

2006 Data Users Handbook

The American Community Survey

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 more than 300 million. As our Nation expands, so do its needs, especially 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 (ACS).

The American Community Survey 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 handbook includes a broad set of information relating directly to the 2006 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 2006 ACS and how users can determine if a specific area is eligible to receive ACS products in 2007. Details on each of the specific 2006 ACS data products, along with tips on how to access and use these products, and a timetable for the 2006 ACS data releases are included as well. And, this handbook 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* report at www.census.gov/acs/www/Downloads/tp67.pdf

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

What Topics are Included in the ACS?

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 the foreign born, language spoken at home, relationship, households by type, 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, and gross rent

Demographic Characteristics

Sex, age, race, and Hispanic origin


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, which are termed statistics, for these characteristics. The ACS releases statistics in several forms - totals, proportions, percentages, means, medians, averages, and ratios. In addition, the Census Bureau provides measures of sampling error associated with all statistics.

Totals

Estimated totals include estimates of the total population and its subsets. Examples include 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*, on the following page, shows an example of the total population 3 years and over enrolled in school - 612,863 - for Dallas County, Texas, based on the 2006 ACS.

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 2006 ACS

Dallas County, Texas						
S1401. School Enrollment 						
Data Set: 2006 American Community Survey						
Survey: 2006 American Community Survey						
NOTE. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see Survey Methodology .						
Subject	Total	Margin of Error	Percent of enrolled population			
			In public school	Margin of Error	In private school	Margin of Error
Population 3 years and over enrolled in school	612,863	+/-6,530	85.0%	+/-0.8	15.0%	+/-0.8
Nursery school, preschool	37,865	+/-3,032	88.9%	+/-4.5	41.1%	+/-4.5
Kindergarten	39,726	+/-2,948	87.0%	+/-2.7	13.0%	+/-2.7
Elementary: grade 1 to grade 4	152,883	+/-4,974	90.5%	+/-1.1	9.5%	+/-1.1
Elementary: grade 5 to grade 8	132,057	+/-4,590	89.5%	+/-1.6	10.5%	+/-1.6
High school: grade 9 to grade 12	137,412	+/-3,542	91.9%	+/-1.3	8.1%	+/-1.3
College, undergraduate	92,274	+/-5,246	75.9%	+/-2.7	24.1%	+/-2.7
Graduate, professional school	20,646	+/-2,345	55.3%	+/-6.4	44.7%	+/-6.4

Similarly, the ACS produces estimates 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 have meaning alone, the major reason they exist in the ACS is to define the universe that will be described in detail. For example, the U.S. population is not the important information coming from ACS data – it is information on the percent of the U.S. population that is 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.

Through a different program called the Population Estimates Program, the Census Bureau produces official estimates of total population and housing for the nation, states, counties, and for a broad set of additional geographic areas. The ACS 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 therefore, do not have associated margins of error. Whenever you see an ACS total with a series of asterisks in the margin of error column, this indicates that it 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 total population by age, sex, race, and Hispanic origin when available. When those estimates are available, you will see links to the population estimates from the ACS data products (see Figure 4). For other geographic areas and 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 the nation has up-to-date population data based on the current estimates.

Estimated Proportions

Estimated proportions include specific characteristics of the estimated totals displayed as percents. For example, the ACS estimates 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, on the previous page, 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 2006 ACS estimated that 85.0 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 the 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, for the state of Mississippi, based on the 2006 ACS.

Figure 2. Median Age at First Marriage for the Household Population, 15 to 54 Years, for the State of Mississippi, Based on the 2006 ACS

[B12007. MEDIAN AGE AT FIRST MARRIAGE - Universe: POPULATION 15 TO 54 YEARS](#)
 Data Set: [2006 American Community Survey](#)
 Survey: 2006 American Community Survey

NOTE. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

	Mississippi	
	Estimate	Margin of Error
Median age at first marriage --		
Male	27.6	+/-0.6
Female	25.4	+/-0.3

Source: U.S. Census Bureau, 2006 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 in Mississippi. Unlike in previous ACS releases, the 2006 data display estimates for the entire resident population of the United States, including both the household population and the group quarters population. This is important to keep in mind if you are making any comparisons of the ACS data with data from past years.

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 household size ratio, which is the average number of persons in a household, owners in a household, and renters in a household for Peoria City, Illinois. You see that the ratio is 2.47 for owner-occupied households.

Figure 3. Household Size Ratio for Peoria City, Illinois, Based on the 2006 ACS

[B25010. AVERAGE HOUSEHOLD SIZE OF OCCUPIED HOUSING UNITS BY TENURE - Universe: OCCUPIED HOUSING UNITS](#)
 Data Set: [2006 American Community Survey](#)
 Survey: 2006 American Community Survey

NOTE. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

	Peoria city, Illinois	
	Estimate	Margin of Error
Average household size --		
Total:	2.31	+/-0.08
Owner occupied	2.47	+/-0.10
Renter occupied	2.06	+/-0.17

Source: U.S. Census Bureau, 2006 American Community Survey

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

The 2006 ACS collected data from a sample of housing units and group quarters and persons living in these types of residences 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 resident 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. A student in a statistical course wanting to use ACS data for developing a case study or a statistical application can also 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 2006 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 occurs when a survey produces estimates of the whole population using only a portion of the population instead of gathering information from every member of that 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 entire population were included in the survey. The estimates would also be different if the survey had selected a different sample from the same population.

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, but it is referred to as nonsampling error as the error is not related to sampling. All of the decennial long form estimates had a smaller amount of sampling error than the 2006 ACS because the census long form sample was much larger than the 2006 ACS sample. The Census 2000 long form sample data included sampling error, but the data tables did not display it so 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's 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

$$\text{Margin of Error} = 1.645^1 \times \text{Standard Error.}$$

The Census Bureau uses a constant value of 1.645 for the 90 percent confidence level. If you prefer to use a 95 or 99 percent level of confidence, you would multiply the standard error by 1.96 or 2.58 respectively.

¹ For ACS data from years 2005 and earlier, use a constant value of 1.65 to calculate the 90 percent confidence level.

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.

