products.

Data Profiles summarize key demographic, social, economic, and housing characteristics.

Narrative Profiles provide information in a user-friendly text and graphics form that puts into words the main topics of the Data Profiles.

Subject Tables provide more detail than the Data Profiles and present summarized topic-specific tables.

Selected Population Profiles provide population profiles for various race, Hispanic origin, and ancestry groups, and for other groups such as children under 18 and people over 60.

Geographic Ranking Tables compare various characteristics for the U.S., all states, the District of Columbia, and Puerto Rico.

Thematic Maps present information in the Geographic Ranking Tables on a map to show geographic relationships for these population characteristics.

Geographic Comparison Tables complement Geographic Ranking Tables by showing key population characteristics for geographic areas beyond the state and county level.

Public Use Microdata Samples provide data files that contain records of a sample of all housing units who responded to the survey.

Analytic Reports contain detailed analyses of ACS data.

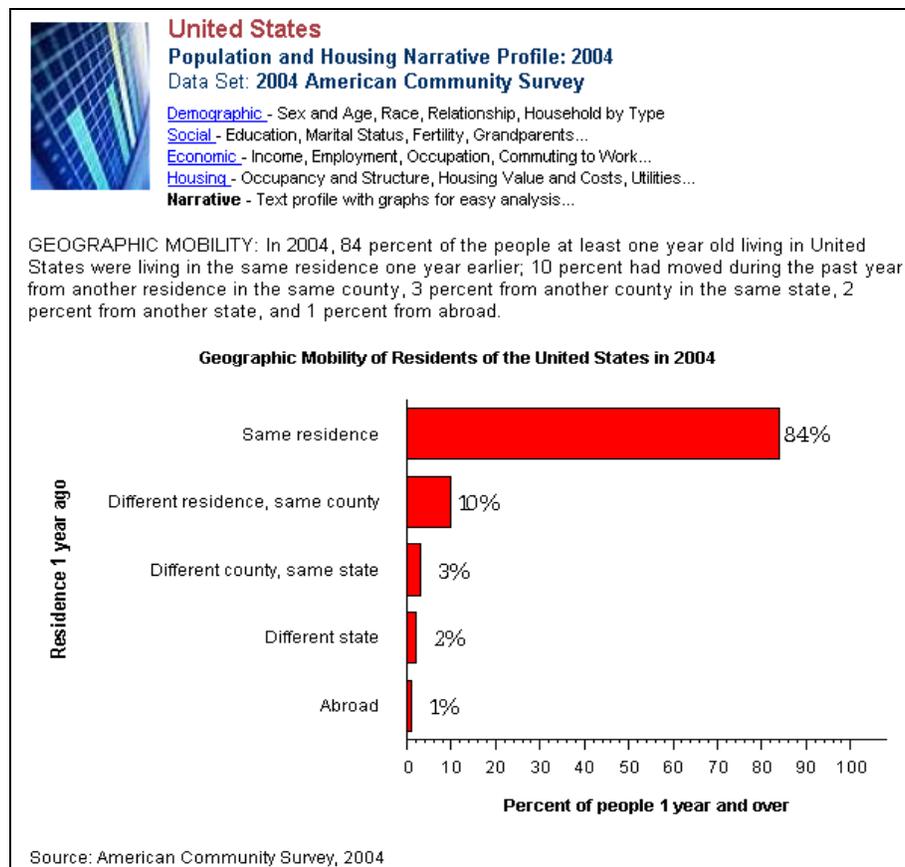
Data Profiles

Data Profiles are tables that provide estimates of selected summary characteristics for each geographic area. They rely on the data tabulated in the Base Tables. We produce Data Profiles for four distinct sets of characteristics - demographic, social, economic, and housing.

Narrative Profiles

Narrative Profiles include Data Profile information displayed in a narrative format that summarizes data on a wide array of subjects. These narratives are easy-to-read, computer-produced profiles that put into words the main topics from the Data Profiles for the general-purpose user. As illustrated in Figure 10, Narrative Profiles are plain-language descriptions with simple graphs to complement the standard Data Profiles.

