



Choosing Census Data

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How To Choose Census Data

Abbreviations used: ACS = American Community Survey; APEP = Annual Population Estimates Program.

In the past, there was just one choice of data from the Census Bureau to get the statistics that you or your customer needed. But that's changed: beginning in December 2010/January 2011, you will have a choice of five sets of Census data.

- 2010 Census data
- American Community Survey 1-year data
- American Community Survey 3-year data
- American Community Survey 5- year data
- American Population Estimates Program data

As an example, here is the population of Norman, Oklahoma from each set of data:

- The 2008 ACS has 103,343 with a Margin of Error of +/- 6,107
- The 2006-2008 ACS has 103,595 with a Margin of Error of +/-1,998
- The 2008 Annual Population Estimates Program has 106,957 (APEP data have no stated Margin of Error data).
- 2010 Census data will have different data, with no Margin of Error data.
- The 2005-2009 ACS that will be released in December of 2010 will have different data with its own Margin of Error data.

Which data are correct? They all are, because each population count is accurate for its method of collecting the data whether those data are by the full 2010 Census or by survey. Because the 2010 Census counts each person, it is regarded as being more accurate than a survey. So it is more accurate than either the ACS or the APEP. An ACS survey is an estimate based on a sample of the population, so the more years and more people included in an ACS sample, the more accurate the result. Therefore a 5-year ACS survey is more accurate than a 3-year ACS survey, and a 3-year ACS survey is more accurate than a 1-year ACS survey. The only drawback of the multi-year ACS survey is that it's harder to detect developing trends than by examining several 1-year ACS surveys. As the 2010 Census data goes more and more out of date as this decade progresses, the less useful it will become. But as it becomes less useful the newer ACS data and APEP data become more useful, since they both provide newer data.

Example: If you're searching for disability data in the year 2016, you'll find data in 2016 ACS data, and in 2014-2016 ACS data, and in 2012-2016 ACS data. Any of these sets of data will be more up-to-date than data from the 2010 Census. Population count data from the American Population Estimates Program will also be more recent than data from the 2010 Census.

So how do you choose from among the three main Census datasets, which again are the:

- 2010 Decennial Census,
- American Community Survey 1-, 3-, and 5-year surveys
- Annual Population Estimates Program?

• **Need the most current data? Your choice will be determined by your subject and geography (county, town, Census tract, etc.):**

- If you can only use 100% count data, your only choice is 2010 Census data.
- You can choose data from either the 2010 Census or the latest 1-year ACS survey or the latest survey from the APEP. But the types of data that you need may not be in either the ACS or the APEP, in which case you will need to use 2010 Census data.
- For characteristics of geographies with populations of 65,000 or more, choose the most recent 1-year ACS survey.
- Choose the most recent 3-year ACS survey for characteristic of communities with populations between 20,000 and 64,999.
- For characteristics of geographies with populations of 20,000 or less, choose the most recent 5-year ACS survey.

• **Need the most accurate data? Choose from the following in this order:**

- 2010 Census; only the 2010 Census is based on a 100% count of the population.
- The latest ACS 5-year survey, because it has the largest sample size (5 years worth of data) and because it gives Margin of Error data.
- The latest ACS 3-year survey (3 years worth of data).

- The latest ACS 1-year survey (1 year of data).
- Use APEP if you need data based on age, sex, race, or Hispanic origin. APEP gives no Margin of Error data.

• Need data for small geographies? Choose either the 2010 Census or the latest ACS 5-year survey. Only the 2010 Census and ACS 5-year surveys include all geographies for a state.

- * Choose the latest ACS 5-year survey if you need the most recent data.
- * Choose the latest APEP data if it's more recent than the latest ACS 1-, 3-, or 5- year survey and you don't need to report Margin of Error data. (**Note:** APEP doesn't have the depth of data that either the 2010 Census or any ACS survey has).

• Need data for large geographies?

- Choose the 2010 Census if you need 100% count data.
- Choose APEP data if you need only basic counts of population by age, sex, race, and Hispanic origin (**Note:** APEP doesn't have the depth of data that either the 2010 Census or any ACS survey has).
- Choose ACS 1-year survey data for the most current data for other characteristics; be aware that ACS 1-year data has the largest Margin of Error, so if you need more accurate data, choose ACS 5-year and then ACS 3-year data for large geographies.
- Be aware that although ACS 5-year and ACS 3-year data has larger sample sizes with smaller Margins of Error, they may "mask" recent population trends in a way that ACS 1-year data doesn't.

- **ACS basics note #1:** Dollar values for Multi-year ACS data have been adjusted for inflation. Dollar values are current for January of the last year of the survey period.
- **ACS basics note #2:** data for ACS 3-year and 5-year data are only valid for the entire 3-year or 5-year period of the data. You can't state that the data from a 3-year or 5-year set of data are valid for just one of the three years in the data, or just one of the five years in the data.
- **How to report Census data.** The following data statement represents a good example of how to legally report data:

“During the ACS survey period of 2006 - 2008 there were 1,185 Thais in Oklahoma with a Margin of Error of +/- 516”.

The number “516” must remain with the data statement and be included with a citation to the data.

- **Give complete citations for the data you use.** Following are examples on how to cite online Census data from the “FAQs/Questions and Answer Center” of the Census Bureau’s guide at www.census.gov:

For dynamically generated tables, maps, and files from American FactFinder:

1. U.S. Census Bureau. (Use semicolons to separate elements.)
2. Name of the database or other data repository/source (e.g., American FactFinder), set off by quotation marks, or follow publication citation style;
3. The name of the person who generates the tabulation, etc., e.g., “generated by John Smith;”
4. The name of the software package used to generate the tabulation, if known, e.g., “using American FactFinder;”
5. The URL of the application software’s main or first page set off by angle brackets, e.g., <<http://factfinder.census.gov>>;
6. The date, within parenthesis, when the user generated the tabulation, e.g., (7 January 2005).

For a reference map in American FactFinder:

U.S. Census Bureau; generated by (your name or customer's name); using American FactFinder; <<http://factfinder.census.gov>>; (12 February 2005).

For a thematic map in American FactFinder (find the specific survey or census, data set and matrix number under the map image):

U.S. Census Bureau; Census 2000, Summary File 1, Matrix P7; generated by Joe Smith; using American FactFinder; <<http://factfinder.census.gov>>; (15 February 2005).

Examples:

- U.S. Census Bureau; American Community Survey, 2003 Summary Tables ; generated by John Smith; using American FactFinder; <<http://factfinder.census.gov>>; (7 January 2005).
- U.S. Census Bureau; Census 2000, Summary File 1; generated by Jane Jones; using American FactFinder; <<http://factfinder.census.gov>>; (20 February 2004).
- U.S. Census Bureau; 1990 Census of Population and Housing, Summary Tape File 3; Matrices P13, P31; generated by John Smith; using American FactFinder; <<http://factfinder.census.gov>>; (12 December 2004).

Acknowledgements

Thank you to Steve Barker, Oklahoma State Data Center, Oklahoma Department of Commerce for his assistance. Also, thank you to Charles Bernholz, University of Nebraska, Lincoln for his editing assistance. *This guide may be freely duplicated.*

The following graph was created by Steve Barker, Oklahoma State Data Center, Oklahoma Department of Commerce. It shows how the 2010 Census is related to the ACS 1-, 3-, and 5-year surveys.

