

HAC'S RURAL & SMALL TOWN TYPOLOGY DATABASE



HAC

Technical Documentation

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Given the changes and shortcomings to traditional definitions used to identify rural areas, the Housing Assistance Council (HAC) developed a sub-county designation of rural and small-town areas which incorporates measures of housing density and commuting at the Census tract level to establish a more precise measure of rural character.



Housing Assistance Council

HAC'S RURAL & SMALL TOWN TRACT DESIGNATION - OVERVIEW

Given the changes and shortcomings to traditional definitions used to identify rural areas, the Housing Assistance Council (HAC) developed a sub-county designation of rural and small-town areas which incorporates measures of housing density and commuting at the Census tract level to establish a more precise measure of rural character.¹ This alternative residence definition includes six classifications: 1) rural, 2) small-town, 3) exurban, 4) outer suburban, 5) inner suburban, and 6) urban.

The HAC rural tract classifications are generally defined by the following characteristics:

0 = No designation – no land area.

1 = Rural tract – Less than 16 housing units per square mile.

2 = Small-town tract – Sixteen to 64 housing units per square mile and a low degree of commuting to a metropolitan core area.

3 = Exurban tract - Sixteen to 64 units per square mile and a high degree of commuting to a metropolitan core area.

4 = Outer suburban tract – 65 to 640 housing units per square mile.

5 = Inner suburban tract – 641 to 1,600 housing units per square mile.

6 = Urban tract - More than 1,600 housing units per square mile.

Additional adjustments were made to account for incongruities such as low-housing density tracts in highly urbanized areas, and discordant commuting data/patterns, etc. The revisions were largely incorporated using GIS mapping technologies and manual review or visual inspection.

For simplicity, these designations are also collapsed into 3 general classifications of: 1) small town and rural tracts, 2) suburban and exurban tracts, and 3) urban tracts.

DATA SOURCES AND GEOGRAPHIC CONCEPTS

The information used to develop HAC's Rural and Small Town Typology Database derives from HAC tabulations of various public-use data sources. Most of the data comes from the U.S. Census Bureau's 2010 Census of Population and Housing. The U.S. Census counts every resident and housing unit in the United States every 10 years. Additional information used in database development derives from HAC tabulations of other publically available data sources such as the U.S. Department of Agriculture's Economic Research Service (ERS) and the U.S. Census Bureau.

¹ HAC's tract-based rural classification definition is based in part on concepts of housing density introduced by David Theobald. "Land-Use Dynamics Beyond the American Urban Fringe." *Geographical Review*. Volume 91, Number 3. 9 July 2001) pages 544-564.

U.S. Census Bureau's 2010 Census of Population and Housingⁱ

The U.S. Census counts every resident in the United States. It is mandated by Article I, Section 2 of the Constitution and takes place every 10 years. The data collected by the decennial census determine the number of seats each state has in the U.S. House of Representatives and is also used to distribute billions in federal funds to local communities.

Approximately 74 percent of U.S. households returned their census forms by mail; the remaining households were counted by census workers walking neighborhoods throughout the United States. National and state population totals from the 2010 Census were released on December 21, 2010.

Limitations Identified in the 2010 Census of Population and Housingⁱⁱ

The Census Bureau estimates that among the 300.7 million people who live in housing units, about 94.7 percent were counted correctly, about 3.3 percent were counted erroneously, 1.6 percent provided only a census count and had their demographic characteristics imputed, or statistically inserted, and 0.4 percent needed more extensive imputation after all census follow-up efforts were attempted. Among those erroneously counted, about 84.9 percent were duplicates, while the remainder were incorrectly counted for another reason, such as people who died before Census Day (April 1, 2010), who were born after Census Day or were fictitious census records.

The Census Bureau estimated 16.0 million omissions in the census. Omissions include people missed in the census and people whose census records could not be verified in the post-enumeration survey because they did not answer enough of the demographic characteristic questions in the census. Of the 16.0 million omissions, about 6.0 million were likely counted in the census but couldn't be verified in the post-enumeration survey.

The 2010 Census undercounted renters by 1.1 percent, showing no significant change compared with 2000. Homeowners were overcounted in both the 2000 and 2010 censuses. However, the 2010 Census reduced the net overcount for homeowners from 1.2 percent to 0.6 percent. Renters were more likely to be duplicated than owners and twice as likely to have all of their characteristics imputed.

