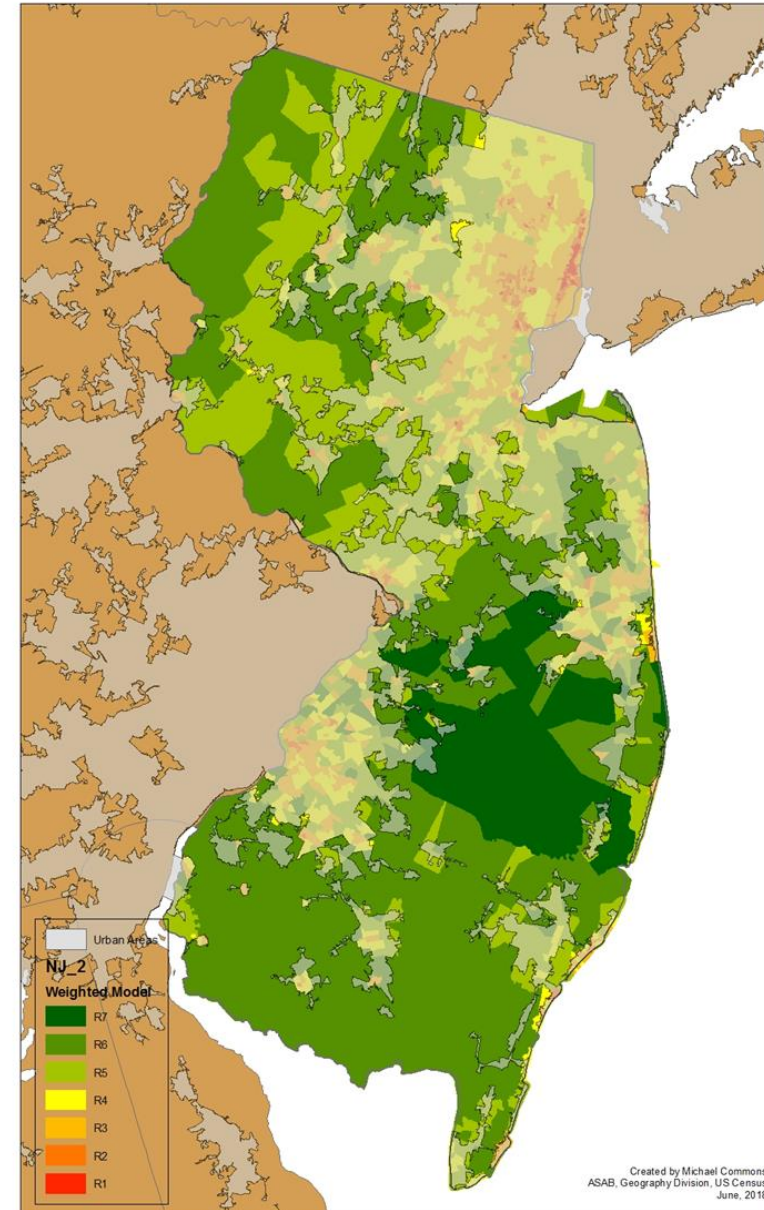


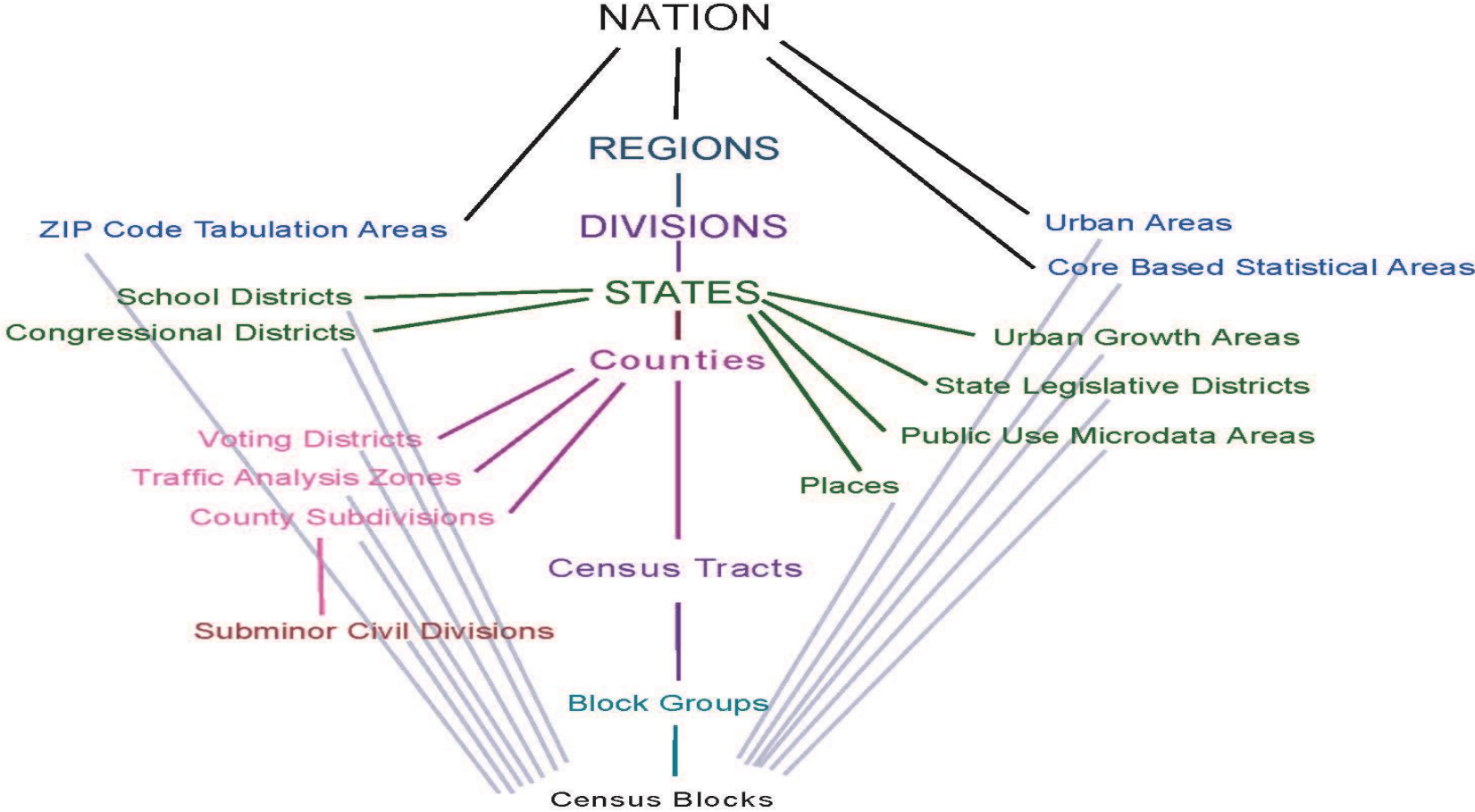
Defining Rurality

Michael Commons
Geography Division
US Census Bureau

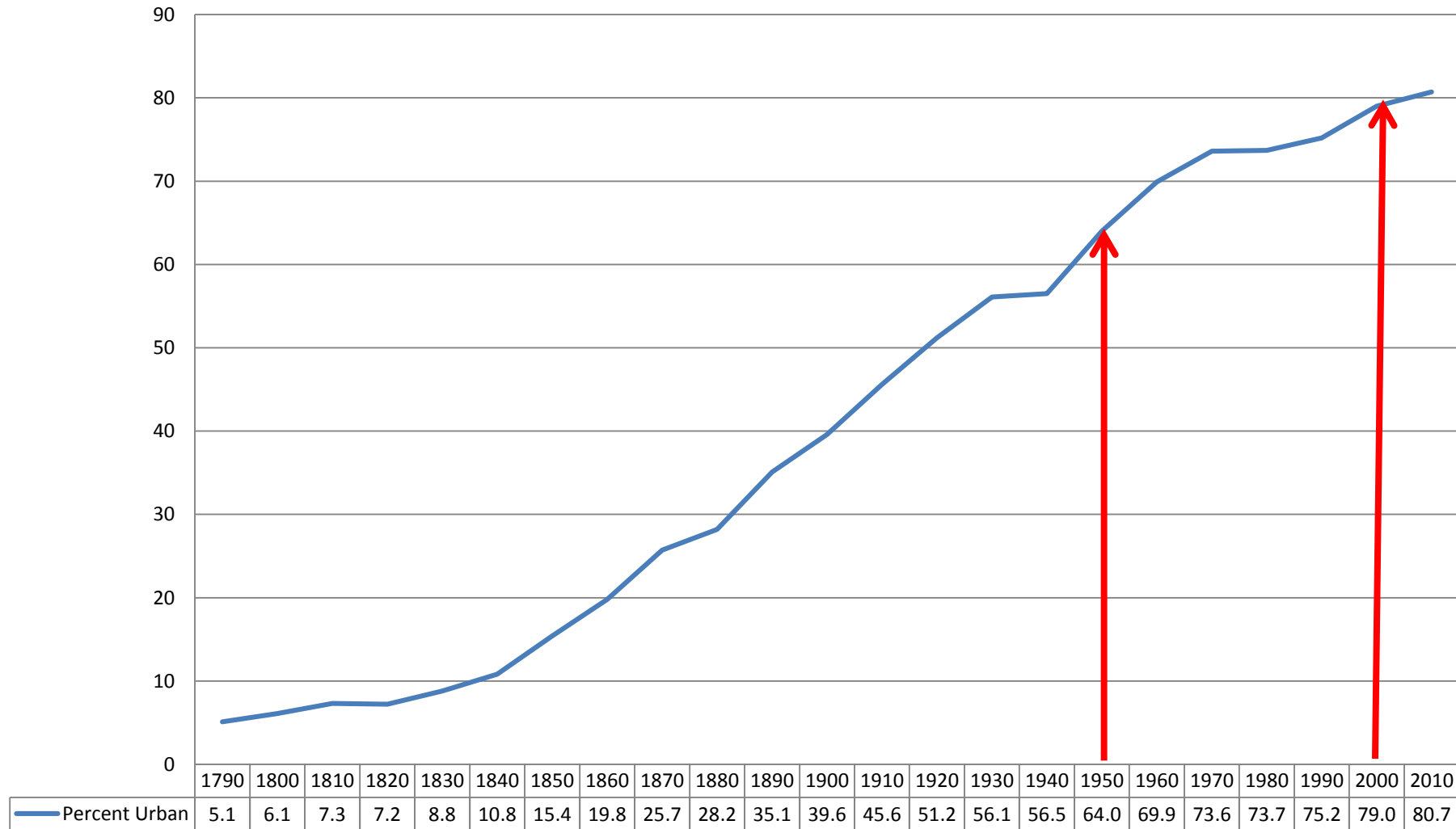
June 20th, 2018



Standard Hierarchy of Census Geographic Entities



Urban Population as a Percentage of Total US Population, 1790-2010



1950: urbanized areas of 50,000+ adopted.
 2000: urban clusters of 2,500-49,999 adopted.

Census Bureau designated Urban Areas

- Delineated decennially
- Two types of urban areas:
 - Urbanized Areas (UAs) of 50,000 or more people
 - Urban Clusters (UCs) of at least 2,500 and less than 50,000 people

Urban and Rural Population in the United States: 2010 and 2000

| | 2000 Population | 2000 Percent | 2010 Population | 2010 Percent |
|----------------|--------------------|-----------------|--------------------|-----------------|
| Urban | 222,360,539 | 79.0 | 249,253,271 | 80.7 |
| Urbanized Area | 192,323,824 | 68.3 | 219,922,123 | 71.2 |
| Urban Cluster | 30,036,715 | 10.7 | 29,331,148 | 9.5 |
| Rural | 59,061,367 | 21.0 | 59,492,267 | 19.3 |

What is “Rural?”

What is “rural?” What characterizes “rurality?”

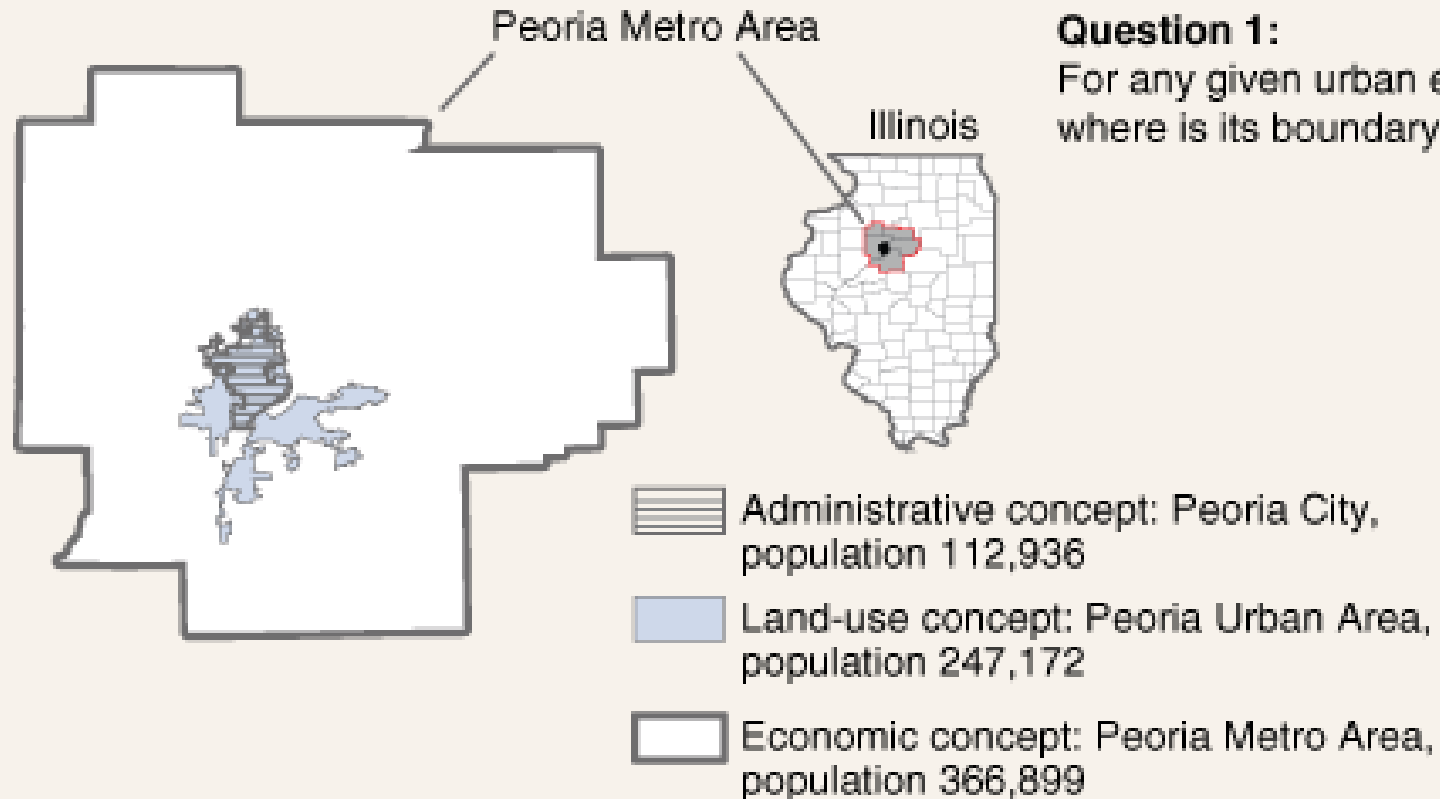
- Low population density.
- Small numbers of people.
- Low levels of urbanization/urban population.
- Distance from/proximity to [larger] urban centers.
- Isolation and remoteness.

