PENNSYLVANIA OFFICE OF RURAL HEALTH

Rural Pennsylvania: Where Is It Anyway?

A Compendium of the Definitions of Rural and Rationale for Their Use

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The Concept of Rural and the Rationale for Multiple Definitions

Everyone has a general idea about what defines the term "rural." However, these ideas often are not well articulated. Some examples of expressions of these general notions include, "Where the farms are"; "areas that are located away from the city"; "small places"; or other similar characterizations. These perceptions vary from person to person. For example, someone who lives in the center of a city may think that a farming area five miles outside of the city is a rural area, while a logger who lives in a remote forested area may think of it as urban.

Although these vaguely defined definitions of rural are adequate to serve the needs of the lay person, they are not specific enough to be used in the administration of public programs or in conducting research. It is important to consider both uses since the definitions used in public programs are borrowed from the research literature. For researchers, the definition of rural begins with a theoretical understanding of rural areas and the manner in which they differ from urban areas, both socially and economically. Among the characteristics that have been entertained in the theoretical conception of rural are: (1) population size, (2) population density, and (3) the social and economic ties that the population maintains with more urban centers. These characteristics need to be more clearly defined so that they can be measured consistently and accurately.

Each of these characteristics has been used to operationalize the definition of rural and in developing the multiple definitions of "rural." Although having more than one definition introduces some confusion, there are advantages associated with the opportunity to select from several definitions. Researchers can choose the definition that has the best fit with the research question being posed or, on a more practical level, the definition for which data are available. Researchers often use one of the definitions used by the U.S. Census Bureau, since significant quantities of data are classified by these definitions. Some of the definitions currently in use may reflect one of the three characteristics in favor of others, while others incorporate a combination of characteristics.

Similar to the definitions used in research, the definition of rural in the administration of public programs also has to be well-defined. Since organizations and agencies at the federal, state, and community levels are involved in the administration of these programs, it is not surprising that several definitions also are used in these applications. Most organizations have relied on U.S. Census Bureau-based definitions because of their availability and the availability of associated data.

One size does not fit all. Different programs use different definitions and the definition that is

used may exclude some areas for which the program was intended, while at the same time, including other areas that were not targeted by the program. Nevertheless, it would be administratively prohibitive for a sponsoring agency to use multiple definitions, allow for many exceptions, or make decisions on an *ad hoc* or case-by-case basis.

The general scenario can be summarized as follows. In everyday life, we use a very general conception about where rural is. This concept is not well-defined, varies from person to person, but has a common basis. There are a variety of definitions that are used in both scientific research and the administration of public programs. These definitions are based on the theoretical understanding of rural which distinguishes urban from rural on the basis of (1) population size, (2) population density, and (3) the social and economic ties that the population maintains with urban centers. Consequently, there is more than one answer to the question, "Rural, where is it anyway?" If one participates in any rural-targeted programs or is engaged in scientific research, it is unarguably beneficial to be familiar with the several possible answers to that question, that is, to be aware of the different definitions of rural currently in common usage.

Click here (https://www.ruralhealthinfo.org/am-i-rural) to see if your location is considered to be rural and eligible for several federal programs.

Rural: Where Is It Anyway?
The Most Frequently Used Definitions of Rural

From Lake Erie to the Appalachian Mountains, to state and national forests, Pennsylvania was home to over 13 million people in 2020, becoming the fifth-most populous state in the nation (Krawitz, 2020). According to the Center for Rural Pennsylvania, a bicameral agency of the Pennsylvania General Assembly, nearly 3.4 million of those citizens lived in rural areas of the state. While as a whole, the population of rural Pennsylvania is relatively homogenous, there are unique and noteworthy qualities within that population that deserve attention and dedicated resources. Although some of these qualities present challenges, others offer opportunities for growth and improvement if given the right support.

Defining "rural" can be challenging and federal and state organizations may use different criteria when determining what is considered to be rural or non-metropolitan. The Center for Rural Pennsylvania defines rural counties as any county with a population density of less than the statewide density average of 291 people per square land mile, based on the 2020 Census. The Center for Rural Pennsylvania's definition of rural is shown in Figure 1 (Center for Rural Pennsylvania, 2023).