USDA Economic Research Service (ERS) Rural-Urban Commuting Area Codes.ⁱⁱⁱ

The rural-urban commuting area (RUCA) codes, created and produced by the U.S. Department of Agriculture's Economic Research Service (ERS), is a detailed and flexible scheme for delineating sub-county components of rural and urban areas, were updated using data from the 2010 decennial census and the 2006-10 American Community Survey (ACS). RUCA codes are based on the same theoretical concepts used by the Office of Management and Budget (OMB) to define county-level metropolitan and micropolitan areas. ERS applied similar criteria to measures of population density, urbanization, and daily commuting to identify urban cores and adjacent territory that is economically integrated with those cores. ERS adopted OMB's metropolitan and micropolitan terminology to highlight the underlying connectedness between the two classification systems. However, the use of census tracts instead of

counties as building blocks for RUCA codes provides a different and more detailed geographic pattern of urban and rural areas.

Census tracts are used because they are the smallest geographic building block for which commuting flow estimates are available from the U.S. Census. Tract-to-tract commuting flow files were constructed from ACS data as part of a special tabulation for the Department of Transportation—the Census Transportation Planning Package. To derive estimates for small geographic units such as census tracts, information collected annually from over 3.5 million housing units was combined across 5 years (2006-10). As with all survey data, ACS estimates are not exact because they are based on a sample. In general, the smaller the estimate, the larger the degree of uncertainty associated with it.

Office of Management and Budget (OMB) Defined Metropolitan and Micropolitan Statistical Areas^{iv}

The United States Office of Management and Budget (OMB) defines Metropolitan and Micropolitan statistical areas according to published standards that are applied to Census Bureau data. The general concept of a Metropolitan or Micropolitan statistical area is that of a core based statistical area (CBSA) containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Current Metropolitan and Micropolitan statistical area definitions were announced by OMB effective February 28, 2013.

The 2013 standards provide that each CBSA must contain at least one urban area of 10,000 or more population. Each metropolitan statistical area must have at least one urbanized area of 50,000 or more inhabitants. Each micropolitan statistical area must have at least one urban cluster of at least 10,000 people but a population of less than 50,000.

Under the standards, the county (or counties) in which at least 50 percent of the population resides within urban areas of 10,000 or more population, or that contain at least 5,000 people residing within a single urban area of 10,000 or more population, is identified as a "central county" (counties). Additional "outlying counties" are included in the CBSA if they meet specified requirements of commuting to or from the central counties. Counties or equivalent entities form the geographic "building blocks" for metropolitan and micropolitan statistical areas throughout the United States and Puerto Rico. The basic categories of the 2013 OMB Metropolitan classifications include:

Metropolitan Statistical Areas Metropolitan Statistical Areas have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. With these standards there are 1090 counties classified as metropolitan.

Micropolitan Statistical Areas Micropolitan Statistical Areas – a new set of statistical areas – have at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

Outside Core Based Statistical Areas (Outside CBSA): Areas not included in Metro or Micropolitan Statistical Areas.

U.S. Census Defined Urban and Rural Areas^v

For the 2010 Census, the Census Bureau classified as urban all territory, population, and housing units located within urbanized areas (UAs) and urban clusters (UCs), both defined using the same criteria. The Census Bureau delineates UA and UC boundaries that represent densely developed territory, encompassing residential, commercial, and other nonresidential urban land uses. In general, this territory consists of areas of high population density and urban land use resulting in a representation of the "urban footprint."

Rural consists of all territory, population, and housing units located outside UAs and UCs.

For the 2010 Census, the urban and rural classification was applied to the 50 states, the District of Columbia, Puerto Rico, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands.

Urbanized Areas (UAs): An urbanized area consists of densely developed territory that contains 50,000 or more people. The Census Bureau delineates UAs to provide a better separation of urban and rural territory, population, and housing in the vicinity of large places.

Urban Clusters (UCs): An urban cluster consists of densely developed territory that has at least 2,500 people but fewer than 50,000 people. The Census Bureau first introduced the UC concept for Census 2000 to provide a more consistent and accurate measure of urban population, housing, and territory throughout the United States, Puerto Rico, and the Island Areas.