What is “Rural?”

- Rural often is defined as the residual. This could be “not urban” or “not metropolitan” in a dichotomous classification, or what remains after all other categories in a multi-category classification have been defined.
- “Rural” sometimes is defined as less than a specific population size threshold, such as, less than 2,500 or less than 10,000. This might be applied in an administrative unit-based definition. For example: incorporated places less than 10,000 people.

For any given urban entity, where is the boundary?

Three ways to define Peoria



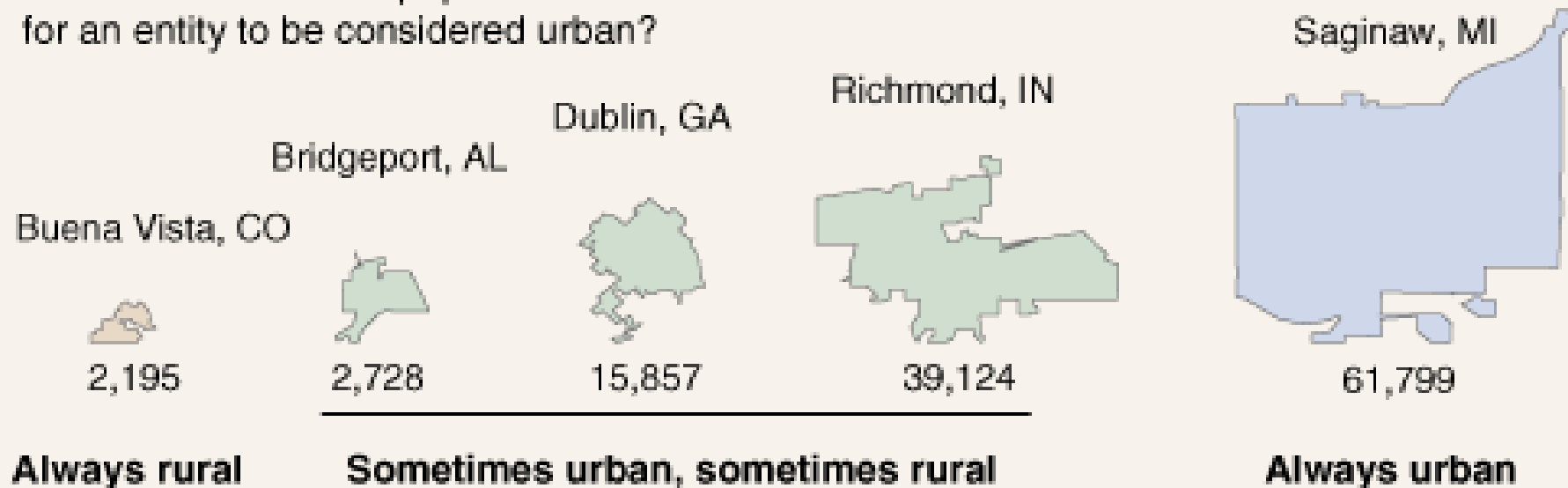
Source: USDA, Economic Research Service, using data from the U.S. Census Bureau.

What is the minimum population size for an entity to be considered urban?

Depending on the definition, population size thresholds range from 2,500 to 50,000 people

Question 2:

What is the minimum population size for an entity to be considered urban?



Source: USDA, Economic Research Service, using data from the U.S. Census Bureau.

Urban and Rural in the United States

Classifications tend to be dichotomous:

- Urban and Rural;
- Metropolitan and Nonmetropolitan
- Rural/nonmetropolitan are residual categories

Classifications tend to describe:

- Form/Structural (settlement patterns); or
- Function (economic and social relationships)

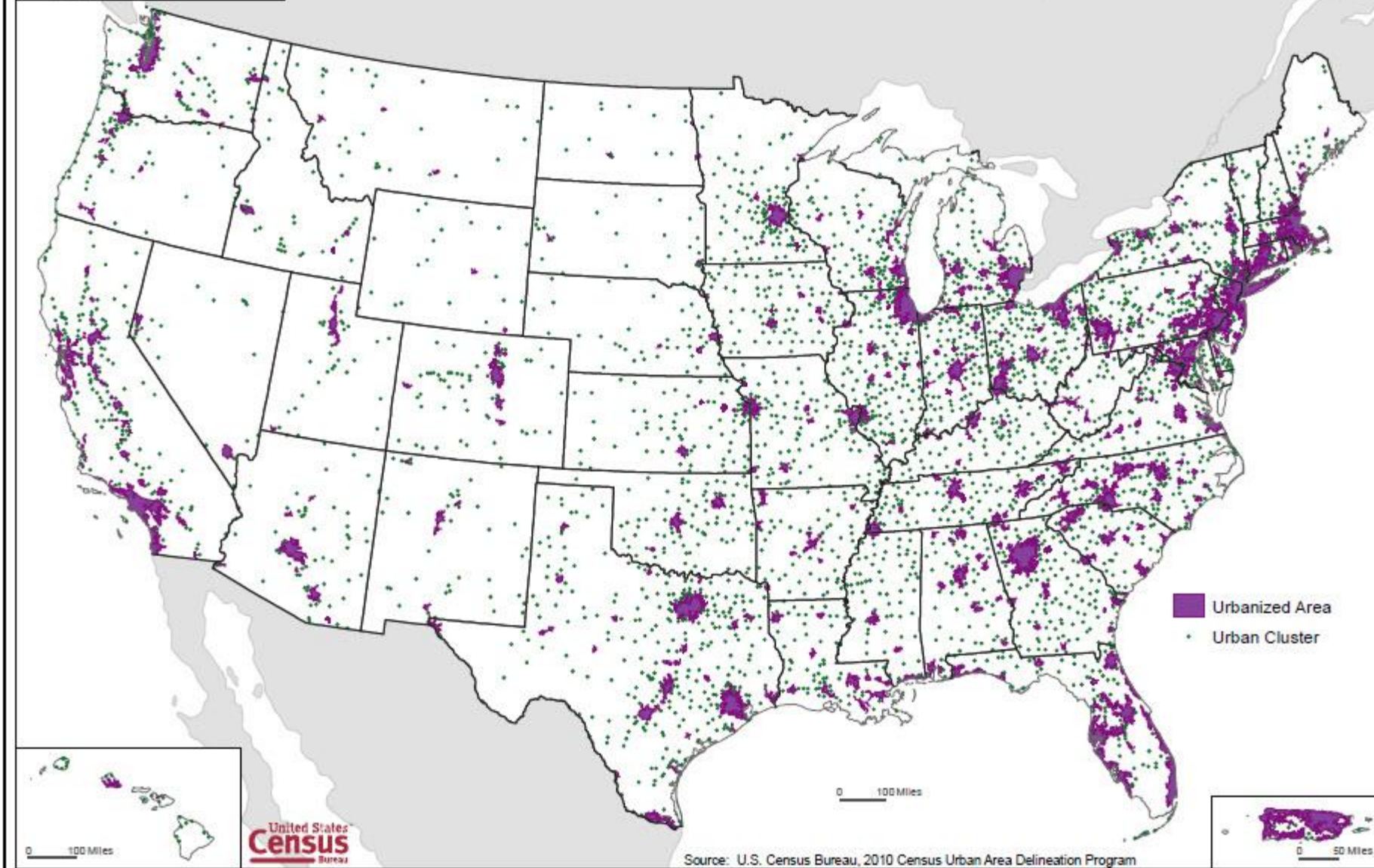
Census Bureau urban/rural = structural urban

Office of Management and Budget metropolitan and
micropolitan statistical areas = functional urban

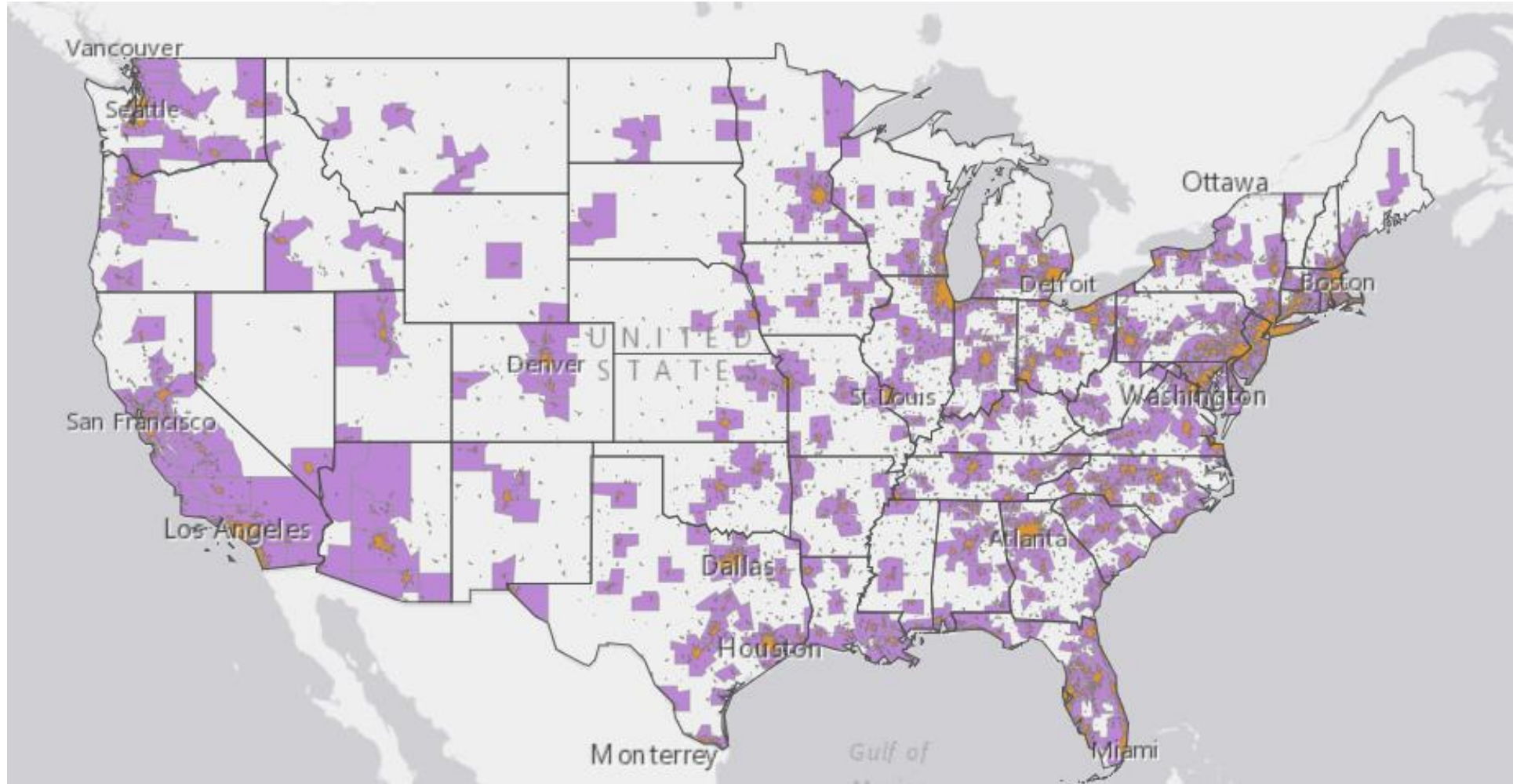
Census Bureau's Urban and Rural Classification

- The Census Bureau identifies and classifies urban and rural areas after each decennial census.
- Urban areas of at least 2,500 people have been identified since 1906.
- Urbanized areas of 50,000 or more people were first defined for the 1950 Census. Urban places of at least 2,500 people were identified outside urbanized areas. Urban clusters of 2,500 - 49,999 were first defined after Census 2000.
- The Census Bureau identifies urban and rural areas solely for the purpose of tabulating and presenting statistical data.
- Final criteria for defining urban areas published in the *Federal Register*, vol. 76, no. 164 (August 24, 2011), pp. 53030-53043.
- More information: <https://www.census.gov/geo/reference/ua/urban-rural-2010.html>

Urbanized Areas and Urban Clusters: 2010



Urban Areas and Metropolitan Statistical Areas



What is Rural?