Table 2. Example of Margin of Error – Age

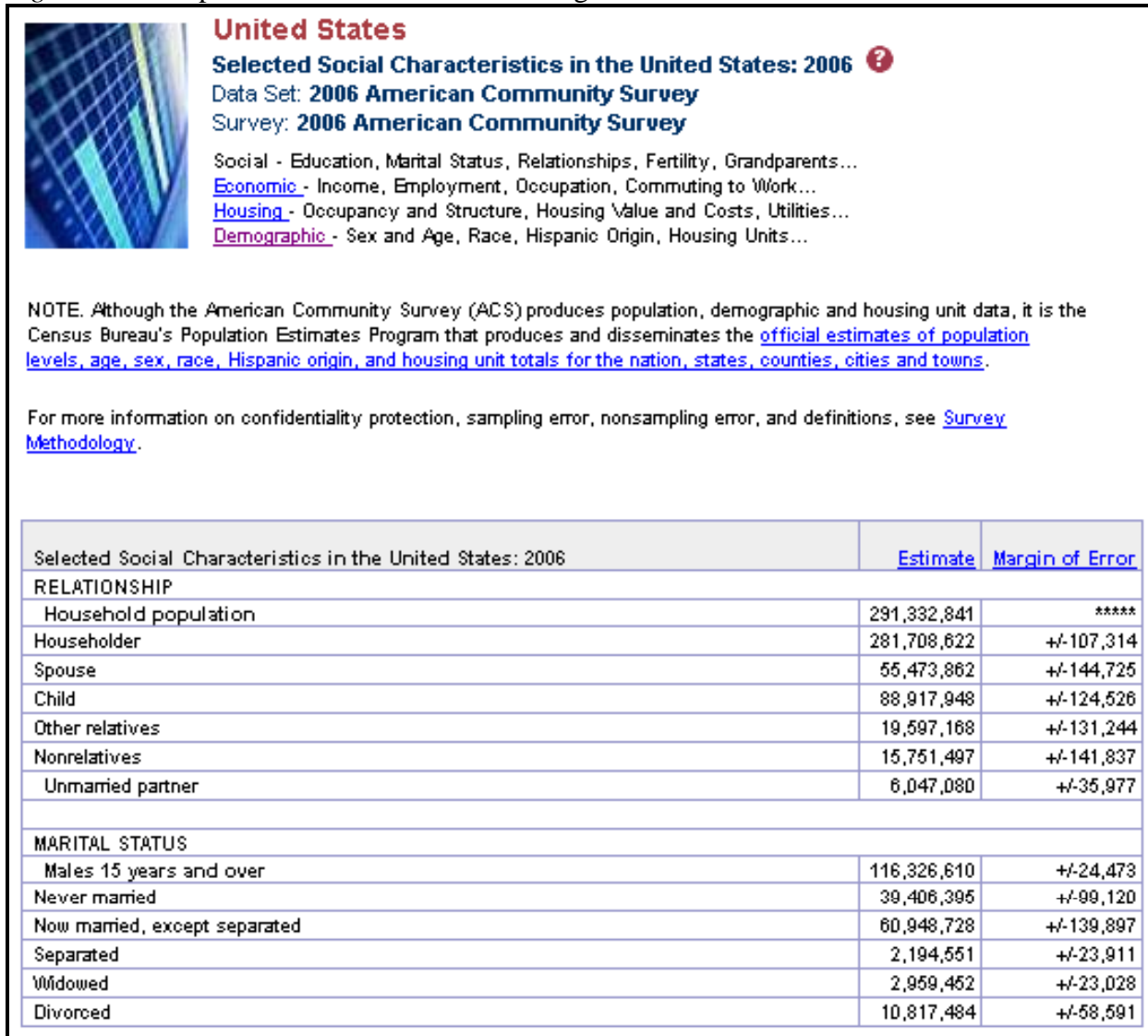
Subject	Estimate (Percent of total)	Margin of Error (MOE)
Under 5 Years	7.0	+/- 0.1

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. We interpret the confidence interval as follows; if we were to conduct the survey 100 times, then about 90 of the resulting confidence intervals would contain the true percentage of respondents who say they are in the labor force. *Figures 1- 4* all include examples of the margins of error found in 2006 ACS data products.

In *Figure 4* the household population estimate does not have a margin of error, because it is controlled to the official population estimate. In this case, there will be a series of asterisks shown for the Margin of Error. The Census Bureau’s Population Estimates Program produces this estimate. This program produces official estimates of the total population for the nation, state, counties, and other selected geographic areas. These estimates are used in federal funding allocations, as survey controls, and in monitoring recent demographic changes. Because the household 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 “statistically significant” at the 90 percent confidence level if the difference between them is large enough so that: if there were no true difference, then there would be a less than a 10 percent chance of obtaining a difference that large. 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 1.645.

$$SE(estimate) = \frac{MOE(estimate)}{1.645}$$

$$SE(Area 1) = \frac{5.0}{1.645} = 3.04$$

$$SE(Area 2) = \frac{4.7}{1.645} = 2.86$$

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 4.17 as shown below.

$$SE(Diff) = \sqrt{SE(Area 1)^2 + SE(Area 2)^2}$$

$$SE(Diff) = \sqrt{3.04^2 + 2.86^2} = 4.17$$

To calculate the margin of error of the difference, simply multiply the standard error of the difference by 1.645. This is shown below.

$$MOE(Diff) = 1.645 \times SE(Diff)$$

$$MOE(Diff) = 1.645 \times 4.17 = 6.86\%$$

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 social, economic, housing, and demographic characteristics produced from the ACS each year, the Census Bureau produces four statistics - sample sizes, 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. Quality measures for Puerto Rico are released as well. 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 at the end of this section "*Where can I find more technical information about the design and quality of the ACS?*" includes additional references and a link to the Quality Measures website.

Sample Size

The sample size measures on the ACS Quality Measures website summarize information for the housing unit sample and group quarters sample. Specifically, the website displays the number of initial addresses selected for housing units (number of initial sample selected for group quarters people) and the number of final survey interviews for housing units and group quarters people by state. The number of initial addresses selected for housing units is the sum of the 12 monthly address samples selected from the Master Address File for a given year. The number of initial sample selected for group quarters people is the sum of people living in group quarters that we did contact and those we expected to contact over the 12 months. The number of final interviews is the total number of interviews successfully completed by mail, telephone, or personal visit for housing units and the total number of interviews successfully completed by personal visit for group quarters between January 1 and December 31 of a year. The difference between these two counts for housing units 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. The difference between these two counts for group quarters is accounted for by several factors including people thought to be in group quarters that were later determined to be out of scope or nonexistent, as

well as people not interviewed due to the group quarter refusing entry, the person refusing to respond, or other reasons.

You can find additional detail about the sample sizes used to produce 2006 ACS estimates on the ACS homepage. If you click on the *About the ACS* tab at the top of the page, you will see a list of topics for which greater information is available. The *Sample Size* option, which you will find in the *Available in this Section* column on the left, will link you to a list of the 2006 ACS sample sizes for all published counties and county equivalents. You can also find sample size information on the number of initial addresses selected compared to number of final interviews by clicking on the *Quality Measures* link listed under *Technical Products* on the ACS homepage.

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 final ACS population estimates are adjusted for coverage error by controlling specific survey estimates to independent population controls by sex, age, race, and Hispanic origin. The final Puerto Rico Community Survey population estimates are adjusted for coverage error by controlling specific survey estimates to independent population controls by sex and age. The ACS housing unit estimates are adjusted for coverage error by controlling the survey estimates to the independent housing unit controls for total housing units. Because of subsequent steps in the housing unit weighting process, the final ACS housing unit estimates will not agree with the independent housing unit 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. Coverage rates for the total resident population are calculated by sex at the national and state level (including Puerto Rico) and at the national level only for total Hispanics, and non-Hispanics crossed by the five major race categories: White, Black, American Indian and Alaska Native, Asian, and Native Hawaiian and Other Pacific Islander. The total resident population includes persons in both housing units and group quarters. In addition, a coverage rate that includes only the group quarters population is calculated at the national level. Coverage rates for housing units are calculated at the national and state level, except for Puerto Rico because independent housing unit estimates are not available. The 2005 and earlier coverage rates are for the household population only. 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 or group quarter in the sample in order for it to be counted as an interview. This 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 units interviewed after data collection is complete to the estimate of all units that the survey should have interviewed. Separate rates are calculated for housing unit response and GQ person response. For housing units, this means all interviews after mail, telephone and personal visit follow-up. For GQ persons, this means all interviews after personal visit. 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 or group quarters people have the same probability of selection. These weights account for the probabilities associated with 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, because 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 estimate.

The ACS Quality Measures website displays item allocation rates at the national and state 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. The 2006 item allocation rates are for the total resident population, which includes the housing unit and group quarters populations. The 2000-2005 item allocation rates are for the housing unit population only.

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 also locate this information from the ACS homepage by clicking on the *How to Use the Data* tab.

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>. You can also locate this information from the ACS homepage by clicking on the *Quality Measures* link listed under *Technical Products*.

WHAT GEOGRAPHIC AREAS DO THE 2006 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. Included for the first time as a summary level are the Alaska Native Regional Corporations.

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 next few sections will detail the types and numbers of geographic areas covered by the 2006 ACS data products and will explain how to determine the geographic areas, by state, that are available.

Geographic Areas Published in 2006

The Census Bureau will only release 2006 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 2006 ACS data products are based on the estimated total populations as of July 1, 2006. Table 4, on the following page, shows the specific types of geographic areas covered by the 2006 ACS data release with an estimate of the total number of geographic areas that will receive 2006 ACS data.

