

2011-2013 PUMS Accuracy of the Data¹

1. INTRODUCTION

This 3-year public use microdata sample (PUMS) for 2011-2013 is a subset of the 2011, 2012, and 2013 American Community Survey (ACS) and Puerto Rico Community Survey (PRCS) samples. It contains the same sample as the PUMS 1-year files for 2011, 2012 and 2013. Unless otherwise specified, the term “ACS” in this document will refer to both the ACS and PRCS.

This 2011-2013 PUMS is the seventh 3-year file published by the ACS. It contains three years of data for housing units and the population from households and the group quarters (GQ) population. The GQ population, housing units and population from households are all weighted to agree with the ACS counts which are an average over the three year period (2011-2013). The ACS sample was selected from all counties across the nation, and all municipios in Puerto Rico.

The 2011-2013 PUMS data contain 4,023,003 housing unit records and 8,991,763 person records from households and 465,721 person records from GQs. The GQ person records include some imputed records.

Estimates from the PUMS file are expected to be different from the previously released ACS estimates because they are subject to additional sampling error and further data processing operations. The additional sampling error is a result of selecting the PUMS housing and person records through an additional stage of sampling. In the public use file, the basic unit is an individual housing unit, except for the sample from GQs. For the GQ sample, the basic unit is the person. The population sample is defined as all persons living in households selected in the housing unit sample, plus the persons selected from the GQ sample. Note that microdata records in this sample do not contain names, addresses, or any information that can identify a specific housing unit, GQ or person.

Users of the 2011-2013 ACS PUMS file can find detailed information on differences between the 2011-2013 PUMS and previous PUMS files in the PUMS ReadMe document. The PUMS ReadMe document for this PUMS file can be found at:

http://www.census.gov/acs/www/data_documentation/pums_documentation/

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Table of Contents

1	Introduction	1
2	Confidentiality of the Data	3
3	Sample Design	4
3.1	Sample Design for Housing Units	4
3.2	Sample Design for Group Quarters	6
4	Dual Variables on the Multiyear PUMS.....	8
4.1	Example 1 – Multiple Occupation Codes	8
4.2	Example 2 – Multiple PUMA Codes	8
5	Weighting and Estimation	9
5.1	Weighting	9
5.1.1	Group Quarters Person Weighting	9
5.1.2	Housing Unit and Household Person Weighting	10
5.2	Estimation.....	12
6	Errors in the Data	13
6.1	Sampling Error	13
6.2	Nonsampling Error	13
7	Measuring Sampling Error	14
7.1	Approximating Standard Errors with Replicate Weights	15
7.2	Approximating a Generalized Standard Errors with Design Factors.....	17
7.2.1	Standard Errors for Total and Percentages.....	17
7.2.2	Standard Errors for Sums and Differences.....	18
7.2.3	Standard Errors for Ratios	18
7.2.4	Standard Errors for Medians	19
7.2.5	Standard Errors for Means	20
7.3	Examples of Standard Error Calculations using Generalized Standard Error Formulas.....	21
8	Working with Dollar Amounts	24
8.1	Adjustment Factors on the PUMS File	24
8.2	Comparing PUMS Files from Different Periods.....	24
9	References	25
	Tables of Design Factors for Calculating PUMS Standard Errors	26

List of Tables

Table 1:	2011-2013 3-year ACS Housing Unit Estimates and PUMS Sample Sizes.....	5
Table 2:	2011-2013 3-year ACS GQ Universe Estimates and PUMS Sample Sizes.....	7
Table 3:	Distribution Frequency for Adjusted Household Income in Massachusetts.....	22
Table 4:	Computations for Mean Adjusted Person Income of Females Age 25-34 in Alabama...23	
Table 5:	Design Factors for Calculating ACS PUMS Standard Errors – United States.....	26
Table 6:	PUMAs with Fertility (FER) & Telephone (TEL) Variables Suppressed for 2012	132

2. CONFIDENTIALITY OF THE DATA

The Census Bureau has implemented a series of steps to protect the confidentiality of the data. Title 13 United States Code, Section 9, prohibits the Census Bureau from publishing results in which an individual's data can be identified.

The Census Bureau's internal Disclosure Review Board sets the confidentiality rules for all data releases. A checklist approach is used to ensure that all potential risks to the confidentiality of the data are considered and addressed.

- **Title 13, United States Code:** Title 13 of the United States Code authorizes the Census Bureau to conduct censuses and surveys. Section 9 of the same Title requires that any information collected from the public under the authority of Title 13 be maintained as confidential. Section 214 of Title 13 and Sections 3559 and 3571 of Title 18 of the United States Code provide for the imposition of penalties of up to five years in prison and up to \$250,000 in fines for wrongful disclosure of confidential census information.
- **Disclosure Avoidance:** Disclosure avoidance is the process for protecting the confidentiality of data. A disclosure of data occurs when someone can use published statistical information to identify an individual that has provided information under a pledge of confidentiality. For data tabulations the Census Bureau uses disclosure avoidance procedures to modify or remove the characteristics that put confidential information at risk for disclosure.
- **Data Swapping:** Data swapping is a method of disclosure avoidance designed to protect confidentiality in tables of frequency data (the number or percent of the population with certain characteristics). Data swapping is done by editing the source data or exchanging records for a sample of cases when creating a table. A sample of households is selected and matched on a set of selected key variables with households in neighboring geographic areas that have similar characteristics (such as the same number of adults and same number of children). Because the swap often occurs within a neighboring area, there is no effect on the marginal totals for the area or for totals that include data from multiple areas. Because of data swapping, users should not assume that tables with cells having a value of one or two reveal information about specific individuals. Data swapping procedures were first used in the 1990 Census, and were used again in Census 2000.
- **Synthetic Data:** The goals of using synthetic data are the same as the goals of data swapping, namely to protect the confidentiality in tables of frequency data. Persons are identified as being at risk for disclosure based on certain characteristics. The synthetic data technique then models the values for another collection of characteristics to protect the confidentiality of that individual.

The Census Bureau takes further steps to prevent the identification of specific individuals, households, or housing units. The main disclosure avoidance method used is to limit the geographic detail shown in the files. The smallest geographic unit that is identified is the Public Use Microdata Area (PUMA) which is based on a population size of initially around 100,000 or

more. No geography smaller than the PUMA can be identified on a PUMS file. Other disclosure avoidance measures used in the PUMS files includes top-coding, age perturbation, weight perturbation and collapsing of detail for categorical variables. The answers to open-ended questions, where an extreme value might identify an individual are top-coded (or bottom-coded). Top-coding (and bottom-coding) substitutes the value of extreme cases with the mean of the highest (or lowest) cases. Top-coded questions include age, income and housing unit value. Age perturbation disguises original data by randomly adjusting the reported ages for a subset of individuals. Weight perturbation disguises the probability of selection for some records.

3. SAMPLE DESIGN

The 2011-2013 PUMS sample is the same sample found in each of the 1-year PUMS files for the years 2011, 2012 and 2013. It contains three percent of the housing units and three percent of the GQ persons plus some imputed GQ persons in the United States, District of Columbia, and Puerto Rico weighted to represent the average population during three years.

The PUMS GQ sample for data years 2011, 2012, and 2013 contained additional imputed records to represent the not-in-sample GQs, which effectively double the total number of records. There were 241,884 sample cases (3 percent of the GQ universe), plus 223,837 imputed cases were added.

See the Accuracy of the Data for the 2013 1-year PUMS for a further explanation of the PUMS sampling of these imputed GQ records. By including these imputed records in the 2011-2013 3-year PUMS, the PUMS will agree better with the 2011-2013 3-year full sample ACS for population totals by state. More details about the methodology of the large-scale whole person imputation into not-in-sample GQ facilities can be found in the 2013 ACS Accuracy of the Data at:

http://www.census.gov/acs/www/data_documentation/documentation_main/.

3.1 Sample Design for Housing Units

Table 1 shows PUMS sample sizes for housing units next to the corresponding ACS estimates by state, the District of Columbia, and Puerto Rico.

Table 1. 2011-2013 3-year ACS Housing Unit Estimates and PUMS Sample Sizes

State	ACS Estimate	PUMS Sample Size	State	ACS Estimate	PUMS Sample Size
Alabama	2,183,720	65,617	Montana	484,889	14,612
Alaska	307,300	9,263	Nebraska	803,530	24,126
Arizona	2,873,765	86,283	Nevada	1,182,122	35,537
Arkansas	1,325,302	39,823	New Hampshire	616,128	18,515
California	13,762,376	412,184	New Jersey	3,570,581	107,154
Colorado	2,231,542	67,025	New Mexico	904,189	27,203
Connecticut	1,487,745	44,701	New York	8,118,921	243,686
Delaware	409,783	12,323	North Carolina	4,368,603	131,324
District of Columbia	299,880	9,023	North Dakota	329,970	9,897
Florida	9,020,516	271,058	Ohio	5,124,140	153,862
Georgia	4,100,890	123,204	Oklahoma	1,675,586	50,347
Hawaii	524,389	15,731	Oregon	1,680,478	50,509
Idaho	672,794	20,237	Pennsylvania	5,566,494	167,170
Illinois	5,287,756	158,823	Rhode Island	462,218	13,891
Indiana	2,804,783	84,185	South Carolina	2,150,430	64,726
Iowa	1,344,770	40,361	South Dakota	367,742	11,051
Kansas	1,237,481	37,163	Tennessee	2,830,769	85,048
Kentucky	1,933,019	58,066	Texas	10,151,253	305,088
Louisiana	1,982,533	59,568	Utah	996,674	29,960
Maine	722,760	21,731	Vermont	323,548	9,725
Maryland	2,394,924	71,911	Virginia	3,395,522	101,985
Massachusetts	2,810,864	84,429	Washington	2,912,255	87,505
Michigan	4,526,207	135,758	West Virginia	880,266	26,442
Minnesota	2,360,533	70,843	Wisconsin	2,630,155	79,008
Mississippi	1,280,484	38,489	Wyoming	264,378	7,963
Missouri	2,716,497	81,626	Puerto Rico	1,569,050	47,244

The sampling for HUs (and persons from HUs) was performed independently on the ACS samples of HUs for each of the years 2011, 2012 and 2013, as follows:

1. Records of HUs were sorted within each state by: PUMA, ACS weighting area, interview mode, type of vacant, tenure, building type, household type, householder demographics (race, Hispanic origin, sex and age), county, tract, and housing unit weight.
2. Systematic sampling was applied to ACS HUs as described below:
 - a. Within each state, a random number is chosen between zero and the sampling interval. A counter is initialized with the random number.
 - b. At each record, the value of the counter is incremented by one and compared to the sampling interval.