Figure 10. Example of a 2004 ACS Narrative Profile as displayed on the *American FactFinder*



Subject Tables

Subject Tables show more detail than is available in the Data Profiles. Generally, they present percent distributions for a few key universes, estimates of each universe total and the associated margins of error. Subject Tables display measures such as medians and ratios where appropriate. There are approximately 50 summarized topic-specific Subject Tables, which include such topics as housing financial characteristics, relationships by households and families, and means of transportation to work by selected characteristics. You will find a list of 2005 ACS Subject Tables

on the ACS homepage under the *Using the Data* tab. The 2005 User's guide link will provide additional links to an inventory of the 2005 Subject Tables.

Selected Population Profiles

Selected Population Profiles provide the user with ready-made data tabulations on a specific population or housing group of interest. There are two types of Selected Population Profiles. The first type provides characteristics of race, ethnic and ancestry groups such as Native Hawaiians and Other Pacific Islanders. The second type provides characteristics for groupings that are based on age or other characteristics such as children under 18, and the population age 60 years and older. A Selected Population Profile can be created when the population group of interest is 65,000 or more and the geographic area of interest has a population of 1 million or greater. In 2005, we expect to produce most Selected Population Profiles at the national and state levels. The Text Box, *Which Selected Population Profiles are being produced in 2005?* lists some of the Selected Population Profiles that we plan to publish in 2005.

Which Selected Population Profiles Are Being Produced in 2005?

- Various Race, Ethnic, and Ancestry Groups
- The Foreign-Born Population by Period of Entry into the United States and by Region of Birth
- The Native and Foreign-Born Populations
- The Population 60 Years and Over
- The Population 65 Years and Over
- Children
- Teenagers
- Grandchildren
- Workers 16 Years and Over
- People at Specified Levels of Poverty in the Past 12 Months

Geographic Ranking Tables and Charts

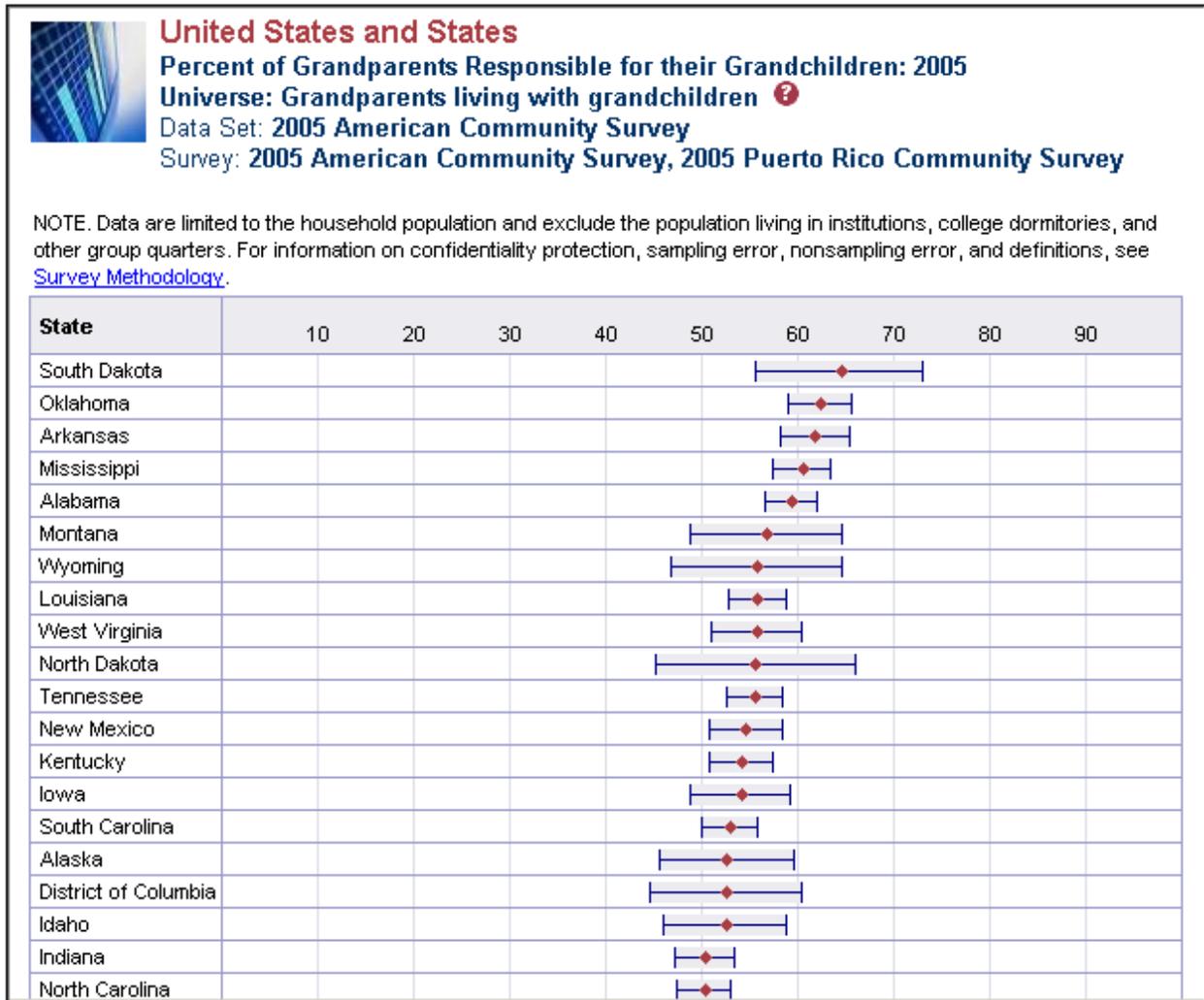
Geographic Ranking Tables compare population characteristics across the Nation and all states, including the District of Columbia and Puerto Rico. The Geographic Ranking Tables are currently available for over 80 characteristics at the state level and include geographies with populations greater than 250,000. The table describes a single characteristic, and the geographic areas are "ranked" from highest to lowest. Like the other tables, Geographic Ranking Tables show the percentage estimate and the associated margins of error.