In the 2006 ACS release, just over 7,000 geographic areas will receive data. These areas are large enough to meet the 65,000 population threshold for 1-year period estimates. Next year, in addition to the 1-year estimates, the Census Bureau plans to release 3-year period estimates. These estimates will allow for the release of data for more geographic areas – areas with a population of 20,000 or more. Table 5, on the following page, compares information about the geographic areas that will receive 1-year estimates this year with geographic areas that will receive 3-year estimates next year. For many types of geographic areas, the release of 3-year estimates will allow for a much larger number of geographic areas to qualify for data.

Table 4. Geographic Areas Receiving 2006 ACS Data

Type of Geographic Area	Estimated Number Included
United States	7,040
Nation	1
Census Regions	4
Census Divisions	9
States (and District of Columbia)	51
Counties (and county equivalents) ²	783
Minor Civil Divisions (townships, villages, etc.)	187
Places (cities, towns, and Census designated places)	504
Alaska Native Regional Corporation	3
American Indian and Alaska Native areas	14
School Districts	922
Urban Areas	379
Congressional Districts (including District of Columbia)	436
Metropolitan and Micropolitan Areas	499
Principal Cities of Metropolitan and Micropolitan Areas	350
New England City and Town Areas (NECTAs)	25
Principal Cities of NECTAs	20
Combined Statistical Areas (Metropolitan and NECTA)	131
Metropolitan and NECTA Divisions	38
Public Use Microdata Areas (PUMAs)	2,068
Other (urban/rural components of states, etc.)	616

Note: There are more than 2,000 Public Use Microdata Areas (PUMAs), which are special, non-overlapping areas that partition a state. State governments drew the PUMA boundaries for the Census 2000 sample PUMS files. When originally designed, each PUMA contained a population of about 100,000. Due to the population displacement in the greater New Orleans area caused by Hurricane Katrina in 2005, Louisiana PUMAs 1801, 1802, and 1905 no longer meet the 65,000-population threshold for single-year estimates. Louisiana PUMAs 1801 and 1802 are both contained in Orleans Parish, and have respective current population estimates of 17,013 and 33,862. Louisiana PUMA 1905 is made up of St. Bernard and Plaquemines Parishes and has a current population estimate of 33,457.

² County equivalents include Alaska burroughs and Louisiana parishes.

Table 5. Detailed Summary Geographic Area Information

Code	Type of Geographic Area	Number of Geographic Areas with a Population of 65,000 or More*		Number of Geographic Areas with a Population of 20,000 or More*		Total Number of Entities for this Type of Geographic Area
		Count	Percent of All Such Areas	Count	Percent of All Such Areas	
<i>Geographic Summary Levels</i>						
010	Nation	1	100.0	1	100.0	1
020	Census Region	4	100.0	4	100.0	4
030	Census Division	9	100.0	9	100.0	9
040	State (and the District of Columbia)	51	100.0	51	100.0	51
050	County	783	24.9	1,820	57.9	3,141
060	County Subdivision	187	0.9	996	4.7	21,194
160	Place	504	2.0	2,102	8.4	25,106
500	Congressional District – 109 th	436	100.0	436	100.0	436
950	School District, Elementary	69	2.7	349	13.4	2,599
960	School District, Secondary	91	13.9	262	40.0	655
970	School District, Unified	762	6.9	2,818	25.6	10,994
795	Public Use Microdata Area	2,068	99.9	2,070	100.0	2,071
230	Alaska Native Regional Corporation	3	4.8	54	85.7	63
250	American Indian Area/Alaska Native Area/Native Hawaiian Area	14	2.3	39	6.5	603
330	Combined Statistical Area	122	100.0	122	100.0	122
310	Metropolitan Statistical Area/Micropolitan Statistical Area	499	53.2	913	97.3	938
312	Principal City	350	1.3	2,744	10.3	26,556
314	Metropolitan Division	29	3.0	931	97.4	956
335	Combined New England City and Town Area	9	90.0	10	100.0	10
350	New England City and Town Area	25	58.1	40	93.0	43
352	Principal City of NECTAs	20	0.1	2,136	8.5	25,157
355	NECTA Division	9	17.6	48	94.1	51
400	Urban Area	379	10.5	842	23.3	3,607

*Estimates based on geographic boundaries as of January 1, 2006 and population sizes from the July 1, 2006 Census Bureau Population Estimates.

Table 6. Detailed Geographic Area Information

Code	Type of Geographic Area	Number of geographic areas with a population of 65,000 or more*		Number of geographic areas with a population of 20,000 or more*		Total Number of Entities for this Type of Geographic Area
		Count	Percent of All Such Areas	Count	Percent of All Such Areas	
<i>Geographic Component</i>						
01	Urban**	65	100.0	65	100.0	65
43	Rural**	64	98.5	64	98.5	65
52	In metropolitan or micropolitan statistical area**	65	100.0	65	100.0	65
55	Not in metropolitan or micropolitan statistical area**	56	86.2	59	90.8	65
56	In metropolitan statistical area**	65	100.0	65	100.0	65
57	In metropolitan statistical area—in principal city**	64	98.5	65	100.0	65
58	In metropolitan statistical area—not in principal city**	63	96.9	64	98.5	65
60	In micropolitan statistical area**	60	92.3	61	93.8	65
61	In micropolitan statistical area—in principal city**	55	84.6	60	92.3	65
62	In micropolitan statistical area—not in principal city**	59	90.8	60	92.3	65
89	American Indian reservation and trust land –Federal Tribe***	1	100.0	1	100.0	1
91	Oklahoma tribal statistical area***	1	100.0	1	100.0	1
92	Tribal designated statistical area***	1	100.0	1	100.0	1
93	Alaska Native village statistical area***	1	100.0	1	100.0	1
94	State designated American Indian statistical area***	1	100.0	1	100.0	1
	TOTAL	7,045	--	19,430	--	125,022

