

2011 AHS Geography Overview

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The following pages explain the nuances of geography in regard to the 2011 PUF.

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Background

Since its establishment in 1973, the American Housing Survey (AHS) has been split into two surveys – a national and metropolitan survey. These two surveys generally ask the same questions but focus on different geography. The national survey has a sample spread throughout the United States, while each individual metropolitan survey focuses on units in a specific Metropolitan Statistical Area (MSA). These areas usually, but not always, coincide with the Office of Management and Budget (OMB) definitions of the MSA.

Traditionally, the national and metropolitan microdata files were separated in the past. This is because the geography variables on each file are slightly different. While there are some variables both files held in common, such as the SMSA variable identifying a particular SMSA, there are many differences. Due to the longitudinality of the data, the national file has 1980-based geography and focuses on large areas at a national scale. For this reason, it has variables such as REGION, which represents in which of the four Census regions the case resides. The metropolitan file, on the other hand, has variables such as STATE and COUNTY and will often represent more recent vintages of geography such as 1990-based boundaries and definitions.

Combining the Files

For 2011, the AHS greatly expanded its metropolitan survey coverage, covering 29 separate metro areas. In an effort to streamline the national and metropolitan surveys, beginning in 2011 we have decided to combine the national and metropolitan files. This will allow us to use national sample that lies within one of the 29 metro areas to supplement that metropolitan area.

In order to allow for these cases to reside on the same dataset, we had to make many adjustments. First of all, any returning national cases will retain their original 1980-based geography information. There are a couple of reasons for this. We wanted the cases to remain longitudinally consistent since they can be traced back to previous years. Additionally, if we were to update these returning cases to match a later vintage of geography, it would cause disclosure problems as the definitional changes between years would expose geographic splinters. For this reason, in cases where the 1980-based geography conflicted with the later vintages, we forced the case to the nearest location that would not cause a conflict that could expose geographic splinters. Any major changes of note or exceptions to this rule are documented in the "Individual MSA Documentation" section below.

General Variable Suppression Rules

There are numerous suppression rules we must follow in order to maintain the confidentiality of our respondents. Some of them apply to specific areas and any major

changes of note are documented in the "Individual MSA Documentation" section. Below is an outline of the most prominent rules that were followed.

General Geography Suppressions

The metropolitan sample cases were designed to all be shown as part of that area. The national cases, however, must follow a specific set of suppression rules to prevent disclosure. For this reason, there are some national cases that may be part of one of the 29 MSAs but needed to be suppressed. Whenever a case is not allowed to show itself as part of a metro area, the STATE, COUNTY, METRO, and ZONE variables are set to 99, 999, 9, and 999 respectively. Any national case that must be suppressed will not have a metropolitan weight on the PUF, but will still be used internally for the tables covering that area. Cases hidden in this way are treated by the same rules as returning national cases and we are forced to use 1980-based geography on the PUF.

New County Suppressions

One notable difference between the national and metropolitan sample is that in most cases the metropolitan sample adheres to the 2000 definition of the MSA. Because we must use 1980-based suppression rules for units in the national survey, national cases in counties that were not part of the MSA in 1980 are not identified. For additional information about how the AHS defines each metropolitan area please see the "AHS Metropolitan Area Definitions" section of this document.

Zone 990 Suppressions

Because of the way the suppression rules work, there are some cases where showing the ZONE would cause a disclosure issue, but a data user may still identify it as part of an MSA due to another variable, such as the CMSA. These cases will be assigned a "990" for the ZONE rather than the standard "999". This is because these cases will be weighted as part of that metro area, but the data user will be unable to pinpoint the ZONE location due to disclosure guidelines.

State and County Suppressions

Cases where a ZONE spans multiple states are forced to have a suppressed STATE code of 99. This is because showing the true STATE for these cases would show a subset of a ZONE boundary which is not allowed.