Data users can easily view the statistical significance of comparisons among jurisdictions by simply clicking the "with statistical significance" link to the left of the table.

You can also view Geographic Ranking Tables as charts, as seen in Figure 11. Characteristics in the ranking charts are displayed from highest to lowest. The dot represents the estimate and the brackets represent the 90 percent confidence intervals around each estimate. Like the margin of

error shown in the Base Tables, the “wings” or “arms” here represent how close or far apart the bounds are around the estimate: the shorter the wing span, the lower the variance on the estimate. You can view and download the ranking tables and charts in portable data format (PDF).

Figure 11. Example of a 2005 ACS Geographic Ranking Chart as displayed on the *American FactFinder*



Thematic Maps

We base the Thematic Maps on the state-level Geographic Ranking Tables. They have the added advantage of visually displaying on a map the geographic variation and patterns of a key summary or derived measure. The shading intensity on a Thematic Map is directly related to the value associated with the derived measure listed in the map’s legend under data classes. Lighter shading is used for the lower derived measure values. As the shading becomes darker and more intense, the derived measure’s values increase.

Public Use Microdata Sample (PUMS)

Public Use Microdata Sample (PUMS) files are data files that contain records of a sample of all housing units that the survey interviewed. PUMS files are available as comma-delimited files and as SAS datasets and are available for downloading from the main AFF website. Simply select a data type, data format, and state, and you will have access to public-use 2005 ACS data.

Analytic Reports

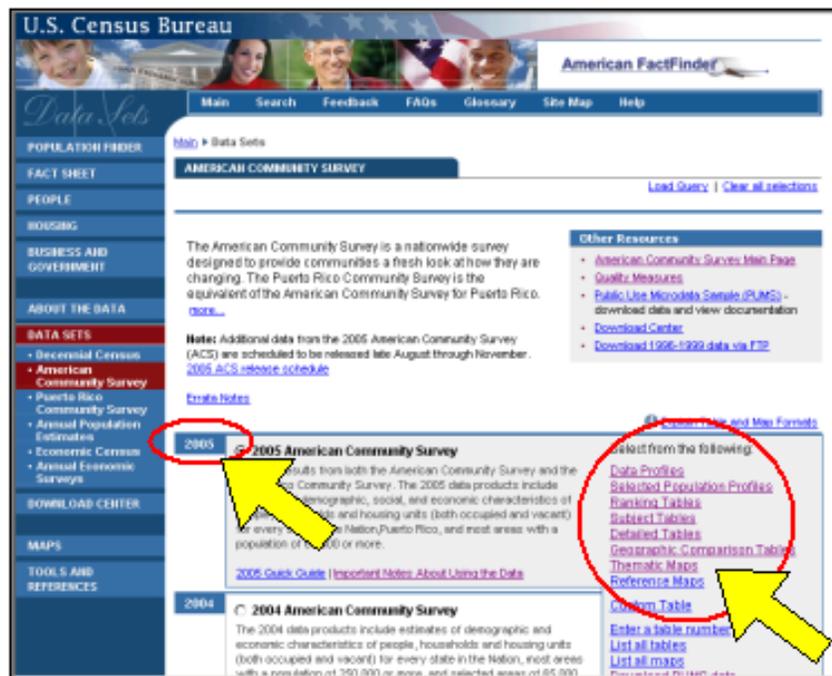
Analytic Reports contain detailed analyses of ACS data. The Census Bureau issued the most recent Analytic Report, “Income, Earnings, and Poverty From the 2004 American Community Survey,” in August 2005. This report is available through the following Census Bureau site: <http://www.census.gov/prod/2005pubs/acs-01.pdf>.