Figure 1: Rural Counties in Pennsylvania by Population Density, 2020
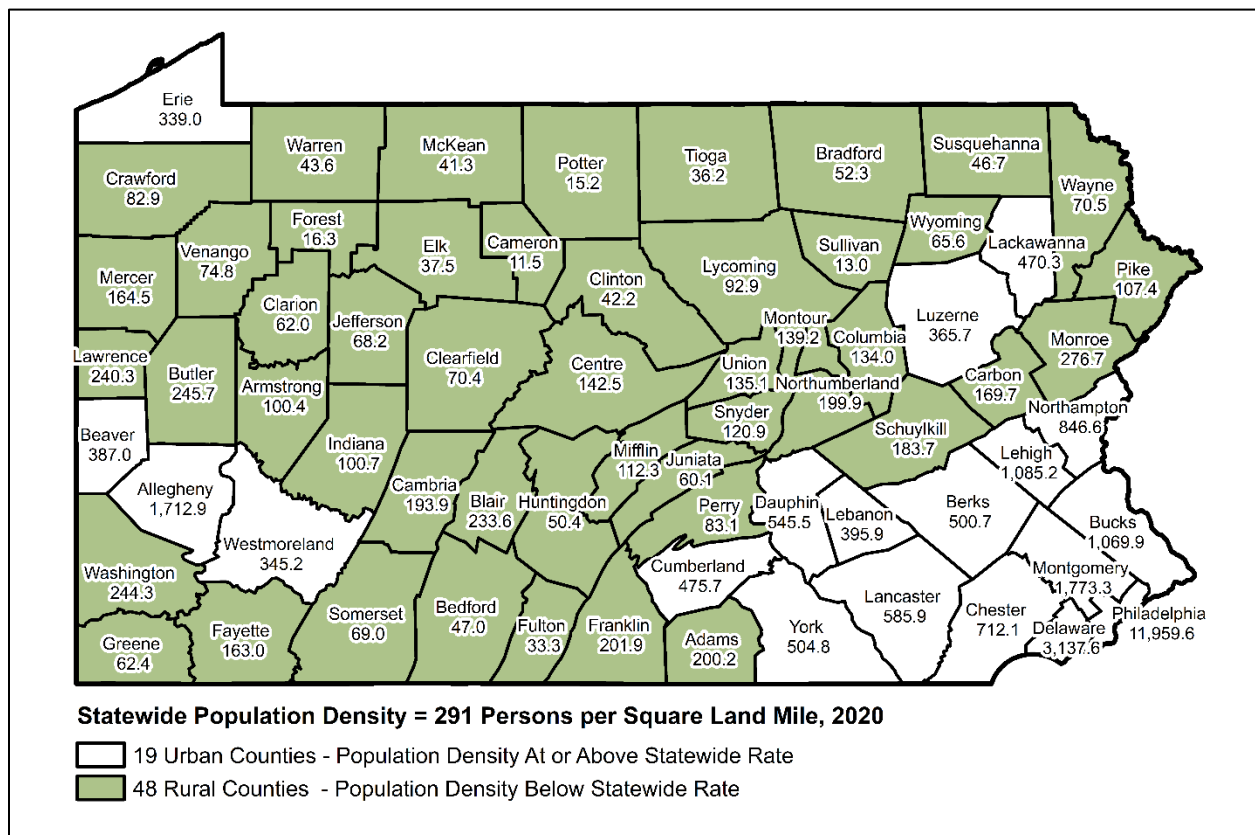
Source: U.S. Census Bureau, 2020; prepared by the Center for Rural Pennsylvania, 2023

Federal government entities provide at least seven other definitions of rural which may not align with how individual states designate rural areas. All federal definitions are population-based, and first define various levels of urban areas before describing the remaining areas as rural. The definitions most frequently used in rural health care are included in Table 1. Maps depicting Pennsylvania's rurality based on these federal definitions are provided in Figures 2 through 7. As of July 2023, the U.S. Census Bureau and the Office of Management and Budget updated their definitions of rural and urban using the results of the 2020 Census.

Table 1: Federal Government Entity Definitions of Rural

Entity and Unit of Classification	Unit
U.S. Census Bureau	**Urban Areas, 2020**
Using the 2020 Census, the U.S. Census Bureau defined an urban area as densely settled core of census blocks that meet minimum housing unit density and/or population density requirements. This includes adjacent territory containing non-residential urban land uses. To qualify as an urban area, the territory identified according to criteria must encompass at least 2,000 housing units or a population of at least 5,000. All areas outside Urban Areas are considered rural. Source: U.S. Census Bureau, 2023b	
Office of Management and Budget	**Core-Based Statistical Area (CBSA)**
Rural areas are all areas that are not: - Metropolitan Area: at least one urbanized area of 50,000+ persons. - Rural areas may be designated as: - Micropolitan Area: at least one urbanized cluster of 10,000 to 49,999 persons; or - Non-Metro: all other areas not inside the CBSA. Source: U.S. Census Bureau, 2023a	
U.S. Department of Agriculture	**Rural-Urban Commuting Area Codes (RUCAs)**
Sub-county components are designated according to population density, urbanization, and daily commuting to urbanized areas or urban clusters: 1. Metropolitan area core: primary flow within an urbanized area (UA); 2. Metropolitan area high commuting: primary flow 30% or more to a UA; 3. Metropolitan area low commuting: primary flow 10%-30% to a UA; 4. Micropolitan area core: primary flow within an Urban Cluster of 10,000-49,999 (large UC); 5. Micropolitan high commuting: primary flow 30% or more to a large UC; 6. Micropolitan low commuting: primary flow 10%-30% to a large UC; 7. Small town core: primary flow within an Urban Cluster of 2,500-9,999 (small UC); 8. Small town high commuting: primary flow 30% or more to a small UC; 9. Small town low commuting: primary flow 10%-30% to a small UC; 10. Rural areas: primary flow to a tract outside of UA or UC; or	