- i. If the counter's new value is greater than the sampling interval, the HU record is selected for the PUMS and a flag is set to 1. The counter is decreased by the sampling interval with the new value passed to the next record.
 - ii. If the counter is less than the sampling interval, the HU record is not selected for the PUMS and the value of the counter is passed to the next record without altering its value.
3. All HUs selected for PUMS were placed in the PUMS HU sample file.
 4. The PUMS HU sample file was matched to the ACS sample of persons. All persons in selected HUs were placed in the PUMS person sample.

3.2 Sample Design for Group Quarters

Table 2 shows PUMS sample sizes for GQs (including imputed records) next to the corresponding ACS estimates by state, the District of Columbia, and Puerto Rico.

Table 2. 2011-2013 3-Year ACS GQ Universe Estimates and PUMS Sample Sizes

State	ACS GQ Person Estimate	PUMS GQ Person Sample Size	PUMS GQ Imputed Persons	State	ACS GQ Person Estimate	PUMS GQ Person Sample Size	PUMS GQ Imputed Persons
Alabama	114,957	3,459	3,461	Montana	28,801	866	640
Alaska	26,598	797	487	Nebraska	51,526	1,540	1,469
Arizona	147,514	4,410	4,819	Nevada	36,170	1,089	540
Arkansas	81,252	2,415	2,098	New Hampshire	40,719	1,213	960
California	812,650	24,422	24,551	New Jersey	186,582	5,599	4,619
Colorado	117,927	3,494	3,097	New Mexico	42,960	1,286	1,204
Connecticut	119,338	3,531	3,320	New York	584,323	17,536	17,430
Delaware	25,052	750	257	North Carolina	254,224	7,663	7,643
District of Columbia	40,247	1,206	695	North Dakota	26,258	777	377
Florida	425,915	12,729	12,571	Ohio	313,367	9,262	8,378
Georgia	261,474	7,820	6,447	Oklahoma	109,851	3,299	3,132
Hawaii	43,359	1,301	1,216	Oregon	87,486	2,609	3,101
Idaho	29,441	881	516	Pennsylvania	429,290	12,919	10,938
Illinois	299,334	9,003	7,615	Rhode Island	41,009	1,251	1,000
Indiana	188,217	5,640	4,843	South Carolina	139,017	4,175	3,648
Iowa	100,152	2,986	2,875	South Dakota	34,008	1,023	687
Kansas	79,108	2,375	2,302	Tennessee	153,968	4,609	4,120
Kentucky	126,267	3,780	3,226	Texas	588,936	17,574	14,383
Louisiana	128,101	3,836	2,861	Utah	46,843	1,400	1,147
Maine	35,581	1,069	1,155	Vermont	25,332	762	428
Maryland	141,254	4,209	4,102	Virginia	241,971	7,254	6,895
Massachusetts	247,261	7,333	7,959	Washington	141,037	4,280	5,215
Michigan	226,397	6,823	6,092	West Virginia	49,635	1,486	1,341
Minnesota	136,106	4,075	4,181	Wisconsin	148,208	4,471	4,221
Mississippi	93,640	2,792	2,441	Wyoming	13,963	418	123
Missouri	174,248	5,230	5,384	Puerto Rico	38,917	1,157	1,627

The sampling for PUMS GQ persons was originally performed on the ACS sample of GQ persons for each of the years 2011, 2012 and 2013 as follows:

1. GQ persons were sorted within each state by the size of their GQ facility (large vs small), the type of GQ facility, PUMA, demographics (race, Hispanic origin, sex and age), county, tract, and GQ person weight.
2. Systematic sampling was applied as described above under housing units.
3. All selected GQ records were added to the PUMS person sample. All imputed records derived from the selected record were also placed in the PUMS person sample.
4. A placeholder record was also placed in the PUMS HU file for each PUMS GQ person record.

4. DUAL VARIABLES ON MULTIYEAR PUMS

Occasionally response categories used in the ACS data files must change. This may cause a multi-year PUMS file to carry two or more variables to replace the original single variable seen in the 1-year PUMS. This happens because of changes in the classification systems used for analysis of the economy as well as changes in the detailed race, ancestry, place of birth codes and definitions of Public Use Microdata Areas (PUMAs).

4.1 Example 1 – Multiple Occupation Codes

The variable SOCP provides the PUMS version of the Standard Occupational Classification (SOC) were revised by OMB in 2000 and 2010. Later the SOCP values were recollapsing for the ACS 1-year PUMS in 2012. Since 1-year PUMS files must be combined to form multiyear PUMS files, pairs of variables were formed in the multiyear files to distinguish the classification systems. The first time SOCP appeared as a dual vintage variable was in the 2008-2010 3-year ACS PUMS. The 2008-2010 PUMS carried variables SOCP00 (SOCP for the years preceding 2010) and SOCP10 (SOCP for the year 2010).

The 2011-2013 PUMS carries variables SOCP10 (SOCP for the year 2011) and SOCP12 (SOCP for the years 2012 and 2013). In order to use these codes, analysts have to use both variables SOCP10 and SOCP12 in order to represent all eligible records in estimates from the 3-year file. Analysts must consult the 2011-2013 PUMS Data Dictionary, and crosswalk SOCP10 and SOCP12.

4.2 Example 2 – Multiple PUMA Codes

There are two sets of PUMAs on the 2011-2013 ACS PUMS. PUMS records from 2011 have PUMA codes which were created for the 2000 Census 5% PUMS data files. PUMS

records from 2012 and 2013 have PUMA codes based on the 2010 Census data. The 2011 records do not have the 2010 PUMA codes, while the 2012 and 2013 records do not have the 2000 based 5% PUMA codes. This avoids the risk of disclosure of the location of individual housing units or group quarters.

Maps for PUMAs can be found on the Census Bureau's ACS website under "**Geography**" at http://www.census.gov/acs/www/data_documentation/other_resources/. Click on "Other Mapping Resources", then click on the link "2010 Census Public Use Microdata Area (PUMA) Maps". Then click on "Tigerweb Applications", then under "Tigerweb Applications" click on "Tigerweb Decennial". Then on the upper left, find the icon "Layers". Below "Layers" you will find the box "Select Vintage". In this box select 'Census 2010' to display the Census 2010 PUMAs or select 'Census 2000' to display the Census 2000 5% PUMAs. After selecting the vintage, you will have to select "PUMAs, UGAs, ZCTAs", and open the "PUMAs, UGAs, ZCTAs" categories. You will have to zoom in somewhat before you can select the PUMA box and deselect the ZCTA box.

The 2000-based PUMA codes used in the 2011-2013 PUMS file agree with these maps with the following exception: Beginning with the 2006 ACS PUMS files, three Louisiana PUMAs (01801, 01802, and 01905) were combined to form a single pseudo PUMA which has a PUMA code of 77777 on the PUMS file.

The 2011-2013 3-year PUMS and 2009-2013 5-year PUMS have seventeen sets of dual variables since many detailed variables were revised for the 2012 data products. For a complete list of the dual variables, see the Readme document for the 2011-2013 3-year PUMS. Also see the PUMS Data Dictionary for more information on these variables. Both documents are found at http://www.census.gov/acs/www/data_documentation/pums_documentation/.

5. WEIGHTING AND ESTIMATION

5.1 Weighting

Weights for PUMS records are a product of the 1-year ACS weight adjusted for the number of years of sample data, the PUMS subsampling factor, and ratio-estimate factors. The PUMS subsampling factors are the sampling intervals used to sample the PUMS HU or GQ person records within a state. The ratio-estimate factors bring the PUMS estimates into closer agreement with the published ACS estimates for several characteristics explained below.

5.1.1 Group Quarters Person Weighting

The procedure used to assign the weights to the GQ persons is performed independently within state.

The steps are as follows:

1. Initial Weight - The three-year PUMS initial weight is the product of the 1-year ACS unrounded weights for the record divided by three and the PUMS subsampling factor. Each imputed record received the same subsampling factor as its donor interview. .
2. GQ Person Post-stratification Factor - This factor adjusts the GQ person weights so that the weighted sample counts equal published ACS estimates at the state level. The GQ imputed records are not distinguished from the GQ sample records when forming the cells used for the GQ Person Post-stratification Factor Adjustment. Since this adjustment is done at the state level and since noise is added for disclosure avoidance reasons, **only state level PUMS GQ person estimates** will agree with published ACS estimates. This adjustment uses the following groups:

State × Institutional/noninstitutional × Sex × Age Category

3. Rounding - The final GQ person weight is rounded to an integer. Rounding is performed so that the sum of the rounded weights is within one person of the sum of the ACS total GQ person estimate within state.

5.1.2 Housing Unit and Household Person Weighting

The estimation procedure used to assign the HU and person weights is performed independently within each PUMA.

The steps are as follows:

1. Initial Weight for persons and HUs - The 3-year PUMS initial weight is equal to the product of the ACS 1-year final weight for the record and the PUMS subsampling factor divided by three.
2. Person Weighting Factors - The person weights are adjusted to agree better with ACS published estimates for householders, spouses, race, Hispanic origin, sex and age by a series of two steps which are repeated until a stopping criterion is met. This is an iterative proportional fitting or raking process. The person weights are individually adjusted at each step as described below.
 - a) Spouse Equalization/Householder Equalization Raking Factor—This factor is applied to individuals based on the combination of their status of being in a married-couple or unmarried-partner household and whether they are the householder. All persons are assigned to one of four groups:
 1. Householder in a married-couple or unmarried-partner household
 2. Spouse or unmarried partner in a married-couple or unmarried-partner household (non-householder)
 3. Other householder
 4. Other non-householder

The weights of persons in the first two groups are adjusted so that their sums are each equal to the ACS estimate of married-couple or unmarried-partner households using the ACS housing unit weight. The weights of persons in the third group are adjusted so that the sum is equal to the ACS estimate of occupied housing units not having a partner using the housing unit weight. The weights of persons in the fourth group are adjusted to agree with the ACS total population minus the first three groups. The goal of this step is to produce more consistent estimates of spouses or unmarried partners and married-couple and unmarried-partner households while simultaneously producing more consistent estimates of householders, occupied housing units, and households.

b) Demographic Raking Factor—This factor is applied to individuals based on their age, race, sex and Hispanic origin. It adjusts the person weights so that the weighted sample counts equal ACS population estimates by age, race, sex, and Hispanic origin at the PUMA level. Because of collapsing of groups in applying this factor, only total population is assured of agreeing precisely with the published ACS 2011-2013 population estimates at the PUMA level.

This uses the following groups within each PUMA (note that there are 13 Age groupings):

Race / Ethnicity (non-Hispanic White, non-Hispanic Black, non-Hispanic American Indian or Alaskan Native, non-Hispanic Asian, non-Hispanic Native Hawaiian or Pacific Islander, and Hispanic (any race)) \times Sex \times Age Groups.