USDA/Economic Research Service Rural-Urban Continuum Codes

- Nine-level classification commonly used with rural programs, research, and analysis.
- County-based.
- Classifies nonmetropolitan counties based on amount of urban population and adjacency or lack of adjacency to a metropolitan area.

| Code | Description |
|---------------------------------|--|
| Metropolitan Counties | |
| 1 | Counties in metro areas of 1 million population or more |
| 2 | Counties in metro areas of 250,000 to 1 million population |
| 3 | Counties in metro areas of fewer than 250,000 population |
| Nonmetropolitan Counties | |
| 4 | Urban population of 20,000 or more, adjacent to a metro area |
| 5 | Urban population of 20,000 or more, not adjacent to a metro area |
| 6 | Urban population of 2,500 to 19,999, adjacent to a metro area |
| 7 | Urban population of 2,500 to 19,999, not adjacent to a metro area |
| 8 | Completely rural or less than 2,500 urban population, adjacent to a metro area |
| 9 | Completely rural or less than 2,500 urban population, not adjacent to a metro area |

Rural-Urban Continuum Codes

USDA/Economic Research
Service

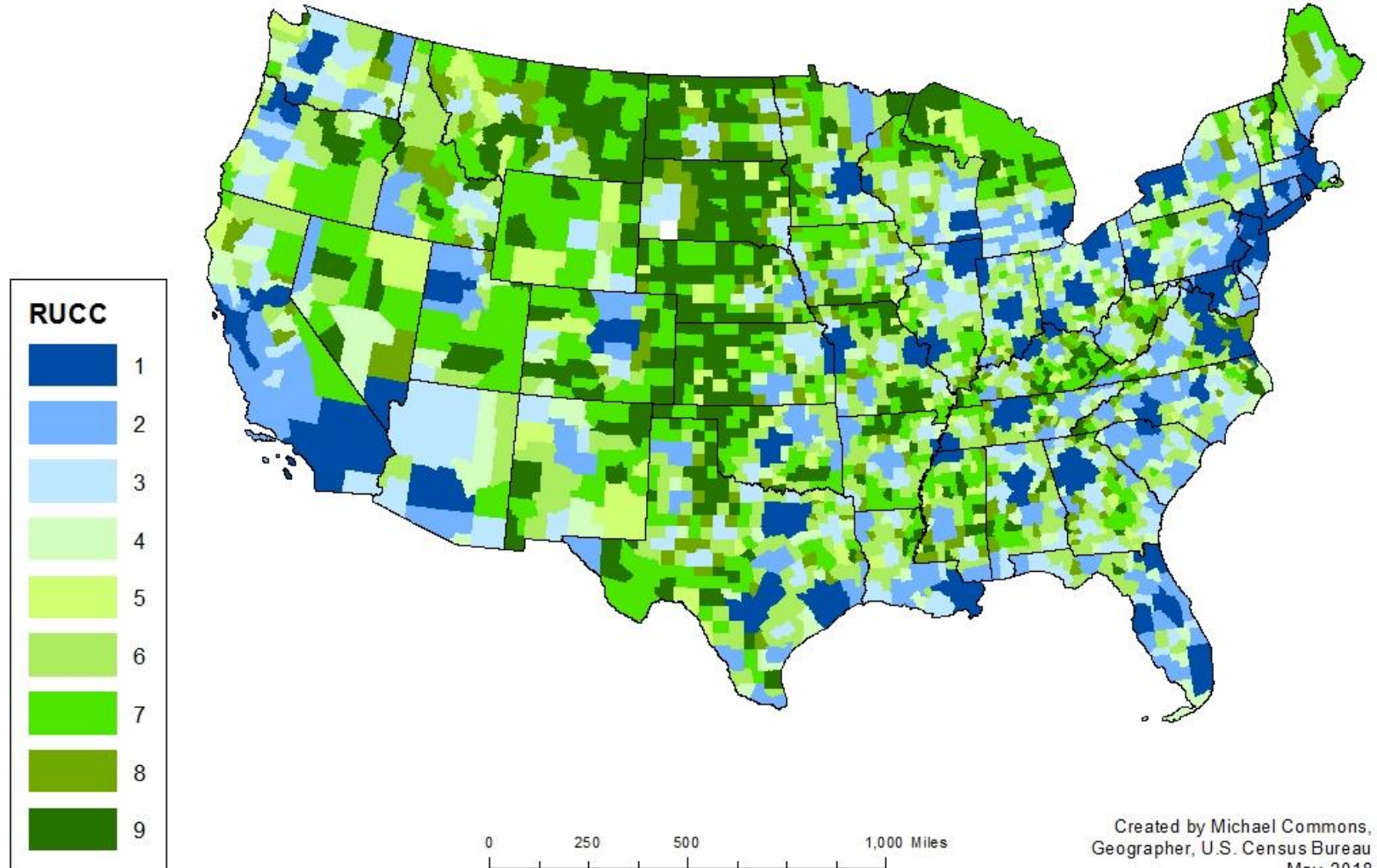
Metro Counties:

| | |
|------|-------------------------------|
| CODE | population size of metro area |
| 1 | 1 million or more |
| 2 | 250,000 to 1 million |
| 3 | fewer than 250,000 |

Nonmetro counties:

| | |
|------|--|
| CODE | size of urban population, adjacency |
| 4 | 20,000 or more, adjacent |
| 5 | 20,000 or more, nonadjacent |
| 6 | 2,500 to 19,999, adjacent |
| 7 | 2,500 to 19,999, nonadjacent |
| 8 | < 2,500 or completely rural, adjacent |
| 9 | < 2,500 or completely rural, nonadjacent |

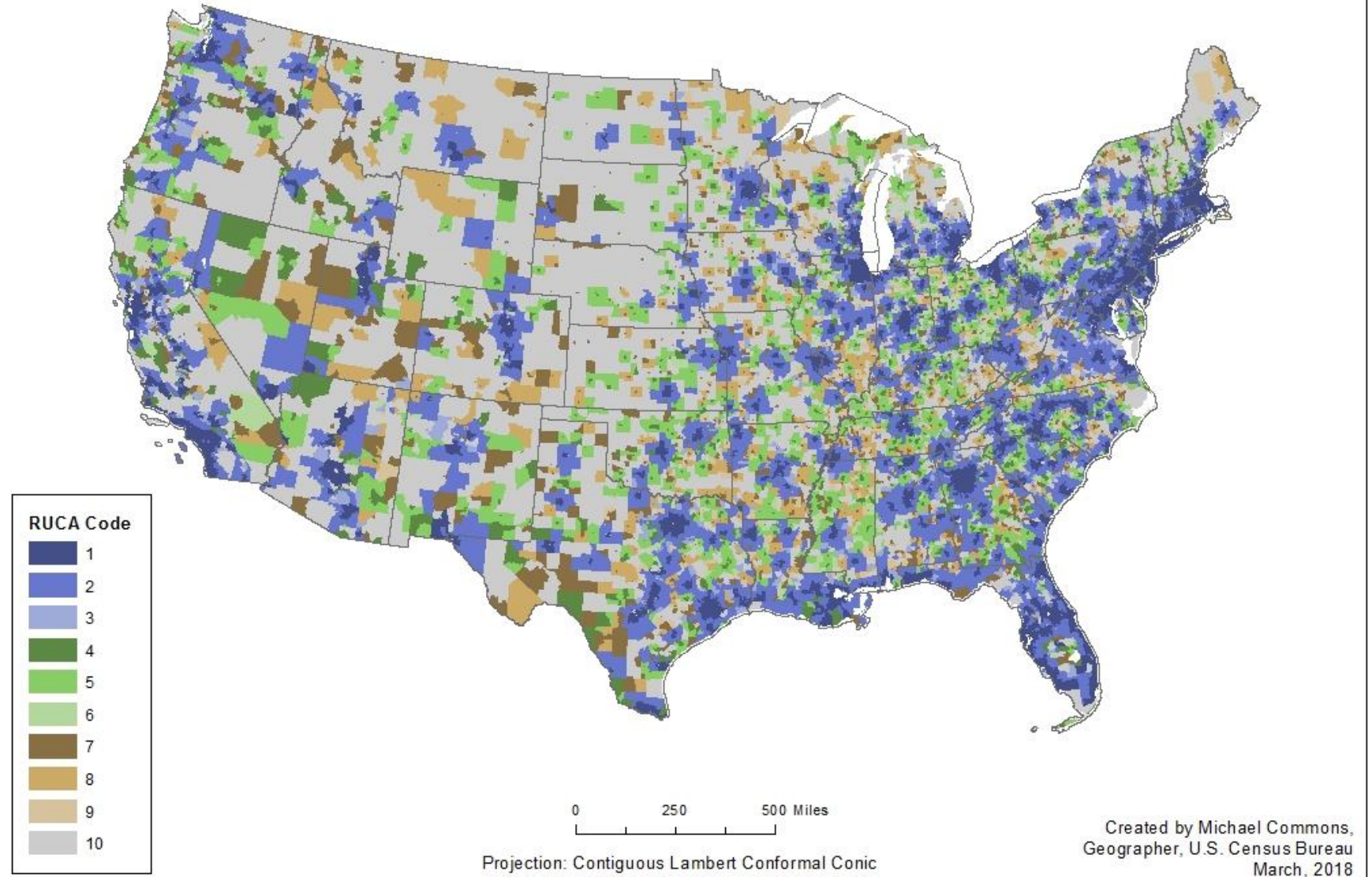
Rural Urban Continuum Codes (Beale)