11. Not coded: Census tract with zero population and no rural-urban identifier information
Source: U.S. Department of Agriculture, 2023

Federal Office of Rural Health Policy
The Federal Office of Rural Health Policy accepts all non-Metro counties as rural and uses the Rural-Urban Commuting Area (RUCA) codes as an additional method to determine rurality whereby tracts inside Metropolitan counties with the RUCA codes 4-10 are considered rural. The Federal Office of Rural Health Policy has also designated 132 large area census tracts with RUCA codes 2 or 3 as rural. These tracts have an area of 400+ square miles and population densities of no more than 35 people per square mile. Source: Health Resources and Services Administration, 2021

Figures 2 through 7 show rural and urban areas of Pennsylvania based on these definitions.

### *Definition 1: Census Urbanized Area, Urban Cluster, Urban and Rural*

The U.S. Census Bureau defines an urban area as a densely settled core of census tracts and/or census blocks that meet minimum population density requirements, combined with adjacent territory including less densely settled areas that connect two parts of the densely settled core. To qualify as an urban area, the territory must encompass at least 5,000 people and the addition of a minimum housing unit threshold of 2,000 as an alternative to qualification based on population size. This classification includes both Urbanized Areas (UAs) of 50,000 or more people and Urban Clusters (UCs) of at least 5,000 and less than 50,000 people. The use of housing unit density instead of population density has also been taken into account.

It is important to note that the building block of urban is the census tract or the smaller census block; urban need not be an entire county. "Rural" is defined as the residual, i.e., any areas not identified as "urban." Consequently, rural encompasses all population, housing, and territory not included within an urban area.

Figure 2 shows the urban and rural areas of Pennsylvania using the U.S. Census definition.

Click here https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html to access the U.S. Census Bureau's website on the 2020 Census Urban and Rural Classification and Urban Area Criteria.

Figure 2: U.S. Census Bureau Definition of Urban Areas, 2020
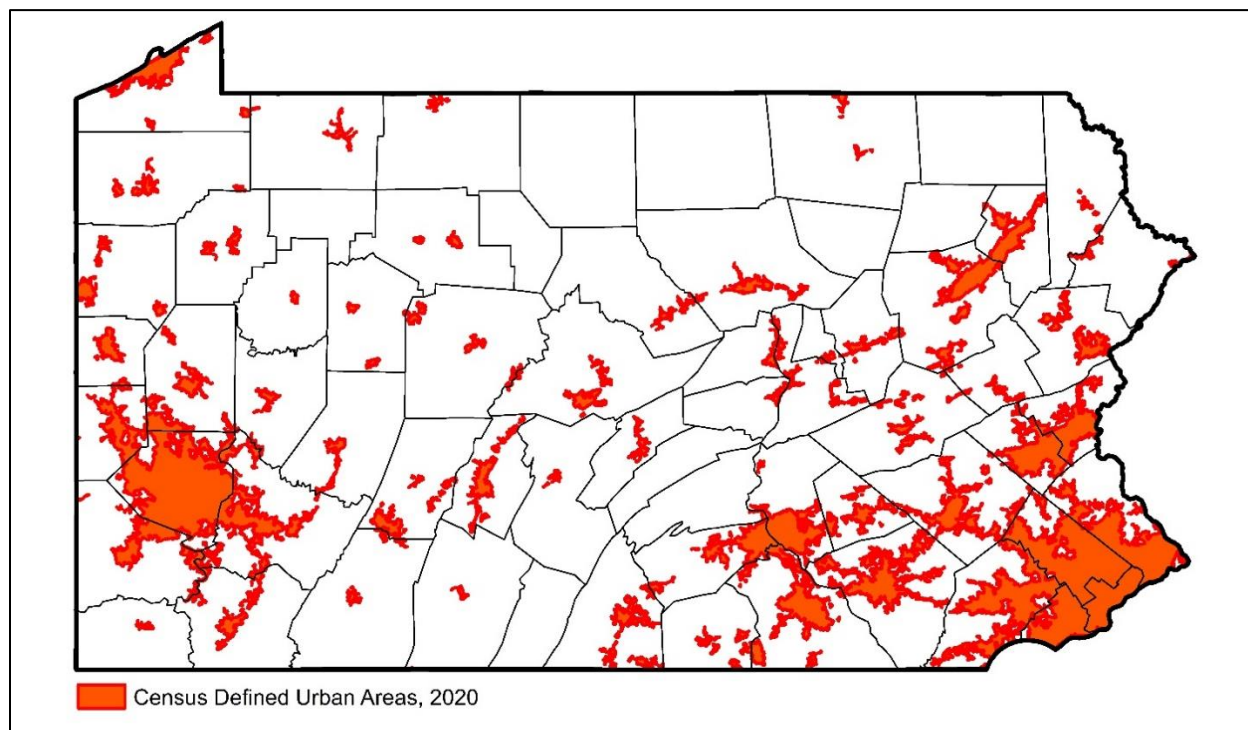
Source: U.S. Census Bureau, 2023; prepared by the Center for Rural Pennsylvania, 2023