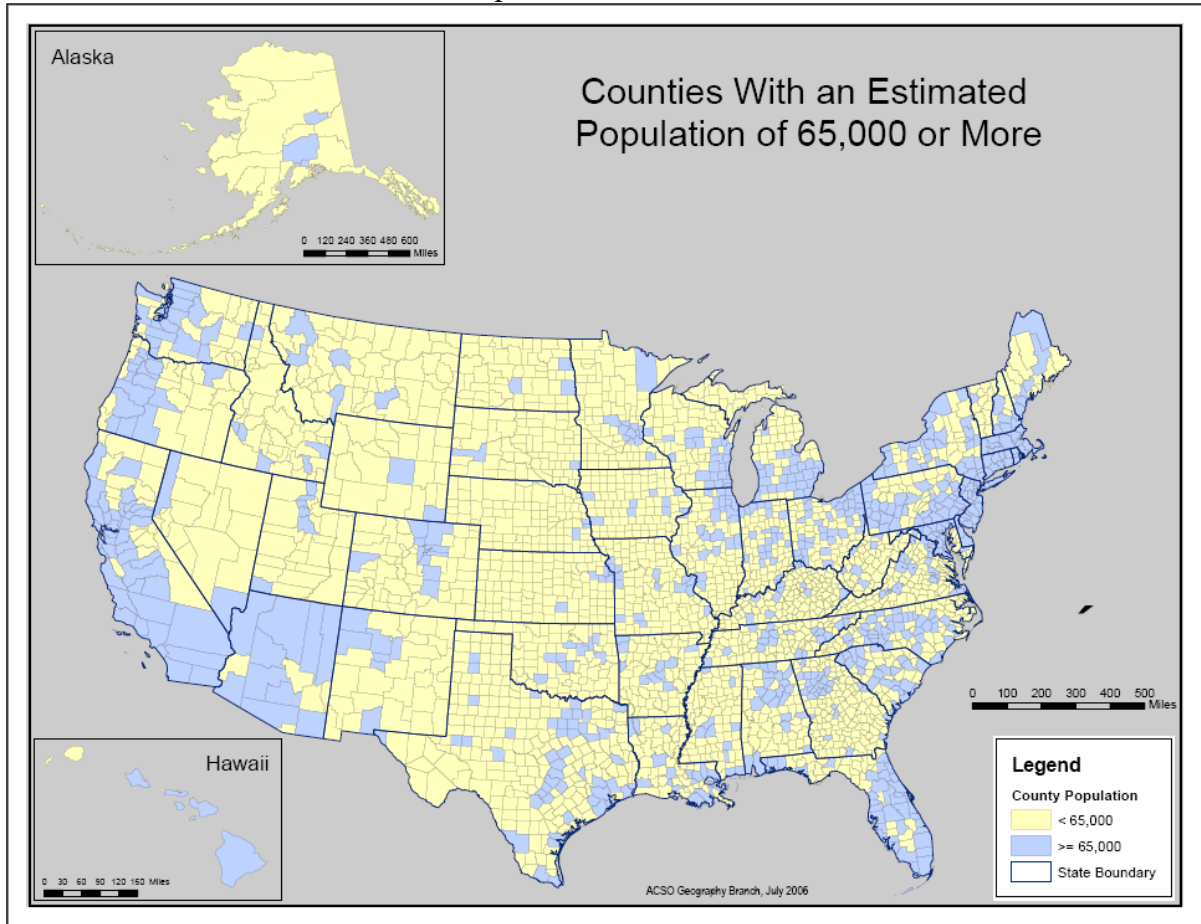
*Estimates based on geographic boundaries as of January 1, 2006 and population sizes from the July 1, 2006 Census Bureau Population Estimates.

**These geographic components are provided for the nation, census regions, census divisions, and states (summary levels 010, 020, 030, and 040).

***These geographic components are provided for the nation (summary level 010) only.

Figure 5 identifies the U.S. counties and Puerto Rico *municipios* receiving 2006 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 receiving ACS estimates for 2006. 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 2006 ACS data products.

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



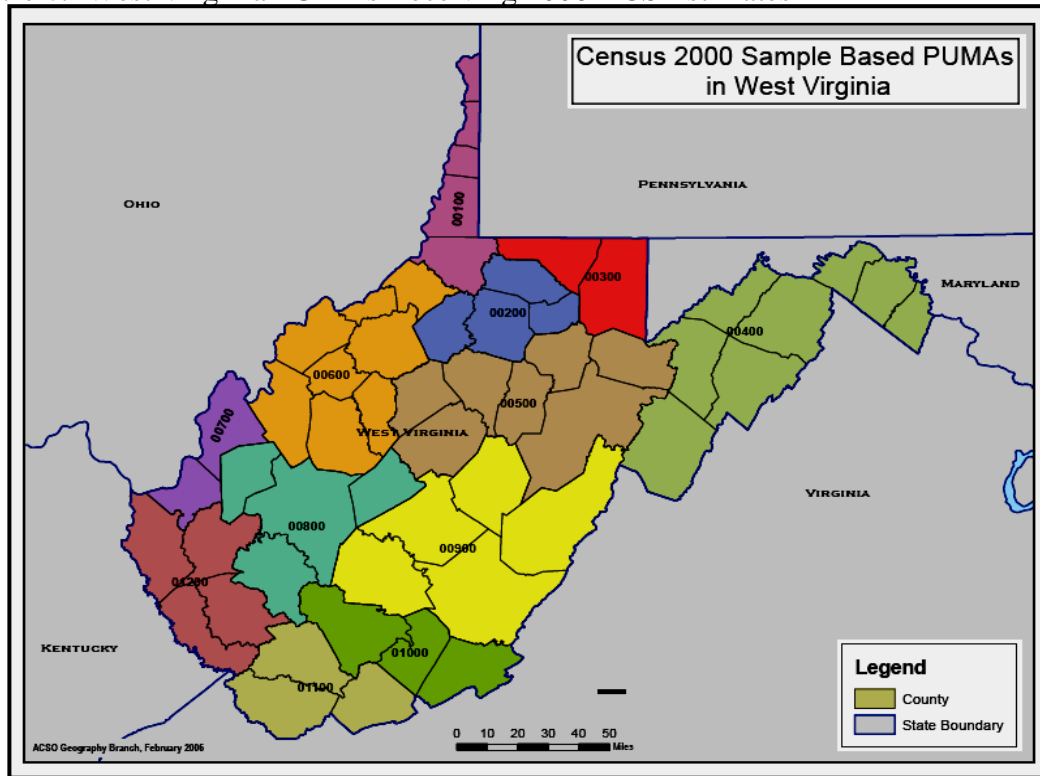
Public Use Micro Data Sample Areas (PUMAs)

The primary way to access data for rural areas in the ACS is 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 have produced 2006 ACS data products, which contain selected social, economic, housing, and demographic characteristics for 2,068 PUMAs³. 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 2006 ACS. However, because West Virginia is partitioned into 12 PUMAs, each of these areas will receive 2006 ACS estimates. *Figure 6* illustrates this point.

³ There are a total of 2,071 PUMAs. Due to the population displacement in the New Orleans area following Hurricane Katrina in 2005, three Louisiana PUMAs (1801, 1802, 1905) no longer meet the 65,000-population threshold for single-year estimates.

Figure 6. West Virginia PUMAs Receiving 2006 ACS Estimates



Metropolitan and Micropolitan Statistical Areas

Another geographic breakdown is metropolitan and micropolitan statistical 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 2006 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 2006 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 section titled “2006 ACS Data Products” provides a link to the “2006 Guide to the Data Products.” Clicking on this link directs you to a page where you are able to view a list of geographic areas published within each state by selecting a state from the dropdown menu. As seen in *Figure 7*, 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 2006 ACS. Also, notice that on the right side of the screen, you can filter on specific areas below the state level.

Figure 7. Determining Which Geographic Areas are Included in the 2006 ACS Data Products

The screenshot displays the U.S. Census Bureau American Community Survey (ACS) website. The top navigation bar includes links for People, Business, Geography, Newsroom, Subjects A to Z, and Search@Census. The main header features the ACS logo and a navigation menu with options like ACS Main, About the ACS, Access Data, How to Use the Data, About the Data, Site Map, and Search ACS. The breadcrumb trail indicates the user is in the '2006 Guide to the Data Products' section.

The main content area is titled 'GEOGRAPHIC AREAS IN 2006'. A dropdown menu is open, showing a list of states with 'Alaska' selected. A red circle highlights the dropdown menu, and a red arrow points from it to the 'AREAS TO BE PUBLISHED IN 2006' section. This section lists various geographic areas for Alaska, such as '00101, Alaska' and 'Anchorage municipality, AK'. On the right side, there is a 'Choose a state or Puerto Rico:' section with a 'Select a State' dropdown and a 'Go' button, and a 'Choose a geographic area:' section with several checkboxes for filtering options like 'All', 'State', 'County', etc.