Created by Michael Commons,
Geographer, U.S. Census Bureau
May, 2018

Rural-Urban
Commuting Areas
USDA/Economic Research
Service

RUCA Codes by Census Tract



Created by Michael Commons,
Geographer, U.S. Census Bureau
March, 2018

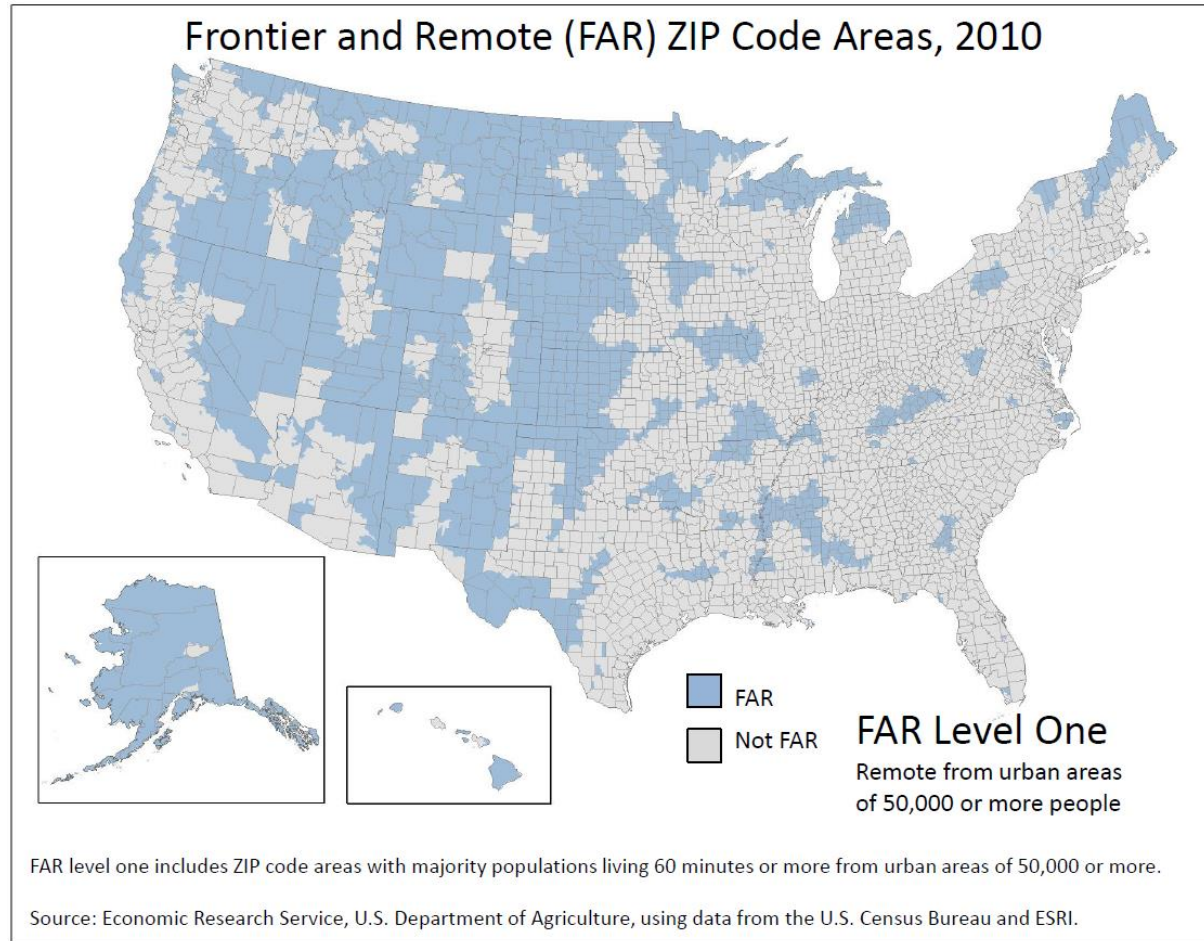
Rural-Urban Commuting Areas

USDA/Economic Research Service

- 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

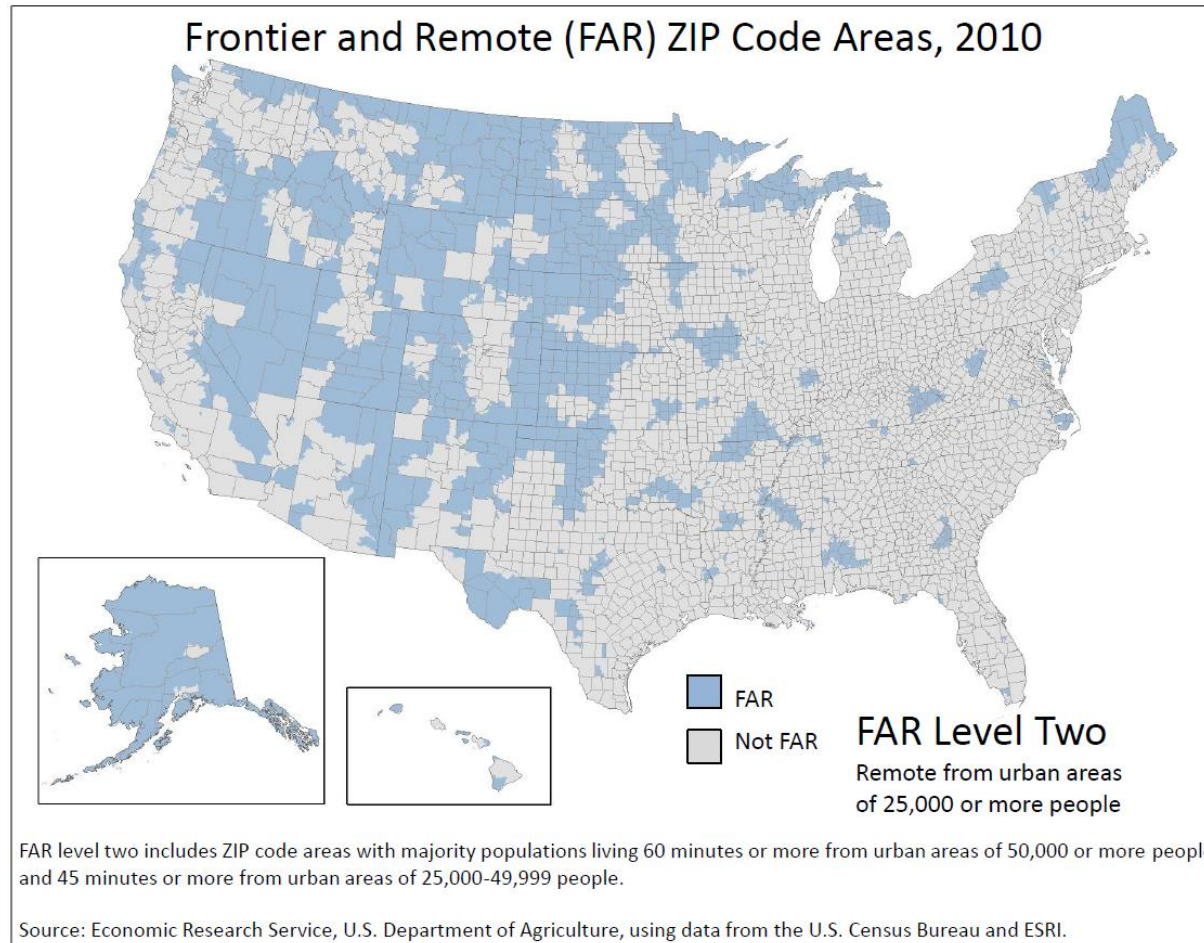
Frontier and Remote Areas

Measuring Distance and Isolation



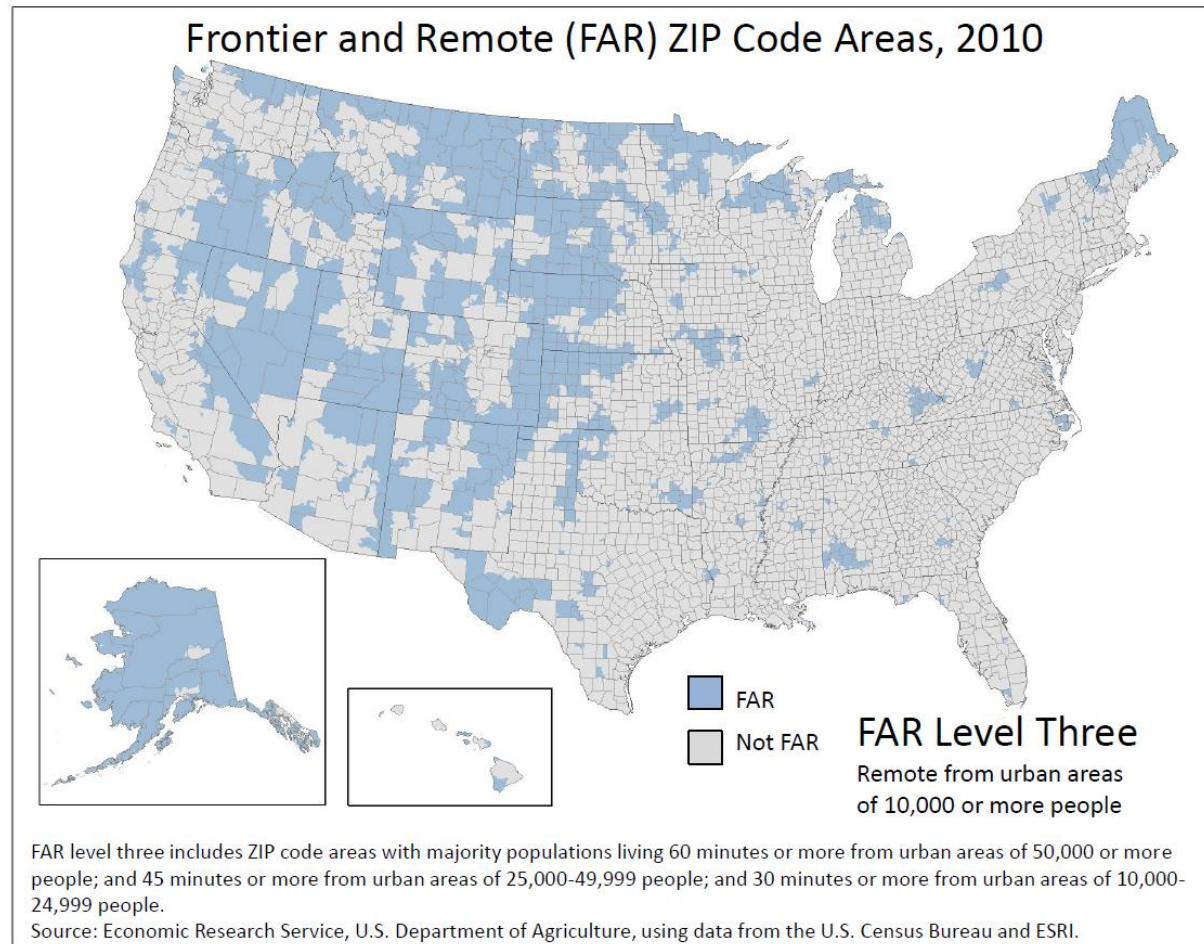
Frontier and Remote Areas

Measuring Distance and Isolation



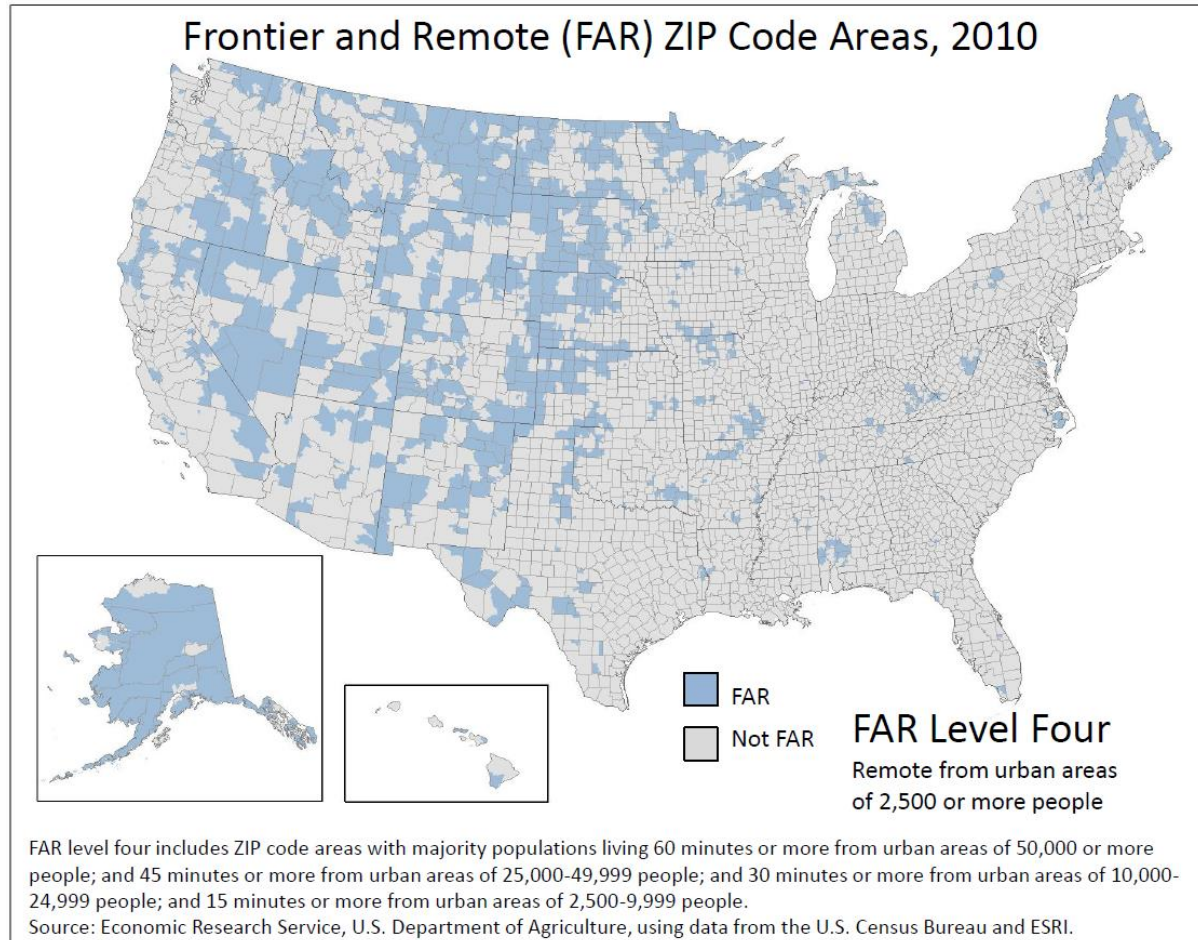
Frontier and Remote Areas

Measuring Distance and Isolation



Frontier and Remote Areas

Measuring Distance and Isolation

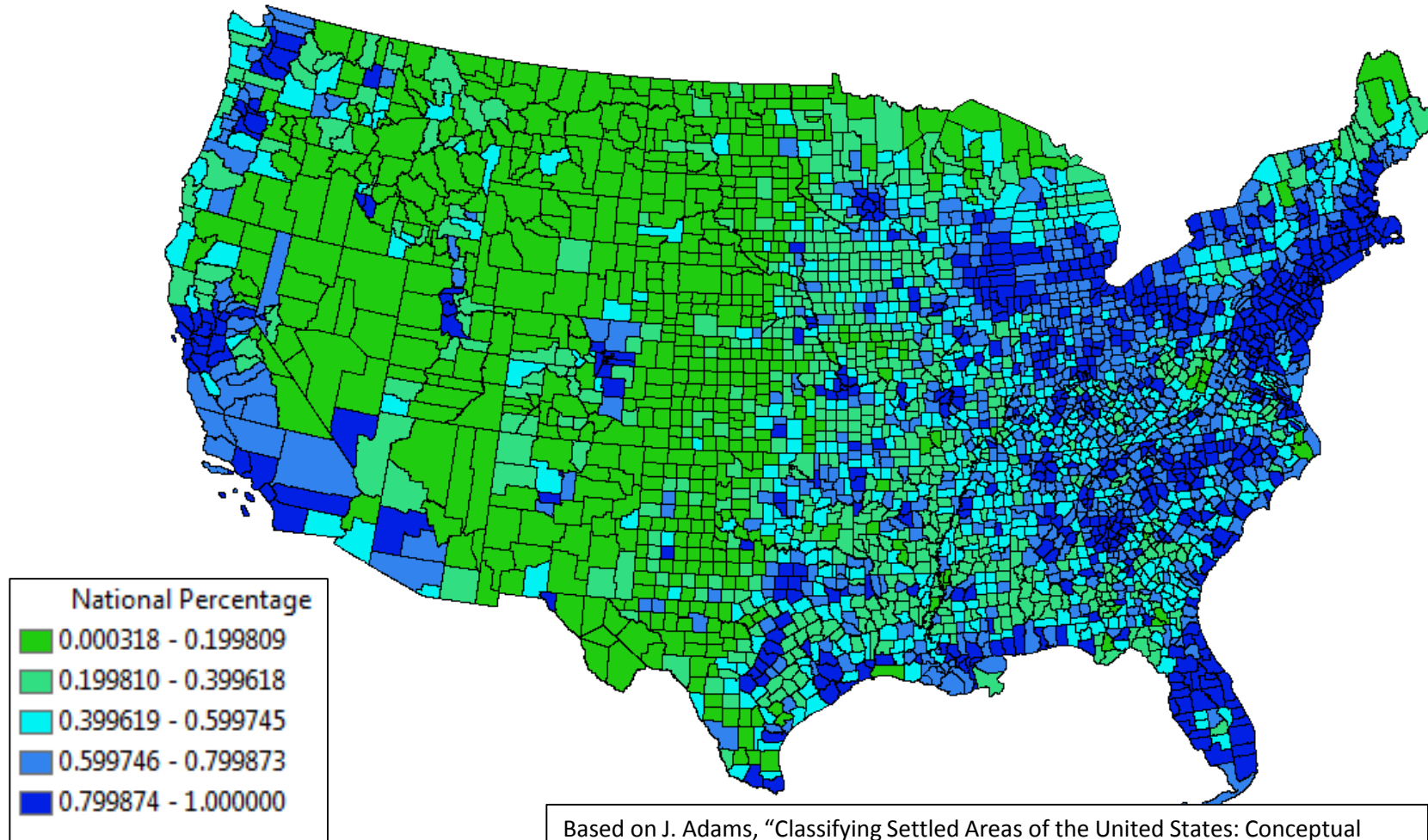


What is Rural?

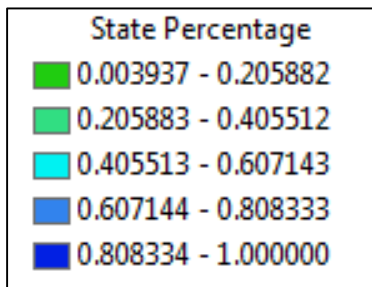
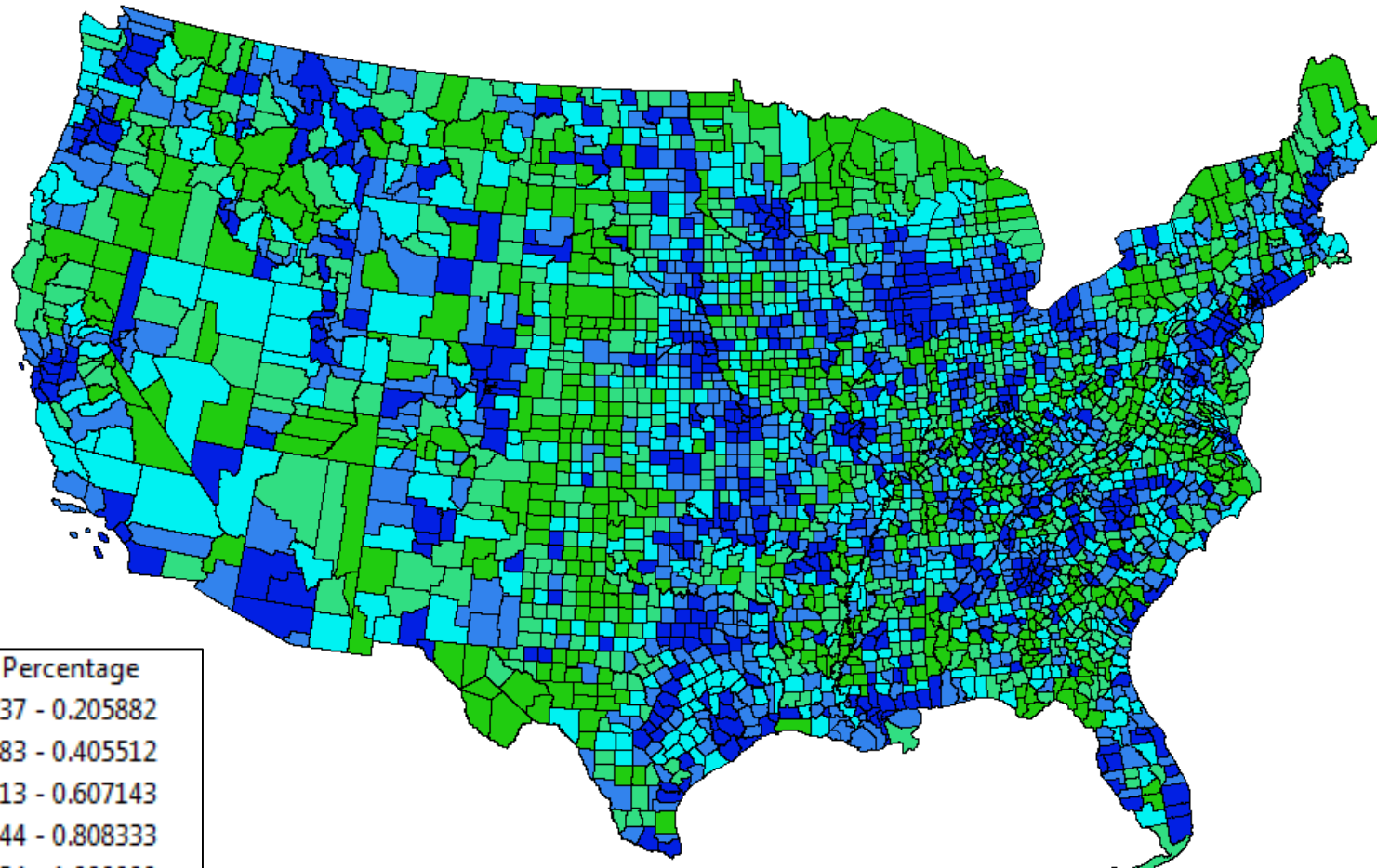
Comparative Density Approach

- In this approach, counties are ranked based on population density within state as well as nationally.
- Each county is assigned a percentile score based on its population density relative to other counties in the state and other counties in the nation. An overall score can be computed by combining the state and national scores.
 - $\text{Score} = (\# \text{ of counties} - \text{county rank from top}) / \# \text{ of counties}$
 - $\text{Overall Score} = \text{National Score} \times \text{State Score}$
- Counties can be grouped based on similarity of scores.
- Proposed by John Adams (University of Minnesota) as part of research into new approaches to defining metropolitan areas commissioned by the Office of Management and Budget, 1995.

