

Metropolitan Area Selection Strategies and Decisions for the 2015 American Housing Survey and Beyond

Shawn Bucholtz

December 2015



PD&R



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Purpose

The purpose of this paper is to discuss strategies for selecting metropolitan area samples for the American Housing Survey (AHS) for 2015 and beyond and to detail the decision the U.S. Department of Housing and Urban Development (HUD) made regarding metropolitan area selection. This whitepaper is organized into five parts. Part 1 presents a history of metropolitan area selection. Part 2 discusses user needs and lessons learned from past surveys. Part 3 discusses how metropolitan areas can be categorized. Part 4 presents four metropolitan area selection strategies. Part 5 presents HUD's decision regarding metropolitan area selection strategies for 2015 and beyond.

1. Metropolitan Area Sample Selection: 1974–2013

This section discusses the purpose and history of selecting metropolitan areas for the AHS.

1.1 Purpose of the AHS Longitudinal Samples

A survey that is conducted once can be used to produce cross-sectional estimates. For instance, the 2011 AHS can be used to produce estimates of housing costs for 2011. A survey that is repeated can be used to make cross-sectional estimates of a given year and can be used to measure the change in cross-sectional estimates across the years for which it is repeated. For instance, the current AHS can be used to measure the change in median housing costs between 2009 and 2011. A good example of a repeated cross-sectional survey is the American Community Survey, or ACS.

From the beginning of the AHS in 1973, both the national and metropolitan area samples were intended to be a longitudinal.¹ Specifically, the AHS was designed as a panel sample whereby the same housing units were surveyed during every survey cycle. For the national sample, the survey cycle was originally every year and then changed to every 2 years starting in the early 1980s. For the metropolitan area samples, the survey cycle was intended to be every 4 years.

The purpose of a longitudinal survey is to produce an estimate of characteristics that change within the unit of observation. In the case of the AHS, HUD conducts a longitudinal survey to measure lifecycle changes in the housing stock and well as changes in household dynamics. For instance, the longitudinal national AHS survey can be used produce estimates of housing unit-level tenure change (owner to renter and vice versa) and filtering of the housing stock.

Of course, housing lifecycle changes happen slowly, and it is necessary to observe a housing unit over a long period of time (10 or more years) in order to detect changes of interest. In addition, not all respondents can or do chose to participate every time the survey is conducted, which reduces the ability to detect changes in a housing unit or its occupants. For these reasons, the AHS national sample size must be larger relative to what would be required if the AHS were a simple cross-sectional survey.

1.2 Relationship Between Budget, Sample Size, and Priority

At the start of each survey cycle, AHS managers must make a decision about which metropolitan areas to survey. Three things need to be taken into consideration when choosing metropolitan areas.

1. What is the overall budget?
2. What is the desired metropolitan area sample size?
3. What metropolitan areas have a higher priority, given HUD's current needs and considering the historical inclusion of each metropolitan area in the survey?

For any given survey cycle, the overall budget available for metropolitan areas is fixed. Historically, AHS managers have determined the metropolitan sample size during various redesigns, then attempted to keep that sample size fixed while varying the number of metropolitan areas selected for a given year so as to fit within the budget. The standard in place in the 1990s through 2013 was approximately 4,500, although there have been some large departures, including 2007 when the average sample size was about 2,700.

For a given budget and desired sample size, AHS managers then must select the specific metropolitan areas to survey.

¹ Oral history.

1.3 AHS Metropolitan Area Samples History: Frequency and Sample Size

Most of the following historical overview is derived from the oral histories of Duane McGough and John Weichart, as well as AHS documentation and analysis of AHS data.

1974–1977

The AHS began in 1973 with a national sample. In 1974, metropolitan area samples were introduced. The original metropolitan area sample strategy was to sample 60 metropolitan areas² once every 3 years (20 per year over a 3-year cycle). To implement this strategy, the 60 metropolitan areas were organized into three groups. Between 1974 and 1976, all 60 metropolitan areas were sampled (19 in 1974, 21 in 1975, and 20 in 1976). The largest 12 metropolitan areas were split among the three groups and each had a sample size of approximately 15,000 housing units. The remaining 48 metropolitan areas had a sample size of approximately 5,000 housing units.