Similarly, there are cases where COUNTY is pseudocoded because a ZONE represents multiple counties. If a COUNTY code is above 840, it means we have set it to a pseudocode that represents two or more counties. The full list of COUNTY pseudocodes and what they

represent can be found in the codebook.

Rural Suppressions

Similar to new county suppressions, national cases are also suppressed from showing their SMSA if they are rural. Additionally, even though all metropolitan cases show their SMSA the rural cases will be forced to an urban code (METRO3 = 2) on the PUF. This is because in most MSAs, a large portion of the cases are urban and showing the truly rural cases as rural could serve to identify the unit. Therefore, no metropolitan sample case will ever show a rural code on the PUF, though a minority of them may be truly rural cases.

AHS Metropolitan Area Definitions

Below is a table covering the 2011 metro area definitions and how they compare to OMB.

Table 1. AHS Metropolitan Area Definitions compared to the 2003 OMB Definitions

Metro Name	OMB Match Status
Anaheim	The AHS definition for this area matches the 2003 OMB definition for the Santa Ana-Anaheim-Irvine Metropolitan Division.
Atlanta	Matches the 2003 OMB definition.
Birmingham	Matches the 2003 OMB definition.
Buffalo	Matches the 2003 OMB definition.
Charlotte	Matches the 2003 OMB definition.
Cincinnati	Matches the 2003 OMB definition.
Cleveland	Matches the 2003 OMB definition.
Columbus	Matches the 2003 OMB definition.
Dallas	The AHS definition matches the 2003 OMB Dallas Metropolitan Division definition.
Denver	The OMB 2003 definition includes Broomfield county, which was created in 2001. The AHS definition does not include Broomfield county, as all of what defined Boulder and Weld counties before Broomfield's creation are excluded from the AHS definition.
Fort Worth	The AHS definition matches the 2003 Fort Worth Metropolitan Division OMB definition.
Indianapolis	Matches the 2003 OMB definition.
Kansas City	Matches the 2003 OMB definition.
Los Angeles	The AHS definition matches the 2003 Los Angeles-Long Beach-Glendale Metropolitan Division OMB definition.
Memphis	Matches the 2003 OMB definition.

Milwaukee	Matches the 2003 OMB definition.
New Orleans	Matches the 2003 OMB definition.
Oakland	The AHS definition matches the 2003 Oakland Metropolitan Division OMB definition.
Phoenix	Matches the 2003 OMB definition.
Pittsburgh	Matches the 2003 OMB definition.
Portland	Matches the 2003 OMB definition.
Providence	Differs from the 2003 OMB definition. See table 2.
Riverside	Matches the 2003 OMB definition.
Sacramento	Matches the 2003 OMB definition.
San Diego	Matches the 2003 OMB definition.
San Francisco	The AHS definition matches the 2003 San Francisco Metropolitan Division OMB definition.
San Jose	Matches the 2003 OMB definition.
St. Louis	The AHS does not include Sullivan City, which is legally part of the 2003 OMB definition, though it resides in an outlying county.
Virginia Beach	Matches the 2003 OMB definition.

Table 2. Definitions of the Providence MSA

In 2003 OMB Only	In AHS 2011 Only	In Both
Acushnet town, Bristol County, MA	Bellingham, Norfolk County, MA	Attleboro city, Bristol County, MA
Berkley town, Bristol County, MA	Plainville, Norfolk County, MA	Fall River city, Bristol County, MA
Dartmouth town, Bristol County, MA	Blackstone, Worcester County, MA	North Attleborough town, Bristol County, MA
Dighton town, Bristol County, MA	Millville, Worcester County, MA	Rehoboth town, Bristol County, MA
Easton town, Bristol County, MA		Seekonk town, Bristol County, MA
Fairhaven town, Bristol County, MA		Somerset town, Bristol County, MA
Freetown town, Bristol County, MA		Swansea town, Bristol County, MA
Mansfield town, Bristol County, MA		Westport town, Bristol County, MA
New Bedford city, Bristol County, MA		Bristol County, RI
Norton town, Bristol County, MA		Kent County, RI
Raynham town, Bristol County, MA		Newport County, RI
Taunton city, Bristol County, MA		Providence County, RI
New Shoreham, Washington		Charlestown town, Washington

