**U.S. Department of Labor**

Bureau of Labor Statistics
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July 21, 2023

MEMORANDUM FOR: JENNIFER EPPS, Survey Director
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U.S. Bureau of the Census

FROM: ADAM SAFIR, Chief
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SUBJECT: PSUs for the Consumer Expenditure Survey's 2020 Census-Based Sample Design



## I. Introduction

Every ten years the Consumer Expenditure Survey (CE) updates its sample of primary sampling units (PSUs) based on the latest decennial census. The purpose is to make sure CE's sample accurately reflects the latest geographic shifts in the American population. This memo provides a list of the 91 PSUs that were recently selected by the Bureau of Labor Statistics (BLS) for the CE survey based on the 2020 census. They are scheduled to be used over the ten-year period 2025-2034.

The list of PSUs is at the end of the memo (see Appendix 1). It shows the 91 PSUs that were selected, the counties that constitute them, and their populations. The United States has 3,144 counties (or county equivalents) which BLS and the Census Bureau partitioned into 1,492 PSUs, and from which BLS selected 91 of them for CE's sample. The list of added and dropped PSUs also appears at the end of the memo (see Appendix 2).

## II. Overview of CE's Geographic Sample Design

CE's overall geographic sample design remains unchanged from the 2010 census-based sample design. It still consists of the largest core-based statistical areas (CBSAs) in the country, plus a random sample of smaller CBSAs, and non-CBSA areas.[1] The areas are called PSUs and combined they represent the whole country.

There are 1,492 PSUs in the country, and they are still stratified geographically by the nine Census divisions, and demographically by three population size classes – self-representing (S), non-self-representing (N), and rural (R). The "S" PSUs are the largest CBSAs in the country (those with over 2.8 million people); the "N" PSUs are smaller CBSAs (those with under 2.8 million people); and the "R" PSUs are non-CBSA areas. The "R" PSUs were defined by BLS staff by partitioning the counties that are not in CBSAs into clusters of contiguous counties similar in size to CBSAs.

There are 23 "S" PSUs in the sample. They are self-representing, which means they are the only PSUs in their strata, and they were selected with certainty. They consist of the 21 CBSAs with over 2.8 million people, plus Anchorage and Honolulu. The threshold for this class of PSUs was increased from 2.5 million people in the 2010 census-based sample design to 2.8 million people in the 2020 census-based sample design. That keeps the set of self-representing

[1] A Core-Based Statistical Area (CBSA) is a geographic area defined by the Office of Management and Budget for use by federal statistical agencies in collecting, tabulating, and publishing federal statistics. It is a collective term for both metropolitan and micropolitan areas. A metropolitan CBSA has an urban core with 50,000 or more people, and a micropolitan CBSA has an urban core with 10,000 to 50,000 people. CBSAs consist of the county containing the urban core plus the adjacent counties that have a high degree of social and economic integration with the core as measured by commuting ties.

PSUs unchanged. Anchorage and Honolulu are treated as self-representing for publication purposes because their expenditure patterns are different than those of PSUs in the continental United States.

There are 52 “N” PSUs in the sample. They are non-self-representing, and they were randomly selected to represent the rest of the CBSAs or “urban” parts of the country. And there are 16 “R” PSUs in the sample. They are non-self-representing, and they were randomly selected to represent the non-CBSAs or “rural” parts of the country.

The PSU definitions come from the March 2020 CBSA “delineations.” Those delineations reflect concepts from the 2010 decennial census, such as how an “urban core” is defined, but with updated population estimates. They do not reflect new concepts from the 2020 decennial census, such as the new way of defining an urban core. The original plan was to use preliminary CBSA definitions from the 2020 decennial census, but those definitions were not delivered in time to use. As a result, the CE survey will be using the March 2020 CBSA definitions. Those definitions will be used for the whole ten-year period 2025-2034. They will *not* be changed when new definitions become available.

**III. How PSUs Were Selected for the Sample**

After stratifying the complete universe of 1,492 PSUs into nine divisions and three size classes, BLS selected 23 “S” PSUs, 52 “N” PSUs, and 16 “R” PSUs for the sample:

| | | PSU Size Class | | | |
|---|---|---|---|---|---|
| Region | Division | S | N | R | **Total** |
| 1. Northeast | 1. New England | 1 | 4 | 1 | **6** |
| | 2. Middle Atlantic | 2 | 6 | 1 | **9** |
| 2. Midwest | 3. East North Central | 2 | 7 | 2 | **11** |
| | 4. West North Central | 2 | 3 | 3 | **8** |
| 3. South | 5. South Atlantic | 5 | 10 | 3 | **18** |
| | 6. East South Central | 0 | 4 | 2 | **6** |
| | 7. West South Central | 2 | 7 | 2 | **11** |
| 4. West | 8. Mountain | 2 | 4 | 1 | **7** |
| | 9. Pacific | 7 | 7 | 1 | **15** |
| | **Total** | **23** | **52** | **16** | **91** |

As mentioned above, the 23 “S” PSUs are the largest CBSAs in the country, plus Anchorage and Honolulu. They are the CBSAs with over 2.8 million people. They are self-representing, which means no sampling process was used when deciding to include them in the sample.