Definition 2: Metropolitan—Non-Metropolitan Core-Based Statistical Area

The most frequently used definition of rural has been the United States Office of Management and Budget (OMB) non-metropolitan definition. A metropolitan area is a county or a group of counties that includes a city and the densely settled areas surrounding it; anything outside of this area is considered to be non-metropolitan. Metropolitan statistical areas (MSA) are defined by population cores. Areas within the MSAs are labeled metropolitan while those areas outside of MSAs are labeled non-metropolitan. Metropolitan is commonly considered and labeled "urban" while non-metropolitan is commonly considered and labeled "rural."

In the past two decades, there have been several complementary statistical classifications and definitions added to the basic MSA categorization. Metropolitan statistical areas are defined as an urbanized area (or combined urbanized areas) of 50,000 or more population plus adjacent counties sharing a high degree of social and economic integration (as measured by commuting ties) with the core urbanized area. Micropolitan areas are urbanized core clusters of 10,000-49,999 population and are considered "rural." Non-metropolitan is now designated for all areas outside the MSA and micropolitan areas. The term core-based statistical area (CBSA) is used interchangeably for both MSAs and micropolitan areas and is related to the large population nucleus. A combined statistical area (CSA) occurs when two or more adjacent MSAs and/or micropolitan areas have an employment interchange of at least 15 percent. Both MSA and micropolitan areas always include the county in which the urbanized area is located.

MSAs are defined by the OMB and periodically updated. The latest update occurred in July, 2023. Most know this definition through the use of U.S. Census Bureau data and consider it to be a Census definition. The 2023 update resulted in significant changes for Pennsylvania, including the promotion of Hermitage, Saint Marys, and Hemlock Farms to Combined Statistical Areas (CSAs) and the demotion of East Stroudsburg and Bloomsburg-Berwick from MSAs to micropolitan statistical areas (Van Leuven, 2023).

Figure 3 shows the metropolitan and non-metropolitan areas of Pennsylvania using the OMB definition.

Click here https://www.census.gov/programs-surveys/metro-micro.html to access the U.S. Census Bureau's website on Metropolitan and Micropolitan Statistical Areas.

Figure 3: Office of Management and Budget Definition of Rural, 2020
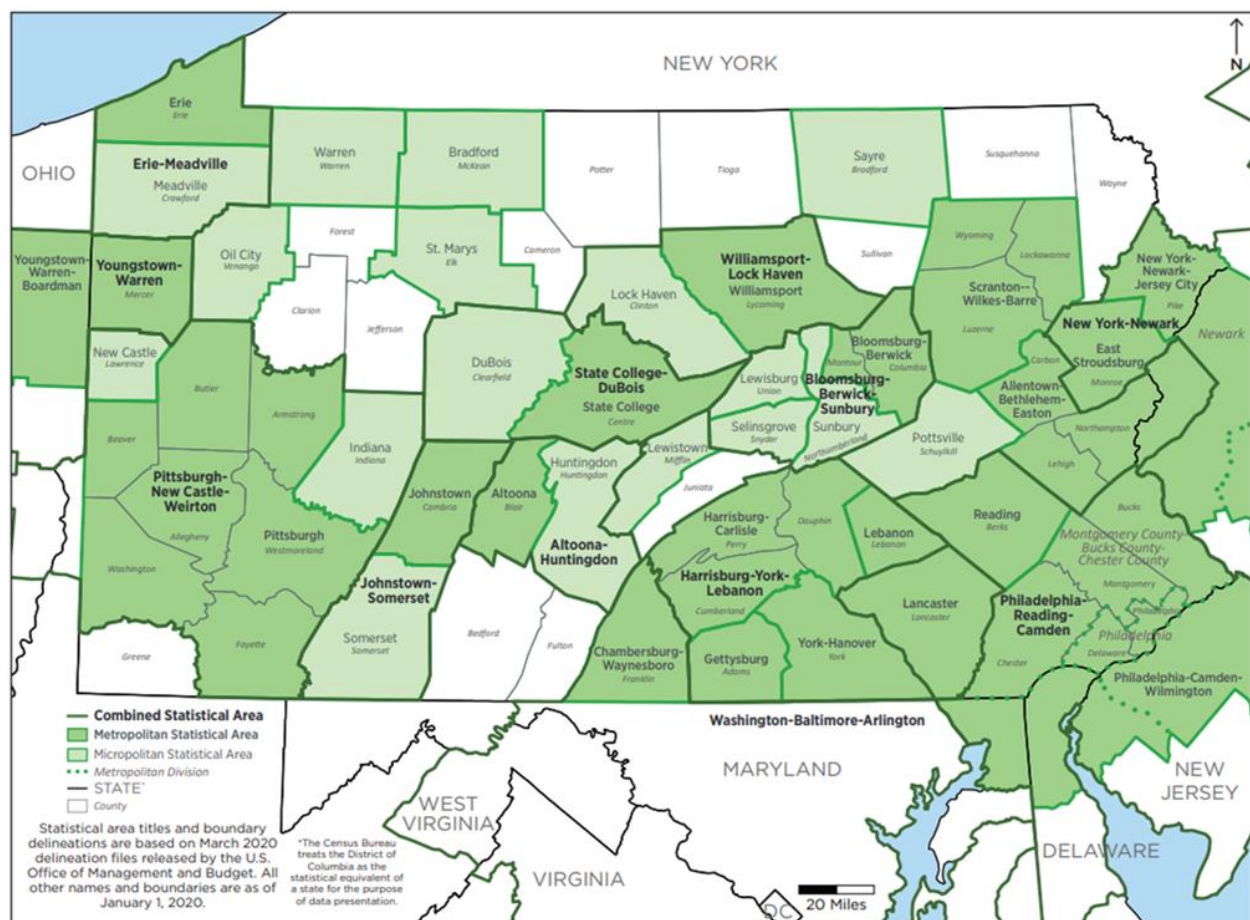
Source: U.S. Census Bureau, 2024