These two steps are repeated several times until the estimates at the PUMA level achieve their optimal consistency with regard to the spouse and householder equalization. The final Person Weighting Factor is then equal to the product of the factors from all of the iterations of these two adjustments. The unrounded person weight is then equal to the product of Person Weighting Factor times the initial person weight.

3. Rounding of person weights - The person weight after the Person Weighting Factor has been applied is rounded to an integer. Rounding is performed so that the sum of the rounded weights is within one person of the sum of the ACS total person from HU's estimates within state and PUMA.
4. Householder adjustment Factor (HHRF) - This factor applied to occupied housing units is the same as the Person Weighting factor from the person weighting. After this stage, the weight of the housing unit is identical to the unrounded person weight of the householder after the Person Weighting Factor is applied.
5. Housing Unit Control factor - This factor adjusts PUMS housing unit estimates to agree with the published ACS housing unit estimates for housing units with married couples (or partners), occupied housing units without partners and vacant housing units.
6. Rounding of Housing Unit weights - The Housing Unit weight after the Housing Unit Control Factor is applied is rounded to an integer. Rounding is performed so that the sum

of the rounded weights is within one housing unit of the sum of the ACS total HU's estimates within state and PUMA.

For a detailed description of how the original ACS weights are computed see 2011-2013 & 2009-2013 Multiyear Accuracy found on http://www.census.gov/acs/www/data_documentation/documentation_main/

5.2 Estimation

To produce estimates or tabulations of characteristics from the PUMS, add the weights of all persons or HUs that possess the characteristic of interest. For instance, if the characteristic of interest is "total number of black teachers", determine the race and occupation of all persons and cumulate the weights of those who match the characteristics of interest. To get estimates of proportions divide the weighted estimate of persons or HUs with a given characteristic by the weighted estimate of the base. For example, the proportion of "black teachers" is obtained by dividing the weighted estimate of black teachers by the weighted estimate of teachers.

PUMS estimates are expected to be different from published ACS estimates that are based on the full set of data because of the additional sampling. The exception will be characteristics controlled by the ratio-estimate factors.

Note that the housing unit file contains some records with blank weights. These are the GQ placeholder records². The housing unit weights were set to zero for these records since they are not housing units, but persons. For confidentiality reasons, the GQ data are not provided at the level of an address but only at the person-level. All of the GQ person data are included in the PUMS person file except the food stamp reciprocity which are the only data included on the GQ placeholder records in the housing unit file. For food stamp reciprocity estimates of persons in GQs, you will need to match the placeholder records to the person file to get the person weights.

A note to GQ data users. There are limitations to the usefulness of GQ estimates at the PUMA level. The PUMS weighting controls the GQ estimates to agree with the ACS state level estimates. Depending on the application or analysis, GQ data users should consider working with state level estimates rather than PUMAs.

In a limited number of geographies, the ACS PUMS file has suppressed variables affecting PUMS data. This is due to nonsampling error or issues with interpreting the recode. Three variables were affected. In 2012 data, the fertility variable (FER) was suppressed in 59 PUMAs within states Florida, Georgia, Kansas, Montana, North Carolina, Ohio and Texas. Also in 2012 data, the telephone variable (TEL) was suppressed in six PUMAs in Georgia. The complete plumbing facilities recode (PLM) was suppressed in Puerto Rico for both 2012 and 2013 data. In these cases, the nonsampling errors could not be edited or corrected before the publication of the PUMS file.

² To identify HU and GQ placeholder records on the PUMS housing file, see the TYPE variable in the PUMS data dictionary: http://www.census.gov/acs/www/data_documentation/pums_documentation/

Within the PUMAs listed in the user note, the variables FER and TEL were assigned the value '8' to identify them as suppressed due to data problems. In order to estimate the fertility rate or the telephone rate for the states impacted by the suppressed values, use the estimate having the value of '1' divided by the sum of the estimate having the value of '1' and the estimate having the value of '2'. In the examples shown, the fertility rate is the number out of 1000 and the telephone rate is a percent.

$$\text{Fertilityrate} = 1000 * \frac{\sum \text{pwgtp for all cases having FER= '1'}}{\sum \text{pwgtp for all cases having FER='1' or '2'}}$$

$$\text{Telephonerate} = 100 * \frac{\sum \text{wgtp for all cases having TEL= '1'}}{\sum \text{wgtp for all cases having TEL= '1' or '2'}}$$

The variable PLM was assigned the value of '9' in all PUMAs in Puerto Rico to mean not applicable. See Table 6 for a list of PUMA codes affected by the FER and TEL variables.

6. ERRORS IN THE DATA

Every sample survey is subject to two types of error: sampling error and nonsampling error.

6.1 Sampling Error

The data in the ACS products are estimates of the actual figures that would have been obtained by interviewing the entire population using the same methodology. The estimates from the chosen sample also differ from other samples of HUs and persons within those HUs. Sampling error in data arises due to the use of probability sampling, which is necessary to ensure the integrity and representativeness of sample survey results. The implementation of statistical sampling procedures provides the basis for the statistical analysis of sample data.

Estimates made with PUMS data are subject to additional sampling error because the PUMS data consists of a subset of the full ACS sample. Thus standard errors of PUMS estimates can be larger than standard errors that would be obtained using all of the ACS data.

6.2 Nonsampling Error

In addition to sampling error, data users should realize that other types of errors may be introduced during any of the various complex operations used to collect and process survey data. For example, operations such as data entry from questionnaires and editing may introduce error into the estimates. These and other sources of error contribute to the nonsampling error component of the total error of survey estimates. Nonsampling errors may affect the data in two ways. Errors that are introduced randomly increase the variability of the data. Systematic errors, which are consistent in one direction, introduce bias into the results of a sample survey. The Census Bureau protects against the effect of systematic errors on survey estimates by conducting extensive research and evaluation programs on sampling techniques, questionnaire design, and data collection and processing procedures. In addition, an important goal of the ACS is to minimize the amount of nonsampling error introduced through nonresponse for sample HUs.

One way of accomplishing this is by following up on mail nonrespondents during the CATI and CAPI phases.

More information about the control of nonsampling error can be found in 2011-2013 & 2009-2013 Multiyear Accuracy at http://www.census.gov/acs/www/data_documentation/documentation_main/.

7. MEASURING SAMPLING ERROR

Standard error: A measure of the deviation of a sample estimate from the average of all possible samples. Sampling error and some types of nonsampling error are estimated by the standard error. The sample estimate and its estimated standard error permit the construction of interval estimates with a prescribed confidence that the interval includes the average result of all possible samples.

Two methods are provided for calculating the standard errors of PUMS estimates: replicate weights and design factors. Replicate weights have been provided with the ACS PUMS files since the 2005 PUMS. Design factors (a type of generalized variance function) is a method used by the Census 2000 PUMS and also in use by the ACS PUMS since 2000. **It is important to keep in mind that there will be differences between the standard error approximations computed by the two methods.** Generally, using the replicate weights will produce a more accurate estimate of a standard error.

Confidence Intervals: A sample estimate and its estimated standard error may be used to construct confidence intervals about the estimate. These intervals are ranges that will contain the average value of the estimated characteristic that results over all possible samples, with a known probability.

For example, if all possible samples that could result under the PUMS sample design were independently selected and surveyed under the same conditions, and if the estimate and its estimated standard error were calculated for each of these samples, then:

1. Approximately 68 percent of the intervals from one estimated standard error below the estimate to one estimated standard error above the estimate would contain the average result from all possible samples;
2. Approximately 90 percent of the intervals from 1.645 times the estimated standard error below the estimate to 1.645 times the estimated standard error above the estimate would contain the average result from all possible samples.
3. Approximately 95 percent of the intervals from two estimated standard errors below the estimate to two estimated standard errors above the estimate would contain the average result from all possible samples.

These intervals are referred to as 68 percent, 90 percent, and 95 percent confidence intervals, respectively. An example of how to construct a 90 percent confidence interval follows:

Add and subtract 1.645 times the standard error to the estimate to yield the lower and upper bounds of a 90% confidence interval around the estimate (EST).

$$LB = \text{Lower bound} = \text{EST} - 1.645 * \text{SE}(\text{EST})$$

$$UB = \text{Upper bound} = \text{EST} + 1.645 * \text{SE}(\text{EST})$$

The 90% confidence interval is the interval (LB, UB).

Limitations: The user should be careful when computing and interpreting standard errors and confidence intervals.

1. The estimated standard errors included in this data product do not include all portions of the variability due to nonsampling error that may be present in the data. In particular, the standard errors do not reflect the effect of correlated errors introduced by interviewers, coders, or other field or processing personnel. Nor do they reflect the error from imputed values due to missing responses. Thus, the standard errors calculated represent a lower bound of the total error. As a result, confidence intervals formed using these estimated standard errors may not meet the stated levels of confidence (i.e., 68, 90, or 95 percent). Thus, some care must be exercised in the interpretation of the data in this data product based on the estimated standard errors.
2. Zero or small estimates; very large estimates — The value of almost all PUMS characteristics is greater than or equal to zero by definition. For zero or small estimates, use of the method given previously for calculating confidence intervals relies on large sample theory, and may result in negative values which for most characteristics are not admissible. In this case, the lower limit of the confidence interval is set to zero by default. A similar caution holds for estimates of totals close to a control total or estimated proportions near one, where the upper limit of the confidence interval is set to its largest admissible value. In these situations, the level of confidence of the adjusted range of values is less than the prescribed confidence level.

7.1 Approximating Standard Errors with Replicate Weights

Replicate weights can be used to calculate what we refer to as direct standard errors. Standard errors for the published ACS tabulations are calculated using replicate weights. Direct standard errors will often be more accurate than generalized standard errors, although they may be more inconvenient for some users to calculate. The advantage of using replicate weights is that a single formula is used to calculate the standard error of many types of estimates.

Each PUMS housing unit and person record contains 80 replicate weights. These replicate weights were formed from the ACS replicate weights adjusted for PUMS subsampling and ratio adjustments. For any estimate X, 80 replicate estimates are also computed using the replicate

weights. For this discussion, we refer to X as the ‘full sample estimate.’ The first replicate estimate X_1 is computed using the first replicate weight, the second replicate estimate X_2 is computed using the second replicate weight, and so on. Each replicate estimate is computed using the replicate weights in the same way that the full sample estimate X is computed, as described in Section 4.2.