ACCESSING THE 2005 ACS DATA PRODUCTS

To access the 2005 ACS data products, begin by visiting the main Census Bureau website, www.census.gov. On the main page, you will see a link to the *American FactFinder*, which is the vehicle for accessing Census Bureau data products. On the AFF page, find the data title that says “American Community Survey,” and click on “get data.”

The following page, seen in Figure 13, will allow you to select the ACS data year of interest. To access the 2005 products, make sure you select, “2005 American Community Survey.” From there you will notice a list of products on the right: Data Profiles, Selected Population Profiles, Geographic Ranking Tables, etc., which are all available for the 2005 products. Select the data product you are interested in retrieving.

Figure 13. Selecting 2005 ACS Data Products from *American FactFinder*

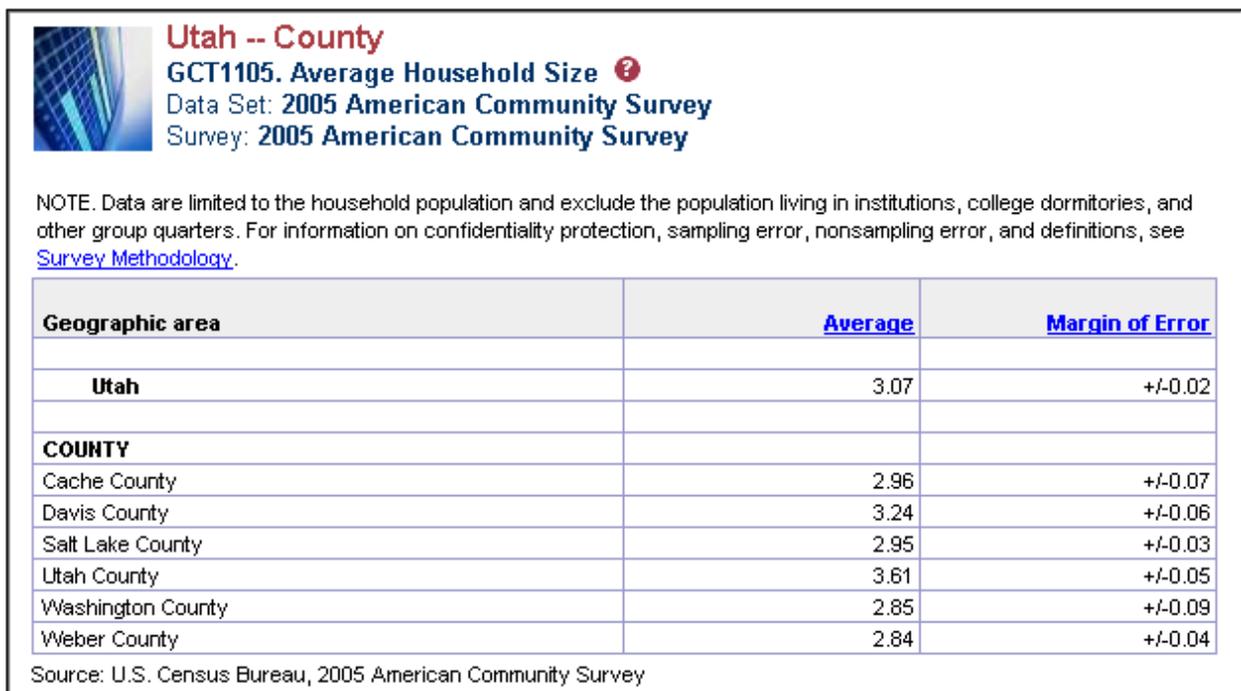


For instance, if you are interested in comparing the average household size by county for the state of Utah you will want to create a Geographic Comparison Table. To access a Geographic Comparison Table you first need to select the geography of interest. For this example, you would select “State” under geographic type. The next box contains various geographic breakdowns for creating a Geographic Comparison Table. You can compare geographies other than counties, but for this example, you would select “State – County.” Then click “Next.”