THE 2006 ACS DATA PRODUCTS

The 2006 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 2006 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

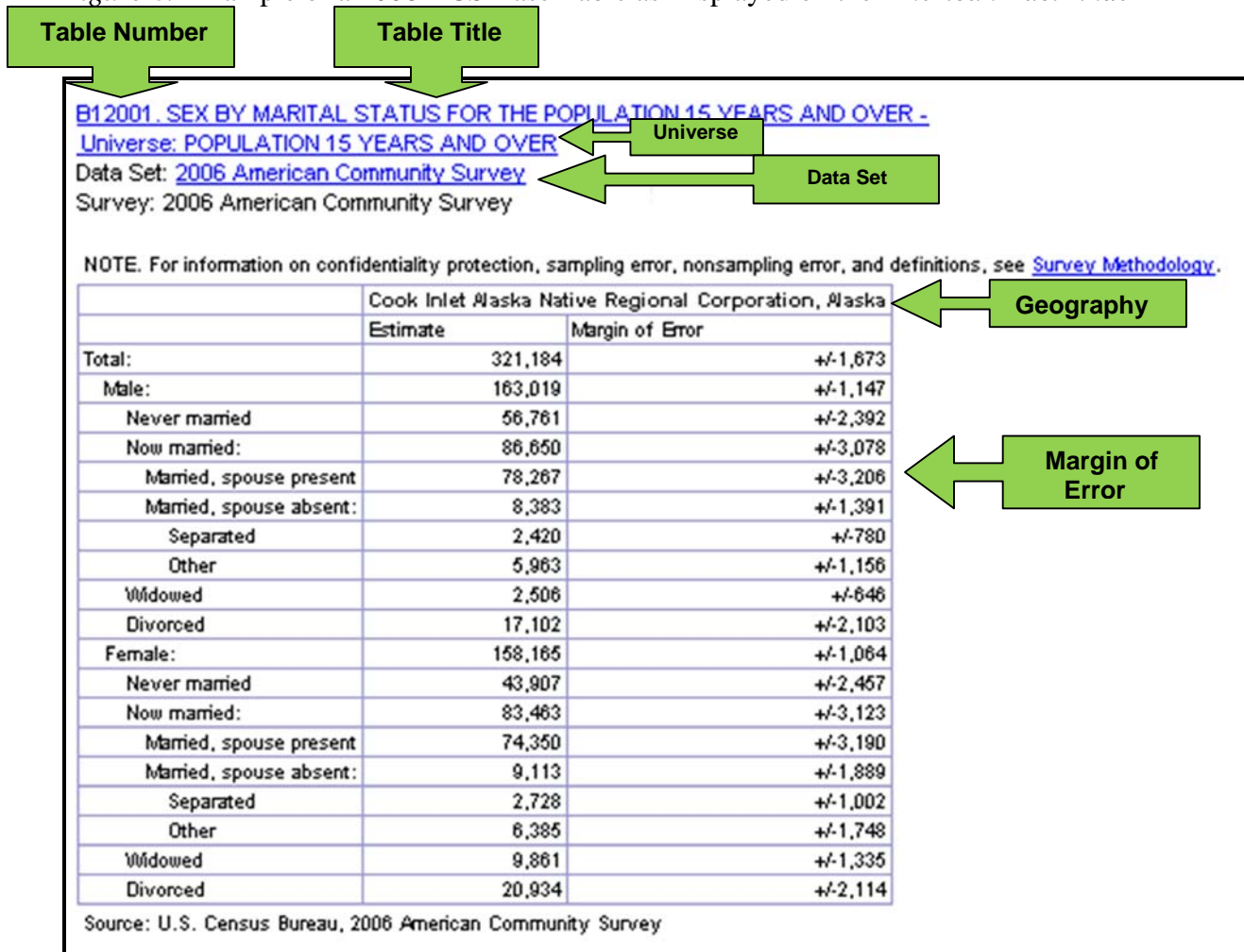
Base Tables show basic distributions of population and housing characteristics. These tables provide the most detailed data and are the basis for other ACS products. Base Tables include tables iterated for race and Hispanic origin universes and tables that show imputation (allocation) rates for selected variables. We will release approximately 1,200 Base Tables for the 2006 ACS. *Figure 8* 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 variables of interest are 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.

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 2006 ACS data, the data set will always read *2006 American Community Survey*. We display the level of geography on the first row of the table. In this example, statistics for Cook Inlet Alaska Native Regional Corporation, Alaska 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. All published margins of error for the ACS are based 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 8. Example of a 2006 ACS Base Table as Displayed on the American FactFinder



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 social, economic, housing, and demographic characteristics.

Narrative Profiles provide information presented in a user-friendly, text-and-graphic format that put various topics into words for the general user.

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, including 200 different population groups and major groups quarters types. A new profile will be provided for the group quarters population.

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.

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 - social, economic, housing, and demographic. *Figure 4* shows a data profile for social characteristics.

Changes to 2006 ACS Data Profiles: ACS data profiles were reorganized and renamed for 2006. The "Demographic Characteristics Profile" was dropped and replaced with the "ACS Demographic and Housing Estimates" profile. ACS estimates previously included in the Demographic Characteristics profile were moved to either the "ACS Demographic and Housing Estimates" profile or to the "Social Characteristics" profile, as detailed below.

ACS Estimates Now Found in the ACS Demographic and Housing Estimates Profile:

- Sex and Age
- Race
- Hispanic Origin
- Total Housing Units

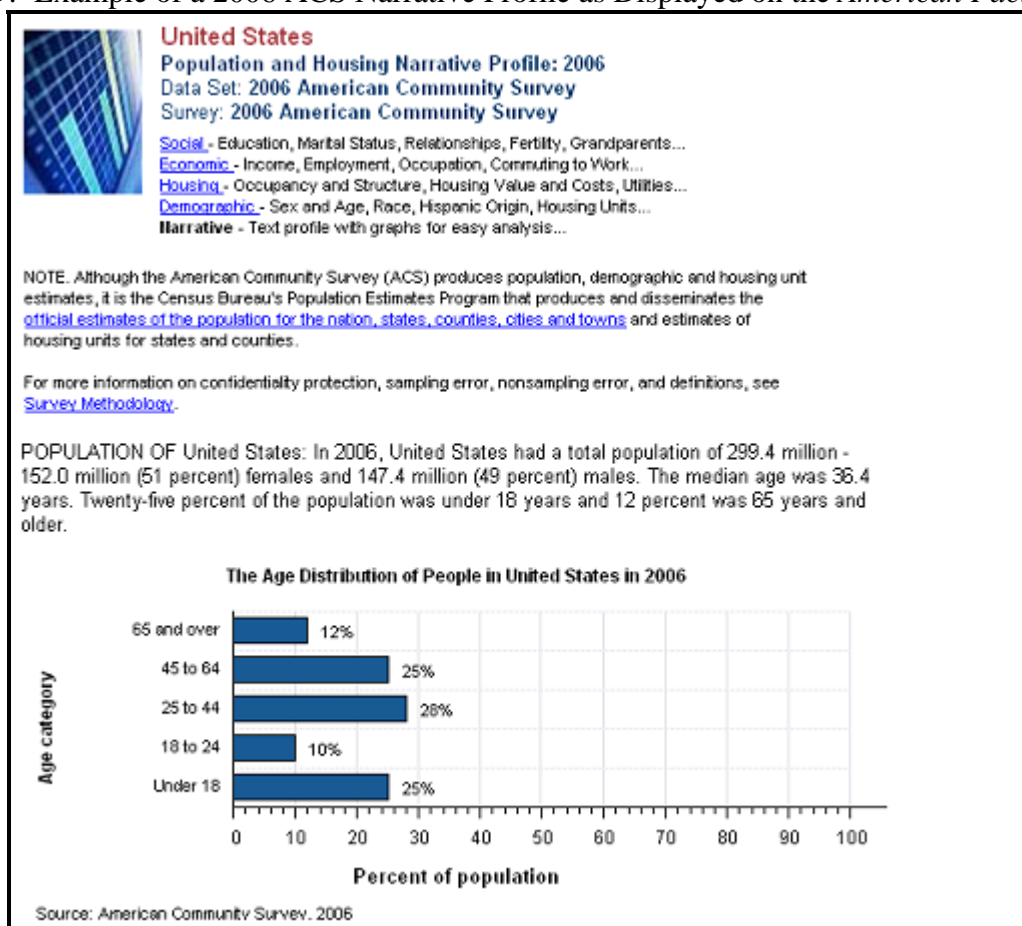
ACS Estimates Now Found in the Social Characteristics Profile:

- Households by Type
- Relationship

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 9*, Narrative Profiles are plain-language descriptions with simple graphs to complement the standard Data Profiles.