NOTE: When programming the replicate weight standard errors, users will find the eighty replicate weights can be positive, zero or negative. The negative replicate weights are partly due to the addition of the Group Quarters (GQ) population to the full ACS weighting process. Within a weighting cell, GQ estimates were subtracted from population totals, sometimes resulting in negative values for the cell. The cells were collapsed in such a way as to prevent a final cell from being zero or negative for the full sample weights. The full sample weights are never negative. This restriction was not placed on the replicate weights since their only purpose is to represent the variability of the sample. PUMS replicate weights are based on ACS replicate weights so negative values are carried along. Keep in mind that the replicate weights are only to be used to estimate standard errors with the formula provided in the PUMS accuracy document.

The standard error of X can be computed after the replicate estimates X_1 through X_{80} are computed. The standard error is estimated using the sum of squared differences between each replicate estimate X_r and the full sample estimate X . The standard error formula is:

$$SE(X) = \sqrt{\frac{1}{80} \sum_{r=1}^{80} (X_r - X)^2}$$

If X is zero, then use the generalized variance method for zero estimates given in section 6.2, Standard Errors for Totals and Percentages, to approximate the standard error.

The standard error can be used to form a 90% confidence interval around the estimate (X) as follows:

$$\begin{aligned} \text{LB} &= \text{Lower bound} = X - 1.645 * SE(X) \\ \text{UB} &= \text{Upper bound} = X + 1.645 * SE(X) \end{aligned}$$

The 90% confidence interval is the interval (LB, UB).

As mentioned we consider the replicate weight SEs to be more accurate than the design factor SEs. For exceptions, please note the following:

After using replicate weight SEs, some users may notice that occasionally the SE is zero for an estimate. The user may want to know if this is accurate. Except for controlled estimates, all PUMS estimates are based on a sample of the population and should not have a SE of zero. However, if the estimate is a controlled count (or total) such as total population or total GQ population in a state, there is no sampling variability in the estimate. It is expected that the replicate weight SE and MOE will be zero for some controlled estimates.

If your estimate is a median, the replicate weight method may yield a SE of zero. This occurs when several records in the middle of the distribution were rounded to the same value, or when the characteristic contains few records, such as a median based on less than five records. Rounding by respondents, as well as rounding by PUMS edits may mask the variability in the median. In order to yield a more adequate standard error for that case, use the design factor method to estimate the SE of a median.

Examples of PUMS estimates with replicate weight standard errors are found at: http://www.census.gov/acs/www/data_documentation/pums_documentation/.

Users can check national and state level estimates with associated replicate weight standard errors by comparing to values shown in these files.

7.2 Approximating Generalized Standard Errors with Design Factors

7.2.1. Standard Errors for Totals and Percentages

The design factors provided in Tables 5 through 5.52 in the appendix can be used to approximate the standard errors of most sample estimates of *totals* and *proportions*. Design factors are given by subject for the United States, all 50 states, the District of Columbia, and Puerto Rico. The term "subject" refers to a characteristic, such as age for persons and tenure for HUs. The design factors reflect the effects of the actual sample design and estimation procedures used for the ACS. To approximate the standard error for most estimates, use the following formulas:

Total Formula:

$$SE(\hat{Y}) \doteq DF \times \sqrt{\left(\frac{97}{3}\right) \times \hat{Y} \left(1 - \frac{\hat{Y}}{N}\right)}$$

Where:

DF = Design Factor

N = Size of Population in the Geographic Area

\hat{Y} = Estimate of Characteristic Total

Percent Formula:

$$SE(\hat{p}) \doteq DF \times \sqrt{\frac{97}{3B} \times \hat{p}(100 - \hat{p})}$$

Where:

DF = Design Factor

B = Denominator of Estimated Percentage

\hat{p} = Estimated Percentage

The values of N and the design factor can be determined as follows:

1. For the value of N, obtain the number of persons, number of households or number of HUs, respectively for the geography (ies) you are interested in. If the estimate is of HUs then use the number of HUs; if the estimates are of families or households then use the number of households; otherwise use the number of persons.
2. Select the appropriate table from Tables 5 through 5.52. Use the table for the United States (Table 5) when estimating characteristics for the United States or geographic areas that cover more than one state. Use the table for a specific state (Tables 5.1-5.52) when estimating characteristics for that state or geographic areas that are contained entirely within that state.
3. Then use the selected table to obtain the appropriate design factor for the characteristic; for example, educational attainment or ancestry. If the estimate is a combination of two or more characteristics, we suggest the following guideline: Use the largest design factor for this combination of characteristics. **The only exception to this is for items crossed with race or Hispanic Origin. For an item(s) crossed with race or Hispanic Origin, use the largest design factor not including the race or Hispanic Origin design factor.**

An inspection of the formulas used to calculate the simple random sampling standard errors suggests that when dealing with zero estimates or very small estimates of totals and percentages the standard error estimates approach zero. This is also the case for very large estimates of totals and percentages. Zero or small estimates, like any other sample estimates, are still subject to sampling variability and therefore an estimated standard error of zero or close to zero is not adequate. Use one of the following procedures for estimates of this type:

1. **An estimated total is less than 425 or within 425 of the total size of the tabulation area.** Use a basic standard error of 142 multiplied by the design factor for the type of estimate.
2. **For estimated percentages that are less than 2 or greater than 98.** Use a value of 2 for the estimated percentage in the percent formula.
3. **The denominator of a percentage is zero.** There are no sample observations available to compute an estimate of a proportion or an estimate of its standard error.

7.2.2. Standard Errors for Sums and Differences

For the sum or difference between two estimates, the standard error is approximately the square root of the sum of the two individual standard errors squared:

$$SE(\bar{X} + \bar{Y}) = SE(\bar{X} - \bar{Y}) = \sqrt{[SE(\bar{X})]^2 + [SE(\bar{Y})]^2}$$

This method is, however, an approximation as the two estimates of interest in a sum or a difference are likely to be correlated. If the two quantities X and Y are positively correlated, this method underestimates the standard error of the sum of X and Y and overestimates the standard error of the difference between the two estimates. If the two estimates are negatively correlated,

this method overestimates the standard error of the sum and underestimates the standard error of the difference.

7.2.3. Standard Errors for Ratios

Frequently, the statistic of interest is the ratio of two variables, where the numerator is not a subset of the denominator. An example is the ratio of students to teachers in public elementary schools. The standard error of the ratio between two sample estimates is estimated as follows:

$$SE\left(\frac{\hat{X}}{\hat{Y}}\right) = \left(\frac{\hat{X}}{\hat{Y}}\right) \times \sqrt{\frac{[SE(\hat{X})]^2}{\hat{X}^2} + \frac{[SE(\hat{Y})]^2}{\hat{Y}^2}}$$

If the ratio is a proportion, that is, the numerator is a subset of the denominator, then follow the procedure outlined in the section Standard Errors for Totals and Percentages.

7.2.4. Standard Errors for Medians

The sampling variability of an estimated median depends on the form of the distribution and the size of its base. The standard error of an estimated median is approximated by constructing a 68 percent confidence interval. Estimate the 68 percent confidence limits of a median based on sample data using the following procedure.³

1. Obtain the weighted frequency distribution for the selected variable using user-defined categorical values. Cumulate these frequencies to yield the base. In general, variables pertaining to income could use a category as small as \$2,500, for example \$0-\$2,499, \$2,500-\$4,999, etc. In Example 3 in Section 7.3.3, only sixteen rows are used (for simplicity) which causes the income category widths to be larger than ideal. Other variables such as gross rent should use smaller category widths than the income variables.
2. Determine the standard error of a 50 percent proportion using the formula in the section Standard Errors for Totals and Percentages.

$$SE(50 \text{ percent}) = DF \times \sqrt{\frac{97}{3B} \times 50^2}$$

3. Subtract from and add to 50 percent the standard error determined in step 2.

³ The design factor method shown here for medians is preferred over the replicate weight method whenever the replicate weight method gives a standard error of zero. This may happen due to having several records in the middle of the range that have exactly the same value. Be aware that PUMS dollar values are rounded to the nearest 100 for values between 1,000 and 50,000 and rounded to the nearest 1,000 above 50,000. This increases the number of respondents with exactly the same value. The amount of rounding done by respondents is unknown, but could be substantial. Since rounding may cause the number of records with exactly the same value to increase, and might cause all 80 replicates to yield the same median, the replicate weight formula can give a standard error of zero. To avoid this, it is possible to calculate the medians using a categorical method with linear interpolation for all 80 replicates, OR simply use the design factor method to estimate the standard errors.

$$p_{\text{lower}} = 50 - \text{SE}(50 \text{ percent})$$

$$p_{\text{upper}} = 50 + \text{SE}(50 \text{ percent})$$

4. Determine the categories in the distribution that contain p_{lower} and p_{upper} . If p_{lower} and p_{upper} fall in the same category, follow step 5. If p_{lower} and p_{upper} fall in different categories, go to step 6.
5. If p_{lower} and p_{upper} fall in the same category, do the following:
 - Define A1 as the smallest value in that category.
 - Define A2 as the smallest value in the next (higher) category.
 - Define C1 as the cumulative percent of units strictly less than A1.
 - Define C2 as the cumulative percent of units strictly less than A2.

Use the following formulas to determine the lower and upper bounds for a confidence interval about the median:

$$\text{Lower Bound} = \left[\frac{p_{\text{lower}} - C1}{C2 - C1} \right] \times (A2 - A1) + A1$$

$$\text{Upper Bound} = \left[\frac{p_{\text{upper}} - C1}{C2 - C1} \right] \times (A2 - A1) + A1$$

6. If p_{lower} and p_{upper} fall in different categories, do the following:
 - For the category containing p_{lower} : Define A1, A2, C1, and C2 as described in step 5. Use these values and the formula in step 5 to obtain the lower bound.
 - For the category containing p_{upper} : Define new values for A1, A2, C1, and C2 as described in step 5. Use these values and the formula in step 5 to obtain the upper bound.
7. Use the lower and upper bounds determined in steps 5 or 6 to calculate the standard error of the median.

$$\text{SE}(\text{median}) = \frac{1}{2} \times (\text{Upper Bound} - \text{Lower Bound})$$

7.2.5. Standard Errors for Means

A mean is defined here as the average quantity of some characteristic (other than the number of people, HUs, households, or families) per person, housing unit, household, or family. For example, a mean could be the average annual income of females age 25 to 34. The standard error of a mean can be approximated by the formula below. Because of the approximation used in developing this formula, the estimated standard error of the mean obtained from this formula will generally underestimate the true standard error.

$$SE(\bar{Y}) = DF \times \sqrt{\frac{97}{3B} \times s^2}$$

Where: B is the base (denominator) of the mean, and s^2 is the sample variance of the characteristic based on weighted data. The value of s^2 can be computed using the formula:

$$s^2 = \frac{\sum_{i=1}^n w_i y_i^2 - (\sum_{i=1}^n w_i y_i)^2 / \sum_{i=1}^n w_i}{(\sum_{i=1}^n w_i) - 1}$$

Where:

w_i is the weight of the i^{th} sample record

y_i is the value of the characteristic for the i^{th} sample record

n is the number of sample records

Note that $\sum_{i=1}^n w_i$ is the weighted estimate of persons/HUs in the sample (ex. the number of females age 25 to 34, and $\sum_{i=1}^n w_i y_i$ is the weighted aggregate estimate for the characteristic of interest (ex. the aggregate income of females age 25 to 34).