By clicking “Next,” you arrive at the “Table” screen. Here you select your subject of interest. Because you are interested in comparing the average household size by county for the state of Utah, you highlight “Average Household Size.” To retrieve the data table, you click “Show Result.”

Figure 14 is the resulting Geographic Comparison Table. The table compares the average household size for each of the six counties, with a total population of 65,000 or more, in Utah. These estimates are based on the 2005 ACS.

Figure 14. Example of a Geographic Comparison Table Comparing the Average Household Size by County for the state of Utah, based on the 2005 ACS Estimate



Utah -- County
GCT1105. Average Household Size ⓘ
 Data Set: **2005 American Community Survey**
 Survey: **2005 American Community Survey**

NOTE: Data are limited to the household population and exclude the population living in institutions, college dormitories, and other group quarters. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

| Geographic area | Average | Margin of Error |
|------------------------|----------------|------------------------|
| Utah | 3.07 | +/-0.02 |
| COUNTY | | |
| Cache County | 2.96 | +/-0.07 |
| Davis County | 3.24 | +/-0.06 |
| Salt Lake County | 2.95 | +/-0.03 |
| Utah County | 3.61 | +/-0.05 |
| Washington County | 2.85 | +/-0.09 |
| Weber County | 2.84 | +/-0.04 |

Source: U.S. Census Bureau, 2005 American Community Survey

While other tabulations may be more complex, you would follow these basic steps to access most 2005 ACS data products. For other useful tips on using the 2005 data products, visit the Guide to the New ACS Data Products and the AFF Tutorial.

The Guide to the New ACS Data Products is accessible from the ACS homepage. The box in the top right-hand corner of the page will direct you to http://www.census.gov/acs/www/Products/users_guide/index.htm.

The Guide to the New ACS Data Products provides information on key points to note about the 2005 release, such as the geographic areas published, the topics covered, and new 2005 data products. This guide is a great resource for learning more about how to use the 2005 data products.

You can find additional user assistance at the AFF web site, which offers a set of tutorials that focus on topics such as using AFF search features, working with AFF tables, creating custom tables, and creating and using maps. Look for these tutorials under the “Help” tab on the main AFF web page.

RELEASE SCHEDULE FOR THE 2005 ACS DATA PRODUCTS

The release of 2005 ACS data products, for both the United States and Puerto Rico, begins in August 2006. The Census Bureau will release 2005 ACS data in four thematic waves. Table 5 provides a release schedule defining the basic theme of each wave. We will release the data for Puerto Rico concurrent with each of these releases. Each release includes various data products such as Base Tables, Geographic Ranking Tables, and Thematic Maps. The only specific data products that will not be released until November 2006 are the race iterated Selected Population Profiles.

Table 5. 2005 ACS Data Product Release Schedule

| Release Date | Type of Data Product |
|---------------------|--|
| August 15 | Demographic & Social Characteristics |
| August 29 | Economic Characteristics |
| October 3 | Housing Characteristics |
| November 14 | Selected Population Profiles for Race, Ethnic, & Ancestry Groups |

HOW SHOULD USERS INTERPRET ACS RESULTS?

Data users have asked if they need to interpret ACS data in a way that differs from how they interpreted Census 2000 long form sample data. While some differences are important to note, in many ways and in many areas the 2005 ACS estimates will be quite similar to Census long form sample estimates in their interpretation. You should consider three factors when interpreting any survey or census results – the target population, the time period that the estimates describe, and the reference periods covered by the specific questions.

ACS Target Population

Interview and residence rules define the universe – or target population – for a survey. These rules identify the collection units and the people eligible for inclusion in the survey; this is the universe that the survey is designed to describe. The sampling frame reflects this choice of universe, as do the instructions on the forms and in the procedures used by survey interviewers and survey respondents. The 2005 ACS is restricted to the population living in housing units.