By contrast, the 52 “N” PSUs are a representative sample of CBSAs with under 2.8 million people. They are non-self-representing, which means they were chosen with a sampling process. In the sampling process, the universe of CBSAs with under 2.8 million people was partitioned into 52 strata based on their Census division, their population, and four variables that research found were correlated with expenditures – income, education, computer ownership, and urbanicity. Then one PSU was selected from each stratum in a semi-random process.

To be more precise, within each division, the “N” PSUs were partitioned into two smaller size classes – those with over 200,000 people, and those with under 200,000 people – and within each of those smaller size classes, the PSUs were stratified by the four variables that research found were correlated with expenditures. The PSUs were stratified into these two size classes to make sure both large and small PSUs were selected for the sample. With stratification completed, a sample of “N” PSUs with over 200,000 people was selected in a two-step process. The first step was determining whether a stratum had a PSU that was already in the sample. If it did, then that PSU was automatically

selected. Otherwise, the second step was randomly selecting a PSU from the stratum with probability proportional to its population. Then a sample of "N" PSUs with under 200,000 people was selected in a three-step process. The first step was determining whether a stratum had a PSU that was already in the sample. If it did, then that PSU was automatically selected. Otherwise, the second step was identifying the PSUs that were geographically close to an "S" PSU or a selected "N" PSU with over 200,000 people. "Geographically close" meant within 20 miles of them, and the purpose of it was to facilitate data collection. And the third step was randomly selecting one of those PSUs with probability proportional to its population. [2]

The 16 "R" PSUs are a representative sample of non-CBSA or "rural" areas. They were selected in a similar three-step semi-random process. After stratifying the "R" PSUs within each Census division by the four variables that research found were correlated with expenditures, the first step was determining whether a stratum had a PSU that was already in the sample. If it did, then that PSU was automatically selected. Otherwise, the second step was identifying the PSUs that were geographically close to an "S" PSU or a selected "N" PSU. Again, "geographically close" meant within 20 miles of them. The third step was randomly selecting one of those PSUs with probability proportional to its population.

## IV. Connecticut

The governor of Connecticut recently asked the Census Bureau to change the definitions of its counties, and the Census Bureau agreed to do it. Since the sample design is based on CBSA definitions from March 2020, which pre-dates the new counties, a mapping was made to link the new counties to the March 2020 CBSAs. This table shows the mapping. It includes both county names and FIPS codes:

**Mapping of Connecticut's New Counties to the March 2020 CBSAs**

| CBSA | Old Definition | New Definition |
|---|---|---|
| Hartford, CT | Hartford, Middlesex, Tolland (09003, 09007, 09013) | Capitol, Lower Connecticut River Valley (09110, 09130) |
| New Haven, CT | New Haven (09009) | South Central Connecticut, Naugatuck Valley (09170, 09140) |
| Bridgeport, CT | Fairfield (09001) | Greater Bridgeport, Western Connecticut (09120, 09190) |
| Torrington, CT | Litchfield (09005) | Northwest Hills (09160) |
| Norwich, CT | New London (09011) | Southeastern Connecticut (09180) |
| Worcester, MA | Windham (09015) | Northeastern Connecticut (09150) |

## V. Alaska and Hawaii

Alaska has four CBSAs (Anchorage, Fairbanks, Juneau, Ketchikan), and Hawaii also has four CBSAs (Honolulu, Hilo, Kahului-Wailuku-Lahaina, Kapaa). The four CBSAs in Alaska were grouped into a single state stratum, and Anchorage was selected with certainty to represent it. Likewise, the four CBSAs in Hawaii were grouped into a single state stratum, and Honolulu was selected with certainty to represent it. These state-level strata were defined by the Consumer Price Index program, and the CE program is using them to be consistent with the CPI program.

[2] The small "N" PSUs (those with under 200,000 people) were required to be geographically close to an "S" PSU or a large "N" PSU in the sample to make data collection easier by allowing field representatives (FRs) to travel from one PSU to another PSU to fill in for another FR when the need arises. For example, when an FR gets sick or goes on vacation. Twenty miles was felt to be a reasonable distance for an FR in one PSU to travel to another PSU, collect data in that PSU, and then return home at the end of the day.

The distance between PSUs was computed from the edge of one PSU to the edge of the other PSU. The edges of the PSUs were determined by starting with their geographic areas, and the latitudes and longitudes of their population centers (their demographic centers, not their geographic centers), and then backing into their radii under the assumption that the PSUs' shapes were circles. The distance between two PSUs was the shortest distance between the two circles. In practice, this edge-to-edge distance was computed as the distance between the two PSUs' centers, minus the sum of the two circles' radii.

Anchorage and Honolulu are classified as self-representing PSUs for publication purposes, but non-self-representing PSUs for the purpose of drawing their samples. That means when drawing their samples, their *stratum* populations should be used as their measure of size.