County, RI		County, RI
Westerly town, Washington County, RI		Exeter town, Washinton County, RI
		Hopkinton town, Washington County, RI
		Narragansett town, Washington County, RI
		North Kingstown town, Washington County, RI
		Richmond town, Washington County, RI
		South Kingstown town, Washington County, RI

Division Recodes

For the first time, the AHS microdata file will now have Census DIVISION codes. This is represented on the PUF by a two digit variable called "DIVISION". Each code refers to a Census Division referred to in Table 3 below. Due to disclosure violations caused by combining the DIVISION variable with the DEGREE variable, we had to combine divisions 05 with 06 and 08 with 09 on the PUF.

Table 3. AHS DIVISION Codes

DIVISION Code	Division(s) Represented	States Represented
'01'	New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
'02'	Middle Atlantic	New Jersey, New York, Pennsylvania
'03'	East North Central	Indiana, Illinois, Michigan, Ohio, Wisconsin
'04'	West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
'56'	South Atlantic and East South Central	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, Alabama, Kentucky, Mississippi, Tennessee
'07'	West South Central	Arkansas, Louisiana, Oklahoma, Texas
'89'	Mountain and Pacific	Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming, Alaska, California, Hawaii, Oregon, Washington

Weighting the PUF

There are four weights on the file – the base weight (PWT); two national weights, the 1980 geography based weight (WEIGHT) and the 1990 geography-based weight (WGT90GEO); and the metro weight (WGTMETRO).

For MSA totals, WGTMETRO must be used. Cases that are not identified as one of the 29 metro areas will have no value for METROWGT and will be kept out of these totals. To identify particular MSAs when using this weight, please refer to the following table.

Metro Area	Condition
Anaheim	(SMSA = 0360)
Atlanta	(SMSA = 0520)
Birmingham	(SMSA = 1000)
Buffalo	(SMSA = 1280 or CMSA = 10)
Charlotte	(SMSA = 1520)
Cincinnati	(SMSA = 1640)
Cleveland	(SMSA = 1680)
Columbus	(SMSA = 1840)
Dallas	(SMSA = 1920)
Denver	(SMSA = 2080) [CMSA codes of 34 are not used because some of those are in Boulder, CO, which is not part of the Denver MSA]
Fort Worth	(SMSA = 2800)
Indianapolis	(SMSA = 3480)
Kansas City	(SMSA = 3760)
Los Angeles	(SMSA = 4480)
Memphis	(SMSA = 4920)
Milwaukee	(SMSA = 5080)
New Orleans	(SMSA = 5560)
Oakland	(SMSA = 5775)
Phoenix	(SMSA = 6200)
Pittsburgh	(SMSA = 0845 or SMSA = 6280)
Portland	(SMSA = 6440 or CMSA = 79)
Providence	(SMSA = 6480 or CMSA = 80)
Riverside	(SMSA = 6780)
Sacramento	(SMSA = 6920)
San Diego	(SMSA = 7320)
San Francisco	(SMSA = 7360)
San Jose	(SMSA = 7400)
St. Louis	(SMSA = 0275 or SMSA = 2285 or SMSA = 7040 or CMSA = 82)
Virginia Beach	(SMSA = 5720)

Individual MSA Documentation

Below is a list of notable changes for each of the 29 metro areas.

Anaheim

The AHS definition for this area matches the December 2009 OMB definition for the Santa Ana-Anaheim-Irvine Metropolitan Division, which is located within the Los Angeles-Long Beach-Santa Ana MSA.

Atlanta

Dawson and Pickens County were added to county code 967, which includes Bartow, Cherokee, Douglas, Forsyth, and Paulding Counties.