7.3 Examples of Standard Error Calculations using Generalized Standard Error Formulas

We will present some examples based on the 2011-2013 PUMS data to demonstrate the use of the generalized standard error formulas.

7.3.1 Example 1 – Using Design Factors to Estimate the Standard Error of a Total

The estimated number of people 15 years or over who were never married is 2,111,426 from the PUMS data for the state of Virginia. To calculate the standard error, we use the total formula given in the section Standard Errors for Totals and Percentages. In this formula, Y is our estimate of 2,111,426 and N is the total PUMS population for the state of Virginia, which is 8,184,299. The design factor (from Table 5.47) for “Marital Status” is 1.4.

$$SE = 1.4 \times \sqrt{\frac{97}{3} \times 2,111,426 \times \left(1 - \frac{2,111,426}{8,184,299}\right)} = 9,964.32$$

To calculate the lower and upper bounds of the 90 percent confidence interval around 2,111,426 using the standard error, multiply 9,964.32 by 1.645, then add and subtract the product from 2,111,426. Thus the 90 percent confidence interval for this estimate is [2,111,426 - 1.645(9,964.32)] to [2,111,426 + 1.645(9,964.32)] or 2,095,035 to 2,127,817.

7.3.2 Example 2 – Using Design Factors to Estimate the Standard Error of a Proportion or Percentage

The estimated percent of people 25 years or over with a bachelor’s degree or higher in Louisiana is 22.0021 = (100 times 662,481 / 3,010,988) from the PUMS data. To calculate the standard error, we use the percent formula given in the section Standard Errors for Totals and

Percentages. Use the denominator of the percentage, 3,010,988 in the formula. The design factor (from Table 5.19) for “Educational Attainment” is 1.5.

$$SE = 1.5 \times \sqrt{\frac{97}{3 \times 3,010,988} \times 22.0021 \times (100 - 22.0021)} = 0.2036$$

To calculate the lower and upper bounds of the 90 percent confidence interval around 22.0021 percent using the standard error, multiply 0.2036 by 1.645, then add and subtract the product from 22.0021. Thus the 90 percent confidence interval for this estimated percentage is [22.0021 - 1.645(0.2036)] to [22.0021 + 1.645(0.2036)] or 21.67 to 22.34.

7.3.3 Example 3 – Calculating the Standard Error of a Median

Table 3 below shows a weighted frequency distribution for adjusted household income in Massachusetts.

Table 3: PUMS Distribution of Adjusted Household Income in Massachusetts

Adjusted Household Income	Frequency	Cumulative Frequency	Cumulative Percent
Less than \$10,000	161,616	161,616	6.39%
\$10,000 to \$14,999	134,615	296,231	11.72%
\$15,000 to \$19,999	115,211	411,442	16.27%
\$20,000 to \$24,999	110,244	521,686	20.63%
\$25,000 to \$29,999	97,830	619,516	24.50%
\$30,000 to \$34,999	100,874	720,390	28.49%
\$35,000 to \$39,999	92,488	812,878	32.15%
\$40,000 to \$44,999	90,625	903,503	35.73%
\$45,000 to \$49,999	86,561	990,064	39.15%
\$50,000 to \$59,999	170,342	1,160,406	45.89%
\$60,000 to \$74,999	243,162	1,403,568	55.51%
\$75,000 to \$99,999	315,906	1,719,474	68.00%
\$100,000 to \$124,999	239,953	1,959,427	77.49%
\$125,000 to \$149,999	166,891	2,126,318	84.09%
\$150,000 to \$199,999	191,126	2,317,444	91.65%
\$200,000 or more	211,145	2,528,589	100.00%

- Determine the standard error of a 50 percent proportion, using as the denominator the cumulative sum of the weighted frequencies, 2,528,589. For this example, the design factor for household income is 1.5 from Table 5.22.

$$SE(50 \text{ percent}) = 1.5 \times \sqrt{\frac{97}{3 \times 2,528,589} \times 50^2} = 0.27$$

- Calculate p_{lower} and p_{upper} .

$$p_{lower} = 50 - SE(50 \text{ percent}) = 49.73$$

$$p_{upper} = 50 + SE(50 \text{ percent}) = 50.27$$

- Determine the categories that contain p_{lower} and p_{upper} . The first category with a cumulative percentage that is greater than 49.73 is \$60,000 to \$74,999. The first category with a cumulative percentage that is greater than 50.27 is \$60,000 to \$74,999. Since p_{lower} and p_{upper} fall in the same category, follow the instructions given in step 5 of the section Standard Errors for Medians.
- Define A_1 , A_2 , C_1 , and C_2 : $A_1 = 60,000$, $A_2 = 75,000$, $C_1 = 45.89$ and $C_2 = 55.51$. Calculate the lower bound and upper bound using these values.

$$Lower \ Bound = \left[\frac{49.73 - 45.89}{55.51 - 45.89} \right] \times (75,000 - 60,000) + 60,000 = 65,987.53$$

$$Upper \ Bound = \left[\frac{50.27 - 45.89}{55.51 - 45.89} \right] \times (75,000 - 60,000) + 60,000 = 66,829.52$$

- Finally, calculate the standard error of the median:

$$SE(\text{median}) = \frac{1}{2} \times (65,987.53 - 66,829.52) = 421.00$$

7.3.4 Example 4 – Calculating the Standard Error of a Mean

Suppose we wish to estimate mean adjusted person income of females age 25 to 34 in Alabama. Table 4 below summarizes the computation of the terms in the formula for s^2 . The PUMS data for Alabama has 7,743 records for females age 25 to 34 that have a non-missing value for person income.

Table 4: Computations for Mean Adjusted Person Income of Females Age 25 to 34 in Alabama

Sample Record	y_i	w_i	$w_i y_i$	$w_i y_i^2$
1	21,092	7	147,646	3,114,189,929
2	21,092	20	421,846	8,897,685,512
3	9,492	49	465,085	4,414,364,225
4	64,331	34	2,187,269	140,710,223,108
.				
.				
7,743	0	29	0	0
Total		313,985	6,435,080,971	293,727,992,217,993

Note: Data from 2011-2013 PUMS. The inflation-adjusted income shown in column 2 was the person income multiplied by the ADJINC variable. Unrounded adjusted income was used to compute the products in the third and fourth columns.

The mean adjusted income is:

$$\bar{Y} = \frac{6,435,080,971}{313,985} = 20,494.87$$

See the section Standard Errors for Means for the formula for s^2 , computed as follows:

$$\frac{293,727,992,217,993 - (6,435,080,971)^2/313,985}{313,985 - 1} = 515,446,202$$

The design factor for person income in Alabama, from Table 5.1, is 1.6. The standard error of the mean can now be calculated:

$$SE(\bar{Y}) = 1.6 \times \sqrt{\frac{97}{3 \times 313,985} \times 515,446,202} = 369$$

8. WORKING WITH DOLLAR AMOUNTS

Dollar variables must be adjusted into a common year before using them to form estimates. Generally, the older years are adjusted to the most recent year covered by the analysis. Data in the 2011-2013 PUMS were collected over three years, so the adjustment will inflate 2011 and 2012 dollars into 2013 values.

8.1 Adjustment Factors on the PUMS File

The PUMS data dictionary for 2011-2013 describes two adjustment factors on the 3-year file that put dollar values into 2013 dollars:

ADJINC – inflation adjustment factor for income variables, such as household income, self-employment income, retirement income and wages.

ADJHSG – inflation adjustment factor for most housing dollar variables, such as utility costs, rent, food stamps, and condominium fees.

For more details, see the PUMS Data Dictionary at http://www.census.gov/acs/www/data_documentation/pums_documentation/.

For example, multiply the household income variable by ADJINC to adjust household income into 2013 dollars. The reason this adjustment is needed is because interviews in the ACS were conducted throughout the year for a reference period that included twelve previous months. Application of the adjustment factor will convert amounts to 2013 dollars.

For example, multiply ADJHSG times the monthly rent to adjust rent into 2013 dollars. All records get this adjustment, although the records interviewed in 2013 have a factor of 1.

Note that the values of ADJINC and ADJHSG are the same for all sample cases from the same year. This is for disclosure avoidance reasons, that is, so that the month of interview cannot be identified by the adjustment factor.

8.2 Comparing PUMS Files From Different Periods

When comparing dollar estimates from the 2011-2013 PUMS file to estimates from previous years, an additional adjustment is necessary to convert the older estimates into dollars from the current year. We use the CPI-U-RS adjustment factors from the Bureau of Labor Statistics. These factors can be found in the first table in the PDF file at <http://www.bls.gov/cpi/cpirsai1978-2013.pdf>. [For example, to express year 2000 dollars in terms of 2013 dollars, multiply the 2000 dollars by $342.1/252.9 = 1.3527$].