Figure 9. Example of a 2006 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, relationship by households and families, and means of transportation to work by selected characteristics. You will find a list of the 2006 ACS Subject Tables on the ACS homepage in the *2006 Guide to the Data Products*, which is located under the *2006 ACS Data Products* heading.

Selected Population Profiles

Selected Population Profiles provide the user with ready-made data tabulations on a specific population 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 Hawaiian and Other Pacific Islander. The second type provides characteristics for groupings that are based on age or other characteristics such as children under 18 and the population 60 years and over. 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. The Text Box “Which

Selected Population Profiles Are Being Produced in 2006?” lists some of the Selected Population Profiles that we plan to publish in 2006.

Which Selected Population Profiles Are Being Produced in 2006

- 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

Group Quarters

A group quarters is a place where people live or stay, in a group living arrangement that is owned or managed by an entity or organization providing housing and/or services for the residents. This is not a typical household-type living arrangement. These services may include custodial or medical care as well as other types of assistance, and residency is commonly restricted to those receiving these services. People living in group quarters are usually not related to each other. Group quarters are classified into two groups: institutionalized and non-institutionalized.

GROUP QUARTERS

Institutionalized Group Quarters

Includes facilities for people under formally authorized, supervised care or custody at the time of interview

- Adult Correctional Facilities
- Nursing/Skilled Nursing Facilities
- In-patient Hospice Facilities
- Mental (Psychiatric Hospitals)
- Group Homes for Juveniles
- Residential Treatment Centers for Juveniles

Non-institutionalized Group Quarters

Includes facilities that are not classified as institutionalized group quarters

- College/University Housing
- Group Homes Intended for Adults
- Residential Treatment Facilities for Adults
- Workers’ Group Living Quarters
- Job Corps Centers
- Religious Group Quarters

Most 2006 ACS data products will include both the population in housing units and the population in group quarters. The two combined represent the total population. The 2005 ACS data products included only the population in housing units, and 2006 is the first year of expanded sample to include data for the group quarters population. The Text Box “Group Quarters” describes the types of group quarters.

The Census Bureau plans to release a number of national level selected population profiles describing the characteristics of the group quarters population. The profiles will include summaries of the following:

- characteristics of the total group quarters population
- characteristics broken out for the institutionalized group quarters population and the non-institutionalized group quarters population
- characteristics for the group quarters population living in the three major group quarter types (adult correctional facilities, nursing facilities, and college/university housing)
- characteristics of the total group quarters population and the institutionalized and non-institutionalized group quarters populations for census regions and divisions and other selected sub-national areas

Thirty-five states and Puerto Rico had large enough sample sizes to meet the 2006 ACS publication threshold. For next year's release of 3-year estimates (based on 2005-2007 data), we hope to release Group Quarters profiles for every state. The Text Box “*Characteristics For 2006 Group Quarters Data*” describes the group quarters information we plan to publish in 2006.

Characteristics for 2006 Group Quarters Data

National Level Selected Population Profiles Describing the Group Quarters Population

- Characteristics of the total group quarters population
- Characteristics broken out by institutionalized and noninstitutionalized group quarters populations

National Characteristics for the Three Major Group Quarter Types

- Adult Correctional Facilities
- Nursing/Skilled Nursing Facilities
- College/University Housing

Characteristics for Selected Sub-National Areas

- 9 Census Divisions
- 35 States
- Puerto Rico

Geographic Ranking Tables and Charts

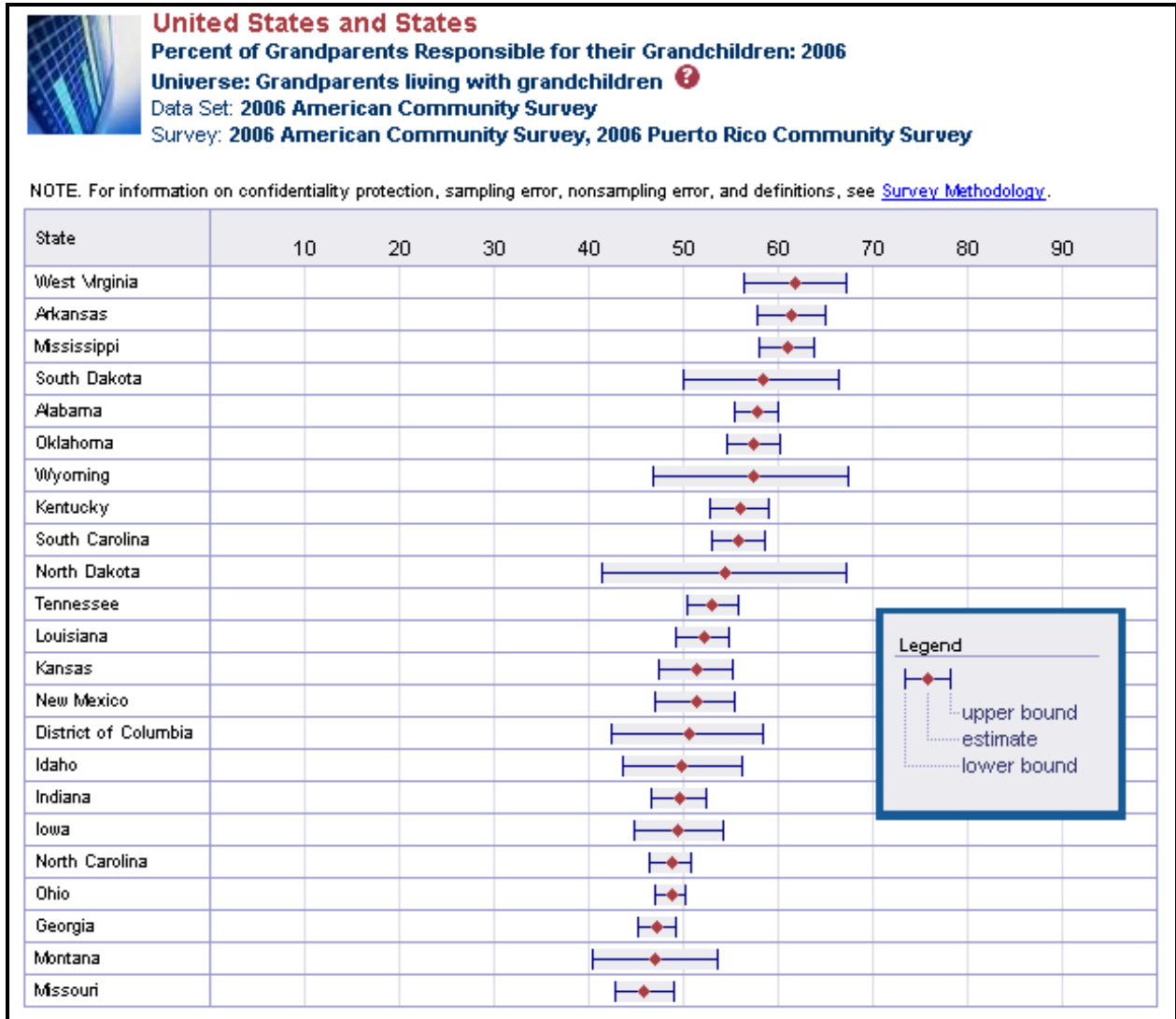
Geographic Ranking Tables compare population characteristics across the nation and all states, including the District of Columbia and Puerto Rico. The Geographic Ranking Tables are currently available for approximately 80 characteristics at the state level. The table describes a single characteristic, 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 10* 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.