Comparative Density Approach: National Percentage Scores

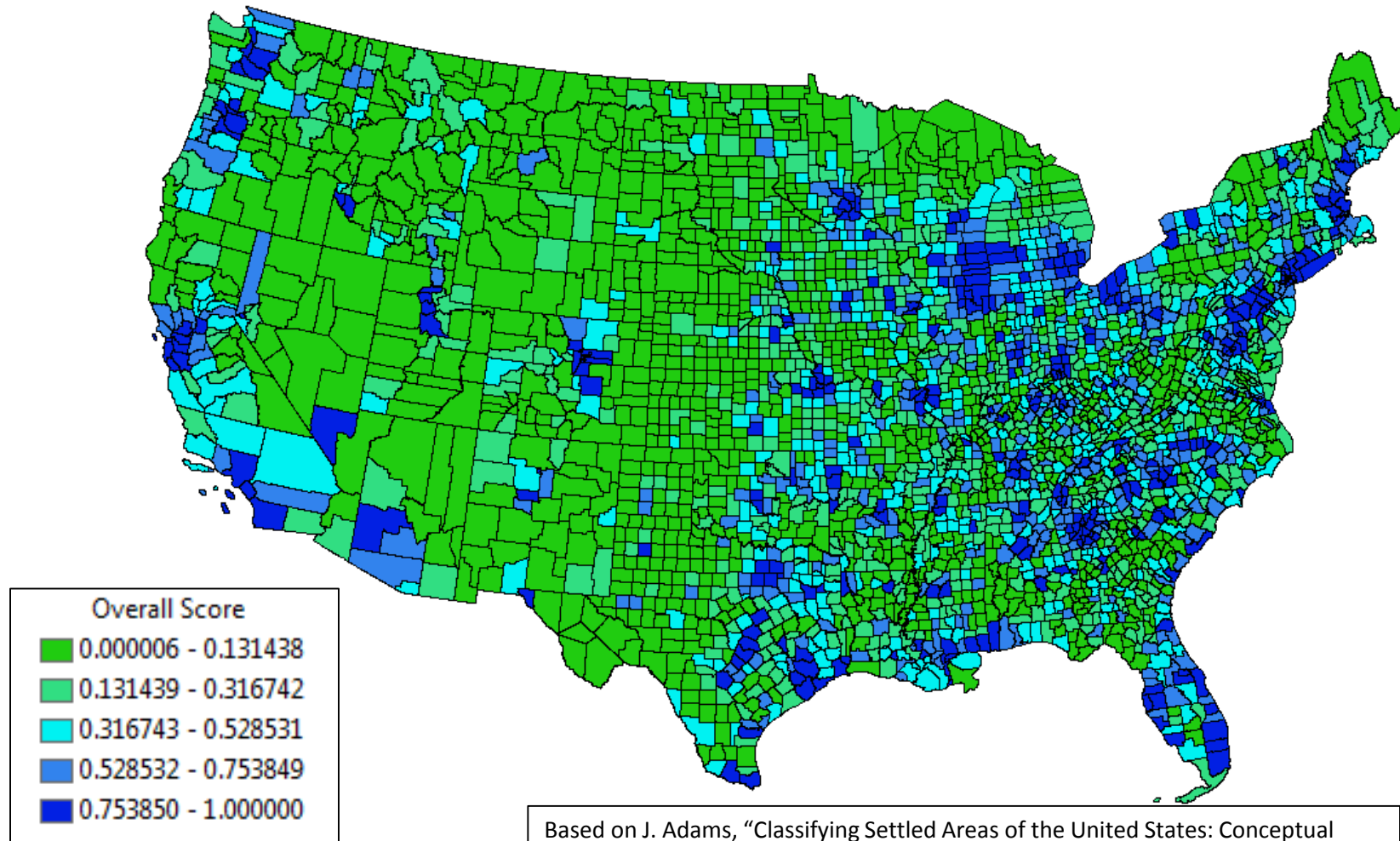


Comparative Density Approach: State Percentage Scores



Based on J. Adams, "Classifying Settled Areas of the United States: Conceptual Issues and Proposals for New Approaches," in D. Dahmann and J. Fitzsimmons (eds.), *Metropolitan and Nonmetropolitan Areas: New Approaches to Geographical Definition*. U.S. Census Bureau, Population Division, Working Paper Number 12, September 1995.

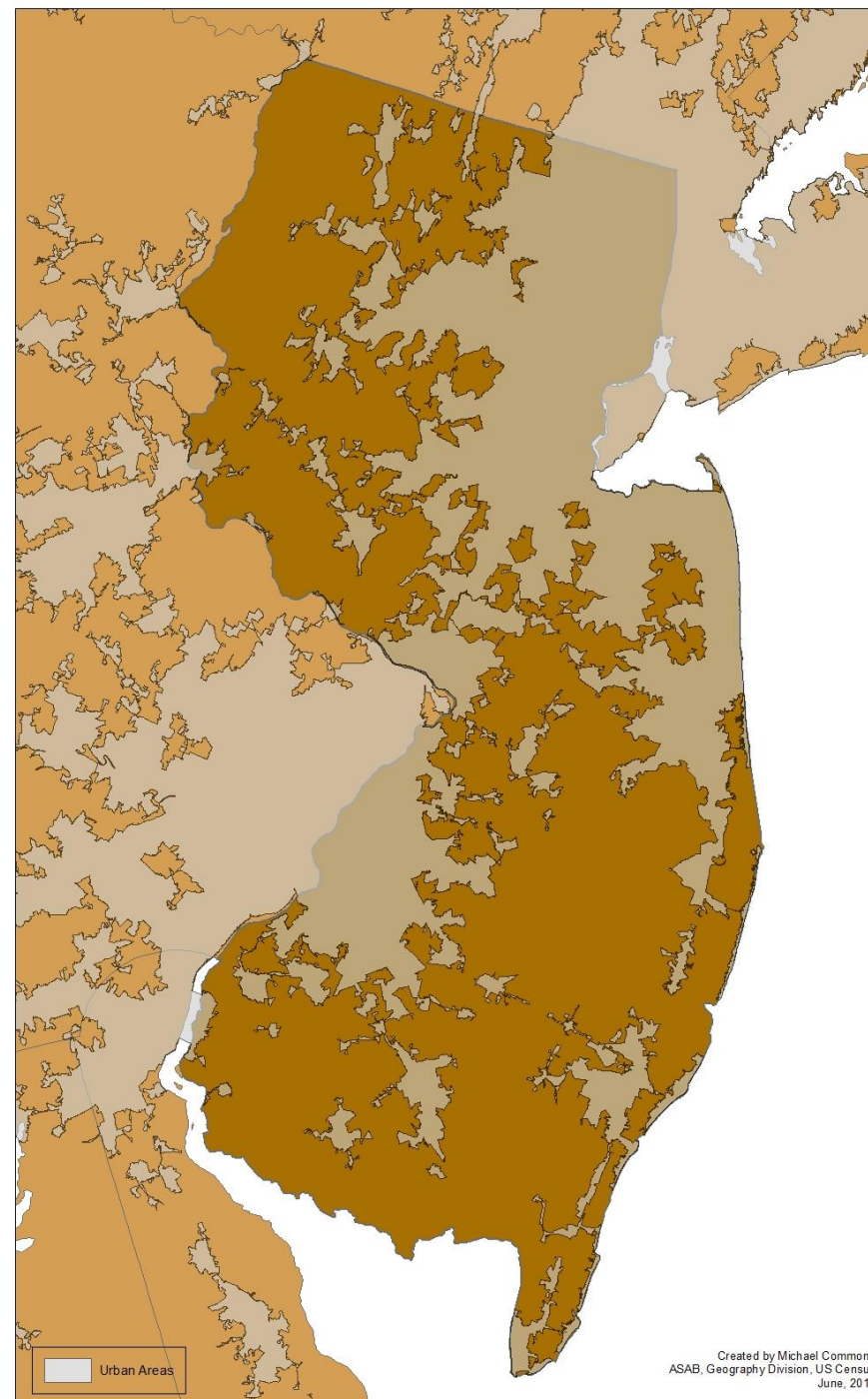
Comparative Density Approach: Overall Scores