Census Tracts^{vi}

Census Tracts are small, relatively permanent statistical subdivisions of a county or equivalent entity that are updated by local participants prior to each decennial census as part of the Census Bureau's Participant Statistical Areas Program. The Census Bureau delineates census tracts in situations where no local participant existed or where state, local, or tribal governments declined to participate. The primary purpose of census tracts is to provide a stable set of geographic units for the presentation of statistical data.

Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. A census tract usually covers a contiguous area; however, the spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. Census tracts occasionally are split due to population growth or merged as a result of substantial population decline.

Census tract boundaries generally follow visible and identifiable features. They may follow nonvisible legal boundaries, such as minor civil division (MCD) or incorporated place boundaries in some states and situations, to allow for census-tract-to-governmental-unit relationships where the governmental boundaries tend to remain unchanged between censuses. State and county boundaries always are census tract boundaries in the standard census geographic hierarchy.

DATABASE CODES

Variable	Label	Value Labels
StateCountyCTractFIPs_String	11 digit Census tract FIPS code - String	
StateCountyCTractFIPs_Numeric	11 digit Census tract FIPS code - Numeric	
StateFIPs_String	2 digit State FIPS code - String	
StateFIPs_Numeric	2 digit State FIPS code - Numeric	
CountyFIPs_String	3 digit County FIPS code - String	
CountyFIPs_Numeric	3 digit County FIPS code - Numeric	
CtractFIPs_String	6 digit Census tract(only) FIPS code - String	
CtractFIPs_Numeric	6 digit Census tract(only) FIPS code - Numeric	
Name	Census tract name	
Pop_2010	Total population (2010 Census of Population and Housing)	
TotHUnits_2010	Total housing units (2010 Census of Population and Housing)	
OccupHUnits_2010	Occupied housing units (2010 Census	

	of Population and Housing)	
VacantHUnits_2010	Vacant housing units (2010 Census of Population and Housing)	
HAC_Tract_9	HAC's Rural & Small Town Census Tract Code (HAC Tract 9)	<p>0 = No designation - no land area</p> <p>1 = Rural tract – Less than 16 housing units per square mile (.025 housing units per acre).</p> <p>2 = Small Town tract – Sixteen to 64 housing units per square mile (.025 to 0.1 housing units per acre), and a low degree of commuting to a metropolitan core area.</p> <p>3 = Exurban tract - Sixteen to 64 units per square mile (.025 to 0.1 housing units per acre) and a high degree of commuting to a metropolitan core area.</p> <p>4 = Suburban tract – 65 to 1,600 housing units per square mile. (0.1 to 2.5 housing units per acre).</p> <p>5 = Urban tract - More than 1,600 housing units per square mile (2.5 housing units per acre).</p>
HAC_Tract_9_collapsed	Collapsed version of HAC Tract 9 Code	<p>0 = No designation - no land area</p> <p>1= Rural & Small Town Tract (HAC Tract 9 - 1, 2)</p> <p>2= Suburban and Exurban Tract (HAC Tract 9 - 3,4,)</p> <p>3= Urban Tract (HAC Tract 9 - 5)</p>

ADDITIONAL INFORMATION/CONTACT:

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NOTES

ⁱ Excerpted from, *What is the Census?*, <http://2010.census.gov/2010census/about/>

ⁱⁱ Excerpted from U.S. Census Bureau, <http://content.govdelivery.com/bulletins/gd/USCENSUS-418bf7>

ⁱⁱⁱ Excerpted from USDA Economic Research Service ERS *2010 Rural-Urban Commuting Area (RUCA) Codes*
<http://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/documentation.aspx#.UuLxO9Io5kg>

^{iv} Excerpted from Office of Management and Budget (OMB) Bulletins - February 2013 (OMB Bulletin No. 13-01) announcing metropolitan and micropolitan statistical areas as of February 2013.
<http://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b-13-01.pdf>

^v Excerpted from U.S. Census Bureau: *Geographic Terms and Concepts - Urban and Rural*
http://www.census.gov/geo/www/2010census/gtc/gtc_urbanrural.html

^{vi} Excerpted from U.S. Census Bureau: *Geographic Terms and Concepts – Census Tracts*
http://www.census.gov/geo/www/2010census/gtc/gtc_ct.html