County code 939 was created. This code includes Haralson, Heard, Jasper, Lamar, Meriwether, and Pike Counties.

County code 940 was created. This code includes Butts and Carroll Counties.

Birmingham

County code 943 was created. This code includes Bibb, Chilton, and Walker Counties.

Because Walker is the only county in the 1980-based definition in ZONE 105 and we are not allowed to identify it by itself for disclosure reasons, no national case will be allowed to be identified in ZONE 105.

Buffalo

For disclosure reasons, we are not allowed to identify Niagara and Erie Counties individually on the PUF. For this reason, national cases in the Buffalo area will be identified instead by their CMSA code of 10, which corresponds to the 1980 definition of the Buffalo-Niagara Falls, NY CMSA. This CMSA definition is identical to the 2009 OMB definition for the Buffalo-Niagara Falls, NY MSA.

Charlotte

Because Rowan and Lincoln Counties were removed from the MSA definition, Gaston and Cabarrus Counties, which were previously in County codes 950 and 951 respectively, will now identify their true county FIPS code (071 and 025 respectively) on the PUF.

Anson County was added to County 952.

For disclosure reasons, national cases in the Charlotte MSA cannot be identified. Because there are no purely central city ZONE codes in the Charlotte MSA and there are ZONE codes

above 200 that represent an area that is mixed between central city and suburbs, the METRO3 code for these ZONES will be masked to prevent users from finding central city splits within one of the ZONES.

Cincinnati

County code 945 was created. This includes Franklin and Ohio Counties, IN, Bracken, Gallatin, Grant, and Pendleton Counties, KY, and Brown County, OH.

The Cincinnati MSA lies in both the Midwest and South REGION. There are two ZONES (108 and 115) that cross both of these REGIONS. ZONE 108 cases will all identify a REGION of 3 (South) and DIV of 56 while ZONE 115 cases will all show a REGION of 2 (Midwest) and DIV of 03. There are some cases in ZONE 108 that are actually in the Midwest and some cases in ZONE 115 that are actually in the South but they need to be masked for disclosure reasons.

Cleveland

Ashtabula will be removed from the definition for County 992 because it is no longer part of the MSA definition.

Columbus

There were 10 returning metro cases published in the past with a county code that did not match their ZONE code. These cases were published as part of Fairfield county but were actually part of Franklin county. These cases had their county code changed to match their true ZONE code.

County code 961 now includes Union County.

County code 942 was created, which includes Licking and Morrow Counties.

Dallas

The AHS definition for this area matches the December 2009 OMB definition for the Dallas-Plano-Irving Metropolitan Division, which is located within the Dallas-Fort Worth-Arlington MSA.

County code 987 now includes Hunt County.

Denver

The AHS differs from the 2009 OMB definition in that we do not have the new county of Broomfield as part of the metro area. We continue to use the old county borders from before Broomfield's creation to make up our version of the Denver MSA.

Clear Creek, Elbert, Gilpin, and Park were added to the definition for County 977.

Fort Worth

The AHS definition for this area matches the December 2009 OMB definition for the Fort Worth-Arlington Metropolitan Division, which is located within the Dallas-Fort Worth-Arlington MSA.

County 933 was created for Parker and Wise Counties.

Indianapolis

Each pseudo code in this metro area contains a part of Marion county. This differs from other metro areas where counties are not divided amongst pseudocounties. The breakdown of Marion county is as follows:

- The central city part of Marion County (zones 001-005) were pseudo coded to 997.
- Pseudo code 996 contains Boone County and Hendricks County and part of Marion County.
- Pseudo code 995 contains Hamilton County and Hancock County and part of Marion County.
- Pseudo code 994 contains Brown County, Putnam County, Johnson County, Morgan County, Shelby County, and part of Marion County.

Brown and Putnam Counties were added to County 994.