Urban Areas

Urban Population: 8,394,909

Rural Population: 396,985

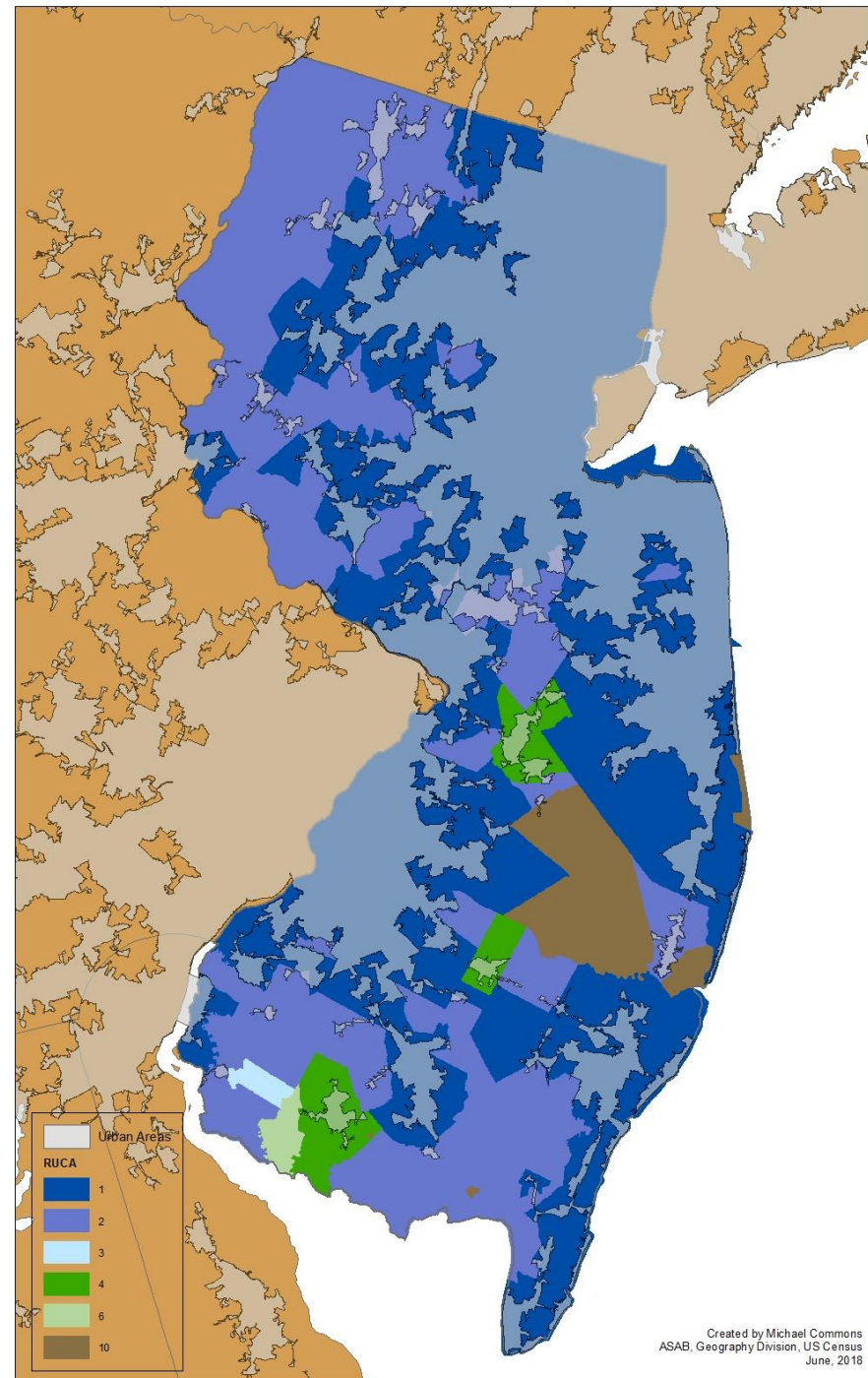


RUCA

Urban Population: 8,782,309

Rural Population: 9,585

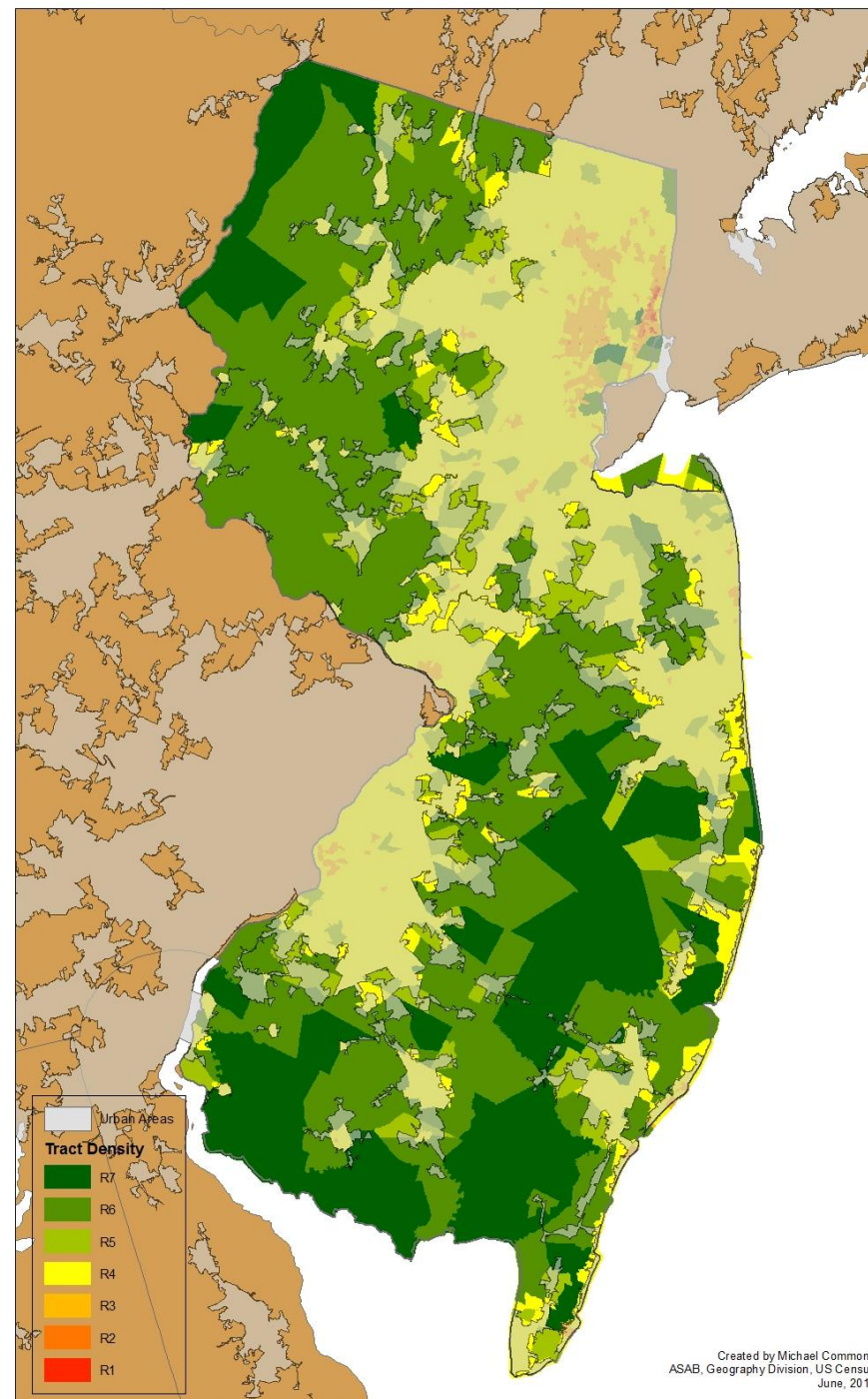
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- 10 Rural areas: primary flow to a tract outside a UA or UC



Tract Density

Urban Population: 8,398,466

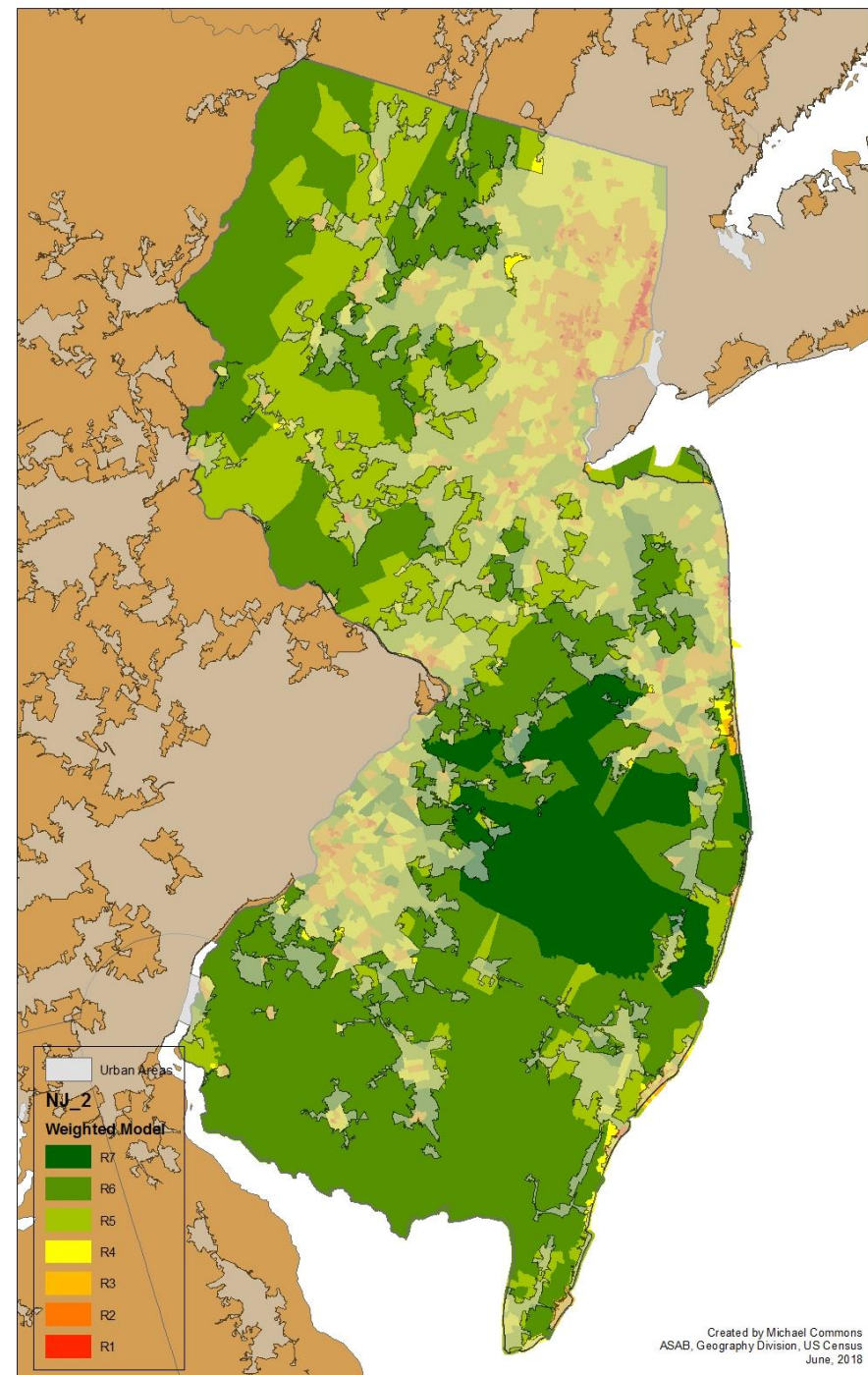
Rural Population: 393,428

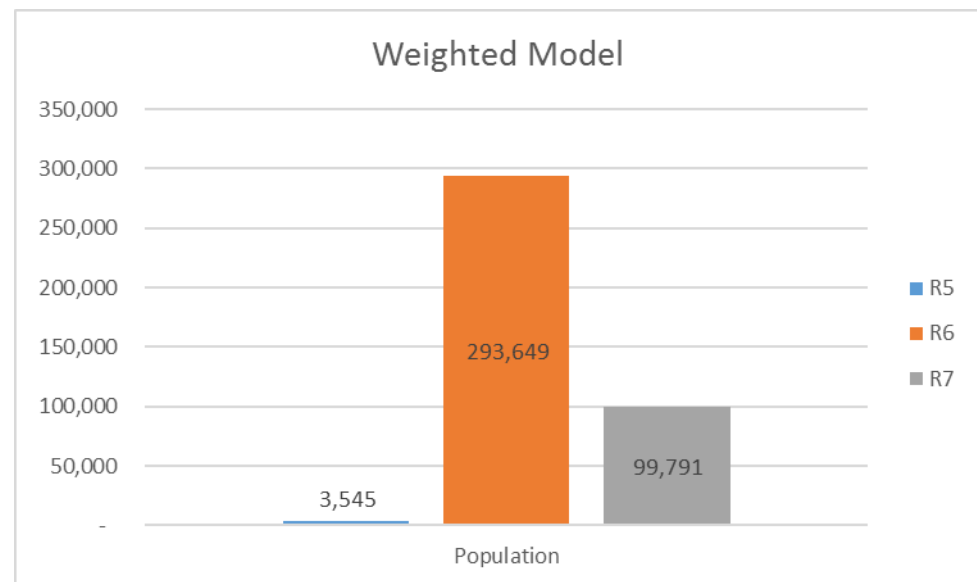
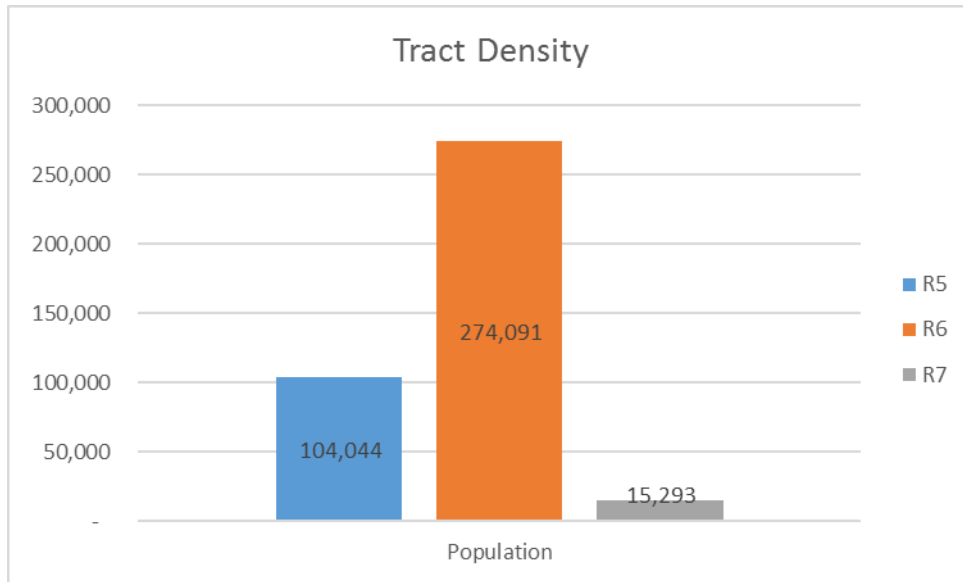
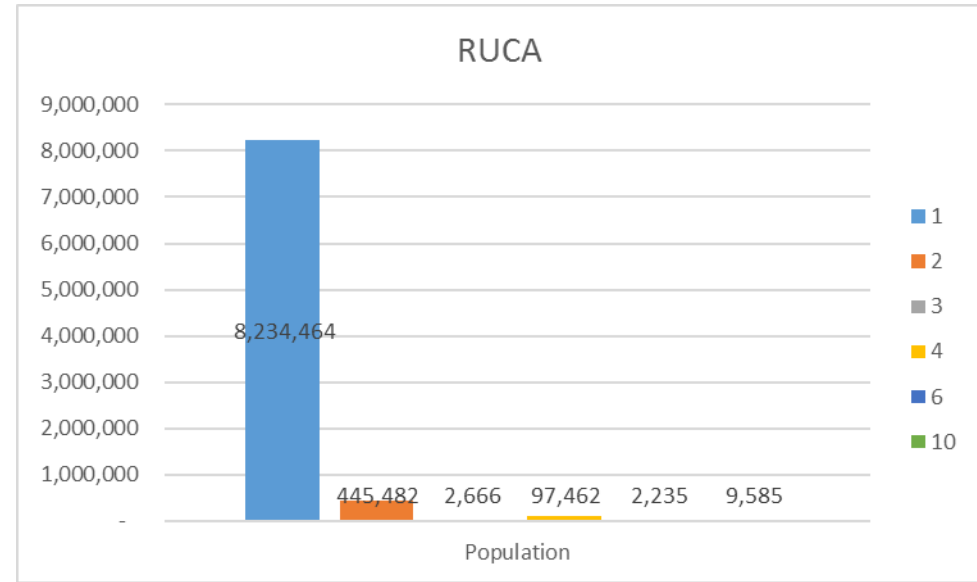
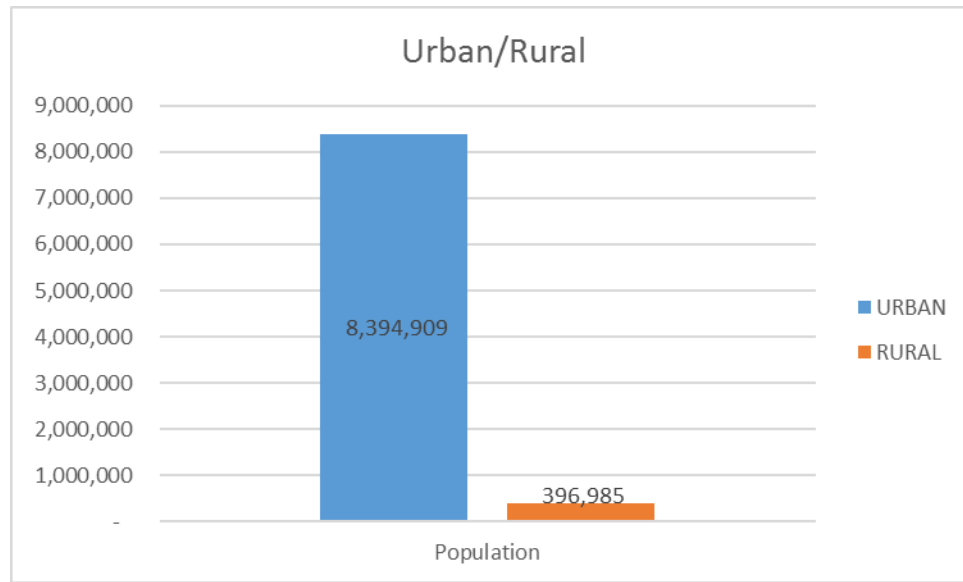