The 1977 AHS marked the beginning of repeating the metropolitan area samples that were surveyed in 1974. All 19 metropolitan areas surveyed in 1974 were surveyed again in 1977. In addition, Madison, WI, which was previously surveyed in 1975, was surveyed.

1978–1983

Due to budget cutbacks, beginning in 1978, the 60 metropolitan areas were redistributed into four groups of 15 metropolitan areas, with each group intended to be surveyed once every 4 years. Each group had three large metropolitan areas and 12 smaller metropolitan areas. From 1978 through 1981, each survey year included 15 metropolitan areas, but 1982 and 1983 included only 12 and 13 metropolitan areas, respectively.

1984–1994

Beginning in 1984, HUD scaled back from 60 metropolitan areas to 44, with four groups of 11 metropolitan areas, each intended to be surveyed once every 4 years. Also, during

a redesign in 1983, the metropolitan area sample size was reduced from 15,000 in the largest metropolitan areas and 5,000 in the rest to 8,250 housing units in the largest areas and 4,250 in the rest. Due to ongoing budget reductions, further reductions of sample size to 3,200 were implemented in certain years.

The AHS was generally able to stay on track with its strategy of surveying each of the 44 metropolitan areas once every 4 years. In 1992, 1993, and 1994, however, the AHS included only 8, 7, and 8 metropolitan areas, respectively.

1995–2009

The AHS underwent a major redesign for the 1995 AHS. The AHS increased from 44 metropolitan areas to 47.³ One major change was drawing new metropolitan samples for more than one-half of the metropolitan areas. Another important change for the redesign was the inclusion of the “Big 6” metropolitan areas (Chicago, IL-IN-WI; Detroit, MI; Los Angeles, CA; New York, NY-NJ-PA; Northern New Jersey, NJ; and Philadelphia, PA-NJ-DE-MD) into the national sample.⁴ Finally, for the metropolitan areas outside of the Big 6, AHS managers adopted a strategy of surveying each of them once every 6 years.

Major budget reductions during this time period resulted in infrequent metropolitan samples. In fact, only the Big 6 metropolitan areas, plus Seattle, WA, and Miami, FL, were surveyed more than twice. The sample sizes for the independent metropolitan area sample (that is, those not in the Big 6) averaged about 4,600 between 1995 and 2006. In the face of budget restrictions, however, HUD reduced the sample sizes for the independent metropolitan areas to approximately 2,600 for 2007 and 2009.⁵ The sample sizes for the Big 6 metropolitan areas averaged about 2,500.⁶ Lastly, beginning in 2005, HUD and the U.S. Census Bureau decided to conduct the metropolitan AHS surveys in the same years (odd numbered years) as the national survey.

2011–2013

Spurred on by the publication of the National Academy of Sciences report and a substantial increase in budget, HUD returned to the “top 60” strategy of the late 1970s. Prior to the

² This sample included most of the 60 largest metropolitan areas and a few fast-growing metropolitan areas that were not part of the 60 largest metropolitan areas.

³ This increase was achieved by splitting San Francisco-Oakland, CA, into separate metropolitan areas, as well as adding Sacramento, CA, and Charlotte, NC-SC.

⁴ Los Angeles was not included in the Big 6 in 2009 due to U.S. Census Bureau concerns over the AHS interfering with fieldwork on other Census Bureau surveys. Los Angeles was moved to 2011.

⁵ The notable exception was New Orleans, LA, in 2009, which included a much larger sample so as to produce estimates of damage and recovery from Hurricanes Katrina and Rita.

⁶ This number reflects the sum of the cases that were already part of the regular national sample, plus supplemental cases.

2011 survey, HUD developed a list of 60 metropolitan areas. This list included the 47 from the 1995-to-2009 period and several new metropolitan areas.⁷

Although the budget in 2011 and 2013 was much bigger than in prior years, HUD was able to conduct only 29 metropolitan area surveys in 2011 and 25 metropolitan area surveys in 2013.⁸ Each sample included about 4,500 housing units.

1.4 AHS Metropolitan Area Samples History: Prioritization

It is obvious from the prior subsection that the AHS has experienced major budget reductions since the 1970s, requiring HUD to develop priorities for metropolitan area selection. The budget reduction in 1978 caused HUD to reduce the frequency of metropolitan area samples from once every 3 years to once every 4 years. Further budget reductions in 1982 and 1983 caused HUD to deviate from the planned schedule by not conducting surveys in Springfield, MA; Colorado Springs, CO; Las Vegas, NV; Omaha, NE-IA; and Raleigh, NC.