9. REFERENCES

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Table 5. Design Factors for Calculating PUMS Standard Errors - United States

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.7
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	3.3
Age	1.1
Sex	1.1
Population of Two or More Races	2.5
White Alone	1.8
Black or African American Alone	1.0
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.3
Marital Status	1.5
Marital History	1.5
Relationship	1.7
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	3.1
School Enrollment, Level of School, Type of School, and Field of Degree	1.5
Educational Attainment	1.7
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.3
Employment/Work Status	1.5
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.4
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.5

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.6
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.6
Race of Householder	1.5
Household, Family or Nonfamily Income	1.6
Person Earnings/Income	1.6
Type of Household Income	1.3
Poverty Status (Persons)	2.6
Poverty Status (Families/Households)	1.7
Ratio of Income to Poverty Level	2.9
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	2.3
Health Insurance	1.3
HOUSING	
Households/Occupied Housing Units	2.7
Family Type, Household Type, and Household Size	1.7
Households by Presence of Nonrelatives	2.4
Unmarried Partner Households	1.7
Tenure	1.8
Vacant	2.1
Rooms and Bedrooms	1.6
Occupants per Room	1.7
Units in Structure	1.9
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.6
Vehicles Available	1.6
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.7
Meals Included in Rent	1.8
Inclusion of Utilities in Rent	1.6
Value	1.5
Mortgage Status and Selected Monthly Owner Costs	1.5
Selected Physical and Financial Conditions	1.7

Table 5.1 Design Factors for Calculating PUMS Standard Errors - Alabama

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.1
Population by Tenure	2.7
Age	1.1
Sex	1.0
Population of Two or More Races	1.9
White Alone	1.2
Black or African American Alone	1.0
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.5
Marital Status	1.6
Marital History	1.4
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.7
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.3
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.2 Design Factors for Calculating PUMS Standard Errors - Alaska

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.0
Population by Tenure	2.6
Age	1.4
Sex	1.2
Population of Two or More Races	2.1
White Alone	1.1
Black or African American Alone	1.4
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.6
Hispanic or Latino	2.2
Marital Status	1.5
Marital History	1.0
Relationship	1.9
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.7
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	2.2
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.7
Educational Attainment	1.7
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.7
Disability Status	1.0
Employment/Work Status	1.1
Industry, Occupation, and Class of Worker	1.8
Travel Time to Work	1.9
Means of Transportation to Work	1.8
Place of Work	1.4
Time Leaving Home to go to Work	1.9
Private Vehicle Occupancy	1.9
Work Experience, Hours Worked per Week, and Weeks Worked	1.6

Characteristics	Design Factor
Number of Workers in Family	1.6
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.6
Age of Own Children by Living Arrangements and Employment Status of Parents	2.1
Age of Householder	1.4
Race of Householder	1.7
Household, Family or Nonfamily Income	1.7
Person Earnings/Income	1.7
Type of Household Income	1.7
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.9
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.4
Family Type, Household Type, and Household Size	1.7
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.8
Tenure	1.6
Vacant	1.5
Rooms and Bedrooms	1.7
Occupants per Room	1.7
Units in Structure	1.8
Year Structure Built and Year Householder Moved Into Unit	1.7
House Heating Fuel	1.6
Telephone Service Available	1.3
Vehicles Available	1.7
Plumbing Facilities and Kitchen Facilities	1.4
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.7
Meals Included in Rent	1.7
Inclusion of Utilities in Rent	1.7
Value	1.6
Mortgage Status and Selected Monthly Owner Costs	1.6
Selected Physical and Financial Conditions	1.4

Table 5.3 Design Factors for Calculating PUMS Standard Errors - Arizona

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	3.0
Age	1.3
Sex	1.4
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.4
Marital Status	1.6
Marital History	1.5
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.9
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.3
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.4 Design Factors for Calculating PUMS Standard Errors - Arkansas

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	1.3
Population by Tenure	2.5
Age	1.1
Sex	1.0
Population of Two or More Races	1.8
White Alone	1.1
Black or African American Alone	1.0
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.1
Marital Status	1.3
Marital History	1.3
Relationship	1.7
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.2
Language Spoken at Home and Ability to Speak English	1.0
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.8
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.2
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.7
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.4
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.8
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.6
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.0
HOUSING	
Households/Occupied Housing Units	1.8
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.8
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.5 Design Factors for Calculating PUMS Standard Errors - California

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	3.0
Age	1.3
Sex	1.6
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.4
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	2.0
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.7
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.4
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.6 Design Factors for Calculating PUMS Standard Errors - Colorado

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.8
Age	1.1
Sex	1.5
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.5
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.4
Relationship	1.8
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.8
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.4
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.1
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.7 Design Factors for Calculating PUMS Standard Errors - Connecticut

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.5
Age	1.1
Sex	1.1
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.5
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.1
Hispanic or Latino	2.2
Marital Status	1.3
Marital History	1.3
Relationship	1.5
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.2
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.1
Period of Military Service	1.3
Disability Status	1.2
Employment/Work Status	1.2
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.4
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.6
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	2.0
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.5

Table 5.8 Design Factors for Calculating PUMS Standard Errors - Delaware

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.8
Age	1.1
Sex	1.4
Population of Two or More Races	2.0
White Alone	2.0
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.2
Marital Status	1.5
Marital History	1.4
Relationship	1.8
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.7
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	2.0
Age of Householder	1.3
Race of Householder	1.3
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.6
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.4
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.4
Occupants per Room	1.5
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.5
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.7
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.5

Table 5.9 Design Factors for Calculating PUMS Standard Errors - District of Columbia

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.0
Population by Tenure	2.4
Age	1.2
Sex	1.4
Population of Two or More Races	1.8
White Alone	1.6
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.7
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	1.7
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.3
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.8
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.4
Tenure	1.4
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.4
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.4
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.4

Table 5.10 Design Factors for Calculating PUMS Standard Errors - Florida

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	3.0
Age	1.3
Sex	1.6
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.1
Hispanic or Latino	2.1
Marital Status	1.6
Marital History	1.5
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	2.0
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.11 Design Factors for Calculating PUMS Standard Errors - Georgia

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	3.0
Age	1.1
Sex	1.0
Population of Two or More Races	2.2
White Alone	1.7
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.5
Marital Status	1.6
Marital History	1.4
Relationship	1.8
Ancestry	1.9
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.5

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.6
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.12 Design Factors for Calculating PUMS Standard Errors - Hawaii

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	3.0
Age	1.2
Sex	1.5
Population of Two or More Races	2.2
White Alone	1.5
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.0
Hispanic or Latino	2.1
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.4
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.4
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.4
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.3
Poverty Status (Persons)	1.6
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.7
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.13 Design Factors for Calculating PUMS Standard Errors - Idaho

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.9
Age	1.1
Sex	1.2
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.7
Hispanic or Latino	2.1
Marital Status	1.5
Marital History	1.4
Relationship	1.8
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.7
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.3
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.5

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.3
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.8
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.2
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.4
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.14 Design Factors for Calculating PUMS Standard Errors - Illinois

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.8
Age	1.1
Sex	1.2
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.1
Marital Status	1.5
Marital History	1.4
Relationship	1.7
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.3
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.15 Design Factors for Calculating PUMS Standard Errors - Indiana

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.7
Age	1.1
Sex	1.0
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.4
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.6
Hispanic or Latino	2.5
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.6
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.8
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.4
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.3
Poverty Status (Persons)	1.5
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.0
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.3
Unmarried Partner Households	1.5
Tenure	1.4
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.4
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	2.1
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.16 Design Factors for Calculating PUMS Standard Errors - Iowa

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.3
Population in Households by Race/Hispanic Origin of Householder	1.9
Population by Tenure	2.4
Age	1.0
Sex	1.0
Population of Two or More Races	1.8
White Alone	1.4
Black or African American Alone	1.4
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.0
Marital Status	1.3
Marital History	1.3
Relationship	1.6
Ancestry	1.9
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.0
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.2
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.5
Means of Transportation to Work	1.6
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.1
Race of Householder	1.5
Household, Family or Nonfamily Income	1.3
Person Earnings/Income	1.4
Type of Household Income	1.3
Poverty Status (Persons)	1.2
Poverty Status (Families/Households)	1.6
Ratio of Income to Poverty Level	2.3
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.6
Family Type, Household Type, and Household Size	1.3
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.4
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.3
Telephone Service Available	1.3
Vehicles Available	1.3
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.4
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.4
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.17 Design Factors for Calculating PUMS Standard Errors - Kansas

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.4
Age	1.1
Sex	1.2
Population of Two or More Races	1.9
White Alone	1.9
Black or African American Alone	1.5
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.1
Marital Status	1.5
Marital History	1.4
Relationship	1.7
Ancestry	1.9
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.2
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.4
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.3
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.5
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.4
Type of Household Income	1.2
Poverty Status (Persons)	1.5
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.4
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.1
Family Type, Household Type, and Household Size	1.4
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.5
Tenure	1.3
Vacant	1.7
Rooms and Bedrooms	1.4
Occupants per Room	1.4
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.3
House Heating Fuel	1.4
Telephone Service Available	1.3
Vehicles Available	1.3
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.5
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.2
Selected Physical and Financial Conditions	1.5

Table 5.18 Design Factors for Calculating PUMS Standard Errors - Kentucky

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.8
Age	1.1
Sex	1.0
Population of Two or More Races	1.9
White Alone	1.5
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.7
Hispanic or Latino	2.1
Marital Status	1.3
Marital History	1.3
Relationship	1.6
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.2
Language Spoken at Home and Ability to Speak English	1.0
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.6
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.6
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.0
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.4
Telephone Service Available	1.5
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	2.1
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.19 Design Factors for Calculating PUMS Standard Errors - Louisiana

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.8
Age	1.1
Sex	1.2
Population of Two or More Races	1.9
White Alone	1.1
Black or African American Alone	1.1
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.3
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.7
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.20 Design Factors for Calculating PUMS Standard Errors - Maine

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.1
Population by Tenure	2.4
Age	1.0
Sex	1.0
Population of Two or More Races	1.4
White Alone	1.0
Black or African American Alone	1.5
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.6
Hispanic or Latino	2.2
Marital Status	1.4
Marital History	1.4
Relationship	1.7
Ancestry	1.8
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.6
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.5
Means of Transportation to Work	1.4
Place of Work	1.5
Time Leaving Home to go to Work	1.4
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.1
Race of Householder	1.5
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.4
Type of Household Income	1.3
Poverty Status (Persons)	1.3
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.3
Family Type, Household Type, and Household Size	1.4
Households by Presence of Nonrelatives	1.8
Unmarried Partner Households	1.5
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.6
Occupants per Room	1.6
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.4
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.4
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.5
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.6

Table 5.21 Design Factors for Calculating PUMS Standard Errors - Maryland

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	3.0
Age	1.1
Sex	1.5
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.4
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.6
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.22 Design Factors for Calculating PUMS Standard Errors - Massachusetts

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.1
Population by Tenure	2.5
Age	1.1
Sex	1.2
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.5
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.0
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.23 Design Factors for Calculating PUMS Standard Errors - Michigan

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.3
Population in Households by Race/Hispanic Origin of Householder	1.8
Population by Tenure	2.5
Age	1.1
Sex	1.2
Population of Two or More Races	1.9
White Alone	1.7
Black or African American Alone	1.5
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.7
Hispanic or Latino	2.0
Marital Status	1.3
Marital History	1.3
Relationship	1.6
Ancestry	1.8
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.6
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.4
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.3
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.2
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.5
Means of Transportation to Work	1.4
Place of Work	1.3
Time Leaving Home to go to Work	1.4
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.2
Race of Householder	1.4
Household, Family or Nonfamily Income	1.3
Person Earnings/Income	1.4
Type of Household Income	1.2
Poverty Status (Persons)	1.6
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.4
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.5
Family Type, Household Type, and Household Size	1.3
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.4
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.4
Occupants per Room	1.5
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.3
House Heating Fuel	1.2
Telephone Service Available	1.3
Vehicles Available	1.3
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.3
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.2
Selected Physical and Financial Conditions	1.4