Alaska also has twenty-five non-CBSA ("rural" or "R") PSUs, and Hawaii has one non-CBSA ("rural" or "R") PSU. They were not included in the Anchorage and Honolulu strata because they are out-of-scope for the CPI program. Instead, they were stratified and treated just like any other non-CBSA PSUs in their division.

## VI. Phase-In/Phase-Out Process

The phase-in/phase-out (PIPO) process will be different in this sample design than in past sample designs. In past sample designs, the old sample of PSUs was dropped at the same time the new sample of PSUs was introduced. Both were done in a single year. However, this time the PIPO process will be done over a three-year period instead of in a one-year period. A few old PSUs will be dropped, and a few new PSUs will be added each year. At the end of the three-year period, the changeover from the old sample design to the new sample design will be complete. The purpose of the longer PIPO period is to smooth out over time the costs associated with hiring and training new field staff.

As mentioned above, there were 91 PSUs in the 2010 census-based sample design, and there will still be 91 PSUs in the 2020 census-based sample design. However, 24 of those PSUs will be changing. The table below shows the number of old PSUs that will be dropped from the sample, and the number of new PSUs that will be added to the sample by PSU size class.

**Number of PSUs Being Dropped from the Old Sample Design And Added to the New Sample Design**

| | S | N | R | Total |
|---|---|---|---|---|
| Number of PSUs in the 2010 census-based sample design | 23 | 52 | 16 | 91 |
| Number of old PSUs being dropped | –0 | –14 | –10 | –24 |
| Number of new PSUs being added | +0 | +14 | +10 | +24 |
| Number of PSUs in the 2020 census-based sample design | 23 | 52 | 16 | 91 |

Here is a list of the 24 PSUs being dropped from the sample, and the 24 PSUs being added to the sample. All 24 of them will be phased-in/phased-out over the three-year period 2025-2027.

| 24 Old PSUs Being Dropped from the Sample, and 24 New PSUs Being Added to the Sample | |
|---|---|
| **Old PSUs Being Dropped** | **New PSUs Being Added** |
| N23E Columbus, OH | N11D Burlington-South Burlington, VT |
| N23G Dayton, OH | N11E Pittsfield, MA |
| N23H Flint, MI | N12G Kingston, NY |
| N23J Frankfort, IN | N12H Chambersburg-Waynesboro, PA |
| N24C Omaha-Council Bluffs, NE-IA | N23K Indianapolis-Carmel-Anderson, IN |
| N24F Brookings, SD | N23L Green Bay, WI |
| N35J Greenville-Anderson-Mauldin, SC | N23M Terre Haute, IN |
| N35K Winston-Salem, NC | N24H St. Cloud, MN |
| N35M Ocala, FL | N35R Gainesville, GA |
| N35O Wilmington, NC | N35S Punta Gorda, FL |
| N35Q Clarksburg, WV | N35T Winchester, VA-WV |
| N36D Huntsville, AL | N49L Sacramento-Roseville-Folsom, CA |
| N36F Meridian, MS | N49M Eugene-Springfield, OR |
| N37E Baton Rouge, LA | N49N Yuba City, CA |
| R12G Susquehanna-Wayne, PA | R12A Delaware-Sullivan, NY |
| R23K Cheboygan-Presque Isle, MI | R23A Hardin-Wyandot, OH |
| R24G Daviess-Gentry-Grundy-Harrison-Mercer-Worth, MO | R24A Crawford-Gasconade-Iron-Washington, MO |
| R24H Cedar-Knox, NE | R24B Meeker-Renville-Sibley, MN |
| R35S McDowell-Mingo-Wyoming, WV | R24C Johnson-Nemaha-Otoe-Pawnee-Richardson, NE |
| R36G Floyd-Johnson-Lawrence-Martin-Pike, KY | R35A Caroline-Essex-King George-Middlesex, VA |
| R36H Carroll-Decatur-Henderson, TN | R35C Lancaster-Northumberland-Richmond-Westmoreland, VA |
| R48G Ravalli, MT | R36A Franklin-Marion-Winston, AL |
| R48H Lincoln, NM | R36B Casey-Marion-Washington, KY |
| R48I Gooding, ID | R48A Daggett-Duchesne, UT |

The exact schedule for the PIPO has been only partially determined at this point. The PSUs being phased-in/phased-out have been determined for 2025, but not for 2026-2027. The basic plan is to phase-in/phase-out 8 PSUs per year as this table shows.