A major reprioritization occurred in 1984 when HUD scaled from 60 to 44 metropolitan areas and cut the sample sizes in half. The metropolitan areas listed previously were officially cut, as were Allentown, PA-NJ; Grand Rapids, MI; Louisville, KY-IN; Sacramento, CA; Honolulu, HI; Wichita, KS; Saginaw, MI; Madison, WI; Orlando, FL; Albany, NY. The Newark, NJ-PA, and Paterson, NJ metropolitan areas were combined into a “Northern New Jersey” area.

Between 1984 and 1994, HUD was not able to fully implement the strategy of surveying each of the 44 metropolitan areas once every 4 years. As previously mentioned, in 1992, 1993, and 1994, the AHS included only 8, 7, and 8 metropolitan areas, respectively. The net result was 23 metropolitan areas being surveyed three times during the 1984-to-1994 period (the expectation under a “once every 4 years” strategy) and 21 metropolitan areas being surveyed twice during this period.

During the period of 1995 through 2009, budget reductions led to major fluctuations in the number of metropolitan areas surveyed. It is clear that HUD prioritized the six largest metropolitan areas through their integration with the national sample.

HUD was never able to implement its strategy of surveying the remaining metropolitan areas once every 6 years, however.

Moreover, in 2005, 2007, and 2009, HUD made the decision to reduce the metropolitan sample size from 4,500 to approximately 2,600, thereby enabling it to conduct more metropolitan area surveys.

In 2011, HUD reestablished the goal to survey 60 metropolitan areas once every 4 years (or every other survey cycle). The development of the list of 60 metropolitan areas was generally consistent with the 1970s—the 55 or so largest metropolitan areas, plus some faster growing areas.

2. HUD and AHS User Community Needs

This section discusses the various needs for metropolitan data and summarizes lessons learned from prior survey years. Many of the needs were identified during the 2015 AHS redesign process, including a redesign conference held in May 2013.

2.1 HUD Needs

AHS managers identified three constituencies within HUD: Office of Policy Development and Research (PD&R) headquarters economists, PD&R regional economists, and program managers and leadership within other HUD offices. AHS managers conducted information gathering meetings with each of these constituencies.

PD&R headquarters economists generally felt that emphasis should be placed on the very largest metropolitan areas, but whatever strategy was adopted needed to be flexible to accommodate point-in-time needs. Another idea that was submitted by PD&R headquarters economists was to develop a geographically and socioeconomically representative set of metropolitan areas that could be surveyed on a regular schedule (explored further in section 3). Finally, PD&R headquarters economists cited the need to develop constituencies for AHS products within metropolitan area governments and other local entities.

PD&R regional economists identified a number of smaller metropolitan areas for which HUD has not historically conducted

⁷ The original plan included disaggregating a handful of larger metropolitan areas into their respective metropolitan divisions, as well as adding some of the faster growing metropolitan areas just outside of the top 60, by population.

⁸ In practice, HUD cut the Gary, IN; Wilmington, DE-MD-NJ; and Camden, NJ metropolitan divisions; aggregated the Fort Lauderdale, Miami, and West Palm Beach, FL metropolitan divisions into one metropolitan area; and aggregated the Edison-New Brunswick, NJ; Nassau-Suffolk, NY; and New York-White Plains, NY metropolitan divisions into two metropolitan areas. This latter change had the added advantage of keeping the AHS New York and Northern New Jersey metropolitan areas consistent with past surveys.

the AHS. These areas included Raleigh, NC; Albany, NY; Greenville and Spartanburg, SC; Colorado Springs, CO; and Boise City, ID. PD&R regional economists also suggested conducting the AHS in areas with major (and recently active) oil and natural gas deposits, as these areas have presented unique housing challenges.

Program managers and leadership in the various HUD offices generally cited a need for conducting metropolitan samples in the large metropolitan areas.

2.2 AHS User Community Needs

The AHS user community expressed a similar sentiment as HUD users. They expressed a desire to continue with metropolitan samples in the largest metropolitan areas. Specifically, the Joint Center for Housing Studies at Harvard University (JCHS) expressed a desire for a “consistent set” of metropolitan areas; that is, for HUD to ensure that some metropolitan areas are on a fixed survey schedule and are always given priority over other metropolitan areas. Also, AHS users in Portland, OR-WA, and Seattle, WA, expressed a desire to have their metropolitan areas surveyed on a consistent basis.