Table 5.24 Design Factors for Calculating PUMS Standard Errors - Minnesota

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.0
Population by Tenure	2.7
Age	1.3
Sex	1.0
Population of Two or More Races	2.0
White Alone	1.8
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.1
Hispanic or Latino	2.3
Marital Status	1.4
Marital History	1.2
Relationship	1.1
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.9
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.8
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.5
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.6
Age of Householder	1.1
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.4
Poverty Status (Persons)	1.4
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.6
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.7
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.8
Unmarried Partner Households	1.8
Tenure	1.4
Vacant	1.5
Rooms and Bedrooms	1.6
Occupants per Room	1.6
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.2
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.4
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.6

Table 5.25 Design Factors for Calculating PUMS Standard Errors - Mississippi

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	1.0
Population by Tenure	2.7
Age	1.1
Sex	1.0
Population of Two or More Races	2.2
White Alone	1.0
Black or African American Alone	1.0
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.5
Hispanic or Latino	2.1
Marital Status	1.3
Marital History	1.3
Relationship	1.7
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.4
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.2
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.0
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.4
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.26 Design Factors for Calculating PUMS Standard Errors - Missouri

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.6
Age	1.1
Sex	1.3
Population of Two or More Races	1.9
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.1
Marital Status	1.5
Marital History	1.4
Relationship	1.7
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.4
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6

Characteristics	Design Factor
Work Experience, Hours Worked per Week, and Weeks Worked	1.3
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.3
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.6
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.5

Table 5.27 Design Factors for Calculating PUMS Standard Errors - Montana

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.0
Population by Tenure	2.3
Age	1.0
Sex	1.0
Population of Two or More Races	1.8
White Alone	1.0
Black or African American Alone	1.4
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.0
Hispanic or Latino	2.3
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	1.8
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.2
Language Spoken at Home and Ability to Speak English	1.0
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.6
Residence 1 Year Ago	2.3
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.3
Disability Status	1.0
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.5
Means of Transportation to Work	1.4
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.4
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.5
Type of Household Income	1.3
Poverty Status (Persons)	1.2
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.3
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.5
Family Type, Household Type, and Household Size	1.4
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.9
Tenure	1.3
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.3
Telephone Service Available	1.3
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.6
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.4

Table 5.28 Design Factors for Calculating PUMS Standard Errors - Nebraska

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.2
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.3
Age	1.0
Sex	1.0
Population of Two or More Races	2.1
White Alone	2.3
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.3
Hispanic or Latino	2.1
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	1.7
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.2
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.3
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.2
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.3
Travel Time to Work	1.5
Means of Transportation to Work	1.6
Place of Work	1.2
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.1
Race of Householder	1.5
Household, Family or Nonfamily Income	1.3
Person Earnings/Income	1.4
Type of Household Income	1.2
Poverty Status (Persons)	1.3
Poverty Status (Families/Households)	1.3
Ratio of Income to Poverty Level	2.3
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.7
Family Type, Household Type, and Household Size	1.3
Households by Presence of Nonrelatives	1.7
Unmarried Partner Households	1.8
Tenure	1.3
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.2
Telephone Service Available	1.3
Vehicles Available	1.3
Plumbing Facilities and Kitchen Facilities	1.8
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.4
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.4
Value	1.2
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.5

Table 5.29 Design Factors for Calculating PUMS Standard Errors - Nevada

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	3.0
Age	1.3
Sex	1.2
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.1
Marital Status	1.6
Marital History	1.5
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.7
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.1
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.30 Design Factors for Calculating PUMS Standard Errors - New Hampshire

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.5
Age	1.1
Sex	1.0
Population of Two or More Races	1.6
White Alone	1.8
Black or African American Alone	1.4
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.7
Hispanic or Latino	2.4
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.8
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.4
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.3
Poverty Status (Families/Households)	1.6
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.0
HOUSING	
Households/Occupied Housing Units	1.6
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.5
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.4
Occupants per Room	1.4
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.5
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.6
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.5

Table 5.31 Design Factors for Calculating PUMS Standard Errors - New Jersey

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.7
Age	1.1
Sex	1.2
Population of Two or More Races	2.5
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.1
Hispanic or Latino	2.1
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.8
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.1
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.1
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.32 Design Factors for Calculating PUMS Standard Errors - New Mexico

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.9
Age	1.1
Sex	1.6
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.5
Relationship	1.8
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.8
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.4
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.1
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.33 Design Factors for Calculating PUMS Standard Errors - New York

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	3.0
Age	1.1
Sex	1.6
Population of Two or More Races	2.2
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.4
Marital Status	1.3
Marital History	1.4
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.3
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.5
Tenure	1.5
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.34 Design Factors for Calculating PUMS Standard Errors - North Carolina

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	3.0
Age	1.1
Sex	1.2
Population of Two or More Races	2.4
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.5
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.1
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.0
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.35 Design Factors for Calculating PUMS Standard Errors - North Dakota

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	1.3
Population by Tenure	2.1
Age	1.0
Sex	1.0
Population of Two or More Races	1.9
White Alone	1.0
Black or African American Alone	1.5
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.0
Hispanic or Latino	1.5
Marital Status	1.4
Marital History	1.4
Relationship	1.4
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.4
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.0
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.4
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.5
Means of Transportation to Work	1.4
Place of Work	1.4
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.3
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.0
Race of Householder	1.4
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.3
Poverty Status (Persons)	1.2
Poverty Status (Families/Households)	1.7
Ratio of Income to Poverty Level	2.2
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.4
Family Type, Household Type, and Household Size	1.4
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.8
Tenure	1.3
Vacant	1.6
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.4
Telephone Service Available	1.2
Vehicles Available	1.6
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.6
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.4

Table 5.36 Design Factors for Calculating PUMS Standard Errors - Ohio

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	1.8
Population by Tenure	2.8
Age	1.1
Sex	1.2
Population of Two or More Races	1.8
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.7
Hispanic or Latino	2.1
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.2
Language Spoken at Home and Ability to Speak English	1.6
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.5
Tenure	1.4
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.6
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.9
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.4
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.4

Table 5.37 Design Factors for Calculating PUMS Standard Errors - Oklahoma

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.3
Population in Households by Race/Hispanic Origin of Householder	2.1
Population by Tenure	2.3
Age	1.2
Sex	1.1
Population of Two or More Races	1.8
White Alone	1.2
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.6
Hispanic or Latino	1.8
Marital Status	1.3
Marital History	1.3
Relationship	1.6
Ancestry	1.7
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.2
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.4
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.2
Disability Status	1.4
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.4
Means of Transportation to Work	1.4
Place of Work	1.5
Time Leaving Home to go to Work	1.4
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.2
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.1
Race of Householder	1.2
Household, Family or Nonfamily Income	1.3
Person Earnings/Income	1.3
Type of Household Income	1.3
Poverty Status (Persons)	1.4
Poverty Status (Families/Households)	1.3
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.8
Family Type, Household Type, and Household Size	1.3
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.3
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.4
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.3
Telephone Service Available	1.2
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.6
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.3
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.4
Value	1.2
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.4

Table 5.38 Design Factors for Calculating PUMS Standard Errors - Oregon

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.8
Age	1.1
Sex	1.5
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.8
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.4
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.0
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.39 Design Factors for Calculating PUMS Standard Errors - Pennsylvania

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	2.6
Age	1.1
Sex	1.2
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.5
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	1.9
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.7
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.2
Disability Status	1.0
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.5
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.9
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.4
Type of Household Income	1.2
Poverty Status (Persons)	1.6
Poverty Status (Families/Households)	1.7
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.4
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.5
Tenure	1.4
Vacant	1.7
Rooms and Bedrooms	1.4
Occupants per Room	1.6
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.3
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	2.0
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.5
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.4

Table 5.40 Design Factors for Calculating PUMS Standard Errors - Rhode Island

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	1.8
Population by Tenure	2.3
Age	1.1
Sex	1.0
Population of Two or More Races	1.9
White Alone	1.6
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.0
Marital Status	1.3
Marital History	1.2
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.4
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.5
School Enrollment, Level of School, Type of School, and Field of Degree	1.2
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.1
Period of Military Service	1.4
Disability Status	1.2
Employment/Work Status	1.2
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.1
Poverty Status (Persons)	1.5
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.0
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.6
Tenure	1.4
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.4
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	2.0
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.41 Design Factors for Calculating PUMS Standard Errors - South Carolina

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.7
Age	1.1
Sex	1.5
Population of Two or More Races	2.1
White Alone	1.4
Black or African American Alone	1.1
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.4
Marital Status	1.4
Marital History	1.4
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.8
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.3
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.5
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.1
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.42 Design Factors for Calculating PUMS Standard Errors - South Dakota

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.3
Population in Households by Race/Hispanic Origin of Householder	1.3
Population by Tenure	2.1
Age	1.0
Sex	1.0
Population of Two or More Races	1.9
White Alone	1.0
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.1
Hispanic or Latino	1.9
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	1.8
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.4
Language Spoken at Home and Ability to Speak English	1.0
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.4
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.4
Period of Military Service	1.3
Disability Status	1.0
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.4
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.4
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.1
Race of Householder	1.4
Household, Family or Nonfamily Income	1.4
Person Earnings/Income	1.4
Type of Household Income	1.3
Poverty Status (Persons)	1.2
Poverty Status (Families/Households)	1.7
Ratio of Income to Poverty Level	2.3
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.9
Family Type, Household Type, and Household Size	1.3
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.8
Tenure	1.3
Vacant	1.8
Rooms and Bedrooms	1.4
Occupants per Room	1.6
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.3
Telephone Service Available	1.2
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.7
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.4
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.4

Table 5.43 Design Factors for Calculating PUMS Standard Errors - Tennessee

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	3.0
Age	1.1
Sex	1.0
Population of Two or More Races	1.9
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.1
Marital Status	1.4
Marital History	1.4
Relationship	1.8
Ancestry	2.1
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.1
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.44 Design Factors for Calculating PUMS Standard Errors - Texas

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.3
Population by Tenure	3.0
Age	1.4
Sex	1.2
Population of Two or More Races	2.1
White Alone	1.9
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.2
Hispanic or Latino	2.5
Marital Status	1.6
Marital History	1.5
Relationship	1.9
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.5
Language Spoken at Home and Ability to Speak English	1.9
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.5
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.4
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.3
HOUSING	
Households/Occupied Housing Units	2.4
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.4
Unmarried Partner Households	1.6
Tenure	1.6
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.7
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.45 Design Factors for Calculating PUMS Standard Errors - Utah