Definition 3: Rural-Urban Commuting Areas (RUCAs)

The Rural-Urban Commuting Area code designation, known as RUCAs, is a Census tract-based classification scheme that combines Urbanized Area and Urban Cluster definitions with work commuting patterns. The result is a detailed rural and urban status classification scheme that highlights commuting patterns. The original census tract-based RUCA classifications have been mapped and converted to a ZIP Code geography. Most people use the ZIP Code version rather than the original census tract version.

The classification was developed in the 1990s as a collaborative project between the federal Health Resources and Service Administration's (HRSA) Office of Rural Health Policy (ORHP), the Department of Agriculture's Economic Research Service (ERS), and the University of Washington's WWAMI Rural Health Research Center. The scheduled update of the data is expected in Fall 2024; the current data are based on 2010 U.S. Census and 2006-10 American Community Survey data.

The scheme has 10 major categories (a more detailed classification exists that includes secondary commuting flows). The categories are as follows:

1. Metropolitan area core: primary flow within an urbanized area (UA)
2. Metropolitan area high commuting: primary flow 30% or more to a UA
3. Metropolitan area low commuting: primary flow 10% to 30% to a UA
4. Micropolitan area core: primary flow within an Urban Cluster of 10,000 to 49,999 (large UC)
5. Micropolitan high commuting: primary flow 30% or more to a large UC
6. Micropolitan low commuting: primary flow 10% to 30% to a large UC
7. Small town core: primary flow within an Urban Cluster of 2,500 to 9,999 (small UC)
8. Small town high commuting: primary flow 30% or more to a small UC
9. Small town low commuting: primary flow 10% to 30% to a small UC
10. Rural areas: primary flow to a tract outside a UA or UC

Such a detailed classification can be useful for some research purposes, but for administrative purposes it is too detailed. Consequently, RUCA codes 4 through 10 are considered to be rural for the purposes of grants administered through the Federal Office of Rural Health Policy, as well as for many other applications.

Figure 4 shows the urban and rural areas of Pennsylvania using the RUCA definition aggregated into three categories.