The AHS user community also identified several small metropolitan areas they would like HUD to sample in 2015. In particular, the National Center for Healthy Housing identified six metropolitan areas for which HUD has never conducted a metropolitan sample: Honolulu, HI; Albuquerque, NM; Omaha-Council Bluffs, NE-IA; Little Rock, AR; Boise City, ID; and Des Moines, IA.

2.3 Neighborhood Samples

An idea put forth by several people at HUD and within the AHS user community was to conduct neighborhood samples for populations or locations of interest. HUD users mentioned this idea in the context of evaluating HUD investments made through programs such as Choice Neighborhoods. This idea was also mentioned in the context of exploring housing issues within the Asian and Pacific Islander communities located on the U.S. mainland.

These neighborhood samples do not have to be large. A sample of 300 to 500 should be sufficient to detect changes in neighborhood for most characteristics.

At this time, further research is needed to determine the usefulness of neighborhood samples in detecting programmatic impacts.

⁹ The statute requiring HUD to conduct the AHS says that HUD should conduct a survey similar to what existed in 1981. At that time, the goal of the AHS was to survey the top 60 metropolitan areas.

3. Developing a Representative Set of Metropolitan Areas

3.1 Overview

In addition to specific HUD and AHS user needs, there remains the general statutory charge to survey the largest 45 to 60 metropolitan areas, and HUD has generally adhered to this strategy while exercising some flexibility as needed.⁹ Restricting the metropolitan samples to the top 45 by population establishes a cutoff at New Orleans, LA, with a population of 1.2 million. Restricting the metropolitan samples to the top 60 by population establishes a cutoff at Omaha-Council Bluffs, NE-IA, with a population of 895,000. Either cutoff leaves out some of the smaller but faster growing metropolitan areas in the south and west, including those impacted by oil and gas production.

One strategy that has not been explored with the AHS metropolitan samples is choosing a set of metropolitan areas that are representative of other metropolitan areas. For instance, it may not be necessary to have every fast-growing southern metropolitan area with 1 to 2 million people if a few of them are representative of the whole.

In fact, a small but robust literature explores commonalities between metropolitan areas and attempts to create groups or clusters of metropolitan areas that are similar in nature. Three of those attempts are summarized in the following sections.

3.2 Typologies of Sprawl: Investigating U.S. Metropolitan Land Use Patterns

Sarzynski et al. (2014a, 2014b) investigated metropolitan land use patterns with eye toward the measurement of sprawl. They evaluated 311 metropolitan areas based on four general factors.

1. **Intensity:** The intensity of residential and nonresidential land use overall.
2. **Compactness:** The degree to which development is concentrated and more intensively developed near the historical core as opposed to the periphery.
3. **Mixing:** The degree to which residential and nonresidential uses are integrated at a fine scale.

4. **Core-dominance:** The degree to which jobs are distributed in a monocentric pattern.

Using these four general factors, they identify four clusters of metropolitan areas.

1. **Ascendants:** These areas are, on average, large, young, and fast growing. This cluster includes “world cities” such as Atlanta, GA; Chicago, IL-IN-WI; Los Angeles, CA; and Miami, FL. It also includes a few rust belt areas (Cleveland, OH, and Detroit, MI) and a few of the fast-growing southern (Fort Lauderdale and Miami, FL) and western (Las Vegas, NV; Phoenix, AZ; and Salt Lake City, UT) metropolitan areas.
2. **Insulars:** These areas are the smallest, youngest, and slowest growing. None had more than 1 million residents as of 2000. Examples include Birmingham, AL; Albuquerque, NM; and Little Rock, AR.
3. **Redevelopers:** This cluster is more often located in the north-east. These metropolitan areas tend to be smaller, older, and whiter and to have declining central cities. Examples include Buffalo, NY; Cincinnati, OH-KY-IN; Philadelphia, PA-NJ-DE-MD; Pittsburgh, PA; and Washington, DC-VA-MD-WV.
4. **Cosmopolitans:** This cluster includes, on average, the largest and oldest areas. These areas include Boston, MA-NH; New York, NY-NJ-PA; San Francisco, CA; and St. Louis, MO-IL.