| CE's 3-Year PIPO Schedule | | | | | | |
|---|---|---|---|---|---|---|
| | Dropped PSUs | | | Added PSUs | | |
| | **2025** | **2026** | **2027** | **2025** | **2026** | **2027** |
| "N" PSUs | N23E Columbus, OH | TBD | TBD | N11E Pittsfield, MA | TBD | TBD |
| | N23H Flint, MI | TBD | TBD | N12H Chambersburg, PA | TBD | TBD |
| | N35M Ocala, FL | TBD | | N23K Indianapolis, IN | TBD | |
| | N36D Huntsville, AL | TBD | | N23L Green Bay, WI | TBD | |
| | N36F Meridian, MS | TBD | | N35S Punta Gorda, FL | TBD | |
| | N37E Baton Rouge, LA | TBD | | N49L Sacramento, CA | TBD | |
| "R" PSUs | R48I Gooding, ID | TBD | TBD | R24B Meeker-Renville, MN | TBD | TBD |
| | R48G Ravalli, MT | TBD | TBD | R35A Caroline-Essex, VA | TBD | TBD |
| | | | TBD | | | TBD |
| | | | TBD | | | TBD |
| | | | TBD | | | TBD |
| | | | TBD | | | TBD |

## VII. SAS Dataset with PSU Information

In addition to providing the complete list of 91 selected PSUs at the end of the memo, a SAS dataset is also being provided. The file is called CECPI_PSULIST_2020DESIGN.sas7bdat. It has 3,144 records, one for every county (or county equivalent) in the United States, and it contains the following variables:

| Variable name | Format | Description |
|---|---|---|
| State_Name | Character $2 | State Name (DC, MD, VA, WV, etc.) |
| County_Name | Character $33 | County name (Montgomery, Howard, Fairfax, Loudon, etc.) |
| State_FIPS | Character $2 | State FIPS code (01,02,…,56) |
| County_FIPS | Character $3 | County FIPS code (001,002,003,…) |
| FIPS | Character $5 | State and county FIPS codes concatenated (09110, 09120, etc.) |
| PSU_Code | Character $8 | PSU code (N12C.001, N12C.002, etc.) |
| PSU_Name | Character $85 | PSU name (Washington-Arlington-Alexandria, DC-VA-MD-WV) |
| PSU_Type | Character $5 | CBSA type (Metro, Micro, Rural) |
| Selected | Character $1 | Was the PSU selected for sample? (Y/N) |
| Stratum | Character $4 | Stratum code (N12C, N12D, etc. These are the first four characters of PSU_Code.) |
| CBSA_Code | Character $5 | CBSA code from the March 2020 definitions |
| County_Population | Numeric | Number of people in the county (2020 census) |
| PSU_Population | Numeric | Number of people in the PSU (2020 census) |
| Stratum_Population | Numeric | Number of people in the stratum (2020 census) |
| County_Latitude | Numeric | Population center of the county (the *demographic* center, not the geographic center) |
| County_Longitude | Numeric | Population center of the county (the *demographic* center, not the geographic center) |
| County_Area_Square_Miles | Numeric | County area in square miles (land plus water) |
| County_Land_Square_Miles | Numeric | County area in square miles (land) |
| County_Water_Square_Miles | Numeric | County area in square miles (water) |

Most of the variables are self-explanatory. However, a few need some explanation. The main one is "PSU_Code." It has eight characters. The first four characters identify the stratum; then there is a decimal point; and then there are three more characters that identify the specific PSU within the stratum. Examples include S35A.001 for Washington-Arlington-Alexandria, DC-VA-MD-WV, and N11B.001 for Hartford-East Hartford-Middletown, CT. The characters have the following meaning:

- 1st character: S, N, R (self-representing, non-self-representing, "rural")
- 2nd character: Region (1,2,3,4)
- 3rd character: Division (1,2,…,9)
- 4th character: Unique stratum identifier (A,B,C,…)
- 5th character: Decimal point to separate the stratum and PSU
- 6th through 8th characters: Unique PSU identifier within the stratum (001,002,003,…)

Most of the time the characters to the right of the decimal point are ignored because they are only of academic interest. That is because CE selects only one PSU per stratum, which means there is a one-to-one correspondence between the strata in the survey and the PSUs in the sample. For example, as the table below shows, Stratum=N11B has four PSUs: Hartford-East Hartford-Middletown, CT; New Haven-Milford, CT; Bridgeport-Stamford-Norwalk, CT; and , and Barnstable Town, MA. However, since Hartford-East Hartford-Middletown, CT was selected for the sample, it is the only PSU in the stratum that most people ever see, so most people refer to it as PSU=N11B instead of Stratum=N11B or PSU=N11B.001. We will use that convention ourselves for the remainder of this memo.

| The 4 PSUs in Stratum=N11B | | | |
|---|---|---|---|
| **Stratum** | **PSU_Code** | **PSU_Name** | **Selected** |
| N11B | N11B.001 | Hartford-East Hartford-Middletown, CT | Y |
| N11B | N11B.002 | New Haven-Milford, CT | N |
| N11B | N11B.003 | Bridgeport-Stamford-Norwalk, CT | N |
| N11B | N11B.004 | Barnstable Town, MA | N |

Also "PSU_Name" is the PSU's name according to the March 2020 CBSA definitions; "CBSA_Code" is the PSU's five-character code according to the March 2020 CBSA definitions; and "PSU_Type" indicates whether the PSU is a metropolitan CBSA, a micropolitan CBSA, or a non-CBSA area according to the March 2020 CBSA definitions.