Figure 4: U.S. Department of Agriculture Rural-Urban Commuting Codes, 2010
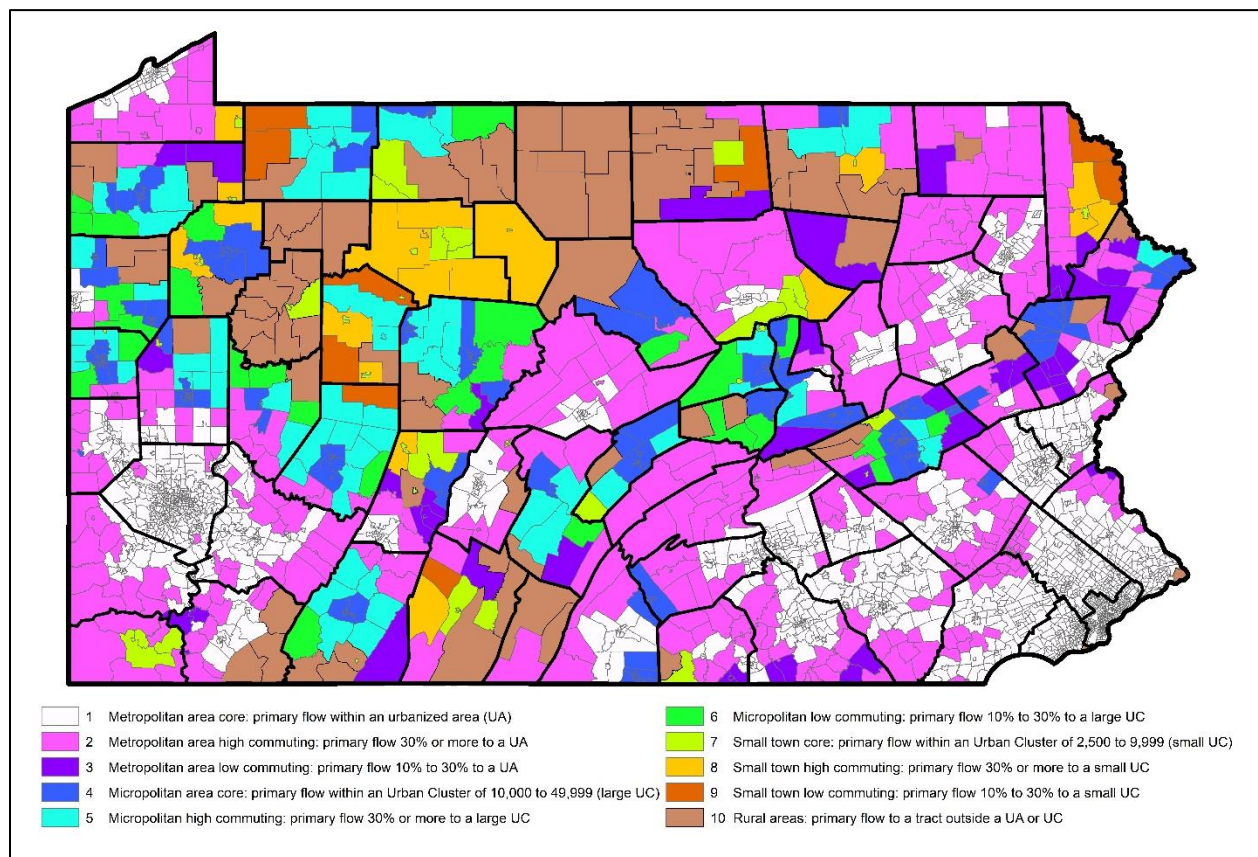
Source: U.S. Department of Agriculture, 2023

Click here https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/ to access the United States Department of Agriculture, Rural-Urban Commuting Area Codes (RUCAs) website.

Definition 4: The Center for Rural Pennsylvania's Urban and Rural for Counties, School Districts, and Municipalities

In Pennsylvania, a rural definition that is gaining some favor is one developed by the Center for Rural Pennsylvania. The Center for Rural Pennsylvania's definition of rural and urban is based on population density whereby counties and school districts with population densities less than the Commonwealth density as a whole are classified as rural, and those with densities equal to or greater than the Commonwealth density as a whole as urban. The population density average of Pennsylvania in 2020 was 291 persons per square mile.

For municipalities, the classification has an additional criterion to population density. The definition for municipalities is: A municipality is rural when the population density within the municipality is less than the statewide average density of 291 persons per square mile, or the total population is less than 2,500, unless more than 50 percent of the population lives in an

urbanized area as defined by the U.S. Census Bureau. All other municipalities are considered to be urban.

Figure 1 shows Pennsylvania using the Center for Rural Pennsylvania definition of urban and rural with the county as the unit of analysis. Figure 5 shows Pennsylvania using the Center for Rural Pennsylvania definition with school districts as the unit of analysis and Figure 6 shows Pennsylvania using the Center for Rural Pennsylvania definition with the municipality as the unit of analysis.

Click here https://www.rural.pa.gov/data/rural-urban-definitions to access the Center for Rural Pennsylvania's website and the information on their definitions of rural and urban.

Figure 5: Map of Pennsylvania Using the Center for Rural Pennsylvania Definition (School District as Unit of Analysis, 2020)

Rural and Urban Pennsylvania School Districts

Data source: U.S. Census Bureau, 2020 Census.