It is worth noting that the clustering methodology used by Sarzynski et al. is based heavily on land use patterns but still incorporates important aspects of housing density and housing location relative to employment location.

3.3 Urban Institute: Expanding Access of Economic Opportunity in Fast-Growth Metropolitan Areas

Pendall and Turner (2014) review the nation’s top 99 largest metropolitan areas along five key categories of economic opportunity.

1. **Growth:** Population growth (2000–2010) and changes in jobs (2007–2010).
2. **Job quality:** The percentage of adults with at least a bachelor’s degree (2005/2009 average); labor force participation (2005/2009 average); and average wage growth per job (2000–2010).
3. **Cost of living:** The hourly wage required to afford the 40th percentile apartment (2013).

4. **Diversity:** Percent foreign born (2005/2009), percent Black (2005/2009), percent Hispanic (2005/2009), and percent age 65 and over (2005/2009).

5. **Access to opportunity:** Black-White dissimilarity index (2005/2009), poverty rate (2012), ratio of 80th to 20th percentile household income (2005/2009), and the percentage of children born in the early 1980s to households in the lowest 20 percent of the income distribution who rose to the top 20 percent by 2010.

Using a clustering approach, the authors find nine clusters of metropolitan areas. Unfortunately, the authors don’t provide a description of each cluster. Instead, they name each cluster using the largest city within the cluster. The clusters were Baltimore, Chicago, Detroit, Houston, McAllen, Memphis, New York, Riverside, and Tampa.

3.4 From Jurisdictional to Functional Analysis of Urban Cores and Suburbs

Cox (2014) builds upon previous research to develop a typology of functional areas *within* a larger metropolitan area. Whereas the two previously reviewed studies cluster metropolitan areas into groups, Cox breaks apart a metropolitan area into four functional areas based on housing age, density, and use of public transit, biking, or walking. His four function areas are—

1. **Pre-auto urban core:** In census urban areas; with high density of people; with 20 percent or more using public transportation, walking, or biking; and other area with median age of home before 1946.
2. **Early auto suburban:** In census urban area, with median age of house between 1947 and 1979.
3. **Later auto suburban:** In census urban area, with median age of house 1980 or later.
4. **Auto exurban:** Outside census urban area, or population density less than 250 persons per square mile, regardless of median age of home.

Cox’s results (partially shown in the following table) can be used to develop groups of metropolitan areas that have similar amounts of a particular function area. For instance, Austin, TX, and Atlanta, GA, have very similar percentage values for each of the four function areas. The same could be said for Boston, MA-NH, and Buffalo, NY.

Table 1. Examples of Cox (2014) Metropolitan Area Typology

Metropolitan Area	Pre-Auto Urban Core	Early Auto Suburban	Later Auto Suburban	Auto Exurban
Atlanta, GA	0.5%	14.9%	70.7%	13.8%
Austin, TX	1.8%	15.7%	62.5%	20.0%
Baltimore, MD	16.2%	41.8%	19.9%	22.0%
Birmingham, AL	0.0%	42.1%	24.6%	33.3%
Boston, MA-NH	34.2%	49.7%	3.2%	12.9%
Buffalo, NY	28.8%	51.6%	3.1%	16.5%

3.5 Conclusion

Each of the three lines of research cited previously contains useful information for how metropolitan areas could be clustered for the AHS. Ideally, a clustering method specifically for use in selecting metropolitan areas for the AHS would use metrics that are related strongly to the reasons for conducting the AHS: housing cost, housing quality, and neighborhood assets. Housing quality tends to be closely correlated with the age of structures, and housing costs are a function of density and access to jobs. Age of structures is clearly part of the Cox methodology, while density and access to jobs are both part of Sarzynski et al. and Pendall and Turner. Neighborhood assets are not explicitly a part of any of the three lines of research, but perhaps correlated with the percentage of people using public transportation, walking, or biking.

Absent a quantitative assessment based on specific AHS needs, a qualitative combination of the aforementioned three methods may help in creating a representative selection of metropolitan areas to survey.

4. Metropolitan Area Selection Strategies

There are a number of options for selecting metropolitan areas for 2015 and forward. Four options are presented in the following sections.