Changes to 2006 ACS Ranking Products: Ranking products contain ranked results of many important measures across geographic areas. ACS age and sex ranking tables R0101 through R0107 are no longer produced using ACS data. Tables ranking the same topics, at the state level, are available from the Intercensal Population Estimates Program.

Figure 10. Example of a 2006 ACS Geographic Ranking Chart as Displayed on the American FactFinder

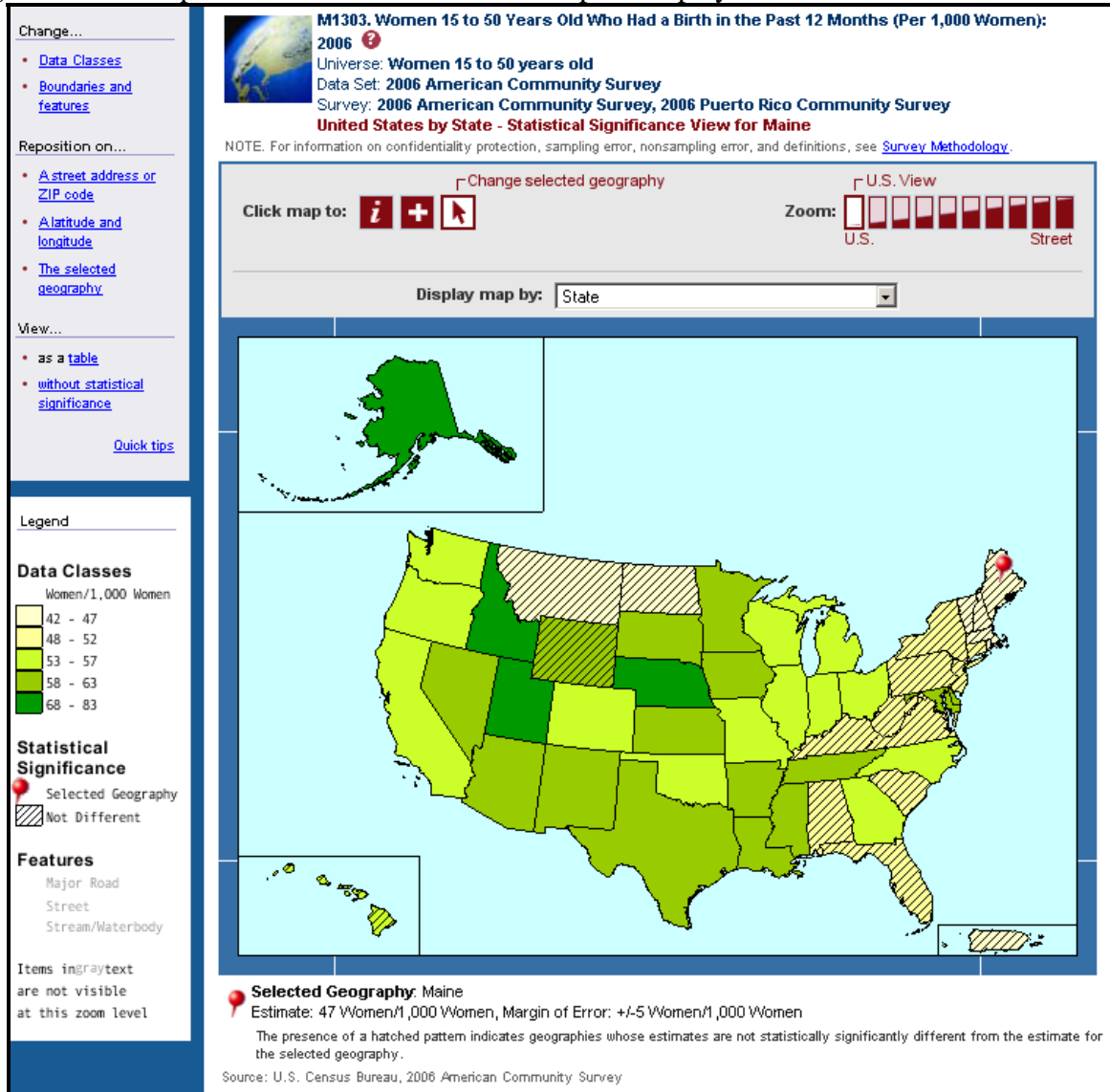


Thematic Maps

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.

Similar to the Geographic Ranking Tables, data users can easily view the statistical significance of comparisons among states by simply clicking the “with statistical significance” link to the left of the Thematic Map. Figure 11 depicts an example of a Thematic Map, with statistical significance shown for the state of Maine.

Figure 11. Example of a 2006 ACS Thematic Map as Displayed on the American FactFinder



Geographic Comparison Tables

Geographic Comparison Tables complement Geographic Ranking Tables by showing characteristics for various geographic levels. You can use Geographic Comparison Tables to compare geographic levels beyond the state level. For example, users can compare Congressional Districts, Places, PUMAs, Urban/Rural areas, and areas inside versus outside metropolitan and micropolitan statistical areas. It should be noted however, that statistical significance of comparisons is not shown in the Geographic Comparison Tables.

Public Use Microdata Sample (PUMS)

Public Use Microdata Sample (PUMS) files are data files that contain records of a sample of all housing units and group quarters persons that the survey interviewed. PUMS files are available as comma-delimited files and 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 2006 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 2006 American Community Survey,” in August 2007. This report is available through the following Census Bureau site:

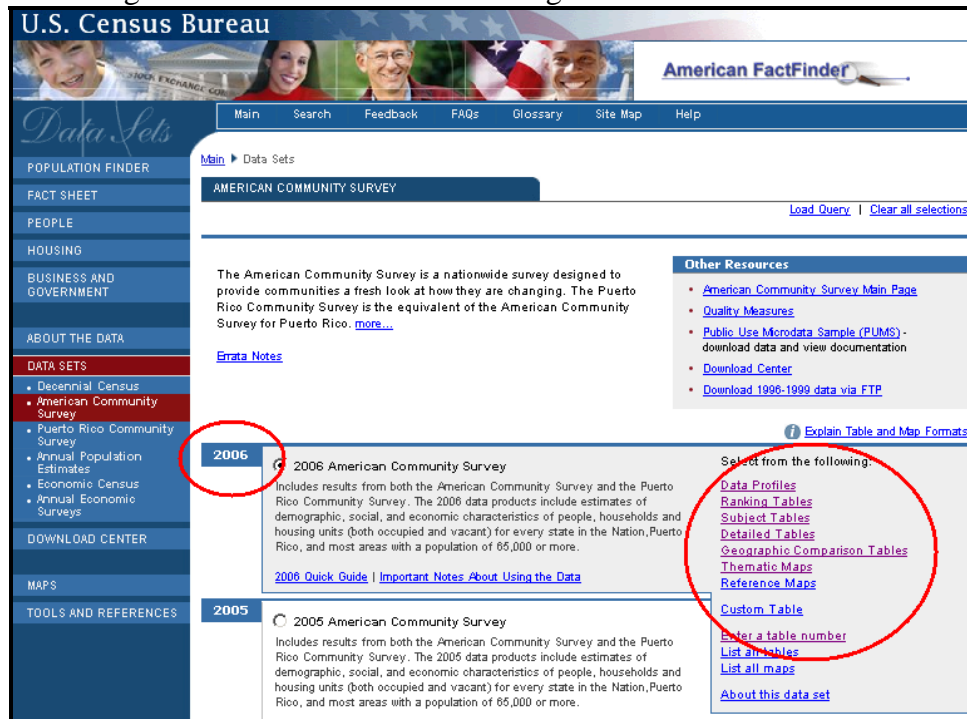
<http://www.census.gov/prod/2007pubs/acs-08.pdf>

ACCESSING THE 2006 ACS DATA PRODUCTS

To access the 2006 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 12*, will allow you to select the ACS data year of interest. To access the 2006 products, make sure you select, “2006 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 2006 products. Select the data product you are interested in retrieving.