Here is an example of what the database looks like for stratum N49L. It is a group of "N" PSUs in the West region and the Pacific division. The stratum has 3 PSUs (Sacramento, San Jose, Oxnard) and 7 counties (El Dorado, Placer, Sacramento, Yolo, San Benito, Santa Clara, Ventura). Sacramento is the PSU selected to represent the stratum, which can be seen by the letter "Y" in the column labeled "Selected." That particular PSU has four counties and its population is 2,397,382 (= 191,185 + 404,739 + 1,585,055 + 216,403). The population of the whole stratum is 5,241,693, so its stratum-to-PSU inflation factor will be 2.186 (= 5,241,693 / 2,397,382).

| Stratum | PSU Code | PSU Name | Selected | State FIPS | County FIPS | State Name | County Name | County Population | PSU Population | Stratum Population |
|---|---|---|---|---|---|---|---|---|---|---|
| N49L | N49L.001 | Sacramento, CA | Y | 06 | 017 | CA | El Dorado | 191,185 | 2,397,382 | 5,241,693 |
| N49L | N49L.001 | Sacramento, CA | Y | 06 | 061 | CA | Placer | 404,739 | 2,397,382 | 5,241,693 |
| N49L | N49L.001 | Sacramento, CA | Y | 06 | 067 | CA | Sacramento | 1,585,055 | 2,397,382 | 5,241,693 |
| N49L | N49L.001 | Sacramento, CA | Y | 06 | 113 | CA | Yolo | 216,403 | 2,397,382 | 5,241,693 |
| N49L | N49L.002 | San Jose, CA | N | 06 | 069 | CA | San Benito | 64,209 | 2,000,468 | 5,241,693 |
| N49L | N49L.002 | San Jose, CA | N | 06 | 085 | CA | Santa Clara | 1,936,259 | 2,000,468 | 5,241,693 |
| N49L | N49L.003 | Oxnard, CA | N | 06 | 111 | CA | Ventura | 843,843 | 843,843 | 5,241,693 |

***Note***: The county, PSU, and stratum populations over the entire United States sum to 331,449,281, which is the Census Bureau's official estimate of the U.S. resident population on April 1, 2020 (the 2020 decennial census). When working with and manipulating the database, the best way of verifying the accuracy of one's computations is to look for three numbers. There should be 3,144 counties; 1,492 PSUs; and 331,449,281 people.

**VIII. Other Aspects of CE's Sample Design**

The purpose of this memo is only to provide PSU definitions for CE's 2020 census-based sample design. Other aspects of the redesign, such as the sample size, will be covered in separate memos.

cc:

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## Appendix 1. U.S. Consumer Expenditure Survey: 2020 Census-Based Sample Design (91 PSUs)

### Division 1 (New England), Northeast Region

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S11A | Boston-Cambridge-Newton, MA-NH | MA: Essex, Middlesex, Norfolk, Plymouth, Suffolk<br>NH: Rockingham, Strafford | 4,941,632 | 4,941,632 |
| N11B | Hartford-East Hartford-Middletown, CT | CT: Capitol, Lower Connecticut River Valley | 1,150,473 | 3,346,659 |
| N11C | Springfield, MA | MA: Franklin, Hampden, Hampshire | 699,162 | 3,333,200 |
| N11D | Burlington-South Burlington, VT | VT: Chittenden, Franklin, Grand Isle | 225,562 | 1,701,880 |
| N11E | Pittsfield, MA | MA: Berkshire | 129,026 | 1,132,074 |
| R11A | Addison, VT | VT: Addison | 37,363 | 660,760 |

### Division 2 (Middle Atlantic), Northeast Region

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S12A | New York-Newark-Jersey City, NY-NJ-PA | NY: Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester<br>NJ: Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union<br>PA: Pike | 20,140,470 | 20,140,470 |
| S12B | Philadelphia-Camden-Wilmington, PA-NJ-DE-MD | PA: Bucks, Chester, Delaware, Montgomery, Philadelphia<br>NJ: Burlington, Camden, Gloucester, Salem<br>DE: New Castle<br>MD: Cecil | 6,245,051 | 6,245,051 |
| N12C | Pittsburgh, PA | PA: Allegheny, Armstrong, Beaver, Butler, Fayette, Washington, Westmoreland | 2,370,930 | 4,392,090 |
| N12D | Buffalo-Cheektowaga, NY | NY: Erie, Niagara | 1,166,902 | 3,010,523 |
| N12E | Rochester, NY | NY: Livingston, Monroe, Ontario, Orleans, Wayne, Yates | 1,090,135 | 2,044,456 |
| N12F | Reading, PA | PA: Berks | 428,849 | 2,371,021 |
| N12G | Kingston, NY | NY: Ulster | 181,851 | 1,587,894 |
| N12H | Chambersburg-Waynesboro, PA | PA: Franklin | 155,932 | 2,505,473 |
| R12A | Delaware-Sullivan, NY | NY: Delaware, Sullivan | 122,932 | 759,757 |