Urban
Rural
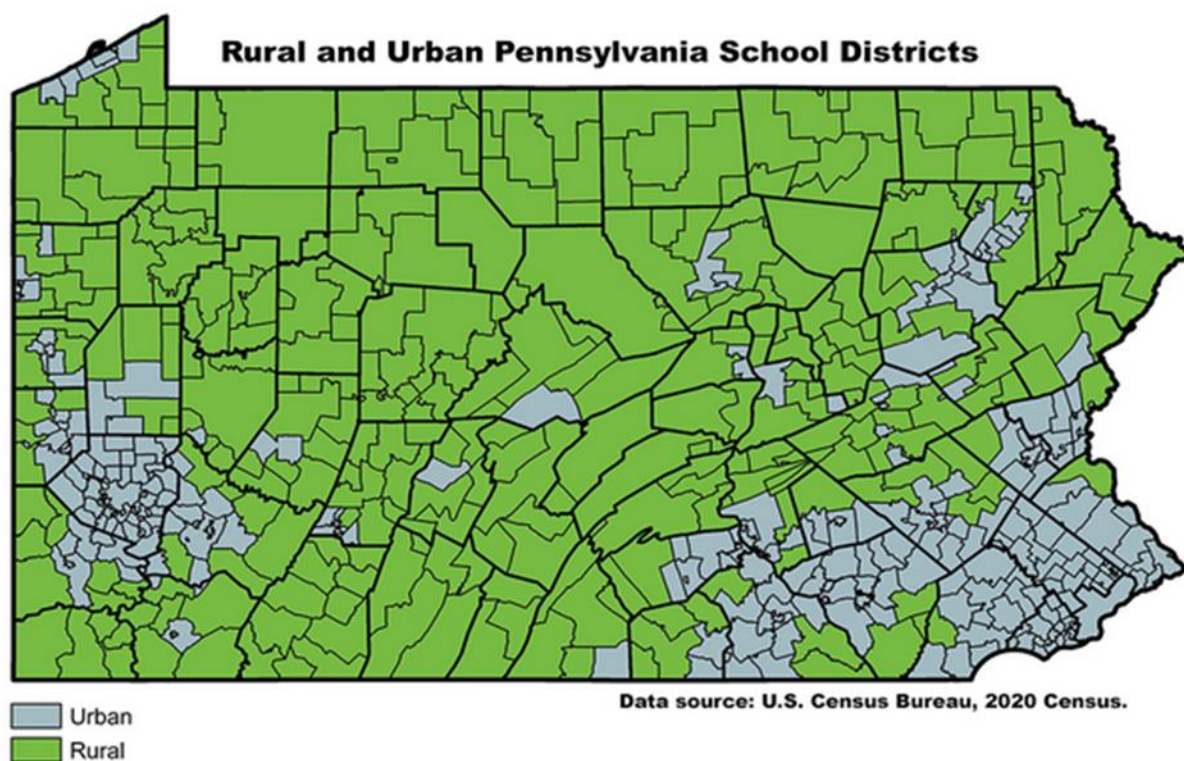
Source: Center for Rural Pennsylvania, 2024

Figure 6: Map of Pennsylvania Using the Center for Rural Pennsylvania Definition (Municipality as Unit of Analysis, 2020)
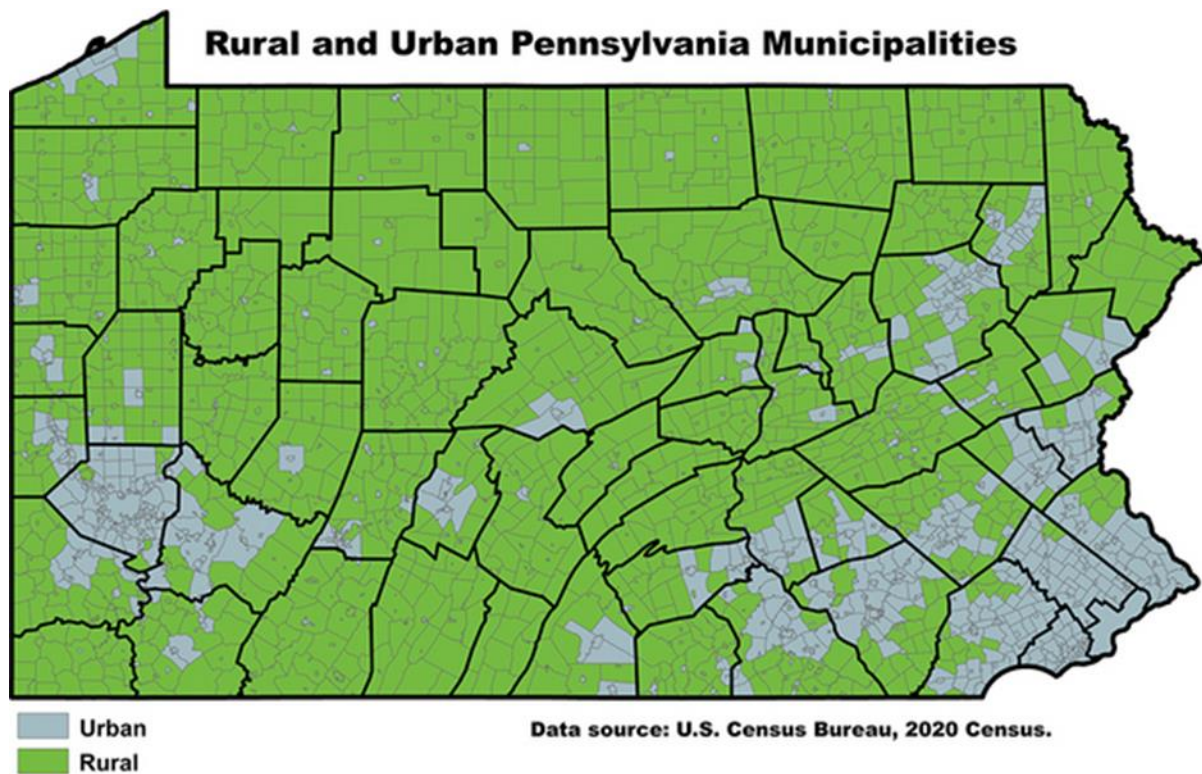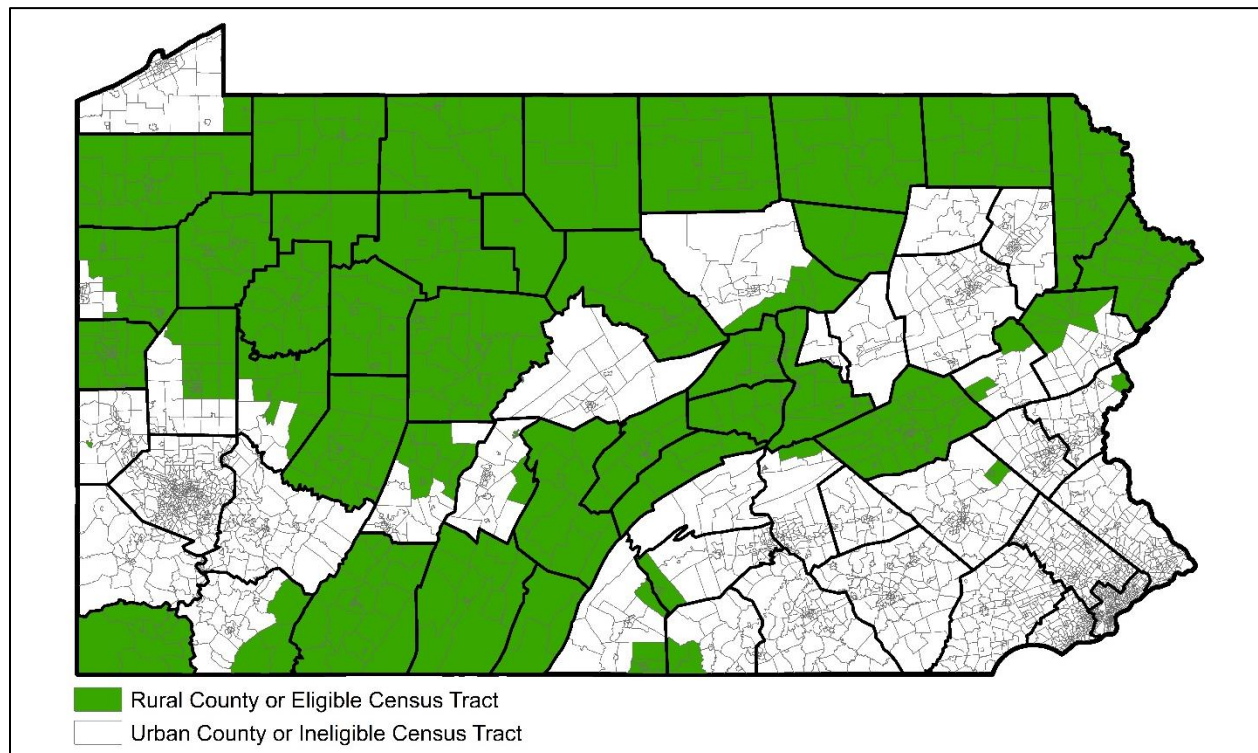