4.1 Option 1: National Sample and Top 60 Metropolitan Areas, Sampled Once Every 4 Years

The first option is the status quo. This option reflects what has been HUD's historic goal for the AHS. For 2015, 30 of the top 60 metropolitan areas would be surveyed. In 2017, the other 30 would be surveyed.

While this option maintains the status quo, it is not necessarily flexible. More to the point, it does not provide a metropolitan area prioritization strategy that could be implemented if budget reductions require conducting less than 30 metropolitan area surveys.

4.2 Option 2: Integrate National Sample and Next 45 Largest Metropolitan Areas

This option includes permanently integrating into the national sample a sufficiently large metropolitan area sample for each of the 15 largest metropolitan areas, by population.¹⁰ Metropolitan area samples would be drawn for the remaining top 45 metropolitan areas, and they would be sampled either once every 4 years (22/23 per survey cycle) or once every 6 years (15 per survey cycle).

¹⁰ The 15 largest metropolitan areas, by population, include approximately one-third of all U.S. residents.

Table 2. Top 15 Largest Metropolitan Areas, by 2013 Population

Rank	Metropolitan Statistical Area Name	2013 Population
1	New York-Newark-Jersey City, NY-NJ-PA	19,949,502
2	Los Angeles-Long Beach-Anaheim, CA	13,131,431
3	Chicago-Naperville-Elgin, IL-IN-WI	9,537,289
4	Dallas-Fort Worth-Arlington, TX	6,810,913
5	Houston-The Woodlands-Sugar Land, TX	6,313,158
6	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,034,678
7	Washington-Arlington-Alexandria, DC-VA-MD-WV	5,949,859
8	Miami-Fort Lauderdale-West Palm Beach, FL	5,828,191
9	Atlanta-Sandy Springs-Roswell, GA	5,522,942
10	Boston-Cambridge-Newton, MA-NH	4,684,299
11	San Francisco-Oakland-Hayward, CA	4,516,276
12	Phoenix-Mesa-Scottsdale, AZ	4,398,762
13	Riverside-San Bernardino-Ontario, CA	4,380,878
14	Detroit-Warren-Dearborn, MI	4,294,983
15	Seattle-Tacoma-Bellevue, WA	3,610,105

This option is consistent with the original intent of the metropolitan area samples. In addition, this option provides two advantages over option 1. First, this option ensures that a consistent set of the 15 largest metropolitan area samples will be part of every survey cycle—a preference expressed by some of the larger AHS users. Second, integrating the top 15 metropolitan areas into the national sample provides cost savings compared with having them as separate samples. The cost savings is achieved because fully one-third of a representative national sample is already in the top 15 metropolitan areas, because the top 15 metropolitan areas represent one-third of the population. As such, HUD need only add the amount of sample necessary to bump up each metropolitan area's total sample to 3,000.

4.3 Option 3: Integrated National Sample and Selection of Metropolitan Areas Based on Point-in-Time Criteria

This option includes integrating into the national sample a sufficiently large metropolitan area sample for each of the 15 largest metropolitan areas, by population.

The selection of additional metropolitan area samples for any given year would be based on criteria established at that point in time and would not necessarily be restricted to the next 45 largest metropolitan areas. Criteria may include fast-growing metropolitan areas; metropolitan areas that recently experienced a major disaster; or rural areas of the country where energy production has dramatically increased the demand for housing, leading to a loss of affordable housing for rural residents.

It is worth noting that HUD has historically exercised some flexibility in choosing metropolitan areas that were outside of the 45 or 60 largest, although they have generally stuck with the largest metropolitan areas.

4.4 Option 4:

- **National Sample with Big 15 Integration.**
- **A secondary group of the “Next 20” large Metropolitan Areas representative of the largest 50 metropolitan areas, surveyed every 4 years (10 every 2 years).**
- **A third group of metropolitan areas based on point-in-time selection criteria.**

After the top 15, the next 20 largest metropolitan areas represent a slightly skewed cross-section of larger metropolitan area types, given the clustering research cited previously. For the Sarzynski clusters, Cosmopolitans make up one-half of the next 20 largest metropolitan areas, but this skewing is to be expected as the Cosmopolitan group includes the larger and older metropolitan areas.

Within this list, there are some possibilities for creating a (perhaps) less skewed representation across the Sarzynski clusters and the Urban Institute clusters. Note that the current distribution includes 10 Cosmopolitans, 7 Ascendants, and 2 Redevelopers. (Tampa, FL, the 18th largest metropolitan area, is not included in a Sarzynski cluster.)