**Division 3 (East North Central), Midwest Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S23A | Chicago-Naperville-Elgin, IL-IN-WI | IL: Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, Will<br>IN: Jasper, Lake, Newton, Porter<br>WI: Kenosha | 9,618,502 | 9,618,502 |
| S23B | Detroit-Warren-Dearborn, MI | MI: Lapeer, Livingston, Macomb, Oakland, St. Clair, Wayne | 4,392,041 | 4,392,041 |
| N23C | Cincinnati, OH-KY-IN | OH: Brown, Butler, Clermont, Hamilton, Warren<br>KY: Boone, Bracken, Campbell, Gallatin, Grant, Kenton, Pendleton<br>IN: Dearborn, Franklin, Ohio, Union | 2,256,884 | 4,395,810 |
| N23D | Cleveland-Elyria, OH | OH: Cuyahoga, Geauga, Lake, Lorain, Medina | 2,088,251 | 4,581,867 |
| N23F | Milwaukee-Waukesha, WI | WI: Milwaukee, Ozaukee, Washington, Waukesha | 1,574,731 | 3,374,770 |
| N23I | Janesville-Beloit, WI | WI: Rock | 163,687 | 6,656,008 |
| N23K | Indianapolis-Carmel-Anderson, IN | IN: Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Putnam, Shelby | 2,111,040 | 4,621,876 |
| N23L | Green Bay, WI | WI: Brown, Kewaunee, Oconto | 328,268 | 2,883,718 |
| N23M | Terre Haute, IN | IN: Clay, Parke, Sullivan, Vermillion, Vigo | 185,031 | 2,878,687 |
| R23A | Hardin-Wyandot, OH | OH: Hardin, Wyandot | 52,596 | 301,222 |
| R23B | Holmes, OH | OH: Holmes | 44,223 | 2,698,641 |

**Division 4 (West North Central), Midwest Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S24A | Minneapolis-St. Paul-Bloomington, MN-WI | MN: Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Le Sueur, Mille Lacs, Ramsey, Scott, Sherburne, Washington, Wright<br>WI: Pierce, St. Croix | 3,690,261 | 3,690,261 |
| S24B | St. Louis, MO-IL | MO: Franklin, Jefferson, Lincoln, St. Charles, St. Louis, Warren, St. Louis City<br>IL: Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe, St. Clair | 2,820,253 | 2,820,253 |
| N24D | Wichita, KS | KS: Butler, Harvey, Sedgwick, Sumner | 647,610 | 4,992,147 |
| N24E | Lincoln, NE | NE: Lancaster, Seward | 340,217 | 2,489,617 |
| N24H | St. Cloud, MN | MN: Benton, Stearns | 199,671 | 5,466,283 |
| R24A | Crawford-Gasconade-Iron-Washington, MO | MO: Crawford, Gasconade, Iron, Washington | 70,901 | 2,734,097 |
| R24B | Meeker-Renville-Sibley, MN | MN: Meeker, Renville, Sibley | 52,959 | 336,192 |
| R24C | Southeastern Nebraska | NE: Johnson, Nemaha, Otoe, Pawnee, Richardson | 38,691 | 160,902 |

**Division 5 (South Atlantic), South Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S35A | Washington-Arlington-Alexandria, DC-VA-MD-WV | DC: District of Columbia<br>VA: Arlington, Clarke, Culpeper, Fairfax, Fauquier, Loudon, Madison, Prince William, Rappahannock, Spotsylvania, Stafford, Warren, Alexandria City, Fairfax City, Falls Church City, Fredericksburg City, Manassas City, Manassas Park City<br>MD: Calvert, Charles, Frederick, Montgomery, Prince George's<br>WV: Jefferson | 6,385,162 | 6,385,162 |
| S35B | Miami-Fort Lauderdale-Pompano Beach, FL | FL: Broward, Miami-Dade, Palm Beach | 6,138,333 | 6,138,333 |
| S35C | Atlanta-Sandy Springs-Alpharetta, GA | GA: Barrow, Bartow, Butts, Carroll, Cherokee, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Haralson, Heard, Henry, Jasper, Lamar, Meriwether, Morgan, Newton, Paulding, Pickens, Pike, Rockdale, Spalding, Walton | 6,089,815 | 6,089,815 |
| S35D | Tampa-St. Petersburg-Clearwater, FL | FL: Hernando, Hillsborough, Pasco, Pinellas | 3,175,275 | 3,175,275 |
| S35E | Baltimore-Columbia-Towson, MD | MD: Anne Arundel, Baltimore, Carroll, Harford, Howard, Queen Anne's, Baltimore City | 2,844,510 | 2,844,510 |
| N35F | Charlotte-Concord-Gastonia, NC-SC | NC: Anson, Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Union<br>SC: Chester, Lancaster, York | 2,660,329 | 5,242,048 |
| N35G | Orlando-Kissimmee-Sanford, FL | FL: Lake, Orange, Osceola, Seminole | 2,673,376 | 4,279,224 |
| N35H | Richmond, VA | VA: Amelia, Charles City, Chesterfield, Dinwiddie, Goochland, Hanover, Henrico, King and Queen, King William, New Kent, Powhatan, Prince George, Sussex, Colonial Heights City, Hopewell City, Petersburg City, Richmond City | 1,314,434 | 3,114,108 |
| N35I | Raleigh-Cary, NC | NC: Franklin, Johnston, Wake | 1,413,982 | 4,963,233 |
| N35L | Cape Coral-Fort Myers, FL | FL: Lee | 760,822 | 3,934,031 |
| N35O | Gainesville, FL | FL: Alachua, Gilchrist, Levy | 339,247 | 2,420,826 |
| N35P | Jacksonville, NC | NC: Onslow | 204,576 | 2,651,818 |
| N35R | Gainesville, GA | GA: Hall | 203,136 | 2,879,738 |
| N35S | Punta Gorda, FL | FL: Charlotte | 186,847 | 1,271,140 |
| N35T | Winchester, VA-WV | VA: Frederick, Winchester City<br>WV: Hampshire | 142,632 | 7,058,712 |
| R35A | Central Virginia | VA: Caroline, Essex, King George, Middlesex | 78,834 | 690,246 |
| R35B | Southern Virginia | VA: Halifax, Mecklenburg | 64,341 | 2,305,129 |
| R35C | Eastern Virginia | VA: Lancaster, Northumberland, Richmond, Westmoreland | 50,158 | 149,211 |