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.0
Population by Tenure	2.9
Age	1.1
Sex	1.6
Population of Two or More Races	2.1
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.1
Hispanic or Latino	2.5
Marital Status	1.5
Marital History	1.4
Relationship	1.9
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	2.0
Age of Householder	1.3
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.2
HOUSING	
Households/Occupied Housing Units	2.0
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.7
Rooms and Bedrooms	1.5
Occupants per Room	1.4
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.5
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.8
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.46 Design Factors for Calculating PUMS Standard Errors - Vermont

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.3
Population in Households by Race/Hispanic Origin of Householder	1.2
Population by Tenure	2.3
Age	1.0
Sex	1.0
Population of Two or More Races	1.3
White Alone	1.4
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.2
Hispanic or Latino	1.6
Marital Status	1.2
Marital History	1.3
Relationship	1.0
Ancestry	1.6
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.1
Language Spoken at Home and Ability to Speak English	1.4
Linguistic Isolation	1.2
Place of Birth, Year of Entry, and Citizenship Status	1.6
Residence 1 Year Ago	2.0
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.3
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.2
Disability Status	1.2
Employment/Work Status	1.2
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.4
Means of Transportation to Work	1.3
Place of Work	1.3
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.5
Work Experience, Hours Worked per Week, and Weeks Worked	1.2

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.2
Age of Own Children by Living Arrangements and Employment Status of Parents	1.6
Age of Householder	1.0
Race of Householder	1.5
Household, Family or Nonfamily Income	1.3
Person Earnings/Income	1.4
Type of Household Income	1.3
Poverty Status (Persons)	1.2
Poverty Status (Families/Households)	1.3
Ratio of Income to Poverty Level	2.2
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.1
Family Type, Household Type, and Household Size	1.3
Households by Presence of Nonrelatives	1.5
Unmarried Partner Households	1.4
Tenure	1.3
Vacant	1.5
Rooms and Bedrooms	1.4
Occupants per Room	1.3
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.2
Telephone Service Available	1.1
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.3
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.4
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.4
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.3

Table 5.47 Design Factors for Calculating PUMS Standard Errors - Virginia

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.8
Age	1.1
Sex	1.2
Population of Two or More Races	2.1
White Alone	1.6
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.4
Marital Status	1.4
Marital History	1.4
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.7
Age of Householder	1.3
Race of Householder	1.4
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.2
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.2
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.5
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.48 Design Factors for Calculating PUMS Standard Errors - Washington

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.6
Population in Households by Race/Hispanic Origin of Householder	2.2
Population by Tenure	2.8
Age	1.2
Sex	1.4
Population of Two or More Races	2.0
White Alone	1.9
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.8
Hispanic or Latino	2.1
Marital Status	1.4
Marital History	1.4
Relationship	1.8
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.9
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	2.0
Residence 1 Year Ago	2.9
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.4
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.6
Travel Time to Work	1.7
Means of Transportation to Work	1.7
Place of Work	1.5
Time Leaving Home to go to Work	1.7
Private Vehicle Occupancy	1.7
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.4
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.6
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.8
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	2.4
Family Type, Household Type, and Household Size	1.6
Households by Presence of Nonrelatives	2.1
Unmarried Partner Households	1.6
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.6
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.5
House Heating Fuel	1.5
Telephone Service Available	1.5
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	2.2
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.6
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.5

Table 5.49 Design Factors for Calculating PUMS Standard Errors - West Virginia

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	1.9
Population by Tenure	2.4
Age	1.0
Sex	1.0
Population of Two or More Races	1.5
White Alone	1.0
Black or African American Alone	1.1
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.5
Hispanic or Latino	1.7
Marital Status	1.3
Marital History	1.3
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.3
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.8
Residence 1 Year Ago	2.3
School Enrollment, Level of School, Type of School, and Field of Degree	1.2
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.1
Period of Military Service	1.3
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.5
Place of Work	1.4
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.4
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.4
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.3
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.7
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.7
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	2.0
Unmarried Partner Households	1.5
Tenure	1.4
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.4
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.4
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.7
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.5
Inclusion of Utilities in Rent	1.4
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.4

Table 5.50 Design Factors for Calculating PUMS Standard Errors - Wisconsin

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.4
Population in Households by Race/Hispanic Origin of Householder	2.0
Population by Tenure	2.5
Age	1.0
Sex	1.0
Population of Two or More Races	2.1
White Alone	1.4
Black or African American Alone	1.6
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	2.3
Marital Status	1.4
Marital History	1.4
Relationship	1.4
Ancestry	1.7
Grandparents Responsible for Grandchildren	1.8
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.8
Linguistic Isolation	1.3
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.7
School Enrollment, Level of School, Type of School, and Field of Degree	1.4
Educational Attainment	1.5
Armed Forces Status and Veteran Status	1.3
Period of Military Service	1.4
Disability Status	1.0
Employment/Work Status	1.4
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.4

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.5
Age of Own Children by Living Arrangements and Employment Status of Parents	1.6
Age of Householder	1.1
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.3
Poverty Status (Persons)	1.3
Poverty Status (Families/Households)	1.7
Ratio of Income to Poverty Level	2.5
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.6
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.7
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.8
Unmarried Partner Households	1.8
Tenure	1.5
Vacant	1.8
Rooms and Bedrooms	1.5
Occupants per Room	1.5
Units in Structure	1.6
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.5
Telephone Service Available	1.3
Vehicles Available	1.5
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.6
Inclusion of Utilities in Rent	1.6
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.5

Table 5.52 Design Factors for Calculating PUMS Standard Errors - Wyoming

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.1
Population by Tenure	2.4
Age	1.0
Sex	1.0
Population of Two or More Races	1.7
White Alone	1.3
Black or African American Alone	1.4
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	1.9
Hispanic or Latino	1.9
Marital Status	1.5
Marital History	1.3
Relationship	1.7
Ancestry	1.8
Grandparents Responsible for Grandchildren	1.6
Number of Women Who Had a Birth in the Past 12 Months	1.3
Language Spoken at Home and Ability to Speak English	1.4
Linguistic Isolation	1.4
Place of Birth, Year of Entry, and Citizenship Status	1.7
Residence 1 Year Ago	2.3
School Enrollment, Level of School, Type of School, and Field of Degree	1.3
Educational Attainment	1.3
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.3
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.4
Travel Time to Work	1.5
Means of Transportation to Work	1.6
Place of Work	1.3
Time Leaving Home to go to Work	1.5
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.2

Characteristics	Design Factor
Number of Workers in Family	1.5
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.8
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.5
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.2
Poverty Status (Families/Households)	1.5
Ratio of Income to Poverty Level	2.6
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.6
Family Type, Household Type, and Household Size	1.5
Households by Presence of Nonrelatives	1.7
Unmarried Partner Households	1.5
Tenure	1.3
Vacant	1.6
Rooms and Bedrooms	1.5
Occupants per Room	1.4
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.4
House Heating Fuel	1.3
Telephone Service Available	1.4
Vehicles Available	1.4
Plumbing Facilities and Kitchen Facilities	1.6
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.5
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.5
Value	1.4
Mortgage Status and Selected Monthly Owner Costs	1.4
Selected Physical and Financial Conditions	1.4

Table 5.52 Design Factors for Calculating PUMS Standard Errors - Puerto Rico

Characteristics	Design Factor
POPULATION	
Families and Nonfamilies	1.5
Population in Households by Race/Hispanic Origin of Householder	2.1
Population by Tenure	2.7
Age	1.1
Sex	1.0
Population of Two or More Races	2.2
White Alone	2.2
Black or African American Alone	1.2
American Indian or Alaska Native Alone, Asian Alone, Native Hawaiian or Other Pacific Islander Alone, or Some Other Race Alone	2.0
Hispanic or Latino	2.0
Marital Status	1.4
Marital History	1.3
Relationship	1.6
Ancestry	2.0
Grandparents Responsible for Grandchildren	1.7
Number of Women Who Had a Birth in the Past 12 Months	1.1
Language Spoken at Home and Ability to Speak English	1.5
Linguistic Isolation	1.5
Place of Birth, Year of Entry, and Citizenship Status	1.9
Residence 1 Year Ago	2.6
School Enrollment, Level of School, Type of School, and Field of Degree	1.2
Educational Attainment	1.4
Armed Forces Status and Veteran Status	1.2
Period of Military Service	1.4
Disability Status	1.3
Employment/Work Status	1.3
Industry, Occupation, and Class of Worker	1.5
Travel Time to Work	1.6
Means of Transportation to Work	1.6
Place of Work	1.5
Time Leaving Home to go to Work	1.6
Private Vehicle Occupancy	1.6
Work Experience, Hours Worked per Week, and Weeks Worked	1.3

Characteristics	Design Factor
Number of Workers in Family	1.3
Presence of Own Children, Presence of People Under 18 Years, Presence of People 60 Years and Over, and Presence of People 65 Years and Over	1.3
Age of Own Children by Living Arrangements and Employment Status of Parents	1.6
Age of Householder	1.2
Race of Householder	1.5
Household, Family or Nonfamily Income	1.3
Person Earnings/Income	1.5
Type of Household Income	1.2
Poverty Status (Persons)	1.7
Poverty Status (Families/Households)	1.4
Ratio of Income to Poverty Level	2.7
Receipt of Food Stamps and Participation in Free/Reduced Price Meals	1.5
Health Insurance	1.1
HOUSING	
Households/Occupied Housing Units	1.7
Family Type, Household Type, and Household Size	1.4
Households by Presence of Nonrelatives	1.9
Unmarried Partner Households	1.4
Tenure	1.4
Vacant	1.4
Rooms and Bedrooms	1.4
Occupants per Room	1.4
Units in Structure	1.4
Year Structure Built and Year Householder Moved Into Unit	1.3
House Heating Fuel	1.3
Telephone Service Available	1.4
Vehicles Available	1.3
Plumbing Facilities and Kitchen Facilities	1.5
Gross Rent, Gross Rent as a Percentage Of Household Income, and Contract Rent	1.4
Meals Included in Rent	1.4
Inclusion of Utilities in Rent	1.4
Value	1.3
Mortgage Status and Selected Monthly Owner Costs	1.3
Selected Physical and Financial Conditions	1.4

Table 6 - PUMAs With Fertility (FER) and Telephone (TEL) Variables Suppressed for Data Year 2012.

FER Suppressed		TEL Suppressed	
State FIPS code	PUMA codes	State FIPS code	PUMA codes
12	06300	13	02500 - 02700
13	02500	13	02900
13	02800 – 02900	13	03101 - 03102
13	03101 – 03102		
20	01500		
30	00400		
30	00600		
37	01206		
37	01301 – 01302		
37	01400		
39	03900		
39	04000		
39	04101 - 04111		
48	00900		
48	01400		
48	01901		
48	01907		
48	02001		
48	02301 - 02322		
48	05201 – 05204		
48	05301 - 05302		