Figure 12. Selecting 2006 ACS Data Products through 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 13 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 2006 ACS.

Figure 13. Example of a Geographic Comparison Table Comparing the Average Household Size by County for the State of Utah, Based on the 2006 ACS



NOTE. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [Survey Methodology](#).

Geographic area	Average	Margin of Error
Utah	3.08	+/-0.02
COUNTY		
Cache County	3.09	+/-0.10
Davis County	3.23	+/-0.05
Salt Lake County	2.98	+/-0.03
Utah County	3.56	+/-0.04
Washington County	2.85	+/-0.11
Weber County	2.91	+/-0.06

Source: U.S. Census Bureau, 2006 American Community Survey

While other tabulations may be more complex, you would follow these basic steps to access most 2006 ACS data products. For other useful tips on using the 2006 data products, visit the 2006 Guide to the Data Products and the AFF Tutorial.

The 2006 Guide to the Data Products is accessible from the ACS homepage. The link under the 2006 ACS Data Products section will direct you to http://www.census.gov/acs/www/Products/users_guide/index.htm.

The 2006 Guide to the Data Products provides information on key points to note about the 2006 release, such as the geographic areas published, and the topics covered. This guide is a great resource for learning more about how to use the 2006 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 2006 ACS DATA PRODUCTS

The release of 2006 ACS data products, for both the United States and Puerto Rico, began in August 2007. The 2006 ACS data are released in a phased approach. Table 7 provides the release schedule. The data for Puerto Rico are released concurrent with each of these release dates. The majority of the data is released on September 12, 2007.

Table 7. 2006 ACS Data Product Release Schedule

Release Date	Type of Data Product
August 28	Income, Earnings, and Poverty Data
September 12	Social, Economic, and Housing Characteristics; Demographic and Housing Estimates
September 27	Selected Population Profiles for Race, Ethnic, & Ancestry Groups; Workplace Base Tables; Group Quarters Data Profiles

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 2006 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. For the first time, the 2006 ACS includes the population living in group quarters as well as the population living in housing units. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers’ dormitories. The ACS universe is the entire resident population of the United States. If comparing to earlier years of the ACS, users need to be aware of this difference, as earlier years included the household population only. 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 rules 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 include people 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.

All people staying in the GQ facility when the roster of residents is made and sampled are eligible to be interviewed in the ACS. The GQ sample universe will include all people residing in the selected GQ facility at the time of the interview, regardless of their length of stay in the GQ facility.

Period Estimates

The ACS produces period estimates. Period estimates are designed to describe the characteristics of an area over a set time frame. The 2006 ACS estimates describe the characteristics of the housing unit and population of an area for the time period that spans January through December of 2006. In order to estimate the characteristics that best represent 2006, 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 2006 ACS estimates as representing the average characteristics of an area over calendar year 2006.

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 and characteristics of the population and housing as of April 1, 2000.

Characteristics for many different types of areas will be published from the 2006 ACS data. 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. Other areas may 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 characteristics over time. The period estimates produced from the ACS describe the average population and its characteristics for the full year.

Stable Areas

The 2006 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 2006 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 2006 ACS has substantial proportions of seasonal populations.

Areas with Large Changes

In areas that experienced dramatic changes in the populations, the data produced by the ACS will reflect the characteristics of the average population over the 12-month period. An example of this type of area is the New Orleans area in the fall of 2005. Due to Hurricane Katrina and her aftermath, the population in the New Orleans area at the end of 2005 was much smaller than at the beginning of 2005. None of the geographic areas covered by the 2006 ACS had substantial population changes in 2006.

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. In the Question box on the right side of the ACS homepage, you will find links to the 2005-2006 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 2006.

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 status, 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 2006. 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 2006 ACS estimates is therefore the entire calendar year 2006 plus the last few months of 2005.

Comparisons with Other Data Sources

The Census Bureau encourages users to compare 2006 ACS data with data from other sources. Guidance is needed before drawing conclusions because in some instances comparisons could be misleading due to differences in questions or methods. General guidance has been developed and can be accessed from the ACS website, as shown below in *Figure 14*.

There are three columns, subjects are on the left, Comparing 2006 ACS with Census 2000 is in the center, and Comparing 2006 ACS with 2005 ACS is on the right. In each of the comparison columns, there will be one of three instructions – compare, compare with caution, and do not compare. Each cell will also contain a hyperlink to more information. The Census 2000 column will also contain a hyperlink to the crosswalk that provides information on the 2006 ACS tables and the corresponding tables in the Census 2000 Summary File 3.

Figure 14. Comparing 2006 ACS Data to Other Sources

The screenshot shows the U.S. Census Bureau website. The main heading is "American Community Survey (ACS)". The breadcrumb trail is "Census > ACS Main > How to Use the Data > Guidance on Comparing 2006 ACS Data to Other Sources". The main heading of the page is "How to Use the Data: Guidance on Comparing 2006 ACS Data to Other Sources".

The text on the page reads:

The Census Bureau encourages users to compare 2006 ACS data with data from other sources. Guidance is needed before drawing conclusions because in some instances comparisons could be misleading due to differences in questions or methods. This page provides three forms of guidance - general guidance, item-specific guidance, and examples. For all comparisons of differing time periods, users should take into consideration that geographic boundaries for the area of interest may have changed.

General Guidance

Our general guidance for comparing 2006 ACS data with data from the 2005 ACS and with Census 2000 is provided below.

Comparing 2006 ACS Data to 2005 ACS Data - The 2006 ACS includes the Group Quarters (GQ) population whereas the 2005 ACS does not. A GQ is a place where people live or stay that is normally owned or managed by an entity or organization providing housing and/or services for the residents. These services may include custodial or medical care as well as other types of assistance, and residency is commonly restricted to those receiving these services. People living in group quarters are usually not related to each other. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, workers' dormitories, and facilities for people experiencing homelessness. Many types of GQ populations have demographic, social, or economic characteristics that are very different from the household population. The inclusion of the GQ population in the 2006 ACS could therefore have a noticeable impact on the distributions of these characteristics. This is particularly true for areas with a substantial GQ population.

For most population subjects, the Census Bureau suggests that you make comparisons only if the geographic area of interest does not include a substantial GQ population. For most housing subjects, the Census Bureau supports comparisons being made.

Comparing 2006 ACS Data to Census 2000 Data - There are global differences that exist between the 2006 ACS and Census 2000. These include differences in residence rules, universes, and reference periods. For example, the 2006 ACS uses a "two-month" residence rule - defined as anyone living for more than two months in the sample unit when the unit is interviewed whereas Census 2000 used a "usual residence" rule - defined as the place where a person lives or stays most of the time.

The Census Bureau subject matter specialists have reviewed all of these factors and have determined that for most population and housing subjects, comparisons can be made.

Comparisons with Census 2000

There are global differences that exist between the ACS and Census 2000. These include differences in residence rules, universes, and reference periods. The Census Bureau subject matter specialists have reviewed all of these factors and have determined that for most population and housing subjects, comparisons can be made.

Comparisons with 2005 ACS Data

A primary limitation of comparing 2006 ACS data with 2005 ACS data is the differences in the target populations. The 2006 ACS 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 the 2005 ACS. For characteristics that the 2006 ACS tabulated exclusively for the household population, such comparisons are also reasonable. The ACS homepage includes a link to the guidance on comparing the 2006 ACS to other data sources.

ADDITIONAL RESOURCES

While we hope that this user guide has answered many of your questions about the 2006 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 2006 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 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 2006 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 2006 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	1-800-432-1495
Kansas City	1-800-728-4748
Los Angeles	1-800-992-3530
New York	1-800-991-2520
Philadelphia	1-800-262-4236
Seattle	1-800-233-3308