**Division 6 (East South Central), South Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| N36A | Louisville/Jefferson County, KY-IN | KY: Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer<br>IN: Clark, Floyd, Harrison, Washington | 1,285,439 | 3,879,172 |
| N36B | Birmingham-Hoover, AL | AL: Bibb, Blount, Chilton, Jefferson, St. Clair, Shelby | 1,115,289 | 4,442,587 |
| N36C | Chattanooga, TN-GA | TN: Hamilton, Marion, Sequatchie<br>GA: Catoosa, Dade, Walker | 562,647 | 3,017,577 |
| N36E | Florence-Muscle Shoals, AL | AL: Colbert, Lauderdale | 150,791 | 5,480,843 |
| R36A | Northwestern Alabama | AL: Franklin, Marion, Winston | 84,994 | 869,088 |
| R36B | Central Kentucky | KY: Casey, Marion, Washington | 47,549 | 1,605,760 |

**Division 7 (West South Central), South Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S37A | Dallas-Fort Worth-Arlington, TX | TX: Collin, Dallas, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, Wise | 7,637,387 | 7,637,387 |
| S37B | Houston-The Woodlands-Sugar Land, TX | TX: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller | 7,122,240 | 7,122,240 |
| N37C | San Antonio-New Braunfels, TX | TX: Atascosa, Bandera, Bexar, Comal, Guadalupe, Kendall, Medina, Wilson | 2,558,143 | 4,297,783 |
| N37D | Oklahoma City, OK | OK: Canadian, Cleveland, Grady, Lincoln, Logan, McClain, Oklahoma | 1,425,695 | 5,331,471 |
| N37F | Lafayette, LA | LA: Acadia, Iberia, Lafayette, St. Martin, Vermilion | 478,384 | 2,299,468 |
| N37G | Brownsville-Harlingen, TX | TX: Cameron | 421,017 | 2,304,839 |
| N37H | Amarillo, TX | TX: Armstrong, Carson, Oldham, Potter, Randall | 268,691 | 3,617,045 |
| N37I | Russellville, AR | AR: Pope, Yell | 83,644 | 2,559,064 |
| N37J | Paris, TX | TX: Lamar | 50,088 | 2,876,907 |
| R37A | Northeastern Texas | TX: Rains, Van Zandt, Wood | 116,548 | 2,194,370 |
| R37B | Northern Arkansas | AR: Cleburne, Conway, Van Buren | 61,222 | 466,715 |

**Division 8 (Mountain), West Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S48A | Phoenix-Mesa-Chandler, AZ | AZ: Maricopa, Pinal | 4,845,832 | 4,845,832 |
| S48B | Denver-Aurora-Lakewood, CO | CO: Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, Park | 2,963,821 | 2,963,821 |
| N48C | Las Vegas-Henderson-Paradise, NV | NV: Clark | 2,265,461 | 4,566,830 |
| N48D | Provo-Orem, UT | UT: Juab, Utah | 671,185 | 2,635,101 |
| N48E | Yuma, AZ | AZ: Yuma | 203,881 | 3,549,617 |
| N48F | St. George, UT | UT: Washington | 180,279 | 5,074,188 |
| R48A | Northeastern Utah | UT: Daggett, Duchesne | 20,531 | 1,280,660 |

