

Example of Creating a Table Using SAS

Here is an example of how to access the Summary Files for one table for all geographies from the ACS Summary File. The following 2005-2009 ACS 5-year Summary File example is also applicable to the current ACS Summary File.

Question: I am interested in downloading table B01001 for all published ACS geographies, how would I do this?

1) Go to the Sequence Number and Detailed Table Number Lookup File located at <http://www.census.gov/programs-surveys/acs/technical-documentation/summary-file-documentation.html> to locate sequence number for table B01001. There are Excel and SAS dataset versions of the file. They are available at http://www2.census.gov/programs-surveys/acs/summary_file/2009/data/

2) Use SF_All_Macro.sas in http://www2.census.gov/programs-surveys/acs/summary_file/2009/documentation/5_year/user_tools/ to run macros.

Note: You will need to change to the LIBNAME stubs to your local directory location of downloaded data and the LIBNAME sas to your local directory location where SAS will save your results.

Run the macro: **%TableShell(B01001);**

This macro will provide metadata information on a given table, in this case B01001.

3) The following SAS dataset will be created with information about table B01001:

Table ID	Sequence Number	Line Number	Start Position	Total Cells in Table	Total Cells in Sequence	Table Title
B01001	0013		7	49 CELLS		SEX BY AGE
B01001	0013					Universe: Total population
B01001	0013	1				Total:
B01001	0013	2				Male:
B01001	0013	3				Under 5 years
B01001	0013	47				75 to 79 years
B01001	0013	48				80 to 84 years
B01001	0013	49				85 years and over

We can see that table B01001 is located in Sequence 0013; this applies to all published geographies.

4) We can read into SAS all tables in the 0013 sequence by running macro:

%CallSt;

This macro will run a do loop creating State two-digit abbreviations, which will allow a simple way to read the Summary Files into SAS for all geographies. Each time a valid two digit state abbreviation is created, the macro **%AllSeqs** is run with the two digit state abbreviation.

The **%AllSeqs** macro performs the following tasks:

- A. Read the geographic header file - **%AnyGeo** macro.
- B. There is a do loop to allow you to choose which sequences you would like to read in. For example, if you wanted sequence 0013 set the loop to be `do x=13 %to 13;` - The 0 values will be filled in.
- C. Within the do loop the following macros will be executed:
 - a) **%TablesBySeq;** – This macro will give information about the whole 0013 sequence, not just table B01001.
 - b) **%ReadDataFile** – This macro is called two times once for each type of estimate. This macro will generate and run SAS code for each sequence specified in the do loop in step 2 and for each geography specified in the **%CallSt** macro.
 - c) Lastly, there is a merge statement that will merge together each of the three types of estimates and the geography header file by sequence number per geography.

5) You now will have all tables in the 0013 sequence read into SAS in the following dataset names, if the code is not modified, in the work directory Sf0013<st two-digit abbrev>.sas7bdat.