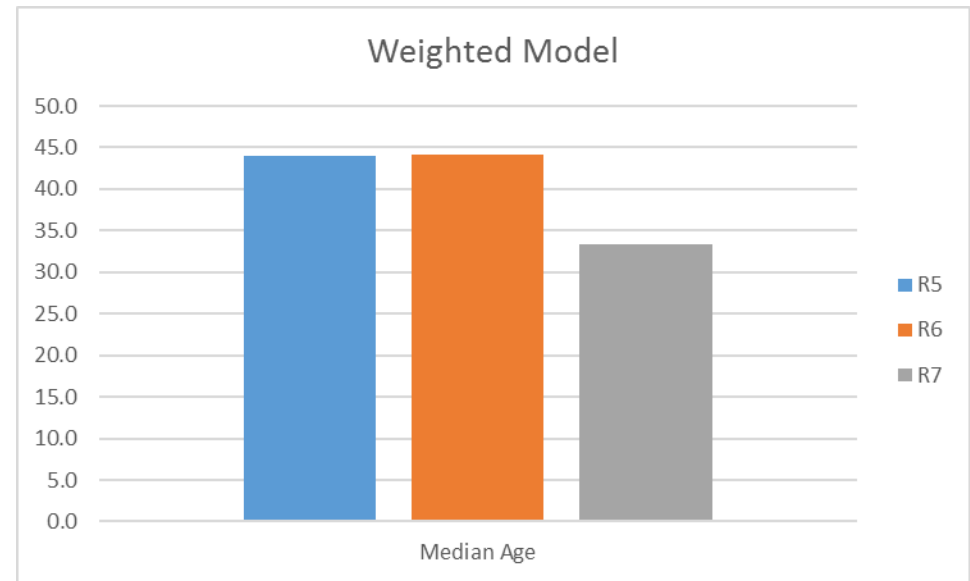
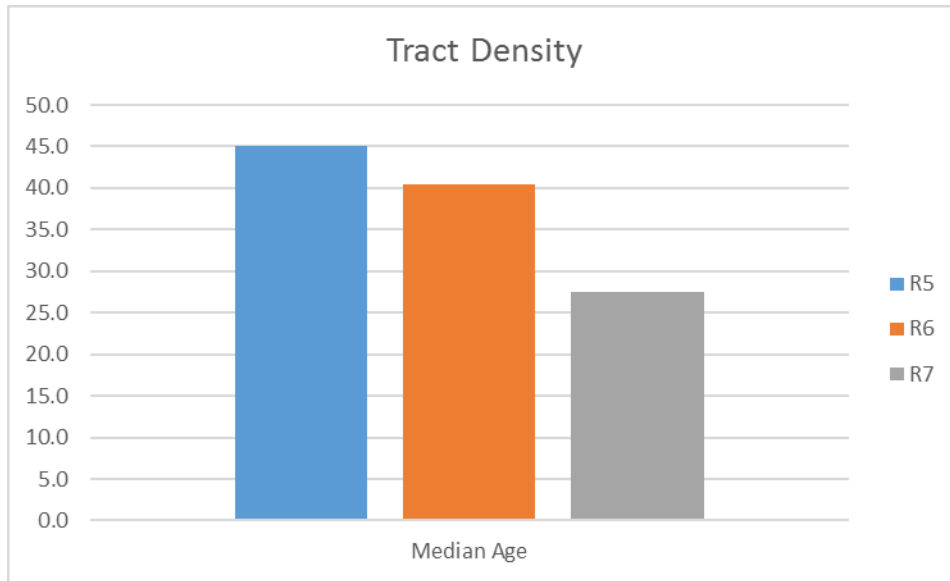
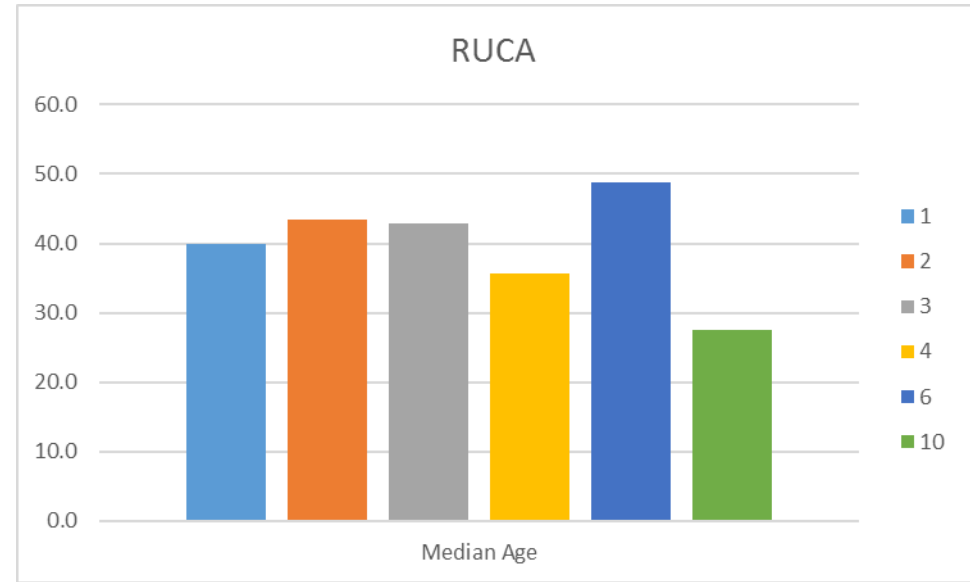
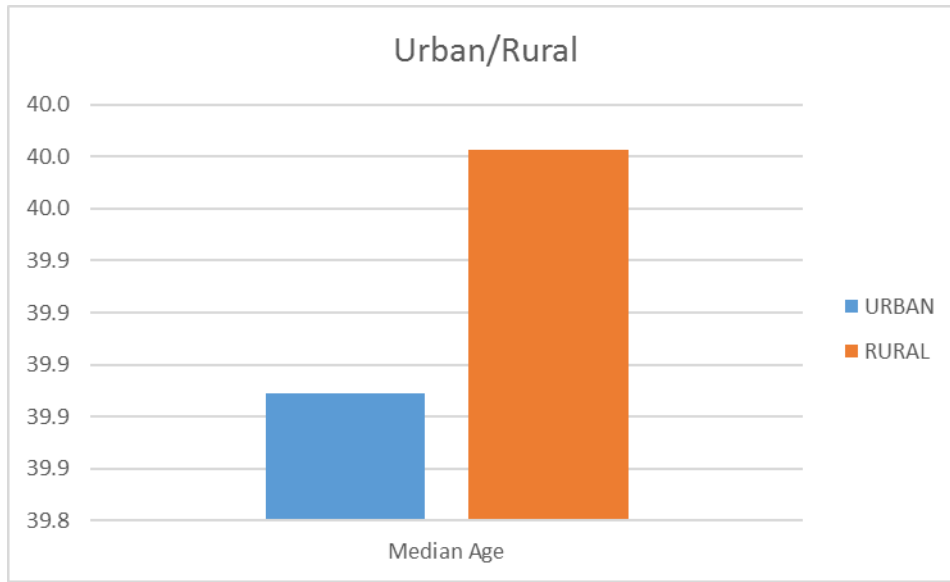
Weighted Model

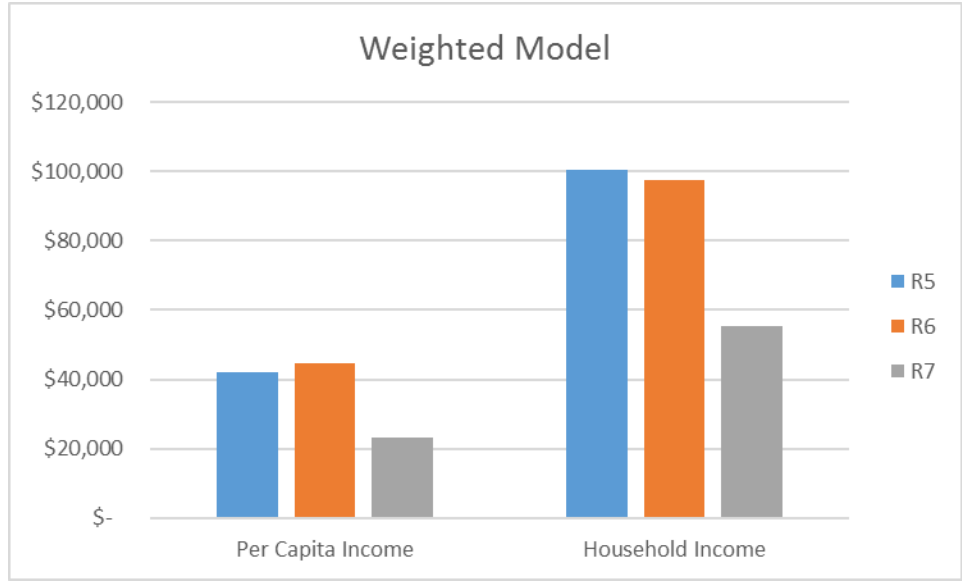
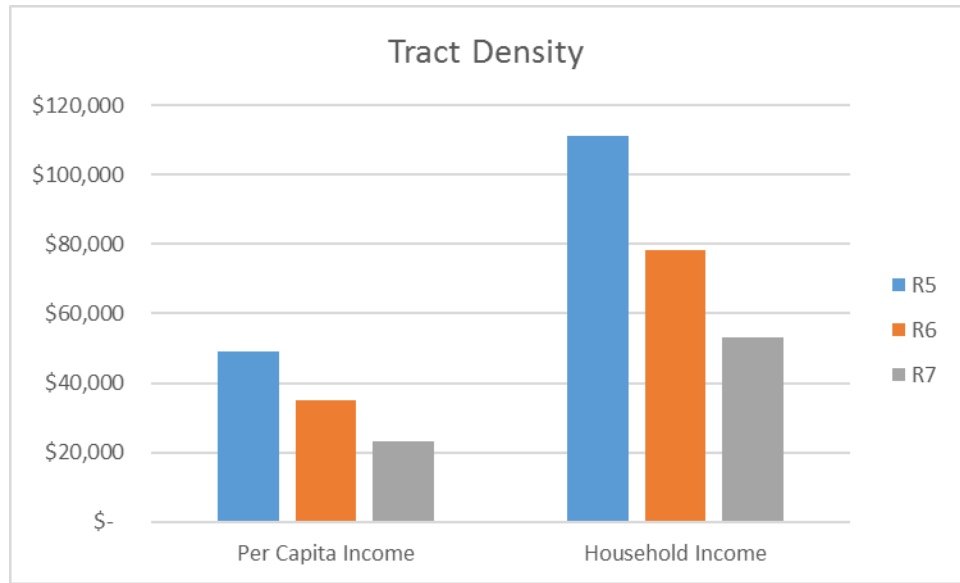
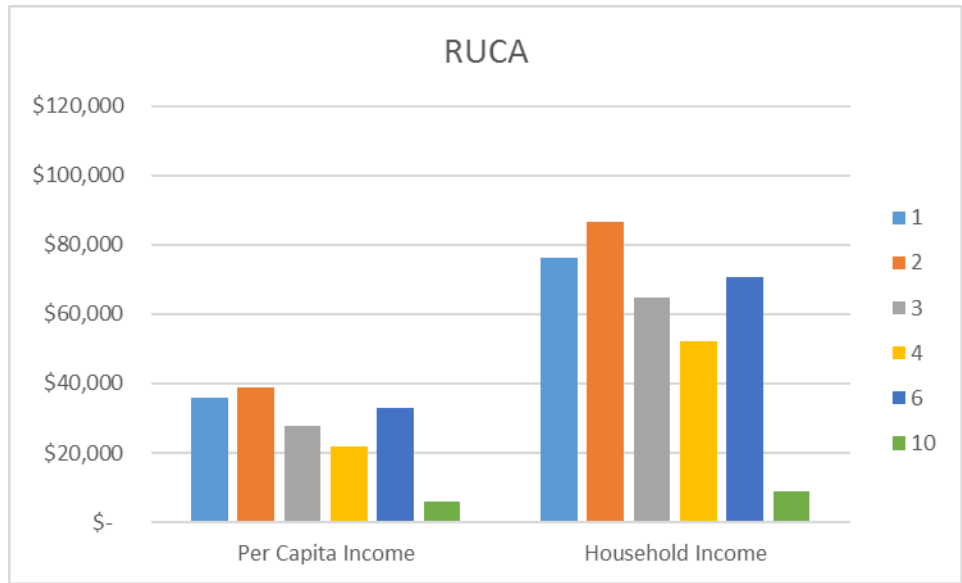
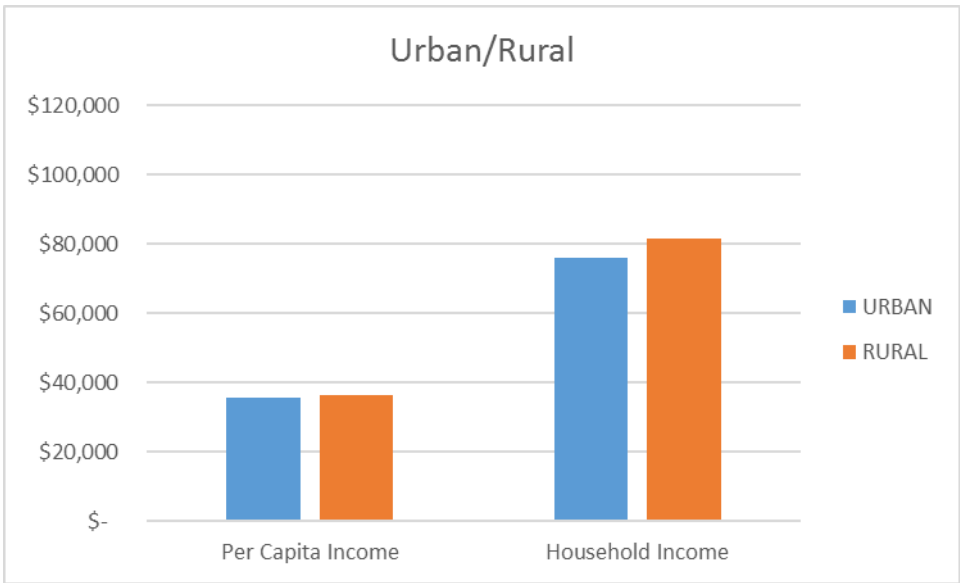
Urban Population: 8,394,909