One option is to replace a few members of this list with members just outside this list that are all classified as Redevelopers: #36 (Nashville, TN), #38 (Providence, RI-MA) and #39 (Milwaukee, WI). They could potentially replace—

- Kansas City, MO-KS, which is in the same combined Sarzynski/Urban Institute cluster (Cosmopolitan and Chicago) as Minneapolis, MN-WI, and St. Louis, MO-IL.

- Sacramento, CA, which is in the same combined Sarzynski/Urban Institute/Cox group (Cosmopolitan/Houston/very low pre-auto urban core) as Denver, CO, and Austin, TX, and which is one of several metropolitan areas in California that fall into the top 60 by population.¹¹
- Columbus, OH, which is in the same combined Sarzynski/Urban Institute/Cox group (Ascendants, Chicago, and five percent Pre-Auto urban core) as Indianapolis, IN (or vice-versa).

Exercising this option would yield a distribution of 8 Cosmopolitans, 6 Ascendants, and 5 Redevelopers—a perhaps better

representation across the Sarzynski clusters. Lastly, recall that the fourth Sarzynski cluster, Insulars, includes much smaller metropolitan areas. The largest of these areas, Birmingham, AL, is ranked 49th in total population as of 2013.

For 2015 point-in-time criteria, it is likely worth considering adding the lists of metropolitan areas submitted by HUD regional economists and the National Center for Healthy Housing, as well as those that are newly in the top 60 but have never been part of the AHS (Salt Lake City, UT, for instance). Together, these lists include 15 metropolitan areas.

Table 3. Next 20 Largest Metropolitan Areas and Their Values for Three Metropolitan Area Typologies

Rank ^a	Metropolitan Statistical Area Name	2013 Population	Sarzynski Clusters	Urban Institute Clusters	Cox % Pre-Auto Urban Core
16	Minneapolis-St. Paul-Bloomington, MN-WI	3,459,146	Cosmopolitans	Chicago	13
17	San Diego-Carlsbad, CA	3,211,252	Cosmopolitans	New York	1
18	Tampa-St. Petersburg-Clearwater, FL	2,870,569	None	Tampa	0
19	St. Louis, MO-IL	2,810,056	Cosmopolitans	Chicago	12
20	Baltimore-Columbia-Towson, MD	2,770,738	Cosmopolitans	Baltimore	16
21	Denver-Aurora-Lakewood, CO	2,697,476	Cosmopolitans	Houston	3
22	Pittsburgh, PA	2,360,867	Redevelopers	Tampa	16
23	Charlotte-Concord-Gastonia, NC-SC	2,335,358	Ascendants	Houston	0
24	Portland-Vancouver-Hillsboro, OR-WA	2,314,554	Cosmopolitans	Portland	10
25	San Antonio-New Braunfels, TX	2,277,550	Cosmopolitans	Riverside	0
26	Orlando-Kissimmee-Sanford, FL	2,267,846	Ascendants	Houston	0
27	Sacramento--Roseville--Arden-Arcade, CA	2,215,770	Cosmopolitans	Houston	2
28	Cincinnati, OH-KY-IN	2,137,406	Redevelopers	Chicago	10
29	Cleveland-Elyria, OH	2,064,725	Ascendants	Chicago	22
30	Kansas City, MO-KS	2,054,473	Cosmopolitans	Chicago	5
31	Las Vegas-Henderson-Paradise, NV	2,027,868	Ascendants	Houston	2
32	Columbus, OH	1,967,066	Ascendants	Chicago	5
33	Indianapolis-Carmel-Anderson, IN	1,953,961	Ascendants	Chicago	5
34	San Jose-Sunnyvale-Santa Clara, CA	1,919,641	Ascendants	New York	0
35	Austin-Round Rock, TX	1,883,051	Cosmopolitans	Houston	2

^a Of the 20 metropolitan areas on this list, 12 were surveyed in 2011 and 8 were surveyed in 2013.

¹¹ The National Center for Healthy Housing commented that the AHS should consider dropping a few of the metropolitan areas in California due to the high number already in the top 60 by population.

5. Metropolitan Area Selection Decision

This section describes the metropolitan area selection strategy chosen by HUD for 2015 and beyond.