Source: Center for Rural Pennsylvania, 2024

Other Definitions

In addition to these commonly used definitions, other rural definitions have been developed over the years. One such classification used for grants starting in 2022 by the Health Resources and Services Administration, Federal Office of Rural Health Policy (FORHP) utilizes RUCA codes at the census tract level. Other ad-hoc definitions are in use, as well as, locally-specific definitions.

Figure 7 shows the Federal Office of Rural Health Policy (FORHP) map of Pennsylvania and census tracts eligible for rural health funding.

Figure 7: Federal Office of Rural Health Policy Rural Counties and Eligible Census Tracts, 2022

Source: Health Resources and Services Administration, 2023; prepared by the Center for Rural Pennsylvania, 2023

Click here https://data.hrsa.gov/Content/Documents/tools/rural-health/forhpeligibleareas.pdf to access the Federal Office of Rural Health Policy list of areas eligible for Rural Health funding utilizing census tracts.

What Definitions Do Rural Health Programs Use?

Each of these definitions is useful for defining metropolitan and non-metropolitan and urban and rural areas although most define larger and more densely populated areas and regions that are outside of those areas are considered to be non-metropolitan or rural. The Rural-Urban Continuum Codes, also known as the Rural Urban Commuting Area (RUCA) codes, is the sole definition utilized to fund rural health grants by the Federal Office of Rural Health Policy to delineate areas of rurality in a state.

The specific similarities and differences of "rural" as indicated in these maps become relevant when applied to state and federal policies, health care provider placement opportunities, health care facility designation and service reimbursement, and more. To determine eligibility for a range of federal programs that fund rural eligible areas, the use of the Am I Rural Tool (Rural Health Information Hub, 2024) and the Rural Health Grants Eligibility Analyzer (Health

Resources and Services Administration, n.d.) provide the most accurate identification of eligibility and are the most frequently used tools to determine potential rural health funding.

Am I Rural Tool: https://www.ruralhealthinfo.org/am-i-rural

Rural Health Grants Eligibility Analyzer: https://data.hrsa.gov/tools/rural-health

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