**Division 9 (Pacific), West Region**

| PSU | PSU Name | PSU Definition (State and County) | PSU Population | Stratum Population |
|---|---|---|---|---|
| S49A | Los Angeles-Long Beach-Anaheim, CA | CA: Los Angeles, Orange | 13,200,998 | 13,200,998 |
| S49B | San Francisco-Oakland-Berkeley, CA | CA: Alameda, Contra Costa, Marin, San Francisco, San Mateo | 4,749,008 | 4,749,008 |
| S49C | Riverside-San Bernardino-Ontario, CA | CA: Riverside, San Bernardino | 4,599,839 | 4,599,839 |
| S49D | Seattle-Tacoma-Bellevue, WA | WA: King, Pierce, Snohomish | 4,018,762 | 4,018,762 |
| S49E | San Diego-Chula Vista-Carlsbad, CA | CA: San Diego | 3,298,634 | 3,298,634 |
| S49F | Urban Honolulu, HI | HI: Honolulu | 1,016,508 | 1,455,189 |
| S49G | Anchorage, AK | AK: Anchorage, Matanuska-Susitna | 398,328 | 540,186 |
| N49H | Portland-Vancouver-Hillsboro, OR-WA | OR: Clackamas, Columbia, Multnomah, Washington, Yamhill<br>WA: Clark, Skamania | 2,512,859 | 3,826,789 |
| N49I | Santa Rosa-Petaluma, CA | CA: Sonoma | 488,863 | 3,456,846 |
| N49J | Chico, CA | CA: Butte | 211,632 | 3,142,008 |
| N49K | Moses Lake, WA | WA: Grant | 99,123 | 2,145,810 |
| N49L | Sacramento-Roseville-Folsom, CA | CA: El Dorado, Placer, Sacramento, Yolo | 2,397,382 | 5,241,693 |
| N49M | Eugene-Springfield, OR | OR: Lane | 382,971 | 1,669,038 |
| N49N | Yuba City, CA | CA: Sutter, Yuba | 181,208 | 1,570,215 |
| R49A | Tillamook, OR | OR: Tillamook | 27,390 | 757,508 |

## Appendix 2. PSUs Being Dropped/Added in the New Sample Design

This table shows the 14 **N-size PSUs that are being dropped** from the sample.

| | | | | | |
|---|---|---|---|---|---|
| 1 | N23E | Columbus, OH | 8 | N35K | Winston-Salem, NC |
| 2 | N23G | Dayton-Kettering, OH | 9 | N35M | Ocala, FL |
| 3 | N23H | Flint, MI | 10 | N35O | Wilmington, NC |
| 4 | N23J | Frankfort, IN | 11 | N35Q | Clarksburg, WV |
| 5 | N24C | Omaha-Council Bluffs, NE-IA | 12 | N36D | Huntsville, AL |
| 6 | N24G | Brookings, SD | 13 | N36F | Meridian, MS |
| 7 | N35J | Greenville-Anderson, SC | 14 | N37E | Baton Rouge, LA |

This table shows the 14 **N-size PSUs that are being added** to the sample.

| | | | | | |
|---|---|---|---|---|---|
| 1 | 15540 | Burlington-South Burlington, VT | 8 | 41060 | St. Cloud, MN |
| 2 | 38340 | Pittsfield, MA | 9 | 23580 | Gainesville, GA |
| 3 | 28740 | Kingston, NY | 10 | 39460 | Punta Gorda, FL |
| 4 | 16540 | Chambersburg-Waynesboro, PA | 11 | 49020 | Winchester, VA-WV |
| 5 | 26900 | Indianapolis-Carmel-Anderson, IN | 12 | 40900 | Sacramento-Roseville-Folsom, CA |
| 6 | 24580 | Green Bay, WI | 13 | 21660 | Eugene-Springfield, OR |
| 7 | 45460 | Terre Haute, IN | 14 | 49700 | Yuba City, CA |

This table shows the 10 **R-Size PSUs that are being dropped** from the sample.

| | | |
|---|---|---|
| 1 | R12G | Northeast Pennsylvania |
| 2 | R23K | Northern Michigan |
| 3 | R24G | Northern Missouri |
| 4 | R24H | Northeast Nebraska |
| 5 | R35S | Southwest West Virginia |
| 6 | R36G | Eastern Kentucky |
| 7 | R36H | Western Tennessee |
| 8 | R48G | Ravalli, MT |
| 9 | R48H | Lincoln, NM |
| 10 | R48I | Gooding, ID |

This table shows the 10 **R-Size PSUs that are being added** to the sample.

| | | |
|---|---|---|
| 1 | R0107 | Franklin-Marion-Winston, AL |
| 2 | R2107 | Casey-Marion-Washington, KY |
| 3 | R2715 | Meeker-Renville-Sibley, MN |
| 4 | R2909 | Crawford-Gasconade-Iron-Washington, MO |
| 5 | R3117 | Johnson-Nemaha-Otoe-Pawnee-Richardson, NE |
| 6 | R3603 | Delaware-Sullivan, NY |
| 7 | R3902 | Hardin-Wyandot, OH |
| 8 | R4902 | Daggett-Duchesne, UT |
| 9 | R5106 | Caroline-Essex-King George-Middlesex, VA |
| 10 | R5109 | Lancaster-Northumberland-Richmond-Westmoreland, VA |