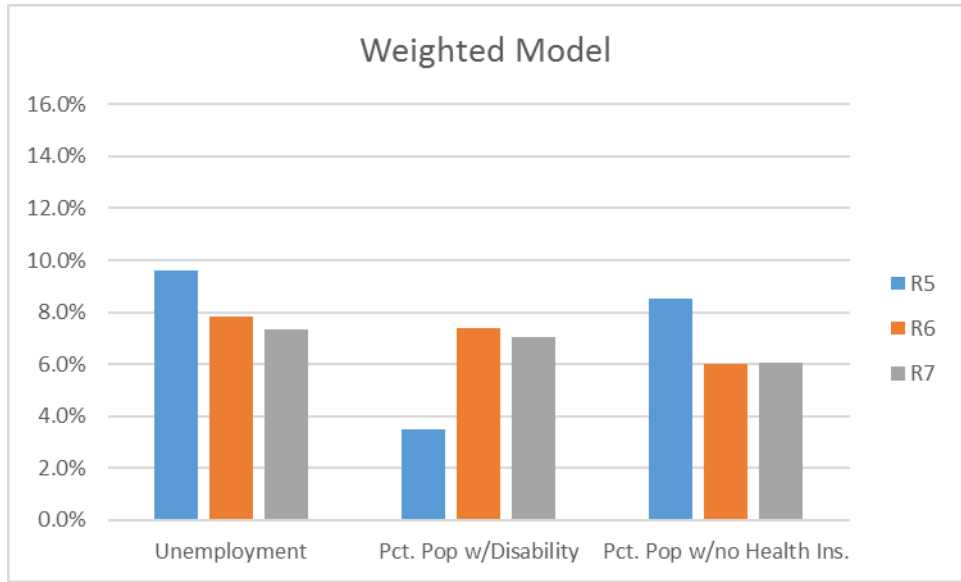
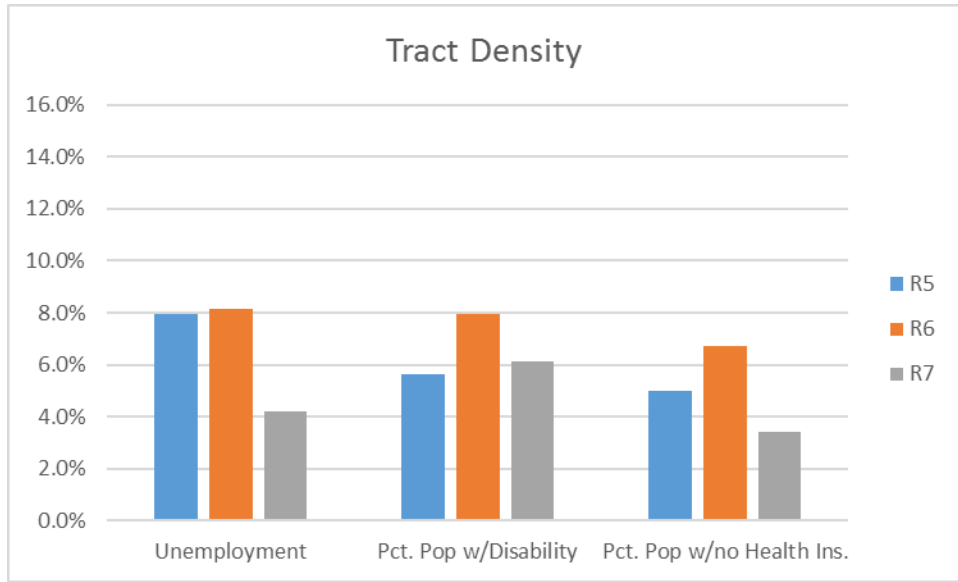
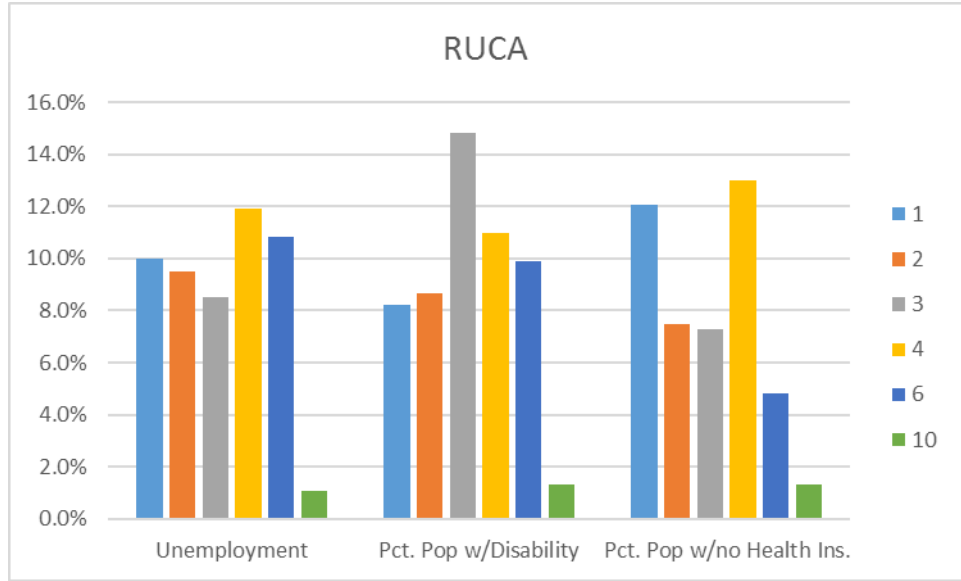
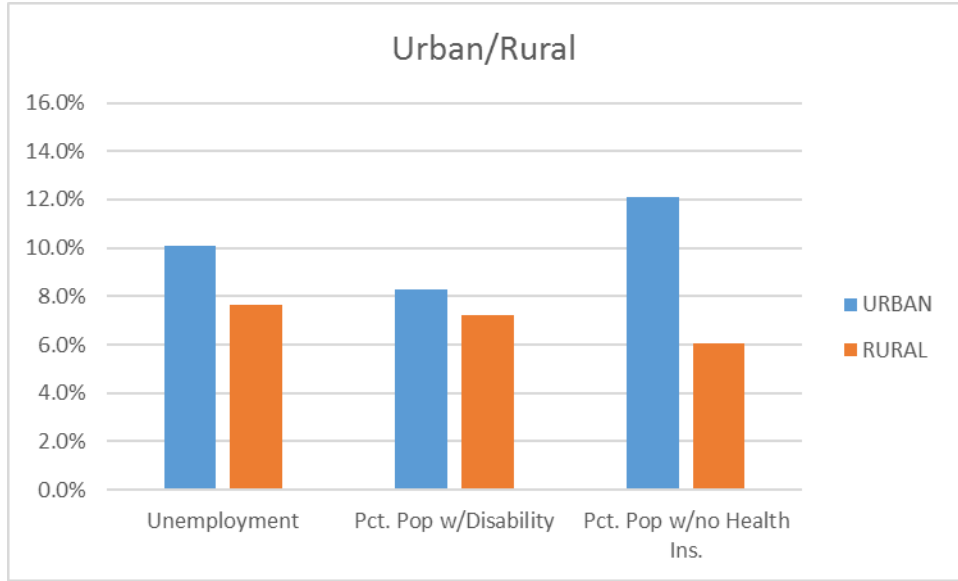
Rural Population: 396,985

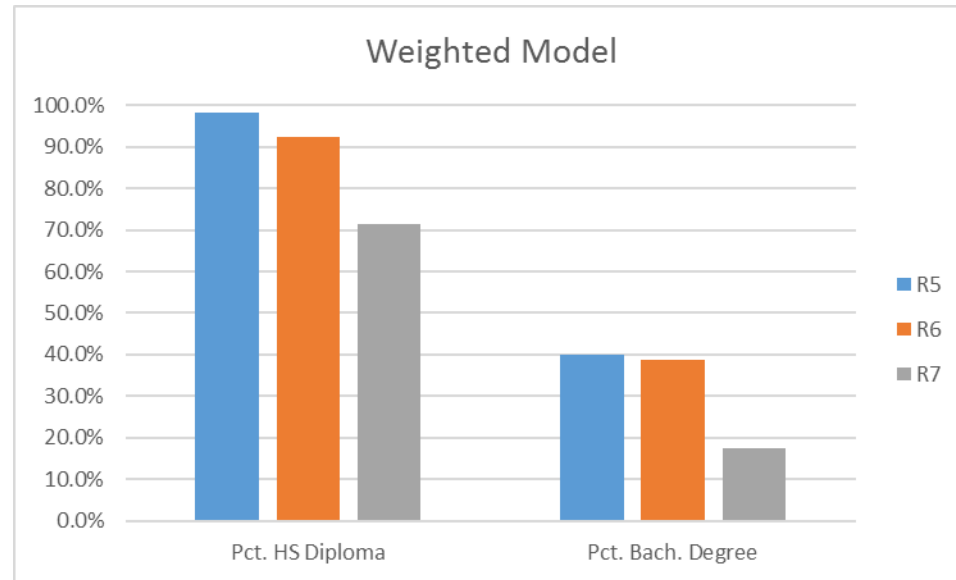
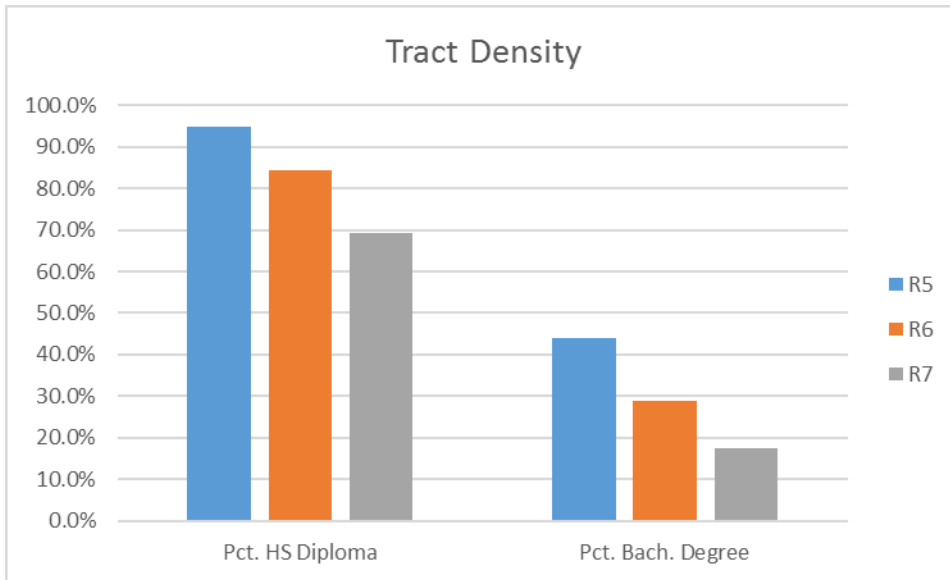
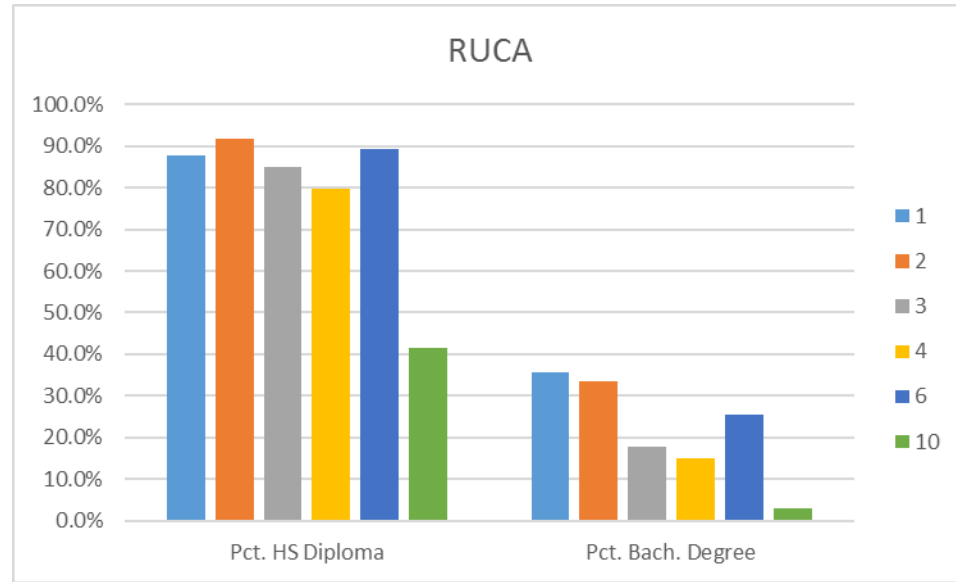
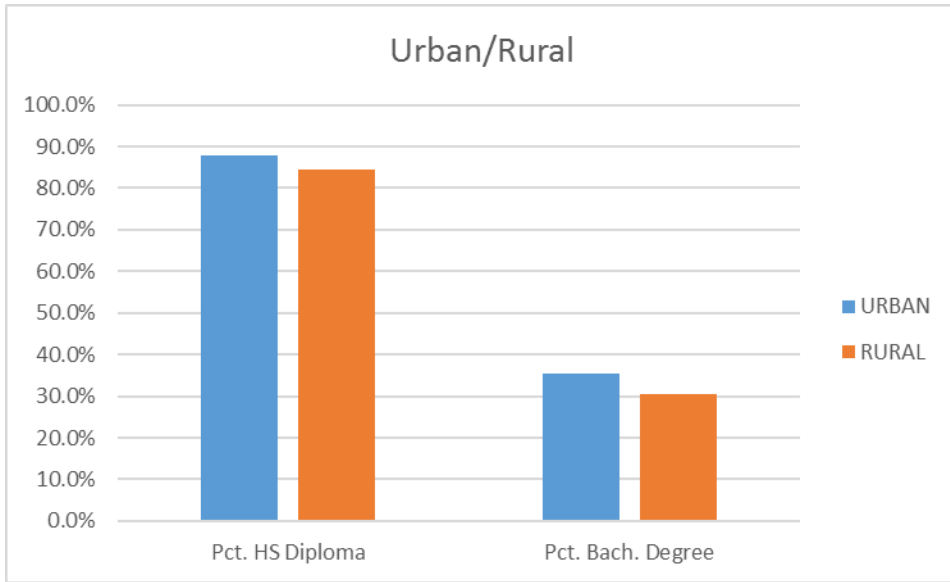












Rural Statistical Areas

Project Goals

- Develop an objective process for identifying and grouping sub-state areas of 65,000 or more people for purposes of tabulating and disseminating ACS 1-year data.
- Focus on meeting need for annual data for rural areas.
 - However, if the classification includes all counties, then we cannot apply the term “rural.”
- Process should result in areas that are comparable from one state to another.
- Use counties as building blocks.
 - Counties are recognizable geographic units.
 - Greater availability of statistical and other data at the county-level.
 - But, large counties in the West pose challenges.

Rural Statistical Areas

Proposed Criteria and Concept

Each statistical area:

- Must have a population of 65,000 or more.
- Should encompass one or more contiguous counties (or other geographic unit).
- Should, to the extent possible, encompass areas with similar levels of rurality.
- Statistical areas should be comparable from one state to another.

Rural Statistical Areas

Thoughts and Items for Consideration

- Population density should be a primary factor considered when defining areas.
- Socio-economic integration, proximity to larger urban centers, and common regional ties should be considered.
- Delineation of areas should be rural-centric.
- The classification should encompass the entirety of the United States and Puerto Rico.
- Should areas be state-based? Or, should they be allowed to cross state lines?
- Should counties be the “building blocks?”

Thank you!

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Vincent Osier: Vincent.osier@census.gov

Jennifer Zaroni: Jennifer.zaroni@census.gov