Population living in group quarters - places such as dormitories, prisons, and nursing homes are NOT included in the 2005 ACS. The ACS universe contrasts with the resident population, which includes persons living in group quarters, and users need to be aware of this universe difference. Like the decennial census, the ACS interviews the population residing in the United States and Puerto Rico without regard to the person's legal status or citizenship.

The ACS includes everyone who is living at the ACS sample address unless this address is determined NOT to qualify as his or her current residence. We describe the ACS residence rule concept in detail in the Text Box, *Who is considered an ACS Resident?*

Who is considered an ACS Resident?

The goal of the ACS is to be able to describe the characteristics of all types of communities every year. Given this goal, it is critical to decide whom the survey should treat as a resident of the community. We designed the ACS to reflect the population that uses community resources.

The ACS residence rules include as residents those people who are currently living or staying at the ACS sample address and whose expected length of stay exceeds two months. The ACS also includes people who are staying for less time but who have no other place to live or stay. Finally, the ACS includes people who usually live at the sample address but are away for a short period of time (two months or less) when the household is contacted.

To avoid including people who are too transient, the ACS does not consider people eligible to be interviewed if they live or stay at the sample address for two months or less or are currently away and plan to be away for more than two months.

Period estimates

The ACS produces period estimates. Period estimates are designed to describe the characteristics of an area over a set time frame. The 2005 ACS estimates describe the characteristics of the housing and population of an area for the time period that spans January through December of 2005. In order to estimate the characteristics that best represent 2005, the ACS collects survey information continuously nearly every day of the year and aggregates the results over the entire time period, instead of choosing one particular point-in-time to collect the data, which may or may not represent the entire year very well. You can think of most 2005 ACS estimates as representing the average characteristics of an area over calendar year 2005.

Period estimates contrast with point-in-time estimates that describe the characteristics of an area on a specific date. The 2000 Decennial Census was designed to measure the count of the population and housing as of April 1, 2000.

We plan to publish the characteristics of many different types of areas in 2005. Some areas have consistent population characteristics throughout the entire calendar year. People may move in

and out but the overall population level and the characteristics of the area stay about the same throughout the year. Other areas may experience seasonal changes in population. These areas may include large numbers of “snowbirds” or groups of people who stay only for a season. These areas might look very different depending on the time of year that a survey was taken. A third set of areas are those that experience a dramatic change in the population during the course of the year. We designed the ACS to estimate the characteristics of all these types of areas, recognizing the potential for change in population size and character over time. The period estimates produced from the ACS describe the average population and its characteristics for the full year.

Stable Areas

The 2005 ACS data for areas with stable populations will be very similar to data from a decennial census. Neither the ACS residence rules nor the use of period estimates in the ACS should influence the interpretation of these data. We do not expect the population estimates used as survey controls for these areas to have an appreciable impact on the final estimates.

Seasonal Areas

In areas with large seasonal differences in population, the ACS estimates will reflect the characteristics of the resident population who live there for a portion of the year as well as the resident population who live there year round. The ACS estimates will reflect both groups in proportion to their length of stay in the area. The population estimates that control the final ACS estimates are likely to influence the basic demographic characteristics of age, sex, race, and Hispanic origin estimated by the survey itself. This will be meaningful only when the seasonal population is large relative to the year round population and their basic demographic characteristics differ from the year round population. Because we will only release 2005 ACS products for areas with populations of 65,000 or more, we do not expect seasonality to be a major issue. None of the geographic areas covered by the 2005 ACS has substantial proportions of seasonal populations.

Areas with Large Changes

Areas along the Gulf Coast experienced dramatic changes in their populations in the fall of 2005. These areas had large populations for the first eight months of 2005 but precipitous drops in population and changes in demographics in the last four months of the year. The data produced by the ACS for these areas will reflect the characteristics of the average population over this 12-month period through the interviews conducted. The final stage of weighting in the ACS will alter the basic survey demographics measured by the ACS to agree with the pre-storm independent population estimates of those basic characteristics. This will make these Gulf Coast area estimates much harder to interpret. They will not provide an actual picture of the post-storm populations. They will reflect, however, the more detailed characteristics measured by ACS, such as education, labor force participation, and income. The Census Bureau released a Special Product for the Gulf Coast Area that you can find at www.census.gov/acs/www/Products/Profiles/gulf_coast.

Reference Periods

Data users should look at each ACS question and understand the reference period that is implied by the data. This will allow for a more complete understanding of how to interpret the results.