5.1 Incorporating Lessons Learned

As detailed in section 1, because of major fluctuations in budget during the 1990s and 2000s, AHS managers were unable to adopt a set schedule of metropolitan area surveys. Although budgets grew substantially in 2011 and 2013, there is no guarantee those budget levels will continue into the future. As such, HUD felt it was important to choose a strategy that could endure budget fluctuations without substantially diminishing the quality of the survey.

Another lesson learned is, when faced with survey reductions, HUD and the AHS user community have a preference for a consistent set of the larger metropolitan areas. For HUD's perspective, having a consistent set of larger metropolitan areas helps build a permanent constituency for survey data products.

The decision of which metropolitan sample to survey for 2015 (and beyond) was certainly a balancing act of adhering to the AHS statute, meeting the needs of the HUD and AHS data users, and building additional customers for AHS data.

5.2 Decision on Metropolitan Area Sample Size

As part of the 2015 AHS redesign process, HUD developed a sample size goal for each selected metropolitan area. This goal is—

For the metropolitan area as a whole, a 2-year change of 10 percent in median monthly housing costs will have a standard error of 5 percent.

HUD and the Census Bureau have determined that a sample size of 3,000 housing units will achieve this standard. More information about the determination of the national and metropolitan area sample sizes can be found in the paper *Sample Sizes Determination and Decisions for the 2015 American Housing Survey and Beyond*.

5.3 Selection Strategy

HUD determined that option 4 provided the most benefit to HUD and AHS users, while maintaining the flexibility to accommodate budget changes and point-in-time needs.

HUD evaluated numerous options for the “Next 20” group. While HUD generally implemented the strategy of picking a less skewed representation across the Sarzynski and Urban Institute clusters, HUD also tried to balance regional considerations and HUD-specific needs. HUD settled on the following “Next 20” group:

Table 4. Final List of AHS “Next 20” Metropolitan Areas

Rank ^a	Metropolitan Statistical Area Name	2013 Population	Planned Survey Year
16	Minneapolis-St. Paul-Bloomington, MN-WI	3,459,146	2017
18	Tampa-St. Petersburg-Clearwater, FL	2,870,569	2017
20	Baltimore-Columbia-Towson, MD	2,770,738	2017
21	Denver-Aurora-Lakewood, CO	2,697,476	2015
22	Pittsburgh, PA	2,360,867	2015
24	Portland-Vancouver-Hillsboro, OR-WA	2,314,554	2015
25	San Antonio-New Braunfels, TX	2,277,550	2017
28	Cincinnati, OH-KY-IN	2,128,603	2015
29	Cleveland-Elyria, OH	2,064,725	2015
30	Kansas City, MO-KS	2,038,724	2015
31	Las Vegas-Henderson-Paradise, NV	2,027,868	2017
34	San Jose-Sunnyvale-Santa Clara, CA	1,919,641	2017
39	Milwaukee-Waukesha-West Allis, WI	1,566,981	2015
41	Memphis, TN-MS-AR	1,377,850	2015
42	Oklahoma City, OK	1,296,565	2017
44	Richmond, VA	1,231,980	2017
45	New Orleans-Metairie, LA	1,227,096	2015
47	Raleigh, NC	1,188,564	2015
48	Birmingham-Hoover, AL	1,136,650	2017
51	Rochester, NY	1,082,284	2017

^a Of the 20 metropolitan areas on this list, 12 were surveyed in 2011 and 8 were surveyed in 2013.

5.4 Implementing the Selection Strategy During Budget Reductions

Given this history of AHS funding, it is likely that HUD will not always be able to implement the metropolitan area survey strategy detailed in this paper. In the event of insufficient funding, HUD will make the following sample reductions.

First, fully fund the integrated national sample. In the event of insufficient funding for the integrated national sample, HUD will not seek to eliminate any of the top 15 metropolitan areas that are integrated into the national sample as a whole. Rather, the entire integrated national sample would be reduced by a percentage necessary to fit within the budget.

Second, if additional funding remains, fund up to 10 metropolitan areas selected from the “Next 20” group of metropolitan areas, plus any of the “Next 20” that were scheduled to be conducted in the prior survey cycle but were not conducted due to budget reductions.

Third, if additional funding remains, fund as many additional metropolitan areas based on point-in-time criteria.

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