Kansas City

There were 250 cases that showed a ZONE of 002 on the previous metro PUF. These cases had to be recoded to ZONE 004 because ZONE 002 was combined with parts of other ZONES and no longer exists.

Some returning national cases that showed an SMSA but no CMSA will now show a CMSA.

All cases we are able to show in the area, regardless of whether they are in the Kansas City, KS PMSA or Kansas City, MO PMSA, will show an SMSA of 3760.

Franklin and Linn Counties were added to County 975.

Bates, Caldwell, and Jackson Counties were added to County 976.

Some returning national cases that were in the central city of Kansas City, KS were forced into central city ZONES of Kansas City, MO for disclosure reasons.

Los Angeles

The AHS definition for this area matches the December 2009 OMB definition for the Los Angeles-Long Beach-Glendale Metropolitan Division, which is located within the Los

Angeles-Long Beach-Santa Ana MSA.

Since this is the first year of the LA metro file since the ZONEs were redrawn, the five central city METRO codes will be defined as follows:

METRO of 1 is Los Angeles city.

METRO of 2 is Long Beach city.

METRO of 3 is Pomona.

METRO of 4 is Pasadena.

METRO of 5 is Burbank.

Memphis

County 934 was created. This includes Crittendon County, AR, and DeSoto, Marshal, Tate, and Tunica Counties, MS.

All Arkansas cases will be forced to a DIV of 06 to keep from identifying the rural area of Crittendon County, AR.

Milwaukee

Nothing of note.

New Orleans

Nothing of note.

Oakland

The AHS definition for this area matches the December 2009 OMB definition for the Oakland-Fremont-Hayword Metropolitan Division, which is located within the San Francisco-Oakland-Fremont MSA.

Phoenix

Nothing of note.

Pittsburgh

County 938 was created. This includes Armstrong and Washington Counties.

Portland

For disclosure reasons, we are not allowed to identify the counties in the Vancouver PMSA and the counties in the Portland PMSA individually. For this reason, national cases in the Portland MSA will be identified instead by their CMSA code of 79, which corresponds to the

1980 definition of the Portland-Vancouver, OR-WA CMSA. All of the counties in this 1980 CMSA are also in the 2000 OMB definition for the Portland-Vancouver-Hillsboro, OR-WA MSA.

County 944 was created. This includes Skamania and Clark Counties.

We corrected an error where some returning metro cases had a central city ZONE code but a COUNTY code that resided completely outside of the central city. The county code for these cases was fixed.

Providence

The AHS Providence MSA definition is MCD-based while the 2009 OMB definition is County-based. Additionally, the AHS defines the Providence area a bit differently than older MCD based vintages the OMB uses. The definition differences can be found on Table 2 in the “AHS Metropolitan Area Definitions” section of this document.

All county codes for the Providence MSA will be set to 999, because the full counties are not part of the definition of the area.

Riverside

There were two different SMSA codes used for this area. The SMSA code now used is 6780.

Sacramento

Nothing of note.

San Diego

Nothing of note.

San Francisco

The AHS definition for this area matches the December 2009 OMB definition for the San Francisco-San Mareo-Redwood City Metropolitan Division, which is located within the San Francisco-Oakland-Fremont MSA.

San Jose

County code 941 was created. This includes Santa Clara and San Benito Counties.

Saint Louis

County code 935 was created. This includes Jefferson and Washington Counties.

County codes 955 and 956 were combined to form County 936. This new County code is comprised of Clinton, Monroe, St. Clair, Jersey, Madison, Bond, Calhoun, and Macoupin.

Due to suppression rules, national cases in the Alton-Granite City PMSA or the East St. Louis-Belleville PMSA had their ZONE changed on the PUF.

Virginia Beach

There were two different SMSA codes used for this area. The SMSA code now used is 5680.

Surry County, VA was added to County 990.

Some returning national cases in Suffolk and Hampton had their ZONE changed on the PUF for disclosure reasons.