Under the *Survey Basics* tab on the ACS homepage, you will find links to the 2005 ACS questionnaire. Reviewing this questionnaire will allow you to understand better the specific reference periods. Keep in mind that all ACS estimates are yearly averages that refer to some period of time relative to calendar year 2005.

Most ACS questions do not stipulate a reference period. Whenever this is the case, the reference period is the interview date. This is true for questions such as tenure, citizenship, marital status, relationship, veterans' status, and more. Because we conduct ACS interviews throughout the year, the estimates for these questions are reflective of the full year. Users should interpret these estimates (for example the proportion of renters) as describing the average proportion of renters in 2004. It is a yearly average measure of tenure.

Other questions specify a period of time (such as "last week" or "in the last 3 months") relative to the date of interview. This is true for the place of work, employment status, cost of electricity, school enrollment questions as well as other questions. You should still interpret these estimates as yearly averages but averages covering a slightly different period of time than the calendar year. For example, school enrollment asks if the person attended school or college in the last 3 months. The overall reference period for the 2005 ACS estimates is therefore the entire calendar year 2005 plus the last few months of 2004.

Comparisons with Census 2000

A primary limitation of comparing 2005 ACS data with Census 2000 data is the differences in the target populations. The Census 2000 data include the population living in both housing units and group quarters. The 2005 ACS only includes the housing unit population. In areas where you feel that the contribution from group quarters is limited, it is reasonable to make comparisons with Census 2000. For characteristics that Census 2000 tabulated exclusively for the household population, such comparisons are also reasonable. The ACS homepage includes a link to a set of subject definitions. The subject definitions for the 2004 ACS include advice about making comparisons with Census 2000 for each ACS topic. That advice is applicable again for comparing 2005 ACS data with Census 2000.

Comparisons with 2004 ACS data

The 2005 ACS data include many more geographic areas than were published from the 2004 ACS. Obviously, no comparisons are possible for these new areas. Areas with populations of 250,000 and greater, including places (cities, towns, and census designated places), counties, and metropolitan statistical areas, that were released in 2004 can be compared with 2005 ACS data. The greater sample sizes in the 2005 ACS will allow users to detect many more statistically significant differences than was possible with the 2004 ACS sample size. It is important that users not interpret this increase in the number of statistically significant differences as an increase in the number of real or substantive changes occurring between 2004 and 2005 compared to previous pairs of sequential years. The survey's increased precision will allow the survey to detect changes that might have been occurring previously that with the smaller sample sizes in earlier years could not be recognized as statistically significant.

We advise users to be cautious about concluding that all significant differences represent meaningful differences. We recommend using multiple years of data to understand if trends are emerging.

ADDITIONAL RESOURCES

While we hope that this user guide has answered many of your questions about the 2005 ACS data and how it should be used, we realize that many users will need additional resources in order to best use and interpret the 2005 ACS data.

The Census Bureau has developed several additional tools that you can find on the ACS web site. The *ACS Design and Methodology* report describes the basic design of the ACS and details the full set of methods and procedures used to collect, process, and produce 2005 ACS data. The appendices contain replications of all of the materials used in data collection, including the questionnaire. You can find this report under the *Survey Basics* tab on the ACS web site.

We designed the *ACS Data User Training Guide* for novice ACS data users. It contains information on how to access and use ACS data products and a discussion of future ACS data products. The guide includes exercises and examples that could be very useful for workshops or training sessions.

We discussed the *ACS Guide to New Data Products* earlier. It provides a wealth of information about the 2005 data products. You can access this information from the ACS main page.

The Partnership and Data Services Program in the Census Bureau's regional offices can provide assistance in accessing and using 2005 ACS data. You can reach your local partnership and data services specialists at the following toll-free numbers.

| | |
|--------------|----------------|
| Atlanta | 1-800-424-6974 |
| Boston | 1-800-562-5721 |
| Charlotte | 1-800-331-7360 |
| Chicago | 1-800-865-6384 |
| Dallas | 1-800-835-9752 |
| Denver | 1-800-852-6159 |
| Detroit | 1-800-564-3978 |
| Kansas City | 1-800-728-4748 |
| Los Angeles | 1-888-806-6389 |
| New York | 1-800-991-2520 |
| Philadelphia | 1-866-238-1374 |
| Seattle | 1-800-233-3308 |